

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-H-835-WSO-DAO-ITL89456-KPL2008-3.11.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.011 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-H-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, 45.6 WATTS

[INPUT_ELECTRICAL]277.0 VOLTS, 47.2 WATTS

[CONVERT] Photometric web converted from original test data

[OTHER]see 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

[ABSOLUTELUMENS]4978

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4978
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	45.6
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	18830	19588	14171
55	15981	17784	12641
65	13195	15490	11175
75	11007	13085	9379
85	10984	13037	7800

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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	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418
2.5	1144.084	1138.023	1132.452	1130.865	1112.113	1094.902	1070.782	1058.986	1059.959	1058.986
5.0	1187.042	1177.122	1160.198	1143.034	1106.418	1074.042	1038.484	1020.588	1016.838	1020.588
7.5	1223.332	1210.400	1184.443	1152.223	1097.789	1048.412	1006.505	977.016	981.365	977.016
10.0	1253.435	1239.726	1202.588	1157.638	1085.184	1022.331	975.428	951.790	949.962	951.790
12.5	1282.722	1264.258	1216.819	1158.572	1069.233	993.737	945.076	918.193	917.088	918.193
15.0	1299.319	1281.384	1227.401	1155.273	1050.357	966.683	913.595	880.565	884.059	880.565
17.5	1305.668	1287.686	1232.365	1146.932	1026.844	935.560	882.923	855.542	854.282	855.542
20.0	1299.972	1284.271	1229.432	1134.491	1004.225	905.176	852.251	827.314	824.178	827.314
22.5	1285.165	1271.253	1222.927	1116.673	975.911	872.427	821.984	798.470	796.517	798.470
25.0	1259.458	1250.183	1201.771	1096.700	945.566	839.919	789.678	769.510	769.176	769.510
27.5	1231.789	1220.281	1179.720	1071.474	910.988	806.485	759.497	740.994	741.515	740.994
30.0	1191.111	1184.280	1148.154	1041.495	876.333	771.417	729.066	711.380	713.855	711.380
32.5	1146.201	1143.439	1114.875	1008.380	837.032	736.232	698.231	682.693	685.704	682.693
35.0	1092.179	1095.805	1074.929	971.849	798.961	699.413	665.769	653.733	655.437	653.733
37.5	1036.041	1042.304	1030.509	928.728	759.170	662.112	632.818	623.792	626.477	623.792
40.0	975.506	986.252	983.559	886.012	720.686	625.621	600.356	593.603	597.182	593.603
42.5	907.814	925.803	929.786	839.273	676.266	589.012	567.646	564.238	565.615	564.238
45.0	841.918	863.595	875.842	790.861	633.635	551.011	533.481	532.057	512.247	532.057
47.5	779.431	797.980	823.524	740.869	589.860	514.239	498.981	500.366	506.707	500.366
50.0	708.486	732.489	762.103	686.435	545.681	476.082	466.029	468.270	473.514	468.270
52.5	642.909	668.415	703.763	634.164	503.050	439.831	430.883	434.789	441.784	434.789
55.0	579.613	604.830	645.026	581.970	458.466	402.818	395.901	402.896	407.292	402.896
57.5	515.173	542.063	582.624	529.902	416.971	366.000	360.670	368.443	374.255	368.443
60.0	457.735	483.855	525.015	476.938	377.593	322.171	320.544	332.643	340.899	332.643
62.5	400.126	427.343	467.087	426.736	330.130	295.381	294.066	303.294	306.204	303.294
65.0	352.617	373.726	413.960	377.391	298.642	260.430	260.446	269.479	271.907	269.479
67.5	305.263	324.917	360.911	329.998	261.092	226.872	226.343	234.637	235.329	234.637
70.0	261.169	277.727	310.468	285.173	222.328	193.679	193.928	200.604	205.319	200.604
72.5	217.722	232.731	259.216	240.177	187.384	162.229	162.439	166.804	169.247	166.804
75.0	180.133	192.053	214.142	199.577	153.491	131.581	131.246	127.356	136.163	127.356
77.5	143.680	154.542	171.426	161.295	123.341	102.582	101.072	102.628	102.208	102.628
80.0	112.603	120.618	132.701	124.811	93.657	75.349	72.423	71.638	71.887	71.638
82.5	84.126	89.214	98.123	92.755	67.996	49.945	47.408	40.514	43.401	40.514
85.0	60.534	62.573	71.848	68.393	42.989	27.972	23.265	19.001	15.849	19.001
87.5	36.336	38.188	40.343	35.659	20.277	7.633	4.085	1.463	0.996	1.463
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	132.822	273.880	286.235	235.784	286.235	273.880	132.822	94.211	132.822
107.5	112.229	153.929	297.047	386.109	359.854	386.109	297.047	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	483.408	502.971	483.408	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	683.156	760.892	683.156	467.449	317.124	276.454	317.124

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CANDELA TABULATION - (Cont.)

