

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-S-8-35-ITL86716.001.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]ITL86716.001 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]02/12/16
[ISSUE DATE]03/30/16
[MANUFAC]FINELITE, INC.
[LUMCAT]HP-WS-6W-4D-4ft-S-8-35
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 14.7 WATTS
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 16.0 WATTS
[ABSOLUTE LUMENS]1243
[OTHER]see 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1243
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	14.7
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	2251	2215	2211
55	1990	1991	1976
65	1675	1681	1712
75	1335	1289	1346
85	989	902	636

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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	524.295	524.295	524.295	524.295	524.295	524.295	524.295	524.295	524.295	524.295
2.5	534.118	534.118	533.299	532.480	530.434	529.206	527.160	526.341	525.113	524.704
5.0	550.489	550.489	549.261	546.805	543.122	539.029	534.118	528.797	523.885	522.658
7.5	563.177	562.768	561.540	558.265	553.354	547.624	540.257	531.662	523.476	518.974
10.0	573.818	573.409	571.772	567.270	562.358	554.173	544.759	534.118	521.430	513.244
12.5	581.185	580.776	578.730	573.818	568.088	558.265	546.396	533.708	518.565	506.695
15.0	586.506	585.278	583.641	578.320	571.363	559.903	547.215	531.662	513.653	498.919
17.5	588.143	587.325	585.688	579.958	572.181	559.493	545.168	527.569	508.333	489.915
20.0	588.553	587.325	584.869	579.548	570.953	557.447	541.485	522.248	500.556	479.683
22.5	586.915	585.688	582.823	577.093	567.679	553.354	536.164	515.290	492.780	468.632
25.0	582.823	582.004	578.730	572.590	562.358	547.215	529.206	506.695	482.957	456.763
27.5	577.502	577.093	573.409	566.042	555.400	539.438	520.202	496.873	471.906	444.075
30.0	570.544	570.135	566.042	558.265	546.805	530.025	509.970	485.413	459.628	429.340
32.5	562.768	561.540	557.447	549.261	536.983	520.202	498.919	473.134	446.121	414.606
35.0	553.354	552.535	547.624	539.029	525.932	507.923	485.822	460.855	432.205	399.053
37.5	542.713	541.894	536.983	527.569	513.653	495.645	471.906	446.530	417.062	382.273
40.0	530.434	529.615	525.113	515.290	500.556	481.320	457.581	431.796	401.509	365.083
42.5	517.337	516.928	512.016	501.375	486.231	467.404	442.438	416.243	385.547	347.893
45.0	502.603	502.193	496.873	485.822	470.678	451.442	425.657	399.463	368.357	329.475
47.5	487.050	486.640	481.729	470.269	454.716	435.070	408.876	382.273	351.167	311.466
50.0	469.041	469.041	464.130	453.079	437.526	418.290	391.277	364.673	332.340	293.048
52.5	448.577	448.168	443.256	434.252	420.336	399.872	372.859	346.256	313.922	275.449
55.0	425.657	425.657	421.155	412.969	400.281	381.045	354.441	327.019	295.913	257.031
57.5	403.965	402.328	397.825	389.640	378.180	360.990	335.205	307.783	277.496	238.204
60.0	380.636	378.180	374.496	366.720	354.441	339.298	315.559	288.546	257.850	219.377
62.5	355.669	354.032	349.939	340.526	329.884	315.559	294.686	268.901	238.613	200.959
65.0	331.931	329.884	325.791	316.378	305.327	291.002	274.221	248.846	219.377	182.541
67.5	307.373	305.327	301.234	291.821	279.951	265.626	250.073	227.972	199.731	163.714
70.0	283.226	281.179	276.677	267.263	255.394	240.660	225.107	206.280	179.676	144.887
72.5	259.078	257.031	252.938	244.343	231.656	216.103	200.550	182.951	159.621	126.469
75.0	235.339	233.702	229.200	221.014	207.098	192.773	176.402	158.803	139.566	107.233
77.5	212.419	210.782	206.689	198.913	185.406	170.263	153.482	135.064	118.284	90.043
80.0	189.908	188.681	184.178	176.402	164.942	148.980	132.199	112.554	95.773	72.444
82.5	168.626	168.216	162.896	155.938	144.478	129.334	112.554	92.089	73.671	54.435
85.0	147.343	146.933	141.613	135.064	124.423	109.689	93.726	74.081	53.616	35.199
87.5	127.288	126.879	122.786	115.419	104.777	91.680	75.718	57.709	38.064	15.553
90.0	106.414	106.005	102.731	95.773	85.950	74.081	58.937	42.975	26.194	5.730
92.5	81.039	81.039	77.764	71.216	61.802	51.161	37.654	23.739	12.688	1.637
95.0	55.663	54.435	52.389	47.477	40.929	32.743	25.376	17.599	8.186	0.819
97.5	41.338	40.929	39.701	37.245	33.561	28.650	22.101	14.325	4.502	0.409
100.0	38.473	38.064	36.836	34.380	31.106	26.194	19.646	11.460	2.046	0.000
102.5	36.017	36.017	34.789	32.334	29.059	24.148	17.599	6.958	0.819	0.000
105.0	34.380	34.380	33.152	30.696	27.422	22.511	12.688	3.684	0.409	0.000
107.5	33.152	32.743	31.924	29.469	25.376	17.190	7.776	1.228	0.409	0.000
110.0	31.924	31.515	30.287	26.604	20.055	12.279	4.502	0.819	0.409	0.000
112.5	28.241	27.422	24.966	20.874	14.734	7.776	1.637	0.409	0.000	0.000
115.0	21.692	20.874	18.827	15.144	9.823	4.093	0.409	0.409	0.000	0.000
117.5	15.553	15.144	13.506	10.232	5.730	1.228	0.409	0.409	0.000	0.000
120.0	10.641	10.641	9.004	6.139	2.456	0.409	0.409	0.409	0.000	0.000
122.5	6.549	6.549	4.911	2.865	0.409	0.409	0.409	0.409	0.000	0.000
125.0	2.456	2.456	1.228	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

