

# Family Correlated Photometric Data

The following photometric information is developed using correlated data. Finelite considers a family to be a group of luminaires where critical performance metrics such as photometric performance, thermal performance, and electrical performance can be accurately projected via a combination of LM79 tests at the luminaire level and well-documented specifications at the component level.

For more information, please download [Finelite's Family Correlated White Paper](#)

Additional links:

- [Solid-State Lighting: Early Lessons Learned on the Way to Market](#)  
(U.S. Department of Energy)
- [Lighting Facts®](#)
- [Design Lights Consortium®](#)

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-H-835-ASY-ITL89988.603.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL89988.603 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]11/16/17  
[ISSUEDATE]02/26/18  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HP-4-I-4ft-H-835-ASYM  
[INPUT\_ELECTRICAL]120.0 VOLTS, 28.3 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 28.9 WATTS  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89988. For further details on Finelite family correlation files, go to  
[more][http://www.finelite.com/download\\_files/series\\_downloads/photometry\\_pdf/FL\\_Family\\_Correlation\\_WhitePaper.pdf](http://www.finelite.com/download_files/series_downloads/photometry_pdf/FL_Family_Correlation_WhitePaper.pdf)  
[ABSOLUTE LUMENS]3450

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3450
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	28.3
Ballast Factor	1.00
CIE Type	Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.32 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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**CANDELA TABULATION**

	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>	<u>85.0</u>
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	52.108	51.331	53.664	52.108	49.775	45.109	46.664	48.220	45.109	32.665
95.0	110.439	110.439	114.327	111.994	109.661	113.550	123.660	121.327	99.550	64.552
97.5	174.213	170.324	181.990	186.657	197.545	211.544	212.322	185.879	145.437	94.884
100.0	269.875	265.986	279.208	286.985	303.317	309.539	292.429	246.543	192.101	125.993
102.5	364.759	361.648	375.647	384.980	407.534	404.423	368.647	307.984	234.877	157.103
105.0	452.643	449.532	467.420	493.863	516.417	503.196	448.754	370.203	273.763	188.990
107.5	557.637	553.749	586.414	627.634	636.967	606.635	531.194	426.200	310.317	219.322
110.0	702.297	698.408	743.517	766.849	759.849	705.408	608.190	472.864	345.315	250.431
112.5	878.065	872.621	902.175	904.508	881.954	802.625	670.409	512.529	378.758	282.319
115.0	1038.279	1032.057	1050.723	1039.834	993.170	881.954	717.851	548.305	409.867	314.984
117.5	1188.382	1180.605	1189.160	1156.495	1080.277	937.951	752.849	577.859	442.532	348.426
120.0	1308.932	1301.932	1296.488	1242.824	1139.385	972.171	777.737	606.635	473.642	381.869
122.5	1396.038	1391.372	1365.706	1298.821	1170.494	991.615	800.291	634.633	507.085	417.645
125.0	1447.369	1442.702	1407.704	1322.931	1182.938	1001.725	818.179	661.077	538.972	452.643
127.5	1465.257	1460.590	1418.592	1324.486	1182.160	1007.947	836.067	686.742	572.414	487.641
130.0	1457.479	1452.813	1408.482	1312.042	1175.161	1012.614	855.511	713.963	604.302	521.862
132.5	1433.369	1430.258	1385.927	1293.377	1166.606	1018.058	874.954	741.961	638.522	557.637

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	1402.260	1399.927	1357.929	1273.156	1158.051	1025.057	895.175	769.960	671.965	593.413
<b>137.5</b>	1370.373	1368.817	1329.153	1252.934	1151.051	1033.613	915.397	800.291	706.185	629.189
<b>140.0</b>	1338.486	1336.930	1301.932	1235.824	1147.162	1042.945	935.618	829.845	741.183	664.965
<b>142.5</b>	1310.487	1308.154	1280.155	1222.603	1146.384	1053.056	957.394	860.177	774.626	700.741
<b>145.0</b>	1288.710	1285.599	1260.712	1212.492	1146.384	1063.167	979.949	889.731	808.069	736.517
<b>147.5</b>	1270.045	1267.711	1246.713	1205.492	1147.162	1075.610	1002.503	918.507	840.734	771.515
<b>150.0</b>	1255.268	1251.379	1235.046	1199.271	1150.273	1088.832	1025.057	945.728	871.843	805.736
<b>152.5</b>	1242.046	1238.157	1224.936	1194.604	1154.162	1102.053	1042.945	969.838	900.620	838.401
<b>155.0</b>	1229.602	1227.269	1215.603	1193.049	1159.606	1113.720	1060.833	990.837	927.840	868.732
<b>157.5</b>	1222.603	1220.269	1210.937	1192.271	1163.495	1122.275	1074.055	1009.503	951.950	897.509
<b>160.0</b>	1217.159	1214.825	1207.826	1191.493	1165.050	1127.719	1084.165	1025.057	973.727	923.952
<b>162.5</b>	1207.048	1207.826	1201.604	1186.049	1162.717	1128.497	1090.387	1036.724	991.615	948.062
<b>165.0</b>	1195.382	1195.382	1189.938	1174.383	1154.162	1124.608	1091.165	1045.279	1006.392	968.283
<b>167.5</b>	1175.938	1176.716	1172.050	1158.828	1140.163	1114.497	1086.499	1049.167	1016.502	983.837
<b>170.0</b>	1151.051	1152.606	1147.940	1137.052	1122.275	1101.276	1077.944	1049.945	1023.502	996.281
<b>172.5</b>	1119.941	1122.275	1119.164	1110.609	1098.942	1082.610	1065.500	1046.834	1025.835	1005.614
<b>175.0</b>	1089.610	1088.054	1085.721	1081.055	1073.277	1062.389	1051.501	1039.057	1025.835	1011.836
<b>177.5</b>	1050.723	1050.723	1049.945	1046.834	1043.723	1037.501	1033.613	1026.613	1019.613	1013.391
<b>180.0</b>	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614

