

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-S-H-835-WSO-DAO-ITL89456-KPL2008-3.14.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.014 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-S-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, 41.8 WATTS

[INPUT_ELECTRICAL]277.0 VOLTS, 43.5 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

[ABSOLUTE LUMENS]4555

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4555
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	41.8
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	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	7.371	12.695	12.695	12.285	12.285	12.285	12.695	12.695	7.371	12.695
95.0	19.247	33.989	33.989	28.256	27.847	28.256	33.989	33.989	19.247	33.989
97.5	32.351	55.693	68.388	49.141	46.275	49.141	68.388	55.693	32.351	55.693
100.0	45.865	72.483	135.957	79.035	69.617	79.035	135.957	72.483	45.865	72.483
102.5	60.607	88.454	187.965	139.643	110.977	139.643	187.965	88.454	60.607	88.454
105.0	74.940	105.654	217.859	227.688	187.556	227.688	217.859	105.654	74.940	105.654
107.5	89.273	122.443	236.287	307.133	286.247	307.133	236.287	122.443	89.273	122.443
110.0	103.606	138.005	252.668	353.817	357.502	353.817	252.668	138.005	103.606	138.005
112.5	117.939	153.157	271.915	384.530	400.091	384.530	271.915	153.157	117.939	153.157
115.0	132.681	167.490	294.847	406.643	429.166	406.643	294.847	167.490	132.681	167.490
117.5	147.424	181.822	319.827	427.528	451.690	427.528	319.827	181.822	147.424	181.822
120.0	162.166	196.974	340.303	449.642	474.213	449.642	340.303	196.974	162.166	196.974
122.5	175.680	209.669	355.045	480.765	497.964	480.765	355.045	209.669	175.680	209.669
125.0	188.375	221.954	363.235	514.754	531.953	514.754	363.235	221.954	188.375	221.954
127.5	200.250	233.421	368.149	537.687	569.628	537.687	368.149	233.421	200.250	233.421
130.0	210.079	243.249	371.016	547.105	596.656	547.105	371.016	243.249	210.079	243.249
132.5	219.907	252.258	371.835	543.420	605.256	543.420	371.835	252.258	219.907	252.258

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CANDELA TABULATION - (Cont.)

135.0	228.507	259.629	371.426	531.953	596.656	531.953	371.426	259.629	228.507	259.629
137.5	236.287	266.591	370.197	516.392	578.638	516.392	370.197	266.591	236.287	266.591
140.0	244.068	272.734	368.149	499.193	555.705	499.193	368.149	272.734	244.068	272.734
142.5	251.439	278.467	365.283	479.946	531.134	479.946	365.283	278.467	251.439	278.467
145.0	259.220	283.790	362.416	461.518	506.154	461.518	362.416	283.790	259.220	283.790
147.5	265.772	287.886	359.140	442.680	480.765	442.680	359.140	287.886	265.772	287.886
150.0	272.324	292.390	355.045	425.890	457.013	425.890	355.045	292.390	272.324	292.390
152.5	278.467	295.666	350.131	409.920	434.900	409.920	350.131	295.666	278.467	295.666
155.0	284.200	298.123	345.217	394.358	414.424	394.358	345.217	298.123	284.200	298.123
157.5	289.524	301.399	340.712	380.025	395.996	380.025	340.712	301.399	289.524	301.399
160.0	294.028	303.447	335.389	366.102	378.797	366.102	335.389	303.447	294.028	303.447
162.5	298.123	305.085	330.065	354.226	362.826	354.226	330.065	305.085	298.123	305.085
165.0	301.399	306.723	324.741	342.760	349.312	342.760	324.741	306.723	301.399	306.723
167.5	304.266	307.952	320.646	332.932	337.436	332.932	320.646	307.952	304.266	307.952
170.0	306.723	309.180	317.780	325.151	328.018	325.151	317.780	309.180	306.723	309.180
172.5	307.952	309.999	314.504	318.599	321.056	318.599	314.504	309.999	307.952	309.999
175.0	309.590	310.409	312.456	314.504	315.323	314.504	312.456	310.409	309.590	310.409
177.5	310.409	310.409	311.228	311.228	311.637	311.228	311.228	310.409	310.409	310.409
180.0	310.818	310.818	310.818	310.818	310.818	310.818	310.818	310.818	310.818	310.818

