

Recomputed Tables of Coordinates of NACA Airfoil Profiles, Meanlines, and Sections

Based on NACA Report 824
and the book *Theory of Airfoil Sections*
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The latest version of the Fortran source code that writes the LaTeX source file is included in the archive file <https://www.pdas.com/packages/naca456.zip>

Introduction

The referenced book has three large appendices containing tables of coordinates of a selection of NACA profiles, mean lines and sections. This page and the linked pages reproduces these data recomputed using the procedures of the PDAS program naca456 module.

There are several differences between this document and the referenced book.

- Results are shown to 4 decimal places.
- A few extra sections of popular airfoils have been added.
- Two tables are shown for each section:
 - The left table presents data interpolated at the same x-location.
 - The right table presents data with the thickness added perpendicular to the mean line (as in the reference book).

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NACA Profile 0006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.6107	0.5910
0.7500	0.7424	0.4749
1.2500	0.9470	0.3579
2.5000	1.3074	0.2387
5.0000	1.7773	0.1514
7.5000	2.1000	0.1104
10.0000	2.3414	0.0844
15.0000	2.6726	0.0509
20.0000	2.8688	0.0289
25.0000	2.9706	0.0126
30.0000	3.0009	-0.0000
35.0000	2.9743	-0.0102
40.0000	2.9015	-0.0186
45.0000	2.7904	-0.0256
50.0000	2.6470	-0.0316
55.0000	2.4762	-0.0366
60.0000	2.2817	-0.0411
65.0000	2.0662	-0.0450
70.0000	1.8320	-0.0486
75.0000	1.5802	-0.0521
80.0000	1.3116	-0.0554
85.0000	1.0263	-0.0587
90.0000	0.7239	-0.0623
95.0000	0.4033	-0.0660
100.0000	0.0630	-0.0702

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.3967 percent chord

NACA Profile 0008

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.8142	0.7880
0.7500	0.9899	0.6332
1.2500	1.2626	0.4772
2.5000	1.7431	0.3183
5.0000	2.3698	0.2019
7.5000	2.7999	0.1472
10.0000	3.1218	0.1125
15.0000	3.5634	0.0679
20.0000	3.8250	0.0385
25.0000	3.9608	0.0168
30.0000	4.0012	-0.0001
35.0000	3.9657	-0.0136
40.0000	3.8687	-0.0248
45.0000	3.7205	-0.0342
50.0000	3.5294	-0.0421
55.0000	3.3016	-0.0489
60.0000	3.0422	-0.0548
65.0000	2.7550	-0.0600
70.0000	2.4426	-0.0649
75.0000	2.1069	-0.0694
80.0000	1.7487	-0.0738
85.0000	1.3684	-0.0783
90.0000	0.9651	-0.0830
95.0000	0.5377	-0.0880
100.0000	0.0840	-0.0935

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.7052 percent chord

NACA Profile 0010

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.0178	0.9850
0.7500	1.2374	0.7915
1.2500	1.5783	0.5966
2.5000	2.1789	0.3979
5.0000	2.9622	0.2524
7.5000	3.4999	0.1840
10.0000	3.9023	0.1406
15.0000	4.4543	0.0848
20.0000	4.7813	0.0481
25.0000	4.9510	0.0210
30.0000	5.0014	-0.0001
35.0000	4.9572	-0.0171
40.0000	4.8358	-0.0310
45.0000	4.6506	-0.0427
50.0000	4.4117	-0.0526
55.0000	4.1270	-0.0611
60.0000	3.8028	-0.0685
65.0000	3.4437	-0.0750
70.0000	3.0533	-0.0811
75.0000	2.6336	-0.0868
80.0000	2.1859	-0.0923
85.0000	1.7105	-0.0979
90.0000	1.2064	-0.1038
95.0000	0.6721	-0.1100
100.0000	0.1050	-0.1169

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord

NACA Profile 0012

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.2213	1.1819
0.7500	1.4849	0.9498
1.2500	1.8939	0.7159
2.5000	2.6147	0.4775
5.0000	3.5547	0.3029
7.5000	4.1999	0.2208
10.0000	4.6828	0.1687
15.0000	5.3452	0.1018
20.0000	5.7375	0.0577
25.0000	5.9412	0.0252
30.0000	6.0017	-0.0001
35.0000	5.9486	-0.0205
40.0000	5.8030	-0.0372
45.0000	5.5807	-0.0513
50.0000	5.2940	-0.0631
55.0000	4.9524	-0.0733
60.0000	4.5634	-0.0822
65.0000	4.1325	-0.0901
70.0000	3.6639	-0.0973
75.0000	3.1603	-0.1041
80.0000	2.6231	-0.1108
85.0000	2.0526	-0.1175
90.0000	1.4477	-0.1245
95.0000	0.8066	-0.1321
100.0000	0.1260	-0.1403

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5867 percent chord

NACA Profile 0015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.5266	1.4774
0.7500	1.8561	1.1872
1.2500	2.3674	0.8948
2.5000	3.2684	0.5969
5.0000	4.4434	0.3786
7.5000	5.2499	0.2760
10.0000	5.8535	0.2109
15.0000	6.6815	0.1272
20.0000	7.1719	0.0721
25.0000	7.4266	0.0315
30.0000	7.5022	-0.0001
35.0000	7.4358	-0.0256
40.0000	7.2538	-0.0466
45.0000	6.9759	-0.0641
50.0000	6.6175	-0.0789
55.0000	6.1905	-0.0916
60.0000	5.7042	-0.1027
65.0000	5.1656	-0.1126
70.0000	4.5799	-0.1216
75.0000	3.9504	-0.1301
80.0000	3.2789	-0.1385
85.0000	2.5657	-0.1469
90.0000	1.8096	-0.1556
95.0000	1.0082	-0.1651
100.0000	0.1575	-0.1754

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.4793 percent chord

NACA Profile 0018

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.8320	1.7729
0.7500	2.2273	1.4246
1.2500	2.8409	1.0738
2.5000	3.9221	0.7162
5.0000	5.3320	0.4543
7.5000	6.2999	0.3312
10.0000	7.0242	0.2531
15.0000	8.0177	0.1527
20.0000	8.6063	0.0866
25.0000	8.9119	0.0379
30.0000	9.0026	-0.0001
35.0000	8.9229	-0.0307
40.0000	8.7045	-0.0559
45.0000	8.3711	-0.0769
50.0000	7.9410	-0.0947
55.0000	7.4286	-0.1099
60.0000	6.8451	-0.1232
65.0000	6.1987	-0.1351
70.0000	5.4959	-0.1459
75.0000	4.7405	-0.1562
80.0000	3.9347	-0.1661
85.0000	3.0788	-0.1762
90.0000	2.1716	-0.1868
95.0000	1.2098	-0.1981
100.0000	0.1890	-0.2105

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 3.5702 percent chord

NACA Profile 0021

x	y	dy/dx
0.0000	0.0000	*****
0.5000	2.1373	2.0684
0.7500	2.5985	1.6621
1.2500	3.3143	1.2528
2.5000	4.5758	0.8356
5.0000	6.2207	0.5301
7.5000	7.3498	0.3863
10.0000	8.1948	0.2953
15.0000	9.3540	0.1781
20.0000	10.0407	0.1010
25.0000	10.3972	0.0442
30.0000	10.5030	-0.0001
35.0000	10.4101	-0.0358
40.0000	10.1553	-0.0652
45.0000	9.7663	-0.0897
50.0000	9.2645	-0.1104
55.0000	8.6667	-0.1282
60.0000	7.9859	-0.1438
65.0000	7.2319	-0.1576
70.0000	6.4118	-0.1703
75.0000	5.5305	-0.1822
80.0000	4.5905	-0.1938
85.0000	3.5920	-0.2056
90.0000	2.5335	-0.2179
95.0000	1.4115	-0.2311
100.0000	0.2205	-0.2455

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 4.8594 percent chord

NACA Profile 0008-34

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.4578	0.4946
0.7500	0.5707	0.4164
1.2500	0.7566	0.3370
2.5000	1.1174	0.2538
5.0000	1.6583	0.1884
7.5000	2.0830	0.1540
10.0000	2.4364	0.1298
15.0000	2.9926	0.0947
20.0000	3.3969	0.0681
25.0000	3.6815	0.0464
30.0000	3.8669	0.0283
35.0000	3.9687	0.0129
40.0000	4.0000	0.0000
45.0000	3.9708	0.0117
50.0000	3.8838	0.0231
55.0000	3.7401	0.0343
60.0000	3.5409	0.0453
65.0000	3.2873	0.0561
70.0000	2.9803	0.0667
75.0000	2.6211	0.0770
80.0000	2.2107	0.0871
85.0000	1.7503	0.0970
90.0000	1.2410	0.1067
95.0000	0.6839	0.1161
100.0000	0.0800	0.1254

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.1763 percent chord

NACA Profile 0010-34

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.5722	0.6182
0.7500	0.7133	0.5205
1.2500	0.9457	0.4212
2.5000	1.3968	0.3173
5.0000	2.0728	0.2355
7.5000	2.6038	0.1925
10.0000	3.0455	0.1623
15.0000	3.7408	0.1183
20.0000	4.2461	0.0851
25.0000	4.6018	0.0580
30.0000	4.8336	0.0353
35.0000	4.9609	0.0161
40.0000	5.0000	0.0000
45.0000	4.9634	0.0146
50.0000	4.8547	0.0289
55.0000	4.6751	0.0429
60.0000	4.4261	0.0567
65.0000	4.1091	0.0701
70.0000	3.7254	0.0833
75.0000	3.2764	0.0962
80.0000	2.7634	0.1089
85.0000	2.1879	0.1213
90.0000	1.5513	0.1334
95.0000	0.8548	0.1452
100.0000	0.1000	0.1567

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2755 percent chord

NACA Profile 0010-35

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.5457	0.5660
0.7500	0.6739	0.4692
1.2500	0.8810	0.3717
2.5000	1.2730	0.2722
5.0000	1.8469	0.1987
7.5000	2.2960	0.1636
10.0000	2.6748	0.1408
15.0000	3.2958	0.1098
20.0000	3.7870	0.0876
25.0000	4.1782	0.0694
30.0000	4.4844	0.0534
35.0000	4.7148	0.0389
40.0000	4.8750	0.0253
45.0000	4.9691	0.0124
50.0000	5.0000	0.0000
55.0000	4.9676	0.0133
60.0000	4.8631	0.0289
65.0000	4.6753	0.0466
70.0000	4.3932	0.0666
75.0000	4.0057	0.0888
80.0000	3.5018	0.1132
85.0000	2.8703	0.1398
90.0000	2.1003	0.1686
95.0000	1.1805	0.1997
100.0000	0.1000	0.2329

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2755 percent chord

NACA Profile 0010-64

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.9880	0.9266
0.7500	1.1932	0.7345
1.2500	1.5062	0.5421
2.5000	2.0428	0.3497
5.0000	2.7205	0.2160
7.5000	3.1808	0.1583
10.0000	3.5315	0.1247
15.0000	4.0471	0.0855
20.0000	4.4115	0.0617
25.0000	4.6742	0.0440
30.0000	4.8556	0.0288
35.0000	4.9637	0.0145
40.0000	5.0000	0.0000
45.0000	4.9634	0.0146
50.0000	4.8547	0.0289
55.0000	4.6751	0.0429
60.0000	4.4261	0.0567
65.0000	4.1091	0.0701
70.0000	3.7254	0.0833
75.0000	3.2764	0.0962
80.0000	2.7634	0.1089
85.0000	2.1879	0.1213
90.0000	1.5513	0.1334
95.0000	0.8548	0.1452
100.0000	0.1000	0.1567

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord

NACA Profile 0010-65

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.9728	0.8967
0.7500	1.1705	0.7049
1.2500	1.4689	0.5133
2.5000	1.9707	0.3229
5.0000	2.5862	0.1929
7.5000	2.9935	0.1390
10.0000	3.3005	0.1091
15.0000	3.7556	0.0769
20.0000	4.0938	0.0598
25.0000	4.3631	0.0485
30.0000	4.5820	0.0393
35.0000	4.7569	0.0306
40.0000	4.8877	0.0215
45.0000	4.9707	0.0115
50.0000	5.0000	0.0000
55.0000	4.9676	0.0133
60.0000	4.8631	0.0289
65.0000	4.6753	0.0466
70.0000	4.3932	0.0666
75.0000	4.0057	0.0888
80.0000	3.5018	0.1132
85.0000	2.8703	0.1398
90.0000	2.1003	0.1686
95.0000	1.1805	0.1997
100.0000	0.1000	0.2329

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord

NACA Profile 0010-66

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.9820	0.9147
0.7500	1.1842	0.7224
1.2500	1.4912	0.5299
2.5000	2.0123	0.3372
5.0000	2.6580	0.2030
7.5000	3.0855	0.1452
10.0000	3.4036	0.1119
15.0000	3.8584	0.0743
20.0000	4.1735	0.0535
25.0000	4.4056	0.0402
30.0000	4.5823	0.0309
35.0000	4.7186	0.0239
40.0000	4.8234	0.0182
45.0000	4.9017	0.0132
50.0000	4.9565	0.0087
55.0000	4.9891	0.0044
60.0000	5.0000	0.0000
65.0000	4.9808	0.0093
70.0000	4.8905	0.0285
75.0000	4.6798	0.0575
80.0000	4.2996	0.0963
85.0000	3.7007	0.1449
90.0000	2.8339	0.2034
95.0000	1.6501	0.2717
100.0000	0.1000	0.3499

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord

NACA Profile 0012-34

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.6867	0.7418
0.7500	0.8560	0.6246
1.2500	1.1348	0.5054
2.5000	1.6761	0.3807
5.0000	2.4874	0.2825
7.5000	3.1245	0.2310
10.0000	3.6546	0.1948
15.0000	4.4889	0.1420
20.0000	5.0953	0.1021
25.0000	5.5222	0.0696
30.0000	5.8003	0.0424
35.0000	5.9530	0.0194
40.0000	6.0000	0.0000
45.0000	5.9561	0.0175
50.0000	5.8256	0.0347
55.0000	5.6102	0.0515
60.0000	5.3114	0.0680
65.0000	4.9309	0.0841
70.0000	4.4704	0.1000
75.0000	3.9316	0.1155
80.0000	3.3161	0.1307
85.0000	2.6255	0.1455
90.0000	1.8615	0.1600
95.0000	1.0258	0.1742
100.0000	0.1200	0.1881

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.3967 percent chord

NACA Profile 0012-64

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.1855	1.1120
0.7500	1.4318	0.8813
1.2500	1.8074	0.6506
2.5000	2.4513	0.4197
5.0000	3.2647	0.2592
7.5000	3.8170	0.1900
10.0000	4.2378	0.1497
15.0000	4.8565	0.1027
20.0000	5.2938	0.0741
25.0000	5.6091	0.0528
30.0000	5.8267	0.0346
35.0000	5.9564	0.0173
40.0000	6.0000	0.0000
45.0000	5.9561	0.0175
50.0000	5.8256	0.0347
55.0000	5.6102	0.0515
60.0000	5.3114	0.0680
65.0000	4.9309	0.0841
70.0000	4.4704	0.1000
75.0000	3.9316	0.1155
80.0000	3.3161	0.1307
85.0000	2.6255	0.1455
90.0000	1.8615	0.1600
95.0000	1.0258	0.1742
100.0000	0.1200	0.1881

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5867 percent chord

NACA Profile 16-006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.4128	0.4057
0.7500	0.5037	0.3287
1.2500	0.6462	0.2514
2.5000	0.9034	0.1734
5.0000	1.2560	0.1181
7.5000	1.5171	0.0932
10.0000	1.7300	0.0781
15.0000	2.0694	0.0593
20.0000	2.3336	0.0470
25.0000	2.5439	0.0374
30.0000	2.7102	0.0292
35.0000	2.8373	0.0217
40.0000	2.9276	0.0144
45.0000	2.9818	0.0073
50.0000	3.0000	0.0000
55.0000	2.9806	0.0080
60.0000	2.9178	0.0173
65.0000	2.8052	0.0280
70.0000	2.6359	0.0400
75.0000	2.4034	0.0533
80.0000	2.1011	0.0679
85.0000	1.7222	0.0839
90.0000	1.2602	0.1012
95.0000	0.7083	0.1198
100.0000	0.0600	0.1398

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.1763 percent chord

NACA Profile 16-009

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.6192	0.6086
0.7500	0.7555	0.4930
1.2500	0.9693	0.3770
2.5000	1.3550	0.2602
5.0000	1.8840	0.1771
7.5000	2.2756	0.1399
10.0000	2.5950	0.1172
15.0000	3.1042	0.0890
20.0000	3.5004	0.0705
25.0000	3.8158	0.0562
30.0000	4.0653	0.0438
35.0000	4.2559	0.0325
40.0000	4.3913	0.0217
45.0000	4.4727	0.0109
50.0000	4.5000	0.0000
55.0000	4.4709	0.0120
60.0000	4.3768	0.0260
65.0000	4.2078	0.0420
70.0000	3.9539	0.0599
75.0000	3.6052	0.0799
80.0000	3.1516	0.1019
85.0000	2.5833	0.1258
90.0000	1.8902	0.1518
95.0000	1.0625	0.1797
100.0000	0.0900	0.2096

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.3967 percent chord

NACA Profile 16-012

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.8256	0.8115
0.7500	1.0073	0.6573
1.2500	1.2924	0.5027
2.5000	1.8067	0.3469
5.0000	2.5120	0.2362
7.5000	3.0342	0.1865
10.0000	3.4600	0.1562
15.0000	4.1389	0.1186
20.0000	4.6671	0.0940
25.0000	5.0877	0.0749
30.0000	5.4203	0.0585
35.0000	5.6746	0.0434
40.0000	5.8551	0.0289
45.0000	5.9636	0.0145
50.0000	6.0000	0.0000
55.0000	5.9611	0.0160
60.0000	5.8357	0.0346
65.0000	5.6103	0.0559
70.0000	5.2718	0.0799
75.0000	4.8069	0.1065
80.0000	4.2022	0.1358
85.0000	3.4444	0.1677
90.0000	2.5203	0.2023
95.0000	1.4166	0.2396
100.0000	0.1200	0.2795

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7052 percent chord

NACA Profile 16-015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.0321	1.0144
0.7500	1.2591	0.8217
1.2500	1.6155	0.6284
2.5000	2.2584	0.4336
5.0000	3.1400	0.2952
7.5000	3.7927	0.2331
10.0000	4.3250	0.1953
15.0000	5.1736	0.1483
20.0000	5.8339	0.1175
25.0000	6.3597	0.0936
30.0000	6.7754	0.0731
35.0000	7.0932	0.0542
40.0000	7.3189	0.0361
45.0000	7.4545	0.0181
50.0000	7.5000	0.0000
55.0000	7.4514	0.0200
60.0000	7.2946	0.0433
65.0000	7.0129	0.0699
70.0000	6.5898	0.0999
75.0000	6.0086	0.1332
80.0000	5.2527	0.1698
85.0000	4.3055	0.2097
90.0000	3.1504	0.2529
95.0000	1.7708	0.2995
100.0000	0.1500	0.3494

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord

NACA Profile 16-018

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.2385	1.2172
0.7500	1.5110	0.9860
1.2500	1.9386	0.7541
2.5000	2.7101	0.5203
5.0000	3.7680	0.3542
7.5000	4.5513	0.2797
10.0000	5.1900	0.2343
15.0000	6.2083	0.1780
20.0000	7.0007	0.1410
25.0000	7.6316	0.1123
30.0000	8.1305	0.0877
35.0000	8.5119	0.0651
40.0000	8.7827	0.0433
45.0000	8.9454	0.0218
50.0000	9.0000	0.0000
55.0000	8.9417	0.0240
60.0000	8.7535	0.0520
65.0000	8.4155	0.0839
70.0000	7.9078	0.1199
75.0000	7.2103	0.1598
80.0000	6.3033	0.2037
85.0000	5.1666	0.2516
90.0000	3.7805	0.3035
95.0000	2.1249	0.3594
100.0000	0.1800	0.4193

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5867 percent chord

NACA Profile 16-021

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.4449	1.4201
0.7500	1.7628	1.1503
1.2500	2.2617	0.8797
2.5000	3.1618	0.6070
5.0000	4.3960	0.4133
7.5000	5.3098	0.3263
10.0000	6.0550	0.2734
15.0000	7.2430	0.2076
20.0000	8.1675	0.1645
25.0000	8.9036	0.1310
30.0000	9.4856	0.1023
35.0000	9.9305	0.0759
40.0000	10.2464	0.0505
45.0000	10.4363	0.0254
50.0000	10.5000	0.0000
55.0000	10.4320	0.0280
60.0000	10.2124	0.0606
65.0000	9.8181	0.0979
70.0000	9.2257	0.1398
75.0000	8.4120	0.1864
80.0000	7.3538	0.2377
85.0000	6.0277	0.2935
90.0000	4.4106	0.3541
95.0000	2.4791	0.4193
100.0000	0.2100	0.4891

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.1597 percent chord

NACA Profile 63-006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.5039	0.4762
0.7500	0.6094	0.3777
1.2500	0.7709	0.2809
2.5000	1.0568	0.1945
5.0000	1.4626	0.1383
7.5000	1.7666	0.1077
10.0000	2.0107	0.0890
15.0000	2.3872	0.0638
20.0000	2.6572	0.0451
25.0000	2.8424	0.0294
30.0000	2.9558	0.0154
35.0000	2.9990	0.0013
40.0000	2.9712	-0.0124
45.0000	2.8764	-0.0253
50.0000	2.7218	-0.0364
55.0000	2.5161	-0.0456
60.0000	2.2679	-0.0536
65.0000	1.9844	-0.0599
70.0000	1.6727	-0.0646
75.0000	1.3433	-0.0672
80.0000	1.0075	-0.0671
85.0000	0.6806	-0.0633
90.0000	0.3820	-0.0555
95.0000	0.1371	-0.0405
100.0000	0.0000	-0.0008

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2676 percent chord

NACA Profile 63-008

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6682	0.6339
0.7500	0.8087	0.5036
1.2500	1.0244	0.3755
2.5000	1.4073	0.2609
5.0000	1.9516	0.1854
7.5000	2.3588	0.1442
10.0000	2.6857	0.1191
15.0000	3.1895	0.0853
20.0000	3.5500	0.0599
25.0000	3.7964	0.0391
30.0000	3.9458	0.0201
35.0000	3.9998	0.0007
40.0000	3.9577	-0.0176
45.0000	3.8252	-0.0351
50.0000	3.6131	-0.0498
55.0000	3.3336	-0.0618
60.0000	2.9982	-0.0721
65.0000	2.6172	-0.0802
70.0000	2.2002	-0.0858
75.0000	1.7616	-0.0891
80.0000	1.3171	-0.0882
85.0000	0.8871	-0.0830
90.0000	0.4963	-0.0725
95.0000	0.1777	-0.0529
100.0000	-0.0000	-0.0011

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.4714 percent chord

NACA Profile 63-009

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.7489	0.7124
0.7500	0.9069	0.5665
1.2500	1.1497	0.4230
2.5000	1.5815	0.2944
5.0000	2.1958	0.2092
7.5000	2.6550	0.1627
10.0000	3.0237	0.1343
15.0000	3.5915	0.0959
20.0000	3.9974	0.0673
25.0000	4.2743	0.0439
30.0000	4.4414	0.0225
35.0000	4.5001	0.0005
40.0000	4.4499	-0.0204
45.0000	4.2974	-0.0402
50.0000	4.0556	-0.0565
55.0000	3.7383	-0.0701
60.0000	3.3586	-0.0810
65.0000	2.9282	-0.0904
70.0000	2.4585	-0.0966
75.0000	1.9654	-0.0997
80.0000	1.4674	-0.0984
85.0000	0.9867	-0.0925
90.0000	0.5512	-0.0806
95.0000	0.1971	-0.0589
100.0000	0.0000	-0.0012

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.5893 percent chord

NACA Profile 63-010

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.8285	0.7905
0.7500	1.0040	0.6293
1.2500	1.2739	0.4706
2.5000	1.7548	0.3281
5.0000	2.4396	0.2332
7.5000	2.9512	0.1812
10.0000	3.3619	0.1494
15.0000	3.9940	0.1066
20.0000	4.4454	0.0748
25.0000	4.7529	0.0488
30.0000	4.9374	0.0249
35.0000	5.0003	0.0003
40.0000	4.9414	-0.0233
45.0000	4.7682	-0.0452
50.0000	4.4959	-0.0634
55.0000	4.1401	-0.0784
60.0000	3.7158	-0.0903
65.0000	3.2357	-0.1007
70.0000	2.7131	-0.1074
75.0000	2.1659	-0.1101
80.0000	1.6146	-0.1088
85.0000	1.0841	-0.1018
90.0000	0.6047	-0.0884
95.0000	0.2160	-0.0648
100.0000	0.0000	-0.0013

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7210 percent chord

NACA Profile 63-012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9837	0.9454
0.7500	1.1938	0.7547
1.2500	1.5181	0.5663
2.5000	2.0980	0.3964
5.0000	2.9256	0.2817
7.5000	3.5432	0.2186
10.0000	4.0386	0.1800
15.0000	4.8003	0.1280
20.0000	5.3431	0.0899
25.0000	5.7115	0.0585
30.0000	5.9304	0.0295
35.0000	6.0005	-0.0008
40.0000	5.9220	-0.0299
45.0000	5.7051	-0.0556
50.0000	5.3698	-0.0777
55.0000	4.9354	-0.0956
60.0000	4.4205	-0.1100
65.0000	3.8398	-0.1220
70.0000	3.2113	-0.1294
75.0000	2.5567	-0.1319
80.0000	1.9002	-0.1298
85.0000	1.2724	-0.1201
90.0000	0.7076	-0.1038
95.0000	0.2521	-0.0759
100.0000	0.0000	-0.0016

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 1.0017 percent chord

NACA Profile 63-015

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.2039	1.1730
0.7500	1.4653	0.9414
1.2500	1.8712	0.7107
2.5000	2.6018	0.5010
5.0000	3.6488	0.3561
7.5000	4.4285	0.2757
10.0000	5.0531	0.2266
15.0000	6.0121	0.1606
20.0000	6.6934	0.1128
25.0000	7.1533	0.0728
30.0000	7.4222	0.0348
35.0000	7.4992	-0.0039
40.0000	7.3859	-0.0416
45.0000	7.0988	-0.0733
50.0000	6.6640	-0.0996
55.0000	6.1072	-0.1219
60.0000	5.4529	-0.1398
65.0000	4.7194	-0.1530
70.0000	3.9318	-0.1606
75.0000	3.1176	-0.1636
80.0000	2.3072	-0.1597
85.0000	1.5389	-0.1474
90.0000	0.8524	-0.1262
95.0000	0.3026	-0.0912
100.0000	0.0000	-0.0019

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4730 percent chord

NACA Profile 63-018

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.4050	1.3930
0.7500	1.7166	1.1258
1.2500	2.2041	0.8563
2.5000	3.0884	0.6086
5.0000	4.3620	0.4329
7.5000	5.3086	0.3344
10.0000	6.0657	0.2744
15.0000	7.2259	0.1941
20.0000	8.0478	0.1360
25.0000	8.5992	0.0864
30.0000	8.9162	0.0397
35.0000	8.9961	-0.0075
40.0000	8.8420	-0.0525
45.0000	8.4783	-0.0910
50.0000	7.9382	-0.1241
55.0000	7.2546	-0.1488
60.0000	6.4567	-0.1693
65.0000	5.5689	-0.1843
70.0000	4.6226	-0.1935
75.0000	3.6506	-0.1945
80.0000	2.6909	-0.1873
85.0000	1.7880	-0.1713
90.0000	0.9866	-0.1464
95.0000	0.3492	-0.1050
100.0000	-0.0000	-0.0023

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9504 percent chord

NACA Profile 63-021

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.5829	1.6011
0.7500	1.9430	1.3061
1.2500	2.5116	1.0024
2.5000	3.5525	0.7196
5.0000	5.0615	0.5129
7.5000	6.1810	0.3948
10.0000	7.0744	0.3235
15.0000	8.4410	0.2287
20.0000	9.4059	0.1594
25.0000	10.0493	0.1001
30.0000	10.4129	0.0450
35.0000	10.4911	-0.0135
40.0000	10.2906	-0.0657
45.0000	9.8438	-0.1114
50.0000	9.1921	-0.1479
55.0000	8.3775	-0.1765
60.0000	7.4333	-0.1995
65.0000	6.3890	-0.2162
70.0000	5.2835	-0.2240
75.0000	4.1572	-0.2241
80.0000	3.0531	-0.2151
85.0000	2.0217	-0.1959
90.0000	1.1116	-0.1658
95.0000	0.3924	-0.1179
100.0000	-0.0000	-0.0026

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.3989 percent chord

NACA Profile 63A006

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.5066	0.4617
0.7500	0.6082	0.3643
1.2500	0.7663	0.2796
2.5000	1.0534	0.1951
5.0000	1.4536	0.1354
7.5000	1.7530	0.1067
10.0000	1.9944	0.0882
15.0000	2.3664	0.0625
20.0000	2.6343	0.0448
25.0000	2.8224	0.0310
30.0000	2.9433	0.0178
35.0000	2.9956	0.0038
40.0000	2.9838	-0.0090
45.0000	2.9103	-0.0207
50.0000	2.7816	-0.0306
55.0000	2.6048	-0.0399
60.0000	2.3870	-0.0470
65.0000	2.1341	-0.0531
70.0000	1.8528	-0.0588
75.0000	1.5523	-0.0613
80.0000	1.2455	-0.0618
85.0000	0.9382	-0.0614
90.0000	0.6308	-0.0623
95.0000	0.3187	-0.0573
100.0000	-0.0000	-2.3633

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2791 percent chord

NACA Profile 63A008

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.6687	0.6119
0.7500	0.8037	0.4856
1.2500	1.0152	0.3748
2.5000	1.4004	0.2618
5.0000	1.9372	0.1816
7.5000	2.3384	0.1429
10.0000	2.6617	0.1181
15.0000	3.1595	0.0836
20.0000	3.5175	0.0598
25.0000	3.7684	0.0409
30.0000	3.9286	0.0231
35.0000	3.9957	0.0049
40.0000	3.9766	-0.0122
45.0000	3.8745	-0.0282
50.0000	3.6988	-0.0421
55.0000	3.4594	-0.0539
60.0000	3.1662	-0.0639
65.0000	2.8271	-0.0718
70.0000	2.4509	-0.0782
75.0000	2.0514	-0.0815
80.0000	1.6455	-0.0812
85.0000	1.2391	-0.0811
90.0000	0.8325	-0.0827
95.0000	0.4216	-0.0748
100.0000	-0.0000	-3.8448

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.4830 percent chord

NACA Profile 63A010

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.8245	0.7591
0.7500	0.9925	0.6063
1.2500	1.2577	0.4713
2.5000	1.7425	0.3297
5.0000	2.4184	0.2284
7.5000	2.9228	0.1795
10.0000	3.3290	0.1482
15.0000	3.9537	0.1051
20.0000	4.4025	0.0750
25.0000	4.7162	0.0507
30.0000	4.9154	0.0279
35.0000	4.9963	0.0054
40.0000	4.9683	-0.0158
45.0000	4.8355	-0.0363
50.0000	4.6109	-0.0533
55.0000	4.3073	-0.0678
60.0000	3.9371	-0.0805
65.0000	3.5109	-0.0908
70.0000	3.0403	-0.0970
75.0000	2.5423	-0.1009
80.0000	2.0387	-0.1006
85.0000	1.5347	-0.1005
90.0000	1.0302	-0.1033
95.0000	0.5233	-0.0916
100.0000	-0.0000	-6.1087

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7260 percent chord

NACA Profile 63A012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9723	0.9022
0.7500	1.1725	0.7258
1.2500	1.4919	0.5693
2.5000	2.0782	0.3991
5.0000	2.8957	0.2760
7.5000	3.5051	0.2167
10.0000	3.9953	0.1786
15.0000	4.7484	0.1270
20.0000	5.2887	0.0903
25.0000	5.6657	0.0609
30.0000	5.9032	0.0322
35.0000	5.9971	0.0052
40.0000	5.9588	-0.0204
45.0000	5.7934	-0.0446
50.0000	5.5183	-0.0645
55.0000	5.1489	-0.0820
60.0000	4.7004	-0.0968
65.0000	4.1862	-0.1084
70.0000	3.6212	-0.1167
75.0000	3.0256	-0.1197
80.0000	2.4255	-0.1200
85.0000	1.8254	-0.1197
90.0000	1.2240	-0.1235
95.0000	0.6238	-0.1077
100.0000	-0.0000	-9.4866

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.9908 percent chord

NACA Profile 63A015

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.1754	1.1071
0.7500	1.4221	0.9004
1.2500	1.8228	0.7195
2.5000	2.5657	0.5062
5.0000	3.6018	0.3494
7.5000	4.3723	0.2737
10.0000	4.9912	0.2249
15.0000	5.9404	0.1606
20.0000	6.6197	0.1138
25.0000	7.0924	0.0771
30.0000	7.3867	0.0391
35.0000	7.4983	0.0050
40.0000	7.4417	-0.0279
45.0000	7.2244	-0.0577
50.0000	6.8703	-0.0838
55.0000	6.3998	-0.1043
60.0000	5.8320	-0.1214
65.0000	5.1845	-0.1363
70.0000	4.4772	-0.1460
75.0000	3.7376	-0.1487
80.0000	2.9947	-0.1491
85.0000	2.2529	-0.1479
90.0000	1.5083	-0.1531
95.0000	0.7730	-0.1309
100.0000	-0.0000	-19.2221

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4059 percent chord

NACA Profile 64-006

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.4918	0.4694
0.7500	0.5954	0.3689
1.2500	0.7517	0.2693
2.5000	1.0216	0.1822
5.0000	1.4022	0.1300
7.5000	1.6897	0.1024
10.0000	1.9237	0.0860
15.0000	2.2931	0.0635
20.0000	2.5675	0.0471
25.0000	2.7676	0.0332
30.0000	2.9020	0.0207
35.0000	2.9762	0.0090
40.0000	2.9855	-0.0061
45.0000	2.9133	-0.0223
50.0000	2.7685	-0.0348
55.0000	2.5688	-0.0448
60.0000	2.3244	-0.0527
65.0000	2.0441	-0.0593
70.0000	1.7359	-0.0640
75.0000	1.4078	-0.0671
80.0000	1.0697	-0.0678
85.0000	0.7351	-0.0654
90.0000	0.4226	-0.0589
95.0000	0.1568	-0.0458
100.0000	0.0000	-0.0010

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.2494 percent chord

NACA Profile 64-008

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6550	0.6242
0.7500	0.7928	0.4906
1.2500	1.0008	0.3590
2.5000	1.3615	0.2440
5.0000	1.8719	0.1743
7.5000	2.2570	0.1372
10.0000	2.5706	0.1152
15.0000	3.0654	0.0850
20.0000	3.4325	0.0630
25.0000	3.6995	0.0443
30.0000	3.8781	0.0271
35.0000	3.9754	0.0114
40.0000	3.9831	-0.0091
45.0000	3.8794	-0.0313
50.0000	3.6797	-0.0475
55.0000	3.4077	-0.0606
60.0000	3.0773	-0.0710
65.0000	2.7001	-0.0793
70.0000	2.2875	-0.0854
75.0000	1.8501	-0.0888
80.0000	1.4015	-0.0898
85.0000	0.9601	-0.0861
90.0000	0.5499	-0.0773
95.0000	0.2032	-0.0597
100.0000	0.0000	-0.0013

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.4462 percent chord

NACA Profile 64-009

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.7360	0.7010
0.7500	0.8907	0.5510
1.2500	1.1245	0.4036
2.5000	1.5306	0.2752
5.0000	2.1064	0.1967
7.5000	2.5408	0.1547
10.0000	2.8946	0.1299
15.0000	3.4525	0.0958
20.0000	3.8661	0.0710
25.0000	4.1667	0.0498
30.0000	4.3673	0.0304
35.0000	4.4758	0.0125
40.0000	4.4817	-0.0110
45.0000	4.3608	-0.0361
50.0000	4.1326	-0.0542
55.0000	3.8234	-0.0687
60.0000	3.4492	-0.0804
65.0000	3.0232	-0.0893
70.0000	2.5581	-0.0961
75.0000	2.0661	-0.0999
80.0000	1.5628	-0.1006
85.0000	1.0689	-0.0962
90.0000	0.6112	-0.0861
95.0000	0.2254	-0.0663
100.0000	0.0000	-0.0014

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.5660 percent chord

NACA Profile 64-010

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.8165	0.7772
0.7500	0.9880	0.6110
1.2500	1.2474	0.4482
2.5000	1.6991	0.3065
5.0000	2.3406	0.2191
7.5000	2.8246	0.1723
10.0000	3.2186	0.1446
15.0000	3.8399	0.1067
20.0000	4.3004	0.0789
25.0000	4.6346	0.0553
30.0000	4.8570	0.0337
35.0000	4.9766	0.0135
40.0000	4.9800	-0.0132
45.0000	4.8409	-0.0410
50.0000	4.5834	-0.0610
55.0000	4.2365	-0.0771
60.0000	3.8181	-0.0899
65.0000	3.3429	-0.0994
70.0000	2.8252	-0.1068
75.0000	2.2788	-0.1112
80.0000	1.7211	-0.1112
85.0000	1.1754	-0.1061
90.0000	0.6710	-0.0945
95.0000	0.2470	-0.0728
100.0000	0.0000	-0.0016

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.6987 percent chord

NACA Profile 64-012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9755	0.9277
0.7500	1.1802	0.7295
1.2500	1.4904	0.5368
2.5000	2.0331	0.3695
5.0000	2.8075	0.2645
7.5000	3.3914	0.2079
10.0000	3.8668	0.1743
15.0000	4.6159	0.1285
20.0000	5.1704	0.0950
25.0000	5.5721	0.0664
30.0000	5.8381	0.0407
35.0000	5.9789	0.0151
40.0000	5.9752	-0.0186
45.0000	5.7972	-0.0511
50.0000	5.4788	-0.0752
55.0000	5.0545	-0.0942
60.0000	4.5462	-0.1092
65.0000	3.9721	-0.1201
70.0000	3.3488	-0.1284
75.0000	2.6938	-0.1331
80.0000	2.0289	-0.1323
85.0000	1.3815	-0.1253
90.0000	0.7862	-0.1110
95.0000	0.2883	-0.0851
100.0000	0.0000	-0.0019

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 1.0073 percent chord

NACA Profile 64-015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.2077	1.1469
0.7500	1.4609	0.9029
1.2500	1.8458	0.6681
2.5000	2.5250	0.4649
5.0000	3.5019	0.3337
7.5000	4.2382	0.2621
10.0000	4.8374	0.2195
15.0000	5.7808	0.1616
20.0000	6.4780	0.1192
25.0000	6.9814	0.0831
30.0000	7.3125	0.0505
35.0000	7.4832	0.0171
40.0000	7.4629	-0.0275
45.0000	7.2202	-0.0682
50.0000	6.8050	-0.0971
55.0000	6.2609	-0.1195
60.0000	5.6145	-0.1376
65.0000	4.8898	-0.1513
70.0000	4.1079	-0.1608
75.0000	3.2917	-0.1647
80.0000	2.4688	-0.1633
85.0000	1.6740	-0.1536
90.0000	0.9484	-0.1353
95.0000	0.3459	-0.1023
100.0000	0.0000	-0.0023

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5563 percent chord

NACA Profile 64-018

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.4300	1.3568
0.7500	1.7297	1.0699
1.2500	2.1872	0.7969
2.5000	3.0026	0.5615
5.0000	4.1862	0.4047
7.5000	5.0784	0.3174
10.0000	5.8041	0.2656
15.0000	6.9453	0.1952
20.0000	7.7873	0.1436
25.0000	8.3933	0.0998
30.0000	8.7891	0.0591
35.0000	8.9873	0.0182
40.0000	8.9432	-0.0372
45.0000	8.6277	-0.0861
50.0000	8.1107	-0.1195
55.0000	7.4420	-0.1463
60.0000	6.6541	-0.1674
65.0000	5.7770	-0.1831
70.0000	4.8364	-0.1924
75.0000	3.8609	-0.1964
80.0000	2.8841	-0.1926
85.0000	1.9477	-0.1802
90.0000	1.0988	-0.1572
95.0000	0.3988	-0.1186
100.0000	-0.0000	-0.0027

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2082 percent chord

NACA Profile 64-021

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.6399	1.5555
0.7500	1.9838	1.2290
1.2500	2.5114	0.9223
2.5000	3.4618	0.6591
5.0000	4.8572	0.4776
7.5000	5.9094	0.3742
10.0000	6.7645	0.3128
15.0000	8.1078	0.2295
20.0000	9.0971	0.1683
25.0000	9.8068	0.1163
30.0000	10.2669	0.0680
35.0000	10.4903	0.0180
40.0000	10.4155	-0.0487
45.0000	10.0198	-0.1044
50.0000	9.3950	-0.1436
55.0000	8.5971	-0.1745
60.0000	7.6648	-0.1972
65.0000	6.6334	-0.2140
70.0000	5.5351	-0.2243
75.0000	4.4025	-0.2274
80.0000	3.2762	-0.2217
85.0000	2.2043	-0.2054
90.0000	1.2386	-0.1783
95.0000	0.4474	-0.1335
100.0000	0.0000	-0.0031

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 2.9371 percent chord

NACA Profile 64A006

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.5015	0.4570
0.7500	0.6018	0.3569
1.2500	0.7543	0.2661
2.5000	1.0267	0.1843
5.0000	1.4041	0.1274
7.5000	1.6870	0.1018
10.0000	1.9208	0.0858
15.0000	2.2864	0.0627
20.0000	2.5592	0.0469
25.0000	2.7592	0.0333
30.0000	2.8967	0.0214
35.0000	2.9767	0.0103
40.0000	2.9978	-0.0027
45.0000	2.9439	-0.0180
50.0000	2.8245	-0.0295
55.0000	2.6522	-0.0391
60.0000	2.4371	-0.0470
65.0000	2.1857	-0.0537
70.0000	1.9034	-0.0592
75.0000	1.5997	-0.0621
80.0000	1.2850	-0.0632
85.0000	0.9678	-0.0629
90.0000	0.6512	-0.0650
95.0000	0.3290	-0.0595
100.0000	-0.0000	-2.3553

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2773 percent chord

NACA Profile 64A008

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6614	0.6055
0.7500	0.7946	0.4748
1.2500	0.9981	0.3560
2.5000	1.3631	0.2471
5.0000	1.8692	0.1706
7.5000	2.2484	0.1364
10.0000	2.5615	0.1148
15.0000	3.0508	0.0839
20.0000	3.4157	0.0628
25.0000	3.6826	0.0443
30.0000	3.8657	0.0288
35.0000	3.9715	0.0139
40.0000	3.9965	-0.0046
45.0000	3.9195	-0.0249
50.0000	3.7558	-0.0399
55.0000	3.5222	-0.0528
60.0000	3.2325	-0.0630
65.0000	2.8951	-0.0720
70.0000	2.5177	-0.0787
75.0000	2.1138	-0.0825
80.0000	1.6967	-0.0840
85.0000	1.2777	-0.0831
90.0000	0.8587	-0.0858
95.0000	0.4349	-0.0777
100.0000	-0.0000	-3.8242

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.4845 percent chord

NACA Profile 64A010

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.8148	0.7509
0.7500	0.9803	0.5920
1.2500	1.2351	0.4467
2.5000	1.6938	0.3110
5.0000	2.3307	0.2145
7.5000	2.8075	0.1713
10.0000	3.2010	0.1441
15.0000	3.8152	0.1053
20.0000	4.2731	0.0788
25.0000	4.6073	0.0555
30.0000	4.8361	0.0362
35.0000	4.9672	0.0172
40.0000	4.9946	-0.0073
45.0000	4.8920	-0.0321
50.0000	4.6822	-0.0509
55.0000	4.3855	-0.0665
60.0000	4.0198	-0.0792
65.0000	3.5954	-0.0902
70.0000	3.1228	-0.0982
75.0000	2.6192	-0.1027
80.0000	2.1010	-0.1042
85.0000	1.5817	-0.1040
90.0000	1.0620	-0.1061
95.0000	0.5393	-0.0950
100.0000	-0.0000	-6.0682

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7349 percent chord

NACA Profile 64A012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9599	0.8924
0.7500	1.1571	0.7078
1.2500	1.4632	0.5383
2.5000	2.0172	0.3760
5.0000	2.7874	0.2592
7.5000	3.3633	0.2068
10.0000	3.8383	0.1738
15.0000	4.5790	0.1269
20.0000	5.1309	0.0950
25.0000	5.5329	0.0667
30.0000	5.8077	0.0435
35.0000	5.9638	0.0201
40.0000	5.9916	-0.0106
45.0000	5.8615	-0.0399
50.0000	5.6034	-0.0627
55.0000	5.2423	-0.0808
60.0000	4.7994	-0.0956
65.0000	4.2870	-0.1089
70.0000	3.7191	-0.1176
75.0000	3.1163	-0.1230
80.0000	2.4983	-0.1240
85.0000	1.8801	-0.1237
90.0000	1.2613	-0.1263
95.0000	0.6424	-0.1117
100.0000	-0.0000	-9.4344

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0212 percent chord

NACA Profile 64A015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.1586	1.0948
0.7500	1.4015	0.8775
1.2500	1.7844	0.6772
2.5000	2.4845	0.4765
5.0000	3.4601	0.3280
7.5000	4.1883	0.2613
10.0000	4.7882	0.2192
15.0000	5.7223	0.1600
20.0000	6.4174	0.1193
25.0000	6.9224	0.0841
30.0000	7.2668	0.0542
35.0000	7.4597	0.0235
40.0000	7.4852	-0.0162
45.0000	7.3100	-0.0526
50.0000	6.9761	-0.0806
55.0000	6.5154	-0.1029
60.0000	5.9546	-0.1214
65.0000	5.3091	-0.1356
70.0000	4.5981	-0.1470
75.0000	3.8476	-0.1525
80.0000	3.0824	-0.1531
85.0000	2.3189	-0.1510
90.0000	1.5532	-0.1567
95.0000	0.7951	-0.1356
100.0000	-0.0000	-19.1584

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4815 percent chord

NACA Profile 65-006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.4680	0.4374
0.7500	0.5639	0.3385
1.2500	0.7052	0.2420
2.5000	0.9520	0.1691
5.0000	1.3110	0.1245
7.5000	1.5905	0.1012
10.0000	1.8243	0.0862
15.0000	2.1977	0.0646
20.0000	2.4814	0.0494
25.0000	2.6957	0.0368
30.0000	2.8510	0.0255
35.0000	2.9505	0.0145
40.0000	2.9971	0.0035
45.0000	2.9818	-0.0099
50.0000	2.8978	-0.0238
55.0000	2.7413	-0.0383
60.0000	2.5198	-0.0498
65.0000	2.2475	-0.0585
70.0000	1.9345	-0.0665
75.0000	1.5921	-0.0704
80.0000	1.2311	-0.0734
85.0000	0.8633	-0.0729
90.0000	0.5069	-0.0686
95.0000	0.1892	-0.0558
100.0000	0.0000	-0.0008

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2303 percent chord

NACA Profile 65-008

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6205	0.5804
0.7500	0.7477	0.4491
1.2500	0.9355	0.3224
2.5000	1.2653	0.2265
5.0000	1.7464	0.1668
7.5000	2.1204	0.1355
10.0000	2.4333	0.1153
15.0000	2.9327	0.0864
20.0000	3.3120	0.0660
25.0000	3.5981	0.0492
30.0000	3.8051	0.0337
35.0000	3.9370	0.0192
40.0000	3.9975	0.0042
45.0000	3.9733	-0.0140
50.0000	3.8556	-0.0332
55.0000	3.6401	-0.0524
60.0000	3.3388	-0.0671
65.0000	2.9714	-0.0792
70.0000	2.5508	-0.0882
75.0000	2.0943	-0.0937
80.0000	1.6145	-0.0974
85.0000	1.1286	-0.0962
90.0000	0.6602	-0.0901
95.0000	0.2463	-0.0723
100.0000	0.0000	-0.0011

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.4060 percent chord

NACA Profile 65-009

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6955	0.6511
0.7500	0.8383	0.5039
1.2500	1.0492	0.3626
2.5000	1.4206	0.2554
5.0000	1.9632	0.1881
7.5000	2.3850	0.1528
10.0000	2.7377	0.1299
15.0000	3.3004	0.0973
20.0000	3.7276	0.0743
25.0000	4.0499	0.0554
30.0000	4.2826	0.0378
35.0000	4.4307	0.0217
40.0000	4.4978	0.0045
45.0000	4.4684	-0.0162
50.0000	4.3329	-0.0381
55.0000	4.0865	-0.0596
60.0000	3.7443	-0.0761
65.0000	3.3284	-0.0897
70.0000	2.8539	-0.0989
75.0000	2.3402	-0.1053
80.0000	1.8014	-0.1094
85.0000	1.2573	-0.1078
90.0000	0.7342	-0.1005
95.0000	0.2739	-0.0802
100.0000	0.0000	-0.0012

