

# 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-ID-4FT-S-H-835-WSO-ITL89456.014.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL89456.014 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]07/19/17  
[ISSUEDATE]08/23/17  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HP2ID-4ft-S-H-835-WSO  
[\_INPUT\_ELECTRICAL]120.0 VOLTS, 42.0 WATTS  
[\_INPUT\_ELECTRICAL]277.0 VOLTS, 44.5 WATTS  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89456. 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]4221

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4221
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	42
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.10
Spacing Criterion (Diagonal)	1.24
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.18 ft
Luminous Height	0.00 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	13259	12507	11773
55	11693	11014	10273
65	10170	9611	8997
75	8531	8212	7756
85	6638	6503	6097

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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>
0.0	1136.311	1136.311	1136.311	1136.311	1136.311
2.5	1134.756	1134.756	1133.978	1133.978	1134.756
5.0	1128.534	1127.756	1126.200	1125.422	1125.422
7.5	1119.200	1118.423	1114.534	1111.423	1112.201
10.0	1108.312	1102.867	1098.201	1095.090	1094.312
12.5	1089.645	1084.201	1078.757	1074.090	1071.757
15.0	1070.201	1059.313	1056.979	1048.424	1043.757
17.5	1046.091	1032.091	1027.424	1016.536	1010.314
20.0	1018.091	1002.536	996.314	983.092	974.537
22.5	986.981	970.648	960.537	945.759	937.204
25.0	951.981	936.426	923.204	906.093	896.760
27.5	918.538	898.316	883.538	864.872	855.539
30.0	878.872	859.428	841.539	821.317	811.206
32.5	838.428	818.984	800.318	777.763	767.652
35.0	795.651	776.207	756.763	732.652	722.541
37.5	752.096	733.430	713.208	688.320	678.987
40.0	706.986	689.098	668.876	643.210	633.876
42.5	661.876	645.543	626.099	599.655	590.322
45.0	617.543	601.211	582.544	557.656	548.323
47.5	572.433	557.656	539.767	514.879	506.324
50.0	528.101	514.879	497.768	474.435	465.102
52.5	485.324	473.657	456.547	434.769	426.214
55.0	441.769	433.214	416.103	395.881	388.103
57.5	400.548	392.770	377.215	358.549	351.549
60.0	360.104	353.882	339.882	322.772	316.549
62.5	321.216	314.994	303.327	288.550	282.328
65.0	283.106	276.884	267.550	255.106	250.440
67.5	246.551	241.884	233.329	223.218	218.551
70.0	211.551	208.440	200.663	192.107	188.996
72.5	177.330	175.774	169.552	163.330	160.997
75.0	145.442	144.664	139.997	135.331	132.220
77.5	115.887	115.109	111.220	108.887	106.553
80.0	87.887	87.109	84.776	82.443	80.887
82.5	62.221	62.221	60.666	59.110	56.777
85.0	38.110	38.110	37.333	35.777	34.999
87.5	15.555	15.555	14.777	13.222	13.222
90.0	0.000	0.000	0.000	0.000	0.000
92.5	7.369	12.692	12.692	12.282	12.282
95.0	19.242	33.981	33.981	28.250	27.840
97.5	32.344	55.680	68.372	49.130	46.264
100.0	45.854	72.466	135.925	79.017	69.600
102.5	60.593	88.433	187.921	139.610	110.951
105.0	74.923	105.629	217.808	227.634	187.511
107.5	89.252	122.415	236.232	307.060	286.180
110.0	103.582	137.972	252.608	353.733	357.418
112.5	117.911	153.121	271.851	384.439	399.997
115.0	132.650	167.450	294.778	406.548	429.065
117.5	147.389	181.780	319.752	427.428	451.583
120.0	162.128	196.928	340.223	449.536	474.101
122.5	175.638	209.620	354.961	480.651	497.847
125.0	188.330	221.902	363.150	514.633	531.828
127.5	200.203	233.366	368.063	537.560	569.494
130.0	210.029	243.192	370.928	546.976	596.515
132.5	219.855	252.199	371.747	543.292	605.113