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-S-H-835-WSO-DAO-ITL89456-KPL2008-3.14.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	12.695	12.285	12.285	12.285	12.695	12.695	7.371
95.0	33.989	28.256	27.847	28.256	33.989	33.989	19.247
97.5	68.388	49.141	46.275	49.141	68.388	55.693	32.351
100.0	135.957	79.035	69.617	79.035	135.957	72.483	45.865
102.5	187.965	139.643	110.977	139.643	187.965	88.454	60.607
105.0	217.859	227.688	187.556	227.688	217.859	105.654	74.940
107.5	236.287	307.133	286.247	307.133	236.287	122.443	89.273
110.0	252.668	353.817	357.502	353.817	252.668	138.005	103.606
112.5	271.915	384.530	400.091	384.530	271.915	153.157	117.939
115.0	294.847	406.643	429.166	406.643	294.847	167.490	132.681
117.5	319.827	427.528	451.690	427.528	319.827	181.822	147.424
120.0	340.303	449.642	474.213	449.642	340.303	196.974	162.166
122.5	355.045	480.765	497.964	480.765	355.045	209.669	175.680
125.0	363.235	514.754	531.953	514.754	363.235	221.954	188.375
127.5	368.149	537.687	569.628	537.687	368.149	233.421	200.250
130.0	371.016	547.105	596.656	547.105	371.016	243.249	210.079
132.5	371.835	543.420	605.256	543.420	371.835	252.258	219.907
135.0	371.426	531.953	596.656	531.953	371.426	259.629	228.507
137.5	370.197	516.392	578.638	516.392	370.197	266.591	236.287
140.0	368.149	499.193	555.705	499.193	368.149	272.734	244.068
142.5	365.283	479.946	531.134	479.946	365.283	278.467	251.439
145.0	362.416	461.518	506.154	461.518	362.416	283.790	259.220
147.5	359.140	442.680	480.765	442.680	359.140	287.886	265.772
150.0	355.045	425.890	457.013	425.890	355.045	292.390	272.324
152.5	350.131	409.920	434.900	409.920	350.131	295.666	278.467
155.0	345.217	394.358	414.424	394.358	345.217	298.123	284.200
157.5	340.712	380.025	395.996	380.025	340.712	301.399	289.524
160.0	335.389	366.102	378.797	366.102	335.389	303.447	294.028
162.5	330.065	354.226	362.826	354.226	330.065	305.085	298.123
165.0	324.741	342.760	349.312	342.760	324.741	306.723	301.399
167.5	320.646	332.932	337.436	332.932	320.646	307.952	304.266
170.0	317.780	325.151	328.018	325.151	317.780	309.180	306.723
172.5	314.504	318.599	321.056	318.599	314.504	309.999	307.952
175.0	312.456	314.504	315.323	314.504	312.456	310.409	309.590
177.5	311.228	311.228	311.637	311.228	311.228	310.409	310.409
180.0	310.818	310.818	310.818	310.818	310.818	310.818	310.818

IES INDOOR REPORT**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-H-835-WSO-DAO-ITL89456-KPL2008-3.14.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	407.04	N.A.	8.90
0-30	862.06	N.A.	18.90
0-40	1395.71	N.A.	30.60
0-60	2367.82	N.A.	52.00
0-80	2860.28	N.A.	62.80
0-90	2910.00	N.A.	63.90
10-90	2805.11	N.A.	61.60
20-40	988.67	N.A.	21.70
20-50	1515.57	N.A.	33.30
40-70	1289.84	N.A.	28.30
60-80	492.46	N.A.	10.80
70-80	174.74	N.A.	3.80
80-90	49.72	N.A.	1.10
90-110	215.32	N.A.	4.70
90-120	499.39	N.A.	11.00
90-130	824.12	N.A.	18.10
90-150	1361.84	N.A.	29.90
90-180	1645.33	N.A.	36.10
110-180	1430.02	N.A.	31.40
0-180	4555.33	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	37.56
100-110	177.76
110-120	284.08
120-130	324.73
130-140	303.50
140-150	234.21
150-160	161.00
160-170	92.52
170-180	29.98