**Vert.  
Angles**

**Horizontal Angles**

	<b>90.0</b>	<b>95.0</b>	<b>112.5</b>	<b>135.0</b>	<b>157.5</b>	<b>180.0</b>
<b>0.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>2.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>5.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>7.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>10.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>12.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>15.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>17.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>20.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>22.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>25.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>27.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>30.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>32.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>35.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>37.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>40.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>42.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>45.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>47.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>50.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>52.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>55.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>57.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>60.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>62.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>65.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>67.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>70.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>72.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>75.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>77.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>80.0</b>	0.000	0.000	0.000	0.000	0.000	0.000

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**CANDELA TABULATION - (Cont.)**

82.5	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000
92.5	17.110	23.332	45.109	70.774	84.773	90.218
95.0	44.331	46.664	71.552	109.661	129.882	136.104
97.5	72.330	70.774	94.884	144.659	174.213	182.768
100.0	101.106	96.439	120.549	173.435	209.989	222.433
102.5	131.438	122.105	146.215	204.545	237.210	249.654
105.0	160.992	150.881	170.324	228.655	267.542	276.097
107.5	192.101	179.657	192.101	251.987	293.985	301.762
110.0	223.211	208.434	213.878	276.097	321.205	328.983
112.5	255.098	237.210	234.877	300.207	347.648	356.981
115.0	286.985	267.542	256.653	321.983	373.314	383.424
117.5	318.872	299.429	279.208	342.204	398.979	409.867
120.0	353.870	332.871	303.317	360.092	421.533	435.533
122.5	389.646	367.092	326.650	377.202	444.088	460.420
125.0	423.867	400.535	349.204	391.979	461.198	482.197
127.5	458.865	433.977	372.536	405.979	475.197	501.640
130.0	493.085	466.642	395.090	419.200	483.752	513.306
132.5	528.083	500.863	417.645	433.200	489.974	517.195
135.0	563.082	535.861	444.088	446.421	494.641	518.751
137.5	598.858	570.859	472.864	460.420	499.307	518.751
140.0	635.411	606.635	503.974	473.642	503.196	518.751
142.5	671.187	640.855	536.639	486.863	507.085	518.751
145.0	706.963	677.409	568.526	500.863	512.529	519.528
147.5	742.739	712.407	601.191	517.973	520.306	523.417
150.0	778.515	748.183	636.189	539.750	528.861	529.639
152.5	811.180	783.181	673.520	570.859	539.750	536.639
155.0	843.067	816.624	713.185	608.968	556.082	549.082
157.5	873.399	848.511	753.627	650.188	584.081	569.304
160.0	901.397	878.843	792.514	692.186	627.634	606.635
162.5	927.063	906.064	830.623	735.739	676.631	656.410
165.0	948.839	930.174	865.621	784.737	725.629	707.741
167.5	967.505	951.172	897.509	831.401	778.515	760.627
170.0	983.837	969.838	927.063	875.732	837.623	823.624
172.5	995.503	985.393	952.728	916.174	889.731	880.398
175.0	1005.614	998.614	976.060	952.728	936.395	930.174
177.5	1010.280	1007.170	995.503	983.837	975.282	972.171
180.0	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	0.00	N.A.	0.00
0-30	0.00	N.A.	0.00
0-40	0.00	N.A.	0.00
0-60	0.00	N.A.	0.00
0-80	0.00	N.A.	0.00
0-90	0.00	N.A.	0.00
10-90	0.00	N.A.	0.00
20-40	0.00	N.A.	0.00
20-50	0.00	N.A.	0.00
40-70	0.00	N.A.	0.00
60-80	0.00	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	449.53	N.A.	13.00
90-120	987.72	N.A.	28.60
90-130	1607.62	N.A.	46.60
90-150	2686.61	N.A.	77.90
90-180	3449.96	N.A.	100.00
110-180	3000.42	N.A.	87.00
0-180	3449.96	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	0.00
10-20	0.00
20-30	0.00
30-40	0.00
40-50	0.00
50-60	0.00
60-70	0.00
70-80	0.00
80-90	0.00
90-100	114.00
100-110	335.53
110-120	538.19
120-130	619.90
130-140	579.32
140-150	499.66
150-160	399.34
160-170	268.47
170-180	95.54

