

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-H-8-35-ITL86716.003.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]ITL86716.003 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-H-8-35
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 28.8 WATTS
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.2 WATTS
[ABSOLUTE LUMENS]2362
[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	2362
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	28.8
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	4277	4210	4201
55	3781	3784	3755
65	3184	3194	3254
75	2537	2449	2558
85	1879	1715	1209

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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	996.286	996.286	996.286	996.286	996.286	996.286	996.286	996.286	996.286	996.286
2.5	1014.952	1014.952	1013.397	1011.841	1007.953	1005.619	1001.731	1000.175	997.842	997.064
5.0	1046.062	1046.062	1043.729	1039.062	1032.063	1024.285	1014.952	1004.842	995.509	993.176
7.5	1070.172	1069.394	1067.061	1060.839	1051.506	1040.618	1026.618	1010.286	994.731	986.176
10.0	1090.393	1089.615	1086.504	1077.949	1068.616	1053.062	1035.174	1014.952	990.842	975.287
12.5	1104.392	1103.615	1099.726	1090.393	1079.505	1060.839	1038.284	1014.175	985.398	962.844
15.0	1114.503	1112.170	1109.059	1098.948	1085.727	1063.950	1039.840	1010.286	976.065	948.067
17.5	1117.614	1116.059	1112.948	1102.059	1087.282	1063.172	1035.951	1002.508	965.955	930.956
20.0	1118.392	1116.059	1111.392	1101.282	1084.949	1059.284	1028.952	992.398	951.177	911.513
22.5	1115.281	1112.948	1107.503	1096.615	1078.727	1051.506	1018.841	979.176	936.400	890.514
25.0	1107.503	1105.948	1099.726	1088.060	1068.616	1039.840	1005.619	962.844	917.735	867.959
27.5	1097.393	1096.615	1089.615	1075.616	1055.395	1025.063	988.509	944.178	896.736	843.849
30.0	1084.171	1083.393	1075.616	1060.839	1039.062	1007.175	969.066	922.401	873.403	815.851
32.5	1069.394	1067.061	1059.284	1043.729	1020.396	988.509	948.067	899.069	847.738	787.852
35.0	1051.506	1049.951	1040.618	1024.285	999.397	965.177	923.179	875.737	821.295	758.298
37.5	1031.285	1029.729	1020.396	1002.508	976.065	941.845	896.736	848.516	792.518	726.410
40.0	1007.953	1006.397	997.842	979.176	951.177	914.624	869.515	820.517	762.964	693.745
42.5	983.065	982.287	972.954	952.733	923.957	888.180	840.738	790.963	732.632	661.080
45.0	955.066	954.288	944.178	923.179	894.402	857.849	808.851	759.075	699.967	626.082
47.5	925.512	924.734	915.401	893.625	864.070	826.739	776.963	726.410	667.302	591.861
50.0	891.291	891.291	881.959	860.960	831.405	794.852	743.521	692.967	631.526	556.863
52.5	852.404	851.627	842.294	825.183	798.740	759.853	708.522	657.969	596.527	523.420
55.0	808.851	808.851	800.296	784.741	760.631	724.077	673.524	621.415	562.307	488.421
57.5	767.631	764.520	755.964	740.410	718.633	685.968	636.970	584.861	527.309	452.645
60.0	723.299	718.633	711.633	696.856	673.524	644.747	599.638	548.308	489.977	416.869
62.5	675.857	672.746	664.969	647.081	626.859	599.638	559.974	510.976	453.423	381.871
65.0	630.748	626.859	619.082	601.194	580.195	552.974	521.087	472.867	416.869	346.873
67.5	584.084	580.195	572.418	554.529	531.975	504.754	475.200	433.202	379.538	311.096
70.0	538.197	534.308	525.753	507.865	485.311	457.312	427.758	391.982	341.428	275.320
72.5	492.310	488.421	480.644	464.311	440.202	410.647	381.093	347.650	303.319	240.322
75.0	447.201	444.090	435.535	419.980	393.537	366.316	335.206	301.764	265.210	203.768
77.5	403.648	400.537	392.759	377.982	352.317	323.540	291.653	256.655	224.767	171.103
80.0	360.872	358.539	349.984	335.206	313.430	283.098	251.210	213.879	181.991	137.660
82.5	320.429	319.652	309.541	296.319	274.543	245.766	213.879	174.992	139.993	103.440
85.0	279.987	279.209	269.098	256.655	236.433	208.435	178.103	140.771	101.884	66.886
87.5	241.878	241.100	233.322	219.323	199.102	174.214	143.882	109.662	72.330	29.554
90.0	202.213	201.435	195.213	181.991	163.326	140.771	111.995	81.663	49.775	10.888
92.5	153.993	153.993	147.771	135.327	117.439	97.218	71.552	45.109	24.110	3.111
95.0	105.773	103.440	99.551	90.218	77.774	62.219	48.220	33.443	15.555	1.555
97.5	78.552	77.774	75.441	70.774	63.775	54.442	41.998	27.221	8.555	0.778
100.0	73.108	72.330	69.997	65.330	59.108	49.775	37.332	21.777	3.889	0.000
102.5	68.441	68.441	66.108	61.442	55.220	45.887	33.443	13.222	1.555	0.000
105.0	65.330	65.330	62.997	58.331	52.109	42.776	24.110	7.000	0.778	0.000
107.5	62.997	62.219	60.664	55.997	48.220	32.665	14.777	2.333	0.778	0.000
110.0	60.664	59.886	57.553	50.553	38.109	23.332	8.555	1.555	0.778	0.000
112.5	53.664	52.109	47.442	39.665	27.999	14.777	3.111	0.778	0.000	0.000
115.0	41.220	39.665	35.776	28.776	18.666	7.777	0.778	0.778	0.000	0.000
117.5	29.554	28.776	25.665	19.444	10.888	2.333	0.778	0.778	0.000	0.000
120.0	20.221	20.221	17.110	11.666	4.666	0.778	0.778	0.778	0.000	0.000
122.5	12.444	12.444	9.333	5.444	0.778	0.778	0.778	0.778	0.000	0.000
125.0	4.666	4.666	2.333	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. Angles **Horizontal Angles**

