

# 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-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-V-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, 72.0 WATTS

[INPUT\_ELECTRICAL]277.0 VOLTS, 72.0 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)

[ABSOLUTELUMENS]7758

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7758
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	72
Ballast Factor	1.00
CIE Type	General Diffuse
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)	0.17 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-V-V-835-WSO-DAO-ITL89456-KPL2008-3.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	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1470.40	1462.61	1455.45	1453.41	1429.31	1407.19	1376.19	1361.03	1362.28	1361.03
5.0	1525.61	1512.86	1491.11	1469.05	1421.99	1380.38	1334.68	1311.68	1306.86	1311.68
7.5	1572.25	1555.63	1522.27	1480.86	1410.90	1347.44	1293.58	1255.68	1261.27	1255.68
10.0	1610.94	1593.32	1545.59	1487.82	1394.70	1313.92	1253.64	1223.26	1220.91	1223.26
12.5	1648.58	1624.85	1563.88	1489.02	1374.20	1277.17	1214.63	1180.08	1178.66	1180.08
15.0	1669.91	1646.86	1577.48	1484.78	1349.94	1242.40	1174.17	1131.72	1136.21	1131.72
17.5	1678.07	1654.96	1583.86	1474.06	1319.72	1202.40	1134.75	1099.56	1097.94	1099.56
20.0	1670.75	1650.57	1580.09	1458.07	1290.65	1163.35	1095.33	1063.28	1059.25	1063.28
22.5	1651.72	1633.84	1571.73	1435.17	1254.26	1121.26	1056.43	1026.21	1023.70	1026.21
25.0	1618.68	1606.76	1544.54	1409.50	1215.26	1079.48	1014.91	988.99	988.56	988.99
27.5	1583.12	1568.33	1516.20	1377.08	1170.82	1036.51	976.12	952.34	953.01	952.34
30.0	1530.84	1522.06	1475.63	1338.55	1126.28	991.44	937.01	914.28	917.46	914.28
32.5	1473.12	1469.57	1432.86	1295.99	1075.77	946.22	897.38	877.41	881.28	877.41
35.0	1403.69	1408.35	1381.52	1249.04	1026.84	898.90	855.66	840.19	842.38	840.19
37.5	1331.54	1339.59	1324.43	1193.62	975.70	850.96	813.31	801.71	805.16	801.71
40.0	1253.74	1267.55	1264.09	1138.72	926.24	804.06	771.59	762.91	767.51	762.91
42.5	1166.74	1189.86	1194.98	1078.65	869.15	757.01	729.55	725.17	726.94	725.17
45.0	1082.05	1109.91	1125.65	1016.43	814.36	708.17	685.64	683.81	658.35	683.81
47.5	1001.74	1025.58	1058.41	952.18	758.10	660.91	641.30	643.08	651.23	643.08
50.0	910.56	941.41	979.47	882.22	701.32	611.87	598.95	601.83	608.57	601.83
52.5	826.28	859.06	904.49	815.04	646.53	565.28	553.78	558.80	567.79	558.80
55.0	744.93	777.34	829.00	747.96	589.23	517.71	508.82	517.81	523.46	517.81
57.5	662.11	696.67	748.80	681.04	535.90	470.39	463.54	473.53	481.00	473.53
60.0	588.29	621.86	674.76	612.97	485.29	414.06	411.97	427.52	438.13	427.52
62.5	514.25	549.23	600.31	548.45	424.29	379.63	377.94	389.80	393.54	389.80
65.0	453.19	480.32	532.03	485.03	383.82	334.71	334.73	346.34	349.46	346.34
67.5	392.33	417.59	463.85	424.12	335.56	291.58	290.90	301.56	302.45	301.56
70.0	335.66	356.94	399.02	366.51	285.74	248.92	249.24	257.82	263.88	257.82
72.5	279.82	299.11	333.15	308.68	240.83	208.50	208.77	214.38	217.52	214.38
75.0	231.51	246.83	275.22	256.50	197.27	169.11	168.68	163.68	175.00	163.68
77.5	184.66	198.62	220.32	207.30	158.52	131.84	129.90	131.90	131.36	131.90
80.0	144.72	155.02	170.55	160.41	120.37	96.84	93.08	92.07	92.39	92.07
82.5	108.12	114.66	126.11	119.21	87.39	64.19	60.93	52.07	55.78	52.07
85.0	77.80	80.42	92.34	87.90	55.25	35.95	29.90	24.42	20.37	24.42
87.5	46.70	49.08	51.85	45.83	26.06	9.81	5.25	1.88	1.28	1.88
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	18.00	31.00	31.00	30.00	30.00	30.00	31.00	31.00	18.00	31.00
95.0	47.00	83.00	83.00	69.00	68.00	69.00	83.00	83.00	47.00	83.00
97.5	79.00	136.00	167.00	120.00	113.00	120.00	167.00	136.00	79.00	136.00
100.0	112.00	177.00	332.00	193.00	170.00	193.00	332.00	177.00	112.00	177.00
102.5	148.00	216.00	459.00	341.00	271.00	341.00	459.00	216.00	148.00	216.00
105.0	183.00	258.00	532.00	556.00	458.00	556.00	532.00	258.00	183.00	258.00
107.5	218.00	299.00	577.00	750.00	699.00	750.00	577.00	299.00	218.00	299.00
110.0	253.00	337.00	617.00	864.00	873.00	864.00	617.00	337.00	253.00	337.00
112.5	288.00	374.00	664.00	939.00	977.00	939.00	664.00	374.00	288.00	374.00
115.0	324.00	409.00	720.00	993.00	1048.00	993.00	720.00	409.00	324.00	409.00
117.5	360.00	444.00	781.00	1044.00	1103.00	1044.00	781.00	444.00	360.00	444.00
120.0	396.00	481.00	831.00	1098.00	1158.00	1098.00	831.00	481.00	396.00	481.00
122.5	429.00	512.00	867.00	1174.00	1216.00	1174.00	867.00	512.00	429.00	512.00
125.0	460.00	542.00	887.00	1257.00	1299.00	1257.00	887.00	542.00	460.00	542.00
127.5	489.00	570.00	899.00	1313.00	1391.00	1313.00	899.00	570.00	489.00	570.00
130.0	513.00	594.00	906.00	1336.00	1457.00	1336.00	906.00	594.00	513.00	594.00
132.5	537.00	616.00	908.00	1327.00	1478.00	1327.00	908.00	616.00	537.00	616.00