135.0	287.265	326.391	466.934	668.741	750.081	668.741	466.934	326.391	287.265	326.391
137.5	297.047	335.143	465.390	649.178	727.429	649.178	465.390	335.143	297.047	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	357.280	374.783	433.987	495.764	520.990	495.764	433.987	374.783	357.280	374.783
157.5	363.972	378.902	428.324	477.746	497.823	477.746	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	392.802	395.376	396.405	395.376	392.802	390.228	389.198	390.228
177.5	390.228	390.228	391.257	391.257	391.772	391.257	390.228	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	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418	1106.418
2.5	1070.782	1094.902	1112.113	1130.865	1132.452	1138.023	1144.084
5.0	1038.484	1074.042	1106.418	1143.034	1160.198	1177.122	1187.042
7.5	1006.505	1048.412	1097.789	1152.223	1184.443	1210.400	1223.332
10.0	975.428	1022.331	1085.184	1157.638	1202.588	1239.726	1253.435
12.5	945.076	993.737	1069.233	1158.572	1216.819	1264.258	1282.722
15.0	913.595	966.683	1050.357	1155.273	1227.401	1281.384	1299.319
17.5	882.923	935.560	1026.844	1146.932	1232.365	1287.686	1305.668
20.0	852.251	905.176	1004.225	1134.491	1229.432	1284.271	1299.972
22.5	821.984	872.427	975.911	1116.673	1222.927	1271.253	1285.165
25.0	789.678	839.919	945.566	1096.700	1201.771	1250.183	1259.458
27.5	759.497	806.485	910.988	1071.474	1179.720	1220.281	1231.789
30.0	729.066	771.417	876.333	1041.495	1148.154	1184.280	1191.111
32.5	698.231	736.232	837.032	1008.380	1114.875	1143.439	1146.201
35.0	665.769	699.413	798.961	971.849	1074.929	1095.805	1092.179
37.5	632.818	662.112	759.170	928.728	1030.509	1042.304	1036.041
40.0	600.356	625.621	720.686	886.012	983.559	986.252	975.506
42.5	567.646	589.012	676.266	839.273	929.786	925.803	907.814
45.0	533.481	551.011	633.635	790.861	875.842	863.595	841.918
47.5	498.981	514.239	589.860	740.869	823.524	797.980	779.431
50.0	466.029	476.082	545.681	686.435	762.103	732.489	708.486
52.5	430.883	439.831	503.050	634.164	703.763	668.415	642.909
55.0	395.901	402.818	458.466	581.970	645.026	604.830	579.613
57.5	360.670	366.000	416.971	529.902	582.624	542.063	515.173
60.0	320.544	322.171	377.593	476.938	525.015	483.855	457.735
62.5	294.066	295.381	330.130	426.736	467.087	427.343	400.126
65.0	260.446	260.430	298.642	377.391	413.960	373.726	352.617
67.5	226.343	226.872	261.092	329.998	360.911	324.917	305.263
70.0	193.928	193.679	222.328	285.173	310.468	277.727	261.169
72.5	162.439	162.229	187.384	240.177	259.216	232.731	217.722
75.0	131.246	131.581	153.491	199.577	214.142	192.053	180.133
77.5	101.072	102.582	123.341	161.295	171.426	154.542	143.680
80.0	72.423	75.349	93.657	124.811	132.701	120.618	112.603

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-H-835-WSO-DAO-ITL89456-KPL2008-3.11.IES****CANDELA TABULATION - (Cont.)**

82.5	47.408	49.945	67.996	92.755	98.123	89.214	84.126
85.0	23.265	27.972	42.989	68.393	71.848	62.573	60.534
87.5	4.085	7.633	20.277	35.659	40.343	38.188	36.336
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	286.235	235.784	286.235	273.880	132.822	94.211
107.5	297.047	386.109	359.854	386.109	297.047	153.929	112.229
110.0	317.639	444.798	449.431	444.798	317.639	173.492	130.247
112.5	341.835	483.408	502.971	483.408	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	683.156	760.892	683.156	467.449	317.124	276.454
135.0	466.934	668.741	750.081	668.741	466.934	326.391	287.265
137.5	465.390	649.178	727.429	649.178	465.390	335.143	297.047
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	433.987	495.764	520.990	495.764	433.987	374.783	357.280
157.5	428.324	477.746	497.823	477.746	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	392.802	395.376	396.405	395.376	392.802	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-H-835-WSO-DAO-ITL89456-KPL2008-3.11.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	407.04	N.A.	8.20
0-30	862.06	N.A.	17.30
0-40	1395.71	N.A.	28.00
0-60	2367.82	N.A.	47.60
0-80	2860.28	N.A.	57.50
0-90	2910.00	N.A.	58.50
10-90	2805.11	N.A.	56.30
20-40	988.67	N.A.	19.90
20-50	1515.57	N.A.	30.40
40-70	1289.84	N.A.	25.90
60-80	492.46	N.A.	9.90
70-80	174.74	N.A.	3.50
80-90	49.72	N.A.	1.00
90-110	270.68	N.A.	5.40
90-120	627.81	N.A.	12.60
90-130	1036.04	N.A.	20.80
90-150	1712.03	N.A.	34.40
90-180	2068.41	N.A.	41.50
110-180	1797.73	N.A.	36.10
0-180	4978.42	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	104.89
10-20	302.15
20-30	455.02
30-40	533.65
40-50	526.90
50-60	445.22
60-70	317.72
70-80	174.74
80-90	49.72
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

