

# 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-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL89988.602 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]11/16/17  
[ISSUE DATE]02/26/18  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HP-4-I-4ft-B-835-ASYM  
[INPUT\_ELECTRICAL]120.0 VOLTS, 18.4 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 19.5 WATTS  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89988. 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]2283

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2283
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	18.4
Ballast Factor	1.00
CIE Type	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)	0.32 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	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**CANDELA TABULATION**

	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>	<u>85.0</u>
0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	34.480	33.966	35.510	34.480	32.936	29.849	30.878	31.907	29.849	21.614
95.0	73.078	73.078	75.651	74.107	72.563	75.136	81.826	80.282	65.873	42.714
97.5	115.277	112.704	120.424	123.511	130.716	139.980	140.494	122.997	96.236	62.785
100.0	178.577	176.004	184.752	189.899	200.706	204.823	193.501	163.138	127.114	83.370
102.5	241.362	239.303	248.567	254.742	269.666	267.608	243.935	203.794	155.418	103.955
105.0	299.515	297.456	309.293	326.790	341.715	332.966	296.942	244.964	181.150	125.055
107.5	368.990	366.417	388.031	415.307	421.482	401.412	351.493	282.018	205.338	145.126
110.0	464.711	462.138	491.987	507.426	502.794	466.770	402.441	312.895	228.496	165.711
112.5	581.018	577.416	596.972	598.515	583.591	531.099	443.612	339.142	250.625	186.811
115.0	687.032	682.915	695.266	688.061	657.183	583.591	475.004	362.815	271.210	208.425
117.5	786.356	781.209	786.870	765.256	714.822	620.645	498.162	382.371	292.825	230.555
120.0	866.123	861.492	857.889	822.380	753.934	643.288	514.631	401.412	313.410	252.684
122.5	923.762	920.674	903.691	859.433	774.519	656.154	529.555	419.939	335.539	276.357
125.0	957.728	954.640	931.481	875.387	782.753	662.844	541.391	437.436	356.639	299.515
127.5	969.564	966.476	938.686	876.416	782.239	666.961	553.228	454.419	378.768	322.673
130.0	964.418	961.330	931.996	868.182	777.607	670.049	566.094	472.431	399.868	345.317
132.5	948.464	946.406	917.072	855.831	771.946	673.651	578.959	490.958	422.512	368.990

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	927.879	926.335	898.545	842.450	766.285	678.283	592.340	509.484	444.641	392.663
<b>137.5</b>	906.779	905.750	879.504	829.070	761.653	683.944	605.720	529.555	467.285	416.336
<b>140.0</b>	885.679	884.650	861.492	817.748	759.080	690.120	619.101	549.111	490.443	440.009
<b>142.5</b>	867.153	865.609	847.082	808.999	758.566	696.810	633.510	569.181	512.572	463.682
<b>145.0</b>	852.743	850.684	834.216	802.309	758.566	703.500	648.435	588.737	534.701	487.355
<b>147.5</b>	840.392	838.848	824.953	797.677	759.080	711.734	663.359	607.779	556.316	510.514
<b>150.0</b>	830.614	828.041	817.233	793.560	761.139	720.483	678.283	625.791	576.901	533.157
<b>152.5</b>	821.865	819.292	810.543	790.473	763.712	729.232	690.120	641.744	595.942	554.772
<b>155.0</b>	813.631	812.087	804.368	789.443	767.314	736.951	701.956	655.639	613.954	574.842
<b>157.5</b>	808.999	807.455	801.280	788.929	769.887	742.612	710.705	667.991	629.908	593.884
<b>160.0</b>	805.397	803.853	799.221	788.414	770.917	746.214	717.395	678.283	644.318	611.381
<b>162.5</b>	798.707	799.221	795.104	784.812	769.373	746.729	721.512	686.003	656.154	627.335
<b>165.0</b>	790.987	790.987	787.385	777.092	763.712	744.156	722.027	691.664	665.932	640.715
<b>167.5</b>	778.121	778.636	775.548	766.800	754.448	737.466	718.939	694.237	672.622	651.008
<b>170.0</b>	761.653	762.683	759.595	752.390	742.612	728.717	713.278	694.751	677.254	659.242
<b>172.5</b>	741.068	742.612	740.553	734.893	727.173	716.366	705.044	692.693	678.798	665.417
<b>175.0</b>	720.997	719.968	718.424	715.337	710.190	702.985	695.781	687.547	678.798	669.534
<b>177.5</b>	695.266	695.266	694.751	692.693	690.634	686.517	683.944	679.312	674.681	670.564
<b>180.0</b>	670.049	670.049	670.049	670.049	670.049	670.049	670.049	670.049	670.049	670.049