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES

## CANDELA TABULATION - (Cont.)

135.0	558.00	634.00	907.00	1299.00	1457.00	1299.00	907.00	634.00	558.00	634.00
137.5	577.00	651.00	904.00	1261.00	1413.00	1261.00	904.00	651.00	577.00	651.00
140.0	596.00	666.00	899.00	1219.00	1357.00	1219.00	899.00	666.00	596.00	666.00
142.5	614.00	680.00	892.00	1172.00	1297.00	1172.00	892.00	680.00	614.00	680.00
145.0	633.00	693.00	885.00	1127.00	1236.00	1127.00	885.00	693.00	633.00	693.00
147.5	649.00	703.00	877.00	1081.00	1174.00	1081.00	877.00	703.00	649.00	703.00
150.0	665.00	714.00	867.00	1040.00	1116.00	1040.00	867.00	714.00	665.00	714.00
152.5	680.00	722.00	855.00	1001.00	1062.00	1001.00	855.00	722.00	680.00	722.00
155.0	694.00	728.00	843.00	963.00	1012.00	963.00	843.00	728.00	694.00	728.00
157.5	707.00	736.00	832.00	928.00	967.00	928.00	832.00	736.00	707.00	736.00
160.0	718.00	741.00	819.00	894.00	925.00	894.00	819.00	741.00	718.00	741.00
162.5	728.00	745.00	806.00	865.00	886.00	865.00	806.00	745.00	728.00	745.00
165.0	736.00	749.00	793.00	837.00	853.00	837.00	793.00	749.00	736.00	749.00
167.5	743.00	752.00	783.00	813.00	824.00	813.00	783.00	752.00	743.00	752.00
170.0	749.00	755.00	776.00	794.00	801.00	794.00	776.00	755.00	749.00	755.00
172.5	752.00	757.00	768.00	778.00	784.00	778.00	768.00	757.00	752.00	757.00
175.0	756.00	758.00	763.00	768.00	770.00	768.00	763.00	758.00	756.00	758.00
177.5	758.00	758.00	760.00	760.00	761.00	760.00	760.00	758.00	758.00	758.00
180.0	759.00	759.00	759.00	759.00	759.00	759.00	759.00	759.00	759.00	759.00