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.5100 percent chord

NACA Profile 65-010

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.7697	0.7211
0.7500	0.9278	0.5582
1.2500	1.1616	0.4026
2.5000	1.5748	0.2844
5.0000	2.1794	0.2096
7.5000	2.6491	0.1701
10.0000	3.0418	0.1446
15.0000	3.6681	0.1083
20.0000	4.1435	0.0827
25.0000	4.5020	0.0616
30.0000	4.7605	0.0418
35.0000	4.9247	0.0240
40.0000	4.9981	0.0047
45.0000	4.9631	-0.0184
50.0000	4.8089	-0.0434
55.0000	4.5309	-0.0670
60.0000	4.1471	-0.0853
65.0000	3.6822	-0.1000
70.0000	3.1537	-0.1102
75.0000	2.5828	-0.1172
80.0000	1.9850	-0.1213
85.0000	1.3834	-0.1191
90.0000	0.8064	-0.1105
95.0000	0.3010	-0.0878
100.0000	0.0000	-0.0013

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.6242 percent chord

NACA Profile 65-012

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.9147	0.8590
0.7500	1.1031	0.6655
1.2500	1.3824	0.4823
2.5000	1.8792	0.3430
5.0000	2.6091	0.2529
7.5000	3.1756	0.2052
10.0000	3.6490	0.1742
15.0000	4.4035	0.1304
20.0000	4.9758	0.0995
25.0000	5.4070	0.0741
30.0000	5.7172	0.0500
35.0000	5.9135	0.0287
40.0000	5.9990	0.0047
45.0000	5.9512	-0.0235
50.0000	5.7573	-0.0545
55.0000	5.4137	-0.0821
60.0000	4.9446	-0.1044
65.0000	4.3806	-0.1207
70.0000	3.7427	-0.1342
75.0000	3.0576	-0.1408
80.0000	2.3433	-0.1440
85.0000	1.6282	-0.1411
90.0000	0.9461	-0.1298
95.0000	0.3533	-0.1025
100.0000	0.0000	-0.0016

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.8756 percent chord

NACA Profile 65-015

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.1222	1.0592
0.7500	1.3547	0.8223
1.2500	1.7012	0.6005
2.5000	2.3240	0.4323
5.0000	3.2454	0.3192
7.5000	3.9598	0.2586
10.0000	4.5562	0.2194
15.0000	5.5055	0.1640
20.0000	6.2249	0.1250
25.0000	6.7662	0.0928
30.0000	7.1543	0.0626
35.0000	7.3985	0.0352
40.0000	7.5004	0.0041
45.0000	7.4295	-0.0333
50.0000	7.1704	-0.0710
55.0000	6.7225	-0.1065
60.0000	6.1200	-0.1335
65.0000	5.4045	-0.1531
70.0000	4.6011	-0.1664
75.0000	3.7453	-0.1752
80.0000	2.8588	-0.1780
85.0000	1.9777	-0.1732
90.0000	1.1444	-0.1576
95.0000	0.4281	-0.1237
100.0000	0.0000	-0.0020

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.2989 percent chord

NACA Profile 65-018

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.3152	1.2496
0.7500	1.5900	0.9735
1.2500	2.0018	0.7165
2.5000	2.7507	0.5233
5.0000	3.8687	0.3873
7.5000	4.7349	0.3133
10.0000	5.4570	0.2655
15.0000	6.6050	0.1983
20.0000	7.4738	0.1508
25.0000	8.1267	0.1117
30.0000	8.5934	0.0756
35.0000	8.8854	0.0416
40.0000	9.0016	0.0028
45.0000	8.9025	-0.0429
50.0000	8.5722	-0.0897
55.0000	8.0118	-0.1323
60.0000	7.2713	-0.1622
65.0000	6.4011	-0.1846
70.0000	5.4316	-0.1999
75.0000	4.4047	-0.2097
80.0000	3.3493	-0.2107
85.0000	2.3072	-0.2042
90.0000	1.3305	-0.1838
95.0000	0.4987	-0.1440
100.0000	0.0000	-0.0024

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.7532 percent chord

NACA Profile 65-021

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.4909	1.4277
0.7500	1.8057	1.1178
1.2500	2.2805	0.8291
2.5000	3.1550	0.6160
5.0000	4.4755	0.4575
7.5000	5.4980	0.3695
10.0000	6.3493	0.3127
15.0000	7.7005	0.2333
20.0000	8.7216	0.1771
25.0000	9.4880	0.1307
30.0000	10.0344	0.0884
35.0000	10.3740	0.0480
40.0000	10.5025	0.0008
45.0000	10.3711	-0.0524
50.0000	9.9609	-0.1119
55.0000	9.2823	-0.1578
60.0000	8.3992	-0.1915
65.0000	7.3699	-0.2198
70.0000	6.2331	-0.2360
75.0000	5.0374	-0.2428
80.0000	3.8165	-0.2435
85.0000	2.6181	-0.2339
90.0000	1.5056	-0.2083
95.0000	0.5655	-0.1630
100.0000	-0.0000	-0.0027

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2099 percent chord

NACA Profile 65A006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.4785	0.4384
0.7500	0.5757	0.3509
1.2500	0.7279	0.2661
2.5000	0.9890	0.1677
5.0000	1.3199	0.1156
7.5000	1.5958	0.1025
10.0000	1.8282	0.0852
15.0000	2.1962	0.0637
20.0000	2.4754	0.0484
25.0000	2.6872	0.0362
30.0000	2.8415	0.0259
35.0000	2.9439	0.0157
40.0000	2.9949	0.0049
45.0000	2.9908	-0.0064
50.0000	2.9247	-0.0196
55.0000	2.7931	-0.0326
60.0000	2.6014	-0.0437
65.0000	2.3631	-0.0519
70.0000	2.0859	-0.0591
75.0000	1.7752	-0.0651
80.0000	1.4389	-0.0692
85.0000	1.0858	-0.0713
90.0000	0.7307	-0.0720
95.0000	0.3693	-0.0678
100.0000	-0.0000	-2.3275

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2534 percent chord

NACA Profile 65A008

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6302	0.5823
0.7500	0.7597	0.4686
1.2500	0.9633	0.3560
2.5000	1.3124	0.2240
5.0000	1.7556	0.1552
7.5000	2.1256	0.1371
10.0000	2.4365	0.1141
15.0000	2.9289	0.0852
20.0000	3.3022	0.0648
25.0000	3.5851	0.0484
30.0000	3.7910	0.0344
35.0000	3.9273	0.0208
40.0000	3.9942	0.0063
45.0000	3.9866	-0.0093
50.0000	3.8946	-0.0271
55.0000	3.7143	-0.0447
60.0000	3.4545	-0.0587
65.0000	3.1338	-0.0697
70.0000	2.7623	-0.0792
75.0000	2.3473	-0.0868
80.0000	1.8997	-0.0927
85.0000	1.4320	-0.0937
90.0000	0.9627	-0.0957
95.0000	0.4873	-0.0886
100.0000	-0.0000	-3.7972

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.4370 percent chord

NACA Profile 65A010

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.7753	0.7243
0.7500	0.9368	0.5866
1.2500	1.1923	0.4471
2.5000	1.6303	0.2809
5.0000	2.1872	0.1953
7.5000	2.6525	0.1721
10.0000	3.0429	0.1432
15.0000	3.6607	0.1069
20.0000	4.1288	0.0812
25.0000	4.4834	0.0608
30.0000	4.7413	0.0428
35.0000	4.9114	0.0256
40.0000	4.9938	0.0075
45.0000	4.9816	-0.0126
50.0000	4.8618	-0.0353
55.0000	4.6306	-0.0572
60.0000	4.3010	-0.0739
65.0000	3.8966	-0.0876
70.0000	3.4298	-0.0994
75.0000	2.9104	-0.1081
80.0000	2.3518	-0.1149
85.0000	1.7714	-0.1158
90.0000	1.1893	-0.1188
95.0000	0.6033	-0.1089
100.0000	-0.0000	-6.0657

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.6523 percent chord

NACA Profile 65A012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9120	0.8634
0.7500	1.1052	0.7046
1.2500	1.4133	0.5398
2.5000	1.9415	0.3385
5.0000	2.6134	0.2360
7.5000	3.1755	0.2077
10.0000	3.6465	0.1726
15.0000	4.3911	0.1288
20.0000	4.9550	0.0979
25.0000	5.3819	0.0733
30.0000	5.6920	0.0511
35.0000	5.8961	0.0304
40.0000	5.9937	0.0087
45.0000	5.9758	-0.0163
50.0000	5.8264	-0.0435
55.0000	5.5421	-0.0698
60.0000	5.1411	-0.0896
65.0000	4.6518	-0.1055
70.0000	4.0889	-0.1190
75.0000	3.4650	-0.1291
80.0000	2.7959	-0.1367
85.0000	2.1043	-0.1379
90.0000	1.4110	-0.1410
95.0000	0.7173	-0.1284
100.0000	-0.0000	-9.4741

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.8908 percent chord

NACA Profile 65A015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.0979	1.0636
0.7500	1.3375	0.8799
1.2500	1.7256	0.6825
2.5000	2.3921	0.4268
5.0000	3.2399	0.2980
7.5000	3.9501	0.2624
10.0000	4.5444	0.2177
15.0000	5.4826	0.1622
20.0000	6.1922	0.1232
25.0000	6.7291	0.0925
30.0000	7.1185	0.0639
35.0000	7.3738	0.0375
40.0000	7.4938	0.0099
45.0000	7.4655	-0.0224
50.0000	7.2686	-0.0560
55.0000	6.9009	-0.0888
60.0000	6.3898	-0.1141
65.0000	5.7712	-0.1327
70.0000	5.0631	-0.1489
75.0000	4.2819	-0.1620
80.0000	3.4477	-0.1710
85.0000	2.5920	-0.1710
90.0000	1.7352	-0.1742
95.0000	0.8854	-0.1559
100.0000	-0.0000	-19.0339

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.2515 percent chord

NACA Profile 66-006

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.4592	0.4300
0.7500	0.5529	0.3294
1.2500	0.6896	0.2309
2.5000	0.9174	0.1552
5.0000	1.2562	0.1199
7.5000	1.5255	0.0975
10.0000	1.7511	0.0840
15.0000	2.1187	0.0641
20.0000	2.3999	0.0492
25.0000	2.6171	0.0378
30.0000	2.7810	0.0279
35.0000	2.8973	0.0190
40.0000	2.9696	0.0100
45.0000	2.9986	0.0013
50.0000	2.9839	-0.0074
55.0000	2.9229	-0.0172
60.0000	2.8083	-0.0296
65.0000	2.6116	-0.0504
70.0000	2.3136	-0.0676
75.0000	1.9511	-0.0773
80.0000	1.5436	-0.0853
85.0000	1.1066	-0.0884
90.0000	0.6681	-0.0862
95.0000	0.2625	-0.0732
100.0000	0.0000	-0.0009

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2179 percent chord

NACA Profile 66-008

x	y	dy/dx
0.0000	0.0000	*****
0.5000	0.6098	0.5690
0.7500	0.7338	0.4356
1.2500	0.9147	0.3062
2.5000	1.2182	0.2079
5.0000	1.6719	0.1605
7.5000	2.0320	0.1303
10.0000	2.3337	0.1123
15.0000	2.8248	0.0857
20.0000	3.2003	0.0658
25.0000	3.4903	0.0505
30.0000	3.7091	0.0373
35.0000	3.8642	0.0253
40.0000	3.9604	0.0131
45.0000	3.9984	0.0016
50.0000	3.9777	-0.0102
55.0000	3.8946	-0.0235
60.0000	3.7378	-0.0408
65.0000	3.4657	-0.0694
70.0000	3.0592	-0.0915
75.0000	2.5714	-0.1039
80.0000	2.0258	-0.1137
85.0000	1.4453	-0.1169
90.0000	0.8674	-0.1131
95.0000	0.3381	-0.0952
100.0000	-0.0000	-0.0011

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.3894 percent chord

NACA Profile 66-009

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.6843	0.6373
0.7500	0.8232	0.4878
1.2500	1.0259	0.3435
2.5000	1.3672	0.2343
5.0000	1.8787	0.1809
7.5000	2.2845	0.1468
10.0000	2.6244	0.1266
15.0000	3.1776	0.0965
20.0000	3.6004	0.0741
25.0000	3.9270	0.0569
30.0000	4.1733	0.0419
35.0000	4.3478	0.0284
40.0000	4.4558	0.0147
45.0000	4.4983	0.0018
50.0000	4.4745	-0.0117
55.0000	4.3799	-0.0268
60.0000	4.2012	-0.0468
65.0000	3.8895	-0.0789
70.0000	3.4272	-0.1034
75.0000	2.8759	-0.1172
80.0000	2.2609	-0.1280
85.0000	1.6093	-0.1309
90.0000	0.9631	-0.1260
95.0000	0.3739	-0.1057
100.0000	0.0000	-0.0012

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.4924 percent chord

NACA Profile 66-010

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.7583	0.7046
0.7500	0.9117	0.5392
1.2500	1.1360	0.3804
2.5000	1.5150	0.2609
5.0000	2.0846	0.2014
7.5000	2.5364	0.1634
10.0000	2.9146	0.1408
15.0000	3.5301	0.1073
20.0000	4.0003	0.0824
25.0000	4.3635	0.0634
30.0000	4.6374	0.0466
35.0000	4.8314	0.0315
40.0000	4.9513	0.0163
45.0000	4.9983	0.0019
50.0000	4.9712	-0.0132
55.0000	4.8649	-0.0300
60.0000	4.6636	-0.0530
65.0000	4.3111	-0.0888
70.0000	3.7920	-0.1154
75.0000	3.1768	-0.1305
80.0000	2.4922	-0.1423
85.0000	1.7699	-0.1449
90.0000	1.0561	-0.1387
95.0000	0.4084	-0.1159
100.0000	0.0000	-0.0014

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 0.6075 percent chord

NACA Profile 66-012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9038	0.8364
0.7500	1.0859	0.6398
1.2500	1.3525	0.4534
2.5000	1.8067	0.3142
5.0000	2.4936	0.2428
7.5000	3.0378	0.1968
10.0000	3.4933	0.1696
15.0000	4.2340	0.1292
20.0000	4.7996	0.0991
25.0000	5.2364	0.0763
30.0000	5.5656	0.0560
35.0000	5.7987	0.0376
40.0000	5.9424	0.0197
45.0000	5.9981	0.0022
50.0000	5.9642	-0.0163
55.0000	5.8339	-0.0366
60.0000	5.5857	-0.0659
65.0000	5.1477	-0.1097
70.0000	4.5122	-0.1398
75.0000	3.7677	-0.1571
80.0000	2.9432	-0.1706
85.0000	2.0807	-0.1723
90.0000	1.2346	-0.1643
95.0000	0.4738	-0.1352
100.0000	0.0000	-0.0016

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.8698 percent chord

NACA Profile 66-015

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.1157	1.0249
0.7500	1.3386	0.7843
1.2500	1.6666	0.5600
2.5000	2.2326	0.3948
5.0000	3.0980	0.3059
7.5000	3.7831	0.2476
10.0000	4.3558	0.2132
15.0000	5.2863	0.1622
20.0000	5.9963	0.1245
25.0000	6.5444	0.0959
30.0000	6.9573	0.0701
35.0000	7.2494	0.0466
40.0000	7.4291	0.0251
45.0000	7.4979	0.0027
50.0000	7.4531	-0.0208
55.0000	7.2853	-0.0468
60.0000	6.9614	-0.0866
65.0000	6.3846	-0.1441
70.0000	5.5686	-0.1782
75.0000	4.6263	-0.1992
80.0000	3.5911	-0.2135
85.0000	2.5222	-0.2125
90.0000	1.4839	-0.2004
95.0000	0.5635	-0.1619
100.0000	0.0000	-0.0020

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.3452 percent chord

NACA Profile 66-018

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.3179	1.2013
0.7500	1.5791	0.9195
1.2500	1.9652	0.6626
2.5000	2.6413	0.4758
5.0000	3.6886	0.3705
7.5000	4.5176	0.2993
10.0000	5.2097	0.2575
15.0000	6.3331	0.1957
20.0000	7.1893	0.1502
25.0000	7.8502	0.1157
30.0000	8.3477	0.0844
35.0000	8.6995	0.0561
40.0000	8.9159	0.0305
45.0000	8.9977	0.0031
50.0000	8.9415	-0.0249
55.0000	8.7343	-0.0579
60.0000	8.3274	-0.1101
65.0000	7.5989	-0.1800
70.0000	6.5958	-0.2169
75.0000	5.4522	-0.2400
80.0000	4.2058	-0.2540
85.0000	2.9351	-0.2516
90.0000	1.7130	-0.2334
95.0000	0.6441	-0.1860
100.0000	-0.0000	-0.0023

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9049 percent chord

NACA Profile 66-021

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	1.5086	1.3639
0.7500	1.8051	1.0446
1.2500	2.2457	0.7602
2.5000	3.0294	0.5566
5.0000	4.2624	0.4366
7.5000	5.2389	0.3522
10.0000	6.0529	0.3027
15.0000	7.3726	0.2298
20.0000	8.3773	0.1763
25.0000	9.1527	0.1359
30.0000	9.7361	0.0990
35.0000	10.1487	0.0661
40.0000	10.4025	0.0355
45.0000	10.4976	0.0034
50.0000	10.4297	-0.0298
55.0000	10.1809	-0.0700
60.0000	9.6829	-0.1354
65.0000	8.7908	-0.2154
70.0000	7.5948	-0.2551
75.0000	6.2451	-0.2837
80.0000	4.7886	-0.2961
85.0000	3.3208	-0.2893
90.0000	1.9235	-0.2653
95.0000	0.7166	-0.2083
100.0000	0.0000	-0.0026

Stations and ordinates given in per cent of airfoil chord
L.E. Radius= 2.5371 percent chord

NACA Profile 67-012

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.9504	0.8500
0.7500	1.1372	0.6774
1.2500	1.4355	0.5217
2.5000	1.9412	0.3300
5.0000	2.6174	0.2313
7.5000	3.1377	0.1867
10.0000	3.5617	0.1550
15.0000	4.2379	0.1179
20.0000	4.7606	0.0919
25.0000	5.1698	0.0717
30.0000	5.4878	0.0550
35.0000	5.7271	0.0399
40.0000	5.8891	0.0251
45.0000	5.9804	0.0111
50.0000	5.9972	-0.0042
55.0000	5.9368	-0.0206
60.0000	5.7860	-0.0404
65.0000	5.5292	-0.0634
70.0000	5.1376	-0.0965
75.0000	4.5357	-0.1462
80.0000	3.6903	-0.1849
85.0000	2.7246	-0.2018
90.0000	1.6745	-0.2137
95.0000	0.6565	-0.1842
100.0000	0.0000	-0.0030

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0122 percent chord

NACA Profile 67-015

x	y	dy/dx
0.0000	0.0000	*****
0.5000	1.1649	1.0305
0.7500	1.3923	0.8322
1.2500	1.7626	0.6506
2.5000	2.3941	0.4134
5.0000	3.2444	0.2913
7.5000	3.8995	0.2349
10.0000	4.4329	0.1949
15.0000	5.2829	0.1482
20.0000	5.9398	0.1155
25.0000	6.4539	0.0902
30.0000	6.8539	0.0696
35.0000	7.1550	0.0501
40.0000	7.3593	0.0317
45.0000	7.4750	0.0143
50.0000	7.4969	-0.0046
55.0000	7.4214	-0.0261
60.0000	7.2309	-0.0513
65.0000	6.9052	-0.0805
70.0000	6.4023	-0.1249
75.0000	5.6213	-0.1886
80.0000	4.5401	-0.2336
85.0000	3.3271	-0.2539
90.0000	2.0210	-0.2618
95.0000	0.7880	-0.2209
100.0000	-0.0000	-0.0038

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5696 percent chord

NACA Mean Line 62

x	y	dy/dx
0.0000	0.0000	0.6000
0.5000	0.2962	0.5850
0.7500	0.4416	0.5775
1.2500	0.7266	0.5625
2.5000	1.4062	0.5250
5.0000	2.6250	0.4500
7.5000	3.6562	0.3750
10.0000	4.5000	0.3000
15.0000	5.6250	0.1500
20.0000	6.0000	-0.0000
25.0000	5.9766	-0.0094
30.0000	5.9062	-0.0187
35.0000	5.7891	-0.0281
40.0000	5.6250	-0.0375
45.0000	5.4141	-0.0469
50.0000	5.1562	-0.0562
55.0000	4.8516	-0.0656
60.0000	4.5000	-0.0750
65.0000	4.1016	-0.0844
70.0000	3.6562	-0.0937
75.0000	3.1641	-0.1031
80.0000	2.6250	-0.1125
85.0000	2.0391	-0.1219
90.0000	1.4063	-0.1312
95.0000	0.7266	-0.1406
100.0000	0.0000	-0.1500

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 63

x	y	dy/dx
0.0000	0.0000	0.4000
0.5000	0.1983	0.3933
0.7500	0.2962	0.3900
1.2500	0.4896	0.3833
2.5000	0.9583	0.3667
5.0000	1.8333	0.3333
7.5000	2.6250	0.3000
10.0000	3.3333	0.2667
15.0000	4.5000	0.2000
20.0000	5.3333	0.1333
25.0000	5.8333	0.0667
30.0000	6.0000	-0.0000
35.0000	5.9694	-0.0122
40.0000	5.8776	-0.0245
45.0000	5.7245	-0.0367
50.0000	5.5102	-0.0490
55.0000	5.2347	-0.0612
60.0000	4.8980	-0.0735
65.0000	4.5000	-0.0857
70.0000	4.0408	-0.0980
75.0000	3.5204	-0.1102
80.0000	2.9388	-0.1224
85.0000	2.2959	-0.1347
90.0000	1.5918	-0.1469
95.0000	0.8265	-0.1592
100.0000	0.0000	-0.1714

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 64

x	y	dy/dx
0.0000	0.0000	0.3000
0.5000	0.1491	0.2962
0.7500	0.2229	0.2944
1.2500	0.3691	0.2906
2.5000	0.7266	0.2812
5.0000	1.4062	0.2625
7.5000	2.0391	0.2437
10.0000	2.6250	0.2250
15.0000	3.6562	0.1875
20.0000	4.5000	0.1500
25.0000	5.1562	0.1125
30.0000	5.6250	0.0750
35.0000	5.9062	0.0375
40.0000	6.0000	-0.0000
45.0000	5.9583	-0.0167
50.0000	5.8333	-0.0333
55.0000	5.6250	-0.0500
60.0000	5.3333	-0.0667
65.0000	4.9583	-0.0833
70.0000	4.5000	-0.1000
75.0000	3.9583	-0.1167
80.0000	3.3333	-0.1333
85.0000	2.6250	-0.1500
90.0000	1.8333	-0.1667
95.0000	0.9583	-0.1833
100.0000	0.0000	-0.2000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 65

x	y	dy/dx
0.0000	0.0000	0.2400
0.5000	0.1194	0.2376
0.7500	0.1786	0.2364
1.2500	0.2963	0.2340
2.5000	0.5850	0.2280
5.0000	1.1400	0.2160
7.5000	1.6650	0.2040
10.0000	2.1600	0.1920
15.0000	3.0600	0.1680
20.0000	3.8400	0.1440
25.0000	4.5000	0.1200
30.0000	5.0400	0.0960
35.0000	5.4600	0.0720
40.0000	5.7600	0.0480
45.0000	5.9400	0.0240
50.0000	6.0000	-0.0000
55.0000	5.9400	-0.0240
60.0000	5.7600	-0.0480
65.0000	5.4600	-0.0720
70.0000	5.0400	-0.0960
75.0000	4.5000	-0.1200
80.0000	3.8400	-0.1440
85.0000	3.0600	-0.1680
90.0000	2.1600	-0.1920
95.0000	1.1400	-0.2160
100.0000	0.0000	-0.2400

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 66

x	y	dy/dx
0.0000	0.0000	0.2000
0.5000	0.0996	0.1983
0.7500	0.1491	0.1975
1.2500	0.2474	0.1958
2.5000	0.4896	0.1917
5.0000	0.9583	0.1833
7.5000	1.4062	0.1750
10.0000	1.8333	0.1667
15.0000	2.6250	0.1500
20.0000	3.3333	0.1333
25.0000	3.9583	0.1167
30.0000	4.5000	0.1000
35.0000	4.9583	0.0833
40.0000	5.3333	0.0667
45.0000	5.6250	0.0500
50.0000	5.8333	0.0333
55.0000	5.9583	0.0167
60.0000	6.0000	-0.0000
65.0000	5.9062	-0.0375
70.0000	5.6250	-0.0750
75.0000	5.1563	-0.1125
80.0000	4.5000	-0.1500
85.0000	3.6562	-0.1875
90.0000	2.6250	-0.2250
95.0000	1.4063	-0.2625
100.0000	0.0000	-0.3000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 67

x	y	dy/dx
0.0000	0.0000	0.1714
0.5000	0.0854	0.1702
0.7500	0.1279	0.1696
1.2500	0.2124	0.1684
2.5000	0.4209	0.1653
5.0000	0.8265	0.1592
7.5000	1.2168	0.1531
10.0000	1.5918	0.1469
15.0000	2.2959	0.1347
20.0000	2.9388	0.1224
25.0000	3.5204	0.1102
30.0000	4.0408	0.0980
35.0000	4.5000	0.0857
40.0000	4.8980	0.0735
45.0000	5.2347	0.0612
50.0000	5.5102	0.0490
55.0000	5.7245	0.0367
60.0000	5.8776	0.0245
65.0000	5.9694	0.0122
70.0000	6.0000	-0.0000
75.0000	5.8333	-0.0667
80.0000	5.3333	-0.1333
85.0000	4.5000	-0.2000
90.0000	3.3333	-0.2667
95.0000	1.8333	-0.3333
100.0000	0.0000	-0.4000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 210

x	y	dy/dx
0.0000	0.0000	0.5961
0.5000	0.2726	0.4958
0.7500	0.3907	0.4491
1.2500	0.5932	0.3623
2.5000	0.9294	0.1850
5.0000	1.1134	-0.0002
7.5000	1.0871	-0.0118
10.0000	1.0577	-0.0118
15.0000	0.9989	-0.0118
20.0000	0.9402	-0.0118
25.0000	0.8814	-0.0118
30.0000	0.8227	-0.0118
35.0000	0.7639	-0.0118
40.0000	0.7051	-0.0118
45.0000	0.6464	-0.0118
50.0000	0.5876	-0.0118
55.0000	0.5289	-0.0118
60.0000	0.4701	-0.0118
65.0000	0.4113	-0.0118
70.0000	0.3526	-0.0118
75.0000	0.2938	-0.0118
80.0000	0.2350	-0.0118
85.0000	0.1763	-0.0118
90.0000	0.1175	-0.0118
95.0000	0.0588	-0.0118
100.0000	0.0000	-0.0118

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 220

x	y	dy/dx
0.0000	0.0000	0.3927
0.5000	0.1883	0.3608
0.7500	0.2766	0.3454
1.2500	0.4417	0.3154
2.5000	0.7919	0.2462
5.0000	1.2578	0.1319
7.5000	1.4784	0.0499
10.0000	1.5344	0.0002
15.0000	1.4634	-0.0172
20.0000	1.3773	-0.0172
25.0000	1.2912	-0.0172
30.0000	1.2052	-0.0172
35.0000	1.1191	-0.0172
40.0000	1.0330	-0.0172
45.0000	0.9469	-0.0172
50.0000	0.8608	-0.0172
55.0000	0.7747	-0.0172
60.0000	0.6887	-0.0172
65.0000	0.6026	-0.0172
70.0000	0.5165	-0.0172
75.0000	0.4304	-0.0172
80.0000	0.3443	-0.0172
85.0000	0.2582	-0.0172
90.0000	0.1722	-0.0172
95.0000	0.0861	-0.0172
100.0000	0.0000	-0.0172

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 230

x	y	dy/dx
0.0000	0.0000	0.3051
0.5000	0.1485	0.2891
0.7500	0.2198	0.2813
1.2500	0.3566	0.2659
2.5000	0.6659	0.2293
5.0000	1.1548	0.1635
7.5000	1.4915	0.1076
10.0000	1.7011	0.0617
15.0000	1.8386	-0.0001
20.0000	1.7667	-0.0220
25.0000	1.6563	-0.0221
30.0000	1.5459	-0.0221
35.0000	1.4355	-0.0221
40.0000	1.3250	-0.0221
45.0000	1.2146	-0.0221
50.0000	1.1042	-0.0221
55.0000	0.9938	-0.0221
60.0000	0.8834	-0.0221
65.0000	0.7729	-0.0221
70.0000	0.6625	-0.0221
75.0000	0.5521	-0.0221
80.0000	0.4417	-0.0221
85.0000	0.3313	-0.0221
90.0000	0.2208	-0.0221
95.0000	0.1104	-0.0221
100.0000	0.0000	-0.0221

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 240

x	y	dy/dx
0.0000	0.0000	0.2523
0.5000	0.1238	0.2428
0.7500	0.1839	0.2381
1.2500	0.3006	0.2288
2.5000	0.5724	0.2062
5.0000	1.0347	0.1643
7.5000	1.3974	0.1265
10.0000	1.6708	0.0929
15.0000	1.9914	0.0381
20.0000	2.0795	-0.0001
25.0000	2.0181	-0.0217
30.0000	1.8902	-0.0270
35.0000	1.7552	-0.0270
40.0000	1.6202	-0.0270
45.0000	1.4851	-0.0270
50.0000	1.3501	-0.0270
55.0000	1.2151	-0.0270
60.0000	1.0801	-0.0270
65.0000	0.9451	-0.0270
70.0000	0.8101	-0.0270
75.0000	0.6751	-0.0270
80.0000	0.5401	-0.0270
85.0000	0.4050	-0.0270
90.0000	0.2700	-0.0270
95.0000	0.1350	-0.0270
100.0000	0.0000	-0.0270

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 250

x	y	dy/dx
0.0000	0.0000	0.2147
0.5000	0.1058	0.2084
0.7500	0.1575	0.2053
1.2500	0.2586	0.1992
2.5000	0.4982	0.1842
5.0000	0.9225	0.1556
7.5000	1.2779	0.1291
10.0000	1.5696	0.1046
15.0000	1.9817	0.0616
20.0000	2.1993	0.0267
25.0000	2.2626	-0.0001
30.0000	2.2120	-0.0188
35.0000	2.0880	-0.0295
40.0000	1.9308	-0.0322
45.0000	1.7699	-0.0322
50.0000	1.6090	-0.0322
55.0000	1.4481	-0.0322
60.0000	1.2872	-0.0322
65.0000	1.1263	-0.0322
70.0000	0.9654	-0.0322
75.0000	0.8045	-0.0322
80.0000	0.6436	-0.0322
85.0000	0.4827	-0.0322
90.0000	0.3218	-0.0322
95.0000	0.1609	-0.0322
100.0000	0.0000	-0.0322

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 430

x	y	dy/dx
0.0000	0.0000	0.6102
0.5000	0.2971	0.5783
0.7500	0.4397	0.5626
1.2500	0.7133	0.5319
2.5000	1.3318	0.4586
5.0000	2.3095	0.3269
7.5000	2.9831	0.2152
10.0000	3.4023	0.1235
15.0000	3.6773	-0.0002
20.0000	3.5334	-0.0441
25.0000	3.3126	-0.0442
30.0000	3.0917	-0.0442
35.0000	2.8709	-0.0442
40.0000	2.6501	-0.0442
45.0000	2.4292	-0.0442
50.0000	2.2084	-0.0442
55.0000	1.9875	-0.0442
60.0000	1.7667	-0.0442
65.0000	1.5459	-0.0442
70.0000	1.3250	-0.0442
75.0000	1.1042	-0.0442
80.0000	0.8834	-0.0442
85.0000	0.6625	-0.0442
90.0000	0.4417	-0.0442
95.0000	0.2208	-0.0442
100.0000	0.0000	-0.0442

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 211

x	y	dy/dx
0.0000	0.0000	0.0794
0.5000	0.0351	0.0615
0.7500	0.0495	0.0534
1.2500	0.0725	0.0389
2.5000	0.1029	0.0121
5.0000	0.1061	-0.0022
7.5000	0.1007	-0.0022
10.0000	0.0953	-0.0021
15.0000	0.0846	-0.0021
20.0000	0.0741	-0.0021
25.0000	0.0638	-0.0020
30.0000	0.0540	-0.0019
35.0000	0.0445	-0.0018
40.0000	0.0356	-0.0017
45.0000	0.0273	-0.0016
50.0000	0.0196	-0.0015
55.0000	0.0128	-0.0013
60.0000	0.0068	-0.0011
65.0000	0.0017	-0.0009
70.0000	-0.0023	-0.0007
75.0000	-0.0052	-0.0005
80.0000	-0.0069	-0.0002
85.0000	-0.0073	0.0001
90.0000	-0.0064	0.0003
95.0000	-0.0039	0.0006
100.0000	0.0000	0.0009

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 221

x	y	dy/dx
0.0000	0.0000	0.4159
0.5000	0.1996	0.3828
0.7500	0.2933	0.3667
1.2500	0.4688	0.3355
2.5000	0.8421	0.2632
5.0000	1.3431	0.1430
7.5000	1.5841	0.0552
10.0000	1.6463	0.0000
15.0000	1.5528	-0.0234
20.0000	1.4360	-0.0233
25.0000	1.3200	-0.0231
30.0000	1.2051	-0.0228
35.0000	1.0919	-0.0224
40.0000	0.9809	-0.0219
45.0000	0.8726	-0.0214
50.0000	0.7675	-0.0207
55.0000	0.6660	-0.0199
60.0000	0.5687	-0.0190
65.0000	0.4761	-0.0180
70.0000	0.3886	-0.0169
75.0000	0.3068	-0.0158
80.0000	0.2311	-0.0145
85.0000	0.1621	-0.0131
90.0000	0.1003	-0.0116
95.0000	0.0461	-0.0100
100.0000	0.0000	-0.0084

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 231

x	y	dy/dx
0.0000	0.0000	0.3364
0.5000	0.1639	0.3195
0.7500	0.2428	0.3111
1.2500	0.3942	0.2948
2.5000	0.7380	0.2556
5.0000	1.2865	0.1848
7.5000	1.6701	0.1238
10.0000	1.9136	0.0726
15.0000	2.0788	0.0000
20.0000	1.9794	-0.0332
25.0000	1.8035	-0.0354
30.0000	1.6272	-0.0351
35.0000	1.4532	-0.0345
40.0000	1.2827	-0.0337
45.0000	1.1170	-0.0325
50.0000	0.9576	-0.0312
55.0000	0.8058	-0.0295
60.0000	0.6629	-0.0276
65.0000	0.5302	-0.0254
70.0000	0.4090	-0.0230
75.0000	0.3008	-0.0203
80.0000	0.2068	-0.0173
85.0000	0.1284	-0.0140
90.0000	0.0669	-0.0105
95.0000	0.0237	-0.0067
100.0000	0.0000	-0.0027

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 241

x	y	dy/dx
0.0000	0.0000	0.2843
0.5000	0.1396	0.2740
0.7500	0.2074	0.2689
1.2500	0.3394	0.2589
2.5000	0.6476	0.2345
5.0000	1.1758	0.1888
7.5000	1.5948	0.1471
10.0000	1.9147	0.1095
15.0000	2.2983	0.0466
20.0000	2.4081	0.0000
25.0000	2.3255	-0.0303
30.0000	2.1320	-0.0443
35.0000	1.9058	-0.0453
40.0000	1.6806	-0.0447
45.0000	1.4594	-0.0437
50.0000	1.2447	-0.0421
55.0000	1.0390	-0.0401
60.0000	0.8448	-0.0375
65.0000	0.6645	-0.0345
70.0000	0.5006	-0.0310
75.0000	0.3556	-0.0270
80.0000	0.2319	-0.0224
85.0000	0.1320	-0.0174
90.0000	0.0584	-0.0119
95.0000	0.0136	-0.0059
100.0000	0.0000	0.0006

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line 251

x	y	dy/dx
0.0000	0.0000	0.2521
0.5000	0.1243	0.2451
0.7500	0.1851	0.2416
1.2500	0.3042	0.2347
2.5000	0.5871	0.2179
5.0000	1.0912	0.1857
7.5000	1.5173	0.1555
10.0000	1.8705	0.1273
15.0000	2.3777	0.0769
20.0000	2.6528	0.0345
25.0000	2.7356	0.0000
30.0000	2.6661	-0.0265
35.0000	2.4841	-0.0450
40.0000	2.2294	-0.0555
45.0000	1.9421	-0.0582
50.0000	1.6525	-0.0575
55.0000	1.3694	-0.0556
60.0000	1.0980	-0.0527
65.0000	0.8438	-0.0488
70.0000	0.6122	-0.0437
75.0000	0.4086	-0.0376
80.0000	0.2384	-0.0303
85.0000	0.1071	-0.0220
90.0000	0.0200	-0.0126
95.0000	-0.0175	-0.0022
100.0000	0.0000	0.0094

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.0$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.4601	0.7587
0.7500	0.6409	0.6921
1.2500	0.9639	0.6071
2.5000	1.6409	0.4889
5.0000	2.6927	0.3656
7.5000	3.5068	0.2903
10.0000	4.1606	0.2352
15.0000	5.1238	0.1551
20.0000	5.7472	0.0969
25.0000	6.1141	0.0516
30.0000	6.2770	0.0148
35.0000	6.2729	-0.0155
40.0000	6.1300	-0.0409
45.0000	5.8713	-0.0620
50.0000	5.5159	-0.0796
55.0000	5.0808	-0.0939
60.0000	4.5813	-0.1054
65.0000	4.0315	-0.1141
70.0000	3.4452	-0.1200
75.0000	2.8357	-0.1233
80.0000	2.2170	-0.1237
85.0000	1.6039	-0.1210
90.0000	1.0133	-0.1145
95.0000	0.4668	-0.1030
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.1$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.4400	0.7344
0.7500	0.6157	0.6748
1.2500	0.9325	0.5990
2.5000	1.6083	0.4937
5.0000	2.6892	0.3824
7.5000	3.5511	0.3107
10.0000	4.2527	0.2506
15.0000	5.2612	0.1609
20.0000	5.9054	0.0998
25.0000	6.2824	0.0528
30.0000	6.4487	0.0150
35.0000	6.4433	-0.0162
40.0000	6.2956	-0.0421
45.0000	6.0294	-0.0637
50.0000	5.6644	-0.0817
55.0000	5.2180	-0.0964
60.0000	4.7057	-0.1081
65.0000	4.1421	-0.1169
70.0000	3.5409	-0.1231
75.0000	2.9160	-0.1264
80.0000	2.2813	-0.1269
85.0000	1.6519	-0.1243
90.0000	1.0450	-0.1178
95.0000	0.4823	-0.1062
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.2$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.4141	0.6949
0.7500	0.5806	0.6405
1.2500	0.8821	0.5713
2.5000	1.5301	0.4759
5.0000	2.5827	0.3766
7.5000	3.4426	0.3149
10.0000	4.1691	0.2680
15.0000	5.3166	0.1937
20.0000	6.1167	0.1241
25.0000	6.5721	0.0634
30.0000	6.7770	0.0203
35.0000	6.7894	-0.0142
40.0000	6.6455	-0.0425
45.0000	6.3728	-0.0659
50.0000	5.9935	-0.0852
55.0000	5.5266	-0.1010
60.0000	4.9888	-0.1136
65.0000	4.3957	-0.1232
70.0000	3.7619	-0.1298
75.0000	3.1020	-0.1336
80.0000	2.4307	-0.1344
85.0000	1.7636	-0.1319
90.0000	1.1186	-0.1254
95.0000	0.5183	-0.1136
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.3$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.3892	0.6554
0.7500	0.5463	0.6052
1.2500	0.8317	0.5416
2.5000	1.4478	0.4540
5.0000	2.4575	0.3634
7.5000	3.2925	0.3078
10.0000	4.0080	0.2662
15.0000	5.1721	0.2025
20.0000	6.0520	0.1507
25.0000	6.6853	0.1028
30.0000	7.0721	0.0483
35.0000	7.1754	-0.0020
40.0000	7.0738	-0.0371
45.0000	6.8162	-0.0649
50.0000	6.4333	-0.0875
55.0000	5.9488	-0.1057
60.0000	5.3828	-0.1201
65.0000	4.7531	-0.1312
70.0000	4.0763	-0.1390
75.0000	3.3683	-0.1436
80.0000	2.6453	-0.1450
85.0000	1.9243	-0.1428
90.0000	1.2244	-0.1364
95.0000	0.5698	-0.1243
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.4$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.3659	0.6176
0.7500	0.5140	0.5711
1.2500	0.7836	0.5121
2.5000	1.3674	0.4311
5.0000	2.3296	0.3476
7.5000	3.1312	0.2967
10.0000	3.8238	0.2589
15.0000	4.9685	0.2019
20.0000	5.8619	0.1568
25.0000	6.5458	0.1173
30.0000	7.0385	0.0799
35.0000	7.3429	0.0414
40.0000	7.4390	-0.0072
45.0000	7.2751	-0.0532
50.0000	6.9289	-0.0838
55.0000	6.4486	-0.1073
60.0000	5.8641	-0.1257
65.0000	5.1992	-0.1396
70.0000	4.4745	-0.1496
75.0000	3.7092	-0.1559
80.0000	2.9219	-0.1584
85.0000	2.1321	-0.1568
90.0000	1.3613	-0.1506
95.0000	0.6362	-0.1382
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.5$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.3442	0.5819
0.7500	0.4839	0.5385
1.2500	0.7383	0.4836
2.5000	1.2903	0.4082
5.0000	2.2034	0.3307
7.5000	2.9678	0.2837
10.0000	3.6317	0.2489
15.0000	4.7393	0.1969
20.0000	5.6195	0.1565
25.0000	6.3136	0.1218
30.0000	6.8423	0.0900
35.0000	7.2155	0.0593
40.0000	7.4344	0.0280
45.0000	7.4906	-0.0063
50.0000	7.3545	-0.0531
55.0000	6.9636	-0.0977
60.0000	6.4019	-0.1255
65.0000	5.7212	-0.1457
70.0000	4.9544	-0.1602
75.0000	4.1279	-0.1696
80.0000	3.2661	-0.1743
85.0000	2.3927	-0.1742
90.0000	1.5335	-0.1685
95.0000	0.7195	-0.1556
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.6$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.3240	0.5482
0.7500	0.4557	0.5076
1.2500	0.6955	0.4561
2.5000	1.2166	0.3856
5.0000	2.0803	0.3133
7.5000	2.8054	0.2695
10.0000	3.4371	0.2373
15.0000	4.4971	0.1893
20.0000	5.3485	0.1525
25.0000	6.0311	0.1212
30.0000	6.5661	0.0931
35.0000	6.9650	0.0666
40.0000	7.2330	0.0406
45.0000	7.3701	0.0141
50.0000	7.3705	-0.0143
55.0000	7.2197	-0.0470
60.0000	6.8800	-0.0947
65.0000	6.2764	-0.1401
70.0000	5.5066	-0.1660
75.0000	4.6316	-0.1827
80.0000	3.6914	-0.1923
85.0000	2.7200	-0.1952
90.0000	1.7515	-0.1910
95.0000	0.8249	-0.1779
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.7$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.3051	0.5162
0.7500	0.4290	0.4780
1.2500	0.6549	0.4296
2.5000	1.1458	0.3633
5.0000	1.9599	0.2955
7.5000	2.6442	0.2545
10.0000	3.2413	0.2245
15.0000	4.2461	0.1799
20.0000	5.0578	0.1459
25.0000	5.7145	0.1174
30.0000	6.2371	0.0920
35.0000	6.6376	0.0684
40.0000	6.9225	0.0457
45.0000	7.0946	0.0231
50.0000	7.1529	0.0000
55.0000	7.0924	-0.0245
60.0000	6.9030	-0.0519
65.0000	6.5647	-0.0848
70.0000	6.0298	-0.1365
75.0000	5.2049	-0.1851
80.0000	4.2145	-0.2086
85.0000	3.1395	-0.2196
90.0000	2.0369	-0.2196
95.0000	0.9637	-0.2073
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.8$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.2870	0.4854
0.7500	0.4035	0.4493
1.2500	0.6158	0.4036
2.5000	1.0768	0.3410
5.0000	1.8408	0.2772
7.5000	2.4826	0.2387
10.0000	3.0426	0.2105
15.0000	3.9852	0.1689
20.0000	4.7480	0.1373
25.0000	5.3672	0.1110
30.0000	5.8631	0.0877
35.0000	6.2478	0.0663
40.0000	6.5283	0.0460
45.0000	6.7086	0.0261
50.0000	6.7896	0.0062
55.0000	6.7696	-0.0143
60.0000	6.6442	-0.0361
65.0000	6.4049	-0.0601
70.0000	6.0370	-0.0879
75.0000	5.5139	-0.1231
80.0000	4.7713	-0.1841
85.0000	3.6826	-0.2392
90.0000	2.4349	-0.2558
95.0000	1.1626	-0.2490
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.9$

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.2694	0.4548
0.7500	0.3786	0.4206
1.2500	0.5772	0.3774
2.5000	1.0078	0.3182
5.0000	1.7195	0.2579
7.5000	2.3159	0.2215
10.0000	2.8351	0.1950
15.0000	3.7069	0.1560
20.0000	4.4102	0.1264
25.0000	4.9796	0.1020
30.0000	5.4347	0.0805
35.0000	5.7873	0.0608
40.0000	6.0449	0.0423
45.0000	6.2118	0.0245
50.0000	6.2899	0.0068
55.0000	6.2793	-0.0111
60.0000	6.1777	-0.0297
65.0000	5.9808	-0.0494
70.0000	5.6808	-0.0710
75.0000	5.2653	-0.0958
80.0000	4.7137	-0.1260
85.0000	3.9871	-0.1673
90.0000	2.9841	-0.2520
95.0000	1.5031	-0.3146
100.0000	0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line a=1.0

x	y	dy/dx
0.0000	-0.0000	0.0000
0.5000	0.2505	0.4212
0.7500	0.3515	0.3888
1.2500	0.5347	0.3477
2.5000	0.9303	0.2915
5.0000	1.5797	0.2343
7.5000	2.1198	0.1999
10.0000	2.5869	0.1748
15.0000	3.3638	0.1380
20.0000	3.9821	0.1103
25.0000	4.4749	0.0874
30.0000	4.8611	0.0674
35.0000	5.1522	0.0493
40.0000	5.3557	0.0323
45.0000	5.4760	0.0160
50.0000	5.5159	0.0000
55.0000	5.4760	-0.0160
60.0000	5.3557	-0.0323
65.0000	5.1522	-0.0493
70.0000	4.8611	-0.0674
75.0000	4.4749	-0.0874
80.0000	3.9821	-0.1103
85.0000	3.3638	-0.1380
90.0000	2.5869	-0.1748
95.0000	1.5797	-0.2343
100.0000	-0.0000	0.0000

(Stations and ordinates given in per cent of airfoil chord)

NACA Mean Line $a=0.8$ (modified)

x	y	dy/dx
0.0000	0.0000	0.0000
0.5000	0.2811	0.4754
0.7500	0.3953	0.4400
1.2500	0.6032	0.3953
2.5000	1.0547	0.3340
5.0000	1.8030	0.2715
7.5000	2.4317	0.2338
10.0000	2.9801	0.2062
15.0000	3.9035	0.1654
20.0000	4.6506	0.1345
25.0000	5.2571	0.1087
30.0000	5.7428	0.0859
35.0000	6.1196	0.0650
40.0000	6.3944	0.0451
45.0000	6.5709	0.0256
50.0000	6.6503	0.0061
55.0000	6.6307	-0.0140
60.0000	6.5079	-0.0354
65.0000	6.2735	-0.0589
70.0000	5.9131	-0.0861
75.0000	5.4008	-0.1206
80.0000	4.6734	-0.1803
85.0000	3.6070	-0.2343
90.0000	2.4521	-0.2452
95.0000	1.2261	-0.2452
100.0000	-0.0000	-0.2452

(Stations and ordinates given in per cent of airfoil chord)

