

# 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-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST] ITL89456-KPL2008-3.008 Family Correlation File

[TESTLAB] Northern Lights Testing Laboratories

[TESTDATE] 5/18/2021

[ISSUEDATE] 8/24/2021

[MANUFAC] Finelite

[LUMCAT] HP-2-P-ID-4ft-H-B-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, 45.7 WATTS

[INPUT\_ELECTRICAL]277.0 VOLTS, 47.5 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]5051

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5052
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	45.7
Ballast Factor	1.00
CIE Type	Semi-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)	0.17 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	12462	12965	9379
55	10577	11771	8366
65	8733	10252	7396
75	7285	8660	6207
85	7270	8629	5163

**IES INDOOR REPORT**

**PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.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	732.289	732.289	732.289	732.289	732.289	732.289	732.289	732.289	732.289	732.289
2.5	757.219	753.208	749.520	748.470	736.059	724.668	708.703	700.896	701.540	700.896
5.0	785.651	779.085	767.884	756.524	732.289	710.861	687.327	675.482	673.000	675.482
7.5	809.669	801.111	783.931	762.606	726.578	693.898	666.161	646.644	649.523	646.644
10.0	829.594	820.520	795.940	766.190	718.236	676.636	645.593	629.948	628.738	629.948
12.5	848.977	836.757	805.359	766.808	707.679	657.711	625.504	607.712	606.980	607.712
15.0	859.962	848.092	812.363	764.625	695.185	639.805	604.668	582.807	585.120	582.807
17.5	864.164	852.263	815.648	759.104	679.623	619.206	584.368	566.246	565.412	566.246
20.0	860.394	850.002	813.707	750.870	664.652	599.096	564.068	547.563	545.487	547.563
22.5	850.594	841.387	809.402	739.077	645.913	577.421	544.035	528.472	527.180	528.472
25.0	833.580	827.441	795.399	725.857	625.828	555.905	522.653	509.305	509.084	509.305
27.5	815.267	807.651	780.805	709.162	602.943	533.777	502.677	490.431	490.776	490.431
30.0	788.344	783.823	759.913	689.320	580.006	510.567	482.537	470.831	472.469	470.831
32.5	758.620	756.792	737.887	667.402	553.995	487.280	462.128	451.844	453.837	451.844
35.0	722.865	725.265	711.448	643.224	528.797	462.911	440.643	432.677	433.805	432.677
37.5	685.710	689.855	682.048	614.684	502.461	438.223	418.834	412.861	414.637	412.861
40.0	645.645	652.757	650.975	586.412	476.990	414.071	397.350	392.880	395.248	392.880
42.5	600.842	612.748	615.385	555.478	447.591	389.841	375.700	373.444	374.356	373.444
45.0	557.229	571.576	579.682	523.436	419.375	364.690	353.087	352.145	339.034	352.145
47.5	515.871	528.148	545.055	490.349	390.403	340.352	330.253	331.170	335.367	331.170
50.0	468.916	484.803	504.403	454.321	361.162	315.098	308.444	309.927	313.398	309.927
52.5	425.514	442.394	465.790	419.725	332.947	291.105	285.183	287.768	292.398	287.768
55.0	383.620	400.311	426.914	385.181	303.439	266.608	262.030	266.659	269.569	266.659
57.5	340.970	358.768	385.613	350.719	275.975	242.239	238.712	243.856	247.703	243.856
60.0	302.955	320.242	347.485	315.664	249.912	213.231	212.154	220.162	225.626	220.162
62.5	264.826	282.840	309.145	282.438	218.499	195.500	194.630	200.737	202.663	200.737
65.0	233.382	247.353	273.982	249.778	197.658	172.367	172.378	178.356	179.963	178.356
67.5	202.040	215.048	238.871	218.411	172.805	150.156	149.806	155.296	155.754	155.296
70.0	172.857	183.815	205.485	188.743	147.149	128.188	128.352	132.771	135.892	132.771
72.5	144.100	154.034	171.564	158.962	124.021	107.372	107.511	110.400	112.017	110.400
75.0	119.222	127.111	141.731	132.091	101.589	87.087	86.866	84.291	90.121	84.291
77.5	95.095	102.284	113.459	106.754	81.634	67.894	66.895	67.925	67.647	67.925
80.0	74.527	79.831	87.829	82.607	61.988	49.870	47.934	47.414	47.579	47.414
82.5	55.679	59.047	64.943	61.390	45.004	33.056	31.377	26.815	28.725	26.815
85.0	40.065	41.414	47.553	45.266	28.452	18.513	15.398	12.576	10.490	12.576
87.5	24.049	25.275	26.701	23.601	13.420	5.052	2.704	0.968	0.659	0.968
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	14.003	24.116	24.116	23.338	23.338	23.338	24.116	24.116	14.003	24.116
95.0	36.563	64.569	64.569	53.678	52.900	53.678	64.569	64.569	36.563	64.569
97.5	61.458	105.800	129.917	93.353	87.908	93.353	129.917	105.800	61.458	105.800
100.0	87.130	137.696	258.277	150.143	132.250	150.143	258.277	137.696	87.130	137.696
102.5	115.136	168.036	357.076	265.279	210.823	265.279	357.076	168.036	115.136	168.036
105.0	142.364	200.710	413.866	432.537	356.298	432.537	413.866	200.710	142.364	200.710
107.5	169.592	232.605	448.874	583.458	543.783	583.458	448.874	232.605	169.592	232.605
110.0	196.820	262.167	479.991	672.144	679.145	672.144	479.991	262.167	196.820	262.167
112.5	224.048	290.951	516.555	730.489	760.051	730.489	516.555	290.951	224.048	290.951
115.0	252.054	318.179	560.120	772.498	815.285	772.498	560.120	318.179	252.054	318.179
117.5	280.060	345.407	607.574	812.174	858.072	812.174	607.574	345.407	280.060	345.407
120.0	308.066	374.191	646.471	854.182	900.859	854.182	646.471	374.191	308.066	374.191
122.5	333.738	398.307	674.477	913.306	945.980	913.306	674.477	398.307	333.738	398.307
125.0	357.854	421.646	690.036	977.876	1010.549	977.876	690.036	421.646	357.854	421.646
127.5	380.415	443.428	699.372	1021.440	1082.120	1021.440	699.372	443.428	380.415	443.428
130.0	399.085	462.099	704.817	1039.333	1133.464	1039.333	704.817	462.099	399.085	462.099
132.5	417.756	479.214	706.373	1032.332	1149.801	1032.332	706.373	479.214	417.756	479.214