## 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	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1376.19	1407.19	1429.31	1453.41	1455.45	1462.61	1470.40
5.0	1334.68	1380.38	1421.99	1469.05	1491.11	1512.86	1525.61
7.5	1293.58	1347.44	1410.90	1480.86	1522.27	1555.63	1572.25
10.0	1253.64	1313.92	1394.70	1487.82	1545.59	1593.32	1610.94
12.5	1214.63	1277.17	1374.20	1489.02	1563.88	1624.85	1648.58
15.0	1174.17	1242.40	1349.94	1484.78	1577.48	1646.86	1669.91
17.5	1134.75	1202.40	1319.72	1474.06	1583.86	1654.96	1678.07
20.0	1095.33	1163.35	1290.65	1458.07	1580.09	1650.57	1670.75
22.5	1056.43	1121.26	1254.26	1435.17	1571.73	1633.84	1651.72
25.0	1014.91	1079.48	1215.26	1409.50	1544.54	1606.76	1618.68
27.5	976.12	1036.51	1170.82	1377.08	1516.20	1568.33	1583.12
30.0	937.01	991.44	1126.28	1338.55	1475.63	1522.06	1530.84
32.5	897.38	946.22	1075.77	1295.99	1432.86	1469.57	1473.12
35.0	855.66	898.90	1026.84	1249.04	1381.52	1408.35	1403.69
37.5	813.31	850.96	975.70	1193.62	1324.43	1339.59	1331.54
40.0	771.59	804.06	926.24	1138.72	1264.09	1267.55	1253.74
42.5	729.55	757.01	869.15	1078.65	1194.98	1189.86	1166.74
45.0	685.64	708.17	814.36	1016.43	1125.65	1109.91	1082.05
47.5	641.30	660.91	758.10	952.18	1058.41	1025.58	1001.74
50.0	598.95	611.87	701.32	882.22	979.47	941.41	910.56
52.5	553.78	565.28	646.53	815.04	904.49	859.06	826.28
55.0	508.82	517.71	589.23	747.96	829.00	777.34	744.93
57.5	463.54	470.39	535.90	681.04	748.80	696.67	662.11
60.0	411.97	414.06	485.29	612.97	674.76	621.86	588.29
62.5	377.94	379.63	424.29	548.45	600.31	549.23	514.25
65.0	334.73	334.71	383.82	485.03	532.03	480.32	453.19
67.5	290.90	291.58	335.56	424.12	463.85	417.59	392.33
70.0	249.24	248.92	285.74	366.51	399.02	356.94	335.66
72.5	208.77	208.50	240.83	308.68	333.15	299.11	279.82
75.0	168.68	169.11	197.27	256.50	275.22	246.83	231.51
77.5	129.90	131.84	158.52	207.30	220.32	198.62	184.66
80.0	93.08	96.84	120.37	160.41	170.55	155.02	144.72

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES****CANDELA TABULATION - (Cont.)**

