

# 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-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.010 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-B-V-835-WSO-DAO

[LUMINAIRE] HP Series

[LAMPCAT] 160 LEDs with 80 CRI

[LAMP] Samsung

[BALLAST] Osram

[BALLASTCAT] OTi50W/120-277, 700mA

[MORE] extrapolated from KPL2008-3.IES

[INPUT\_ELECTRICAL]120.0 VOLTS, 59.4 WATTS

[INPUT\_ELECTRICAL]277.0 VOLTS, 60.9 WATTS

[CONVERT] Photometric web converted from original test data

[OTHER]see [www.finelite.com](http://www.finelite.com) for source files ITL89456 and KPL2008-3. 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]5807

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5808
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	59.4
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.48
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.17 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	24200	25175	18213
55	20539	22857	16246
65	16958	19909	14363
75	14146	16817	12054
85	14117	16755	10025

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES

## CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990
2.5	1470.400	1462.610	1455.450	1453.410	1429.310	1407.190	1376.190	1361.030	1362.280	1361.030
5.0	1525.610	1512.860	1491.110	1469.050	1421.990	1380.380	1334.680	1311.680	1306.860	1311.680
7.5	1572.250	1555.630	1522.270	1480.860	1410.900	1347.440	1293.580	1255.680	1261.270	1255.680
10.0	1610.940	1593.320	1545.590	1487.820	1394.700	1313.920	1253.640	1223.260	1220.910	1223.260
12.5	1648.580	1624.850	1563.880	1489.020	1374.200	1277.170	1214.630	1180.080	1178.660	1180.080
15.0	1669.910	1646.860	1577.480	1484.780	1349.940	1242.400	1174.170	1131.720	1136.210	1131.720
17.5	1678.070	1654.960	1583.860	1474.060	1319.720	1202.400	1134.750	1099.560	1097.940	1099.560
20.0	1670.750	1650.570	1580.090	1458.070	1290.650	1163.350	1095.330	1063.280	1059.250	1063.280
22.5	1651.720	1633.840	1571.730	1435.170	1254.260	1121.260	1056.430	1026.210	1023.700	1026.210
25.0	1618.680	1606.760	1544.540	1409.500	1215.260	1079.480	1014.910	988.990	988.560	988.990
27.5	1583.120	1568.330	1516.200	1377.080	1170.820	1036.510	976.120	952.340	953.010	952.340
30.0	1530.840	1522.060	1475.630	1338.550	1126.280	991.440	937.010	914.280	917.460	914.280
32.5	1473.120	1469.570	1432.860	1295.990	1075.770	946.220	897.380	877.410	881.280	877.410
35.0	1403.690	1408.350	1381.520	1249.040	1026.840	898.900	855.660	840.190	842.380	840.190
37.5	1331.540	1339.590	1324.430	1193.620	975.700	850.960	813.310	801.710	805.160	801.710
40.0	1253.740	1267.550	1264.090	1138.720	926.240	804.060	771.590	762.910	767.510	762.910
42.5	1166.740	1189.860	1194.980	1078.650	869.150	757.010	729.550	725.170	726.940	725.170
45.0	1082.050	1109.910	1125.650	1016.430	814.360	708.170	685.640	683.810	658.350	683.810
47.5	1001.740	1025.580	1058.410	952.180	758.100	660.910	641.300	643.080	651.230	643.080
50.0	910.560	941.410	979.470	882.220	701.320	611.870	598.950	601.830	608.570	601.830
52.5	826.280	859.060	904.490	815.040	646.530	565.280	553.780	558.800	567.790	558.800
55.0	744.930	777.340	829.000	747.960	589.230	517.710	508.820	517.810	523.460	517.810
57.5	662.110	696.670	748.800	681.040	535.900	470.390	463.540	473.530	481.000	473.530
60.0	588.290	621.860	674.760	612.970	485.290	414.060	411.970	427.520	438.130	427.520
62.5	514.250	549.230	600.310	548.450	424.290	379.630	377.940	389.800	393.540	389.800
65.0	453.190	480.320	532.030	485.030	383.820	334.710	334.730	346.340	349.460	346.340
67.5	392.330	417.590	463.850	424.120	335.560	291.580	290.900	301.560	302.450	301.560
70.0	335.660	356.940	399.020	366.510	285.740	248.920	249.240	257.820	263.880	257.820
72.5	279.820	299.110	333.150	308.680	240.830	208.500	208.770	214.380	217.520	214.380
75.0	231.510	246.830	275.220	256.500	197.270	169.110	168.680	163.680	175.000	163.680
77.5	184.660	198.620	220.320	207.300	158.520	131.840	129.900	131.900	131.360	131.900
80.0	144.720	155.020	170.550	160.410	120.370	96.840	93.080	92.070	92.390	92.070
82.5	108.120	114.660	126.110	119.210	87.390	64.190	60.930	52.070	55.780	52.070
85.0	77.800	80.420	92.340	87.900	55.250	35.950	29.900	24.420	20.370	24.420
87.5	46.700	49.080	51.850	45.830	26.060	9.810	5.250	1.880	1.280	1.880
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	9.267	15.959	15.959	15.444	15.444	15.444	15.959	15.959	9.267	15.959
95.0	24.196	42.729	42.729	35.522	35.007	35.522	42.729	42.729	24.196	42.729
97.5	40.670	70.014	85.974	61.777	58.174	61.777	85.974	70.014	40.670	70.014
100.0	57.659	91.122	170.918	99.359	87.518	99.359	170.918	91.122	57.659	91.122
102.5	76.192	111.199	236.299	175.551	139.514	175.551	236.299	111.199	76.192	111.199
105.0	94.211	132.821	273.880	286.236	235.784	286.236	273.880	132.821	94.211	132.821
107.5	112.229	153.929	297.046	386.109	359.854	386.109	297.046	153.929	112.229	153.929
110.0	130.247	173.492	317.639	444.798	449.431	444.798	317.639	173.492	130.247	173.492
112.5	148.266	192.540	341.835	483.409	502.971	483.409	341.835	192.540	148.266	192.540
115.0	166.799	210.558	370.665	511.208	539.523	511.208	370.665	210.558	166.799	210.558
117.5	185.332	228.577	402.068	537.464	567.838	537.464	402.068	228.577	185.332	228.577
120.0	203.866	247.625	427.809	565.264	596.152	565.264	427.809	247.625	203.866	247.625
122.5	220.854	263.584	446.342	604.389	626.011	604.389	446.342	263.584	220.854	263.584
125.0	236.814	279.028	456.638	647.119	668.741	647.119	456.638	279.028	236.814	279.028
127.5	251.743	293.443	462.816	675.948	716.104	675.948	462.816	293.443	251.743	293.443
130.0	264.099	305.798	466.420	687.789	750.081	687.789	466.420	305.798	264.099	305.798
132.5	276.454	317.124	467.449	683.155	760.892	683.155	467.449	317.124	276.454	317.124

