

# 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-WS-6W-4D-4FT-B-8-35-ITL86716.002.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL86716.002 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]02/12/16

[ISSUEDATE]03/30/16

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-WS-6W-4D-4ft-B-8-35

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 18.7 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 19.8 WATTS

[ABSOLUTE]LUMENS]1563

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL86716. 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)

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1563
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	18.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.58
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.08
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.49 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.36 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2830	2786	2780
55	2502	2504	2485
65	2107	2114	2153
75	1679	1620	1693
85	1243	1135	800

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**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	659.270	659.270	659.270	659.270	659.270	659.270	659.270	659.270	659.270	659.270
2.5	671.622	671.622	670.592	669.563	666.990	665.446	662.873	661.843	660.299	659.785
5.0	692.208	692.208	690.664	687.576	682.944	677.797	671.622	664.931	658.755	657.211
7.5	708.162	707.647	706.103	701.986	695.810	688.605	679.341	668.534	658.241	652.580
10.0	721.543	721.028	718.970	713.309	707.133	696.840	685.003	671.622	655.667	645.374
12.5	730.807	730.292	727.719	721.543	714.338	701.986	687.061	671.107	652.065	637.140
15.0	737.497	735.953	733.895	727.204	718.455	704.045	688.091	668.534	645.889	627.362
17.5	739.556	738.526	736.468	729.263	719.484	703.530	685.517	663.387	639.199	616.039
20.0	740.070	738.526	735.439	728.748	717.940	700.957	680.885	656.697	629.420	603.173
22.5	738.012	736.468	732.865	725.660	713.823	695.810	674.195	647.948	619.642	589.277
25.0	732.865	731.836	727.719	719.999	707.133	688.091	665.446	637.140	607.290	574.352
27.5	726.175	725.660	721.028	711.765	698.384	678.312	654.123	624.788	593.394	558.398
30.0	717.426	716.911	711.765	701.986	687.576	666.475	641.257	610.378	577.955	539.871
32.5	707.647	706.103	700.957	690.664	675.224	654.123	627.362	594.938	560.971	521.343
35.0	695.810	694.781	688.605	677.797	661.329	638.684	610.893	579.499	543.473	501.786
37.5	682.429	681.400	675.224	663.387	645.889	623.244	593.394	561.486	524.431	480.686
40.0	666.990	665.960	660.299	647.948	629.420	605.231	575.382	542.959	504.874	459.070
42.5	650.521	650.006	643.830	630.449	611.407	587.733	556.339	523.402	484.803	437.455
45.0	631.993	631.479	624.788	610.893	591.851	567.662	535.239	502.301	463.187	414.295
47.5	612.437	611.922	605.746	591.336	571.779	547.076	514.138	480.686	441.572	391.651
50.0	589.792	589.792	583.616	569.720	550.164	525.975	492.008	458.555	417.898	368.491
52.5	564.059	563.545	557.369	546.046	528.548	502.816	468.849	435.396	394.739	346.361
55.0	535.239	535.239	529.578	519.284	503.330	479.142	445.689	411.207	372.094	323.202
57.5	507.962	505.904	500.242	489.949	475.539	453.924	421.500	387.019	348.934	299.528
60.0	478.627	475.539	470.907	461.129	445.689	426.647	396.797	362.830	324.231	275.854
62.5	447.233	445.175	440.028	428.191	414.810	396.797	370.550	338.127	300.042	252.694
65.0	417.383	414.810	409.663	397.826	383.931	365.918	344.817	312.909	275.854	229.535
67.5	386.504	383.931	378.784	366.947	352.022	334.010	314.453	286.662	251.150	205.861
70.0	356.140	353.566	347.905	336.068	321.143	302.616	283.059	259.385	225.932	182.187
72.5	325.775	323.202	318.055	307.248	291.293	271.737	252.180	230.050	200.715	159.028
75.0	295.925	293.867	288.205	277.912	260.414	242.401	221.815	199.685	175.497	134.839
77.5	267.105	265.046	259.900	250.121	233.138	214.095	192.995	169.835	148.735	113.224
80.0	238.799	237.255	231.594	221.815	207.405	187.334	166.233	141.529	120.429	91.094
82.5	212.037	211.522	204.832	196.083	181.672	162.630	141.529	115.797	92.637	68.449
85.0	185.275	184.760	178.070	169.835	156.454	137.927	117.855	93.152	67.419	44.260
87.5	160.057	159.542	154.396	145.132	131.751	115.282	95.211	72.566	47.863	19.557
90.0	133.810	133.295	129.178	120.429	108.077	93.152	74.110	54.039	32.938	7.205
92.5	101.901	101.901	97.784	89.550	77.713	64.332	47.348	29.850	15.954	2.059
95.0	69.993	68.449	65.876	59.700	51.465	41.172	31.908	22.130	10.293	1.029
97.5	51.980	51.465	49.921	46.833	42.202	36.026	27.791	18.013	5.661	0.515
100.0	48.377	47.863	46.319	43.231	39.114	32.938	24.703	14.410	2.573	0.000
102.5	45.289	45.289	43.745	40.658	36.540	30.365	22.130	8.749	1.029	0.000
105.0	43.231	43.231	41.687	38.599	34.482	28.306	15.954	4.632	0.515	0.000
107.5	41.687	41.172	40.143	37.055	31.908	21.615	9.778	1.544	0.515	0.000
110.0	40.143	39.628	38.084	33.452	25.218	15.440	5.661	1.029	0.515	0.000
112.5	35.511	34.482	31.394	26.247	18.527	9.778	2.059	0.515	0.000	0.000
115.0	27.277	26.247	23.674	19.042	12.352	5.147	0.515	0.515	0.000	0.000
117.5	19.557	19.042	16.984	12.866	7.205	1.544	0.515	0.515	0.000	0.000
120.0	13.381	13.381	11.322	7.720	3.088	0.515	0.515	0.515	0.000	0.000
122.5	8.234	8.234	6.176	3.603	0.515	0.515	0.515	0.515	0.000	0.000
125.0	3.088	3.088	1.544	0.000	0.000	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Horizontal Angles**