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES

## CANDELA TABULATION - (Cont.)

135.0	434.093	493.216	705.595	1010.549	1133.464	1010.549	705.595	493.216	434.093	493.216
137.5	448.874	506.442	703.261	980.987	1099.235	980.987	703.261	506.442	448.874	506.442
140.0	463.655	518.111	699.372	948.314	1055.670	948.314	699.372	518.111	463.655	518.111
142.5	477.658	529.002	693.926	911.750	1008.993	911.750	693.926	529.002	477.658	529.002
145.0	492.439	539.115	688.480	876.743	961.539	876.743	688.480	539.115	492.439	539.115
147.5	504.886	546.895	682.257	840.957	913.306	840.957	682.257	546.895	504.886	546.895
150.0	517.333	555.452	674.477	809.062	868.185	809.062	674.477	555.452	517.333	555.452
152.5	529.002	561.676	665.142	778.722	826.177	778.722	665.142	561.676	529.002	561.676
155.0	539.893	566.343	655.807	749.160	787.279	749.160	655.807	566.343	539.893	566.343
157.5	550.006	572.567	647.249	721.932	752.272	721.932	647.249	572.567	550.006	572.567
160.0	558.564	576.456	637.136	695.482	719.598	695.482	637.136	576.456	558.564	576.456
162.5	566.343	579.568	627.023	672.922	689.258	672.922	627.023	579.568	566.343	579.568
165.0	572.567	582.680	616.910	651.139	663.586	651.139	616.910	582.680	572.567	582.680
167.5	578.012	585.014	609.130	632.468	641.026	632.468	609.130	585.014	578.012	585.014
170.0	582.680	587.348	603.685	617.688	623.133	617.688	603.685	587.348	582.680	587.348
172.5	585.014	588.904	597.461	605.240	609.908	605.240	597.461	588.904	585.014	588.904
175.0	588.126	589.682	593.571	597.461	599.017	597.461	593.571	589.682	588.126	589.682
177.5	589.682	589.682	591.237	591.237	592.015	591.237	591.237	589.682	589.682	589.682
180.0	590.459	590.459	590.459	590.459	590.459	590.459	590.459	590.459	590.459	590.459