NACA Section 1408

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.8729	0.5000	-0.7583	0.4598	0.8381	0.5402	-0.7884
0.7500	1.0590	0.7500	-0.9240	0.7015	1.0259	0.7985	-0.9516
1.2500	1.3553	1.2500	-1.1734	1.1889	1.3226	1.3111	-1.1996
2.5000	1.8921	2.5000	-1.5982	2.4184	1.8623	2.5816	-1.6201
5.0000	2.6273	5.0000	-2.1168	4.8964	2.6019	5.1036	-2.1332
7.5000	3.1588	7.5000	-2.4456	7.3863	3.1375	7.6137	-2.4578
10.0000	3.5746	10.0000	-2.6733	9.8830	3.5572	10.1170	-2.6822
15.0000	4.1820	15.0000	-2.9482	14.8887	4.1711	15.1113	-2.9523
20.0000	4.5799	20.0000	-3.0725	19.9044	4.5738	20.0956	-3.0738
25.0000	4.8221	25.0000	-3.1009	24.9257	4.8195	25.0743	-3.1008
30.0000	4.9390	30.0000	-3.0640	29.9500	4.9383	30.0500	-3.0633
35.0000	4.9499	35.0000	-2.9818	34.9752	4.9500	35.0248	-2.9813
40.0000	4.8687	40.0000	-2.8687	40.0000	4.8687	40.0000	-2.8687
45.0000	4.7139	45.0000	-2.7271	45.0103	4.7135	44.9897	-2.7274
50.0000	4.5025	50.0000	-2.5564	50.0196	4.5015	49.9804	-2.5571
55.0000	4.2406	55.0000	-2.3629	55.0275	4.2390	54.9725	-2.3640
60.0000	3.9332	60.0000	-2.1517	60.0338	3.9309	59.9662	-2.1532
65.0000	3.5839	65.0000	-1.9266	65.0383	3.5811	64.9617	-1.9283
70.0000	3.1956	70.0000	-1.6903	70.0407	3.1923	69.9593	-1.6923
75.0000	2.7698	75.0000	-1.4447	75.0410	2.7662	74.9590	-1.4468
80.0000	2.3076	80.0000	-1.1908	80.0388	2.3039	79.9612	-1.1928
85.0000	1.8090	85.0000	-0.9286	85.0342	1.8054	84.9658	-0.9304
90.0000	1.2733	90.0000	-0.6577	90.0268	1.2703	89.9732	-0.6592
95.0000	0.6991	95.0000	-0.3768	95.0164	0.6972	94.9836	-0.3777
100.0000	0.0843	100.0000	-0.0838	100.0028	0.0840	99.9972	-0.0840

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7052 percent chord
 slope of mean line at LE = 0.0500

NACA Section 1410

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0951	0.5000	-0.9446	0.4498	1.0414	0.5502	-0.9917
0.7500	1.3244	0.7500	-1.1548	0.6894	1.2730	0.8106	-1.1987
1.2500	1.6879	1.2500	-1.4732	1.1736	1.6379	1.3264	-1.5149
2.5000	2.3431	2.5000	-2.0199	2.3980	2.2976	2.6020	-2.0554
5.0000	3.2320	5.0000	-2.6981	4.8705	3.1938	5.1295	-2.7250
7.5000	3.8687	7.5000	-3.1367	7.3579	3.8369	7.6421	-3.1572
10.0000	4.3630	10.0000	-3.4468	9.8538	4.3371	10.1462	-3.4621
15.0000	5.0775	15.0000	-3.8352	14.8609	5.0615	15.1391	-3.8428
20.0000	5.5385	20.0000	-4.0270	19.8805	5.5298	20.1195	-4.0298
25.0000	5.8132	25.0000	-4.0906	24.9072	5.8095	25.0928	-4.0908
30.0000	5.9393	30.0000	-4.0643	29.9375	5.9385	30.0625	-4.0635
35.0000	5.9411	35.0000	-3.9734	34.9690	5.9415	35.0310	-3.9727
40.0000	5.8358	40.0000	-3.8358	40.0000	5.8358	40.0000	-3.8358
45.0000	5.6442	45.0000	-3.6570	45.0129	5.6437	44.9871	-3.6575
50.0000	5.3853	50.0000	-3.4382	50.0245	5.3838	49.9755	-3.4394
55.0000	5.0668	55.0000	-3.1876	55.0344	5.0644	54.9656	-3.1894
60.0000	4.6948	60.0000	-2.9113	60.0423	4.6915	59.9577	-2.9137
65.0000	4.2740	65.0000	-2.6141	65.0478	4.2698	64.9522	-2.6170
70.0000	3.8078	70.0000	-2.2996	70.0509	3.8028	69.9491	-2.3028
75.0000	3.2982	75.0000	-1.9699	75.0512	3.2928	74.9488	-1.9734
80.0000	2.7465	80.0000	-1.6264	80.0486	2.7409	79.9514	-1.6298
85.0000	2.1527	85.0000	-1.2693	85.0427	2.1474	84.9573	-1.2724
90.0000	1.5159	90.0000	-0.8979	90.0335	1.5115	89.9665	-0.9004
95.0000	0.8344	95.0000	-0.5105	95.0205	0.8315	94.9795	-0.5121
100.0000	0.1055	100.0000	-0.1047	100.0035	0.1049	99.9965	-0.1049

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.1019 percent chord

slope of mean line at LE = 0.0500

NACA Section 1412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.3213	0.5000	-1.1272	0.4398	1.2447	0.5602	-1.1950
0.7500	1.5939	0.7500	-1.3820	0.6772	1.5202	0.8228	-1.4459
1.2500	2.0243	1.2500	-1.7695	1.1584	1.9532	1.3416	-1.8302
2.5000	2.7974	2.5000	-2.4384	2.3776	2.7329	2.6224	-2.4908
5.0000	3.8393	5.0000	-3.2767	4.8446	3.7857	5.1554	-3.3169
7.5000	4.5806	7.5000	-3.8257	7.3295	4.5363	7.6705	-3.8566
10.0000	5.1530	10.0000	-4.2187	9.8245	5.1170	10.1755	-4.2420
15.0000	5.9739	15.0000	-4.7212	14.8330	5.9519	15.1670	-4.7332
20.0000	6.4975	20.0000	-4.9809	19.8566	6.4858	20.1434	-4.9858
25.0000	6.8044	25.0000	-5.0801	24.8886	6.7996	25.1114	-5.0808
30.0000	6.9397	30.0000	-5.0647	29.9250	6.9388	30.0750	-5.0638
35.0000	6.9323	35.0000	-4.9651	34.9628	6.9329	35.0372	-4.9641
40.0000	6.8030	40.0000	-4.8030	40.0000	6.8030	40.0000	-4.8030
45.0000	6.5746	45.0000	-4.5869	45.0155	6.5738	44.9845	-4.5877
50.0000	6.2682	50.0000	-4.3200	50.0294	6.2662	49.9706	-4.3217
55.0000	5.8931	55.0000	-4.0121	55.0413	5.8898	54.9587	-4.0148
60.0000	5.4567	60.0000	-3.6706	60.0507	5.4520	59.9493	-3.6742
65.0000	4.9644	65.0000	-3.3013	65.0574	4.9585	64.9426	-3.3057
70.0000	4.4204	70.0000	-2.9085	70.0611	4.4134	69.9389	-2.9134
75.0000	3.8270	75.0000	-2.4948	75.0614	3.8194	74.9386	-2.5000
80.0000	3.1858	80.0000	-2.0618	80.0583	3.1780	79.9417	-2.0669
85.0000	2.4967	85.0000	-1.6097	85.0513	2.4894	84.9487	-1.6144
90.0000	1.7588	90.0000	-1.1377	90.0402	1.7527	89.9598	-1.1416
95.0000	0.9699	95.0000	-0.6439	95.0246	0.9659	94.9754	-0.6465
100.0000	0.1267	100.0000	-0.1255	100.0042	0.1259	99.9958	-0.1259

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.5867 percent chord

slope of mean line at LE = 0.0500

NACA Section 2408

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.9343	0.5000	-0.7053	0.4200	0.8600	0.5800	-0.7606
0.7500	1.1313	0.7500	-0.8611	0.6533	1.0595	0.8467	-0.9109
1.2500	1.4513	1.2500	-1.0877	1.1283	1.3798	1.3717	-1.1337
2.5000	2.0451	2.5000	-1.4573	2.3373	1.9777	2.6627	-1.4933
5.0000	2.8892	5.0000	-1.8683	4.7934	2.8295	5.2066	-1.8920
7.5000	3.5220	7.5000	-2.0958	7.2733	3.4704	7.7267	-2.1111
10.0000	4.0316	10.0000	-2.2290	9.7665	3.9881	10.2335	-2.2381
15.0000	4.8039	15.0000	-2.3364	14.7777	4.7753	15.2223	-2.3378
20.0000	5.3370	20.0000	-2.3223	19.8090	5.3203	20.1910	-2.3203
25.0000	5.6848	25.0000	-2.2423	24.8516	5.6768	25.1484	-2.2393
30.0000	5.8774	30.0000	-2.1274	29.9000	5.8749	30.1000	-2.1249
35.0000	5.9341	35.0000	-1.9980	34.9504	5.9342	35.0496	-1.9967
40.0000	5.8687	40.0000	-1.8687	40.0000	5.8687	40.0000	-1.8687
45.0000	5.7074	45.0000	-1.7337	45.0207	5.7065	44.9793	-1.7343
50.0000	5.4757	50.0000	-1.5835	50.0392	5.4736	49.9608	-1.5847
55.0000	5.1798	55.0000	-1.4244	55.0550	5.1762	54.9450	-1.4262
60.0000	4.8245	60.0000	-1.2615	60.0676	4.8193	59.9324	-1.2637
65.0000	4.4134	65.0000	-1.0987	65.0765	4.4067	64.9235	-1.1012
70.0000	3.9492	70.0000	-0.9387	70.0814	3.9412	69.9186	-0.9412
75.0000	3.4336	75.0000	-0.7833	75.0819	3.4247	74.9181	-0.7858
80.0000	2.8673	80.0000	-0.6336	80.0777	2.8581	79.9224	-0.6359
85.0000	2.2505	85.0000	-0.4897	85.0683	2.2417	84.9317	-0.4917
90.0000	1.5822	90.0000	-0.3511	90.0535	1.5748	89.9465	-0.3525
95.0000	0.8611	95.0000	-0.2164	95.0328	0.8561	94.9672	-0.2173
100.0000	0.0847	100.0000	-0.0837	100.0056	0.0838	99.9944	-0.0838

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7052 percent chord
 slope of mean line at LE = 0.1000

NACA Section 2410

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.1762	0.5000	-0.8759	0.4000	1.0625	0.6000	-0.9631
0.7500	1.4159	0.7500	-1.0766	0.6292	1.3058	0.8708	-1.1572
1.2500	1.8021	1.2500	-1.3729	1.0978	1.6939	1.4022	-1.4479
2.5000	2.5124	2.5000	-1.8660	2.2966	2.4116	2.7034	-1.9272
5.0000	3.5072	5.0000	-2.4395	4.7418	3.4197	5.2582	-2.4822
7.5000	4.2428	7.5000	-2.7790	7.2166	4.1681	7.7834	-2.8087
10.0000	4.8288	10.0000	-2.9966	9.7081	4.7664	10.2919	-3.0164
15.0000	5.7047	15.0000	-3.2203	14.7221	5.6644	15.2779	-3.2269
20.0000	6.2984	20.0000	-3.2755	19.7612	6.2753	20.2388	-3.2753
25.0000	6.6770	25.0000	-3.2318	24.8145	6.6663	25.1855	-3.2288
30.0000	6.8780	30.0000	-3.1280	29.8750	6.8749	30.1250	-3.1249
35.0000	6.9253	35.0000	-2.9899	34.9380	6.9255	35.0620	-2.9880
40.0000	6.8358	40.0000	-2.8358	40.0000	6.8358	40.0000	-2.8358
45.0000	6.6379	45.0000	-2.6635	45.0258	6.6367	44.9742	-2.6644
50.0000	6.3590	50.0000	-2.4649	50.0490	6.3559	49.9510	-2.4670
55.0000	6.0068	55.0000	-2.2484	55.0688	6.0015	54.9312	-2.2515
60.0000	5.5873	60.0000	-2.0202	60.0845	5.5796	59.9155	-2.0241
65.0000	5.1050	65.0000	-1.7851	65.0956	5.0952	64.9044	-1.7896
70.0000	4.5632	70.0000	-1.5467	70.1017	4.5516	69.8983	-1.5516
75.0000	3.9639	75.0000	-1.3073	75.1023	3.9510	74.8977	-1.3122
80.0000	3.3082	80.0000	-1.0680	80.0971	3.2949	79.9029	-1.0727
85.0000	2.5960	85.0000	-0.8293	85.0854	2.5833	84.9146	-0.8333
90.0000	1.8264	90.0000	-0.5903	90.0669	1.8157	89.9331	-0.5935
95.0000	0.9974	95.0000	-0.3494	95.0410	0.9903	94.9590	-0.3514
100.0000	0.1061	100.0000	-0.1044	100.0070	0.1048	99.9930	-0.1048

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.1019 percent chord
 slope of mean line at LE = 0.1000

NACA Section 2412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.4269	0.5000	-1.0396	0.3800	1.2651	0.6200	-1.1657
0.7500	1.7090	0.7500	-1.2852	0.6050	1.5521	0.8950	-1.4035
1.2500	2.1606	1.2500	-1.6513	1.0674	2.0081	1.4326	-1.7620
2.5000	2.9863	2.5000	-2.2684	2.2559	2.8455	2.7441	-2.3611
5.0000	4.1304	5.0000	-3.0054	4.6901	4.0099	5.3099	-3.0724
7.5000	4.9677	7.5000	-3.4580	7.1599	4.8658	7.8401	-3.5064
10.0000	5.6291	10.0000	-3.7608	9.6498	5.5447	10.3502	-3.7947
15.0000	6.6073	15.0000	-4.1022	14.6666	6.5535	15.3334	-4.1160
20.0000	7.2607	20.0000	-4.2278	19.7135	7.2304	20.2865	-4.2304
25.0000	7.6695	25.0000	-4.2209	24.7774	7.6558	25.2226	-4.2183
30.0000	7.8785	30.0000	-4.1286	29.8500	7.8749	30.1500	-4.1249
35.0000	7.9163	35.0000	-3.9819	34.9256	7.9169	35.0743	-3.9794
40.0000	7.8030	40.0000	-3.8030	40.0000	7.8030	40.0000	-3.8030
45.0000	7.5685	45.0000	-3.5931	45.0310	7.5668	44.9690	-3.5945
50.0000	7.2425	50.0000	-3.3462	50.0588	7.2381	49.9412	-3.3493
55.0000	6.8341	55.0000	-3.0720	55.0825	6.8267	54.9175	-3.0767
60.0000	6.3506	60.0000	-2.7784	60.1014	6.3400	59.8986	-2.7845
65.0000	5.7972	65.0000	-2.4710	65.1147	5.7837	64.8853	-2.4781
70.0000	5.1778	70.0000	-2.1540	70.1221	5.1619	69.8779	-2.1619
75.0000	4.4949	75.0000	-1.8305	75.1228	4.4774	74.8772	-1.8385
80.0000	3.7497	80.0000	-1.5017	80.1165	3.7316	79.8835	-1.5094
85.0000	2.9422	85.0000	-1.1681	85.1025	2.9250	84.8975	-1.1750
90.0000	2.0711	90.0000	-0.8289	90.0803	2.0566	89.9197	-0.8344
95.0000	1.1341	95.0000	-0.4821	95.0492	1.1245	94.9508	-0.4856
100.0000	0.1275	100.0000	-0.1251	100.0084	0.1257	99.9916	-0.1257

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.5867 percent chord

slope of mean line at LE = 0.1000

NACA Section 2415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.8197	0.5000	-1.2730	0.3500	1.5689	0.6500	-1.4696
0.7500	2.1643	0.7500	-1.5853	0.5687	1.9215	0.9313	-1.7729
1.2500	2.7127	1.2500	-2.0563	1.0217	2.4794	1.4783	-2.2333
2.5000	3.7097	2.5000	-2.8602	2.1949	3.4963	2.8051	-3.0119
5.0000	5.0749	5.0000	-3.8444	4.6127	4.8952	5.3873	-3.9577
7.5000	6.0626	7.5000	-4.4683	7.0748	5.9123	7.9252	-4.5529
10.0000	6.8354	10.0000	-4.9006	9.5622	6.7121	10.4378	-4.9621
15.0000	7.9645	15.0000	-5.4213	14.5832	7.8872	15.4168	-5.4497
20.0000	8.7057	20.0000	-5.6542	19.6419	8.6630	20.3582	-5.6630
25.0000	9.1588	25.0000	-5.7039	24.7217	9.1401	25.2783	-5.7026
30.0000	9.3794	30.0000	-5.6295	29.8125	9.3748	30.1875	-5.6248
35.0000	9.4027	35.0000	-5.4700	34.9071	9.4039	35.0929	-5.4664
40.0000	9.2538	40.0000	-5.2538	40.0000	9.2538	40.0000	-5.2538
45.0000	8.9646	45.0000	-4.9874	45.0388	8.9619	44.9612	-4.9897
50.0000	8.5681	50.0000	-4.6676	50.0735	8.5616	49.9265	-4.6727
55.0000	8.0758	55.0000	-4.3069	55.1032	8.0647	54.8968	-4.3147
60.0000	7.4963	60.0000	-3.9148	60.1267	7.4806	59.8733	-3.9250
65.0000	6.8365	65.0000	-3.4986	65.1434	6.8164	64.8566	-3.5109
70.0000	6.1009	70.0000	-3.0638	70.1526	6.0773	69.8474	-3.0773
75.0000	5.2928	75.0000	-2.6139	75.1535	5.2668	74.8465	-2.6280
80.0000	4.4134	80.0000	-2.1509	80.1456	4.3868	79.8544	-2.1646
85.0000	3.4628	85.0000	-1.6751	85.1281	3.4375	84.8719	-1.6875
90.0000	2.4393	90.0000	-1.1858	90.1004	2.4180	89.8996	-1.1958
95.0000	1.3398	95.0000	-0.6805	95.0615	1.3258	94.9385	-0.6869
100.0000	0.1597	100.0000	-0.1561	100.0105	0.1572	99.9895	-0.1572

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.4793 percent chord
 slope of mean line at LE = 0.1000

NACA Section 2418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.2333	0.5000	-1.4921	0.3200	1.8728	0.6800	-1.7734
0.7500	2.6390	0.7500	-1.8707	0.5325	2.2909	0.9675	-2.1423
1.2500	3.2824	1.2500	-2.4466	0.9761	2.9507	1.5239	-2.7046
2.5000	4.4479	2.5000	-3.4379	2.1339	4.1471	2.8661	-3.6628
5.0000	6.0309	5.0000	-4.6713	4.5352	5.7805	5.4648	-4.8430
7.5000	7.1663	7.5000	-5.4689	6.9898	6.9589	8.0102	-5.5995
10.0000	8.0486	10.0000	-6.0325	9.4747	7.8795	10.5253	-6.1295
15.0000	9.3255	15.0000	-6.7358	14.4999	9.2209	15.5001	-6.7834
20.0000	10.1525	20.0000	-7.0783	19.5702	10.0956	20.4298	-7.0956
25.0000	10.6487	25.0000	-7.1861	24.6660	10.6244	25.3340	-7.1869
30.0000	10.8802	30.0000	-7.1303	29.7750	10.8748	30.2250	-7.1248
35.0000	10.8890	35.0000	-6.9583	34.8885	10.8910	35.1115	-6.9535
40.0000	10.7045	40.0000	-6.7045	40.0000	10.7045	40.0000	-6.7045
45.0000	10.3609	45.0000	-6.3815	45.0465	10.3571	44.9535	-6.3849
50.0000	9.8942	50.0000	-5.9887	50.0882	9.8850	49.9118	-5.9961
55.0000	9.3182	55.0000	-5.5410	55.1238	9.3026	54.8762	-5.5526
60.0000	8.6431	60.0000	-5.0501	60.1521	8.6211	59.8479	-5.0656
65.0000	7.8771	65.0000	-4.5250	65.1721	7.8491	64.8279	-4.5436
70.0000	7.0256	70.0000	-3.9721	70.1831	6.9928	69.8169	-3.9928
75.0000	6.0922	75.0000	-3.3958	75.1842	6.0563	74.8158	-3.4174
80.0000	5.0788	80.0000	-2.7985	80.1747	5.0419	79.8253	-2.8197
85.0000	3.9849	85.0000	-2.1807	85.1538	3.9500	84.8463	-2.2000
90.0000	2.8087	90.0000	-1.5415	90.1205	2.7793	89.8795	-1.5571
95.0000	1.5463	95.0000	-0.8781	95.0738	1.5270	94.9262	-0.8881
100.0000	0.1921	100.0000	-0.1868	100.0126	0.1886	99.9874	-0.1886

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 3.5702 percent chord
 slope of mean line at LE = 0.1000

NACA Section 2421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.6682	0.5000	-1.6977	0.2900	2.1766	0.7100	-2.0773
0.7500	3.1334	0.7500	-2.1419	0.4962	2.6604	1.0038	-2.5118
1.2500	3.8697	1.2500	-2.8223	0.9304	3.4219	1.5696	-3.1758
2.5000	5.2010	2.5000	-4.0017	2.0729	4.7980	2.9271	-4.3136
5.0000	6.9983	5.0000	-5.4863	4.4578	6.6658	5.5422	-5.7283
7.5000	8.2789	7.5000	-6.4596	6.9048	8.0054	8.0952	-6.6460
10.0000	9.2686	10.0000	-7.1565	9.3871	9.0469	10.6129	-7.2969
15.0000	10.6904	15.0000	-8.0455	14.4165	10.5546	15.5835	-8.1171
20.0000	11.6011	20.0000	-8.5001	19.4986	11.5282	20.5014	-8.5282
25.0000	12.1391	25.0000	-8.6675	24.6104	12.1086	25.3896	-8.6711
30.0000	12.3809	30.0000	-8.6312	29.7375	12.3747	30.2625	-8.6247
35.0000	12.3750	35.0000	-8.4469	34.8699	12.3780	35.1301	-8.4405
40.0000	12.1553	40.0000	-8.1553	40.0000	12.1553	40.0000	-8.1553
45.0000	11.7574	45.0000	-7.7754	45.0543	11.7522	44.9457	-7.7800
50.0000	11.2208	50.0000	-7.3092	50.1029	11.2084	49.8971	-7.3195
55.0000	10.5613	55.0000	-6.7743	55.1444	10.5405	54.8556	-6.7905
60.0000	9.7910	60.0000	-6.1844	60.1774	9.7617	59.8226	-6.2061
65.0000	8.9189	65.0000	-5.5501	65.2008	8.8819	64.7992	-5.5763
70.0000	7.9516	70.0000	-4.8789	70.2136	7.9083	69.7864	-4.9083
75.0000	6.8933	75.0000	-4.1761	75.2149	6.8458	74.7851	-4.2069
80.0000	5.7457	80.0000	-3.4444	80.2038	5.6970	79.7962	-3.4748
85.0000	4.5086	85.0000	-2.6847	85.1794	4.4625	84.8206	-2.7125
90.0000	3.1795	90.0000	-1.8959	90.1405	3.1407	89.8595	-1.9185
95.0000	1.7537	95.0000	-1.0749	95.0861	1.7283	94.9139	-1.0894
100.0000	0.2247	100.0000	-0.2175	100.0147	0.2200	99.9853	-0.2200

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 4.8594 percent chord

slope of mean line at LE = 0.1000

NACA Section 2424

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	3.1246	0.5000	-1.8904	0.2600	2.4805	0.7400	-2.3811
0.7500	3.6476	0.7500	-2.3994	0.4600	3.0298	1.0400	-2.8812
1.2500	4.4750	1.2500	-3.1839	0.8848	3.8932	1.6152	-3.6471
2.5000	5.9690	2.5000	-4.5518	2.0119	5.4488	2.9881	-4.9644
5.0000	7.9771	5.0000	-6.2893	4.3803	7.5511	5.6197	-6.6136
7.5000	9.4003	7.5000	-7.4404	6.8198	9.0519	8.1802	-7.6925
10.0000	10.4954	10.0000	-8.2724	9.2996	10.2143	10.7004	-8.4643
15.0000	12.0589	15.0000	-9.3505	14.3332	11.8883	15.6668	-9.4508
20.0000	13.0514	20.0000	-9.9195	19.4270	12.9608	20.5730	-9.9608
25.0000	13.6302	25.0000	-10.1480	24.5547	13.5929	25.4453	-10.1554
30.0000	13.8817	30.0000	-10.1319	29.7000	13.8747	30.3000	-10.1247
35.0000	13.8609	35.0000	-9.9356	34.8513	13.8651	35.1487	-9.9276
40.0000	13.6060	40.0000	-9.6060	40.0000	13.6060	40.0000	-9.6060
45.0000	13.1541	45.0000	-9.1691	45.0620	13.1474	44.9380	-9.1752
50.0000	12.5478	50.0000	-8.6292	50.1176	12.5318	49.8824	-8.6430
55.0000	11.8052	55.0000	-8.0068	55.1651	11.7785	54.8349	-8.0285
60.0000	10.9398	60.0000	-7.3176	60.2028	10.9023	59.7972	-7.3467
65.0000	9.9620	65.0000	-6.5738	65.2295	9.9146	64.7705	-6.6090
70.0000	8.8792	70.0000	-5.7842	70.2441	8.8237	69.7559	-5.8237
75.0000	7.6959	75.0000	-4.9548	75.2456	7.6353	74.7544	-4.9964
80.0000	6.4143	80.0000	-4.0888	80.2329	6.3522	79.7671	-4.1300
85.0000	5.0338	85.0000	-3.1873	85.2050	4.9750	84.7950	-3.2250
90.0000	3.5514	90.0000	-2.2492	90.1606	3.5021	89.8394	-2.2799
95.0000	1.9620	95.0000	-1.2709	95.0984	1.9296	94.9016	-1.2907
100.0000	0.2574	100.0000	-0.2480	100.0168	0.2514	99.9832	-0.2514

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 6.3469 percent chord
 slope of mean line at LE = 0.1000

NACA Section 4412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.6539	0.5000	-0.8844	0.2634	1.2975	0.7366	-1.0988
0.7500	1.9557	0.7500	-1.1094	0.4641	1.6057	1.0359	-1.3085
1.2500	2.4493	1.2500	-1.4335	0.8898	2.1054	1.6102	-1.6132
2.5000	3.3816	2.5000	-1.9479	2.0181	3.0543	2.9819	-2.0856
5.0000	4.7313	5.0000	-2.4832	4.3872	4.4390	5.6128	-2.5640
7.5000	5.7602	7.5000	-2.7428	6.8264	5.5049	8.1736	-2.7862
10.0000	6.5986	10.0000	-2.8639	9.3054	6.3810	10.6946	-2.8810
15.0000	7.8879	15.0000	-2.8792	14.3370	7.7414	15.6630	-2.8664
20.0000	8.7966	20.0000	-2.7318	19.4291	8.7091	20.5709	-2.7091
25.0000	9.4053	25.0000	-2.5088	24.5557	9.3621	25.4443	-2.4871
30.0000	9.7588	30.0000	-2.2593	29.7003	9.7442	30.2997	-2.2442
35.0000	9.8849	35.0000	-2.0161	34.8513	9.8843	35.1487	-2.0093
40.0000	9.8030	40.0000	-1.8030	40.0000	9.8030	40.0000	-1.8030
45.0000	9.5565	45.0000	-1.6057	45.0620	9.5526	44.9380	-1.6082
50.0000	9.1915	50.0000	-1.3989	50.1176	9.1816	49.8824	-1.4038
55.0000	8.7171	55.0000	-1.1930	55.1650	8.6997	54.8350	-1.1997
60.0000	8.1399	60.0000	-0.9956	60.2026	8.1144	59.7974	-1.0033
65.0000	7.4649	65.0000	-0.8126	65.2292	7.4317	64.7708	-0.8206
70.0000	6.6957	70.0000	-0.6483	70.2437	6.6558	69.7563	-0.6558
75.0000	5.8342	75.0000	-0.5054	75.2451	5.7897	74.7549	-0.5119
80.0000	4.8815	80.0000	-0.3855	80.2323	4.8350	79.7678	-0.3906
85.0000	3.8370	85.0000	-0.2889	85.2042	3.7924	84.7958	-0.2924
90.0000	2.6990	90.0000	-0.2146	90.1599	2.6611	89.8401	-0.2166
95.0000	1.4646	95.0000	-0.1609	95.0979	1.4395	94.9021	-0.1617
100.0000	0.1295	100.0000	-0.1248	100.0167	0.1249	99.9833	-0.1249

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.5867 percent chord

slope of mean line at LE = 0.2000

NACA Section 4415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.1474	0.5000	-1.0629	0.2042	1.5971	0.7958	-1.3983
0.7500	2.5057	0.7500	-1.3522	0.3926	1.9699	1.1074	-1.6727
1.2500	3.0881	1.2500	-1.7814	0.7997	2.5703	1.7003	-2.0781
2.5000	4.1809	2.5000	-2.4863	1.8977	3.6968	3.1023	-2.7280
5.0000	5.7366	5.0000	-3.2793	4.2341	5.3143	5.7659	-3.4393
7.5000	6.9044	7.5000	-3.7194	6.6579	6.5413	8.3421	-3.8225
10.0000	7.8446	10.0000	-3.9781	9.1317	7.5387	10.8683	-4.0387
15.0000	9.2692	15.0000	-4.1852	14.1713	9.0674	15.8287	-4.1924
20.0000	10.2545	20.0000	-4.1533	19.2864	10.1363	20.7136	-4.1363
25.0000	10.9001	25.0000	-3.9913	24.4446	10.8433	25.5554	-3.9683
30.0000	11.2608	30.0000	-3.7615	29.6254	11.2428	30.3746	-3.7428
35.0000	11.3708	35.0000	-3.5055	34.8142	11.3710	35.1858	-3.4960
40.0000	11.2538	40.0000	-3.2538	40.0000	11.2538	40.0000	-3.2538
45.0000	10.9535	45.0000	-2.9991	45.0775	10.9477	44.9225	-3.0033
50.0000	10.5194	50.0000	-2.7185	50.1470	10.5048	49.8530	-2.7270
55.0000	9.9626	55.0000	-2.4249	55.2062	9.9371	54.7938	-2.4371
60.0000	9.2911	60.0000	-2.1280	60.2533	9.2541	59.7467	-2.1430
65.0000	8.5111	65.0000	-1.8356	65.2865	8.4632	64.7135	-1.8521
70.0000	7.6269	70.0000	-1.5529	70.3046	7.5697	69.6954	-1.5697
75.0000	6.6411	75.0000	-1.2835	75.3063	6.5774	74.6937	-1.2996
80.0000	5.5544	80.0000	-1.0295	80.2903	5.4882	79.7097	-1.0438
85.0000	4.3664	85.0000	-0.7912	85.2553	4.3030	84.7447	-0.8030
90.0000	3.0746	90.0000	-0.5677	90.1998	3.0208	89.8002	-0.5764
95.0000	1.6753	95.0000	-0.3569	95.1223	1.6396	94.8777	-0.3619
100.0000	0.1627	100.0000	-0.1553	100.0208	0.1561	99.9792	-0.1561

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.4793 percent chord

slope of mean line at LE = 0.2000

NACA Section 4418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.6860	0.5000	-1.2198	0.1450	1.8966	0.8550	-1.6979
0.7500	3.0968	0.7500	-1.5709	0.3211	2.3342	1.1789	-2.0370
1.2500	3.7632	1.2500	-2.1033	0.7096	3.0351	1.7904	-2.5429
2.5000	5.0098	2.5000	-2.9983	1.7772	4.3393	3.2228	-3.3705
5.0000	6.7641	5.0000	-4.0515	4.0809	6.1897	5.9191	-4.3147
7.5000	8.0654	7.5000	-4.6760	6.4895	7.5777	8.5105	-4.8589
10.0000	9.1034	10.0000	-5.0758	8.9580	8.6964	11.0420	-5.1964
15.0000	10.6575	15.0000	-5.4811	14.0055	10.3933	15.9945	-5.5183
20.0000	11.7157	20.0000	-5.5696	19.1436	11.5636	20.8564	-5.5636
25.0000	12.3959	25.0000	-5.4721	24.3335	12.3244	25.6665	-5.4494
30.0000	12.7627	30.0000	-5.2637	29.5504	12.7414	30.4496	-5.2414
35.0000	12.8563	35.0000	-4.9953	34.7770	12.8576	35.2230	-4.9826
40.0000	12.7045	40.0000	-4.7045	40.0000	12.7045	40.0000	-4.7045
45.0000	12.3509	45.0000	-4.3922	45.0930	12.3428	44.9070	-4.3984
50.0000	11.8482	50.0000	-4.0371	50.1764	11.8280	49.8236	-4.0502
55.0000	11.2095	55.0000	-3.6552	55.2475	11.1745	54.7525	-3.6745
60.0000	10.4443	60.0000	-3.2584	60.3039	10.3939	59.6961	-3.2827
65.0000	9.5598	65.0000	-2.8559	65.3438	9.4948	64.6562	-2.8836
70.0000	8.5611	70.0000	-2.4545	70.3656	8.4837	69.6344	-2.4837
75.0000	7.4510	75.0000	-2.0584	75.3676	7.3651	74.6324	-2.0873
80.0000	6.2306	80.0000	-1.6702	80.3484	6.1414	79.6516	-1.6970
85.0000	4.8988	85.0000	-1.2905	85.3064	4.8136	84.6936	-1.3136
90.0000	3.4528	90.0000	-0.9184	90.2398	3.3805	89.7602	-0.9361
95.0000	1.8876	95.0000	-0.5513	95.1468	1.8398	94.8532	-0.5620
100.0000	0.1961	100.0000	-0.1855	100.0250	0.1873	99.9750	-0.1873

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 3.5702 percent chord
 slope of mean line at LE = 0.2000

NACA Section 4421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	3.2702	0.5000	-1.3575	0.0859	2.1962	0.9141	-1.9974
0.7500	3.7294	0.7500	-1.7677	0.2496	2.6985	1.2504	-2.4013
1.2500	4.4750	1.2500	-2.4008	0.6196	3.4999	1.8804	-3.0077
2.5000	5.8680	2.5000	-3.4847	1.6567	4.9818	3.3433	-4.0130
5.0000	7.8133	5.0000	-4.7999	3.9277	7.0651	6.0723	-5.1901
7.5000	9.2427	7.5000	-5.6123	6.3211	8.6140	8.6789	-5.8953
10.0000	10.3745	10.0000	-6.1567	8.7844	9.8542	11.2156	-6.3542
15.0000	12.0524	15.0000	-6.7668	13.8398	11.7193	16.1602	-6.8443
20.0000	13.1799	20.0000	-6.9807	19.0009	12.9909	20.9991	-6.9909
25.0000	13.8925	25.0000	-6.9509	24.2224	13.8056	25.7776	-6.9306
30.0000	14.2645	30.0000	-6.7658	29.4755	14.2399	30.5245	-6.7399
35.0000	14.3416	35.0000	-6.4856	34.7398	14.3443	35.2602	-6.4693
40.0000	14.1553	40.0000	-6.1553	40.0000	14.1553	40.0000	-6.1553
45.0000	13.7487	45.0000	-5.7848	45.1085	13.7379	44.8915	-5.7935
50.0000	13.1779	50.0000	-5.3547	50.2058	13.1511	49.7942	-5.3734
55.0000	12.4578	55.0000	-4.8839	55.2887	12.4119	54.7113	-4.9119
60.0000	11.5995	60.0000	-4.3866	60.3546	11.5336	59.6454	-4.4225
65.0000	10.6110	65.0000	-3.8737	65.4011	10.5263	64.5988	-3.9152
70.0000	9.4982	70.0000	-3.3531	70.4265	9.3976	69.5735	-3.3976
75.0000	8.2642	75.0000	-2.8301	75.4289	8.1528	74.5711	-2.8750
80.0000	6.9100	80.0000	-2.3078	80.4064	6.7947	79.5936	-2.3502
85.0000	5.4344	85.0000	-1.7870	85.3574	5.3242	84.6426	-1.8242
90.0000	3.8336	90.0000	-1.2667	90.2798	3.7402	89.7202	-1.2958
95.0000	2.1017	95.0000	-0.7442	95.1712	2.0399	94.8288	-0.7622
100.0000	0.2299	100.0000	-0.2155	100.0291	0.2186	99.9709	-0.2186

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 4.8594 percent chord
 slope of mean line at LE = 0.2000

NACA Section 4424

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	3.9005	0.5000	-1.4782	0.0267	2.4957	0.9733	-2.2970
0.7500	4.4039	0.7500	-1.9446	0.1781	3.0627	1.3219	-2.7655
1.2500	5.2239	1.2500	-2.6753	0.5295	3.9647	1.9705	-3.4726
2.5000	6.7554	2.5000	-3.9464	1.5363	5.6242	3.4637	-4.6555
5.0000	8.8838	5.0000	-5.5249	3.7745	7.9404	6.2255	-6.0654
7.5000	10.4360	7.5000	-6.5282	6.1527	9.6504	8.8473	-6.9317
10.0000	11.6576	10.0000	-7.2206	8.6107	11.0119	11.3893	-7.5119
15.0000	13.4538	15.0000	-8.0419	13.6740	13.0453	16.3260	-8.1703
20.0000	14.6470	20.0000	-8.3864	18.8582	14.4181	21.1418	-8.4181
25.0000	15.3901	25.0000	-8.4278	24.1113	15.2867	25.8887	-8.4117
30.0000	15.7661	30.0000	-8.2677	29.4006	15.7385	30.5994	-8.2385
35.0000	15.8264	35.0000	-7.9762	34.7027	15.8310	35.2973	-7.9560
40.0000	15.6060	40.0000	-7.6060	40.0000	15.6060	40.0000	-7.6060
45.0000	15.1468	45.0000	-7.1770	45.1240	15.1330	44.8760	-7.1886
50.0000	14.5084	50.0000	-6.6713	50.2352	14.4743	49.7648	-6.6965
55.0000	13.7076	55.0000	-6.1111	55.3300	13.6494	54.6700	-6.1494
60.0000	12.7566	60.0000	-5.5126	60.4052	12.6733	59.5948	-5.5622
65.0000	11.6648	65.0000	-4.8887	65.4585	11.5578	64.5415	-4.9467
70.0000	10.4382	70.0000	-4.2487	70.4874	10.3116	69.5126	-4.3116
75.0000	9.0805	75.0000	-3.5987	75.4901	8.9405	74.5099	-3.6627
80.0000	7.5927	80.0000	-2.9422	80.4645	7.4479	79.5355	-3.0034
85.0000	5.9730	85.0000	-2.2805	85.4085	5.8348	84.5915	-2.3348
90.0000	4.2170	90.0000	-1.6126	90.3197	4.1000	89.6803	-1.6555
95.0000	2.3175	95.0000	-0.9355	95.1957	2.2401	94.8043	-0.9623
100.0000	0.2640	100.0000	-0.2452	100.0333	0.2498	99.9667	-0.2498

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 6.3469 percent chord
 slope of mean line at LE = 0.2000

NACA Section 23012

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.8658	0.5000	-0.7569	0.1608	1.3218	0.8392	-1.0247
0.7500	2.1720	0.7500	-0.9625	0.3479	1.6492	1.1521	-1.2095
1.2500	2.6749	1.2500	-1.2597	0.7633	2.1869	1.7367	-1.4737
2.5000	3.6180	2.5000	-1.7290	1.9156	3.2145	3.0844	-1.8827
5.0000	4.9155	5.0000	-2.2624	4.4265	4.6629	5.5735	-2.3534
7.5000	5.8055	7.5000	-2.6258	7.0506	5.6673	7.9494	-2.6843
10.0000	6.4374	10.0000	-2.9382	9.7114	6.3750	10.2886	-2.9727
15.0000	7.1838	15.0000	-3.5066	15.0005	7.1838	14.9995	-3.5065
20.0000	7.4983	20.0000	-3.9795	20.1264	7.5029	19.8736	-3.9694
25.0000	7.5956	25.0000	-4.2897	25.1312	7.5961	24.8688	-4.2835
30.0000	7.5490	30.0000	-4.4573	30.1325	7.5461	29.8675	-4.4544
35.0000	7.3882	35.0000	-4.5119	35.1313	7.3826	34.8687	-4.5117
40.0000	7.1342	40.0000	-4.4746	40.1281	7.1266	39.8719	-4.4766
45.0000	6.8030	45.0000	-4.3612	45.1232	6.7940	44.8768	-4.3648
50.0000	6.4069	50.0000	-4.1837	50.1169	6.3969	49.8831	-4.1885
55.0000	5.9554	55.0000	-3.9518	55.1093	5.9450	54.8907	-3.9574
60.0000	5.4561	60.0000	-3.6729	60.1008	5.4456	59.8993	-3.6789
65.0000	4.9147	65.0000	-3.3524	65.0912	4.9044	64.9088	-3.3586
70.0000	4.3352	70.0000	-2.9944	70.0809	4.3255	69.9191	-3.0005
75.0000	3.7205	75.0000	-2.6017	75.0698	3.7116	74.9302	-2.6074
80.0000	3.0719	80.0000	-2.1757	80.0579	3.0642	79.9421	-2.1808
85.0000	2.3897	85.0000	-1.7165	85.0453	2.3833	84.9547	-1.7208
90.0000	1.6729	90.0000	-1.2233	90.0320	1.6682	89.9680	-1.2265
95.0000	0.9195	95.0000	-0.6940	95.0178	0.9168	94.9822	-0.6959
100.0000	0.1264	100.0000	-0.1257	100.0028	0.1260	99.9972	-0.1260

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5867 percent chord
 slope of mean line at LE = 0.3051

NACA Section 23015

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.4395	0.5000	-0.8958	0.0760	1.6151	0.9240	-1.3180
0.7500	2.7892	0.7500	-1.1620	0.2474	2.0066	1.2526	-1.5669
1.2500	3.3618	1.2500	-1.5651	0.6416	2.6445	1.8584	-1.9312
2.5000	4.4348	2.5000	-2.2362	1.7695	3.8516	3.2305	-2.5198
5.0000	5.9006	5.0000	-3.0535	4.2832	5.5399	5.7168	-3.2304
7.5000	6.9093	7.5000	-3.6178	6.9383	6.7113	8.0617	-3.7282
10.0000	7.6341	10.0000	-4.0798	9.6393	7.5435	10.3607	-4.1412
15.0000	8.5200	15.0000	-4.8429	15.0006	8.5201	14.9994	-4.8428
20.0000	8.9289	20.0000	-5.4183	20.1580	8.9369	19.8420	-5.4035
25.0000	9.0794	25.0000	-5.7771	25.1640	9.0810	24.8360	-5.7685
30.0000	9.0498	30.0000	-5.9580	30.1656	9.0462	29.8344	-5.9545
35.0000	8.8772	35.0000	-5.9979	35.1642	8.8694	34.8358	-5.9985
40.0000	8.5880	40.0000	-5.9230	40.1602	8.5770	39.8398	-5.9270
45.0000	8.2021	45.0000	-5.7531	45.1540	8.1888	44.8460	-5.7596
50.0000	7.7349	50.0000	-5.5034	50.1461	7.7201	49.8539	-5.5117
55.0000	7.1983	55.0000	-5.1858	55.1367	7.1828	54.8633	-5.1953
60.0000	6.6019	60.0000	-4.8093	60.1259	6.5862	59.8741	-4.8195
65.0000	5.9527	65.0000	-4.3811	65.1140	5.9373	64.8859	-4.3914
70.0000	5.2558	70.0000	-3.9062	70.1011	5.2413	69.8989	-3.9163
75.0000	4.5148	75.0000	-3.3879	75.0872	4.5015	74.9128	-3.3973
80.0000	3.7314	80.0000	-2.8280	80.0724	3.7198	79.9276	-2.8364
85.0000	2.9059	85.0000	-2.2268	85.0566	2.8963	84.9434	-2.2338
90.0000	2.0372	90.0000	-1.5831	90.0399	2.0300	89.9600	-1.5884
95.0000	1.1226	95.0000	-0.8943	95.0223	1.1184	94.9777	-0.8975
100.0000	0.1582	100.0000	-0.1570	100.0035	0.1575	99.9965	-0.1575

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.4793 percent chord

slope of mean line at LE = 0.3051

NACA Section 23018

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	3.0689	0.5000	-1.0099	-0.0088	1.9084	1.0088	-1.6114
0.7500	3.4551	0.7500	-1.3322	0.1469	2.3639	1.3531	-1.9242
1.2500	4.0891	1.2500	-1.8360	0.5199	3.1021	1.9801	-2.3888
2.5000	5.2795	2.5000	-2.7075	1.6235	4.4888	3.3765	-3.1570
5.0000	6.9016	5.0000	-3.8168	4.1398	6.4169	5.8602	-4.1074
7.5000	8.0220	7.5000	-4.5929	6.8259	7.7552	8.1741	-4.7722
10.0000	8.8353	10.0000	-5.2132	9.5672	8.7120	10.4328	-5.3097
15.0000	9.8563	15.0000	-6.1792	15.0007	9.8564	14.9993	-6.1791
20.0000	10.3587	20.0000	-6.8581	20.1896	10.3709	19.8104	-6.8375
25.0000	10.5627	25.0000	-7.2650	25.1968	10.5660	24.8032	-7.2534
30.0000	10.5506	30.0000	-7.4588	30.1988	10.5463	29.8012	-7.4545
35.0000	10.3665	35.0000	-7.4835	35.1970	10.3562	34.8030	-7.4853
40.0000	10.0423	40.0000	-7.3708	40.1922	10.0274	39.8078	-7.3774
45.0000	9.6019	45.0000	-7.1443	45.1848	9.5837	44.8152	-7.1545
50.0000	9.0637	50.0000	-6.8222	50.1753	9.0433	49.8247	-6.8349
55.0000	8.4423	55.0000	-6.4187	55.1640	8.4206	54.8360	-6.4331
60.0000	7.7487	60.0000	-5.9448	60.1511	7.7267	59.8489	-5.9600
65.0000	6.9917	65.0000	-5.4089	65.1369	6.9702	64.8631	-5.4243
70.0000	6.1775	70.0000	-4.8170	70.1213	6.1570	69.8787	-4.8320
75.0000	5.3101	75.0000	-4.1732	75.1047	5.2914	74.8953	-4.1872
80.0000	4.3918	80.0000	-3.4796	80.0869	4.3754	79.9131	-3.4920
85.0000	3.4229	85.0000	-2.7364	85.0680	3.4094	84.9320	-2.7468
90.0000	2.4019	90.0000	-1.9424	90.0479	2.3919	89.9520	-1.9502
95.0000	1.3259	95.0000	-1.0944	95.0267	1.3200	94.9733	-1.0991
100.0000	0.1899	100.0000	-0.1882	100.0042	0.1890	99.9958	-0.1890

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 3.5702 percent chord
 slope of mean line at LE = 0.3051

NACA Section 23021

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	3.7507	0.5000	-1.1037	-0.0936	2.2017	1.0936	-1.9047
0.7500	4.1669	0.7500	-1.4771	0.0464	2.7213	1.4536	-2.2816
1.2500	4.8547	1.2500	-2.0757	0.3982	3.5596	2.1018	-2.8464
2.5000	6.1505	2.5000	-3.1438	1.4774	5.1259	3.5226	-3.7941
5.0000	7.9175	5.0000	-4.5512	3.9964	7.2940	6.0036	-4.9845
7.5000	9.1430	7.5000	-5.5499	6.7136	8.7992	8.2864	-5.8161
10.0000	10.0408	10.0000	-6.3377	9.4950	9.8804	10.5050	-6.4781
15.0000	11.1925	15.0000	-7.5156	15.0009	11.1927	14.9991	-7.5154
20.0000	11.7875	20.0000	-8.2987	20.2212	11.8050	19.7788	-8.2716
25.0000	12.0455	25.0000	-8.7532	25.2296	12.0509	24.7704	-8.7383
30.0000	12.0513	30.0000	-8.9595	30.2319	12.0463	29.7681	-8.9546
35.0000	11.8561	35.0000	-8.9688	35.2298	11.8430	34.7702	-8.9721
40.0000	11.4973	40.0000	-8.8180	40.2242	11.4778	39.7758	-8.8278
45.0000	11.0026	45.0000	-8.5346	45.2156	10.9785	44.7844	-8.5493
50.0000	10.3936	50.0000	-8.1400	50.2045	10.3665	49.7955	-8.1581
55.0000	9.6872	55.0000	-7.6506	55.1913	9.6584	54.8087	-7.6709
60.0000	8.8966	60.0000	-7.0792	60.1763	8.8673	59.8237	-7.1006
65.0000	8.0318	65.0000	-6.4356	65.1597	8.0030	64.8403	-6.4572
70.0000	7.1001	70.0000	-5.7269	70.1416	7.0728	69.8584	-5.7478
75.0000	6.1063	75.0000	-4.9576	75.1221	6.0813	74.8779	-4.9771
80.0000	5.0530	80.0000	-4.1303	80.1014	5.0310	79.8987	-4.1477
85.0000	3.9405	85.0000	-3.2453	85.0793	3.9224	84.9207	-3.2599
90.0000	2.7672	90.0000	-2.3012	90.0559	2.7537	89.9441	-2.3121
95.0000	1.5295	95.0000	-1.2942	95.0312	1.5216	94.9688	-1.3007
100.0000	0.2218	100.0000	-0.2194	100.0049	0.2204	99.9951	-0.2204