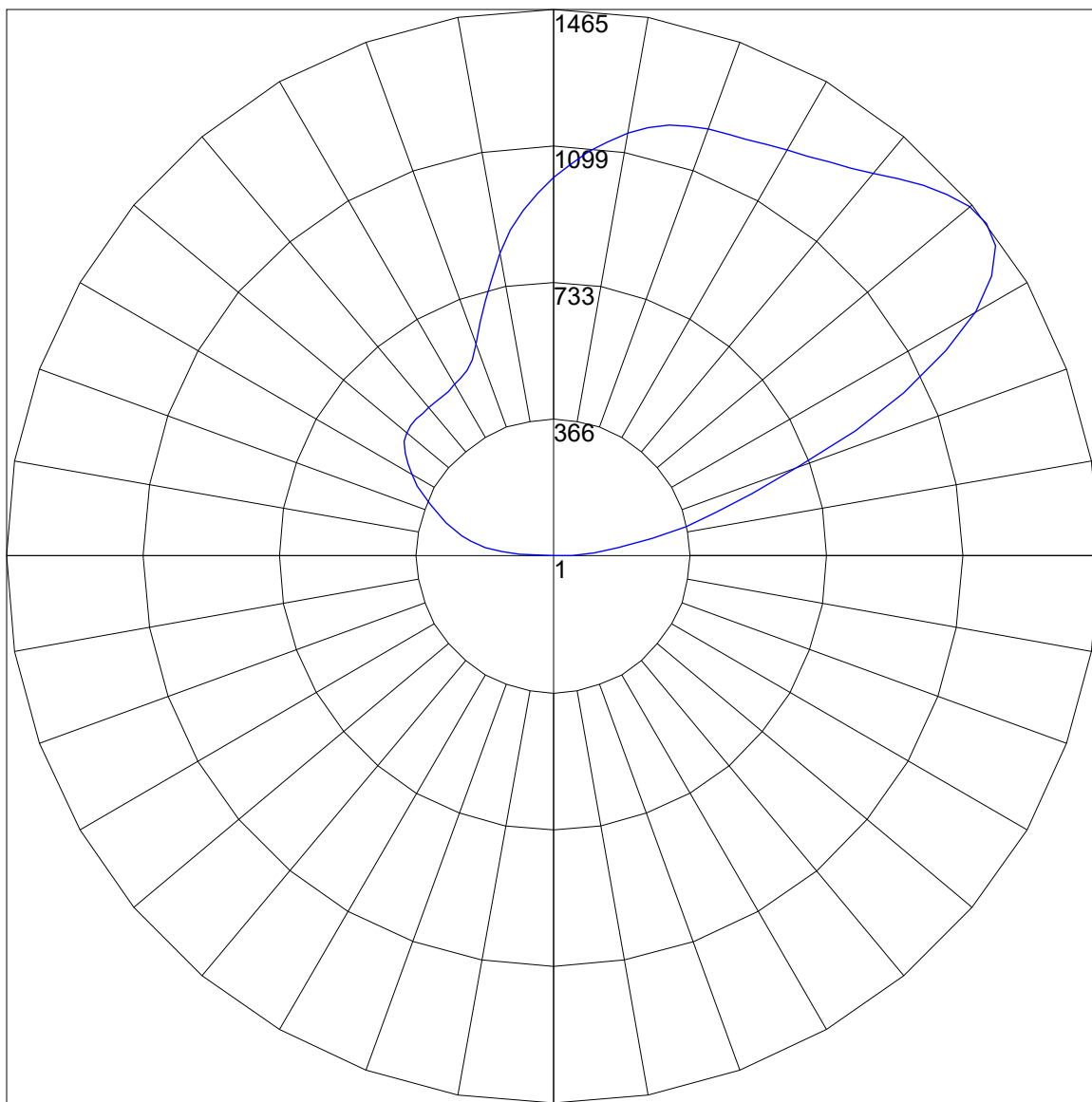
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-H-835-ASY-ITL89988.603.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	28	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

POLAR GRAPH



Maximum Candela = 1465.257 Located At Horizontal Angle = 0, Vertical Angle = 127.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)