82.5	60.93	64.19	87.39	119.21	126.11	114.66	108.12
85.0	29.90	35.95	55.25	87.90	92.34	80.42	77.80
87.5	5.25	9.81	26.06	45.83	51.85	49.08	46.70
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	31.00	30.00	30.00	30.00	31.00	31.00	18.00
95.0	83.00	69.00	68.00	69.00	83.00	83.00	47.00
97.5	167.00	120.00	113.00	120.00	167.00	136.00	79.00
100.0	332.00	193.00	170.00	193.00	332.00	177.00	112.00
102.5	459.00	341.00	271.00	341.00	459.00	216.00	148.00
105.0	532.00	556.00	458.00	556.00	532.00	258.00	183.00
107.5	577.00	750.00	699.00	750.00	577.00	299.00	218.00
110.0	617.00	864.00	873.00	864.00	617.00	337.00	253.00
112.5	664.00	939.00	977.00	939.00	664.00	374.00	288.00
115.0	720.00	993.00	1048.00	993.00	720.00	409.00	324.00
117.5	781.00	1044.00	1103.00	1044.00	781.00	444.00	360.00
120.0	831.00	1098.00	1158.00	1098.00	831.00	481.00	396.00
122.5	867.00	1174.00	1216.00	1174.00	867.00	512.00	429.00
125.0	887.00	1257.00	1299.00	1257.00	887.00	542.00	460.00
127.5	899.00	1313.00	1391.00	1313.00	899.00	570.00	489.00
130.0	906.00	1336.00	1457.00	1336.00	906.00	594.00	513.00
132.5	908.00	1327.00	1478.00	1327.00	908.00	616.00	537.00
135.0	907.00	1299.00	1457.00	1299.00	907.00	634.00	558.00
137.5	904.00	1261.00	1413.00	1261.00	904.00	651.00	577.00
140.0	899.00	1219.00	1357.00	1219.00	899.00	666.00	596.00
142.5	892.00	1172.00	1297.00	1172.00	892.00	680.00	614.00
145.0	885.00	1127.00	1236.00	1127.00	885.00	693.00	633.00
147.5	877.00	1081.00	1174.00	1081.00	877.00	703.00	649.00
150.0	867.00	1040.00	1116.00	1040.00	867.00	714.00	665.00
152.5	855.00	1001.00	1062.00	1001.00	855.00	722.00	680.00
155.0	843.00	963.00	1012.00	963.00	843.00	728.00	694.00
157.5	832.00	928.00	967.00	928.00	832.00	736.00	707.00
160.0	819.00	894.00	925.00	894.00	819.00	741.00	718.00
162.5	806.00	865.00	886.00	865.00	806.00	745.00	728.00
165.0	793.00	837.00	853.00	837.00	793.00	749.00	736.00
167.5	783.00	813.00	824.00	813.00	783.00	752.00	743.00
170.0	776.00	794.00	801.00	794.00	776.00	755.00	749.00
172.5	768.00	778.00	784.00	778.00	768.00	757.00	752.00
175.0	763.00	768.00	770.00	768.00	763.00	758.00	756.00
177.5	760.00	760.00	761.00	760.00	760.00	758.00	758.00
180.0	759.00	759.00	759.00	759.00	759.00	759.00	759.00

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	523.14	N.A.	6.70
0-30	1107.93	N.A.	14.30
0-40	1793.79	N.A.	23.10
0-60	3043.17	N.A.	39.20
0-80	3676.09	N.A.	47.40
0-90	3739.99	N.A.	48.20
10-90	3605.19	N.A.	46.50
20-40	1270.65	N.A.	16.40
20-50	1947.83	N.A.	25.10
40-70	1657.72	N.A.	21.40
60-80	632.92	N.A.	8.20
70-80	224.58	N.A.	2.90
80-90	63.90	N.A.	0.80
90-110	525.79	N.A.	6.80
90-120	1219.49	N.A.	15.70
90-130	2012.46	N.A.	25.90
90-150	3325.54	N.A.	42.90
90-180	4017.8	N.A.	51.80
110-180	3492.02	N.A.	45.00
0-180	7757.79	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	91.71
100-110	434.08
110-120	693.70
120-130	792.97
130-140	741.14
140-150	571.94
150-160	393.14
160-170	225.92
170-180	73.20