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 4.8594 percent chord
 slope of mean line at LE = 0.3051

NACA Section 23024

Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000
0.5000	4.4813	0.5000	-1.1808
0.7500	4.9220	0.7500	-1.6002
1.2500	5.6566	1.2500	-2.2869
2.5000	7.0458	2.5000	-3.5464
5.0000	8.9473	5.0000	-5.2558
7.5000	10.2719	7.5000	-6.4875
10.0000	11.2503	10.0000	-7.4527
15.0000	12.5288	15.0000	-8.8519
20.0000	13.2154	20.0000	-9.7403
25.0000	13.5279	25.0000	-10.2419
30.0000	13.5520	30.0000	-10.4602
35.0000	13.3461	35.0000	-10.4537
40.0000	12.9528	40.0000	-10.2646
45.0000	12.4040	45.0000	-9.9242
50.0000	11.7243	50.0000	-9.4569
55.0000	10.9331	55.0000	-8.8814
60.0000	10.0455	60.0000	-8.2125
65.0000	9.0729	65.0000	-7.4613
70.0000	8.0237	70.0000	-6.6357
75.0000	6.9034	75.0000	-5.7411
80.0000	5.7150	80.0000	-4.7803
85.0000	4.4588	85.0000	-3.7537
90.0000	3.1330	90.0000	-2.6595
95.0000	1.7334	95.0000	-1.4937
100.0000	0.2536	100.0000	-0.2506

Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000
-0.1784	2.4951	1.1784	-2.1980
-0.0542	3.0786	1.5542	-2.6389
0.2765	4.0172	2.2235	-3.3039
1.3313	5.7631	3.6687	-4.4313
3.8531	8.1710	6.1469	-5.8615
6.6012	9.8431	8.3988	-6.8601
9.4229	11.0489	10.5771	-7.6466
15.0010	12.5290	14.9990	-8.8517
20.2528	13.2390	19.7472	-9.7056
25.2623	13.5359	24.7377	-10.2233
30.2650	13.5464	29.7350	-10.4547
35.2627	13.3298	34.7373	-10.4589
40.2562	12.9282	39.7438	-10.2782
45.2464	12.3734	44.7536	-9.9441
50.2338	11.6897	49.7662	-9.4813
55.2187	10.8962	54.7813	-8.9087
60.2015	10.0079	59.7985	-8.2412
65.1825	9.0359	64.8175	-7.4900
70.1618	7.9885	69.8382	-6.6635
75.1395	6.8712	74.8605	-5.7670
80.1158	5.6866	79.8842	-4.8033
85.0906	4.4354	84.9094	-3.7729
90.0639	3.1156	89.9361	-2.6739
95.0356	1.7231	94.9644	-1.5023
100.0056	0.2519	99.9944	-0.2519

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 6.3469 percent chord
 slope of mean line at LE = 0.3051

NACA Section 63-206

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.5770	0.5000	-0.4345	0.4577	0.5522	0.5423	-0.4520
0.7500	0.6988	0.7500	-0.5235	0.7028	0.6778	0.7972	-0.5372
1.2500	0.8950	1.2500	-0.6505	1.1965	0.8760	1.3035	-0.6621
2.5000	1.2564	2.5000	-0.8607	2.4385	1.2411	2.5615	-0.8690
5.0000	1.7896	5.0000	-1.1388	4.9315	1.7770	5.0685	-1.1451
7.5000	2.1995	7.5000	-1.3364	7.4294	2.1891	7.5706	-1.3412
10.0000	2.5356	10.0000	-1.4883	9.9297	2.5269	10.0703	-1.4921
15.0000	3.0650	15.0000	-1.7111	14.9341	3.0590	15.0659	-1.7135
20.0000	3.4569	20.0000	-1.8588	19.9414	3.4529	20.0586	-1.8601
25.0000	3.7393	25.0000	-1.9464	24.9503	3.7370	25.0497	-1.9470
30.0000	3.9289	30.0000	-1.9832	29.9601	3.9278	30.0399	-1.9833
35.0000	4.0296	35.0000	-1.9687	34.9705	4.0293	35.0295	-1.9684
40.0000	4.0422	40.0000	-1.9004	39.9808	4.0423	40.0192	-1.9001
45.0000	3.9714	45.0000	-1.7815	44.9908	3.9716	45.0092	-1.7812
50.0000	3.8250	50.0000	-1.6186	50.0000	3.8250	50.0000	-1.6186
55.0000	3.6116	55.0000	-1.4205	55.0080	3.6112	54.9920	-1.4208
60.0000	3.3399	60.0000	-1.1961	60.0146	3.3390	59.9854	-1.1968
65.0000	3.0161	65.0000	-0.9529	65.0195	3.0147	64.9804	-0.9538
70.0000	2.6466	70.0000	-0.6992	70.0226	2.6448	69.9774	-0.7004
75.0000	2.2400	75.0000	-0.4469	75.0235	2.2381	74.9765	-0.4481
80.0000	1.8056	80.0000	-0.2098	80.0222	1.8037	79.9778	-0.2108
85.0000	1.3548	85.0000	-0.0069	85.0188	1.3531	84.9812	-0.0076
90.0000	0.9003	90.0000	0.1359	90.0134	0.8991	89.9866	0.1356
95.0000	0.4535	95.0000	0.1789	95.0064	0.4529	94.9936	0.1790
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.2676 percent chord
 slope of mean line at LE = 0.0842

NACA Section 63-209

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8478	0.5000	-0.6555	0.4371	0.7964	0.5629	-0.6962
0.7500	1.0192	0.7500	-0.7999	0.6797	0.9745	0.8203	-0.8339
1.2500	1.2936	1.2500	-1.0114	1.1702	1.2539	1.3298	-1.0400
2.5000	1.7970	2.5000	-1.3712	2.4079	1.7648	2.5921	-1.3927
5.0000	2.5355	5.0000	-1.8607	4.8972	2.5093	5.1028	-1.8774
7.5000	3.0983	7.5000	-2.2159	7.3939	3.0769	7.6061	-2.2290
10.0000	3.5571	10.0000	-2.4940	9.8943	3.5393	10.1057	-2.5045
15.0000	4.2751	15.0000	-2.9106	14.9009	4.2629	15.0991	-2.9174
20.0000	4.8007	20.0000	-3.1960	19.9118	4.7929	20.0882	-3.2000
25.0000	5.1732	25.0000	-3.3767	24.9253	5.1687	25.0747	-3.3787
30.0000	5.4153	30.0000	-3.4682	29.9401	5.4132	30.0599	-3.4687
35.0000	5.5308	35.0000	-3.4698	34.9557	5.5303	35.0443	-3.4694
40.0000	5.5206	40.0000	-3.3795	39.9713	5.5210	40.0287	-3.3787
45.0000	5.3921	45.0000	-3.2028	44.9863	5.3926	45.0137	-3.2022
50.0000	5.1588	50.0000	-2.9524	50.0000	5.1588	50.0000	-2.9524
55.0000	4.8343	55.0000	-2.6423	55.0119	4.8335	54.9881	-2.6431
60.0000	4.4316	60.0000	-2.2858	60.0217	4.4297	59.9783	-2.2874
65.0000	3.9614	65.0000	-1.8953	65.0288	3.9585	64.9711	-1.8976
70.0000	3.4341	70.0000	-1.4833	70.0331	3.4305	69.9669	-1.4860
75.0000	2.8641	75.0000	-1.0673	75.0344	2.8601	74.9656	-1.0701
80.0000	2.2673	80.0000	-0.6681	80.0324	2.2634	79.9676	-0.6706
85.0000	1.6624	85.0000	-0.3118	85.0272	1.6591	84.9728	-0.3136
90.0000	1.0705	90.0000	-0.0326	90.0193	1.0682	89.9807	-0.0335
95.0000	0.5138	95.0000	0.1191	95.0092	0.5129	94.9908	0.1190
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.5893 percent chord

slope of mean line at LE = 0.0842

NACA Section 63-210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.9380	0.5000	-0.7253	0.4304	0.8757	0.5696	-0.7755
0.7500	1.1257	0.7500	-0.8881	0.6722	1.0713	0.8278	-0.9307
1.2500	1.4260	1.2500	-1.1280	1.1616	1.3778	1.3384	-1.1639
2.5000	1.9770	2.5000	-1.5384	2.3979	1.9378	2.6021	-1.5657
5.0000	2.7847	5.0000	-2.0997	4.8858	2.7529	5.1142	-2.1210
7.5000	3.3988	7.5000	-2.5082	7.3821	3.3729	7.6179	-2.5249
10.0000	3.8988	10.0000	-2.8290	9.8825	3.8772	10.1175	-2.8425
15.0000	4.6800	15.0000	-3.3110	14.8898	4.6653	15.1102	-3.3198
20.0000	5.2502	20.0000	-3.6427	19.9019	5.2408	20.0981	-3.6479
25.0000	5.6526	25.0000	-3.8545	24.9169	5.6471	25.0831	-3.8571
30.0000	5.9117	30.0000	-3.9639	29.9334	5.9091	30.0666	-3.9647
35.0000	6.0310	35.0000	-3.9701	34.9507	6.0305	35.0493	-3.9696
40.0000	6.0119	40.0000	-3.8712	39.9681	6.0125	40.0319	-3.8702
45.0000	5.8627	45.0000	-3.6737	44.9848	5.8634	45.0152	-3.6729
50.0000	5.5990	50.0000	-3.3927	50.0000	5.5990	50.0000	-3.3927
55.0000	5.2364	55.0000	-3.0439	55.0132	5.2353	54.9868	-3.0449
60.0000	4.7892	60.0000	-2.6426	60.0240	4.7869	59.9760	-2.6446
65.0000	4.2695	65.0000	-2.2022	65.0319	4.2659	64.9681	-2.2051
70.0000	3.6895	70.0000	-1.7372	70.0366	3.6851	69.9634	-1.7406
75.0000	3.0654	75.0000	-1.2670	75.0379	3.0605	74.9621	-1.2706
80.0000	2.4153	80.0000	-0.8147	80.0356	2.4106	79.9644	-0.8178
85.0000	1.7604	85.0000	-0.4087	85.0299	1.7565	84.9701	-0.4110
90.0000	1.1243	90.0000	-0.0858	90.0211	1.1217	89.9789	-0.0869
95.0000	0.5328	95.0000	0.1004	95.0101	0.5317	94.9899	0.1002
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.7210 percent chord

slope of mean line at LE = 0.0842

NACA Section 63-212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.1169	0.5000	-0.8582	0.4174	1.0303	0.5826	-0.9301
0.7500	1.3370	0.7500	-1.0575	0.6575	1.2605	0.8425	-1.1199
1.2500	1.6888	1.2500	-1.3546	1.1447	1.6214	1.3553	-1.4075
2.5000	2.3357	2.5000	-1.8673	2.3779	2.2805	2.6221	-1.9083
5.0000	3.2831	5.0000	-2.5743	4.8630	3.2384	5.1370	-2.6065
7.5000	4.0008	7.5000	-3.0909	7.3584	3.9643	7.6416	-3.1164
10.0000	4.5837	10.0000	-3.4981	9.8589	4.5535	10.1411	-3.5187
15.0000	5.4918	15.0000	-4.1123	14.8675	5.4713	15.1325	-4.1257
20.0000	6.1514	20.0000	-4.5373	19.8821	6.1383	20.1179	-4.5454
25.0000	6.6131	25.0000	-4.8115	24.9002	6.6056	25.0998	-4.8157
30.0000	6.9055	30.0000	-4.9564	29.9200	6.9021	30.0800	-4.9577
35.0000	7.0311	35.0000	-4.9704	34.9409	7.0306	35.0591	-4.9697
40.0000	6.9921	40.0000	-4.8521	39.9618	6.9930	40.0382	-4.8507
45.0000	6.7994	45.0000	-4.6110	44.9818	6.8003	45.0182	-4.6099
50.0000	6.4730	50.0000	-4.2666	50.0000	6.4730	50.0000	-4.2666
55.0000	6.0322	55.0000	-3.8387	55.0158	6.0306	54.9842	-3.8402
60.0000	5.4949	60.0000	-3.3464	60.0285	5.4916	59.9715	-3.3493
65.0000	4.8750	65.0000	-2.8050	65.0378	4.8701	64.9622	-2.8092
70.0000	4.1893	70.0000	-2.2337	70.0433	4.1832	69.9567	-2.2387
75.0000	3.4580	75.0000	-1.6562	75.0447	3.4513	74.9553	-1.6613
80.0000	2.7025	80.0000	-1.0988	80.0419	2.6962	79.9581	-1.1034
85.0000	1.9499	85.0000	-0.5959	85.0351	1.9447	84.9649	-0.5991
90.0000	1.2280	90.0000	-0.1881	90.0247	1.2246	89.9753	-0.1898
95.0000	0.5692	95.0000	0.0644	95.0118	0.5678	94.9882	0.0641
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0017 percent chord
 slope of mean line at LE = 0.0842

NACA Section 63-412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.2546	0.5000	-0.7439	0.3366	1.0702	0.6634	-0.8698
0.7500	1.4864	0.7500	-0.9286	0.5666	1.3202	0.9334	-1.0391
1.2500	1.8660	1.2500	-1.1989	1.0409	1.7175	1.4591	-1.2897
2.5000	2.5801	2.5000	-1.6438	2.2570	2.4560	2.7430	-1.7117
5.0000	3.6464	5.0000	-2.2292	4.7270	3.5447	5.2730	-2.2810
7.5000	4.4636	7.5000	-2.6441	7.2176	4.3798	7.7824	-2.6840
10.0000	5.1333	10.0000	-2.9624	9.7182	5.0635	10.2818	-2.9939
15.0000	6.1866	15.0000	-3.4278	14.7354	6.1386	15.2646	-3.4475
20.0000	6.9620	20.0000	-3.7340	19.7645	6.9308	20.2355	-3.7451
25.0000	7.5164	25.0000	-3.9132	24.8004	7.4980	25.1996	-3.9181
30.0000	7.8815	30.0000	-3.9834	29.8401	7.8727	30.1599	-3.9838
35.0000	8.0623	35.0000	-3.9408	34.8818	8.0602	35.1182	-3.9384
40.0000	8.0624	40.0000	-3.7825	39.9236	8.0637	40.0764	-3.7792
45.0000	7.8936	45.0000	-3.5169	44.9636	7.8954	45.0364	-3.5146
50.0000	7.5761	50.0000	-3.1634	50.0000	7.5761	50.0000	-3.1634
55.0000	7.1289	55.0000	-2.7421	55.0315	7.1258	54.9685	-2.7449
60.0000	6.5694	60.0000	-2.2723	60.0570	6.5624	59.9430	-2.2779
65.0000	5.9106	65.0000	-1.7704	65.0756	5.9000	64.9243	-1.7782
70.0000	5.1680	70.0000	-1.2568	70.0866	5.1545	69.9134	-1.2656
75.0000	4.3600	75.0000	-0.7565	75.0894	4.3451	74.9106	-0.7651
80.0000	3.5058	80.0000	-0.2984	80.0838	3.4912	79.9162	-0.3056
85.0000	2.6284	85.0000	0.0796	85.0702	2.6160	84.9299	0.0751
90.0000	1.7493	90.0000	0.3306	90.0494	1.7407	89.9506	0.3289
95.0000	0.8870	95.0000	0.3803	95.0235	0.8829	94.9765	0.3809
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.0017 percent chord

slope of mean line at LE = 0.1685

NACA Section 63-215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.3786	0.5000	-1.0398	0.3989	1.2497	0.6011	-1.1495
0.7500	1.6465	0.7500	-1.2927	0.6364	1.5312	0.8636	-1.3906
1.2500	2.0755	1.2500	-1.6759	1.1202	1.9737	1.3798	-1.7598
2.5000	2.8678	2.5000	-2.3445	2.3486	2.7834	2.6514	-2.4113
5.0000	4.0291	5.0000	-3.2760	4.8292	3.9608	5.1708	-3.3289
7.5000	4.9045	7.5000	-3.9589	7.3231	4.8490	7.6769	-4.0010
10.0000	5.6134	10.0000	-4.4985	9.8234	5.5674	10.1766	-4.5327
15.0000	6.7137	15.0000	-5.3147	14.8341	6.6826	15.1659	-5.3371
20.0000	7.5080	20.0000	-5.8818	19.8524	7.4882	20.1476	-5.8954
25.0000	8.0583	25.0000	-6.2502	24.8749	8.0471	25.1251	-6.2572
30.0000	8.3985	30.0000	-6.4471	29.8999	8.3938	30.1001	-6.4493
35.0000	8.5297	35.0000	-6.4694	34.9261	8.5293	35.0739	-6.4684
40.0000	8.4553	40.0000	-6.3169	39.9523	8.4569	40.0477	-6.3147
45.0000	8.1924	45.0000	-6.0053	44.9773	8.1940	45.0227	-6.0036
50.0000	7.7672	50.0000	-5.5608	50.0000	7.7672	50.0000	-5.5608
55.0000	7.2048	55.0000	-5.0096	55.0195	7.2024	54.9805	-5.0120
60.0000	6.5290	60.0000	-4.3769	60.0352	6.5239	59.9648	-4.3816
65.0000	5.7571	65.0000	-3.6820	65.0465	5.7496	64.9535	-3.6887
70.0000	4.9129	70.0000	-2.9514	70.0530	4.9037	69.9470	-2.9592
75.0000	4.0219	75.0000	-2.2141	75.0545	4.0121	74.9455	-2.2221
80.0000	3.1123	80.0000	-1.5033	80.0509	3.1031	79.9491	-1.5103
85.0000	2.2185	85.0000	-0.8605	85.0425	2.2111	84.9575	-0.8656
90.0000	1.3741	90.0000	-0.3318	90.0298	1.3693	89.9702	-0.3345
95.0000	0.6202	95.0000	0.0143	95.0142	0.6182	94.9858	0.0137
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.4730 percent chord

slope of mean line at LE = 0.0842

NACA Section 63-415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.5589	0.5000	-0.8928	0.3000	1.2873	0.7000	-1.0869
0.7500	1.8354	0.7500	-1.1305	0.5248	1.5885	0.9752	-1.3073
1.2500	2.2875	1.2500	-1.4904	0.9922	2.0673	1.5078	-1.6395
2.5000	3.1421	2.5000	-2.0963	2.1986	2.9564	2.8014	-2.2122
5.0000	4.4163	5.0000	-2.9108	4.6595	4.2648	5.3405	-3.0010
7.5000	5.3867	7.5000	-3.4960	7.1470	5.2624	7.8530	-3.5665
10.0000	6.1791	10.0000	-3.9496	9.6474	6.0756	10.3526	-4.0061
15.0000	7.4193	15.0000	-4.6215	14.6686	7.3485	15.3315	-4.6575
20.0000	8.3253	20.0000	-5.0732	19.7049	8.2797	20.2951	-5.0941
25.0000	8.9653	25.0000	-5.3492	24.7500	8.9388	25.2500	-5.3589
30.0000	9.3761	30.0000	-5.4733	29.7999	9.3640	30.2001	-5.4751
35.0000	9.5609	35.0000	-5.4403	34.8523	9.5587	35.1477	-5.4369
40.0000	9.5249	40.0000	-5.2482	39.9047	9.5276	40.0953	-5.2431
45.0000	9.2861	45.0000	-4.9119	44.9547	9.2891	45.0453	-4.9083
50.0000	8.8704	50.0000	-4.4577	50.0000	8.8704	50.0000	-4.4577
55.0000	8.3024	55.0000	-3.9121	55.0390	8.2975	54.9610	-3.9167
60.0000	7.6054	60.0000	-3.3012	60.0704	7.5947	59.9296	-3.3102
65.0000	6.7953	65.0000	-2.6451	65.0930	6.7793	64.9070	-2.6576
70.0000	5.8947	70.0000	-1.9717	70.1060	5.8748	69.8940	-1.9859
75.0000	4.9273	75.0000	-1.3117	75.1089	4.9056	74.8911	-1.3257
80.0000	3.9186	80.0000	-0.7005	80.1017	3.8978	79.8983	-0.7122
85.0000	2.8993	85.0000	-0.1834	85.0848	2.8821	84.9152	-0.1910
90.0000	1.8968	90.0000	0.1878	90.0595	1.8851	89.9405	0.1844
95.0000	0.9385	95.0000	0.3304	95.0282	0.9332	94.9718	0.3306
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.4730 percent chord

slope of mean line at LE = 0.1685

NACA Section 63-615

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.7441	0.5000	-0.7658	0.2050	1.3175	0.7950	-1.0169
0.7500	2.0308	0.7500	-0.9821	0.4171	1.6379	1.0829	-1.2161
1.2500	2.5063	1.2500	-1.3155	0.8678	2.1526	1.6322	-1.5109
2.5000	3.4241	2.5000	-1.8575	2.0517	3.1211	2.9483	-2.0047
5.0000	4.8103	5.0000	-2.5536	4.4920	4.5611	5.5080	-2.6655
7.5000	5.8749	7.5000	-3.0399	6.9726	5.6689	8.0274	-3.1251
10.0000	6.7500	10.0000	-3.4066	9.4728	6.5777	10.5272	-3.4734
15.0000	8.1288	15.0000	-3.9326	14.5038	8.0099	15.4962	-3.9733
20.0000	9.1455	20.0000	-4.2676	19.5579	9.0681	20.4421	-4.2896
25.0000	9.8742	25.0000	-4.4502	24.6253	9.8284	25.3747	-4.4585
30.0000	10.3548	30.0000	-4.5008	29.7000	10.3328	30.3000	-4.4995
35.0000	10.5928	35.0000	-4.4119	34.7784	10.5873	35.2216	-4.4046
40.0000	10.5949	40.0000	-4.1798	39.8570	10.5980	40.1430	-4.1712
45.0000	10.3799	45.0000	-3.8186	44.9320	10.3841	45.0680	-3.8129
50.0000	9.9735	50.0000	-3.3545	50.0000	9.9735	50.0000	-3.3545
55.0000	9.4001	55.0000	-2.8146	55.0585	9.3925	54.9415	-2.8213
60.0000	8.6819	60.0000	-2.2257	60.1055	8.6653	59.8945	-2.2385
65.0000	7.8339	65.0000	-1.6086	65.1394	7.8086	64.8606	-1.6260
70.0000	6.8772	70.0000	-0.9927	70.1589	6.8452	69.8411	-1.0119
75.0000	5.8335	75.0000	-0.4102	75.1633	5.7982	74.8367	-0.4283
80.0000	4.7259	80.0000	0.1012	80.1524	4.6914	79.8476	0.0870
85.0000	3.5813	85.0000	0.4926	85.1270	3.5519	84.8730	0.4846
90.0000	2.4205	90.0000	0.7064	90.0889	2.3999	89.9111	0.7044
95.0000	1.2575	95.0000	0.6457	95.0421	1.2475	94.9579	0.6482
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.4730 percent chord

slope of mean line at LE = 0.2527

NACA Section 63-218

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.6270	0.5000	-1.1981	0.3821	1.4501	0.6179	-1.3499
0.7500	1.9420	0.7500	-1.5023	0.6169	1.7818	0.8831	-1.6412
1.2500	2.4480	1.2500	-1.9709	1.0971	2.3057	1.4029	-2.0918
2.5000	3.3889	2.5000	-2.7984	2.3202	3.2692	2.6798	-2.8971
5.0000	4.7703	5.0000	-3.9623	4.7958	4.6732	5.2042	-4.0413
7.5000	5.8072	7.5000	-4.8173	7.2879	5.7283	7.7121	-4.8804
10.0000	6.6445	10.0000	-5.4933	9.7880	6.5794	10.2120	-5.5446
15.0000	7.9399	15.0000	-6.5167	14.8006	7.8960	15.1994	-6.5504
20.0000	8.8699	20.0000	-7.2289	19.8225	8.8422	20.1775	-7.2494
25.0000	9.5083	25.0000	-7.6924	24.8497	9.4929	25.1503	-7.7029
30.0000	9.8939	30.0000	-7.9399	29.8798	9.8876	30.1202	-7.9432
35.0000	10.0263	35.0000	-7.9668	34.9114	10.0261	35.0886	-7.9652
40.0000	9.9103	40.0000	-7.7740	39.9429	9.9129	40.0571	-7.7706
45.0000	9.5711	45.0000	-7.3856	44.9729	9.5735	45.0271	-7.3831
50.0000	9.0414	50.0000	-6.8350	50.0000	9.0414	50.0000	-6.8350
55.0000	8.3533	55.0000	-6.1560	55.0232	8.3498	54.9768	-6.1594
60.0000	7.5350	60.0000	-5.3786	60.0417	7.5277	59.9583	-5.3854
65.0000	6.6097	65.0000	-4.5286	65.0549	6.5991	64.9451	-4.5382
70.0000	5.6072	70.0000	-3.6387	70.0623	5.5944	69.9377	-3.6499
75.0000	4.5586	75.0000	-2.7438	75.0638	4.5451	74.9362	-2.7551
80.0000	3.4991	80.0000	-1.8840	80.0594	3.4867	79.9406	-1.8938
85.0000	2.4700	85.0000	-1.1075	85.0493	2.4601	84.9507	-1.1146
90.0000	1.5097	90.0000	-0.4648	90.0345	1.5034	89.9655	-0.4687
95.0000	0.6673	95.0000	-0.0320	95.0163	0.6648	94.9837	-0.0329
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.9504 percent chord

slope of mean line at LE = 0.0842

NACA Section 63-418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.8562	0.5000	-1.0163	0.2666	1.4856	0.7334	-1.2852
0.7500	2.1765	0.7500	-1.3026	0.4862	1.8368	1.0138	-1.5557
1.2500	2.7011	1.2500	-1.7502	0.9464	2.3970	1.5536	-1.9692
2.5000	3.6991	2.5000	-2.5195	2.1423	3.4397	2.8577	-2.6955
5.0000	5.1865	5.0000	-3.5715	4.5930	4.9749	5.4070	-3.7111
7.5000	6.3129	7.5000	-4.3337	7.0768	6.1396	7.9232	-4.4438
10.0000	7.2296	10.0000	-4.9275	9.5768	7.0857	10.4232	-5.0161
15.0000	8.6584	15.0000	-5.8123	14.6016	8.5605	15.3984	-5.8694
20.0000	9.6954	20.0000	-6.4135	19.6452	9.6328	20.3548	-6.4471
25.0000	10.4196	25.0000	-6.7879	24.6995	10.3839	25.3005	-6.8040
30.0000	10.8730	30.0000	-6.9650	29.7596	10.8574	30.2404	-6.9685
35.0000	11.0572	35.0000	-6.9383	34.8228	11.0553	35.1772	-6.9335
40.0000	10.9789	40.0000	-6.7065	39.8859	10.9835	40.1141	-6.6990
45.0000	10.6640	45.0000	-6.2931	44.9458	10.6686	45.0542	-6.2877
50.0000	10.1445	50.0000	-5.7318	50.0000	10.1445	50.0000	-5.7318
55.0000	9.4520	55.0000	-5.0574	55.0463	9.4449	54.9537	-5.0640
60.0000	8.6135	60.0000	-4.3007	60.0833	8.5984	59.9167	-4.3139
65.0000	7.6510	65.0000	-3.4887	65.1097	7.6287	64.8903	-3.5069
70.0000	6.5927	70.0000	-2.6557	70.1246	6.5653	69.8754	-2.6765
75.0000	5.4677	75.0000	-1.8381	75.1276	5.4384	74.8724	-1.8584
80.0000	4.3087	80.0000	-1.0785	80.1186	4.2811	79.8814	-1.0955
85.0000	3.1534	85.0000	-0.4284	85.0986	3.1308	84.9014	-0.4398
90.0000	2.0339	90.0000	0.0559	90.0688	2.0190	89.9312	0.0505
95.0000	0.9862	95.0000	0.2844	95.0326	0.9796	94.9674	0.2842
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9504 percent chord
 slope of mean line at LE = 0.1685

NACA Section 63-618

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	2.0917	0.5000	-0.8631	0.1557	1.5124	0.8443	-1.2118
0.7500	2.4187	0.7500	-1.1238	0.3600	1.8826	1.1400	-1.4609
1.2500	2.9616	1.2500	-1.5433	0.7999	2.4785	1.7001	-1.8368
2.5000	4.0181	2.5000	-2.2523	1.9679	3.6004	3.0321	-2.4840
5.0000	5.6103	5.0000	-3.1902	4.3927	5.2674	5.6073	-3.3717
7.5000	6.8253	7.5000	-3.8581	6.8677	6.5427	8.1323	-3.9989
10.0000	7.8205	10.0000	-4.3685	9.3671	7.5847	10.6329	-4.4804
15.0000	9.3813	15.0000	-5.1129	14.4036	9.2196	15.5964	-5.1830
20.0000	10.5240	20.0000	-5.6016	19.4685	10.4194	20.5315	-5.6409
25.0000	11.3331	25.0000	-5.8857	24.5495	11.2723	25.4505	-5.9024
30.0000	11.8535	30.0000	-5.9917	29.6396	11.8256	30.3604	-5.9922
35.0000	12.0889	35.0000	-5.9106	34.7342	12.0835	35.2658	-5.9009
40.0000	12.0480	40.0000	-5.6393	39.8289	12.0537	40.1711	-5.6269
45.0000	11.7570	45.0000	-5.2006	44.9188	11.7635	45.0812	-5.1923
50.0000	11.2477	50.0000	-4.6286	50.0000	11.2477	50.0000	-4.6286
55.0000	10.5508	55.0000	-3.9588	55.0695	10.5399	54.9305	-3.9686
60.0000	9.6922	60.0000	-3.2231	60.1250	9.6689	59.8750	-3.2421
65.0000	8.6928	65.0000	-2.4494	65.1645	8.6578	64.8355	-2.4751
70.0000	7.5790	70.0000	-1.6736	70.1869	7.5355	69.8131	-1.7021
75.0000	6.3779	75.0000	-0.9336	75.1912	6.3306	74.8088	-0.9607
80.0000	5.1196	80.0000	-0.2743	80.1777	5.0743	79.8223	-0.2958
85.0000	3.8382	85.0000	0.2492	85.1476	3.8002	84.8524	0.2363
90.0000	2.5594	90.0000	0.5753	90.1029	2.5334	89.8971	0.5709
95.0000	1.3059	95.0000	0.5999	95.0486	1.2936	94.9514	0.6020
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9504 percent chord
 slope of mean line at LE = 0.2527

NACA Section 63-221

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.8558	0.5000	-1.3315	0.3671	1.6274	0.6329	-1.5272
0.7500	2.2170	0.7500	-1.6835	0.5994	2.0074	0.9006	-1.8668
1.2500	2.8005	1.2500	-2.2357	1.0758	2.6125	1.4242	-2.3986
2.5000	3.8934	2.5000	-3.2241	2.2932	3.7325	2.7068	-3.3604
5.0000	5.5033	5.0000	-4.6292	4.7631	5.3719	5.2369	-4.7400
7.5000	6.7066	7.5000	-5.6634	7.2531	6.6000	7.7469	-5.7521
10.0000	7.6754	10.0000	-6.4804	9.7528	7.5875	10.2472	-6.5527
15.0000	9.1697	15.0000	-7.7174	14.7671	9.1105	15.2329	-7.7650
20.0000	10.2371	20.0000	-8.5784	19.7925	10.2000	20.2075	-8.6072
25.0000	10.9632	25.0000	-9.1380	24.8243	10.9428	25.1757	-9.1528
30.0000	11.3922	30.0000	-9.4353	29.8596	11.3842	30.1404	-9.4398
35.0000	11.5206	35.0000	-9.4624	34.8966	11.5210	35.1034	-9.4601
40.0000	11.3575	40.0000	-9.2240	39.9336	11.3615	40.0664	-9.2192
45.0000	10.9356	45.0000	-8.7522	44.9686	10.9390	45.0314	-8.7486
50.0000	10.2953	50.0000	-8.0889	50.0000	10.2953	50.0000	-8.0889
55.0000	9.4775	55.0000	-7.2776	55.0268	9.4727	54.9732	-7.2823
60.0000	8.5142	60.0000	-6.3527	60.0480	8.5043	59.9520	-6.3620
65.0000	7.4333	65.0000	-5.3452	65.0629	7.4191	64.9371	-5.3582
70.0000	6.2721	70.0000	-4.2957	70.0712	6.2552	69.9288	-4.3108
75.0000	5.0691	75.0000	-3.2465	75.0727	5.0515	74.9273	-3.2616
80.0000	3.8648	80.0000	-2.2430	80.0674	3.8488	79.9327	-2.2560
85.0000	2.7063	85.0000	-1.3389	85.0558	2.6937	84.9442	-1.3482
90.0000	1.6361	90.0000	-0.5884	90.0388	1.6283	89.9612	-0.5935
95.0000	0.7110	95.0000	-0.0748	95.0184	0.7079	94.9816	-0.0760
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.3989 percent chord
 slope of mean line at LE = 0.0842

NACA Section 63-421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	2.1388	0.5000	-1.1153	0.2370	1.6611	0.7630	-1.4607
0.7500	2.5026	0.7500	-1.4450	0.4515	2.0605	1.0485	-1.7793
1.2500	3.1002	1.2500	-1.9757	0.9040	2.7015	1.5960	-2.2737
2.5000	4.2456	2.5000	-2.9092	2.0885	3.9007	2.9115	-3.1565
5.0000	5.9537	5.0000	-4.2072	4.5277	5.6713	5.4723	-4.4075
7.5000	7.2399	7.5000	-5.1544	7.0073	7.0092	7.9927	-5.3134
10.0000	8.2832	10.0000	-5.8938	9.5064	8.0919	10.4936	-6.0224
15.0000	9.9033	15.0000	-6.9992	14.5346	9.7737	15.4654	-7.0826
20.0000	11.0718	20.0000	-7.7545	19.5853	10.9896	20.4147	-7.8039
25.0000	11.8794	25.0000	-8.2292	24.6488	11.8331	25.3512	-8.2532
30.0000	12.3729	30.0000	-8.4592	29.7193	12.3536	30.2807	-8.4647
35.0000	12.5511	35.0000	-8.4347	34.7933	12.5499	35.2067	-8.4282
40.0000	12.4249	40.0000	-8.1580	39.8672	12.4320	40.1328	-8.1474
45.0000	12.0275	45.0000	-7.6607	44.9371	12.0340	45.0629	-7.6532
50.0000	11.3985	50.0000	-6.9857	50.0000	11.3985	50.0000	-6.9857
55.0000	10.5775	55.0000	-6.1777	55.0535	10.5678	54.9465	-6.1869
60.0000	9.5952	60.0000	-5.2723	60.0959	9.5750	59.9041	-5.2904
65.0000	8.4782	65.0000	-4.3020	65.1259	8.4486	64.8741	-4.3269
70.0000	7.2617	70.0000	-3.3089	70.1424	7.2260	69.8576	-3.3371
75.0000	5.9824	75.0000	-2.3372	75.1453	5.9446	74.8547	-2.3647
80.0000	4.6780	80.0000	-1.4344	80.1346	4.6430	79.8654	-1.4573
85.0000	3.3924	85.0000	-0.6577	85.1115	3.3642	84.8885	-0.6731
90.0000	2.1620	90.0000	-0.0666	90.0776	2.1436	89.9224	-0.0741
95.0000	1.0305	95.0000	0.2418	95.0366	1.0226	94.9634	0.2412
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.3989 percent chord

slope of mean line at LE = 0.1685

NACA Section 64-108

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.6985	0.5000	-0.6128	0.4724	0.6795	0.5276	-0.6294
0.7500	0.8433	0.7500	-0.7433	0.7192	0.8273	0.7808	-0.7570
1.2500	1.0675	1.2500	-0.9353	1.2152	1.0537	1.2848	-0.9467
2.5000	1.4646	2.5000	-1.2595	2.4603	1.4539	2.5397	-1.2679
5.0000	2.0380	5.0000	-1.7067	4.9562	2.0293	5.0438	-1.7134
7.5000	2.4756	7.5000	-2.0393	7.4549	2.4685	7.5451	-2.0446
10.0000	2.8349	10.0000	-2.3072	9.9551	2.8289	10.0449	-2.3115
15.0000	3.4057	15.0000	-2.7257	14.9577	3.4015	15.0423	-2.7287
20.0000	3.8333	20.0000	-3.0321	19.9621	3.8305	20.0379	-3.0341
25.0000	4.1486	25.0000	-3.2508	24.9677	4.1469	25.0323	-3.2519
30.0000	4.3651	30.0000	-3.3914	29.9739	4.3642	30.0261	-3.3919
35.0000	4.4909	35.0000	-3.4600	34.9804	4.4906	35.0196	-3.4601
40.0000	4.5186	40.0000	-3.4477	39.9871	4.5186	40.0129	-3.4475
45.0000	4.4268	45.0000	-3.3320	44.9938	4.4270	45.0062	-3.3318
50.0000	4.2313	50.0000	-3.1281	50.0000	4.2313	50.0000	-3.1281
55.0000	3.9556	55.0000	-2.8597	55.0054	3.9553	54.9946	-2.8601
60.0000	3.6136	60.0000	-2.5411	60.0099	3.6129	59.9901	-2.5417
65.0000	3.2164	65.0000	-2.1839	65.0133	3.2153	64.9867	-2.1849
70.0000	2.7750	70.0000	-1.8001	70.0154	2.7736	69.9846	-1.8013
75.0000	2.2991	75.0000	-1.4012	75.0162	2.2975	74.9838	-1.4025
80.0000	1.8012	80.0000	-1.0020	80.0155	1.7996	79.9845	-1.0032
85.0000	1.2977	85.0000	-0.6226	85.0133	1.2963	84.9868	-0.6236
90.0000	0.8095	90.0000	-0.2906	90.0096	0.8085	89.9904	-0.2912
95.0000	0.3616	95.0000	-0.0451	95.0048	0.3612	94.9952	-0.0452
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.4462 percent chord

slope of mean line at LE = 0.0421

NACA Section 64-110

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8697	0.5000	-0.7649	0.4656	0.8409	0.5344	-0.7908
0.7500	1.0470	0.7500	-0.9304	0.7116	1.0224	0.7884	-0.9521
1.2500	1.3212	1.2500	-1.1750	1.2067	1.3001	1.2933	-1.1932
2.5000	1.8078	2.5000	-1.5917	2.4505	1.7914	2.5495	-1.6053
5.0000	2.5112	5.0000	-2.1713	4.9452	2.4979	5.0548	-2.1820
7.5000	3.0468	7.5000	-2.6034	7.4435	3.0360	7.5565	-2.6120
10.0000	3.4859	10.0000	-2.9523	9.9437	3.4768	10.0563	-2.9594
15.0000	4.1823	15.0000	-3.4983	14.9470	4.1760	15.0530	-3.5032
20.0000	4.7026	20.0000	-3.8987	19.9526	4.6983	20.0474	-3.9019
25.0000	5.0845	25.0000	-4.1851	24.9595	5.0820	25.0405	-4.1870
30.0000	5.3444	30.0000	-4.3699	29.9673	5.3430	30.0327	-4.3708
35.0000	5.4922	35.0000	-4.4611	34.9755	5.4917	35.0245	-4.4613
40.0000	5.5154	40.0000	-4.4447	39.9839	5.5156	40.0161	-4.4444
45.0000	5.3882	45.0000	-4.2936	44.9923	5.3885	45.0077	-4.2933
50.0000	5.1350	50.0000	-4.0318	50.0000	5.1350	50.0000	-4.0318
55.0000	4.7846	55.0000	-3.6884	55.0068	4.7841	54.9932	-3.6889
60.0000	4.3548	60.0000	-3.2814	60.0123	4.3536	59.9877	-3.2825
65.0000	3.8598	65.0000	-2.8261	65.0165	3.8581	64.9835	-2.8276
70.0000	3.3134	70.0000	-2.3371	70.0191	3.3112	69.9809	-2.3390
75.0000	2.7286	75.0000	-1.8292	75.0199	2.7262	74.9801	-1.8312
80.0000	2.1216	80.0000	-1.3209	80.0190	2.1192	79.9810	-1.3228
85.0000	1.5136	85.0000	-0.8374	85.0162	1.5117	84.9838	-0.8389
90.0000	0.9309	90.0000	-0.4113	90.0117	0.9296	89.9883	-0.4122
95.0000	0.4055	95.0000	-0.0887	95.0058	0.4049	94.9942	-0.0890
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.6987 percent chord
 slope of mean line at LE = 0.0421

NACA Section 64-206

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.5641	0.5000	-0.4233	0.4587	0.5402	0.5413	-0.4400
0.7500	0.6840	0.7500	-0.5102	0.7038	0.6639	0.7962	-0.5233
1.2500	0.8748	1.2500	-0.6322	1.1979	0.8568	1.3021	-0.6429
2.5000	1.2200	2.5000	-0.8266	2.4405	1.2059	2.5595	-0.8338
5.0000	1.7282	5.0000	-1.0793	4.9344	1.7166	5.0656	-1.0848
7.5000	2.1219	7.5000	-1.2601	7.4325	2.1123	7.5675	-1.2643
10.0000	2.4480	10.0000	-1.4017	9.9328	2.4399	10.0672	-1.4051
15.0000	2.9708	15.0000	-1.6172	14.9367	2.9650	15.0633	-1.6195
20.0000	3.3672	20.0000	-1.7690	19.9434	3.3633	20.0566	-1.7705
25.0000	3.6646	25.0000	-1.8714	24.9516	3.6621	25.0484	-1.8721
30.0000	3.8753	30.0000	-1.9292	29.9609	3.8740	30.0391	-1.9295
35.0000	4.0070	35.0000	-1.9456	34.9707	4.0065	35.0293	-1.9456
40.0000	4.0566	40.0000	-1.9145	39.9807	4.0566	40.0193	-1.9143
45.0000	4.0083	45.0000	-1.8183	44.9907	4.0085	45.0093	-1.8181
50.0000	3.8717	50.0000	-1.6654	50.0000	3.8717	50.0000	-1.6654
55.0000	3.6644	55.0000	-1.4732	55.0082	3.6640	54.9918	-1.4736
60.0000	3.3964	60.0000	-1.2526	60.0150	3.3955	59.9850	-1.2533
65.0000	3.0758	65.0000	-1.0126	65.0201	3.0744	64.9799	-1.0136
70.0000	2.7098	70.0000	-0.7624	70.0234	2.7080	69.9766	-0.7636
75.0000	2.3046	75.0000	-0.5113	75.0246	2.3025	74.9754	-0.5126
80.0000	1.8680	80.0000	-0.2720	80.0236	1.8659	79.9764	-0.2731
85.0000	1.4095	85.0000	-0.0613	85.0203	1.4076	84.9797	-0.0621
90.0000	0.9411	90.0000	0.0955	90.0148	0.9397	89.9852	0.0951
95.0000	0.4733	95.0000	0.1593	95.0073	0.4726	94.9927	0.1593
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.2494 percent chord

slope of mean line at LE = 0.0842

NACA Section 64-208

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.7429	0.5000	-0.5719	0.4450	0.7028	0.5550	-0.6026
0.7500	0.8950	0.7500	-0.6950	0.6885	0.8607	0.8115	-0.7201
1.2500	1.1354	1.2500	-0.8710	1.1806	1.1054	1.3194	-0.8915
2.5000	1.5689	2.5000	-1.1586	2.4207	1.5452	2.5793	-1.1731
5.0000	2.2051	5.0000	-1.5427	4.9124	2.1857	5.0876	-1.5539
7.5000	2.6951	7.5000	-1.8224	7.4098	2.6792	7.5902	-1.8312
10.0000	3.0999	10.0000	-2.0444	9.9102	3.0864	10.0898	-2.0517
15.0000	3.7465	15.0000	-2.3866	14.9154	3.7370	15.0846	-2.3915
20.0000	4.2345	20.0000	-2.6321	19.9243	4.2281	20.0757	-2.6352
25.0000	4.5979	25.0000	-2.8022	24.9353	4.5940	25.0647	-2.8040
30.0000	4.8521	30.0000	-2.9048	29.9477	4.8500	30.0523	-2.9056
35.0000	5.0065	35.0000	-2.9447	34.9608	5.0057	35.0392	-2.9448
40.0000	5.0541	40.0000	-2.9123	39.9743	5.0541	40.0257	-2.9119
45.0000	4.9742	45.0000	-2.7846	44.9876	4.9746	45.0124	-2.7841
50.0000	4.7829	50.0000	-2.5765	50.0000	4.7829	50.0000	-2.5765
55.0000	4.5035	55.0000	-2.3118	55.0109	4.5028	54.9891	-2.3124
60.0000	4.1499	60.0000	-2.0048	60.0199	4.1484	59.9801	-2.0061
65.0000	3.7328	65.0000	-1.6677	65.0266	3.7304	64.9734	-1.6695
70.0000	3.2626	70.0000	-1.3129	70.0308	3.2595	69.9692	-1.3151
75.0000	2.7482	75.0000	-0.9525	75.0323	2.7448	74.9677	-0.9548
80.0000	2.2010	80.0000	-0.6027	80.0309	2.1976	79.9691	-0.6048
85.0000	1.6355	85.0000	-0.2854	85.0265	1.6325	84.9735	-0.2869
90.0000	1.0691	90.0000	-0.0314	90.0192	1.0670	89.9808	-0.0322
95.0000	0.5200	95.0000	0.1130	95.0095	0.5190	94.9905	0.1129
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.4462 percent chord

slope of mean line at LE = 0.0842

NACA Section 64-209

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8332	0.5000	-0.6441	0.4382	0.7835	0.5618	-0.6833
0.7500	1.0011	0.7500	-0.7853	0.6810	0.9583	0.8190	-0.8177
1.2500	1.2659	1.2500	-0.9883	1.1720	1.2287	1.3280	-1.0148
2.5000	1.7435	2.5000	-1.3229	2.4109	1.7141	2.5891	-1.3420
5.0000	2.4440	5.0000	-1.7733	4.9014	2.4200	5.0986	-1.7882
7.5000	2.9825	7.5000	-2.1031	7.3985	2.9628	7.6015	-2.1148
10.0000	3.4268	10.0000	-2.3658	9.8988	3.4102	10.1012	-2.3754
15.0000	4.1356	15.0000	-2.7719	14.9047	4.1239	15.0953	-2.7784
20.0000	4.6695	20.0000	-3.0646	19.9147	4.6616	20.0853	-3.0688
25.0000	5.0660	25.0000	-3.2688	24.9272	5.0611	25.0728	-3.2711
30.0000	5.3417	30.0000	-3.3936	29.9411	5.3391	30.0589	-3.3947
35.0000	5.5070	35.0000	-3.4450	34.9559	5.5060	35.0441	-3.4451
40.0000	5.5526	40.0000	-3.4110	39.9711	5.5528	40.0289	-3.4105
45.0000	5.4555	45.0000	-3.2661	44.9861	5.4559	45.0139	-3.2655
50.0000	5.2357	50.0000	-3.0294	50.0000	5.2357	50.0000	-3.0294
55.0000	4.9194	55.0000	-2.7273	55.0122	4.9186	54.9878	-2.7281
60.0000	4.5222	60.0000	-2.3764	60.0223	4.5203	59.9777	-2.3780
65.0000	4.0564	65.0000	-1.9902	65.0298	4.0535	64.9702	-1.9926
70.0000	3.5338	70.0000	-1.5828	70.0345	3.5301	69.9655	-1.5856
75.0000	2.9651	75.0000	-1.1679	75.0361	2.9608	74.9639	-1.1708
80.0000	2.3631	80.0000	-0.7633	80.0345	2.3589	79.9655	-0.7660
85.0000	1.7449	85.0000	-0.3937	85.0295	1.7413	84.9705	-0.3957
90.0000	1.1308	90.0000	-0.0924	90.0214	1.1282	89.9786	-0.0935
95.0000	0.5423	95.0000	0.0909	95.0106	0.5411	94.9894	0.0907
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.5660 percent chord
 slope of mean line at LE = 0.0842