IES INDOOR REPORT

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

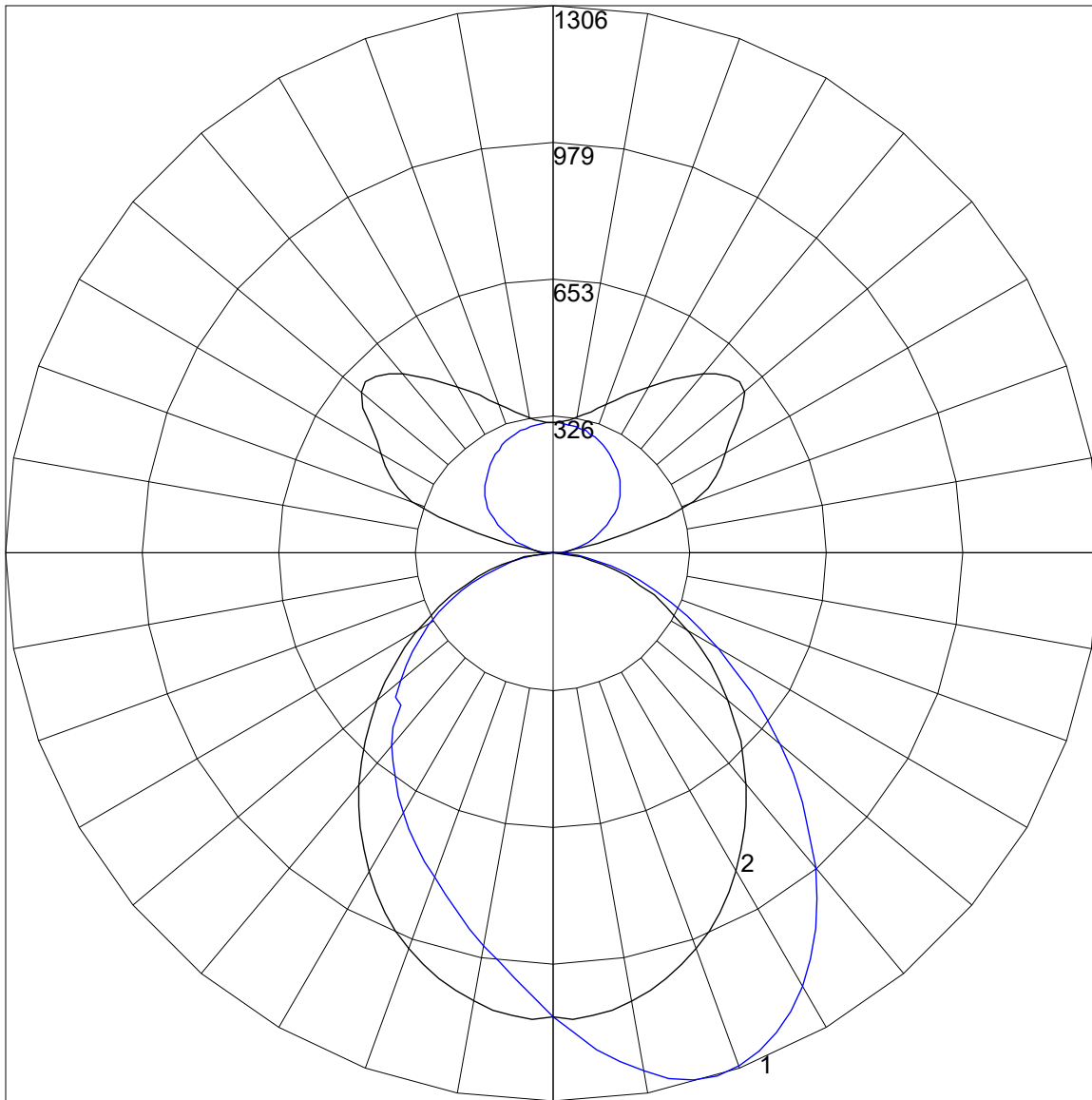
Effective Floor Cavity Reflectance 0.20

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	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64
1	101	97	93	89	95	91	87	84	80	77	75	70	68	67	61	60	58	54
2	92	85	78	73	86	80	74	69	70	66	62	62	59	56	54	51	49	45
3	84	74	67	61	79	70	63	58	62	57	53	55	51	47	48	45	42	39
4	77	66	58	52	72	62	55	49	55	50	45	49	44	41	43	39	36	33
5	71	59	51	44	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	25
7	60	48	40	34	57	45	38	33	41	35	30	36	31	27	32	28	25	22
8	56	44	36	30	53	41	34	29	37	31	27	33	28	25	29	25	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	23	31	26	22	28	23	20	25	21	18	16

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-S-H-835-WSO-DAO-ITL89456-KPL2008-3.14.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)