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PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES

## CANDELA TABULATION - (Cont.)

135.0	287.265	326.391	466.935	668.741	750.081	668.741	466.935	326.391	287.265	326.391
137.5	297.046	335.143	465.390	649.178	727.429	649.178	465.390	335.143	297.046	335.143
140.0	306.828	342.865	462.816	627.556	698.600	627.556	462.816	342.865	306.828	342.865
142.5	316.095	350.072	459.212	603.360	667.711	603.360	459.212	350.072	316.095	350.072
145.0	325.876	356.765	455.609	580.193	636.308	580.193	455.609	356.765	325.876	356.765
147.5	334.113	361.913	451.490	556.512	604.389	556.512	451.490	361.913	334.113	361.913
150.0	342.350	367.576	446.342	535.404	574.530	535.404	446.342	367.576	342.350	367.576
152.5	350.072	371.694	440.164	515.327	546.730	515.327	440.164	371.694	350.072	371.694
155.0	357.279	374.783	433.986	495.764	520.990	495.764	433.986	374.783	357.279	374.783
157.5	363.972	378.902	428.324	477.745	497.823	477.745	428.324	378.902	363.972	378.902
160.0	369.635	381.476	421.631	460.242	476.201	460.242	421.631	381.476	369.635	381.476
162.5	374.783	383.535	414.938	445.312	456.123	445.312	414.938	383.535	374.783	383.535
165.0	378.902	385.594	408.246	430.898	439.135	430.898	408.246	385.594	378.902	385.594
167.5	382.505	387.139	403.098	418.542	424.205	418.542	403.098	387.139	382.505	387.139
170.0	385.594	388.683	399.494	408.761	412.364	408.761	399.494	388.683	385.594	388.683
172.5	387.139	389.713	395.376	400.524	403.613	400.524	395.376	389.713	387.139	389.713
175.0	389.198	390.228	392.801	395.376	396.405	395.376	392.801	390.228	389.198	390.228
177.5	390.228	390.228	391.257	391.257	391.772	391.257	391.257	390.228	390.228	390.228
180.0	390.742	390.742	390.742	390.742	390.742	390.742	390.742	390.742	390.742	390.742