NACA Section 64-210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.9240	0.5000	-0.7150	0.4315	0.8637	0.5685	-0.7635
0.7500	1.1074	0.7500	-0.8741	0.6734	1.0553	0.8266	-0.9147
1.2500	1.3964	1.2500	-1.1042	1.1635	1.3513	1.3365	-1.1374
2.5000	1.9180	2.5000	-1.4858	2.4011	1.8822	2.5989	-1.5101
5.0000	2.6830	5.0000	-2.0032	4.8904	2.6540	5.1096	-2.0221
7.5000	3.2702	7.5000	-2.3833	7.3872	3.2463	7.6128	-2.3983
10.0000	3.7542	10.0000	-2.6869	9.8875	3.7340	10.1125	-2.6993
15.0000	4.5254	15.0000	-3.1573	14.8940	4.5112	15.1060	-3.1657
20.0000	5.1053	20.0000	-3.4975	19.9051	5.0958	20.0949	-3.5029
25.0000	5.5348	25.0000	-3.7359	24.9190	5.5289	25.0810	-3.7389
30.0000	5.8319	30.0000	-3.8830	29.9345	5.8288	30.0655	-3.8844
35.0000	6.0079	35.0000	-3.9457	34.9510	6.0068	35.0490	-3.9459
40.0000	6.0508	40.0000	-3.9094	39.9679	6.0511	40.0321	-3.9088
45.0000	5.9355	45.0000	-3.7464	44.9845	5.9361	45.0155	-3.7457
50.0000	5.6866	50.0000	-3.4802	50.0000	5.6866	50.0000	-3.4802
55.0000	5.3328	55.0000	-3.1403	55.0135	5.3317	54.9865	-3.1413
60.0000	4.8915	60.0000	-2.7448	60.0246	4.8891	59.9754	-2.7469
65.0000	4.3768	65.0000	-2.3093	65.0329	4.3732	64.9671	-2.3123
70.0000	3.8017	70.0000	-1.8491	70.0381	3.7971	69.9619	-1.8527
75.0000	3.1785	75.0000	-1.3797	75.0398	3.1734	74.9602	-1.3835
80.0000	2.5222	80.0000	-0.9209	80.0380	2.5171	79.9620	-0.9243
85.0000	1.8520	85.0000	-0.4996	85.0324	1.8477	84.9676	-0.5022
90.0000	1.1910	90.0000	-0.1518	90.0234	1.1880	89.9765	-0.1532
95.0000	0.5641	95.0000	0.0694	95.0116	0.5627	94.9884	0.0692
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6987 percent chord

slope of mean line at LE = 0.0842

NACA Section 64-112

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.0402	0.5000	-0.9126	0.4589	0.9997	0.5411	-0.9496
0.7500	1.2494	0.7500	-1.1126	0.7042	1.2145	0.7958	-1.1442
1.2500	1.5727	1.2500	-1.4098	1.1982	1.5430	1.3018	-1.4360
2.5000	2.1487	2.5000	-1.9192	2.4408	2.1253	2.5592	-1.9392
5.0000	2.9836	5.0000	-2.6329	4.9342	2.9647	5.0658	-2.6488
7.5000	3.6181	7.5000	-3.1659	7.4322	3.6027	7.5678	-3.1787
10.0000	4.1378	10.0000	-3.5969	9.9324	4.1249	10.0676	-3.6075
15.0000	4.9609	15.0000	-4.2717	14.9363	4.9518	15.0637	-4.2791
20.0000	5.5743	20.0000	-4.7671	19.9430	5.5683	20.0570	-4.7719
25.0000	6.0230	25.0000	-5.1216	24.9513	6.0194	25.0487	-5.1244
30.0000	6.3259	30.0000	-5.3505	29.9606	6.3240	30.0394	-5.3518
35.0000	6.4946	35.0000	-5.4633	34.9705	6.4940	35.0295	-5.4636
40.0000	6.5104	40.0000	-5.4400	39.9807	6.5107	40.0193	-5.4396
45.0000	6.3443	45.0000	-5.2501	44.9907	6.3448	45.0093	-5.2496
50.0000	6.0304	50.0000	-4.9272	50.0000	6.0304	50.0000	-4.9272
55.0000	5.6029	55.0000	-4.5062	55.0081	5.6021	54.9919	-4.5069
60.0000	5.0834	60.0000	-4.0091	60.0147	5.0818	59.9853	-4.0106
65.0000	4.4897	65.0000	-3.4546	65.0196	4.4873	64.9804	-3.4568
70.0000	3.8379	70.0000	-2.8599	70.0226	3.8349	69.9774	-2.8626
75.0000	3.1445	75.0000	-2.2433	75.0236	3.1412	74.9764	-2.2462
80.0000	2.4301	80.0000	-1.6278	80.0224	2.4269	79.9776	-1.6305
85.0000	1.7204	85.0000	-1.0428	85.0191	1.7177	84.9809	-1.0450
90.0000	1.0466	90.0000	-0.5261	90.0137	1.0448	89.9863	-0.5274
95.0000	0.4469	95.0000	-0.1299	95.0068	0.4462	94.9932	-0.1302
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.0073 percent chord

slope of mean line at LE = 0.0421

NACA Section 64-212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.1062	0.5000	-0.8519	0.4181	1.0222	0.5819	-0.9220
0.7500	1.3200	0.7500	-1.0467	0.6585	1.2470	0.8415	-1.1064
1.2500	1.6567	1.2500	-1.3309	1.1466	1.5937	1.3534	-1.3798
2.5000	2.2659	2.5000	-1.8070	2.3817	2.2157	2.6183	-1.8436
5.0000	3.1611	5.0000	-2.4598	4.8686	3.1204	5.1314	-2.4885
7.5000	3.8461	7.5000	-2.9418	7.3645	3.8126	7.6355	-2.9647
10.0000	4.4100	10.0000	-3.3281	9.8649	4.3818	10.1351	-3.3470
15.0000	5.3066	15.0000	-3.9284	14.8726	5.2869	15.1274	-3.9414
20.0000	5.9788	20.0000	-4.3644	19.8860	5.9656	20.1140	-4.3727
25.0000	6.4743	25.0000	-4.6714	24.9026	6.4662	25.0974	-4.6762
30.0000	6.8140	30.0000	-4.8631	29.9213	6.8097	30.0787	-4.8653
35.0000	7.0105	35.0000	-4.9478	34.9411	7.0090	35.0589	-4.9482
40.0000	7.0457	40.0000	-4.9049	39.9614	7.0462	40.0386	-4.9039
45.0000	6.8915	45.0000	-4.7030	44.9815	6.8924	45.0185	-4.7020
50.0000	6.5820	50.0000	-4.3756	50.0000	6.5820	50.0000	-4.3756
55.0000	6.1513	55.0000	-3.9578	55.0161	6.1497	54.9839	-3.9593
60.0000	5.6206	60.0000	-3.4720	60.0293	5.6173	59.9707	-3.4750
65.0000	5.0074	65.0000	-2.9371	65.0391	5.0024	64.9609	-2.9415
70.0000	4.3271	70.0000	-2.3711	70.0452	4.3207	69.9548	-2.3763
75.0000	3.5954	75.0000	-1.7929	75.0471	3.5883	74.9529	-1.7984
80.0000	2.8317	80.0000	-1.2270	80.0448	2.8248	79.9553	-1.2319
85.0000	2.0595	85.0000	-0.7045	85.0381	2.0537	84.9619	-0.7082
90.0000	1.3071	90.0000	-0.2662	90.0275	1.3031	89.9725	-0.2683
95.0000	0.6057	95.0000	0.0284	95.0135	0.6039	94.9865	0.0280
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0073 percent chord
 slope of mean line at LE = 0.0842

NACA Section 64-412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.2410	0.5000	-0.7391	0.3379	1.0621	0.6621	-0.8617
0.7500	1.4656	0.7500	-0.9200	0.5686	1.3068	0.9314	-1.0256
1.2500	1.8291	1.2500	-1.1787	1.0447	1.6901	1.4553	-1.2623
2.5000	2.5053	2.5000	-1.5879	2.2645	2.3915	2.7355	-1.6473
5.0000	3.5203	5.0000	-2.1181	4.7380	3.4271	5.2620	-2.1634
7.5000	4.3059	7.5000	-2.4974	7.2297	4.2285	7.7703	-2.5327
10.0000	4.9575	10.0000	-2.7940	9.7302	4.8921	10.2698	-2.8226
15.0000	6.0007	15.0000	-3.2444	14.7455	5.9544	15.2545	-3.2633
20.0000	6.7896	20.0000	-3.5607	19.7721	6.7582	20.2279	-3.5726
25.0000	7.3781	25.0000	-3.7724	24.8053	7.3586	25.1947	-3.7787
30.0000	7.7909	30.0000	-3.8892	29.8426	7.7804	30.1574	-3.8915
35.0000	8.0426	35.0000	-3.9174	34.8822	8.0386	35.1178	-3.9168
40.0000	8.1165	40.0000	-3.8348	39.9229	8.1170	40.0771	-3.8324
45.0000	7.9859	45.0000	-3.6088	44.9630	7.9875	45.0370	-3.6067
50.0000	7.6851	50.0000	-3.2724	50.0000	7.6851	50.0000	-3.2724
55.0000	7.2481	55.0000	-2.8612	55.0323	7.2448	54.9677	-2.8640
60.0000	6.6952	60.0000	-2.3979	60.0587	6.6881	59.9413	-2.4036
65.0000	6.0431	65.0000	-1.9025	65.0783	6.0322	64.9217	-1.9105
70.0000	5.3061	70.0000	-1.3940	70.0903	5.2920	69.9097	-1.4032
75.0000	4.4979	75.0000	-0.8929	75.0941	4.4821	74.9059	-0.9022
80.0000	3.6355	80.0000	-0.4262	80.0894	3.6197	79.9106	-0.4341
85.0000	2.7387	85.0000	-0.0286	85.0762	2.7249	84.9238	-0.0338
90.0000	1.8290	90.0000	0.2528	90.0549	1.8191	89.9451	0.2505
95.0000	0.9238	95.0000	0.3444	95.0269	0.9189	94.9731	0.3448
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.0073 percent chord

slope of mean line at LE = 0.1685

NACA Section 64-215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.3793	0.5000	-1.0452	0.3986	1.2535	0.6014	-1.1533
0.7500	1.6368	0.7500	-1.2922	0.6368	1.5268	0.8632	-1.3862
1.2500	2.0428	1.2500	-1.6569	1.1219	1.9483	1.3781	-1.7344
2.5000	2.7833	2.5000	-2.2752	2.3530	2.7068	2.6470	-2.3347
5.0000	3.8760	5.0000	-3.1349	4.8361	3.8140	5.1639	-3.1821
7.5000	4.7098	7.5000	-3.7729	7.3307	4.6588	7.6693	-3.8109
10.0000	5.3947	10.0000	-4.2856	9.8309	5.3519	10.1691	-4.3171
15.0000	6.4814	15.0000	-5.0843	14.8405	6.4514	15.1595	-5.1059
20.0000	7.2929	20.0000	-5.6660	19.8571	7.2729	20.1429	-5.6800
25.0000	7.8874	25.0000	-6.0773	24.8779	7.8753	25.1220	-6.0853
30.0000	8.2903	30.0000	-6.3359	29.9014	8.2841	30.0986	-6.3396
35.0000	8.5152	35.0000	-6.4518	34.9263	8.5132	35.0737	-6.4524
40.0000	8.5329	40.0000	-6.3932	39.9518	8.5338	40.0482	-6.3916
45.0000	8.3139	45.0000	-6.1266	44.9769	8.3154	45.0231	-6.1250
50.0000	7.9082	50.0000	-5.7019	50.0000	7.9082	50.0000	-5.7019
55.0000	7.3585	55.0000	-5.1633	55.0200	7.3561	54.9800	-5.1657
60.0000	6.6907	60.0000	-4.5384	60.0362	6.6855	59.9638	-4.5432
65.0000	5.9278	65.0000	-3.8523	65.0482	5.9200	64.9518	-3.8591
70.0000	5.0894	70.0000	-3.1271	70.0554	5.0797	69.9446	-3.1353
75.0000	4.1967	75.0000	-2.3878	75.0575	4.1862	74.9425	-2.3963
80.0000	3.2747	80.0000	-1.6641	80.0545	3.2646	79.9455	-1.6718
85.0000	2.3545	85.0000	-0.9948	85.0462	2.3461	84.9538	-1.0006
90.0000	1.4709	90.0000	-0.4271	90.0331	1.4652	89.9669	-0.4304
95.0000	0.6639	95.0000	-0.0288	95.0162	0.6615	94.9838	-0.0296
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5563 percent chord
 slope of mean line at LE = 0.0842

NACA Section 64-415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.5548	0.5000	-0.8987	0.2993	1.2911	0.7007	-1.0907
0.7500	1.8192	0.7500	-1.1326	0.5255	1.5841	0.9745	-1.3030
1.2500	2.2470	1.2500	-1.4769	0.9957	2.0421	1.5043	-1.6143
2.5000	3.0494	2.5000	-2.0341	2.2075	2.8802	2.7925	-2.1359
5.0000	4.2570	5.0000	-2.7753	4.6732	4.1185	5.3268	-2.8547
7.5000	5.1873	7.5000	-3.3140	7.1622	5.0726	7.8378	-3.3768
10.0000	5.9572	10.0000	-3.7395	9.6625	5.8604	10.3375	-3.7909
15.0000	7.1858	15.0000	-4.3919	14.6813	7.1176	15.3187	-4.4265
20.0000	8.1106	20.0000	-4.8570	19.7144	8.0646	20.2856	-4.8789
25.0000	8.7954	25.0000	-5.1751	24.7560	8.7671	25.2440	-5.1871
30.0000	9.2693	30.0000	-5.3606	29.8029	9.2543	30.1971	-5.3654
35.0000	9.5478	35.0000	-5.4212	34.8526	9.5426	35.1474	-5.4208
40.0000	9.6031	40.0000	-5.3238	39.9037	9.6045	40.0963	-5.3200
45.0000	9.4077	45.0000	-5.0331	44.9539	9.4105	45.0461	-5.0296
50.0000	9.0114	50.0000	-4.5987	50.0000	9.0114	50.0000	-4.5987
55.0000	8.4562	55.0000	-4.0658	55.0400	8.4512	54.9600	-4.0704
60.0000	7.7671	60.0000	-3.4626	60.0725	7.7563	59.9275	-3.4717
65.0000	6.9661	65.0000	-2.8152	65.0963	6.9497	64.9037	-2.8280
70.0000	6.0716	70.0000	-2.1471	70.1107	6.0508	69.8892	-2.1620
75.0000	5.1027	75.0000	-1.4848	75.1150	5.0797	74.8850	-1.4998
80.0000	4.0818	80.0000	-0.8607	80.1088	4.0592	79.8912	-0.8736
85.0000	3.0363	85.0000	-0.3170	85.0923	3.0170	84.9077	-0.3259
90.0000	1.9945	90.0000	0.0931	90.0662	1.9809	89.9338	0.0887
95.0000	0.9827	95.0000	0.2875	95.0323	0.9763	94.9677	0.2875
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.5563 percent chord

slope of mean line at LE = 0.1685

NACA Section 64-218

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.6485	0.5000	-1.2228	0.3800	1.4750	0.6200	-1.3748
0.7500	1.9474	0.7500	-1.5202	0.6159	1.7948	0.8841	-1.6542
1.2500	2.4203	1.2500	-1.9635	1.0983	2.2889	1.4017	-2.0750
2.5000	3.2914	2.5000	-2.7239	2.3252	3.1836	2.6748	-2.8114
5.0000	4.5855	5.0000	-3.7952	4.8040	4.4976	5.1960	-3.8657
7.5000	5.5705	7.5000	-4.5935	7.2971	5.4983	7.7029	-4.6504
10.0000	6.3785	10.0000	-5.2359	9.7972	6.3179	10.2028	-5.2831
15.0000	7.6578	15.0000	-6.2375	14.8083	7.6155	15.1917	-6.2699
20.0000	8.6100	20.0000	-6.9679	19.8282	8.5818	20.1718	-6.9890
25.0000	9.3039	25.0000	-7.4848	24.8533	9.2870	25.1467	-7.4970
30.0000	9.7691	30.0000	-7.8105	29.8815	9.7605	30.1185	-7.8160
35.0000	10.0196	35.0000	-7.9557	34.9115	10.0173	35.0885	-7.9564
40.0000	10.0124	40.0000	-7.8744	39.9423	10.0142	40.0577	-7.8719
45.0000	9.7206	45.0000	-7.5349	44.9724	9.7229	45.0276	-7.5325
50.0000	9.2139	50.0000	-7.0075	50.0000	9.2139	50.0000	-7.0075
55.0000	8.5408	55.0000	-6.3434	55.0238	8.5372	54.9762	-6.3468
60.0000	7.7325	60.0000	-5.5759	60.0429	7.7251	59.9571	-5.5828
65.0000	6.8181	65.0000	-4.7364	65.0569	6.8072	64.9431	-4.7463
70.0000	5.8216	70.0000	-3.8520	70.0652	5.8082	69.9348	-3.8637
75.0000	4.7697	75.0000	-2.9533	75.0675	4.7553	74.9325	-2.9653
80.0000	3.6935	80.0000	-2.0761	80.0636	3.6798	79.9364	-2.0870
85.0000	2.6309	85.0000	-1.2661	85.0538	2.6197	84.9463	-1.2742
90.0000	1.6229	90.0000	-0.5760	90.0384	1.6155	89.9616	-0.5807
95.0000	0.7174	95.0000	-0.0812	95.0187	0.7143	94.9813	-0.0824
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2082 percent chord
 slope of mean line at LE = 0.0842

NACA Section 64-418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.8707	0.5000	-1.0384	0.2624	1.5103	0.7376	-1.3099
0.7500	2.1719	0.7500	-1.3227	0.4842	1.8497	1.0158	-1.5685
1.2500	2.6612	1.2500	-1.7505	0.9487	2.3803	1.5513	-1.9525
2.5000	3.5895	2.5000	-2.4556	2.1522	3.3545	2.8478	-2.6103
5.0000	4.9925	5.0000	-3.4129	4.6094	4.7998	5.3906	-3.5361
7.5000	6.0695	7.5000	-4.1161	7.0952	5.9102	7.9048	-4.2143
10.0000	6.9591	10.0000	-4.6742	9.5951	6.8247	10.4049	-4.7552
15.0000	8.3748	15.0000	-5.5344	14.6171	8.2803	15.3829	-5.5892
20.0000	9.4359	20.0000	-6.1518	19.6567	9.3725	20.3433	-6.1869
25.0000	10.2168	25.0000	-6.5786	24.7067	10.1781	25.2933	-6.5982
30.0000	10.7505	30.0000	-6.8333	29.7630	10.7303	30.2370	-6.8414
35.0000	11.0528	35.0000	-6.9249	34.8229	11.0464	35.1771	-6.9246
40.0000	11.0819	40.0000	-6.8059	39.8846	11.0847	40.1154	-6.8002
45.0000	10.8136	45.0000	-6.4423	44.9449	10.8180	45.0551	-6.4371
50.0000	10.3170	50.0000	-5.9043	50.0000	10.3170	50.0000	-5.9043
55.0000	9.6395	55.0000	-5.2447	55.0475	9.6323	54.9525	-5.2515
60.0000	8.8112	60.0000	-4.4979	60.0859	8.7958	59.9141	-4.5113
65.0000	7.8597	65.0000	-3.6963	65.1138	7.8368	64.8862	-3.7150
70.0000	6.8076	70.0000	-2.8685	70.1304	6.7791	69.8696	-2.8902
75.0000	5.6797	75.0000	-2.0468	75.1349	5.6485	74.8651	-2.0686
80.0000	4.5043	80.0000	-1.2696	80.1271	4.4741	79.8729	-1.2885
85.0000	3.3157	85.0000	-0.5860	85.1074	3.2903	84.8926	-0.5992
90.0000	2.1484	90.0000	-0.0545	90.0767	2.1309	89.9233	-0.0613
95.0000	1.0370	95.0000	0.2354	95.0372	1.0290	94.9628	0.2348
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2082 percent chord
 slope of mean line at LE = 0.1685

NACA Section 64-618

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	2.0964	0.5000	-0.8820	0.1496	1.5367	0.8504	-1.2361
0.7500	2.4023	0.7500	-1.1437	0.3571	1.8953	1.1429	-1.4736
1.2500	2.9088	1.2500	-1.5495	0.8033	2.4620	1.6967	-1.8203
2.5000	3.8963	2.5000	-2.1981	1.9826	3.5159	3.0174	-2.3995
5.0000	5.4070	5.0000	-3.0397	4.4172	5.0933	5.5828	-3.1976
7.5000	6.5752	7.5000	-3.6465	6.8952	6.3142	8.1048	-3.7704
10.0000	7.5454	10.0000	-4.1193	9.3944	7.3245	10.6056	-4.2202
15.0000	9.0961	15.0000	-4.8361	14.4267	8.9399	15.5733	-4.9034
20.0000	10.2650	20.0000	-5.3392	19.4857	10.1595	20.5143	-5.3810
25.0000	11.1318	25.0000	-5.6748	24.5603	11.0667	25.4397	-5.6968
30.0000	11.7333	30.0000	-5.8576	29.6447	11.6985	30.3553	-5.8652
35.0000	12.0866	35.0000	-5.8949	34.7345	12.0747	35.2655	-5.8920
40.0000	12.1518	40.0000	-5.7378	39.8269	12.1549	40.1731	-5.7281
45.0000	11.9068	45.0000	-5.3497	44.9173	11.9130	45.0827	-5.3417
50.0000	11.4202	50.0000	-4.8011	50.0000	11.4202	50.0000	-4.8011
55.0000	10.7383	55.0000	-4.1462	55.0713	10.7273	54.9287	-4.1561
60.0000	9.8900	60.0000	-3.4201	60.1288	9.8662	59.8712	-3.4394
65.0000	8.9018	65.0000	-2.6568	65.1707	8.8658	64.8293	-2.6831
70.0000	7.7945	70.0000	-1.8859	70.1955	7.7491	69.8045	-1.9158
75.0000	6.5909	75.0000	-1.1415	75.2022	6.5406	74.7978	-1.1706
80.0000	5.3166	80.0000	-0.4646	80.1905	5.2671	79.8095	-0.4886
85.0000	4.0020	85.0000	0.0925	85.1608	3.9594	84.8392	0.0772
90.0000	2.6752	90.0000	0.4656	90.1146	2.6449	89.8854	0.4594
95.0000	1.3575	95.0000	0.5511	95.0555	1.3428	94.9445	0.5529
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2082 percent chord
 slope of mean line at LE = 0.2527

NACA Section 64-421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	2.1832	0.5000	-1.1590	0.2275	1.7173	0.7725	-1.5169
0.7500	2.5187	0.7500	-1.4902	0.4452	2.1009	1.0548	-1.8197
1.2500	3.0670	1.2500	-1.9984	0.9040	2.7013	1.5960	-2.2736
2.5000	4.1212	2.5000	-2.8493	2.0990	3.8106	2.9010	-3.0664
5.0000	5.7238	5.0000	-4.0275	4.5467	5.4679	5.4533	-4.2041
7.5000	6.9500	7.5000	-4.9010	7.0289	6.7386	7.9711	-5.0427
10.0000	7.9610	10.0000	-5.5959	9.5280	7.7828	10.4720	-5.7132
15.0000	9.5661	15.0000	-6.6700	14.5530	9.4410	15.4470	-6.7500
20.0000	10.7647	20.0000	-7.4440	19.5990	10.6811	20.4010	-7.4954
25.0000	11.6414	25.0000	-7.9821	24.6573	11.5908	25.3427	-8.0109
30.0000	12.2336	30.0000	-8.3065	29.7232	12.2076	30.2768	-8.3187
35.0000	12.5564	35.0000	-8.4276	34.7933	12.5492	35.2067	-8.4274
40.0000	12.5520	40.0000	-8.2806	39.8656	12.5569	40.1344	-8.2723
45.0000	12.2038	45.0000	-7.8364	44.9360	12.2100	45.0640	-7.8292
50.0000	11.6014	50.0000	-7.1887	50.0000	11.6014	50.0000	-7.1887
55.0000	10.7972	55.0000	-6.3972	55.0549	10.7874	54.9451	-6.4065
60.0000	9.8270	60.0000	-5.5034	60.0989	9.8064	59.9011	-5.5219
65.0000	8.7234	65.0000	-4.5457	65.1307	8.6930	64.8693	-4.5713
70.0000	7.5149	70.0000	-3.5591	70.1492	7.4775	69.8508	-3.5886
75.0000	6.2302	75.0000	-2.5803	75.1539	6.1898	74.8461	-2.6099
80.0000	4.9044	80.0000	-1.6547	80.1444	4.8659	79.8556	-1.6802
85.0000	3.5783	85.0000	-0.8373	85.1215	3.5464	84.8785	-0.8554
90.0000	2.2920	90.0000	-0.1913	90.0864	2.2704	89.9136	-0.2008
95.0000	1.0869	95.0000	0.1878	95.0417	1.0773	94.9583	0.1865
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.9371 percent chord
 slope of mean line at LE = 0.1685

NACA Section 65-108

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.6619	0.5000	-0.5802	0.4739	0.6450	0.5261	-0.5949
0.7500	0.7962	0.7500	-0.7003	0.7210	0.7823	0.7790	-0.7120
1.2500	1.0002	1.2500	-0.8720	1.2175	0.9884	1.2825	-0.8815
2.5000	1.3671	2.5000	-1.1645	2.4631	1.3578	2.5369	-1.1717
5.0000	1.9117	5.0000	-1.5821	4.9591	1.9039	5.0409	-1.5879
7.5000	2.3386	7.5000	-1.9031	7.4576	2.3320	7.5424	-1.9080
10.0000	2.6973	10.0000	-2.1701	9.9575	2.6916	10.0425	-2.1743
15.0000	3.2729	15.0000	-2.5931	14.9595	3.2688	15.0405	-2.5960
20.0000	3.7128	20.0000	-2.9115	19.9635	3.7100	20.0365	-2.9135
25.0000	4.0473	25.0000	-3.1492	24.9685	4.0455	25.0315	-3.1505
30.0000	4.2921	30.0000	-3.3182	29.9743	4.2911	30.0257	-3.3189
35.0000	4.4526	35.0000	-3.4215	34.9806	4.4522	35.0194	-3.4217
40.0000	4.5331	40.0000	-3.4619	39.9871	4.5330	40.0129	-3.4619
45.0000	4.5208	45.0000	-3.4258	44.9937	4.5209	45.0063	-3.4257
50.0000	4.4072	50.0000	-3.3040	50.0000	4.4072	50.0000	-3.3040
55.0000	4.1880	55.0000	-3.0922	55.0058	4.1877	54.9942	-3.0925
60.0000	3.8751	60.0000	-2.8025	60.0108	3.8743	59.9892	-2.8032
65.0000	3.4878	65.0000	-2.4550	65.0146	3.4865	64.9854	-2.4561
70.0000	3.0385	70.0000	-2.0632	70.0172	3.0368	69.9828	-2.0646
75.0000	2.5436	75.0000	-1.6452	75.0183	2.5417	74.9817	-1.6467
80.0000	2.0146	80.0000	-1.2147	80.0178	2.0126	79.9822	-1.2162
85.0000	1.4666	85.0000	-0.7909	85.0156	1.4649	84.9844	-0.7922
90.0000	0.9200	90.0000	-0.4006	90.0115	0.9188	89.9885	-0.4014
95.0000	0.4048	95.0000	-0.0880	95.0058	0.4042	94.9942	-0.0883
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.4060 percent chord

slope of mean line at LE = 0.0421

NACA Section 65-110

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8195	0.5000	-0.7213	0.4676	0.7941	0.5324	-0.7440
0.7500	0.9834	0.7500	-0.8734	0.7140	0.9622	0.7860	-0.8919
1.2500	1.2323	1.2500	-1.0924	1.2096	1.2144	1.2904	-1.1075
2.5000	1.6814	2.5000	-1.4695	2.4541	1.6671	2.5459	-1.4811
5.0000	2.3486	5.0000	-2.0113	4.9489	2.3367	5.0511	-2.0208
7.5000	2.8706	7.5000	-2.4286	7.4470	2.8605	7.5530	-2.4366
10.0000	3.3086	10.0000	-2.7758	9.9468	3.3000	10.0532	-2.7826
15.0000	4.0103	15.0000	-3.3266	14.9494	4.0042	15.0506	-3.3314
20.0000	4.5458	20.0000	-3.7418	19.9543	4.5415	20.0457	-3.7451
25.0000	4.9521	25.0000	-4.0523	24.9606	4.9493	25.0394	-4.0543
30.0000	5.2481	30.0000	-4.2732	29.9679	5.2465	30.0321	-4.2743
35.0000	5.4406	35.0000	-4.4090	34.9757	5.4399	35.0243	-4.4094
40.0000	5.5338	40.0000	-4.4625	39.9839	5.5337	40.0161	-4.4625
45.0000	5.5106	45.0000	-4.4157	44.9921	5.5107	45.0079	-4.4155
50.0000	5.3605	50.0000	-4.2573	50.0000	5.3605	50.0000	-4.2573
55.0000	5.0790	55.0000	-3.9828	55.0072	5.0785	54.9928	-3.9833
60.0000	4.6838	60.0000	-3.6104	60.0134	4.6827	59.9866	-3.6115
65.0000	4.1993	65.0000	-3.1653	65.0181	4.1974	64.9819	-3.1670
70.0000	3.6423	70.0000	-2.6654	70.0213	3.6398	69.9787	-2.6676
75.0000	3.0330	75.0000	-2.1327	75.0226	3.0301	74.9774	-2.1352
80.0000	2.3860	80.0000	-1.5843	80.0219	2.3831	79.9781	-1.5867
85.0000	1.7222	85.0000	-1.0449	85.0191	1.7197	84.9809	-1.0469
90.0000	1.0668	90.0000	-0.5463	90.0141	1.0650	89.9859	-0.5476
95.0000	0.4596	95.0000	-0.1425	95.0070	0.4589	94.9930	-0.1429
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6242 percent chord

slope of mean line at LE = 0.0421

NACA Section 65-206

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.5379	0.5000	-0.4015	0.4607	0.5164	0.5393	-0.4162
0.7500	0.6501	0.7500	-0.4808	0.7063	0.6325	0.7937	-0.4919
1.2500	0.8260	1.2500	-0.5878	1.2011	0.8104	1.2989	-0.5965
2.5000	1.1488	2.5000	-0.7583	2.4446	1.1364	2.5554	-0.7643
5.0000	1.6361	5.0000	-0.9889	4.9386	1.6256	5.0614	-0.9937
7.5000	2.0221	7.5000	-1.1613	7.4365	2.0132	7.5635	-1.1652
10.0000	2.3483	10.0000	-1.3025	9.9362	2.3405	10.0638	-1.3058
15.0000	2.8752	15.0000	-1.5218	14.9394	2.8696	15.0606	-1.5241
20.0000	3.2811	20.0000	-1.6829	19.9453	3.2772	20.0547	-1.6844
25.0000	3.5928	25.0000	-1.7994	24.9529	3.5903	25.0471	-1.8003
30.0000	3.8244	30.0000	-1.8780	29.9616	3.8229	30.0384	-1.8785
35.0000	3.9815	35.0000	-1.9198	34.9709	3.9808	35.0291	-1.9199
40.0000	4.0684	40.0000	-1.9260	39.9807	4.0682	40.0193	-1.9259
45.0000	4.0770	45.0000	-1.8868	44.9905	4.0770	45.0095	-1.8866
50.0000	4.0009	50.0000	-1.7946	50.0000	4.0009	50.0000	-1.7946
55.0000	3.8369	55.0000	-1.6458	55.0088	3.8365	54.9912	-1.6461
60.0000	3.5918	60.0000	-1.4479	60.0163	3.5909	59.9837	-1.4486
65.0000	3.2794	65.0000	-1.2159	65.0221	3.2779	64.9779	-1.2170
70.0000	2.9086	70.0000	-0.9607	70.0261	2.9065	69.9739	-0.9621
75.0000	2.4893	75.0000	-0.6954	75.0278	2.4869	74.9722	-0.6969
80.0000	2.0298	80.0000	-0.4330	80.0272	2.0272	79.9728	-0.4344
85.0000	1.5382	85.0000	-0.1892	85.0238	1.5358	84.9762	-0.1902
90.0000	1.0258	90.0000	0.0114	90.0177	1.0240	89.9823	0.0108
95.0000	0.5058	95.0000	0.1270	95.0089	0.5049	94.9911	0.1270
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.2303 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-208

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.7042	0.5000	-0.5411	0.4479	0.6684	0.5521	-0.5682
0.7500	0.8456	0.7500	-0.6539	0.6920	0.8158	0.8080	-0.6752
1.2500	1.0660	1.2500	-0.8095	1.1851	1.0402	1.3149	-0.8263
2.5000	1.4699	2.5000	-1.0649	2.4263	1.4492	2.5737	-1.0771
5.0000	2.0779	5.0000	-1.4187	4.9183	2.0604	5.0817	-1.4285
7.5000	2.5576	7.5000	-1.6867	7.4153	2.5427	7.5847	-1.6948
10.0000	2.9620	10.0000	-1.9076	9.9150	2.9492	10.0850	-1.9145
15.0000	3.6136	15.0000	-2.2540	14.9191	3.6044	15.0809	-2.2588
20.0000	4.1140	20.0000	-2.5115	19.9269	4.1076	20.0731	-2.5147
25.0000	4.4968	25.0000	-2.7006	24.9371	4.4926	25.0629	-2.7026
30.0000	4.7793	30.0000	-2.8314	29.9487	4.7769	30.0513	-2.8325
35.0000	4.9684	35.0000	-2.9060	34.9612	4.9673	35.0388	-2.9064
40.0000	5.0688	40.0000	-2.9263	39.9742	5.0685	40.0258	-2.9262
45.0000	5.0683	45.0000	-2.8783	44.9873	5.0685	45.0127	-2.8780
50.0000	4.9588	50.0000	-2.7524	50.0000	4.9588	50.0000	-2.7524
55.0000	4.7359	55.0000	-2.5443	55.0116	4.7353	54.9884	-2.5449
60.0000	4.4114	60.0000	-2.2662	60.0215	4.4098	59.9785	-2.2676
65.0000	4.0043	65.0000	-1.9387	65.0293	4.0017	64.9707	-1.9408
70.0000	3.5263	70.0000	-1.5758	70.0344	3.5228	69.9656	-1.5783
75.0000	2.9931	75.0000	-1.1962	75.0366	2.9890	74.9634	-1.1990
80.0000	2.4148	80.0000	-0.8151	80.0356	2.4106	79.9644	-0.8177
85.0000	1.8048	85.0000	-0.4533	85.0312	1.8010	84.9689	-0.4554
90.0000	1.1801	90.0000	-0.1411	90.0231	1.1772	89.9769	-0.1424
95.0000	0.5634	95.0000	0.0701	95.0115	0.5620	94.9885	0.0699
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.4060 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-209

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.7873	0.5000	-0.6086	0.4416	0.7432	0.5584	-0.6430
0.7500	0.9431	0.7500	-0.7380	0.6850	0.9061	0.8150	-0.7655
1.2500	1.1853	1.2500	-0.9179	1.1772	1.1536	1.3228	-0.9397
2.5000	1.6299	2.5000	-1.2160	2.4173	1.6042	2.5827	-1.2321
5.0000	2.2986	5.0000	-1.6321	4.9081	2.2770	5.0919	-1.6451
7.5000	2.8254	7.5000	-1.9483	7.4047	2.8071	7.5953	-1.9591
10.0000	3.2691	10.0000	-2.2095	9.9043	3.2534	10.0957	-2.2186
15.0000	3.9833	15.0000	-2.6200	14.9089	3.9719	15.0911	-2.6264
20.0000	4.5310	20.0000	-2.9260	19.9178	4.5231	20.0822	-2.9303
25.0000	4.9494	25.0000	-3.1516	24.9292	4.9443	25.0708	-3.1543
30.0000	5.2574	30.0000	-3.3086	29.9423	5.2545	30.0577	-3.3100
35.0000	5.4623	35.0000	-3.3995	34.9563	5.4609	35.0437	-3.4001
40.0000	5.5691	40.0000	-3.4266	39.9710	5.5688	40.0290	-3.4265
45.0000	5.5634	45.0000	-3.3734	44.9857	5.5636	45.0143	-3.3732
50.0000	5.4360	50.0000	-3.2297	50.0000	5.4360	50.0000	-3.2297
55.0000	5.1825	55.0000	-2.9905	55.0131	5.1817	54.9869	-2.9913
60.0000	4.8173	60.0000	-2.6714	60.0242	4.8153	59.9758	-2.6731
65.0000	4.3619	65.0000	-2.2952	65.0328	4.3587	64.9672	-2.2978
70.0000	3.8302	70.0000	-1.8781	70.0385	3.8259	69.9615	-1.8815
75.0000	3.2399	75.0000	-1.4413	75.0409	3.2349	74.9591	-1.4449
80.0000	2.6026	80.0000	-1.0011	80.0397	2.5974	79.9603	-1.0045
85.0000	1.9343	85.0000	-0.5813	85.0347	1.9296	84.9653	-0.5841
90.0000	1.2546	90.0000	-0.2146	90.0257	1.2511	89.9743	-0.2163
95.0000	0.5912	95.0000	0.0427	95.0128	0.5896	94.9872	0.0423
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.5100 percent chord
 slope of mean line at LE = 0.0842

NACA Section 65-210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8703	0.5000	-0.6744	0.4354	0.8171	0.5646	-0.7169
0.7500	1.0401	0.7500	-0.8203	0.6781	0.9953	0.8219	-0.8547
1.2500	1.3042	1.2500	-1.0246	1.1694	1.2658	1.3306	-1.0519
2.5000	1.7893	2.5000	-1.3655	2.4083	1.7581	2.5917	-1.3860
5.0000	2.5190	5.0000	-1.8444	4.8980	2.4929	5.1020	-1.8610
7.5000	3.0931	7.5000	-2.2092	7.3942	3.0709	7.6058	-2.2230
10.0000	3.5764	10.0000	-2.5108	9.8937	3.5573	10.1063	-2.5225
15.0000	4.3532	15.0000	-2.9858	14.8988	4.3395	15.1012	-2.9940
20.0000	4.9485	20.0000	-3.3405	19.9086	4.9390	20.0914	-3.3461
25.0000	5.4025	25.0000	-3.6028	24.9213	5.3963	25.0787	-3.6063
30.0000	5.7359	30.0000	-3.7860	29.9358	5.7323	30.0642	-3.7879
35.0000	5.9566	35.0000	-3.8933	34.9515	5.9549	35.0485	-3.8940
40.0000	6.0695	40.0000	-3.9270	39.9677	6.0692	40.0323	-3.9269
45.0000	6.0580	45.0000	-3.8682	44.9841	6.0583	45.0159	-3.8679
50.0000	5.9121	50.0000	-3.7057	50.0000	5.9121	50.0000	-3.7057
55.0000	5.6271	55.0000	-3.4347	55.0145	5.6261	54.9855	-3.4357
60.0000	5.2206	60.0000	-3.0738	60.0268	5.2182	59.9732	-3.0759
65.0000	4.7165	65.0000	-2.6483	65.0363	4.7125	64.9637	-2.6516
70.0000	4.1309	70.0000	-2.1771	70.0425	4.1257	69.9575	-2.1812
75.0000	3.4834	75.0000	-1.6829	75.0452	3.4773	74.9548	-1.6874
80.0000	2.7872	80.0000	-1.1838	80.0438	2.7810	79.9562	-1.1881
85.0000	2.0613	85.0000	-0.7067	85.0382	2.0557	84.9618	-0.7101
90.0000	1.3274	90.0000	-0.2864	90.0282	1.3233	89.9718	-0.2885
95.0000	0.6185	95.0000	0.0158	95.0141	0.6166	94.9859	0.0153
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.6242 percent chord
 slope of mean line at LE = 0.0842

NACA Section 65-410

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.9744	0.5000	-0.5863	0.3721	0.8592	0.6279	-0.6588
0.7500	1.1570	0.7500	-0.7177	0.6074	1.0574	0.8926	-0.7762
1.2500	1.4518	1.2500	-0.8932	1.0900	1.3645	1.4100	-0.9367
2.5000	2.0090	2.5000	-1.1617	2.3176	1.9363	2.6824	-1.1920
5.0000	2.8633	5.0000	-1.5142	4.7966	2.8018	5.2034	-1.5380
7.5000	3.5412	7.5000	-1.7735	7.2888	3.4886	7.7112	-1.7927
10.0000	4.1145	10.0000	-1.9835	9.7878	4.0691	10.2122	-1.9996
15.0000	5.0410	15.0000	-2.3061	14.7978	5.0081	15.2022	-2.3170
20.0000	5.7553	20.0000	-2.5395	19.8173	5.7323	20.1827	-2.5467
25.0000	6.3043	25.0000	-2.7050	24.8427	6.2892	25.1573	-2.7093
30.0000	6.7120	30.0000	-2.8124	29.8717	6.7032	30.1283	-2.8144
35.0000	6.9889	35.0000	-2.8624	34.9030	6.9847	35.0970	-2.8629
40.0000	7.1411	40.0000	-2.8560	39.9355	7.1400	40.0645	-2.8555
45.0000	7.1530	45.0000	-2.7734	44.9683	7.1534	45.0317	-2.7726
50.0000	7.0153	50.0000	-2.6026	50.0000	7.0153	50.0000	-2.6026
55.0000	6.7233	55.0000	-2.3386	55.0289	6.7212	54.9711	-2.3404
60.0000	6.2943	60.0000	-2.0006	60.0535	6.2890	59.9465	-2.0045
65.0000	5.7511	65.0000	-1.6148	65.0725	5.7424	64.9275	-1.6206
70.0000	5.1087	70.0000	-1.2010	70.0850	5.0970	69.9150	-1.2082
75.0000	4.3849	75.0000	-0.7838	75.0903	4.3711	74.9097	-0.7912
80.0000	3.5904	80.0000	-0.3836	80.0875	3.5759	79.9125	-0.3903
85.0000	2.7402	85.0000	-0.0310	85.0763	2.7268	84.9237	-0.0358
90.0000	1.8494	90.0000	0.2327	90.0563	1.8392	89.9437	0.2303
95.0000	0.9367	95.0000	0.3319	95.0281	0.9315	94.9719	0.3322
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6242 percent chord

slope of mean line at LE = 0.1685

NACA Section 65-112

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.9743	0.5000	-0.8566	0.4615	0.9389	0.5385	-0.8888
0.7500	1.1671	0.7500	-1.0404	0.7071	1.1374	0.7929	-1.0671
1.2500	1.4601	1.2500	-1.3064	1.2020	1.4351	1.2980	-1.3281
2.5000	1.9917	2.5000	-1.7684	2.4452	1.9715	2.5548	-1.7854
5.0000	2.7832	5.0000	-2.4364	4.9389	2.7663	5.0611	-2.4504
7.5000	3.4012	7.5000	-2.9512	7.4365	3.3870	7.5635	-2.9630
10.0000	3.9194	10.0000	-3.3797	9.9362	3.9071	10.0638	-3.3898
15.0000	4.7482	15.0000	-4.0596	14.9392	4.7395	15.0608	-4.0667
20.0000	5.3798	20.0000	-4.5725	19.9451	5.3737	20.0549	-4.5773
25.0000	5.8582	25.0000	-4.9562	24.9527	5.8543	25.0473	-4.9593
30.0000	6.2054	30.0000	-5.2293	29.9615	6.2032	30.0386	-5.2310
35.0000	6.4297	35.0000	-5.3976	34.9709	6.4287	35.0291	-5.3983
40.0000	6.5347	40.0000	-5.4634	39.9806	6.5346	40.0194	-5.4634
45.0000	6.4986	45.0000	-5.4039	44.9905	6.4988	45.0095	-5.4036
50.0000	6.3089	50.0000	-5.2057	50.0000	6.3089	50.0000	-5.2057
55.0000	5.9620	55.0000	-4.8654	55.0086	5.9613	54.9914	-4.8661
60.0000	5.4818	60.0000	-4.4073	60.0160	5.4801	59.9840	-4.4090
65.0000	4.8985	65.0000	-3.8628	65.0216	4.8958	64.9784	-3.8653
70.0000	4.2323	70.0000	-3.2533	70.0252	4.2287	69.9748	-3.2565
75.0000	3.5090	75.0000	-2.6064	75.0267	3.5050	74.9733	-2.6100
80.0000	2.7453	80.0000	-1.9415	80.0258	2.7413	79.9742	-1.9449
85.0000	1.9679	85.0000	-1.2888	85.0225	1.9644	84.9775	-1.2917
90.0000	1.2071	90.0000	-0.6854	90.0165	1.2047	89.9835	-0.6873
95.0000	0.5123	95.0000	-0.1947	95.0083	0.5112	94.9917	-0.1953
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8756 percent chord

slope of mean line at LE = 0.0421

NACA Section 65-212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.0351	0.5000	-0.8006	0.4232	0.9616	0.5768	-0.8614
0.7500	1.2325	0.7500	-0.9790	0.6645	1.1701	0.8355	-1.0295
1.2500	1.5393	1.2500	-1.2320	1.1541	1.4860	1.3459	-1.2721
2.5000	2.1057	2.5000	-1.6591	2.3906	2.0621	2.6094	-1.6900
5.0000	2.9587	5.0000	-2.2650	4.8779	2.9222	5.1221	-2.2903
7.5000	3.6281	7.5000	-2.7281	7.3731	3.5971	7.6269	-2.7491
10.0000	4.1908	10.0000	-3.1115	9.8725	4.1642	10.1275	-3.1294
15.0000	5.0937	15.0000	-3.7165	14.8785	5.0746	15.1215	-3.7291
20.0000	5.7843	20.0000	-4.1697	19.8902	5.7710	20.1098	-4.1782
25.0000	6.3098	25.0000	-4.5058	24.9055	6.3012	25.0945	-4.5112
30.0000	6.6938	30.0000	-4.7416	29.9229	6.6889	30.0771	-4.7445
35.0000	6.9459	35.0000	-4.8817	34.9417	6.9437	35.0583	-4.8828
40.0000	7.0705	40.0000	-4.9278	39.9613	7.0700	40.0387	-4.9278
45.0000	7.0460	45.0000	-4.8565	44.9810	7.0464	45.0190	-4.8560
50.0000	6.8605	50.0000	-4.6541	50.0000	6.8605	50.0000	-4.6541
55.0000	6.5103	55.0000	-4.3171	55.0173	6.5089	54.9827	-4.3185
60.0000	6.0191	60.0000	-3.8702	60.0319	6.0156	59.9681	-3.8733
65.0000	5.4165	65.0000	-3.3451	65.0432	5.4108	64.9568	-3.3499
70.0000	4.7220	70.0000	-2.7641	70.0505	4.7146	69.9495	-2.7702
75.0000	3.9605	75.0000	-2.1555	75.0535	3.9521	74.9465	-2.1621
80.0000	3.1477	80.0000	-1.5400	80.0517	3.1391	79.9483	-1.5463
85.0000	2.3079	85.0000	-0.9498	85.0449	2.3003	84.9551	-0.9548
90.0000	1.4684	90.0000	-0.4250	90.0331	1.4629	89.9669	-0.4281
95.0000	0.6714	95.0000	-0.0362	95.0165	0.6689	94.9835	-0.0370
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8756 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-212a=0.5

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0818	0.5000	-0.7599	0.3943	0.9774	0.6057	-0.8397
0.7500	1.2833	0.7500	-0.9334	0.6319	1.1935	0.8681	-1.0000
1.2500	1.6012	1.2500	-1.1762	1.1169	1.5237	1.3831	-1.2284
2.5000	2.1956	2.5000	-1.5753	2.3471	2.1311	2.6529	-1.6149
5.0000	3.0988	5.0000	-2.1304	4.8278	3.0441	5.1722	-2.1627
7.5000	3.8110	7.5000	-2.5501	7.3201	3.7641	7.6799	-2.5770
10.0000	4.4114	10.0000	-2.8953	9.8186	4.3708	10.1814	-2.9182
15.0000	5.3773	15.0000	-3.4363	14.8267	5.3480	15.1733	-3.4523
20.0000	6.1175	20.0000	-3.8388	19.8444	6.0973	20.1556	-3.8495
25.0000	6.6809	25.0000	-4.1361	24.8683	6.6681	25.1317	-4.1427
30.0000	7.0918	30.0000	-4.3445	29.8971	7.0848	30.1029	-4.3479
35.0000	7.3590	35.0000	-4.4688	34.9299	7.3562	35.0701	-4.4700
40.0000	7.4861	40.0000	-4.5121	39.9664	7.4858	40.0336	-4.5121
45.0000	7.4495	45.0000	-4.4529	45.0075	7.4494	44.9925	-4.4531
50.0000	7.2318	50.0000	-4.2834	50.0611	7.2279	49.9389	-4.2861
55.0000	6.8161	55.0000	-4.0132	55.1057	6.8054	54.8943	-4.0199
60.0000	6.2393	60.0000	-3.6528	60.1241	6.2234	59.8759	-3.6626
65.0000	5.5421	65.0000	-3.2228	65.1276	5.5230	64.8724	-3.2345
70.0000	4.7515	70.0000	-2.7378	70.1198	4.7317	69.8802	-2.7499
75.0000	3.8996	75.0000	-2.2192	75.1037	3.8814	74.8963	-2.2302
80.0000	3.0097	80.0000	-1.6797	80.0816	2.9951	79.9184	-1.6886
85.0000	2.1158	85.0000	-1.1427	85.0567	2.1058	84.9433	-1.1487
90.0000	1.2575	90.0000	-0.6358	90.0319	1.2523	89.9681	-0.6389
95.0000	0.4985	95.0000	-0.2085	95.0110	0.4971	94.9890	-0.2093
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.8756 percent chord
 slope of mean line at LE = 0.1164