## 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	732.289	732.289	732.289	732.289	732.289	732.289	732.289
2.5	708.703	724.668	736.059	748.470	749.520	753.208	757.219
5.0	687.327	710.861	732.289	756.524	767.884	779.085	785.651
7.5	666.161	693.898	726.578	762.606	783.931	801.111	809.669
10.0	645.593	676.636	718.236	766.190	795.940	820.520	829.594
12.5	625.504	657.711	707.679	766.808	805.359	836.757	848.977
15.0	604.668	639.805	695.185	764.625	812.363	848.092	859.962
17.5	584.368	619.206	679.623	759.104	815.648	852.263	864.164
20.0	564.068	599.096	664.652	750.870	813.707	850.002	860.394
22.5	544.035	577.421	645.913	739.077	809.402	841.387	850.594
25.0	522.653	555.905	625.828	725.857	795.399	827.441	833.580
27.5	502.677	533.777	602.943	709.162	780.805	807.651	815.267
30.0	482.537	510.567	580.006	689.320	759.913	783.823	788.344
32.5	462.128	487.280	553.995	667.402	737.887	756.792	758.620
35.0	440.643	462.911	528.797	643.224	711.448	725.265	722.865
37.5	418.834	438.223	502.461	614.684	682.048	689.855	685.710
40.0	397.350	414.071	476.990	586.412	650.975	652.757	645.645
42.5	375.700	389.841	447.591	555.478	615.385	612.748	600.842
45.0	353.087	364.690	419.375	523.436	579.682	571.576	557.229
47.5	330.253	340.352	390.403	490.349	545.055	528.148	515.871
50.0	308.444	315.098	361.162	454.321	504.403	484.803	468.916
52.5	285.183	291.105	332.947	419.725	465.790	442.394	425.514
55.0	262.030	266.608	303.439	385.181	426.914	400.311	383.620
57.5	238.712	242.239	275.975	350.719	385.613	358.768	340.970
60.0	212.154	213.231	249.912	315.664	347.485	320.242	302.955
62.5	194.630	195.500	218.499	282.438	309.145	282.840	264.826
65.0	172.378	172.367	197.658	249.778	273.982	247.353	233.382
67.5	149.806	150.156	172.805	218.411	238.871	215.048	202.040
70.0	128.352	128.188	147.149	188.743	205.485	183.815	172.857
72.5	107.511	107.372	124.021	158.962	171.564	154.034	144.100
75.0	86.866	87.087	101.589	132.091	141.731	127.111	119.222
77.5	66.895	67.894	81.634	106.754	113.459	102.284	95.095
80.0	47.934	49.870	61.988	82.607	87.829	79.831	74.527

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES****CANDELA TABULATION - (Cont.)**