**IES INDOOR REPORT**  
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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	228.453	259.568	371.338	531.828	596.515
<b>137.5</b>	236.232	266.528	370.110	516.270	578.501
<b>140.0</b>	244.010	272.669	368.063	499.075	555.574
<b>142.5</b>	251.380	278.401	365.197	479.832	531.009
<b>145.0</b>	259.159	283.724	362.331	461.409	506.035
<b>147.5</b>	265.709	287.818	359.055	442.576	480.651
<b>150.0</b>	272.260	292.321	354.961	425.790	456.905
<b>152.5</b>	278.401	295.596	350.048	409.823	434.797
<b>155.0</b>	284.133	298.053	345.135	394.265	414.326
<b>157.5</b>	289.455	301.328	340.632	379.936	395.903
<b>160.0</b>	293.959	303.375	335.310	366.016	378.707
<b>162.5</b>	298.053	305.013	329.987	354.143	362.740
<b>165.0</b>	301.328	306.651	324.665	342.679	349.230
<b>167.5</b>	304.194	307.879	320.571	332.853	337.357
<b>170.0</b>	306.651	309.107	317.705	325.074	327.940
<b>172.5</b>	307.879	309.926	314.430	318.524	320.980
<b>175.0</b>	309.517	310.335	312.382	314.430	315.248
<b>177.5</b>	310.335	310.335	311.154	311.154	311.564
<b>180.0</b>	310.745	310.745	310.745	310.745	310.745

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	403.36	N.A.	9.60
0-30	827.58	N.A.	19.60
0-40	1300.32	N.A.	30.80
0-60	2120.49	N.A.	50.20
0-80	2533.93	N.A.	60.00
0-90	2575.86	N.A.	61.00
10-90	2469.18	N.A.	58.50
20-40	896.96	N.A.	21.30
20-50	1345.34	N.A.	31.90
40-70	1085.08	N.A.	25.70
60-80	413.44	N.A.	9.80
70-80	148.53	N.A.	3.50
80-90	41.93	N.A.	1.00
90-110	215.26	N.A.	5.10
90-120	499.27	N.A.	11.80
90-130	823.93	N.A.	19.50
90-150	1361.52	N.A.	32.30
90-180	1644.94	N.A.	39.00
110-180	1429.68	N.A.	33.90
0-180	4220.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	106.68
10-20	296.68
20-30	424.22
30-40	472.74
40-50	448.38
50-60	371.80
60-70	264.90
70-80	148.53
80-90	41.93
90-100	37.55
100-110	177.72
110-120	284.01
120-130	324.65
130-140	303.43
140-150	234.16
150-160	160.96
160-170	92.50
170-180	29.97