NACA Section 65-412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.1590	0.5000	-0.6959	0.3480	1.0022	0.6520	-0.8018
0.7500	1.3670	0.7500	-0.8609	0.5805	1.2306	0.9195	-0.9494
1.2500	1.7021	1.2500	-1.0883	1.0596	1.5831	1.4404	-1.1554
2.5000	2.3382	2.5000	-1.4454	2.2823	2.2387	2.7177	-1.4945
5.0000	3.3136	5.0000	-1.9267	4.7565	3.2296	5.2435	-1.9658
7.5000	4.0853	7.5000	-2.2855	7.2469	4.0134	7.7531	-2.3176
10.0000	4.7368	10.0000	-2.5783	9.7454	4.6749	10.2546	-2.6053
15.0000	5.7871	15.0000	-3.0327	14.7572	5.7424	15.2428	-3.0513
20.0000	6.5950	20.0000	-3.3658	19.7806	6.5638	20.2194	-3.3782
25.0000	7.2140	25.0000	-3.6063	24.8110	7.1937	25.1890	-3.6137
30.0000	7.6714	30.0000	-3.7670	29.8459	7.6596	30.1541	-3.7707
35.0000	7.9788	35.0000	-3.8504	34.8835	7.9733	35.1165	-3.8515
40.0000	8.1421	40.0000	-3.8569	39.9226	8.1408	40.0774	-3.8563
45.0000	8.1409	45.0000	-3.7619	44.9620	8.1415	45.0380	-3.7607
50.0000	7.9636	50.0000	-3.5509	50.0000	7.9636	50.0000	-3.5509
55.0000	7.6070	55.0000	-3.2205	55.0346	7.6040	54.9654	-3.2232
60.0000	7.0938	60.0000	-2.7960	60.0638	7.0864	59.9362	-2.8019
65.0000	6.4527	65.0000	-2.3101	65.0863	6.4406	64.9137	-2.3189
70.0000	5.7019	70.0000	-1.7862	70.1009	5.6858	69.8991	-1.7969
75.0000	4.8644	75.0000	-1.2544	75.1069	4.8457	74.8931	-1.2657
80.0000	3.9533	80.0000	-0.7378	80.1033	3.9338	79.8967	-0.7482
85.0000	2.9889	85.0000	-0.2726	85.0898	2.9713	84.9102	-0.2802
90.0000	1.9918	90.0000	0.0950	90.0660	1.9786	89.9340	0.0910
95.0000	0.9903	95.0000	0.2801	95.0330	0.9837	94.9670	0.2801
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8756 percent chord

slope of mean line at LE = 0.1685

NACA Section 65-215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.2769	0.5000	-0.9756	0.4058	1.1684	0.5942	-1.0682
0.7500	1.5140	0.7500	-1.2015	0.6450	1.4210	0.8550	-1.2804
1.2500	1.8835	1.2500	-1.5268	1.1320	1.8041	1.3680	-1.5902
2.5000	2.5721	2.5000	-2.0837	2.3647	2.5061	2.6353	-2.1340
5.0000	3.6131	5.0000	-2.8844	4.8481	3.5577	5.1519	-2.9258
7.5000	4.4277	7.5000	-3.4979	7.3418	4.3806	7.6582	-3.5327
10.0000	5.1112	10.0000	-4.0064	9.8408	5.0708	10.1592	-4.0360
15.0000	6.2052	15.0000	-4.8098	14.8481	6.1762	15.1519	-4.8307
20.0000	7.0399	20.0000	-5.4127	19.8627	7.0198	20.1373	-5.4270
25.0000	7.6730	25.0000	-5.8612	24.8817	7.6601	25.1183	-5.8702
30.0000	8.1332	30.0000	-6.1766	29.9035	8.1258	30.0965	-6.1814
35.0000	8.4319	35.0000	-6.3659	34.9271	8.4286	35.0729	-6.3677
40.0000	8.5719	40.0000	-6.4292	39.9516	8.5714	40.0484	-6.4291
45.0000	8.5240	45.0000	-6.3351	44.9763	8.5247	45.0237	-6.3343
50.0000	8.2735	50.0000	-6.0672	50.0000	8.2735	50.0000	-6.0672
55.0000	7.8200	55.0000	-5.6250	55.0215	7.8176	54.9785	-5.6272
60.0000	7.1965	60.0000	-5.0438	60.0395	7.1910	59.9605	-5.0488
65.0000	6.4433	65.0000	-4.3662	65.0532	6.4347	64.9468	-4.3738
70.0000	5.5841	70.0000	-3.6190	70.0620	5.5729	69.9380	-3.6285
75.0000	4.6523	75.0000	-2.8394	75.0655	4.6397	74.9345	-2.8497
80.0000	3.6672	80.0000	-2.0519	80.0631	3.6545	79.9369	-2.0617
85.0000	2.6607	85.0000	-1.2963	85.0546	2.6497	84.9454	-1.3042
90.0000	1.6689	90.0000	-0.6214	90.0400	1.6611	89.9600	-0.6264
95.0000	0.7470	95.0000	-0.1103	95.0200	0.7436	94.9800	-0.1117
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.2989 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.4349	0.5000	-0.8424	0.3135	1.2068	0.6865	-1.0064
0.7500	1.6788	0.7500	-1.0557	0.5418	1.4793	0.9582	-1.1981
1.2500	2.0728	1.2500	-1.3606	1.0156	1.8989	1.4844	-1.4711
2.5000	2.8278	2.5000	-1.8516	2.2308	2.6805	2.7692	-1.9362
5.0000	3.9875	5.0000	-2.5304	4.6972	3.8631	5.3028	-2.5993
7.5000	4.9014	7.5000	-3.0422	7.1843	4.7951	7.8157	-3.0993
10.0000	5.6712	10.0000	-3.4619	9.6821	5.5798	10.3179	-3.5103
15.0000	6.9086	15.0000	-4.1180	14.6965	6.8427	15.3035	-4.1516
20.0000	7.8576	20.0000	-4.6034	19.7256	7.8117	20.2744	-4.6260
25.0000	8.5818	25.0000	-4.9582	24.7635	8.5520	25.2365	-4.9721
30.0000	9.1132	30.0000	-5.2001	29.8071	9.0961	30.1929	-5.2072
35.0000	9.4659	35.0000	-5.3339	34.8542	9.4580	35.1458	-5.3362
40.0000	9.6437	40.0000	-5.3584	39.9032	9.6421	40.0968	-5.3575
45.0000	9.6185	45.0000	-5.2408	44.9525	9.6198	45.0475	-5.2389
50.0000	9.3767	50.0000	-4.9640	50.0000	9.3767	50.0000	-4.9640
55.0000	8.9176	55.0000	-4.5276	55.0429	8.9127	54.9571	-4.5319
60.0000	8.2732	60.0000	-3.9677	60.0790	8.2618	59.9210	-3.9773
65.0000	7.4826	65.0000	-3.3283	65.1065	7.4644	64.8935	-3.3426
70.0000	6.5679	70.0000	-2.6376	70.1240	6.5439	69.8759	-2.6550
75.0000	5.5605	75.0000	-1.9347	75.1309	5.5330	74.8691	-1.9530
80.0000	4.4769	80.0000	-1.2463	80.1260	4.4489	79.8740	-1.2632
85.0000	3.3452	85.0000	-0.6165	85.1090	3.3202	84.8910	-0.6292
90.0000	2.1947	90.0000	-0.0997	90.0798	2.1764	89.9202	-0.1069
95.0000	1.0669	95.0000	0.2065	95.0399	1.0581	94.9601	0.2057
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.2989 percent chord

slope of mean line at LE = 0.1685

NACA Section 65-415a=0.5

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.5574	0.5000	-0.7528	0.2456	1.2307	0.7544	-0.9553
0.7500	1.8088	0.7500	-0.9522	0.4647	1.5179	1.0353	-1.1308
1.2500	2.2235	1.2500	-1.2390	0.9269	1.9656	1.5731	-1.3750
2.5000	3.0329	2.5000	-1.6769	2.1255	2.8098	2.8745	-1.7775
5.0000	4.2899	5.0000	-2.2551	4.5744	4.0987	5.4256	-2.3360
7.5000	5.2866	7.5000	-2.6813	7.0536	5.1217	7.9464	-2.7474
10.0000	6.1292	10.0000	-3.0253	9.5486	5.9864	10.4514	-3.0811
15.0000	7.4879	15.0000	-3.5547	14.5677	7.3843	15.4323	-3.5928
20.0000	8.5323	20.0000	-3.9397	19.6111	8.4606	20.3889	-3.9649
25.0000	9.3292	25.0000	-4.2177	24.6707	9.2836	25.3293	-4.2327
30.0000	9.9115	30.0000	-4.4054	29.7426	9.8866	30.2574	-4.4127
35.0000	10.2928	35.0000	-4.5081	34.8245	10.2826	35.1755	-4.5102
40.0000	10.4749	40.0000	-4.5268	39.9160	10.4737	40.0840	-4.5262
45.0000	10.4264	45.0000	-4.4327	45.0188	10.4257	44.9812	-4.4332
50.0000	10.1242	50.0000	-4.2190	50.1521	10.1106	49.8479	-4.2269
55.0000	9.5404	55.0000	-3.9137	55.2624	9.5028	54.7376	-3.9319
60.0000	8.7288	60.0000	-3.5259	60.3068	8.6731	59.6932	-3.5516
65.0000	7.7502	65.0000	-3.0770	65.3144	7.6839	64.6855	-3.1069
70.0000	6.6417	70.0000	-2.5799	70.2942	6.5735	69.7058	-2.6100
75.0000	5.4499	75.0000	-2.0587	75.2535	5.3879	74.7465	-2.0855
80.0000	4.2081	80.0000	-1.5242	80.1989	4.1583	79.8011	-1.5454
85.0000	2.9637	85.0000	-1.0019	85.1375	2.9300	84.8626	-1.0158
90.0000	1.7729	90.0000	-0.5215	90.0770	1.7553	89.9230	-0.5284
95.0000	0.7200	95.0000	-0.1379	95.0266	0.7151	94.9734	-0.1395
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.2989 percent chord
 slope of mean line at LE = 0.2328

NACA Section 65-218

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.5085	0.5000	-1.1319	0.3896	1.3606	0.6104	-1.2604
0.7500	1.7833	0.7500	-1.4033	0.6267	1.6556	0.8733	-1.5150
1.2500	2.2135	1.2500	-1.7993	1.1111	2.1039	1.3889	-1.8900
2.5000	3.0249	2.5000	-2.4861	2.3399	2.9321	2.6601	-2.5600
5.0000	4.2587	5.0000	-3.4866	4.8189	4.1804	5.1811	-3.5485
7.5000	5.2216	7.5000	-4.2551	7.3108	5.1550	7.6892	-4.3071
10.0000	6.0282	10.0000	-4.8919	9.8093	5.9710	10.1907	-4.9363
15.0000	7.3162	15.0000	-5.8984	14.8177	7.2753	15.1823	-5.9298
20.0000	8.2967	20.0000	-6.6541	19.8351	8.2684	20.1649	-6.6756
25.0000	9.0386	25.0000	-7.2170	24.8579	9.0204	25.1421	-7.2305
30.0000	9.5751	30.0000	-7.6131	29.8841	9.5649	30.1159	-7.6204
35.0000	9.9198	35.0000	-7.8517	34.9125	9.9154	35.0875	-7.8545
40.0000	10.0731	40.0000	-7.9305	39.9419	10.0726	40.0581	-7.9303
45.0000	9.9966	45.0000	-7.8086	44.9716	9.9977	45.0284	-7.8073
50.0000	9.6753	50.0000	-7.4690	50.0000	9.6753	50.0000	-7.4690
55.0000	9.1104	55.0000	-6.9132	55.0256	9.1070	54.9744	-6.9166
60.0000	8.3502	60.0000	-6.1927	60.0469	8.3423	59.9531	-6.2000
65.0000	7.4435	65.0000	-5.3592	65.0631	7.4312	64.9369	-5.3703
70.0000	6.4190	70.0000	-4.4451	70.0732	6.4033	69.9268	-4.4589
75.0000	5.3165	75.0000	-3.4943	75.0770	5.2990	74.9230	-3.5091
80.0000	4.1622	80.0000	-2.5381	80.0739	4.1449	79.9261	-2.5521
85.0000	2.9939	85.0000	-1.6224	85.0637	2.9791	84.9363	-1.6336
90.0000	1.8573	90.0000	-0.8053	90.0465	1.8471	89.9535	-0.8123
95.0000	0.8185	95.0000	-0.1801	95.0233	0.8141	94.9767	-0.1822
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.7532 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.7048	0.5000	-0.9677	0.2815	1.3971	0.7185	-1.1967
0.7500	1.9822	0.7500	-1.2262	0.5057	1.7118	0.9943	-1.4306
1.2500	2.4334	1.2500	-1.6065	0.9742	2.1966	1.5258	-1.7688
2.5000	3.3080	2.5000	-2.2312	2.1814	3.1043	2.8186	-2.3601
5.0000	4.6563	5.0000	-3.1128	4.6390	4.4837	5.3610	-3.2199
7.5000	5.7151	7.5000	-3.7826	7.1226	5.5677	7.8774	-3.8719
10.0000	6.6051	10.0000	-4.3330	9.6193	6.4785	10.3807	-4.4089
15.0000	8.0317	15.0000	-5.1963	14.6359	7.9405	15.3641	-5.2495
20.0000	9.1227	20.0000	-5.8377	19.6705	9.0594	20.3295	-5.8737
25.0000	9.9526	25.0000	-6.3095	24.7160	9.9117	25.2840	-6.3318
30.0000	10.5581	30.0000	-6.6343	29.7683	10.5347	30.2317	-6.6459
35.0000	10.9551	35.0000	-6.8188	34.8250	10.9445	35.1750	-6.8228
40.0000	11.1449	40.0000	-6.8597	39.8838	11.1431	40.1162	-6.8586
45.0000	11.0907	45.0000	-6.7147	44.9431	11.0928	45.0569	-6.7119
50.0000	10.7785	50.0000	-6.3658	50.0000	10.7785	50.0000	-6.3658
55.0000	10.2091	55.0000	-5.8147	55.0512	10.2021	54.9488	-5.8212
60.0000	9.4292	60.0000	-5.1143	60.0938	9.4129	59.9062	-5.1284
65.0000	8.4864	65.0000	-4.3179	65.1261	8.4607	64.8739	-4.3389
70.0000	7.4073	70.0000	-3.4596	70.1464	7.3741	69.8536	-3.4852
75.0000	6.2296	75.0000	-2.5852	75.1539	6.1920	74.8461	-2.6121
80.0000	4.9767	80.0000	-1.7286	80.1477	4.9389	79.8523	-1.7532
85.0000	3.6824	85.0000	-0.9395	85.1272	3.6492	84.8728	-0.9582
90.0000	2.3858	90.0000	-0.2817	90.0928	2.3620	89.9072	-0.2925
95.0000	1.1396	95.0000	0.1373	95.0465	1.1284	94.9535	0.1354
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.7532 percent chord

slope of mean line at LE = 0.1685

NACA Section 65-418a=0.5

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.8566	0.5000	-0.8592	0.2018	1.4186	0.7982	-1.1432
0.7500	2.1391	0.7500	-1.1018	0.4152	1.7479	1.0848	-1.3608
1.2500	2.6088	1.2500	-1.4658	0.8698	2.2607	1.6302	-1.6701
2.5000	3.5361	2.5000	-2.0398	2.0568	3.2309	2.9432	-2.1986
5.0000	4.9787	5.0000	-2.8224	4.4926	4.7166	5.5074	-2.9539
7.5000	6.1176	7.5000	-3.4087	6.9662	5.8918	8.0338	-3.5176
10.0000	7.0780	10.0000	-3.8849	9.4593	6.8828	10.5407	-3.9775
15.0000	8.6217	15.0000	-4.6248	14.4814	8.4804	15.5186	-4.6889
20.0000	9.8047	20.0000	-5.1686	19.5331	9.7070	20.4669	-5.2114
25.0000	10.7044	25.0000	-5.5658	24.6045	10.6425	25.3955	-5.5917
30.0000	11.3584	30.0000	-5.8380	29.6908	11.3248	30.3092	-5.8509
35.0000	11.7825	35.0000	-5.9926	34.7893	11.7691	35.2107	-5.9967
40.0000	11.9761	40.0000	-6.0281	39.8992	11.9748	40.1008	-6.0273
45.0000	11.8997	45.0000	-5.9053	45.0225	11.8987	44.9775	-5.9063
50.0000	11.5315	50.0000	-5.6153	50.1819	11.5120	49.8181	-5.6284
55.0000	10.8436	55.0000	-5.1902	55.3127	10.7911	54.6873	-5.2202
60.0000	9.8996	60.0000	-4.6599	60.3645	9.8229	59.6355	-4.7014
65.0000	8.7692	65.0000	-4.0543	65.3724	8.6787	64.6276	-4.1017
70.0000	7.4947	70.0000	-3.3916	70.3473	7.4022	69.6527	-3.4387
75.0000	6.1292	75.0000	-2.7018	75.2982	6.0458	74.7018	-2.7435
80.0000	4.7139	80.0000	-2.0023	80.2330	4.6476	79.7670	-2.0347
85.0000	3.3031	85.0000	-1.3235	85.1604	3.2587	84.8397	-1.3445
90.0000	1.9638	90.0000	-0.7037	90.0895	1.9409	89.9105	-0.7141
95.0000	0.7918	95.0000	-0.2075	95.0310	0.7855	94.9690	-0.2099
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.7532 percent chord
 slope of mean line at LE = 0.2328

NACA Section 65-618

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.9033	0.5000	-0.8267	0.1777	1.4254	0.8223	-1.1248
0.7500	2.1867	0.7500	-1.0643	0.3888	1.7594	1.1112	-1.3376
1.2500	2.6604	1.2500	-1.4241	0.8412	2.2804	1.6588	-1.6388
2.5000	3.5994	2.5000	-1.9865	2.0260	3.2678	2.9740	-2.1514
5.0000	5.0611	5.0000	-2.7477	4.4614	4.7788	5.5386	-2.8832
7.5000	6.2150	7.5000	-3.3176	6.9361	5.9730	8.0639	-3.4293
10.0000	7.1877	10.0000	-3.7805	9.4306	6.9794	10.5694	-3.8750
15.0000	8.7514	15.0000	-4.4989	14.4548	8.6008	15.5452	-4.5642
20.0000	9.9518	20.0000	-5.0247	19.5064	9.8467	20.4936	-5.0683
25.0000	10.8687	25.0000	-5.4043	24.5743	10.8005	25.4257	-5.4306
30.0000	11.5424	30.0000	-5.6568	29.6526	11.5031	30.3474	-5.6697
35.0000	11.9910	35.0000	-5.7866	34.7375	11.9728	35.2625	-5.7902
40.0000	12.2170	40.0000	-5.7893	39.8258	12.2133	40.1742	-5.7865
45.0000	12.1849	45.0000	-5.6210	44.9147	12.1877	45.0853	-5.6165
50.0000	11.8817	50.0000	-5.2626	50.0000	11.8817	50.0000	-5.2626
55.0000	11.3078	55.0000	-4.7162	55.0768	11.2971	54.9232	-4.7258
60.0000	10.5086	60.0000	-4.0361	60.1407	10.4833	59.8593	-4.0565
65.0000	9.5298	65.0000	-3.2772	65.1891	9.4896	64.8109	-3.3069
70.0000	8.3965	70.0000	-2.4751	70.2196	8.3438	69.7804	-2.5105
75.0000	7.1440	75.0000	-1.6775	75.2307	7.0836	74.7693	-1.7137
80.0000	5.7928	80.0000	-0.9207	80.2212	5.7312	79.7788	-0.9527
85.0000	4.3727	85.0000	-0.2584	85.1904	4.3176	84.8096	-0.2810
90.0000	2.9159	90.0000	0.2401	90.1388	2.8754	89.8612	0.2289
95.0000	1.4618	95.0000	0.4534	95.0694	1.4416	94.9306	0.4540
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.7532 percent chord

slope of mean line at LE = 0.2527

NACA Section 65-618a=0.5

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.1357	0.5000	-0.6949	0.0665	1.4482	0.9335	-1.0351
0.7500	2.4303	0.7500	-0.9038	0.2611	1.8034	1.2389	-1.2227
1.2500	2.9331	1.2500	-1.2287	0.6922	2.3655	1.8078	-1.4795
2.5000	3.9530	2.5000	-1.7147	1.8457	3.4460	3.1543	-1.8976
5.0000	5.5550	5.0000	-2.3256	4.2470	5.1167	5.7530	-2.4726
7.5000	6.8283	7.5000	-2.7684	6.7056	6.4484	8.2944	-2.8871
10.0000	7.9055	10.0000	-3.1186	9.1939	7.5762	10.8061	-3.2181
15.0000	9.6428	15.0000	-3.6492	14.2251	9.4030	15.7749	-3.7158
20.0000	10.9792	20.0000	-4.0261	19.3014	10.8128	20.6986	-4.0694
25.0000	11.9992	25.0000	-4.2919	24.4077	11.8932	25.5923	-4.3170
30.0000	12.7443	30.0000	-4.4641	29.5365	12.6863	30.4635	-4.4755
35.0000	13.2326	35.0000	-4.5480	34.6840	13.2091	35.3160	-4.5505
40.0000	13.4638	40.0000	-4.5417	39.8488	13.4610	40.1512	-4.5397
45.0000	13.3983	45.0000	-4.4067	45.0337	13.3968	44.9663	-4.4081
50.0000	13.0121	50.0000	-4.1379	50.2727	12.9805	49.7273	-4.1551
55.0000	12.2630	55.0000	-3.7835	55.4686	12.1763	54.5314	-3.8199
60.0000	11.2199	60.0000	-3.3609	60.5459	11.0919	59.4541	-3.4096
65.0000	9.9611	65.0000	-2.8892	65.5575	9.8095	64.4425	-2.9440
70.0000	8.5348	70.0000	-2.3803	70.5196	8.3793	69.4804	-2.4341
75.0000	6.9995	75.0000	-1.8585	75.4460	6.8589	74.5540	-1.9053
80.0000	5.4029	80.0000	-1.3354	80.3484	5.2908	79.6516	-1.3715
85.0000	3.8057	85.0000	-0.8361	85.2398	3.7303	84.7602	-0.8591
90.0000	2.2829	90.0000	-0.3927	90.1338	2.2438	89.8662	-0.4036
95.0000	0.9391	95.0000	-0.0627	95.0464	0.9282	94.9536	-0.0648
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.7532 percent chord
 slope of mean line at LE = 0.3492

NACA Section 65-221

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.7256	0.5000	-1.2689	0.3748	1.5357	0.6252	-1.4355
0.7500	2.0357	0.7500	-1.5829	0.6100	1.8706	0.8900	-1.7300
1.2500	2.5249	1.2500	-2.0468	1.0918	2.3820	1.4082	-2.1681
2.5000	3.4592	2.5000	-2.8620	2.3164	3.3357	2.6836	-2.9636
5.0000	4.8918	5.0000	-4.0681	4.7905	4.7865	5.2095	-4.1546
7.5000	6.0071	7.5000	-4.9969	7.2803	5.9176	7.7197	-5.0697
10.0000	6.9396	10.0000	-5.7657	9.7781	6.8628	10.2219	-5.8280
15.0000	8.4253	15.0000	-6.9807	14.7875	8.3703	15.2125	-7.0248
20.0000	9.5539	20.0000	-7.8929	19.8076	9.5159	20.1924	-7.9231
25.0000	10.4058	25.0000	-8.5726	24.8341	10.3815	25.1659	-8.5916
30.0000	11.0193	30.0000	-9.0510	29.8647	11.0057	30.1353	-9.0613
35.0000	11.4097	35.0000	-9.3391	34.8978	11.4039	35.1022	-9.3430
40.0000	11.5739	40.0000	-9.4314	39.9322	11.5734	40.0678	-9.4311
45.0000	11.4646	45.0000	-9.2778	44.9669	11.4663	45.0331	-9.2759
50.0000	11.0640	50.0000	-8.8577	50.0000	11.0640	50.0000	-8.8577
55.0000	10.3822	55.0000	-8.1824	55.0296	10.3774	54.9704	-8.1870
60.0000	9.4809	60.0000	-7.3178	60.0542	9.4702	59.9458	-7.3279
65.0000	8.4164	65.0000	-6.3239	65.0726	8.3999	64.9274	-6.3391
70.0000	7.2256	70.0000	-5.2417	70.0840	7.2048	69.9159	-5.2604
75.0000	5.9545	75.0000	-4.1218	75.0881	5.9316	74.9119	-4.1416
80.0000	4.6344	80.0000	-3.0005	80.0842	4.6120	79.9158	-3.0191
85.0000	3.3088	85.0000	-1.9296	85.0723	3.2899	84.9277	-1.9443
90.0000	2.0350	90.0000	-0.9781	90.0526	2.0220	89.9474	-0.9873
95.0000	0.8864	95.0000	-0.2461	95.0265	0.8809	94.9735	-0.2490
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.2099 percent chord

slope of mean line at LE = 0.0842

NACA Section 65-421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.9628	0.5000	-1.0729	0.2523	1.5704	0.7477	-1.3700
0.7500	2.2717	0.7500	-1.3724	0.4725	1.9249	1.0275	-1.6437
1.2500	2.7788	1.2500	-1.8246	0.9358	2.4727	1.5642	-2.0449
2.5000	3.7738	2.5000	-2.5808	2.1346	3.5059	2.8654	-2.7616
5.0000	5.3167	5.0000	-3.6703	4.5824	5.0878	5.4176	-3.8240
7.5000	6.5238	7.5000	-4.5040	7.0617	6.3285	7.9383	-4.6326
10.0000	7.5364	10.0000	-5.1891	9.5570	7.3686	10.4430	-5.2991
15.0000	9.1550	15.0000	-6.2660	14.5755	9.0343	15.4245	-6.3433
20.0000	10.3896	20.0000	-7.0678	19.6155	10.3060	20.3845	-7.1203
25.0000	11.3260	25.0000	-7.6596	24.6684	11.2722	25.3316	-7.6922
30.0000	12.0057	30.0000	-8.0691	29.7295	11.9752	30.2705	-8.0863
35.0000	12.4463	35.0000	-8.3051	34.7956	12.4329	35.2044	-8.3111
40.0000	12.6456	40.0000	-8.3608	39.8645	12.6438	40.1355	-8.3593
45.0000	12.5582	45.0000	-8.1845	44.9338	12.5613	45.0662	-8.1805
50.0000	12.1672	50.0000	-7.7545	50.0000	12.1672	50.0000	-7.7545
55.0000	11.4822	55.0000	-7.0826	55.0593	11.4725	54.9407	-7.0917
60.0000	10.5628	60.0000	-6.2366	60.1084	10.5408	59.8916	-6.2563
65.0000	9.4636	65.0000	-5.2785	65.1452	9.4293	64.8548	-5.3075
70.0000	8.2191	70.0000	-4.2514	70.1680	8.1753	69.8319	-4.2864
75.0000	6.8732	75.0000	-3.2077	75.1760	6.8243	74.8240	-3.2443
80.0000	5.4542	80.0000	-2.1864	80.1682	5.4056	79.8318	-2.2199
85.0000	4.0016	85.0000	-1.2432	85.1443	3.9596	84.8557	-1.2686
90.0000	2.5662	90.0000	-0.4524	90.1050	2.5367	89.8950	-0.4671
95.0000	1.2086	95.0000	0.0719	95.0528	1.1950	94.9472	0.0688
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2099 percent chord
 slope of mean line at LE = 0.1685

NACA Section 65-421a=0.5

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.1459	0.5000	-0.9456	0.1620	1.5898	0.8380	-1.3144
0.7500	2.4580	0.7500	-1.2268	0.3697	1.9588	1.1303	-1.5717
1.2500	2.9817	1.2500	-1.6626	0.8169	2.5343	1.6831	-1.9437
2.5000	4.0284	2.5000	-2.3701	1.9916	3.6299	3.0084	-2.5976
5.0000	5.6622	5.0000	-3.3614	4.4131	5.3182	5.5869	-3.5554
7.5000	6.9464	7.5000	-4.1138	6.8802	6.6501	8.1198	-4.2759
10.0000	8.0266	10.0000	-4.7269	9.3709	7.7707	10.6291	-4.8654
15.0000	9.7574	15.0000	-5.6842	14.3954	9.5725	15.6046	-5.7810
20.0000	11.0799	20.0000	-6.3916	19.4552	10.9524	20.5448	-6.4568
25.0000	12.0827	25.0000	-6.9117	24.5383	12.0022	25.4617	-6.9513
30.0000	12.8084	30.0000	-7.2710	29.6389	12.7648	30.3611	-7.2910
35.0000	13.2743	35.0000	-7.4785	34.7540	13.2573	35.2460	-7.4849
40.0000	13.4769	40.0000	-7.5291	39.8824	13.4756	40.1176	-7.5280
45.0000	13.3687	45.0000	-7.3734	45.0262	13.3673	44.9738	-7.3748
50.0000	12.9270	50.0000	-6.9970	50.2113	12.9004	49.7887	-7.0168
55.0000	12.1305	55.0000	-6.4450	55.3623	12.0607	54.6377	-6.4898
60.0000	11.0506	60.0000	-5.7670	60.4211	10.9494	59.5789	-5.8279
65.0000	9.7642	65.0000	-5.0002	65.4288	9.6459	64.5712	-5.0689
70.0000	8.3220	70.0000	-4.1713	70.3985	8.2021	69.6015	-4.2386
75.0000	6.7842	75.0000	-3.3159	75.3410	6.6770	74.6590	-3.3747
80.0000	5.1982	80.0000	-2.4555	80.2655	5.1137	79.7345	-2.5008
85.0000	3.6248	85.0000	-1.6256	85.1820	3.5689	84.8180	-1.6547
90.0000	2.1441	90.0000	-0.8746	90.1012	2.1156	89.8988	-0.8888
95.0000	0.8600	95.0000	-0.2734	95.0351	0.8522	94.9649	-0.2767
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.2099 percent chord
 slope of mean line at LE = 0.2328

NACA Section 66-108

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.6505	0.5000	-0.5701	0.4743	0.6343	0.5257	-0.5842
0.7500	0.7815	0.7500	-0.6870	0.7215	0.7684	0.7785	-0.6981
1.2500	0.9786	1.2500	-0.8519	1.2182	0.9676	1.2818	-0.8607
2.5000	1.3190	2.5000	-1.1185	2.4645	1.3108	2.5355	-1.1247
5.0000	1.8366	5.0000	-1.5080	4.9608	1.8294	5.0392	-1.5134
7.5000	2.2497	7.5000	-1.8151	7.4594	2.2436	7.5406	-1.8196
10.0000	2.5973	10.0000	-2.0708	9.9592	2.5920	10.0408	-2.0746
15.0000	3.1648	15.0000	-2.4854	14.9610	3.1609	15.0390	-2.4882
20.0000	3.6010	20.0000	-2.7999	19.9647	3.5983	20.0353	-2.8019
25.0000	3.9395	25.0000	-3.0414	24.9695	3.9377	25.0305	-3.0427
30.0000	4.1962	30.0000	-3.2222	29.9750	4.1951	30.0250	-3.2229
35.0000	4.3799	35.0000	-3.3485	34.9810	4.3794	35.0190	-3.3489
40.0000	4.4961	40.0000	-3.4247	39.9872	4.4959	40.0128	-3.4248
45.0000	4.5461	45.0000	-3.4508	44.9936	4.5460	45.0064	-3.4508
50.0000	4.5293	50.0000	-3.4261	50.0000	4.5293	50.0000	-3.4261
55.0000	4.4423	55.0000	-3.3468	55.0062	4.4422	54.9938	-3.3470
60.0000	4.2739	60.0000	-3.2017	60.0121	4.2733	59.9879	-3.2022
65.0000	3.9821	65.0000	-2.9493	65.0171	3.9809	64.9829	-2.9504
70.0000	3.5472	70.0000	-2.5713	70.0206	3.5452	69.9794	-2.5730
75.0000	3.0213	75.0000	-2.1217	75.0225	3.0188	74.9775	-2.1238
80.0000	2.4266	80.0000	-1.6252	80.0223	2.4239	79.9777	-1.6274
85.0000	1.7842	85.0000	-1.1067	85.0200	1.7816	84.9800	-1.1088
90.0000	1.1280	90.0000	-0.6071	90.0152	1.1260	89.9848	-0.6086
95.0000	0.4969	95.0000	-0.1795	95.0079	0.4960	94.9921	-0.1800
100.0000	-0.0000	100.0000	-0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.3894 percent chord

slope of mean line at LE = 0.0421

NACA Section 66-110

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8071	0.5000	-0.7107	0.4681	0.7827	0.5319	-0.7326
0.7500	0.9662	0.7500	-0.8583	0.7146	0.9461	0.7854	-0.8758
1.2500	1.2053	1.2500	-1.0680	1.2105	1.1888	1.2895	-1.0818
2.5000	1.6200	2.5000	-1.4113	2.4559	1.6074	2.5441	-1.4213
5.0000	2.2530	5.0000	-1.9174	4.9512	2.2420	5.0488	-1.9261
7.5000	2.7571	7.5000	-2.3166	7.4493	2.7479	7.5507	-2.3239
10.0000	3.1809	10.0000	-2.6492	9.9490	3.1729	10.0510	-2.6555
15.0000	3.8720	15.0000	-3.1888	14.9513	3.8661	15.0487	-3.1933
20.0000	4.4024	20.0000	-3.5987	19.9559	4.3983	20.0441	-3.6019
25.0000	4.8136	25.0000	-3.9138	24.9619	4.8109	25.0381	-3.9159
30.0000	5.1251	30.0000	-4.1499	29.9687	5.1234	30.0313	-4.1512
35.0000	5.3474	35.0000	-4.3155	34.9762	5.3466	35.0238	-4.3161
40.0000	5.4872	40.0000	-4.4155	39.9840	5.4869	40.0160	-4.4157
45.0000	5.5459	45.0000	-4.4507	44.9920	5.5459	45.0080	-4.4507
50.0000	5.5228	50.0000	-4.4196	50.0000	5.5228	50.0000	-4.4196
55.0000	5.4127	55.0000	-4.3170	55.0078	5.4125	54.9922	-4.3173
60.0000	5.2000	60.0000	-4.1273	60.0151	5.1992	59.9850	-4.1281
65.0000	4.8283	65.0000	-3.7941	65.0212	4.8263	64.9788	-3.7959
70.0000	4.2812	70.0000	-3.3030	70.0256	4.2780	69.9744	-3.3058
75.0000	3.6281	75.0000	-2.7258	75.0278	3.6242	74.9722	-2.7292
80.0000	2.8945	80.0000	-2.0903	80.0275	2.8903	79.9725	-2.0939
85.0000	2.1100	85.0000	-1.4301	85.0244	2.1061	84.9756	-1.4333
90.0000	1.3176	90.0000	-0.7950	90.0185	1.3147	89.9815	-0.7973
95.0000	0.5676	95.0000	-0.2495	95.0096	0.5663	94.9904	-0.2503
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6075 percent chord

slope of mean line at LE = 0.0421

NACA Section 66-206

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.5284	0.5000	-0.3934	0.4614	0.5077	0.5386	-0.4075
0.7500	0.6385	0.7500	-0.4705	0.7071	0.6216	0.7929	-0.4810
1.2500	0.8095	1.2500	-0.5730	1.2022	0.7949	1.2978	-0.5810
2.5000	1.1131	2.5000	-0.7248	2.4466	1.1019	2.5534	-0.7298
5.0000	1.5805	5.0000	-0.9345	4.9412	1.5707	5.0588	-0.9388
7.5000	1.9566	7.5000	-1.0968	7.4391	1.9482	7.5609	-1.1003
10.0000	2.2747	10.0000	-1.2297	9.9388	2.2675	10.0612	-1.2327
15.0000	2.7960	15.0000	-1.4430	14.9415	2.7907	15.0585	-1.4451
20.0000	3.1995	20.0000	-1.6014	19.9471	3.1957	20.0529	-1.6029
25.0000	3.5142	25.0000	-1.7208	24.9542	3.5117	25.0458	-1.7217
30.0000	3.7545	30.0000	-1.8080	29.9625	3.7530	30.0375	-1.8085
35.0000	3.9284	35.0000	-1.8664	34.9715	3.9276	35.0285	-1.8667
40.0000	4.0410	40.0000	-1.8984	39.9808	4.0407	40.0192	-1.8985
45.0000	4.0939	45.0000	-1.9034	44.9904	4.0938	45.0096	-1.9034
50.0000	4.0871	50.0000	-1.8807	50.0000	4.0871	50.0000	-1.8807
55.0000	4.0183	55.0000	-1.8276	55.0093	4.0181	54.9907	-1.8277
60.0000	3.8800	60.0000	-1.7367	60.0181	3.8794	59.9819	-1.7371
65.0000	3.6435	65.0000	-1.5800	65.0257	3.6419	64.9743	-1.5811
70.0000	3.2881	70.0000	-1.3395	70.0312	3.2856	69.9688	-1.3411
75.0000	2.8490	75.0000	-1.0538	75.0341	2.8458	74.9659	-1.0558
80.0000	2.3433	80.0000	-0.7446	80.0340	2.3396	79.9660	-0.7468
85.0000	1.7824	85.0000	-0.4315	85.0305	1.7789	84.9695	-0.4334
90.0000	1.1879	90.0000	-0.1490	90.0233	1.1850	89.9767	-0.1503
95.0000	0.5796	95.0000	0.0540	95.0123	0.5781	94.9877	0.0538
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.2179 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-208

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.6922	0.5000	-0.5317	0.4488	0.6578	0.5512	-0.5576
0.7500	0.8303	0.7500	-0.6411	0.6931	0.8018	0.8069	-0.6613
1.2500	1.0436	1.2500	-0.7901	1.1865	1.0195	1.3135	-0.8056
2.5000	1.4208	2.5000	-1.0198	2.4291	1.4022	2.5709	-1.0301
5.0000	2.0022	5.0000	-1.3451	4.9217	1.9860	5.0783	-1.3541
7.5000	2.4682	7.5000	-1.5991	7.4188	2.4544	7.5812	-1.6064
10.0000	2.8616	10.0000	-1.8086	9.9184	2.8496	10.0816	-1.8149
15.0000	3.5053	15.0000	-2.1464	14.9220	3.4965	15.0780	-2.1510
20.0000	4.0021	20.0000	-2.4000	19.9294	3.9959	20.0706	-2.4031
25.0000	4.3889	25.0000	-2.5928	24.9390	4.3848	25.0610	-2.5948
30.0000	4.6835	30.0000	-2.7354	29.9500	4.6810	30.0500	-2.7366
35.0000	4.8958	35.0000	-2.8330	34.9619	4.8945	35.0381	-2.8336
40.0000	5.0319	40.0000	-2.8890	39.9744	5.0314	40.0256	-2.8892
45.0000	5.0937	45.0000	-2.9032	44.9872	5.0936	45.0128	-2.9032
50.0000	5.0809	50.0000	-2.8746	50.0000	5.0809	50.0000	-2.8746
55.0000	4.9901	55.0000	-2.7991	55.0124	4.9898	54.9876	-2.7993
60.0000	4.8100	60.0000	-2.6657	60.0241	4.8088	59.9759	-2.6666
65.0000	4.4986	65.0000	-2.4331	65.0341	4.4960	64.9659	-2.4351
70.0000	4.0354	70.0000	-2.0835	70.0413	4.0311	69.9587	-2.0867
75.0000	3.4714	75.0000	-1.6721	75.0450	3.4660	74.9550	-1.6760
80.0000	2.8278	80.0000	-1.2248	80.0447	2.8217	79.9553	-1.2289
85.0000	2.1233	85.0000	-0.7685	85.0399	2.1175	84.9601	-0.7720
90.0000	1.3888	90.0000	-0.3471	90.0303	1.3843	89.9697	-0.3495
95.0000	0.6559	95.0000	-0.0211	95.0158	0.6537	94.9842	-0.0218
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.3894 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-209

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.7745	0.5000	-0.5988	0.4426	0.7320	0.5574	-0.6318
0.7500	0.9263	0.7500	-0.7244	0.6862	0.8910	0.8138	-0.7504
1.2500	1.1600	1.2500	-0.8965	1.1788	1.1304	1.3212	-0.9165
2.5000	1.5739	2.5000	-1.1652	2.4204	1.5509	2.5796	-1.1788
5.0000	2.2126	5.0000	-1.5488	4.9121	2.1926	5.0879	-1.5607
7.5000	2.7237	7.5000	-1.8489	7.4087	2.7067	7.5913	-1.8587
10.0000	3.1549	10.0000	-2.0970	9.9083	3.1402	10.0917	-2.1054
15.0000	3.8599	15.0000	-2.4975	14.9123	3.8491	15.0877	-2.5036
20.0000	4.4035	20.0000	-2.7989	19.9206	4.3959	20.0794	-2.8031
25.0000	4.8264	25.0000	-3.0287	24.9313	4.8213	25.0687	-3.0314
30.0000	5.1482	30.0000	-3.1990	29.9437	5.1451	30.0563	-3.2007
35.0000	5.3796	35.0000	-3.3163	34.9572	5.3780	35.0428	-3.3171
40.0000	5.5275	40.0000	-3.3843	39.9712	5.5269	40.0288	-3.3846
45.0000	5.5936	45.0000	-3.4031	44.9856	5.5935	45.0144	-3.4031
50.0000	5.5777	50.0000	-3.3713	50.0000	5.5777	50.0000	-3.3713
55.0000	5.4755	55.0000	-3.2843	55.0140	5.4751	54.9860	-3.2846
60.0000	5.2737	60.0000	-3.1288	60.0271	5.2722	59.9729	-3.1300
65.0000	4.9231	65.0000	-2.8562	65.0383	4.9197	64.9617	-2.8589
70.0000	4.4044	70.0000	-2.4505	70.0462	4.3991	69.9538	-2.4546
75.0000	3.7773	75.0000	-1.9755	75.0503	3.7705	74.9497	-1.9805
80.0000	3.0643	80.0000	-1.4587	80.0499	3.0568	79.9501	-1.4640
85.0000	2.2886	85.0000	-0.9314	85.0444	2.2815	84.9556	-0.9360
90.0000	1.4853	90.0000	-0.4420	90.0337	1.4799	89.9663	-0.4451
95.0000	0.6921	95.0000	-0.0566	95.0175	0.6894	94.9825	-0.0575
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.4924 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.8569	0.5000	-0.6648	0.4363	0.8057	0.5637	-0.7055
0.7500	1.0219	0.7500	-0.8061	0.6793	0.9792	0.8207	-0.8386
1.2500	1.2759	1.2500	-1.0012	1.1712	1.2402	1.3288	-1.0263
2.5000	1.7262	2.5000	-1.3089	2.4118	1.6985	2.5882	-1.3264
5.0000	2.4225	5.0000	-1.7513	4.9024	2.3983	5.0976	-1.7664
7.5000	2.9789	7.5000	-2.0978	7.3987	2.9583	7.6013	-2.1104
10.0000	3.4480	10.0000	-2.3847	9.8981	3.4302	10.1019	-2.3954
15.0000	4.2146	15.0000	-2.8482	14.9026	4.2015	15.0974	-2.8559
20.0000	4.8049	20.0000	-3.1976	19.9118	4.7958	20.0882	-3.2029
25.0000	5.2640	25.0000	-3.4644	24.9237	5.2579	25.0763	-3.4679
30.0000	5.6129	30.0000	-3.6627	29.9375	5.6092	30.0625	-3.6648
35.0000	5.8636	35.0000	-3.7997	34.9524	5.8616	35.0476	-3.8007
40.0000	6.0231	40.0000	-3.8797	39.9680	6.0223	40.0320	-3.8801
45.0000	6.0935	45.0000	-3.9030	44.9840	6.0934	45.0160	-3.9030
50.0000	6.0743	50.0000	-3.8680	50.0000	6.0743	50.0000	-3.8680
55.0000	5.9606	55.0000	-3.7692	55.0155	5.9600	54.9845	-3.7696
60.0000	5.7365	60.0000	-3.5910	60.0301	5.7347	59.9699	-3.5924
65.0000	5.3455	65.0000	-3.2771	65.0425	5.3414	64.9575	-3.2805
70.0000	4.7705	70.0000	-2.8142	70.0511	4.7639	69.9489	-2.8194
75.0000	4.0795	75.0000	-2.2751	75.0555	4.0713	74.9445	-2.2814
80.0000	3.2971	80.0000	-1.6886	80.0550	3.2880	79.9450	-1.6952
85.0000	2.4504	85.0000	-1.0907	85.0488	2.4420	84.9512	-1.0964
90.0000	1.5793	90.0000	-0.5342	90.0369	1.5729	89.9631	-0.5381
95.0000	0.7270	95.0000	-0.0908	95.0191	0.7239	94.9809	-0.0920
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6075 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-112