**Vert.  
Angles**

**Horizontal Angles**

	<b>90.0</b>	<b>95.0</b>	<b>112.5</b>	<b>135.0</b>	<b>157.5</b>	<b>180.0</b>
<b>0.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>2.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>5.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>7.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>10.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>12.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>15.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>17.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>20.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>22.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>25.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>27.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>30.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>32.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>35.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>37.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>40.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>42.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>45.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>47.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>50.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>52.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>55.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>57.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>60.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>62.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>65.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>67.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>70.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>72.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>75.0</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>77.5</b>	0.000	0.000	0.000	0.000	0.000	0.000
<b>80.0</b>	0.000	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**CANDELA TABULATION - (Cont.)**

82.5	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000	0.000
92.5	11.322	15.439	29.849	46.831	56.095	59.697
95.0	29.334	30.878	47.346	72.563	85.943	90.060
97.5	47.861	46.831	62.785	95.721	115.277	120.938
100.0	66.902	63.814	79.768	114.763	138.950	147.184
102.5	86.973	80.797	96.751	135.348	156.962	165.196
105.0	106.529	99.838	112.704	151.301	177.033	182.694
107.5	127.114	118.880	127.114	166.740	194.530	199.677
110.0	147.699	137.921	141.523	182.694	212.542	217.689
112.5	168.799	156.962	155.418	198.647	230.040	236.215
115.0	189.899	177.033	169.828	213.057	247.023	253.713
117.5	210.999	198.133	184.752	226.437	264.006	271.210
120.0	234.157	220.262	200.706	238.274	278.930	288.193
122.5	257.830	242.906	216.145	249.596	293.854	304.661
125.0	280.474	265.035	231.069	259.374	305.176	319.071
127.5	303.632	287.164	246.508	268.637	314.439	331.937
130.0	326.276	308.778	261.432	277.386	320.100	339.656
132.5	349.434	331.422	276.357	286.649	324.217	342.229
135.0	372.593	354.580	293.854	295.398	327.305	343.259
137.5	396.266	377.739	312.895	304.661	330.393	343.259
140.0	420.453	401.412	333.481	313.410	332.966	343.259
142.5	444.126	424.056	355.095	322.159	335.539	343.259
145.0	467.799	448.243	376.195	331.422	339.142	343.773
147.5	491.472	471.402	397.809	342.744	344.288	346.346
150.0	515.145	495.075	420.968	357.154	349.949	350.463
152.5	536.760	518.233	445.670	377.739	357.154	355.095
155.0	557.860	540.362	471.916	402.956	367.961	363.329
157.5	577.930	561.462	498.677	430.231	386.488	376.710
160.0	596.457	581.533	524.409	458.021	415.307	401.412
162.5	613.440	599.545	549.625	486.841	447.729	434.348
165.0	627.849	615.498	572.784	519.262	480.150	468.314
167.5	640.200	629.393	593.884	550.140	515.145	503.309
170.0	651.008	641.744	613.440	579.474	554.257	544.994
172.5	658.727	652.037	630.423	606.235	588.737	582.562
175.0	665.417	660.786	645.861	630.423	619.615	615.498
177.5	668.505	666.447	658.727	651.008	645.347	643.288
180.0	670.049	670.049	670.049	670.049	670.049	670.049

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	0.00	N.A.	0.00
0-30	0.00	N.A.	0.00
0-40	0.00	N.A.	0.00
0-60	0.00	N.A.	0.00
0-80	0.00	N.A.	0.00
0-90	0.00	N.A.	0.00
10-90	0.00	N.A.	0.00
20-40	0.00	N.A.	0.00
20-50	0.00	N.A.	0.00
40-70	0.00	N.A.	0.00
60-80	0.00	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	297.46	N.A.	13.00
90-120	653.58	N.A.	28.60
90-130	1063.77	N.A.	46.60
90-150	1777.73	N.A.	77.90
90-180	2282.85	N.A.	100.00
110-180	1985.39	N.A.	87.00
0-180	2282.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	0.00
10-20	0.00
20-30	0.00
30-40	0.00
40-50	0.00
50-60	0.00
60-70	0.00
70-80	0.00
80-90	0.00
90-100	75.43
100-110	222.02
110-120	356.12
120-130	410.19
130-140	383.34
140-150	330.63
150-160	264.25
160-170	177.65
170-180	63.22