## Vert. Angles

## Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990	1421.990
2.5	1376.190	1407.190	1429.310	1453.410	1455.450	1462.610	1470.400
5.0	1334.680	1380.380	1421.990	1469.050	1491.110	1512.860	1525.610
7.5	1293.580	1347.440	1410.900	1480.860	1522.270	1555.630	1572.250
10.0	1253.640	1313.920	1394.700	1487.820	1545.590	1593.320	1610.940
12.5	1214.630	1277.170	1374.200	1489.020	1563.880	1624.850	1648.580
15.0	1174.170	1242.400	1349.940	1484.780	1577.480	1646.860	1669.910
17.5	1134.750	1202.400	1319.720	1474.060	1583.860	1654.960	1678.070
20.0	1095.330	1163.350	1290.650	1458.070	1580.090	1650.570	1670.750
22.5	1056.430	1121.260	1254.260	1435.170	1571.730	1633.840	1651.720
25.0	1014.910	1079.480	1215.260	1409.500	1544.540	1606.760	1618.680
27.5	976.120	1036.510	1170.820	1377.080	1516.200	1568.330	1583.120
30.0	937.010	991.440	1126.280	1338.550	1475.630	1522.060	1530.840
32.5	897.380	946.220	1075.770	1295.990	1432.860	1469.570	1473.120
35.0	855.660	898.900	1026.840	1249.040	1381.520	1408.350	1403.690
37.5	813.310	850.960	975.700	1193.620	1324.430	1339.590	1331.540
40.0	771.590	804.060	926.240	1138.720	1264.090	1267.550	1253.740
42.5	729.550	757.010	869.150	1078.650	1194.980	1189.860	1166.740
45.0	685.640	708.170	814.360	1016.430	1125.650	1109.910	1082.050
47.5	641.300	660.910	758.100	952.180	1058.410	1025.580	1001.740
50.0	598.950	611.870	701.320	882.220	979.470	941.410	910.560
52.5	553.780	565.280	646.530	815.040	904.490	859.060	826.280
55.0	508.820	517.710	589.230	747.960	829.000	777.340	744.930
57.5	463.540	470.390	535.900	681.040	748.800	696.670	662.110
60.0	411.970	414.060	485.290	612.970	674.760	621.860	588.290
62.5	377.940	379.630	424.290	548.450	600.310	549.230	514.250
65.0	334.730	334.710	383.820	485.030	532.030	480.320	453.190
67.5	290.900	291.580	335.560	424.120	463.850	417.590	392.330
70.0	249.240	248.920	285.740	366.510	399.020	356.940	335.660
72.5	208.770	208.500	240.830	308.680	333.150	299.110	279.820
75.0	168.680	169.110	197.270	256.500	275.220	246.830	231.510
77.5	129.900	131.840	158.520	207.300	220.320	198.620	184.660
80.0	93.080	96.840	120.370	160.410	170.550	155.020	144.720

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES****CANDELA TABULATION - (Cont.)**