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	0.9620	0.5000	-0.8470	0.4620	0.9281	0.5380	-0.8780
0.7500	1.1484	0.7500	-1.0246	0.7078	1.1202	0.7922	-1.0499
1.2500	1.4282	1.2500	-1.2782	1.2030	1.4052	1.2970	-1.2982
2.5000	1.9168	2.5000	-1.6982	2.4473	1.8990	2.5527	-1.7129
5.0000	2.6664	5.0000	-2.3221	4.9416	2.6509	5.0584	-2.3350
7.5000	3.2624	7.5000	-2.8145	7.4393	3.2492	7.5607	-2.8253
10.0000	3.7628	10.0000	-3.2248	9.9389	3.7515	10.0611	-3.2341
15.0000	4.5783	15.0000	-3.8904	14.9416	4.5699	15.0584	-3.8972
20.0000	5.2033	20.0000	-4.3964	19.9471	5.1975	20.0529	-4.4011
25.0000	5.6876	25.0000	-4.7856	24.9542	5.6837	25.0458	-4.7887
30.0000	6.0539	30.0000	-5.0775	29.9625	6.0516	30.0375	-5.0794
35.0000	6.3151	35.0000	-5.2825	34.9714	6.3139	35.0286	-5.2834
40.0000	6.4783	40.0000	-5.4065	39.9808	6.4779	40.0192	-5.4068
45.0000	6.5458	45.0000	-5.4505	44.9904	6.5457	45.0096	-5.4505
50.0000	6.5158	50.0000	-5.4126	50.0000	6.5158	50.0000	-5.4126
55.0000	6.3818	55.0000	-5.2860	55.0093	6.3815	54.9907	-5.2863
60.0000	6.1225	60.0000	-5.0489	60.0180	6.1212	59.9820	-5.0501
65.0000	5.6657	65.0000	-4.6298	65.0254	5.6628	64.9746	-4.6324
70.0000	5.0027	70.0000	-4.0220	70.0304	4.9982	69.9696	-4.0260
75.0000	4.2205	75.0000	-3.3152	75.0329	4.2151	74.9671	-3.3201
80.0000	3.3471	80.0000	-2.5396	80.0325	3.3412	79.9675	-2.5448
85.0000	2.4223	85.0000	-1.7396	85.0287	2.4169	84.9713	-1.7441
90.0000	1.4971	90.0000	-0.9725	90.0216	1.4931	89.9784	-0.9757
95.0000	0.6334	95.0000	-0.3145	95.0111	0.6316	94.9889	-0.3157
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8698 percent chord

slope of mean line at LE = 0.0421

NACA Section 66-212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.0213	0.5000	-0.7921	0.4241	0.9507	0.5759	-0.8505
0.7500	1.2122	0.7500	-0.9647	0.6658	1.1529	0.8342	-1.0123
1.2500	1.5054	1.2500	-1.2056	1.1562	1.4562	1.3438	-1.2423
2.5000	2.0284	2.5000	-1.5912	2.3948	1.9897	2.6052	-1.6176
5.0000	2.8406	5.0000	-2.1520	4.8833	2.8068	5.1167	-2.1749
7.5000	3.4881	7.5000	-2.5923	7.3786	3.4594	7.6214	-2.6115
10.0000	4.0334	10.0000	-2.9573	9.8779	4.0086	10.1221	-2.9738
15.0000	4.9233	15.0000	-3.5477	14.8832	4.9051	15.1168	-3.5596
20.0000	5.6076	20.0000	-3.9938	19.8941	5.5948	20.1059	-4.0020
25.0000	6.1391	25.0000	-4.3352	24.9085	6.1306	25.0915	-4.3406
30.0000	6.5425	30.0000	-4.5897	29.9250	6.5373	30.0750	-4.5929
35.0000	6.8316	35.0000	-4.7664	34.9429	6.8289	35.0571	-4.7680
40.0000	7.0144	40.0000	-4.8706	39.9617	7.0134	40.0383	-4.8711
45.0000	7.0934	45.0000	-4.9029	44.9808	7.0933	45.0192	-4.9029
50.0000	7.0674	50.0000	-4.8610	50.0000	7.0674	50.0000	-4.8610
55.0000	6.9298	55.0000	-4.7381	55.0186	6.9291	54.9814	-4.7387
60.0000	6.6593	60.0000	-4.5122	60.0360	6.6567	59.9640	-4.5144
65.0000	6.1839	65.0000	-4.1119	65.0507	6.1779	64.9493	-4.1170
70.0000	5.4934	70.0000	-3.5319	70.0608	5.4840	69.9392	-3.5396
75.0000	4.6736	75.0000	-2.8629	75.0659	4.6621	74.9341	-2.8722
80.0000	3.7514	80.0000	-2.1364	80.0649	3.7389	79.9351	-2.1460
85.0000	2.7642	85.0000	-1.3989	85.0574	2.7527	84.9426	-1.4072
90.0000	1.7599	90.0000	-0.7108	90.0431	1.7512	89.9568	-0.7165
95.0000	0.7932	95.0000	-0.1555	95.0222	0.7892	94.9778	-0.1573
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8698 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordnate	Station	Ordnate	Station	Ordnate	Station	Ordnate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.1421	0.5000	-0.6892	0.3498	0.9915	0.6502	-0.7911
0.7500	1.3434	0.7500	-0.8491	0.5831	1.2136	0.9169	-0.9324
1.2500	1.6637	1.2500	-1.0648	1.0637	1.5535	1.4363	-1.1257
2.5000	2.2560	2.5000	-1.3820	2.2907	2.1667	2.7093	-1.4224
5.0000	3.1927	5.0000	-1.8158	4.7673	3.1146	5.2327	-1.8509
7.5000	3.9429	7.5000	-2.1516	7.2578	3.8761	7.7422	-2.1803
10.0000	4.5775	10.0000	-2.4256	9.7563	4.5196	10.2437	-2.4500
15.0000	5.6157	15.0000	-2.8645	14.7666	5.5730	15.2334	-2.8820
20.0000	6.4178	20.0000	-3.1902	19.7884	6.3877	20.2116	-3.2021
25.0000	7.0433	25.0000	-3.4356	24.8170	7.0232	25.1830	-3.4432
30.0000	7.5204	30.0000	-3.6147	29.8499	7.5080	30.1501	-3.6191
35.0000	7.8649	35.0000	-3.7346	34.8858	7.8585	35.1142	-3.7367
40.0000	8.0866	40.0000	-3.7991	39.9233	8.0841	40.0767	-3.7996
45.0000	8.1887	45.0000	-3.8077	44.9617	8.1884	45.0383	-3.8076
50.0000	8.1705	50.0000	-3.7578	50.0000	8.1705	50.0000	-3.7578
55.0000	8.0258	55.0000	-3.6423	55.0373	8.0242	54.9627	-3.6434
60.0000	7.7332	60.0000	-3.4390	60.0721	7.7275	59.9279	-3.4430
65.0000	7.2205	65.0000	-3.0766	65.1014	7.2076	64.8986	-3.0858
70.0000	6.4753	70.0000	-2.5523	70.1217	6.4550	69.8783	-2.5661
75.0000	5.5807	75.0000	-1.9593	75.1317	5.5554	74.8683	-1.9754
80.0000	4.5610	80.0000	-1.3311	80.1297	4.5331	79.8703	-1.3475
85.0000	3.4493	85.0000	-0.7187	85.1147	3.4231	84.8853	-0.7320
90.0000	2.2866	90.0000	-0.1886	90.0861	2.2664	89.9139	-0.1968
95.0000	1.1138	95.0000	0.1616	95.0442	1.1036	94.9558	0.1602
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8698 percent chord

slope of mean line at LE = 0.1685

NACA Section 66-215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.2658	0.5000	-0.9723	0.4063	1.1619	0.5937	-1.0617
0.7500	1.4928	0.7500	-1.1900	0.6462	1.4049	0.8538	-1.2643
1.2500	1.8422	1.2500	-1.4978	1.1344	1.7695	1.3656	-1.5556
2.5000	2.4731	2.5000	-1.9998	2.3700	2.4148	2.6300	-2.0427
5.0000	3.4616	5.0000	-2.7409	4.8550	3.4105	5.1450	-2.7786
7.5000	4.2474	7.5000	-3.3245	7.3489	4.2040	7.6511	-3.3561
10.0000	4.9080	10.0000	-3.8085	9.8478	4.8705	10.1522	-3.8357
15.0000	5.9845	15.0000	-4.5918	14.8541	5.9570	15.1459	-4.6115
20.0000	6.8105	20.0000	-5.1848	19.8677	6.7912	20.1323	-5.1984
25.0000	7.4513	25.0000	-5.6394	24.8856	7.4384	25.1144	-5.6485
30.0000	7.9367	30.0000	-5.9791	29.9062	7.9289	30.0938	-5.9845
35.0000	8.2836	35.0000	-6.2160	34.9286	8.2795	35.0714	-6.2186
40.0000	8.5016	40.0000	-6.3570	39.9521	8.5001	40.0479	-6.3578
45.0000	8.5932	45.0000	-6.4027	44.9761	8.5931	45.0239	-6.4027
50.0000	8.5562	50.0000	-6.3499	50.0000	8.5562	50.0000	-6.3499
55.0000	8.3817	55.0000	-6.1891	55.0233	8.3805	54.9767	-6.1901
60.0000	8.0365	60.0000	-5.8864	60.0449	8.0323	59.9551	-5.8901
65.0000	7.4243	65.0000	-5.3455	65.0629	7.4148	64.9371	-5.3539
70.0000	6.5547	70.0000	-4.5835	70.0751	6.5404	69.9249	-4.5959
75.0000	5.5381	75.0000	-3.7160	75.0809	5.5206	74.9191	-3.7307
80.0000	4.4052	80.0000	-2.7787	80.0792	4.3866	79.9208	-2.7938
85.0000	3.2108	85.0000	-1.8356	85.0696	3.1940	84.9304	-1.8485
90.0000	2.0126	90.0000	-0.9570	90.0519	2.0004	89.9481	-0.9656
95.0000	0.8843	95.0000	-0.2441	95.0264	0.8788	94.9736	-0.2469
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.3452 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.4184	0.5000	-0.8412	0.3146	1.2004	0.6854	-1.0000
0.7500	1.6520	0.7500	-1.0482	0.5443	1.4633	0.9557	-1.1821
1.2500	2.0240	1.2500	-1.3364	1.0204	1.8646	1.4796	-1.4368
2.5000	2.7210	2.5000	-1.7748	2.2414	2.5897	2.7586	-1.8454
5.0000	3.8314	5.0000	-2.3906	4.7109	3.7164	5.2891	-2.4526
7.5000	4.7172	7.5000	-2.8719	7.1984	4.6189	7.8016	-2.9231
10.0000	5.4652	10.0000	-3.2665	9.6961	5.3799	10.3039	-3.3104
15.0000	6.6864	15.0000	-3.9011	14.7086	6.6238	15.2914	-3.9327
20.0000	7.6274	20.0000	-4.3760	19.7357	7.5833	20.2643	-4.3976
25.0000	8.3599	25.0000	-4.7363	24.7713	8.3304	25.2287	-4.7505
30.0000	8.9172	30.0000	-5.0021	29.8124	8.8992	30.1876	-5.0104
35.0000	9.3183	35.0000	-5.1831	34.8572	9.3089	35.1428	-5.1871
40.0000	9.5743	40.0000	-5.2851	39.9041	9.5708	40.0959	-5.2863
45.0000	9.6886	45.0000	-5.3075	44.9521	9.6882	45.0479	-5.3073
50.0000	9.6594	50.0000	-5.2467	50.0000	9.6594	50.0000	-5.2467
55.0000	9.4780	55.0000	-5.0929	55.0465	9.4756	54.9535	-5.0948
60.0000	9.1120	60.0000	-4.8117	60.0898	9.1030	59.9102	-4.8185
65.0000	8.4644	65.0000	-4.3069	65.1258	8.4443	64.8742	-4.3225
70.0000	7.5418	70.0000	-3.5993	70.1501	7.5111	69.8499	-3.6222
75.0000	6.4512	75.0000	-2.8070	75.1617	6.4135	74.8383	-2.8336
80.0000	5.2211	80.0000	-1.9681	80.1583	5.1804	79.8417	-1.9947
85.0000	3.9013	85.0000	-1.1511	85.1390	3.8639	84.8610	-1.1728
90.0000	2.5432	90.0000	-0.4319	90.1035	2.5150	89.8965	-0.4455
95.0000	1.2065	95.0000	0.0739	95.0526	1.1929	94.9474	0.0709
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.3452 percent chord
 slope of mean line at LE = 0.1685

NACA Section 66-218

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.5045	0.5000	-1.1385	0.3894	1.3633	0.6106	-1.2631
0.7500	1.7646	0.7500	-1.3992	0.6276	1.6447	0.8724	-1.5041
1.2500	2.1668	1.2500	-1.7712	1.1137	2.0674	1.3863	-1.8535
2.5000	2.9043	2.5000	-2.3876	2.3463	2.8229	2.6537	-2.4507
5.0000	4.0724	5.0000	-3.3125	4.8273	4.0006	5.1727	-3.3687
7.5000	4.9990	7.5000	-4.0429	7.3195	4.9380	7.6805	-4.0900
10.0000	5.7768	10.0000	-4.6485	9.8179	5.7239	10.1821	-4.6891
15.0000	7.0421	15.0000	-5.6283	14.8252	7.0034	15.1748	-5.6579
20.0000	8.0110	20.0000	-6.3706	19.8414	7.9839	20.1586	-6.3911
25.0000	8.7620	25.0000	-6.9404	24.8628	8.7439	25.1372	-6.9540
30.0000	9.3301	30.0000	-7.3667	29.8874	9.3192	30.1126	-7.3747
35.0000	9.7352	35.0000	-7.6646	34.9143	9.7296	35.0857	-7.6687
40.0000	9.9889	40.0000	-7.8433	39.9425	9.9869	40.0575	-7.8446
45.0000	10.0931	45.0000	-7.9025	44.9713	10.0929	45.0287	-7.9025
50.0000	10.0447	50.0000	-7.8383	50.0000	10.0447	50.0000	-7.8383
55.0000	9.8312	55.0000	-7.6375	55.0279	9.8295	54.9721	-7.6391
60.0000	9.4046	60.0000	-7.2504	60.0537	9.3983	59.9463	-7.2561
65.0000	8.6429	65.0000	-6.5555	65.0749	8.6290	64.9251	-6.5681
70.0000	7.5879	70.0000	-5.6048	70.0889	7.5675	69.9111	-5.6230
75.0000	6.3709	75.0000	-4.5351	75.0953	6.3463	74.9047	-4.5564
80.0000	5.0269	80.0000	-3.3868	80.0928	5.0012	79.9072	-3.4083
85.0000	3.6295	85.0000	-2.2432	85.0810	3.6068	84.9190	-2.2613
90.0000	2.2456	90.0000	-1.1826	90.0599	2.2294	89.9401	-1.1946
95.0000	0.9663	95.0000	-0.3235	95.0301	0.9593	94.9698	-0.3274
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.9049 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.6925	0.5000	-0.9757	0.2810	1.3998	0.7190	-1.1994
0.7500	1.9548	0.7500	-1.2272	0.5074	1.7009	0.9926	-1.4198
1.2500	2.3753	1.2500	-1.5856	0.9793	2.1603	1.5207	-1.7325
2.5000	3.1761	2.5000	-2.1433	2.1941	2.9956	2.8059	-2.2514
5.0000	4.4635	5.0000	-2.9444	4.6558	4.3044	5.3442	-3.0407
7.5000	5.4869	7.5000	-3.5752	7.1399	5.3512	7.8601	-3.6553
10.0000	6.3496	10.0000	-4.0934	9.6365	6.2318	10.3635	-4.1622
15.0000	7.7554	15.0000	-4.9280	14.6509	7.6689	15.3491	-4.9779
20.0000	8.8358	20.0000	-5.5552	19.6831	8.7751	20.3169	-5.5894
25.0000	9.6760	25.0000	-6.0329	24.7256	9.6353	25.2744	-6.0554
30.0000	10.3138	30.0000	-6.3870	29.7749	10.2891	30.2251	-6.4002
35.0000	10.7716	35.0000	-6.6305	34.8286	10.7587	35.1714	-6.6370
40.0000	11.0623	40.0000	-6.7709	39.8849	11.0575	40.1151	-6.7729
45.0000	11.1885	45.0000	-6.8073	44.9425	11.1880	45.0575	-6.8071
50.0000	11.1478	50.0000	-6.7351	50.0000	11.1478	50.0000	-6.7351
55.0000	10.9281	55.0000	-6.5408	55.0558	10.9245	54.9442	-6.5437
60.0000	10.4821	60.0000	-6.1736	60.1075	10.4689	59.8925	-6.1844
65.0000	9.6875	65.0000	-5.5126	65.1497	9.6583	64.8503	-5.5366
70.0000	8.5811	70.0000	-4.6149	70.1778	8.5379	69.8222	-4.6490
75.0000	7.2912	75.0000	-3.6196	75.1905	7.2388	74.8095	-3.6589
80.0000	5.8500	80.0000	-2.5699	80.1854	5.7945	79.8146	-2.6089
85.0000	4.3262	85.0000	-1.5537	85.1618	4.2762	84.8382	-1.5852
90.0000	2.7804	90.0000	-0.6544	90.1195	2.7436	89.8805	-0.6741
95.0000	1.2902	95.0000	-0.0045	95.0601	1.2732	94.9399	-0.0094
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9049 percent chord
 slope of mean line at LE = 0.1685

NACA Section 66-618

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.8818	0.5000	-0.8348	0.1771	1.4280	0.8229	-1.1274
0.7500	2.1496	0.7500	-1.0684	0.3913	1.7487	1.1087	-1.3269
1.2500	2.5898	1.2500	-1.4092	0.8487	2.2446	1.6513	-1.6029
2.5000	3.4563	2.5000	-1.9086	2.0449	3.1600	2.9551	-2.0436
5.0000	4.8614	5.0000	-2.5846	4.4865	4.6006	5.5135	-2.7049
7.5000	5.9810	7.5000	-3.1146	6.9620	5.7574	8.0380	-3.2136
10.0000	6.9278	10.0000	-3.5445	9.4564	6.7334	10.5436	-3.6291
15.0000	8.4727	15.0000	-4.2323	14.4773	8.3297	15.5227	-4.2932
20.0000	9.6636	20.0000	-4.7430	19.5252	9.5628	20.4748	-4.7843
25.0000	10.5919	25.0000	-5.1276	24.5888	10.5243	25.4112	-5.1544
30.0000	11.2988	30.0000	-5.4087	29.6626	11.2575	30.3374	-5.4242
35.0000	11.8088	35.0000	-5.5971	34.7430	11.7871	35.2570	-5.6044
40.0000	12.1360	40.0000	-5.6989	39.8274	12.1277	40.1726	-5.7009
45.0000	12.2840	45.0000	-5.7123	44.9138	12.2829	45.0862	-5.7117
50.0000	12.2510	50.0000	-5.6319	50.0000	12.2510	50.0000	-5.6319
55.0000	12.0251	55.0000	-5.4441	55.0837	12.0195	54.9163	-5.4483
60.0000	11.5598	60.0000	-5.0971	60.1612	11.5392	59.8388	-5.1124
65.0000	10.7327	65.0000	-4.4704	65.2245	10.6869	64.7755	-4.5043
70.0000	9.5753	70.0000	-3.6261	70.2666	9.5071	69.7334	-3.6738
75.0000	8.2130	75.0000	-2.7058	75.2856	8.1297	74.7144	-2.7598
80.0000	6.6752	80.0000	-1.7552	80.2778	6.5858	79.7222	-1.8074
85.0000	5.0253	85.0000	-0.8667	85.2423	4.9434	84.7577	-0.9068
90.0000	3.3172	90.0000	-0.1284	90.1787	3.2558	89.8213	-0.1515
95.0000	1.6156	95.0000	0.3128	95.0897	1.5856	94.9103	0.3100
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9049 percent chord
 slope of mean line at LE = 0.2527

NACA Section 66-221

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.7343	0.5000	-1.2904	0.3734	1.5534	0.6266	-1.4532
0.7500	2.0242	0.7500	-1.5913	0.6101	1.8700	0.8899	-1.7294
1.2500	2.4759	1.2500	-2.0240	1.0942	2.3473	1.4058	-2.1334
2.5000	3.3180	2.5000	-2.7518	2.3237	3.2103	2.6763	-2.8382
5.0000	4.6699	5.0000	-3.8635	4.8005	4.5736	5.1995	-3.9417
7.5000	5.7405	7.5000	-4.7450	7.2907	5.6587	7.7093	-4.8108
10.0000	6.6374	10.0000	-5.4750	9.7885	6.5666	10.2115	-5.5318
15.0000	8.0944	15.0000	-6.6556	14.7965	8.0426	15.2035	-6.6970
20.0000	9.2080	20.0000	-7.5501	19.8152	9.1717	20.1848	-7.5789
25.0000	10.0704	25.0000	-8.2373	24.8400	10.0462	25.1600	-8.2563
30.0000	10.7221	30.0000	-8.7517	29.8687	10.7075	30.1313	-8.7630
35.0000	11.1862	35.0000	-9.1120	34.9000	11.1786	35.1000	-9.1177
40.0000	11.4762	40.0000	-9.3292	39.9329	11.4734	40.0671	-9.3312
45.0000	11.5929	45.0000	-9.4023	44.9665	11.5927	45.0335	-9.4023
50.0000	11.5328	50.0000	-9.3265	50.0000	11.5328	50.0000	-9.3265
55.0000	11.2784	55.0000	-9.0834	55.0325	11.2760	54.9675	-9.0856
60.0000	10.7627	60.0000	-8.6033	60.0625	10.7538	59.9375	-8.6116
65.0000	9.8402	65.0000	-7.7421	65.0866	9.8209	64.9134	-7.7600
70.0000	8.5940	70.0000	-6.5968	70.1024	8.5663	69.8976	-6.6219
75.0000	7.1719	75.0000	-5.3202	75.1092	7.1391	74.8908	-5.3492
80.0000	5.6174	80.0000	-3.9621	80.1056	5.5838	79.8944	-3.9910
85.0000	4.0215	85.0000	-2.6230	85.0916	3.9923	84.9084	-2.6468
90.0000	2.4602	90.0000	-1.3894	90.0672	2.4397	89.9328	-1.4050
95.0000	1.0403	95.0000	-0.3948	95.0335	1.0317	94.9665	-0.3998
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.5371 percent chord

slope of mean line at LE = 0.0842

NACA Section 66-421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.9595	0.5000	-1.0938	0.2493	1.5878	0.7507	-1.3874
0.7500	2.2476	0.7500	-1.3867	0.4726	1.9243	1.0274	-1.6431
1.2500	2.7134	1.2500	-1.8116	0.9406	2.4382	1.5594	-2.0104
2.5000	3.6172	2.5000	-2.4853	2.1491	3.3811	2.8509	-2.6369
5.0000	5.0856	5.0000	-3.4739	4.6023	4.8757	5.3977	-3.6119
7.5000	6.2493	7.5000	-4.2589	7.0824	6.0702	7.9176	-4.3743
10.0000	7.2284	10.0000	-4.9039	9.5777	7.0729	10.4223	-5.0034
15.0000	8.8209	15.0000	-5.9436	14.5935	8.7069	15.4065	-6.0159
20.0000	10.0421	20.0000	-6.7265	19.6307	9.9620	20.3693	-6.7763
25.0000	10.9905	25.0000	-7.3243	24.6801	10.9370	25.3199	-7.3571
30.0000	11.7095	30.0000	-7.7687	29.7375	11.6770	30.2625	-7.7882
35.0000	12.2245	35.0000	-8.0762	34.8001	12.2076	35.1999	-8.0858
40.0000	12.5502	40.0000	-8.2563	39.8658	12.5439	40.1342	-8.2594
45.0000	12.6884	45.0000	-8.3072	44.9329	12.6878	45.0671	-8.3069
50.0000	12.6360	50.0000	-8.2233	50.0000	12.6360	50.0000	-8.2233
55.0000	12.3760	55.0000	-7.9860	55.0650	12.3711	54.9350	-7.9902
60.0000	11.8428	60.0000	-7.5240	60.1250	11.8244	59.8750	-7.5398
65.0000	10.8901	65.0000	-6.6941	65.1732	10.8500	64.8268	-6.7283
70.0000	9.5944	70.0000	-5.6000	70.2048	9.5365	69.7952	-5.6476
75.0000	8.1004	75.0000	-4.3971	75.2183	8.0313	74.7817	-4.4513
80.0000	6.4487	80.0000	-3.1381	80.2111	6.3767	79.7889	-3.1911
85.0000	4.7249	85.0000	-1.9280	85.1831	4.6613	84.8169	-1.9703
90.0000	2.9993	90.0000	-0.8577	90.1342	2.9536	89.8658	-0.8841
95.0000	1.3658	95.0000	-0.0748	95.0669	1.3453	94.9331	-0.0815
100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.5371 percent chord

slope of mean line at LE = 0.1685

NACA Section 67-212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.0722	0.5000	-0.8339	0.4202	0.9972	0.5798	-0.8970
0.7500	1.2702	0.7500	-1.0112	0.6618	1.2040	0.8382	-1.0635
1.2500	1.5978	1.2500	-1.2793	1.1504	1.5389	1.3496	-1.3250
2.5000	2.1675	2.5000	-1.7212	2.3870	2.1240	2.6130	-1.7519
5.0000	2.9643	5.0000	-2.2760	4.8775	2.9304	5.1225	-2.2985
7.5000	3.5875	7.5000	-2.6927	7.3746	3.5591	7.6254	-2.7112
10.0000	4.1005	10.0000	-3.0271	9.8755	4.0769	10.1245	-3.0421
15.0000	4.9260	15.0000	-3.5529	14.8830	4.9090	15.1170	-3.5635
20.0000	5.5678	20.0000	-3.9556	19.8950	5.5559	20.1050	-3.9630
25.0000	6.0720	25.0000	-4.2690	24.9096	6.0640	25.0904	-4.2740
30.0000	6.4646	30.0000	-4.5120	29.9260	6.4596	30.0740	-4.5151
35.0000	6.7600	35.0000	-4.6946	34.9436	6.7572	35.0564	-4.6964
40.0000	6.9613	40.0000	-4.8171	39.9620	6.9601	40.0380	-4.8179
45.0000	7.0759	45.0000	-4.8850	44.9809	7.0756	45.0191	-4.8852
50.0000	7.1003	50.0000	-4.8940	50.0000	7.1003	50.0000	-4.8940
55.0000	7.0325	55.0000	-4.8413	55.0190	7.0320	54.9810	-4.8416
60.0000	6.8588	60.0000	-4.7135	60.0373	6.8570	59.9627	-4.7148
65.0000	6.5633	65.0000	-4.4956	65.0545	6.5594	64.9455	-4.4985
70.0000	6.1169	70.0000	-4.1591	70.0693	6.1093	69.9307	-4.1649
75.0000	5.4430	75.0000	-3.6297	75.0793	5.4300	74.9207	-3.6400
80.0000	4.5026	80.0000	-2.8797	80.0814	4.4858	79.9186	-2.8929
85.0000	3.4137	85.0000	-2.0377	85.0752	3.3963	84.9248	-2.0508
90.0000	2.2055	90.0000	-1.1456	90.0585	2.1909	89.9415	-1.1561
95.0000	0.9788	95.0000	-0.3359	95.0307	0.9718	94.9693	-0.3399
100.0000	0.0000	100.0000	0.0000	100.0000	0.0000	100.0000	-0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0122 percent chord
 slope of mean line at LE = 0.0842

NACA Section 67-215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000
0.5000	1.3197	0.5000	-1.0158	0.4022	1.2109	0.5978	-1.1107
0.7500	1.5568	0.7500	-1.2373	0.6421	1.4584	0.8579	-1.3178
1.2500	1.9531	1.2500	-1.5794	1.1277	1.8653	1.3723	-1.6514
2.5000	2.6414	2.5000	-2.1543	2.3606	2.5761	2.6394	-2.2040
5.0000	3.6078	5.0000	-2.8877	4.8481	3.5567	5.1519	-2.9248
7.5000	4.3630	7.5000	-3.4418	7.3442	4.3204	7.6558	-3.4725
10.0000	4.9831	10.0000	-3.8878	9.8451	4.9476	10.1549	-3.9128
15.0000	5.9792	15.0000	-4.5904	14.8542	5.9537	15.1458	-4.6082
20.0000	6.7527	20.0000	-5.1295	19.8690	6.7347	20.1310	-5.1419
25.0000	7.3601	25.0000	-5.5497	24.8872	7.3479	25.1128	-5.5580
30.0000	7.8331	30.0000	-5.8758	29.9076	7.8255	30.0924	-5.8810
35.0000	8.1893	35.0000	-6.1213	34.9295	8.1851	35.0705	-6.1242
40.0000	8.4321	40.0000	-6.2868	39.9525	8.4303	40.0475	-6.2880
45.0000	8.5706	45.0000	-6.3795	44.9761	8.5702	45.0239	-6.3797
50.0000	8.6000	50.0000	-6.3937	50.0000	8.6000	50.0000	-6.3937
55.0000	8.5173	55.0000	-6.3257	55.0237	8.5166	54.9763	-6.3262
60.0000	8.3046	60.0000	-6.1576	60.0467	8.3019	59.9533	-6.1597
65.0000	7.9415	65.0000	-5.8696	65.0680	7.9354	64.9320	-5.8745
70.0000	7.3858	70.0000	-5.4198	70.0863	7.3739	69.9137	-5.4295
75.0000	6.5357	75.0000	-4.7084	75.0983	6.5154	74.9017	-4.7254
80.0000	5.3610	80.0000	-3.7214	80.1002	5.3354	79.8999	-3.7425
85.0000	4.0245	85.0000	-2.6324	85.0918	3.9986	84.9082	-2.6531
90.0000	2.5583	90.0000	-1.4862	90.0706	2.5371	89.9294	-1.5024
95.0000	1.1129	95.0000	-0.4652	95.0369	1.1031	94.9631	-0.4712
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.5696 percent chord

slope of mean line at LE = 0.0842

NACA Section 63A210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.9451	0.5000	-0.7110	0.4220	0.8770	0.5780	-0.7646
0.7500	1.1275	0.7500	-0.8651	0.6630	1.0677	0.8370	-0.9096
1.2500	1.4294	1.2500	-1.0940	1.1509	1.3744	1.3491	-1.1332
2.5000	1.9954	2.5000	-1.4973	2.3838	1.9496	2.6162	-1.5277
5.0000	2.8123	5.0000	-2.0314	4.8689	2.7754	5.1311	-2.0542
7.5000	3.4367	7.5000	-2.4150	7.3635	3.4059	7.6365	-2.4333
10.0000	3.9480	10.0000	-2.7154	9.8628	3.9222	10.1372	-2.7301
15.0000	4.7502	15.0000	-3.1613	14.8692	4.7322	15.1308	-3.1708
20.0000	5.3430	20.0000	-3.4650	19.8816	5.3310	20.1184	-3.4708
25.0000	5.7740	25.0000	-3.6606	24.8975	5.7665	25.1025	-3.6637
30.0000	6.0670	30.0000	-3.7652	29.9155	6.0632	30.0845	-3.7661
35.0000	6.2210	35.0000	-3.7725	34.9351	6.2198	35.0649	-3.7720
40.0000	6.2466	40.0000	-3.6904	39.9552	6.2470	40.0448	-3.6892
45.0000	6.1489	45.0000	-3.5223	44.9752	6.1496	45.0248	-3.5212
50.0000	5.9407	50.0000	-3.2812	49.9944	5.9409	50.0056	-3.2808
55.0000	5.6343	55.0000	-2.9803	55.0121	5.6334	54.9879	-2.9811
60.0000	5.2410	60.0000	-2.6334	60.0279	5.2386	59.9722	-2.6354
65.0000	4.7696	65.0000	-2.2527	65.0413	4.7654	64.9587	-2.2560
70.0000	4.2284	70.0000	-1.8530	70.0523	4.2224	69.9477	-1.8572
75.0000	3.6293	75.0000	-1.4567	75.0613	3.6217	74.9387	-1.4614
80.0000	2.9821	80.0000	-1.0979	80.0735	2.9720	79.9265	-1.1027
85.0000	2.2649	85.0000	-0.8076	85.0718	2.2544	84.9282	-0.8116
90.0000	1.5269	90.0000	-0.5358	90.0505	1.5193	89.9495	-0.5385
95.0000	0.7718	95.0000	-0.2761	95.0256	0.7679	94.9744	-0.2774
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.7260 percent chord

slope of mean line at LE = 0.0951

NACA Section 63A112

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0440	0.5000	-0.9027	0.4538	0.9993	0.5462	-0.9431
0.7500	1.2503	0.7500	-1.0971	0.6985	1.2109	0.8015	-1.1318
1.2500	1.5871	1.2500	-1.3990	1.1911	1.5510	1.3089	-1.4304
2.5000	2.2124	2.5000	-1.9463	2.4306	2.1825	2.5694	-1.9716
5.0000	3.0987	5.0000	-2.6948	4.9214	3.0750	5.0786	-2.7143
7.5000	3.7669	7.5000	-3.2451	7.4181	3.7473	7.5819	-3.2609
10.0000	4.3088	10.0000	-3.6834	9.9176	4.2925	10.0824	-3.6964
15.0000	5.1494	15.0000	-4.3487	14.9214	5.1381	15.0786	-4.3574
20.0000	5.7607	20.0000	-4.8177	19.9289	5.7533	20.0711	-4.8232
25.0000	6.1955	25.0000	-5.1365	24.9384	6.1911	25.0616	-5.1396
30.0000	6.4794	30.0000	-5.3275	29.9493	6.4773	30.0507	-5.3287
35.0000	6.6094	35.0000	-5.3850	34.9610	6.6089	35.0390	-5.3850
40.0000	6.5977	40.0000	-5.3199	39.9731	6.5981	40.0269	-5.3193
45.0000	6.4498	45.0000	-5.1369	44.9852	6.4504	45.0148	-5.1362
50.0000	6.1831	50.0000	-4.8535	49.9966	6.1833	50.0033	-4.8533
55.0000	5.8126	55.0000	-4.4852	55.0072	5.8120	54.9928	-4.4858
60.0000	5.3528	60.0000	-4.0480	60.0166	5.3511	59.9834	-4.0495
65.0000	4.8163	65.0000	-3.5563	65.0246	4.8135	64.9754	-3.5588
70.0000	4.2162	70.0000	-3.0263	70.0312	4.2123	69.9688	-3.0297
75.0000	3.5703	75.0000	-2.4814	75.0365	3.5655	74.9635	-2.4853
80.0000	2.8985	80.0000	-1.9533	80.0437	2.8925	79.9563	-1.9578
85.0000	2.1917	85.0000	-1.4600	85.0428	2.1856	84.9572	-1.4642
90.0000	1.4732	90.0000	-0.9756	90.0300	1.4689	89.9700	-0.9785
95.0000	0.7485	95.0000	-0.4996	95.0153	0.7462	94.9847	-0.5010
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.9908 percent chord

slope of mean line at LE = 0.0475

NACA Section 63A412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.2675	0.5000	-0.7126	0.3184	1.0676	0.6816	-0.8427
0.7500	1.4974	0.7500	-0.8852	0.5467	1.3129	0.9533	-0.9967
1.2500	1.8861	1.2500	-1.1361	1.0170	1.7148	1.4830	-1.2323
2.5000	2.6280	2.5000	-1.5647	2.2248	2.4818	2.7752	-1.6380
5.0000	3.7194	5.0000	-2.1048	4.6874	3.6000	5.3126	-2.1576
7.5000	4.5630	7.5000	-2.4761	7.1737	4.4625	7.8263	-2.5172
10.0000	5.2587	10.0000	-2.7576	9.6716	5.1738	10.3284	-2.7897
15.0000	6.3594	15.0000	-3.1571	14.6864	6.2995	15.3136	-3.1767
20.0000	7.1819	20.0000	-3.4100	19.7158	7.1413	20.2842	-3.4209
25.0000	7.7886	25.0000	-3.5529	24.7538	7.7632	25.2462	-3.5575
30.0000	8.2104	30.0000	-3.6027	29.7972	8.1969	30.2028	-3.6026
35.0000	8.4477	35.0000	-3.5504	34.8442	8.4429	35.1558	-3.5472
40.0000	8.5152	40.0000	-3.4042	39.8926	8.5155	40.1074	-3.4000
45.0000	8.4194	45.0000	-3.1680	44.9407	8.4214	45.0593	-3.1647
50.0000	8.1776	50.0000	-2.8591	49.9866	8.1784	50.0134	-2.8582
55.0000	7.8036	55.0000	-2.4943	55.0289	7.8011	54.9711	-2.4965
60.0000	7.3104	60.0000	-2.0912	60.0665	7.3030	59.9335	-2.0967
65.0000	6.7074	65.0000	-1.6673	65.0985	6.6945	64.9015	-1.6757
70.0000	6.0031	70.0000	-1.2434	70.1246	5.9843	69.8754	-1.2538
75.0000	5.2068	75.0000	-0.8511	75.1458	5.1824	74.8542	-0.8618
80.0000	4.3221	80.0000	-0.5417	80.1745	4.2886	79.8255	-0.5499
85.0000	3.2964	85.0000	-0.3697	85.1703	3.2602	84.8297	-0.3746
90.0000	2.2249	90.0000	-0.2345	90.1195	2.1990	89.8805	-0.2373
95.0000	1.1248	95.0000	-0.1291	95.0609	1.1113	94.9391	-0.1304
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.9908 percent chord
 slope of mean line at LE = 0.1902

NACA Section 63A415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.5546	0.5000	-0.8458	0.2804	1.2672	0.7196	-1.0423
0.7500	1.8295	0.7500	-1.0664	0.5035	1.5587	0.9965	-1.2425
1.2500	2.2944	1.2500	-1.4006	0.9653	2.0417	1.5347	-1.5591
2.5000	3.1820	2.5000	-1.9940	2.1602	2.9649	2.8398	-2.1212
5.0000	4.4785	5.0000	-2.7650	4.6111	4.3019	5.3889	-2.8595
7.5000	5.4739	7.5000	-3.3057	7.0929	5.3260	7.9071	-3.3806
10.0000	6.2909	10.0000	-3.7225	9.5898	6.1663	10.4102	-3.7822
15.0000	7.5762	15.0000	-4.3282	14.6077	7.4888	15.3923	-4.3660
20.0000	8.5291	20.0000	-4.7278	19.6443	8.4704	20.3557	-4.7499
25.0000	9.2249	25.0000	-4.9722	24.6918	9.1885	25.3082	-4.9829
30.0000	9.6981	30.0000	-5.0833	29.7462	9.6795	30.2538	-5.0852
35.0000	9.9495	35.0000	-5.0519	34.8052	9.9436	35.1948	-5.0479
40.0000	9.9969	40.0000	-4.8889	39.8659	9.9983	40.1341	-4.8828
45.0000	9.8489	45.0000	-4.6007	44.9260	9.8524	45.0740	-4.5956
50.0000	9.5290	50.0000	-4.2116	49.9833	9.5304	50.0167	-4.2102
55.0000	9.0559	55.0000	-3.7438	55.0359	9.0520	54.9641	-3.7474
60.0000	8.4457	60.0000	-3.2192	60.0825	8.4346	59.9175	-3.2282
65.0000	7.7118	65.0000	-2.6598	65.1220	7.6925	64.8780	-2.6737
70.0000	6.8674	70.0000	-2.0920	70.1541	6.8398	69.8459	-2.1093
75.0000	5.9287	75.0000	-1.5545	75.1801	5.8935	74.8199	-1.5729
80.0000	4.9036	80.0000	-1.1013	80.2155	4.8562	79.7845	-1.1175
85.0000	3.7368	85.0000	-0.7883	85.2102	3.6859	84.7898	-0.8003
90.0000	2.5180	90.0000	-0.5128	90.1472	2.4819	89.8528	-0.5202
95.0000	1.2787	95.0000	-0.2752	95.0755	1.2597	94.9245	-0.2789
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4059 percent chord
 slope of mean line at LE = 0.1902

NACA Section 63A615

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.7574	0.5000	-0.7140	0.1776	1.2990	0.8224	-0.9617
0.7500	2.0498	0.7500	-0.9119	0.3870	1.6122	1.1130	-1.1379
1.2500	2.5448	1.2500	-1.2115	0.8293	2.1355	1.6707	-1.4117
2.5000	3.5050	2.5000	-1.7264	1.9958	3.1485	3.0042	-1.8828
5.0000	4.9306	5.0000	-2.3625	4.4209	4.6367	5.5791	-2.4731
7.5000	6.0370	7.5000	-2.7862	6.8927	5.7889	8.1073	-2.8709
10.0000	6.9517	10.0000	-3.1004	9.3872	6.7415	10.6128	-3.1653
15.0000	8.4026	15.0000	-3.5314	14.4132	8.2534	15.5868	-3.5692
20.0000	9.4900	20.0000	-3.7886	19.4674	9.3886	20.5326	-3.8079
25.0000	10.2956	25.0000	-3.9168	24.5383	10.2316	25.4617	-3.9231
30.0000	10.8566	30.0000	-3.9347	29.6196	10.8226	30.3804	-3.9312
35.0000	11.1768	35.0000	-3.8305	34.7079	11.1643	35.2921	-3.8208
40.0000	11.2754	40.0000	-3.6134	39.7989	11.2756	40.2011	-3.6024
45.0000	11.1614	45.0000	-3.2892	44.8891	11.1661	45.1109	-3.2809
50.0000	10.8584	50.0000	-2.8823	49.9750	10.8604	50.0250	-2.8801
55.0000	10.3840	55.0000	-2.4159	55.0539	10.3780	54.9461	-2.4211
60.0000	9.7529	60.0000	-1.9132	60.1237	9.7354	59.8763	-1.9259
65.0000	8.9764	65.0000	-1.3984	65.1830	8.9454	64.8170	-1.4172
70.0000	8.0644	70.0000	-0.9014	70.2310	8.0191	69.7690	-0.9233
75.0000	7.0273	75.0000	-0.4660	75.2697	6.9683	74.7303	-0.4873
80.0000	5.8636	80.0000	-0.1607	80.3222	5.7813	79.6778	-0.1732
85.0000	4.4858	85.0000	-0.0631	85.3136	4.3952	84.6864	-0.0668
90.0000	3.0282	90.0000	-0.0203	90.2195	2.9635	89.7805	-0.0209
95.0000	1.5345	95.0000	-0.0293	95.1125	1.5004	94.8875	-0.0291
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4059 percent chord
 slope of mean line at LE = 0.2852

NACA Section 63A418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.8226	0.5000	-0.9511	0.2474	1.4409	0.7526	-1.2160
0.7500	2.1423	0.7500	-1.2135	0.4654	1.7753	1.0346	-1.4591
1.2500	2.6849	1.2500	-1.6245	0.9185	2.3380	1.5815	-1.8554
2.5000	3.7246	2.5000	-2.3843	2.0990	3.4230	2.9010	-2.5793
5.0000	5.2327	5.0000	-3.3969	4.5367	4.9877	5.4633	-3.5453
7.5000	6.3836	7.5000	-4.1143	7.0132	6.1788	7.9868	-4.2334
10.0000	7.3239	10.0000	-4.6720	9.5085	7.1519	10.4915	-4.7678
15.0000	8.7963	15.0000	-5.4917	14.5291	8.6762	15.4709	-5.5535
20.0000	9.8804	20.0000	-6.0428	19.5728	9.8003	20.4272	-6.0799
25.0000	10.6655	25.0000	-6.3920	24.6297	10.6164	25.3703	-6.4108
30.0000	11.1883	30.0000	-6.5651	29.6952	11.1640	30.3048	-6.5697
35.0000	11.4513	35.0000	-6.5536	34.7662	11.4444	35.2338	-6.5488
40.0000	11.4750	40.0000	-6.3710	39.8392	11.4778	40.1608	-6.3623
45.0000	11.2712	45.0000	-6.0272	44.9115	11.2766	45.0885	-6.0198
50.0000	10.8698	50.0000	-5.5536	49.9800	10.8717	50.0200	-5.5515
55.0000	10.2950	55.0000	-4.9795	55.0429	10.2894	54.9571	-4.9848
60.0000	9.5663	60.0000	-4.3309	60.0983	9.5506	59.9017	-4.3442
65.0000	8.7008	65.0000	-3.6344	65.1451	8.6738	64.8549	-3.6550
70.0000	7.7168	70.0000	-2.9225	70.1830	7.6788	69.8170	-2.9483
75.0000	6.6378	75.0000	-2.2415	75.2137	6.5901	74.7863	-2.2695
80.0000	5.4752	80.0000	-1.6469	80.2556	5.4120	79.7444	-1.6733
85.0000	4.1704	85.0000	-1.1960	85.2493	4.1029	84.7507	-1.2173
90.0000	2.8056	90.0000	-0.7828	90.1743	2.7579	89.8257	-0.7962
95.0000	1.4317	95.0000	-0.4192	95.0899	1.4067	94.9101	-0.4258
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.7925 percent chord
 slope of mean line at LE = 0.1902

NACA Section 63A421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	2.0617	0.5000	-1.0312	0.2199	1.5854	0.7801	-1.3605
0.7500	2.4253	0.7500	-1.3283	0.4332	1.9577	1.0668	-1.6415
1.2500	3.0477	1.2500	-1.8058	0.8776	2.5963	1.6224	-2.1138
2.5000	4.2484	2.5000	-2.7295	2.0421	3.8489	2.9579	-3.0051
5.0000	5.9770	5.0000	-3.9951	4.4645	5.6520	5.5355	-4.2096
7.5000	7.2882	7.5000	-4.8978	6.9348	7.0170	8.0652	-5.0717
10.0000	8.3549	10.0000	-5.6026	9.4280	8.1275	10.5720	-5.7434
15.0000	10.0177	15.0000	-6.6450	14.4508	9.8597	15.5492	-6.7369
20.0000	11.2348	20.0000	-7.3534	19.5012	11.1299	20.4988	-7.4094
25.0000	12.1095	25.0000	-7.8111	24.5676	12.0459	25.4324	-7.8402
30.0000	12.6809	30.0000	-8.0479	29.6441	12.6503	30.3559	-8.0561
35.0000	12.9528	35.0000	-8.0555	34.7271	12.9453	35.2729	-8.0496
40.0000	12.9492	40.0000	-7.8503	39.8126	12.9542	40.1874	-7.8387
45.0000	12.6868	45.0000	-7.4479	44.8969	12.6946	45.1031	-7.4378
50.0000	12.2015	50.0000	-6.8869	49.9768	12.2042	50.0232	-6.8840
55.0000	11.5226	55.0000	-6.2030	55.0497	11.5149	54.9503	-6.2103
60.0000	10.6733	60.0000	-5.4274	60.1139	10.6521	59.8861	-5.4458
65.0000	9.6761	65.0000	-4.5928	65.1679	9.6403	64.8321	-4.6215
70.0000	8.5528	70.0000	-3.7367	70.2114	8.5031	69.7886	-3.7725
75.0000	7.3365	75.0000	-2.9147	75.2467	7.2747	74.7533	-2.9540
80.0000	6.0384	80.0000	-2.1803	80.2949	5.9576	79.7051	-2.2189
85.0000	4.5985	85.0000	-1.5943	85.2877	4.5124	84.7123	-1.6268
90.0000	3.0884	90.0000	-1.0457	90.2008	3.0279	89.7992	-1.0662
95.0000	1.5844	95.0000	-0.5615	95.1042	1.5526	94.8958	-0.5718
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 2.1255 percent chord
 slope of mean line at LE = 0.1902

NACA Section 64A204

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.4052	0.5000	-0.2717	0.4681	0.3916	0.5319	-0.2791
0.7500	0.4925	0.7500	-0.3183	0.7146	0.4814	0.7854	-0.3233
1.2500	0.6350	1.2500	-0.3792	1.2102	0.6246	1.2898	-0.3833
2.5000	0.9042	2.5000	-0.4714	2.4543	0.8957	2.5457	-0.4738
5.0000	1.3029	5.0000	-0.5731	4.9492	1.2959	5.0508	-0.5747
7.5000	1.6156	7.5000	-0.6358	7.4475	1.6096	7.5525	-0.6369
10.0000	1.8798	10.0000	-0.6817	9.9473	1.8746	10.0527	-0.6825
15.0000	2.3063	15.0000	-0.7407	14.9496	2.3025	15.0504	-0.7411
20.0000	2.6363	20.0000	-0.7732	19.9542	2.6336	20.0458	-0.7734
25.0000	2.8900	25.0000	-0.7854	24.9601	2.8883	25.0399	-0.7854
30.0000	3.0785	30.0000	-0.7804	29.9668	3.0775	30.0332	-0.7803
35.0000	3.2074	35.0000	-0.7592	34.9742	3.2069	35.0258	-0.7591
40.0000	3.2775	40.0000	-0.7198	39.9820	3.2774	40.0180	-0.7196
45.0000	3.2794	45.0000	-0.6513	44.9899	3.2795	45.0101	-0.6511
50.0000	3.2180	50.0000	-0.5580	49.9977	3.2181	50.0023	-0.5580
55.0000	3.1015	55.0000	-0.4489	55.0050	3.1013	54.9950	-0.4490
60.0000	2.9353	60.0000	-0.3315	60.0116	2.9349	59.9884	-0.3317
65.0000	2.7223	65.0000	-0.2117	65.0173	2.7215	64.9827	-0.2121
70.0000	2.4630	70.0000	-0.0960	70.0220	2.4617	69.9780	-0.0965
75.0000	2.1579	75.0000	0.0046	75.0260	2.1562	74.9740	0.0042
80.0000	1.8018	80.0000	0.0702	80.0312	1.7993	79.9688	0.0700
85.0000	1.3753	85.0000	0.0701	85.0305	1.3726	84.9695	0.0702
90.0000	0.9310	90.0000	0.0517	90.0215	0.9290	89.9785	0.0518
95.0000	0.4673	95.0000	0.0241	95.0108	0.4663	94.9892	0.0241
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.1228 percent chord
 slope of mean line at LE = 0.0951