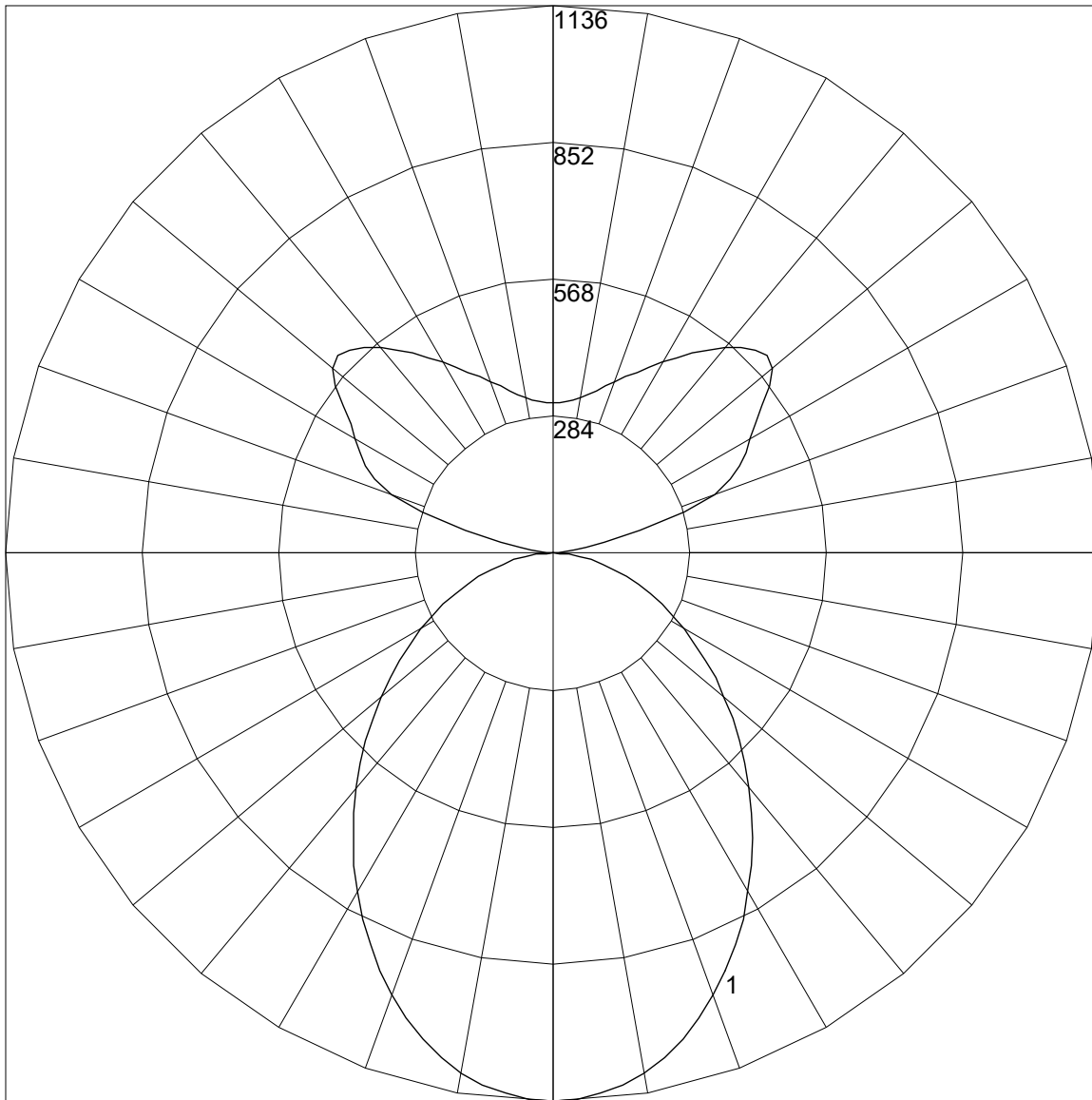
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	89	94	90	87	84	79	76	74	69	67	65	59	58	56	52
2	92	84	78	73	86	79	74	69	69	65	62	61	57	55	52	50	48	44
3	84	74	67	61	78	70	63	58	62	56	52	54	50	47	47	44	41	38
4	77	66	58	52	72	62	55	50	55	49	45	48	44	40	42	39	36	32
5	71	59	51	45	66	56	48	43	49	44	39	43	39	35	38	34	31	28
6	65	53	45	39	61	50	43	38	45	39	34	39	35	31	34	31	28	25
7	61	48	40	35	57	46	38	33	41	35	30	36	31	28	32	28	25	22
8	56	44	36	31	53	42	35	30	37	31	27	33	28	25	29	25	22	20
9	53	40	33	28	49	38	31	27	34	29	24	30	26	22	27	23	20	18
10	49	37	30	25	46	35	29	24	32	26	22	28	24	20	25	21	19	17

POLAR GRAPH



Maximum Candela = 1136.311 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)