82.5	60.930	64.190	87.390	119.210	126.110	114.660	108.120
85.0	29.900	35.950	55.250	87.900	92.340	80.420	77.800
87.5	5.250	9.810	26.060	45.830	51.850	49.080	46.700
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	15.959	15.444	15.444	15.444	15.959	15.959	9.267
95.0	42.729	35.522	35.007	35.522	42.729	42.729	24.196
97.5	85.974	61.777	58.174	61.777	85.974	70.014	40.670
100.0	170.918	99.359	87.518	99.359	170.918	91.122	57.659
102.5	236.299	175.551	139.514	175.551	236.299	111.199	76.192
105.0	273.880	286.236	235.784	286.236	273.880	132.821	94.211
107.5	297.046	386.109	359.854	386.109	297.046	153.929	112.229
110.0	317.639	444.798	449.431	444.798	317.639	173.492	130.247
112.5	341.835	483.409	502.971	483.409	341.835	192.540	148.266
115.0	370.665	511.208	539.523	511.208	370.665	210.558	166.799
117.5	402.068	537.464	567.838	537.464	402.068	228.577	185.332
120.0	427.809	565.264	596.152	565.264	427.809	247.625	203.866
122.5	446.342	604.389	626.011	604.389	446.342	263.584	220.854
125.0	456.638	647.119	668.741	647.119	456.638	279.028	236.814
127.5	462.816	675.948	716.104	675.948	462.816	293.443	251.743
130.0	466.420	687.789	750.081	687.789	466.420	305.798	264.099
132.5	467.449	683.155	760.892	683.155	467.449	317.124	276.454
135.0	466.935	668.741	750.081	668.741	466.935	326.391	287.265
137.5	465.390	649.178	727.429	649.178	465.390	335.143	297.046
140.0	462.816	627.556	698.600	627.556	462.816	342.865	306.828
142.5	459.212	603.360	667.711	603.360	459.212	350.072	316.095
145.0	455.609	580.193	636.308	580.193	455.609	356.765	325.876
147.5	451.490	556.512	604.389	556.512	451.490	361.913	334.113
150.0	446.342	535.404	574.530	535.404	446.342	367.576	342.350
152.5	440.164	515.327	546.730	515.327	440.164	371.694	350.072
155.0	433.986	495.764	520.990	495.764	433.986	374.783	357.279
157.5	428.324	477.745	497.823	477.745	428.324	378.902	363.972
160.0	421.631	460.242	476.201	460.242	421.631	381.476	369.635
162.5	414.938	445.312	456.123	445.312	414.938	383.535	374.783
165.0	408.246	430.898	439.135	430.898	408.246	385.594	378.902
167.5	403.098	418.542	424.205	418.542	403.098	387.139	382.505
170.0	399.494	408.761	412.364	408.761	399.494	388.683	385.594
172.5	395.376	400.524	403.613	400.524	395.376	389.713	387.139
175.0	392.801	395.376	396.405	395.376	392.801	390.228	389.198
177.5	391.257	391.257	391.772	391.257	391.257	390.228	390.228
180.0	390.742	390.742	390.742	390.742	390.742	390.742	390.742

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	523.14	N.A.	9.00
0-30	1107.93	N.A.	19.10
0-40	1793.79	N.A.	30.90
0-60	3043.17	N.A.	52.40
0-80	3676.09	N.A.	63.30
0-90	3739.99	N.A.	64.40
10-90	3605.19	N.A.	62.10
20-40	1270.65	N.A.	21.90
20-50	1947.83	N.A.	33.50
40-70	1657.72	N.A.	28.50
60-80	632.92	N.A.	10.90
70-80	224.58	N.A.	3.90
80-90	63.90	N.A.	1.10
90-110	270.68	N.A.	4.70
90-120	627.81	N.A.	10.80
90-130	1036.04	N.A.	17.80
90-150	1712.03	N.A.	29.50
90-180	2068.41	N.A.	35.60
110-180	1797.73	N.A.	31.00
0-180	5808.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	134.80
10-20	388.33
20-30	584.80
30-40	685.86
40-50	677.18
50-60	572.20
60-70	408.34
70-80	224.58
80-90	63.90
90-100	47.21
100-110	223.47
110-120	357.13
120-130	408.23
130-140	381.55
140-150	294.44
150-160	202.40
160-170	116.31
170-180	37.68

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PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-V-8TW-WSO-DAO-ITL89456-KPL2008-3.910.IES

## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

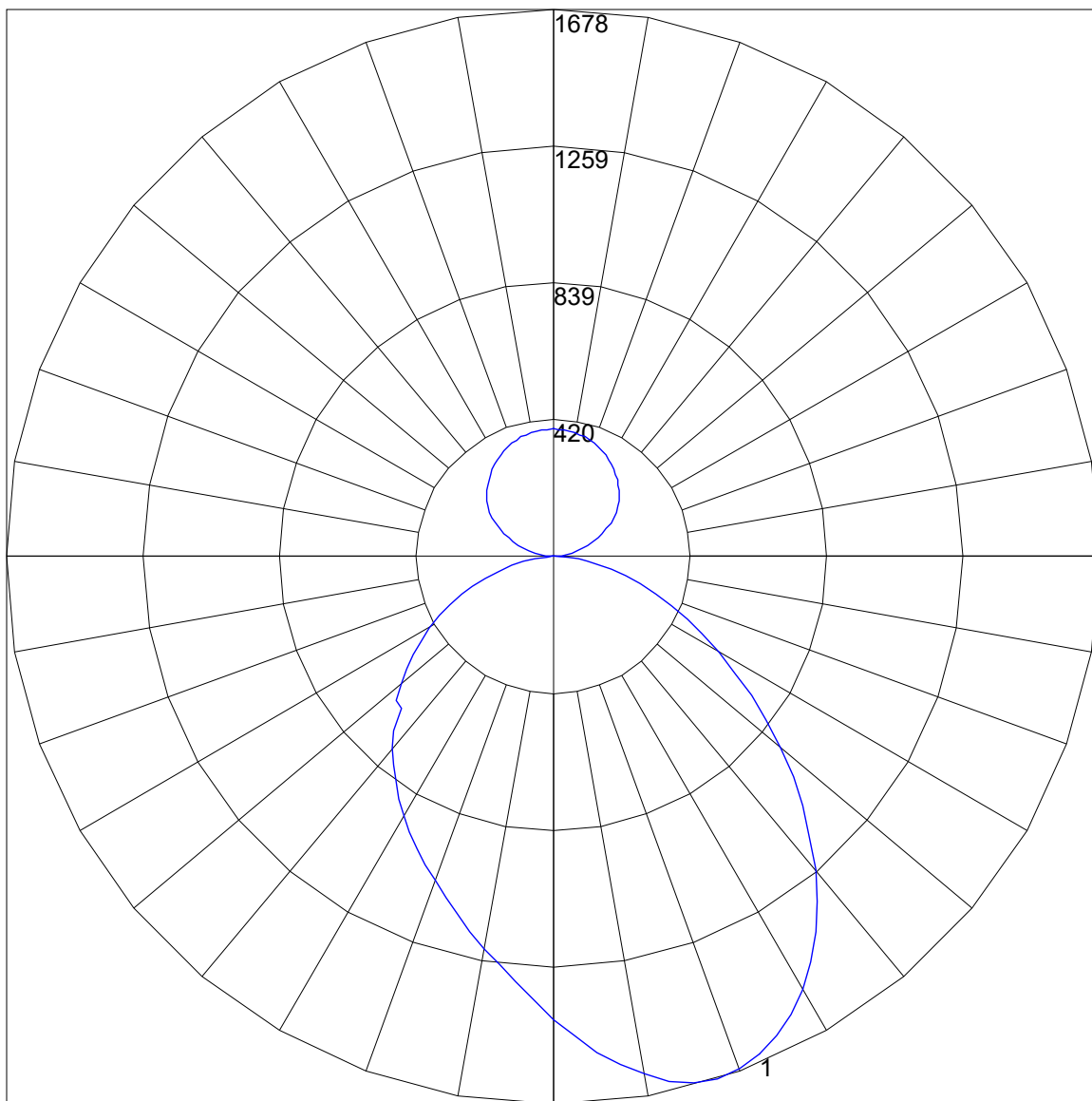
Effective Floor Cavity Reflectance 0.20

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	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	64
1	101	97	93	89	95	91	88	84	80	78	75	71	69	67	61	60	59	54
2	92	85	78	73	86	80	74	70	71	66	63	62	59	56	54	52	50	46
3	84	74	67	61	79	70	64	58	62	57	53	55	51	47	48	45	42	39
4	77	66	58	52	72	62	55	50	55	50	45	49	44	41	43	40	37	33
5	71	59	51	45	66	56	48	43	50	44	39	44	39	35	39	35	32	29
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	35	31	28	26
7	61	48	40	34	57	45	38	33	41	35	30	36	31	28	32	28	25	23
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	30	26	22	20
9	52	40	32	27	49	38	31	26	34	28	24	31	26	22	27	23	20	18
10	49	37	29	24	46	35	28	24	32	26	22	28	24	20	25	21	18	17

IES INDOOR REPORT

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POLAR GRAPH



Maximum Candela = 1678.07 Located At Horizontal Angle = 0, Vertical Angle = 17.5

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)