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES

## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

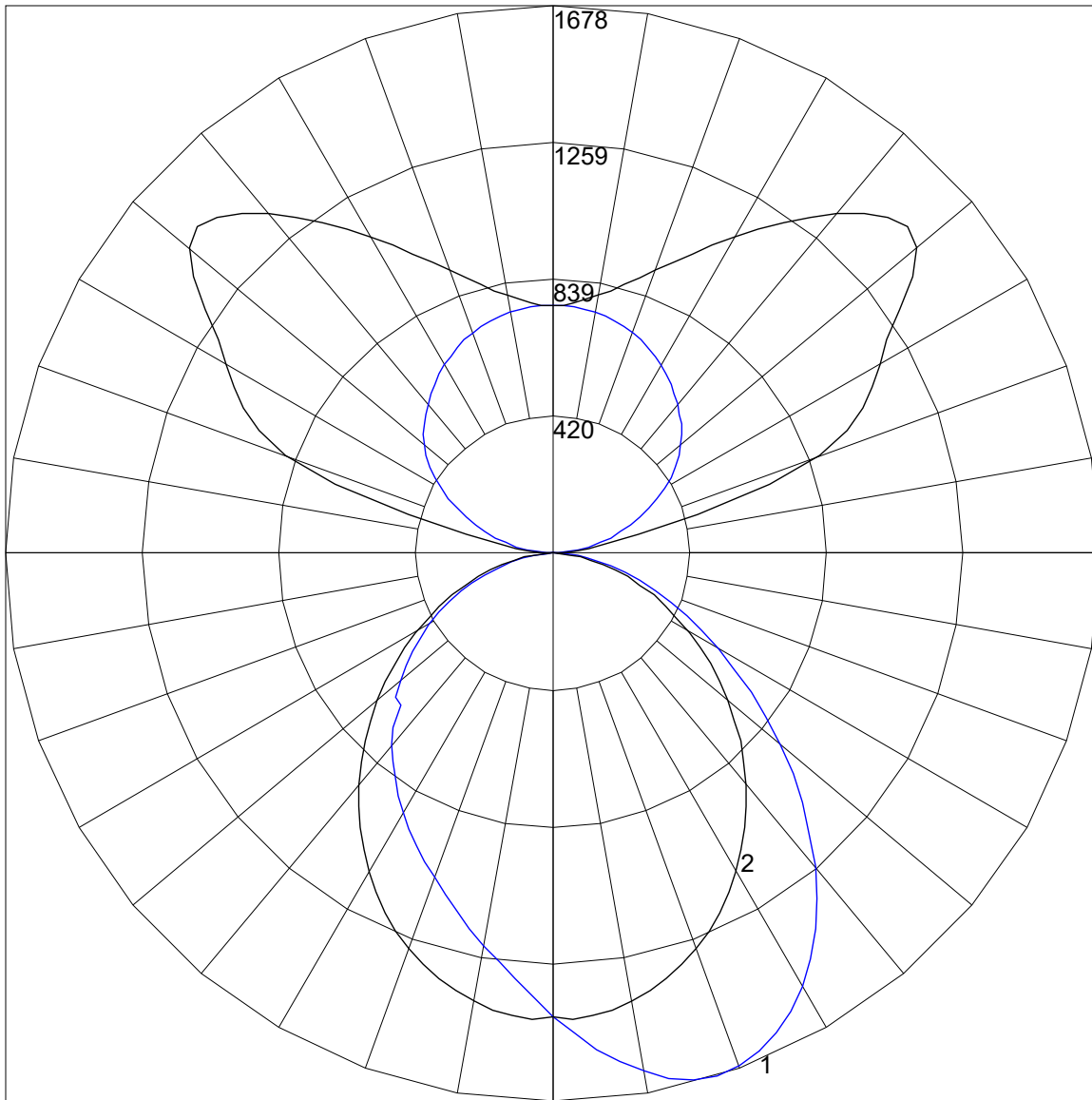
Effective Floor Cavity Reflectance 0.20

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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	97	93	89	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41
2	89	81	75	70	81	75	70	65	63	60	56	53	50	47	43	41	39	34
3	81	72	64	59	74	66	60	55	56	51	47	47	43	40	38	35	33	29
4	74	63	56	50	68	59	52	46	50	45	40	41	38	34	34	31	29	25
5	68	57	48	43	62	52	45	40	45	39	35	37	33	30	30	27	25	22
6	63	51	43	37	58	47	40	35	40	35	30	34	29	26	28	24	22	19
7	58	46	38	32	53	43	35	30	36	31	27	31	26	23	25	22	20	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	21	18	16	14
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	14	12

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-V-V-835-WSO-DAO-ITL89456-KPL2008-3.IES

## 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.)

# 2 - Vertical Plane Through Horizontal Angles (90 - 270)