82.5	31.377	33.056	45.004	61.390	64.943	59.047	55.679
85.0	15.398	18.513	28.452	45.266	47.553	41.414	40.065
87.5	2.704	5.052	13.420	23.601	26.701	25.275	24.049
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	24.116	23.338	23.338	23.338	24.116	24.116	14.003
95.0	64.569	53.678	52.900	53.678	64.569	64.569	36.563
97.5	129.917	93.353	87.908	93.353	129.917	105.800	61.458
100.0	258.277	150.143	132.250	150.143	258.277	137.696	87.130
102.5	357.076	265.279	210.823	265.279	357.076	168.036	115.136
105.0	413.866	432.537	356.298	432.537	413.866	200.710	142.364
107.5	448.874	583.458	543.783	583.458	448.874	232.605	169.592
110.0	479.991	672.144	679.145	672.144	479.991	262.167	196.820
112.5	516.555	730.489	760.051	730.489	516.555	290.951	224.048
115.0	560.120	772.498	815.285	772.498	560.120	318.179	252.054
117.5	607.574	812.174	858.072	812.174	607.574	345.407	280.060
120.0	646.471	854.182	900.859	854.182	646.471	374.191	308.066
122.5	674.477	913.306	945.980	913.306	674.477	398.307	333.738
125.0	690.036	977.876	1010.549	977.876	690.036	421.646	357.854
127.5	699.372	1021.440	1082.120	1021.440	699.372	443.428	380.415
130.0	704.817	1039.333	1133.464	1039.333	704.817	462.099	399.085
132.5	706.373	1032.332	1149.801	1032.332	706.373	479.214	417.756
135.0	705.595	1010.549	1133.464	1010.549	705.595	493.216	434.093
137.5	703.261	980.987	1099.235	980.987	703.261	506.442	448.874
140.0	699.372	948.314	1055.670	948.314	699.372	518.111	463.655
142.5	693.926	911.750	1008.993	911.750	693.926	529.002	477.658
145.0	688.480	876.743	961.539	876.743	688.480	539.115	492.439
147.5	682.257	840.957	913.306	840.957	682.257	546.895	504.886
150.0	674.477	809.062	868.185	809.062	674.477	555.452	517.333
152.5	665.142	778.722	826.177	778.722	665.142	561.676	529.002
155.0	655.807	749.160	787.279	749.160	655.807	566.343	539.893
157.5	647.249	721.932	752.272	721.932	647.249	572.567	550.006
160.0	637.136	695.482	719.598	695.482	637.136	576.456	558.564
162.5	627.023	672.922	689.258	672.922	627.023	579.568	566.343
165.0	616.910	651.139	663.586	651.139	616.910	582.680	572.567
167.5	609.130	632.468	641.026	632.468	609.130	585.014	578.012
170.0	603.685	617.688	623.133	617.688	603.685	587.348	582.680
172.5	597.461	605.240	609.908	605.240	597.461	588.904	585.014
175.0	593.571	597.461	599.017	597.461	593.571	589.682	588.126
177.5	591.237	591.237	592.015	591.237	591.237	589.682	589.682
180.0	590.459	590.459	590.459	590.459	590.459	590.459	590.459

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	269.40	N.A.	5.30
0-30	570.56	N.A.	11.30
0-40	923.76	N.A.	18.30
0-60	1567.16	N.A.	31.00
0-80	1893.09	N.A.	37.50
0-90	1926.00	N.A.	38.10
10-90	1856.58	N.A.	36.80
20-40	654.35	N.A.	13.00
20-50	1003.09	N.A.	19.90
40-70	853.69	N.A.	16.90
60-80	325.94	N.A.	6.50
70-80	115.65	N.A.	2.30
80-90	32.91	N.A.	0.70
90-110	409.03	N.A.	8.10
90-120	948.69	N.A.	18.80
90-130	1565.58	N.A.	31.00
90-150	2587.08	N.A.	51.20
90-180	3125.63	N.A.	61.90
110-180	2716.59	N.A.	53.80
0-180	5051.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	69.42
10-20	199.98
20-30	301.16
30-40	353.20
40-50	348.73
50-60	294.67
60-70	210.28
70-80	115.65
80-90	32.91
90-100	71.35
100-110	337.69
110-120	539.66
120-130	616.89
130-140	576.56
140-150	444.94
150-160	305.84
160-170	175.76
170-180	56.94