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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	524.295	524.295	524.295	524.295	524.295
2.5	523.885	519.793	513.653	505.877	503.012
5.0	521.430	507.105	486.231	464.539	460.855
7.5	516.928	490.324	448.577	415.834	408.058
10.0	510.788	467.404	409.695	365.083	351.576
12.5	503.830	442.438	368.766	313.922	296.732
15.0	495.645	416.243	327.019	262.761	241.888
17.5	485.413	388.821	284.863	212.419	188.681
20.0	474.362	360.581	243.116	164.123	139.157
22.5	461.674	332.340	203.006	117.874	92.499
25.0	448.168	303.281	163.714	75.718	49.933
27.5	435.070	275.858	126.469	41.338	15.553
30.0	418.290	246.799	91.271	13.916	9.004
32.5	401.509	218.558	58.528	9.414	6.958
35.0	384.728	190.727	30.287	7.367	5.321
37.5	366.311	163.305	13.097	5.730	4.502
40.0	348.302	136.701	9.823	4.911	3.684
42.5	329.475	111.326	7.776	3.684	2.865
45.0	310.238	86.769	6.139	2.865	2.046
47.5	291.002	63.849	4.911	2.046	1.228
50.0	271.356	42.566	3.684	1.228	0.000
52.5	252.120	24.148	2.865	0.819	0.000
55.0	232.883	13.506	2.046	0.409	0.000
57.5	214.056	9.004	1.228	0.000	0.000
60.0	194.820	6.549	0.819	0.000	0.000
62.5	175.993	4.911	0.409	0.000	0.000
65.0	157.166	3.684	0.409	0.000	0.000
67.5	138.748	2.456	0.409	0.000	0.000
70.0	120.330	1.637	0.409	0.000	0.000
72.5	102.321	1.228	0.409	0.000	0.000
75.0	84.722	0.409	0.409	0.000	0.000
77.5	67.532	0.409	0.409	0.000	0.000
80.0	51.161	0.409	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

82.5	35.199	0.000	0.000	0.000	0.000
85.0	20.464	0.000	0.000	0.000	0.000
87.5	6.139	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	173.62	N.A.	14.00
0-30	342.58	N.A.	27.60
0-40	530.80	N.A.	42.70
0-60	901.07	N.A.	72.50
0-80	1151.47	N.A.	92.60
0-90	1208.68	N.A.	97.30
10-90	1160.69	N.A.	93.40
20-40	357.18	N.A.	28.70
20-50	549.87	N.A.	44.20
40-70	517.20	N.A.	41.60
60-80	250.40	N.A.	20.10
70-80	103.47	N.A.	8.30
80-90	57.21	N.A.	4.60
90-110	29.66	N.A.	2.40
90-120	33.73	N.A.	2.70
90-130	34.17	N.A.	2.70
90-150	34.17	N.A.	2.70
90-180	34.17	N.A.	2.70
110-180	4.51	N.A.	0.40
0-180	1242.85	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	47.98
10-20	125.63
20-30	168.96
30-40	188.22
40-50	192.69
50-60	177.58
60-70	146.93
70-80	103.47
80-90	57.21
90-100	20.00
100-110	9.66
110-120	4.07
120-130	0.44
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