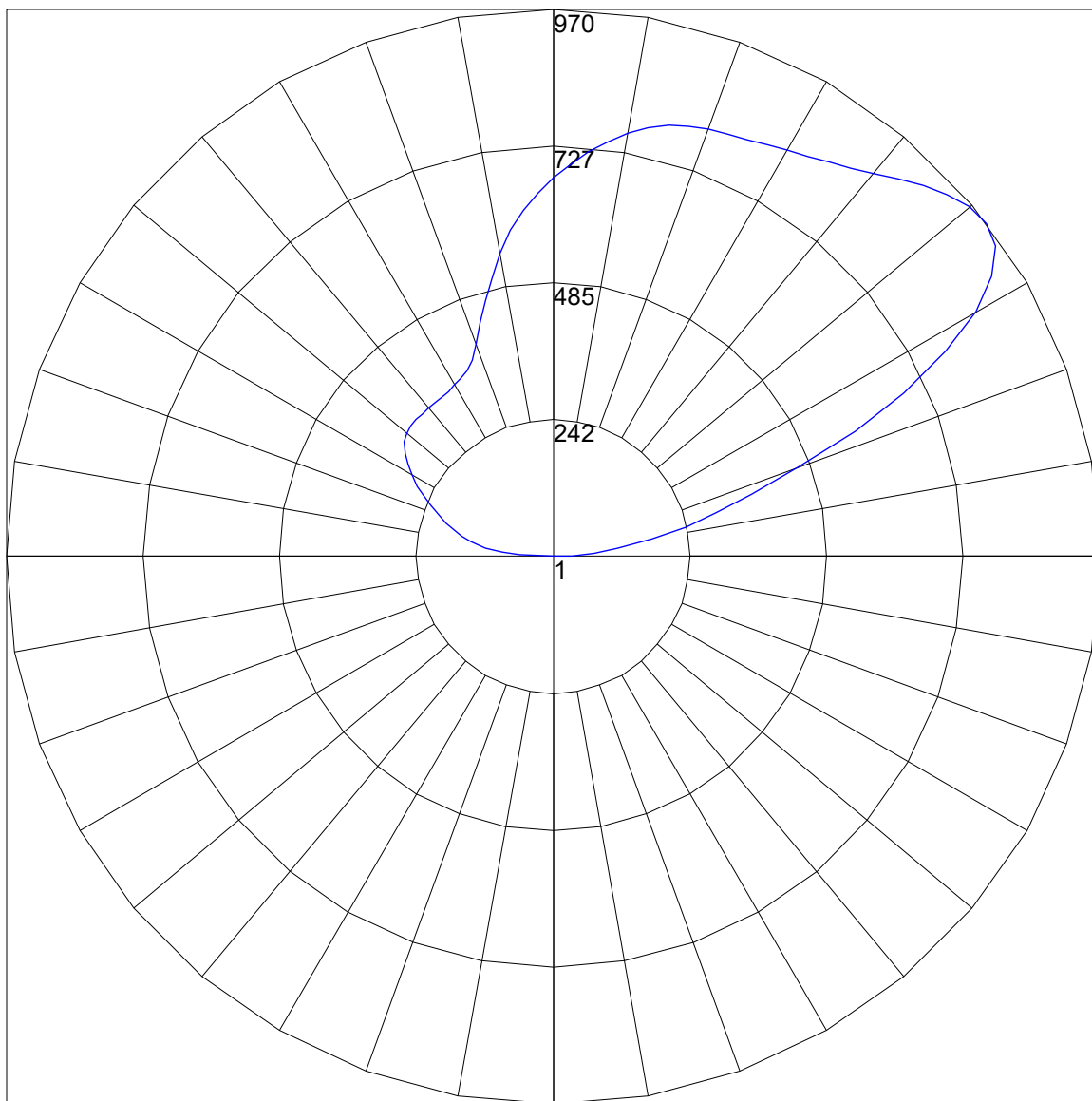
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-4-I-4FT-B-835-ASY-ITL89988.602.IES**

**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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

POLAR GRAPH



Maximum Candela = 969.564 Located At Horizontal Angle = 0, Vertical Angle = 127.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)