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES

## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

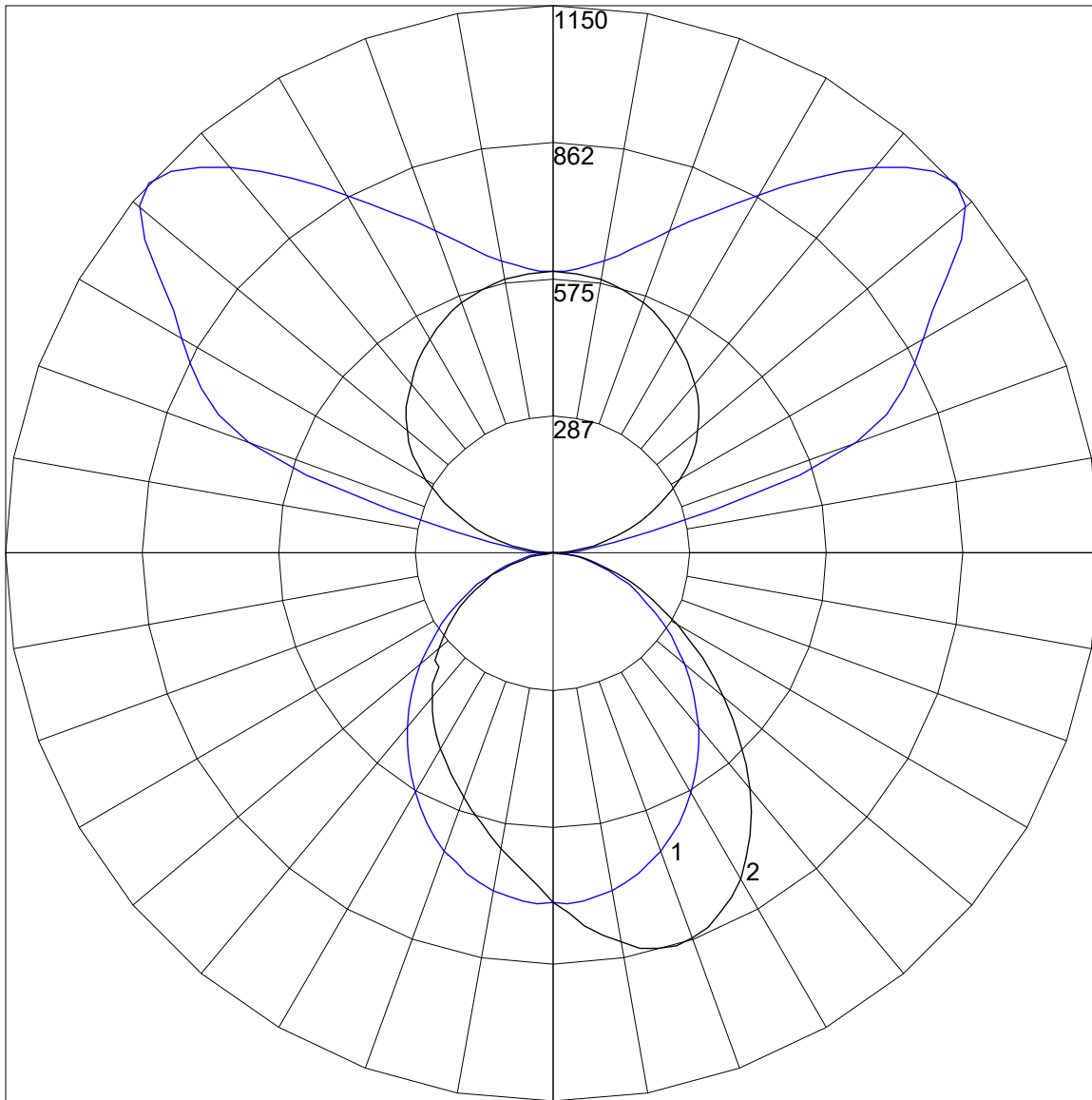
Effective Floor Cavity Reflectance 0.20

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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	84	86	83	80	77	67	65	63	53	52	50	40	39	38	32
2	87	79	74	68	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	72	62	54	48	65	56	50	45	46	41	37	37	33	30	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	37	31	51	41	34	29	34	28	25	27	23	20	21	18	16	13
8	52	40	33	27	47	37	30	26	31	25	22	25	21	18	19	16	14	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	17	21	17	15	16	14	12	10

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-ID-4FT-H-B-835-WSO-DAO-ITL89456-KPL2008-3.008.IES

## POLAR GRAPH



Maximum Candela = 1149.801 Located At Horizontal Angle = 90, Vertical Angle = 132.5

# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)

# 2 - Vertical Plane Through Horizontal Angles (0 - 180)