NACA Section 64A106

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.5417	0.5000	-0.4625	0.4762	0.5291	0.5238	-0.4729
0.7500	0.6510	0.7500	-0.5537	0.7235	0.6407	0.7765	-0.5617
1.2500	0.8233	1.2500	-0.6865	1.2202	0.8141	1.2798	-0.6934
2.5000	1.1389	2.5000	-0.9155	2.4657	1.1316	2.5343	-0.9206
5.0000	1.5897	5.0000	-1.2194	4.9619	1.5838	5.0381	-1.2232
7.5000	1.9347	7.5000	-1.4403	7.4606	1.9297	7.5394	-1.4434
10.0000	2.2226	10.0000	-1.6198	9.9604	2.2184	10.0396	-1.6223
15.0000	2.6794	15.0000	-1.8939	14.9622	2.6764	15.0378	-1.8957
20.0000	3.0261	20.0000	-2.0928	19.9656	3.0241	20.0344	-2.0940
25.0000	3.2860	25.0000	-2.2326	24.9700	3.2847	25.0300	-2.2333
30.0000	3.4716	30.0000	-2.3220	29.9751	3.4709	30.0249	-2.3223
35.0000	3.5890	35.0000	-2.3646	34.9807	3.5886	35.0193	-2.3647
40.0000	3.6372	40.0000	-2.3584	39.9865	3.6372	40.0135	-2.3583
45.0000	3.6008	45.0000	-2.2869	44.9925	3.6010	45.0075	-2.2868
50.0000	3.4894	50.0000	-2.1595	49.9983	3.4895	50.0017	-2.1594
55.0000	3.3154	55.0000	-1.9890	55.0037	3.3153	54.9963	-1.9891
60.0000	3.0883	60.0000	-1.7859	60.0086	3.0879	59.9914	-1.7863
65.0000	2.8138	65.0000	-1.5577	65.0129	2.8131	64.9871	-1.5584
70.0000	2.4957	70.0000	-1.3111	70.0164	2.4946	69.9836	-1.3120
75.0000	2.1411	75.0000	-1.0585	75.0193	2.1396	74.9807	-1.0595
80.0000	1.7540	80.0000	-0.8164	80.0232	1.7521	79.9768	-0.8174
85.0000	1.3302	85.0000	-0.6060	85.0227	1.3283	84.9773	-0.6069
90.0000	0.8977	90.0000	-0.4052	90.0160	0.8963	89.9840	-0.4058
95.0000	0.4522	95.0000	-0.2059	95.0081	0.4515	94.9919	-0.2063
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.2773 percent chord

slope of mean line at LE = 0.0475

NACA Section 64A210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.9339	0.5000	-0.7026	0.4229	0.8674	0.5771	-0.7549
0.7500	1.1132	0.7500	-0.8544	0.6641	1.0555	0.8359	-0.8974
1.2500	1.4035	1.2500	-1.0743	1.1527	1.3519	1.3473	-1.1106
2.5000	1.9434	2.5000	-1.4517	2.3871	1.9010	2.6129	-1.4791
5.0000	2.7218	5.0000	-1.9464	4.8736	2.6879	5.1264	-1.9667
7.5000	3.3193	7.5000	-2.3017	7.3689	3.2908	7.6311	-2.3181
10.0000	3.8186	10.0000	-2.5886	9.8681	3.7943	10.1319	-2.6022
15.0000	4.6112	15.0000	-3.0233	14.8738	4.5938	15.1262	-3.0324
20.0000	5.2138	20.0000	-3.3355	19.8851	5.2017	20.1149	-3.3415
25.0000	5.6654	25.0000	-3.5513	24.8998	5.6576	25.1002	-3.5548
30.0000	5.9884	30.0000	-3.6853	29.9169	5.9840	30.0831	-3.6869
35.0000	6.1926	35.0000	-3.7426	34.9354	6.1907	35.0646	-3.7429
40.0000	6.2733	40.0000	-3.7162	39.9550	6.2732	40.0450	-3.7155
45.0000	6.2054	45.0000	-3.5787	44.9750	6.2061	45.0250	-3.5777
50.0000	6.0119	50.0000	-3.3524	49.9943	6.0122	50.0057	-3.3521
55.0000	5.7125	55.0000	-3.0585	55.0123	5.7116	54.9877	-3.0593
60.0000	5.3237	60.0000	-2.7160	60.0284	5.3213	59.9716	-2.7181
65.0000	4.8542	65.0000	-2.3372	65.0423	4.8499	64.9577	-2.3405
70.0000	4.3111	70.0000	-1.9353	70.0538	4.3049	69.9462	-1.9397
75.0000	3.7066	75.0000	-1.5333	75.0631	3.6986	74.9369	-1.5383
80.0000	3.0449	80.0000	-1.1598	80.0757	3.0343	79.9243	-1.1649
85.0000	2.3124	85.0000	-0.8543	85.0740	2.3013	84.9260	-0.8585
90.0000	1.5590	90.0000	-0.5674	90.0520	1.5511	89.9480	-0.5703
95.0000	0.7880	95.0000	-0.2920	95.0264	0.7838	94.9736	-0.2934
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.7349 percent chord

slope of mean line at LE = 0.0951

NACA Section 64A410

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0575	0.5000	-0.6003	0.3478	0.9129	0.6522	-0.6880
0.7500	1.2530	0.7500	-0.7359	0.5801	1.1235	0.9199	-0.8073
1.2500	1.5792	1.2500	-0.9217	1.0571	1.4612	1.4429	-0.9787
2.5000	2.2000	2.5000	-1.2171	2.2757	2.1008	2.7243	-1.2570
5.0000	3.1193	5.0000	-1.5689	4.7484	3.0383	5.2516	-1.5959
7.5000	3.8369	7.5000	-1.8019	7.2386	3.7680	7.7614	-1.8226
10.0000	4.4414	10.0000	-1.9815	9.7369	4.3822	10.2631	-1.9981
15.0000	5.4111	15.0000	-2.2354	14.7481	5.3683	15.2519	-2.2455
20.0000	6.1573	20.0000	-2.4008	19.7704	6.1272	20.2296	-2.4067
25.0000	6.7255	25.0000	-2.4975	24.7998	6.7058	25.2002	-2.5001
30.0000	7.1420	30.0000	-2.5358	29.8338	7.1304	30.1662	-2.5361
35.0000	7.4188	35.0000	-2.5189	34.8709	7.4134	35.1291	-2.5177
40.0000	7.5524	40.0000	-2.4383	39.9100	7.5515	40.0900	-2.4360
45.0000	7.5190	45.0000	-2.2655	44.9499	7.5201	45.0501	-2.2634
50.0000	7.3417	50.0000	-2.0227	49.9886	7.3423	50.0114	-2.0221
55.0000	7.0395	55.0000	-1.7316	55.0246	7.0377	54.9754	-1.7331
60.0000	6.6278	60.0000	-1.4125	60.0569	6.6225	59.9431	-1.4162
65.0000	6.1134	65.0000	-1.0794	65.0846	6.1038	64.9154	-1.0850
70.0000	5.5004	70.0000	-0.7488	70.1075	5.4862	69.8925	-0.7557
75.0000	4.7954	75.0000	-0.4488	75.1262	4.7765	74.8738	-0.4558
80.0000	3.9915	80.0000	-0.2215	80.1512	3.9649	79.8488	-0.2262
85.0000	3.0465	85.0000	-0.1301	85.1476	3.0176	84.8524	-0.1320
90.0000	2.0586	90.0000	-0.0752	90.1037	2.0378	89.8963	-0.0761
95.0000	1.0380	95.0000	-0.0460	95.0526	1.0271	94.9474	-0.0463
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 0.7349 percent chord
 slope of mean line at LE = 0.1902

NACA Section 64A212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.1028	0.5000	-0.8253	0.4091	1.0118	0.5909	-0.8993
0.7500	1.3117	0.7500	-1.0109	0.6486	1.2317	0.8514	-1.0736
1.2500	1.6511	1.2500	-1.2845	1.1347	1.5793	1.3653	-1.3380
2.5000	2.2829	2.5000	-1.7603	2.3655	2.2237	2.6345	-1.8018
5.0000	3.1910	5.0000	-2.3916	4.8489	3.1439	5.1511	-2.4227
7.5000	3.8857	7.5000	-2.8480	7.3429	3.8460	7.6571	-2.8733
10.0000	4.4649	10.0000	-3.2179	9.8419	4.4310	10.1581	-3.2390
15.0000	5.3813	15.0000	-3.7815	14.8486	5.3572	15.1514	-3.7959
20.0000	6.0758	20.0000	-4.1895	19.8620	6.0592	20.1380	-4.1989
25.0000	6.5936	25.0000	-4.4746	24.8797	6.5830	25.1203	-4.4801
30.0000	6.9614	30.0000	-4.6556	29.9002	6.9554	30.0998	-4.6583
35.0000	7.1896	35.0000	-4.7388	34.9225	7.1872	35.0775	-4.7393
40.0000	7.2702	40.0000	-4.7136	39.9460	7.2703	40.0540	-4.7125
45.0000	7.1746	45.0000	-4.5486	44.9700	7.1756	45.0300	-4.5472
50.0000	6.9331	50.0000	-4.2738	49.9932	6.9335	50.0068	-4.2734
55.0000	6.5696	55.0000	-3.9149	55.0147	6.5684	54.9853	-3.9161
60.0000	6.1043	60.0000	-3.4946	60.0340	6.1008	59.9661	-3.4977
65.0000	5.5474	65.0000	-3.0271	65.0505	5.5414	64.9495	-3.0320
70.0000	4.9098	70.0000	-2.5294	70.0640	4.9012	69.9360	-2.5359
75.0000	4.2065	75.0000	-2.0278	75.0751	4.1956	74.9249	-2.0352
80.0000	3.4457	80.0000	-1.5541	80.0900	3.4313	79.9100	-1.5620
85.0000	2.6144	85.0000	-1.1498	85.0880	2.5994	84.9120	-1.1566
90.0000	1.7608	90.0000	-0.7647	90.0618	1.7502	89.9382	-0.7693
95.0000	0.8924	95.0000	-0.3941	95.0315	0.8868	94.9685	-0.3964
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.0212 percent chord

slope of mean line at LE = 0.0951

NACA Section 64A412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.2506	0.5000	-0.7039	0.3207	1.0554	0.6793	-0.8305
0.7500	1.4744	0.7500	-0.8738	0.5494	1.2976	0.9506	-0.9814
1.2500	1.8473	1.2500	-1.1157	1.0215	1.6865	1.4785	-1.2040
2.5000	2.5570	2.5000	-1.5124	2.2328	2.4214	2.7672	-1.5776
5.0000	3.6023	5.0000	-2.0039	4.6991	3.4923	5.3009	-2.0499
7.5000	4.4150	7.5000	-2.3398	7.1869	4.3214	7.8131	-2.3760
10.0000	5.0976	10.0000	-2.6038	9.6845	5.0173	10.3155	-2.6332
15.0000	6.1883	15.0000	-2.9889	14.6976	6.1304	15.3024	-3.0077
20.0000	7.0242	20.0000	-3.2517	19.7243	6.9837	20.2757	-3.2633
25.0000	7.6568	25.0000	-3.4189	24.7596	7.6305	25.2404	-3.4248
30.0000	8.1166	30.0000	-3.5053	29.8005	8.1014	30.1995	-3.5071
35.0000	8.4165	35.0000	-3.5149	34.8450	8.4096	35.1550	-3.5139
40.0000	8.5492	40.0000	-3.4359	39.8920	8.5484	40.1080	-3.4329
45.0000	8.4878	45.0000	-3.2358	44.9400	8.4896	45.0600	-3.2328
50.0000	8.2627	50.0000	-2.9442	49.9864	8.2635	50.0136	-2.9433
55.0000	7.8970	55.0000	-2.5876	55.0294	7.8945	54.9706	-2.5899
60.0000	7.4095	60.0000	-2.1901	60.0679	7.4020	59.9321	-2.1957
65.0000	6.8084	65.0000	-1.7677	65.1009	6.7952	64.8991	-1.7764
70.0000	6.1015	70.0000	-1.3409	70.1280	6.0821	69.8720	-1.3516
75.0000	5.2984	75.0000	-0.9410	75.1501	5.2730	74.8499	-0.9524
80.0000	4.3964	80.0000	-0.6133	80.1797	4.3611	79.8203	-0.6224
85.0000	3.3526	85.0000	-0.4234	85.1754	3.3147	84.8246	-0.4291
90.0000	2.2632	90.0000	-0.2710	90.1231	2.2361	89.8769	-0.2744
95.0000	1.1440	95.0000	-0.1473	95.0627	1.1297	94.9373	-0.1489
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0212 percent chord
 slope of mean line at LE = 0.1902

NACA Section 64A612

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.4035	0.5000	-0.5977	0.2367	1.0917	0.7633	-0.7544
0.7500	1.6445	0.7500	-0.7475	0.4546	1.3559	1.0454	-0.8816
1.2500	2.0509	1.2500	-0.9570	0.9123	1.7856	1.5877	-1.0618
2.5000	2.8388	2.5000	-1.2738	2.1036	2.6107	2.8964	-1.3451
5.0000	4.0209	5.0000	-1.6245	4.5519	3.8329	5.4481	-1.6693
7.5000	4.9509	7.5000	-1.8391	7.0328	4.7897	7.9672	-1.8717
10.0000	5.7361	10.0000	-1.9962	9.5288	5.5973	10.4712	-2.0211
15.0000	6.9998	15.0000	-2.2012	14.5477	6.8987	15.4523	-2.2146
20.0000	7.9760	20.0000	-2.3175	19.5872	7.9046	20.4128	-2.3239
25.0000	8.7223	25.0000	-2.3657	24.6398	8.6754	25.3602	-2.3669
30.0000	9.2735	30.0000	-2.3566	29.7009	9.2457	30.2991	-2.3543
35.0000	9.6443	35.0000	-2.2919	34.7677	9.6310	35.2323	-2.2875
40.0000	9.8287	40.0000	-2.1588	39.8381	9.8261	40.1619	-2.1528
45.0000	9.8012	45.0000	-1.9233	44.9100	9.8034	45.0900	-1.9182
50.0000	9.5924	50.0000	-1.6146	49.9796	9.5936	50.0204	-1.6133
55.0000	9.2244	55.0000	-1.2604	55.0441	9.2205	54.9559	-1.2636
60.0000	8.7148	60.0000	-0.8858	60.1018	8.7030	59.8982	-0.8935
65.0000	8.0700	65.0000	-0.5090	65.1513	8.0484	64.8487	-0.5202
70.0000	7.2943	70.0000	-0.1535	70.1919	7.2620	69.8081	-0.1662
75.0000	6.3920	75.0000	0.1441	75.2249	6.3487	74.7751	0.1323
80.0000	5.3501	80.0000	0.3241	80.2688	5.2878	79.7312	0.3203
85.0000	4.0948	85.0000	0.2990	85.2617	4.0260	84.7383	0.3024
90.0000	2.7686	90.0000	0.2197	90.1836	2.7191	89.8164	0.2234
95.0000	1.3972	95.0000	0.0978	95.0935	1.3712	94.9065	0.1001
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.0212 percent chord
 slope of mean line at LE = 0.2852

NACA Section 64A114

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.1788	0.5000	-1.0140	0.4480	1.1220	0.5520	-1.0658
0.7500	1.4114	0.7500	-1.2374	0.6918	1.3613	0.8082	-1.2823
1.2500	1.7843	1.2500	-1.5793	1.1836	1.7395	1.3164	-1.6189
2.5000	2.4726	2.5000	-2.1929	2.4222	2.4356	2.5778	-2.2247
5.0000	3.4459	5.0000	-3.0318	4.9121	3.4168	5.0879	-3.0562
7.5000	4.1811	7.5000	-3.6502	7.4085	4.1567	7.5915	-3.6704
10.0000	4.7902	10.0000	-4.1566	9.9078	4.7696	10.0922	-4.1735
15.0000	5.7458	15.0000	-4.9389	14.9116	5.7313	15.0884	-4.9506
20.0000	6.4632	20.0000	-5.5152	19.9194	6.4532	20.0806	-5.5231
25.0000	6.9907	25.0000	-5.9282	24.9298	6.9844	25.0702	-5.9330
30.0000	7.3577	30.0000	-6.2032	29.9417	7.3542	30.0583	-6.2057
35.0000	7.5740	35.0000	-6.3481	34.9548	7.5727	35.0452	-6.3488
40.0000	7.6267	40.0000	-6.3487	39.9685	7.6270	40.0315	-6.3481
45.0000	7.4842	45.0000	-6.1717	44.9825	7.4850	45.0175	-6.1708
50.0000	7.1844	50.0000	-5.8550	49.9960	7.1847	50.0040	-5.8547
55.0000	6.7565	55.0000	-5.4287	55.0085	6.7556	54.9915	-5.4295
60.0000	6.2244	60.0000	-4.9184	60.0197	6.2221	59.9803	-4.9206
65.0000	5.6014	65.0000	-4.3393	65.0293	5.5975	64.9707	-4.3428
70.0000	4.9037	70.0000	-3.7109	70.0371	4.8983	69.9629	-3.7156
75.0000	4.1521	75.0000	-3.0596	75.0435	4.1454	74.9565	-3.0653
80.0000	3.3645	80.0000	-2.4149	80.0521	3.3561	79.9479	-2.4214
85.0000	2.5423	85.0000	-1.8063	85.0509	2.5338	84.9491	-1.8124
90.0000	1.7075	90.0000	-1.2069	90.0357	1.7016	89.9643	-1.2111
95.0000	0.8699	95.0000	-0.6194	95.0182	0.8668	94.9818	-0.6216
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.3237 percent chord
 slope of mean line at LE = 0.0475

NACA Section 64A215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.3414	0.5000	-0.9871	0.3903	1.2096	0.6097	-1.0972
0.7500	1.5936	0.7500	-1.2205	0.6271	1.4752	0.8729	-1.3171
1.2500	2.0067	1.2500	-1.5736	1.1094	1.8995	1.3906	-1.6582
2.5000	2.7796	2.5000	-2.2002	2.3344	2.6899	2.6656	-2.2681
5.0000	3.8870	5.0000	-3.0428	4.8124	3.8156	5.1876	-3.0944
7.5000	4.7301	7.5000	-3.6551	7.3044	4.6701	7.6956	-3.6974
10.0000	5.4312	10.0000	-4.1526	9.8027	5.3801	10.1973	-4.1881
15.0000	6.5361	15.0000	-4.9143	14.8108	6.4999	15.1892	-4.9385
20.0000	7.3702	20.0000	-5.4689	19.8274	7.3452	20.1726	-5.4850
25.0000	7.9879	25.0000	-5.8598	24.8495	7.9721	25.1505	-5.8693
30.0000	8.4230	30.0000	-6.1125	29.8751	8.4143	30.1249	-6.1171
35.0000	8.6864	35.0000	-6.2341	34.9031	8.6830	35.0969	-6.2351
40.0000	8.7634	40.0000	-6.2077	39.9325	8.7638	40.0675	-6.2061
45.0000	8.6223	45.0000	-5.9979	44.9626	8.6241	45.0374	-5.9957
50.0000	8.3054	50.0000	-5.6467	49.9915	8.3061	50.0085	-5.6460
55.0000	7.8435	55.0000	-5.1874	55.0183	7.8415	54.9817	-5.1892
60.0000	7.2614	60.0000	-4.6481	60.0421	7.2561	59.9579	-4.6529
65.0000	6.5726	65.0000	-4.0462	65.0625	6.5634	64.9375	-4.0540
70.0000	5.7930	70.0000	-3.4045	70.0792	5.7800	69.9208	-3.4148
75.0000	4.9429	75.0000	-2.7543	75.0928	4.9266	74.9072	-2.7663
80.0000	4.0361	80.0000	-2.1328	80.1111	4.0151	79.8889	-2.1457
85.0000	3.0595	85.0000	-1.5834	85.1086	3.0378	84.8915	-1.5950
90.0000	2.0570	90.0000	-1.0531	90.0761	2.0418	89.9239	-1.0609
95.0000	1.0473	95.0000	-0.5449	95.0389	1.0393	94.9611	-0.5489
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4815 percent chord
 slope of mean line at LE = 0.0951

NACA Section 64A415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.5303	0.5000	-0.8347	0.2836	1.2507	0.7164	-1.0258
0.7500	1.7960	0.7500	-1.0520	0.5070	1.5384	0.9930	-1.2222
1.2500	2.2391	1.2500	-1.3756	0.9713	2.0038	1.5287	-1.5212
2.5000	3.0847	2.5000	-1.9272	2.1710	2.8845	2.8290	-2.0408
5.0000	4.3230	5.0000	-2.6355	4.6264	4.1611	5.3736	-2.7187
7.5000	5.2803	7.5000	-3.1307	7.1100	5.1428	7.8900	-3.1974
10.0000	6.0816	10.0000	-3.5248	9.6064	5.9640	10.3936	-3.5799
15.0000	7.3556	15.0000	-4.1122	14.6221	7.2712	15.3779	-4.1484
20.0000	8.3271	20.0000	-4.5247	19.6552	8.2684	20.3448	-4.5479
25.0000	9.0565	25.0000	-4.8003	24.6992	9.0187	25.3008	-4.8130
30.0000	9.5813	30.0000	-4.9602	29.7503	9.5596	30.2497	-4.9654
35.0000	9.9143	35.0000	-5.0098	34.8062	9.9050	35.1938	-5.0093
40.0000	10.0421	40.0000	-4.9307	39.8651	10.0418	40.1349	-4.9263
45.0000	9.9348	45.0000	-4.6859	44.9252	9.9380	45.0748	-4.6812
50.0000	9.6348	50.0000	-4.3173	49.9830	9.6361	50.0170	-4.3159
55.0000	9.1715	55.0000	-3.8594	55.0366	9.1676	54.9634	-3.8630
60.0000	8.5685	60.0000	-3.3418	60.0842	8.5572	59.9158	-3.3509
65.0000	7.8368	65.0000	-2.7840	65.1250	7.8170	64.8750	-2.7982
70.0000	6.9892	70.0000	-2.2122	70.1582	6.9606	69.8418	-2.2301
75.0000	6.0402	75.0000	-1.6631	75.1854	6.0034	74.8146	-1.6828
80.0000	4.9936	80.0000	-1.1873	80.2218	4.9438	79.7782	-1.2051
85.0000	3.8049	85.0000	-0.8528	85.2164	3.7516	84.7836	-0.8660
90.0000	2.5645	90.0000	-0.5566	90.1516	2.5266	89.8484	-0.5649
95.0000	1.3015	95.0000	-0.2967	95.0776	1.2817	94.9224	-0.3008
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.4815 percent chord
 slope of mean line at LE = 0.1902

NACA Section 64A218

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.5555	0.5000	-1.1206	0.3741	1.3807	0.6259	-1.2682
0.7500	1.8496	0.7500	-1.3973	0.6083	1.6888	0.8917	-1.5307
1.2500	2.3367	1.2500	-1.8268	1.0865	2.1887	1.4135	-1.9474
2.5000	3.2550	2.5000	-2.6069	2.3050	3.1290	2.6950	-2.7071
5.0000	4.5689	5.0000	-3.6697	4.7770	4.4682	5.2230	-3.7470
7.5000	5.5650	7.5000	-4.4437	7.2665	5.4802	7.7335	-4.5076
10.0000	6.3912	10.0000	-5.0734	9.7640	6.3191	10.2360	-5.1270
15.0000	7.6886	15.0000	-6.0394	14.7731	7.6376	15.2269	-6.0762
20.0000	8.6646	20.0000	-6.7448	19.7929	8.6296	20.2071	-6.7694
25.0000	9.3840	25.0000	-7.2444	24.8193	9.3619	25.1807	-7.2591
30.0000	9.8869	30.0000	-7.5704	29.8500	9.8748	30.1500	-7.5776
35.0000	10.1843	35.0000	-7.7303	34.8836	10.1798	35.1164	-7.7320
40.0000	10.2542	40.0000	-7.6998	39.9191	10.2552	40.0809	-7.6974
45.0000	10.0633	45.0000	-7.4408	44.9552	10.0660	45.0448	-7.4376
50.0000	9.6675	50.0000	-7.0094	49.9899	9.6685	50.0101	-7.0084
55.0000	9.1044	55.0000	-6.4466	55.0218	9.1016	54.9782	-6.4493
60.0000	8.4030	60.0000	-5.7851	60.0502	8.3953	59.9498	-5.7922
65.0000	7.5818	65.0000	-5.0480	65.0743	7.5688	64.9257	-5.0594
70.0000	6.6596	70.0000	-4.2612	70.0940	6.6415	69.9060	-4.2762
75.0000	5.6648	75.0000	-3.4645	75.1100	5.6423	74.8900	-3.4820
80.0000	4.6143	80.0000	-2.6972	80.1317	4.5857	79.8683	-2.7163
85.0000	3.4960	85.0000	-2.0063	85.1286	3.4666	84.8714	-2.0238
90.0000	2.3461	90.0000	-1.3329	90.0900	2.3255	89.9100	-1.3447
95.0000	1.2006	95.0000	-0.6935	95.0463	1.1899	94.9537	-0.6995
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.9435 percent chord
 slope of mean line at LE = 0.0951

NACA Section 64A221

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.7387	0.5000	-1.2256	0.3607	1.5214	0.6393	-1.4090
0.7500	2.0719	0.7500	-1.5396	0.5926	1.8677	0.9074	-1.7096
1.2500	2.6323	1.2500	-2.0391	1.0666	2.4398	1.4334	-2.1986
2.5000	3.7014	2.5000	-2.9736	2.2780	3.5336	2.7220	-3.1117
5.0000	5.2313	5.0000	-4.2664	4.7429	5.0962	5.2571	-4.3750
7.5000	6.3859	7.5000	-5.2095	7.2295	6.2721	7.7705	-5.2994
10.0000	7.3412	10.0000	-5.9765	9.7258	7.2444	10.2742	-6.0524
15.0000	8.8364	15.0000	-7.1543	14.7357	8.7680	15.2643	-7.2066
20.0000	9.9578	20.0000	-8.0156	19.7584	9.9109	20.2416	-8.0506
25.0000	10.7809	25.0000	-8.6276	24.7891	10.7514	25.2109	-8.6486
30.0000	11.3524	30.0000	-9.0289	29.8249	11.3364	30.1751	-9.0393
35.0000	11.6831	35.0000	-9.2273	34.8641	11.6775	35.1359	-9.2297
40.0000	11.7431	40.0000	-9.1905	39.9057	11.7448	40.0943	-9.1871
45.0000	11.4983	45.0000	-8.8783	44.9478	11.5022	45.0522	-8.8738
50.0000	11.0201	50.0000	-8.3628	49.9882	11.0215	50.0118	-8.3614
55.0000	10.3532	55.0000	-7.6934	55.0253	10.3494	54.9747	-7.6971
60.0000	9.5307	60.0000	-6.9074	60.0581	9.5203	59.9419	-6.9171
65.0000	8.5745	65.0000	-6.0320	65.0860	8.5570	64.9140	-6.0476
70.0000	7.5113	70.0000	-5.1016	70.1086	7.4873	69.8914	-5.1220
75.0000	6.3741	75.0000	-4.1604	75.1270	6.3445	74.8730	-4.1842
80.0000	5.1819	80.0000	-3.2490	80.1518	5.1447	79.8482	-3.2754
85.0000	3.9244	85.0000	-2.4191	85.1483	3.8862	84.8517	-2.4434
90.0000	2.6289	90.0000	-1.6052	90.1036	2.6023	89.8964	-1.6215
95.0000	1.3530	95.0000	-0.8403	95.0536	1.3391	94.9464	-0.8487
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 2.3674 percent chord

slope of mean line at LE = 0.0951

NACA Section 65A210

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	0.8899	0.5000	-0.6678	0.4266	0.8280	0.5734	-0.7156
0.7500	1.0671	0.7500	-0.8139	0.6679	1.0122	0.8321	-0.8541
1.2500	1.3591	1.2500	-1.0328	1.1560	1.3093	1.3440	-1.0680
2.5000	1.8751	2.5000	-1.3924	2.3913	1.8376	2.6087	-1.4158
5.0000	2.5741	5.0000	-1.8069	4.8814	2.5446	5.1186	-1.8234
7.5000	3.1630	7.5000	-2.1476	7.3761	3.1360	7.6239	-2.1633
10.0000	3.6594	10.0000	-2.4315	9.8746	3.6364	10.1254	-2.4443
15.0000	4.4563	15.0000	-2.8690	14.8789	4.4394	15.1211	-2.8780
20.0000	5.0694	20.0000	-3.1911	19.8890	5.0575	20.1110	-3.1972
25.0000	5.5418	25.0000	-3.4271	24.9025	5.5338	25.0975	-3.4309
30.0000	5.8940	30.0000	-3.5899	29.9185	5.8892	30.0815	-3.5920
35.0000	6.1373	35.0000	-3.6863	34.9362	6.1349	35.0638	-3.6871
40.0000	6.2732	40.0000	-3.7148	39.9550	6.2725	40.0450	-3.7147
45.0000	6.2956	45.0000	-3.6678	44.9745	6.2958	45.0255	-3.6674
50.0000	6.1917	50.0000	-3.5320	49.9941	6.1919	50.0059	-3.5318
55.0000	5.9575	55.0000	-3.3037	55.0130	5.9567	54.9870	-3.3044
60.0000	5.6049	60.0000	-2.9972	60.0304	5.6025	59.9696	-2.9993
65.0000	5.1556	65.0000	-2.6382	65.0459	5.1510	64.9541	-2.6416
70.0000	4.6187	70.0000	-2.2418	70.0590	4.6119	69.9410	-2.2466
75.0000	3.9989	75.0000	-1.8234	75.0702	3.9897	74.9298	-1.8294
80.0000	3.2977	80.0000	-1.4089	80.0848	3.2849	79.9152	-1.4156
85.0000	2.5043	85.0000	-1.0422	85.0829	2.4908	84.9171	-1.0480
90.0000	1.6879	90.0000	-0.6935	90.0583	1.6783	89.9417	-0.6974
95.0000	0.8528	95.0000	-0.3553	95.0295	0.8478	94.9704	-0.3573
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.6523 percent chord

slope of mean line at LE = 0.0951

NACA Section 65A112

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0487	0.5000	-0.7839	0.4137	0.9641	0.5863	-0.8517
0.7500	1.2565	0.7500	-0.9631	0.6531	1.1800	0.8469	-1.0219
1.2500	1.5988	1.2500	-1.2363	1.1386	1.5295	1.3614	-1.2883
2.5000	2.2002	2.5000	-1.6907	2.3706	2.1481	2.6294	-1.7262
5.0000	3.0112	5.0000	-2.2236	4.8583	2.9702	5.1417	-2.2490
7.5000	3.6960	7.5000	-2.6615	7.3517	3.6583	7.6483	-2.6857
10.0000	4.2713	10.0000	-3.0276	9.8498	4.2394	10.1502	-3.0473
15.0000	5.1928	15.0000	-3.5940	14.8548	5.1694	15.1452	-3.6080
20.0000	5.8999	20.0000	-4.0135	19.8667	5.8833	20.1333	-4.0231
25.0000	6.4431	25.0000	-4.3231	24.8830	6.4320	25.1170	-4.3292
30.0000	6.8464	30.0000	-4.5393	29.9022	6.8398	30.0978	-4.5426
35.0000	7.1228	35.0000	-4.6703	34.9234	7.1195	35.0766	-4.6717
40.0000	7.2732	40.0000	-4.7146	39.9460	7.2723	40.0540	-4.7146
45.0000	7.2896	45.0000	-4.6622	44.9694	7.2899	45.0306	-4.6616
50.0000	7.1561	50.0000	-4.4966	49.9929	7.1564	50.0071	-4.4963
55.0000	6.8693	55.0000	-4.2149	55.0156	6.8682	54.9845	-4.2159
60.0000	6.4461	60.0000	-3.8364	60.0364	6.4426	59.9636	-3.8394
65.0000	5.9126	65.0000	-3.3916	65.0548	5.9062	64.9452	-3.3968
70.0000	5.2805	70.0000	-2.8984	70.0704	5.2709	69.9296	-2.9056
75.0000	4.5569	75.0000	-2.3749	75.0835	4.5441	74.9165	-2.3838
80.0000	3.7462	80.0000	-1.8493	80.1008	3.7288	79.8992	-1.8594
85.0000	2.8416	85.0000	-1.3714	85.0985	2.8233	84.9015	-1.3806
90.0000	1.9127	90.0000	-0.9127	90.0691	1.8997	89.9309	-0.9189
95.0000	0.9684	95.0000	-0.4681	95.0351	0.9617	94.9649	-0.4713
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8908 percent chord

slope of mean line at LE = 0.0951

NACA Section 65A212

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.0487	0.5000	-0.7839	0.4137	0.9641	0.5863	-0.8517
0.7500	1.2565	0.7500	-0.9631	0.6531	1.1800	0.8469	-1.0219
1.2500	1.5988	1.2500	-1.2363	1.1386	1.5295	1.3614	-1.2883
2.5000	2.2002	2.5000	-1.6907	2.3706	2.1481	2.6294	-1.7262
5.0000	3.0112	5.0000	-2.2236	4.8583	2.9702	5.1417	-2.2490
7.5000	3.6960	7.5000	-2.6615	7.3517	3.6583	7.6483	-2.6857
10.0000	4.2713	10.0000	-3.0276	9.8498	4.2394	10.1502	-3.0473
15.0000	5.1928	15.0000	-3.5940	14.8548	5.1694	15.1452	-3.6080
20.0000	5.8999	20.0000	-4.0135	19.8667	5.8833	20.1333	-4.0231
25.0000	6.4431	25.0000	-4.3231	24.8830	6.4320	25.1170	-4.3292
30.0000	6.8464	30.0000	-4.5393	29.9022	6.8398	30.0978	-4.5426
35.0000	7.1228	35.0000	-4.6703	34.9234	7.1195	35.0766	-4.6717
40.0000	7.2732	40.0000	-4.7146	39.9460	7.2723	40.0540	-4.7146
45.0000	7.2896	45.0000	-4.6622	44.9694	7.2899	45.0306	-4.6616
50.0000	7.1561	50.0000	-4.4966	49.9929	7.1564	50.0071	-4.4963
55.0000	6.8693	55.0000	-4.2149	55.0156	6.8682	54.9845	-4.2159
60.0000	6.4461	60.0000	-3.8364	60.0364	6.4426	59.9636	-3.8394
65.0000	5.9126	65.0000	-3.3916	65.0548	5.9062	64.9452	-3.3968
70.0000	5.2805	70.0000	-2.8984	70.0704	5.2709	69.9296	-2.9056
75.0000	4.5569	75.0000	-2.3749	75.0835	4.5441	74.9165	-2.3838
80.0000	3.7462	80.0000	-1.8493	80.1008	3.7288	79.8992	-1.8594
85.0000	2.8416	85.0000	-1.3714	85.0985	2.8233	84.9015	-1.3806
90.0000	1.9127	90.0000	-0.9127	90.0691	1.8997	89.9309	-0.9189
95.0000	0.9684	95.0000	-0.4681	95.0351	0.9617	94.9649	-0.4713
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8908 percent chord

slope of mean line at LE = 0.0951

NACA Section 65A412

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.1912	0.5000	-0.6685	0.3296	1.0084	0.6704	-0.7835
0.7500	1.4165	0.7500	-0.8304	0.5584	1.2466	0.9416	-0.9304
1.2500	1.7919	1.2500	-1.0688	1.0293	1.6372	1.4707	-1.1547
2.5000	2.4664	2.5000	-1.4481	2.2429	2.3463	2.7571	-1.5025
5.0000	3.4165	5.0000	-1.8417	4.7178	3.3194	5.2822	-1.8770
7.5000	4.2230	7.5000	-2.1544	7.2043	4.1343	7.7957	-2.1890
10.0000	4.9020	10.0000	-2.4148	9.7003	4.8262	10.2997	-2.4421
15.0000	5.9990	15.0000	-2.8016	14.7100	5.9429	15.2900	-2.8201
20.0000	6.8481	20.0000	-3.0755	19.7338	6.8081	20.2662	-3.0876
25.0000	7.5066	25.0000	-3.2668	24.7662	7.4796	25.2338	-3.2739
30.0000	8.0024	30.0000	-3.3881	29.8044	7.9858	30.1956	-3.3915
35.0000	8.3505	35.0000	-3.4455	34.8468	8.3419	35.1532	-3.4463
40.0000	8.5533	40.0000	-3.4360	39.8920	8.5505	40.1080	-3.4350
45.0000	8.6035	45.0000	-3.3488	44.9388	8.6039	45.0612	-3.3471
50.0000	8.4859	50.0000	-3.1669	49.9858	8.4864	50.0142	-3.1662
55.0000	8.1966	55.0000	-2.8877	55.0311	8.1943	54.9689	-2.8897
60.0000	7.7513	60.0000	-2.5319	60.0727	7.7438	59.9273	-2.5375
65.0000	7.1739	65.0000	-2.1320	65.1095	7.1599	64.8905	-2.1411
70.0000	6.4732	70.0000	-1.7092	70.1407	6.4517	69.8593	-1.7212
75.0000	5.6507	75.0000	-1.2867	75.1669	5.6213	74.8331	-1.3006
80.0000	4.7000	80.0000	-0.9064	80.2012	4.6580	79.7988	-0.9193
85.0000	3.5834	85.0000	-0.6430	85.1964	3.5379	84.8036	-0.6523
90.0000	2.4176	90.0000	-0.4177	90.1377	2.3851	89.8623	-0.4234
95.0000	1.2213	95.0000	-0.2207	95.0700	1.2043	94.9300	-0.2235
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 0.8908 percent chord

slope of mean line at LE = 0.1902

NACA Section 65A215

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.2721	0.5000	-0.9359	0.3961	1.1492	0.6039	-1.0367
0.7500	1.5256	0.7500	-1.1621	0.6327	1.4114	0.8673	-1.2533
1.2500	1.9446	1.2500	-1.5169	1.1140	1.8408	1.3860	-1.5996
2.5000	2.6759	2.5000	-2.1176	2.3405	2.5977	2.6595	-2.1758
5.0000	3.6575	5.0000	-2.8323	4.8243	3.5958	5.1757	-2.8746
7.5000	4.4890	7.5000	-3.4192	7.3155	4.4321	7.6845	-3.4594
10.0000	5.1847	10.0000	-3.9114	9.8128	5.1366	10.1872	-3.9445
15.0000	6.2955	15.0000	-4.6753	14.8187	6.2603	15.1813	-4.6989
20.0000	7.1450	20.0000	-5.2436	19.8335	7.1201	20.1665	-5.2599
25.0000	7.7954	25.0000	-5.6657	24.8537	7.7789	25.1463	-5.6761
30.0000	8.2759	30.0000	-5.9630	29.8777	8.2660	30.1223	-5.9689
35.0000	8.6019	35.0000	-6.1469	34.9042	8.5971	35.0958	-6.1493
40.0000	8.7737	40.0000	-6.2146	39.9325	8.7724	40.0675	-6.2147
45.0000	8.7789	45.0000	-6.1522	44.9618	8.7796	45.0382	-6.1512
50.0000	8.5982	50.0000	-5.9391	49.9912	8.5987	50.0088	-5.9386
55.0000	8.2288	55.0000	-5.5731	55.0194	8.2270	54.9806	-5.5747
60.0000	7.6966	60.0000	-5.0832	60.0452	7.6912	59.9548	-5.0880
65.0000	7.0352	65.0000	-4.5078	65.0679	7.0254	64.9321	-4.5161
70.0000	6.2594	70.0000	-3.8681	70.0872	6.2449	69.9128	-3.8797
75.0000	5.3799	75.0000	-3.1860	75.1032	5.3608	74.8968	-3.2005
80.0000	4.4057	80.0000	-2.4942	80.1243	4.3802	79.8757	-2.5108
85.0000	3.3370	85.0000	-1.8525	85.1213	3.3105	84.8787	-1.8677
90.0000	2.2422	90.0000	-1.2324	90.0850	2.2235	89.9150	-1.2427
95.0000	1.1392	95.0000	-0.6339	95.0434	1.1296	94.9566	-0.6391
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.2515 percent chord
 slope of mean line at LE = 0.0951

NACA Section 65A415

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.4544	0.5000	-0.7925	0.2949	1.1910	0.7051	-0.9661
0.7500	1.7253	0.7500	-1.0001	0.5182	1.4753	0.9818	-1.1591
1.2500	2.1723	1.2500	-1.3205	0.9805	1.9457	1.5195	-1.4632
2.5000	2.9684	2.5000	-1.8529	2.1832	2.7929	2.8168	-1.9491
5.0000	4.0846	5.0000	-2.4347	4.6502	3.9422	5.3498	-2.4998
7.5000	5.0356	7.5000	-2.8967	7.1322	4.9056	7.8678	-2.9602
10.0000	5.8320	10.0000	-3.2858	9.6265	5.7211	10.3735	-3.3370
15.0000	7.1138	15.0000	-3.8737	14.6380	7.0320	15.3620	-3.9093
20.0000	8.1018	20.0000	-4.2993	19.6673	8.0435	20.3327	-4.3231
25.0000	8.8646	25.0000	-4.6052	24.7076	8.8256	25.2924	-4.6199
30.0000	9.4352	30.0000	-4.8096	29.7554	9.4114	30.2446	-4.8171
35.0000	9.8312	35.0000	-4.9211	34.8084	9.8192	35.1916	-4.9235
40.0000	10.0541	40.0000	-4.9359	39.8649	10.0504	40.1351	-4.9349
45.0000	10.0925	45.0000	-4.8392	44.9236	10.0934	45.0764	-4.8367
50.0000	9.9278	50.0000	-4.6096	49.9823	9.9287	50.0177	-4.6085
55.0000	9.5567	55.0000	-4.2452	55.0387	9.5531	54.9613	-4.2485
60.0000	9.0037	60.0000	-3.7768	60.0904	8.9923	59.9096	-3.7860
65.0000	8.3000	65.0000	-3.2451	65.1358	8.2789	64.8642	-3.2602
70.0000	7.4572	70.0000	-2.6746	70.1743	7.4253	69.8257	-2.6948
75.0000	6.4802	75.0000	-2.0925	75.2063	6.4372	74.7937	-2.1166
80.0000	5.3680	80.0000	-1.5452	80.2481	5.3081	79.7519	-1.5694
85.0000	4.0876	85.0000	-1.1186	85.2419	4.0235	84.7581	-1.1379
90.0000	2.7533	90.0000	-0.7338	90.1694	2.7077	89.8306	-0.7461
95.0000	1.3954	95.0000	-0.3847	95.0864	1.3716	94.9136	-0.3908
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.2515 percent chord
 slope of mean line at LE = 0.1902

NACA Section 65A615

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.6461	0.5000	-0.6700	0.1989	1.2244	0.8011	-0.8871
0.7500	1.9345	0.7500	-0.8539	0.4086	1.5303	1.0914	-1.0560
1.2500	2.4072	1.2500	-1.1378	0.8518	2.0409	1.6482	-1.3171
2.5000	3.2689	2.5000	-1.5985	2.0299	2.9783	2.9701	-1.7126
5.0000	4.5207	5.0000	-2.0472	4.4791	4.2796	5.5209	-2.1160
7.5000	5.5897	7.5000	-2.3829	6.9513	5.3708	8.0487	-2.4528
10.0000	6.4862	10.0000	-2.6679	9.4421	6.2981	10.5579	-2.7219
15.0000	7.9374	15.0000	-3.0779	14.4584	7.7979	15.5416	-3.1137
20.0000	9.0625	20.0000	-3.3592	19.5018	8.9625	20.4982	-3.3818
25.0000	9.9367	25.0000	-3.5479	24.5619	9.8691	25.4381	-3.5605
30.0000	10.5964	30.0000	-3.6581	29.6334	10.5547	30.3666	-3.6633
35.0000	11.0615	35.0000	-3.6965	34.7127	11.0400	35.2873	-3.6965
40.0000	11.3350	40.0000	-3.6579	39.7975	11.3277	40.2025	-3.6545
45.0000	11.4064	45.0000	-3.5263	44.8854	11.4072	45.1146	-3.5220
50.0000	11.2573	50.0000	-3.2801	49.9735	11.2587	50.0265	-3.2784
55.0000	10.8847	55.0000	-2.9174	55.0581	10.8791	54.9419	-2.9222
60.0000	10.3111	60.0000	-2.4708	60.1356	10.2931	59.8644	-2.4836
65.0000	9.5655	65.0000	-1.9831	65.2037	9.5316	64.7963	-2.0035
70.0000	8.6563	70.0000	-1.4826	70.2612	8.6042	69.7388	-1.5084
75.0000	7.5826	75.0000	-1.0014	75.3090	7.5112	74.6910	-1.0302
80.0000	6.3343	80.0000	-0.6011	80.3709	6.2317	79.6291	-0.6237
85.0000	4.8437	85.0000	-0.3902	85.3608	4.7309	84.6392	-0.4025
90.0000	3.2685	90.0000	-0.2393	90.2526	3.1880	89.7474	-0.2454
95.0000	1.6538	95.0000	-0.1377	95.1289	1.6116	94.8711	-0.1403
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord

L.E. Radius= 1.2515 percent chord

slope of mean line at LE = 0.2852

NACA Section 65A418

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.6981	0.5000	-0.8889	0.2652	1.3473	0.7348	-1.1224
0.7500	2.0154	0.7500	-1.1361	0.4830	1.6750	1.0170	-1.3588
1.2500	2.5356	1.2500	-1.5333	0.9362	2.2258	1.5638	-1.7433
2.5000	3.4559	2.5000	-2.2231	2.1267	3.2159	2.8733	-2.3721
5.0000	4.7414	5.0000	-2.9999	4.5847	4.5456	5.4153	-3.1031
7.5000	5.8406	7.5000	-3.6152	7.0616	5.6614	7.9385	-3.7161
10.0000	6.7570	10.0000	-4.1380	9.5536	6.6043	10.4464	-4.2202
15.0000	8.2265	15.0000	-4.9336	14.5663	8.1142	15.4337	-4.9914
20.0000	9.3550	20.0000	-5.5155	19.6010	9.2752	20.3990	-5.5547
25.0000	10.2232	25.0000	-5.9397	24.6492	10.1699	25.3508	-5.9642
30.0000	10.8691	30.0000	-6.2294	29.7064	10.8368	30.2936	-6.2426
35.0000	11.3130	35.0000	-6.3965	34.7700	11.2969	35.2300	-6.4012
40.0000	11.5551	40.0000	-6.4361	39.8379	11.5506	40.1621	-6.4350
45.0000	11.5795	45.0000	-6.3279	44.9083	11.5812	45.0917	-6.3244
50.0000	11.3641	50.0000	-6.0469	49.9788	11.3655	50.0212	-6.0453
55.0000	10.9077	55.0000	-5.5929	55.0463	10.9024	54.9537	-5.5978
60.0000	10.2437	60.0000	-5.0075	60.1079	10.2274	59.8921	-5.0211
65.0000	9.4121	65.0000	-4.3412	65.1618	9.3826	64.8382	-4.3638
70.0000	8.4255	70.0000	-3.6204	70.2072	8.3814	69.7928	-3.6509
75.0000	7.2937	75.0000	-2.8777	75.2448	7.2349	74.7552	-2.9143
80.0000	6.0225	80.0000	-2.1654	80.2938	5.9423	79.7062	-2.2036
85.0000	4.5821	85.0000	-1.5791	85.2862	4.4967	84.7138	-1.6111
90.0000	3.0810	90.0000	-1.0386	90.2001	3.0207	89.7999	-1.0590
95.0000	1.5673	95.0000	-0.5448	95.1025	1.5359	94.8975	-0.5550
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.5906 percent chord
 slope of mean line at LE = 0.1902

NACA Section 65A421

Upper surface		Lower surface		Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate	Station	Ordinate	Station	Ordinate
0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.5000	1.9130	0.5000	-0.9607	0.2410	1.4742	0.7590	-1.2493
0.7500	2.2776	0.7500	-1.2402	0.4538	1.8409	1.0462	-1.5247
1.2500	2.8733	1.2500	-1.7049	0.8974	2.4710	1.6026	-1.9884
2.5000	3.9229	2.5000	-2.5538	2.0741	3.6096	2.9259	-2.7659
5.0000	5.3821	5.0000	-3.5328	4.5218	5.1246	5.4782	-3.6822
7.5000	6.6337	7.5000	-4.3054	6.9927	6.3975	8.0073	-4.4522
10.0000	7.6738	10.0000	-4.9675	9.4820	7.4725	10.5180	-5.0883
15.0000	9.3348	15.0000	-5.9789	14.4953	9.1871	15.5047	-6.0643
20.0000	10.6062	20.0000	-6.7224	19.5350	10.5014	20.4650	-6.7809
25.0000	11.5814	25.0000	-7.2688	24.5908	11.5115	25.4092	-7.3058
30.0000	12.3034	30.0000	-7.6469	29.6574	12.2614	30.3426	-7.6671
35.0000	12.7955	35.0000	-7.8715	34.7316	12.7749	35.2684	-7.8792
40.0000	13.0563	40.0000	-7.9364	39.8109	13.0509	40.1891	-7.9354
45.0000	13.0646	45.0000	-7.8154	44.8931	13.0673	45.1069	-7.8106
50.0000	12.7943	50.0000	-7.4784	49.9754	12.7964	50.0246	-7.4762
55.0000	12.2498	55.0000	-6.9311	55.0538	12.2425	54.9462	-6.9380
60.0000	11.4730	60.0000	-6.2256	60.1252	11.4510	59.8748	-6.2447
65.0000	10.5108	65.0000	-5.4210	65.1875	10.4714	64.8125	-5.4526
70.0000	9.3798	70.0000	-4.5483	70.2395	9.3216	69.7604	-4.5911
75.0000	8.0936	75.0000	-3.6447	75.2825	8.0169	74.7175	-3.6962
80.0000	6.6658	80.0000	-2.7692	80.3386	6.5627	79.6614	-2.8240
85.0000	5.0682	85.0000	-2.0263	85.3295	4.9590	84.6705	-2.0734
90.0000	3.4015	90.0000	-1.3332	90.2299	3.3250	89.7701	-1.3634
95.0000	1.7377	95.0000	-0.7018	95.1184	1.6978	94.8816	-0.7170
100.0000	-0.0000	100.0000	0.0000	100.0000	-0.0000	100.0000	0.0000

Stations and ordinates given in per cent of airfoil chord
 L.E. Radius= 1.8806 percent chord
 slope of mean line at LE = 0.1902