IES INDOOR REPORT

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

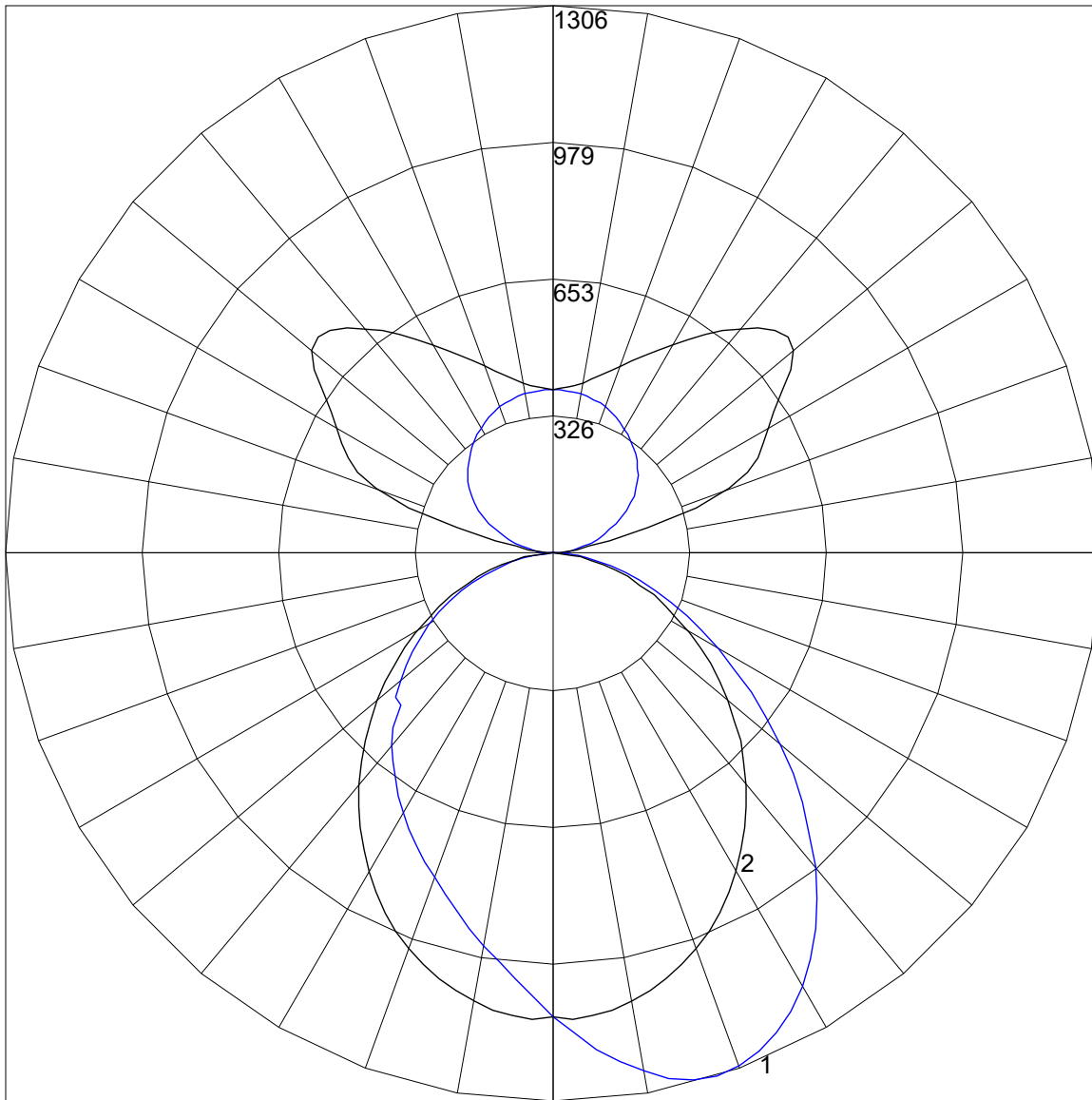
Effective Floor Cavity Reflectance 0.20

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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58
1	100	95	92	88	93	89	86	83	77	75	73	67	65	63	57	55	54	49
2	91	83	77	72	85	78	73	68	68	64	60	59	56	53	50	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35
4	76	65	57	51	71	61	54	48	53	48	43	46	42	38	40	36	34	30
5	70	58	50	44	65	55	47	42	48	42	37	42	37	33	36	32	29	26
6	64	52	44	38	60	49	42	36	43	37	33	38	33	29	32	29	26	23
7	60	47	39	33	55	44	37	32	39	33	29	34	30	26	30	26	23	21
8	55	43	35	30	52	40	33	28	36	30	26	31	27	23	27	23	21	18
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-B-H-835-WSO-DAO-ITL89456-KPL2008-3.11.IES

POLAR GRAPH



Maximum Candela = 1305.668 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)