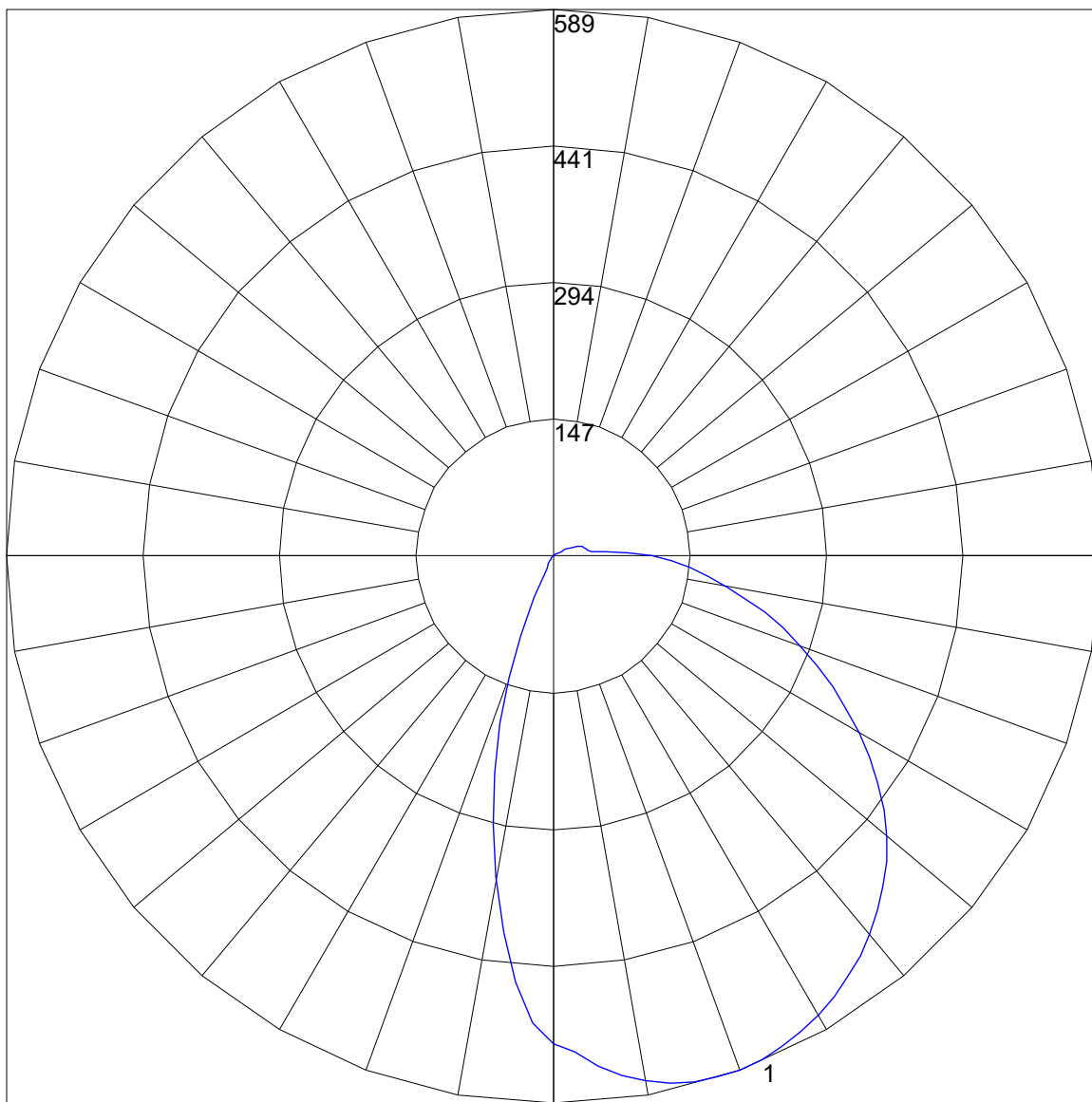
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 588.553 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)