	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	659.270	659.270	659.270	659.270	659.270
2.5	658.755	653.609	645.889	636.111	632.508
5.0	655.667	637.655	611.407	584.131	579.499
7.5	650.006	616.554	564.059	522.887	513.109
10.0	642.286	587.733	515.167	459.070	442.087
12.5	633.537	556.339	463.702	394.739	373.123
15.0	623.244	523.402	411.207	330.407	304.160
17.5	610.378	488.920	358.198	267.105	237.255
20.0	596.482	453.409	305.704	206.376	174.982
22.5	580.528	417.898	255.268	148.220	116.311
25.0	563.545	381.358	205.861	95.211	62.788
27.5	547.076	346.876	159.028	51.980	19.557
30.0	525.975	310.336	114.768	17.498	11.322
32.5	504.874	274.824	73.595	11.837	8.749
35.0	483.773	239.828	38.084	9.264	6.690
37.5	460.614	205.346	16.469	7.205	5.661
40.0	437.969	171.894	12.352	6.176	4.632
42.5	414.295	139.986	9.778	4.632	3.603
45.0	390.107	109.106	7.720	3.603	2.573
47.5	365.918	80.286	6.176	2.573	1.544
50.0	341.215	53.524	4.632	1.544	0.000
52.5	317.026	30.365	3.603	1.029	0.000
55.0	292.837	16.984	2.573	0.515	0.000
57.5	269.163	11.322	1.544	0.000	0.000
60.0	244.975	8.234	1.029	0.000	0.000
62.5	221.301	6.176	0.515	0.000	0.000
65.0	197.627	4.632	0.515	0.000	0.000
67.5	174.467	3.088	0.515	0.000	0.000
70.0	151.308	2.059	0.515	0.000	0.000
72.5	128.663	1.544	0.515	0.000	0.000
75.0	106.533	0.515	0.515	0.000	0.000
77.5	84.918	0.515	0.515	0.000	0.000
80.0	64.332	0.515	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

82.5	44.260	0.000	0.000	0.000	0.000
85.0	25.733	0.000	0.000	0.000	0.000
87.5	7.720	0.000	0.000	0.000	0.000
90.0	0.000	0.000	0.000	0.000	0.000
92.5	0.000	0.000	0.000	0.000	0.000
95.0	0.000	0.000	0.000	0.000	0.000
97.5	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000
102.5	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000
107.5	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000
112.5	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000
127.5	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000
132.5	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000
137.5	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000
142.5	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000
147.5	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000
152.5	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000
157.5	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000
162.5	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000
167.5	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000
172.5	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000
177.5	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	218.31	N.A.	14.00
0-30	430.78	N.A.	27.60
0-40	667.45	N.A.	42.70
0-60	1133.04	N.A.	72.50
0-80	1447.9	N.A.	92.60
0-90	1519.84	N.A.	97.30
10-90	1459.5	N.A.	93.40
20-40	449.13	N.A.	28.70
20-50	691.43	N.A.	44.20
40-70	650.35	N.A.	41.60
60-80	314.86	N.A.	20.10
70-80	130.10	N.A.	8.30
80-90	71.94	N.A.	4.60
90-110	37.29	N.A.	2.40
90-120	42.41	N.A.	2.70
90-130	42.97	N.A.	2.70
90-150	42.97	N.A.	2.70
90-180	42.97	N.A.	2.70
110-180	5.67	N.A.	0.40
0-180	1562.81	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	60.34
10-20	157.98
20-30	212.46
30-40	236.67
40-50	242.30
50-60	223.29
60-70	184.76
70-80	130.10
80-90	71.94
90-100	25.15
100-110	12.14
110-120	5.12
120-130	0.56
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

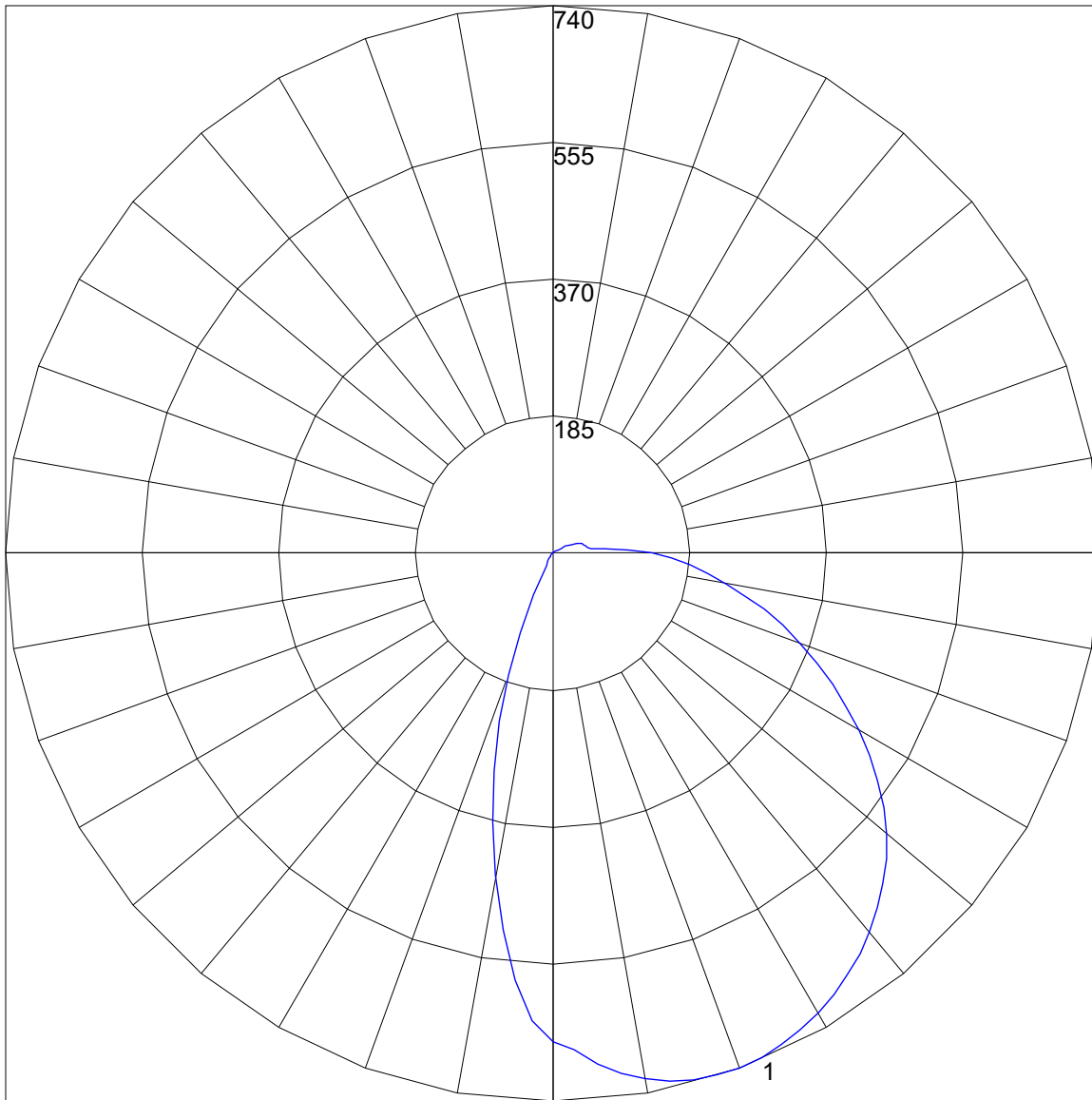
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97
1	107	102	97	93	104	99	95	91	94	91	87	90	87	84	86	83	81	79
2	97	88	81	75	94	86	79	74	82	76	72	78	74	70	75	71	68	65
3	88	77	69	62	86	76	68	61	72	65	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	52	64	57	51	62	55	50	59	54	49	47
5	75	61	52	46	72	60	52	45	58	50	44	55	49	44	53	48	43	41
6	69	56	46	40	67	54	46	40	52	45	39	50	44	39	49	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	39	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	41	33	28	39	33	28	38	32	28	26
10	53	39	32	26	51	39	31	26	38	31	26	36	30	26	35	30	25	24

POLAR GRAPH



Maximum Candela = 740.07 Located At Horizontal Angle = 0, Vertical Angle = 20  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)