	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	996.286	996.286	996.286	996.286	996.286
2.5	995.509	987.731	976.065	961.288	955.844
5.0	990.842	963.621	923.957	882.736	875.737
7.5	982.287	931.734	852.404	790.185	775.408
10.0	970.621	888.180	778.519	693.745	668.080
12.5	957.399	840.738	700.745	596.527	563.862
15.0	941.845	790.963	621.415	499.310	459.645
17.5	922.401	738.854	541.308	403.648	358.539
20.0	901.402	685.190	461.978	311.874	264.432
22.5	877.292	631.526	385.760	223.989	175.770
25.0	851.627	576.306	311.096	143.882	94.884
27.5	826.739	524.198	240.322	78.552	29.554
30.0	794.852	468.978	173.436	26.443	17.110
32.5	762.964	415.314	111.217	17.888	13.222
35.0	731.077	362.427	57.553	13.999	10.111
37.5	696.078	310.319	24.888	10.888	8.555
40.0	661.858	259.766	18.666	9.333	7.000
42.5	626.082	211.546	14.777	7.000	5.444
45.0	589.528	164.881	11.666	5.444	3.889
47.5	552.974	121.328	9.333	3.889	2.333
50.0	515.642	80.885	7.000	2.333	0.000
52.5	479.089	45.887	5.444	1.555	0.000
55.0	442.535	25.665	3.889	0.778	0.000
57.5	406.759	17.110	2.333	0.000	0.000
60.0	370.205	12.444	1.555	0.000	0.000
62.5	334.429	9.333	0.778	0.000	0.000
65.0	298.653	7.000	0.778	0.000	0.000
67.5	263.654	4.666	0.778	0.000	0.000
70.0	228.656	3.111	0.778	0.000	0.000
72.5	194.435	2.333	0.778	0.000	0.000
75.0	160.992	0.778	0.778	0.000	0.000
77.5	128.327	0.778	0.778	0.000	0.000
80.0	97.218	0.778	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

82.5	66.886	0.000	0.000	0.000	0.000
85.0	38.887	0.000	0.000	0.000	0.000
87.5	11.666	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	329.91	N.A.	14.00
0-30	650.99	N.A.	27.60
0-40	1008.64	N.A.	42.70
0-60	1712.24	N.A.	72.50
0-80	2188.06	N.A.	92.60
0-90	2296.78	N.A.	97.30
10-90	2205.6	N.A.	93.40
20-40	678.73	N.A.	28.70
20-50	1044.89	N.A.	44.20
40-70	982.81	N.A.	41.60
60-80	475.82	N.A.	20.10
70-80	196.61	N.A.	8.30
80-90	108.71	N.A.	4.60
90-110	56.36	N.A.	2.40
90-120	64.09	N.A.	2.70
90-130	64.93	N.A.	2.70
90-150	64.93	N.A.	2.70
90-180	64.93	N.A.	2.70
110-180	8.57	N.A.	0.40
0-180	2361.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.18
10-20	238.73
20-30	321.07
30-40	357.66
40-50	366.16
50-60	337.44
60-70	279.21
70-80	196.61
80-90	108.71
90-100	38.01
100-110	18.35
110-120	7.73
120-130	0.84
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

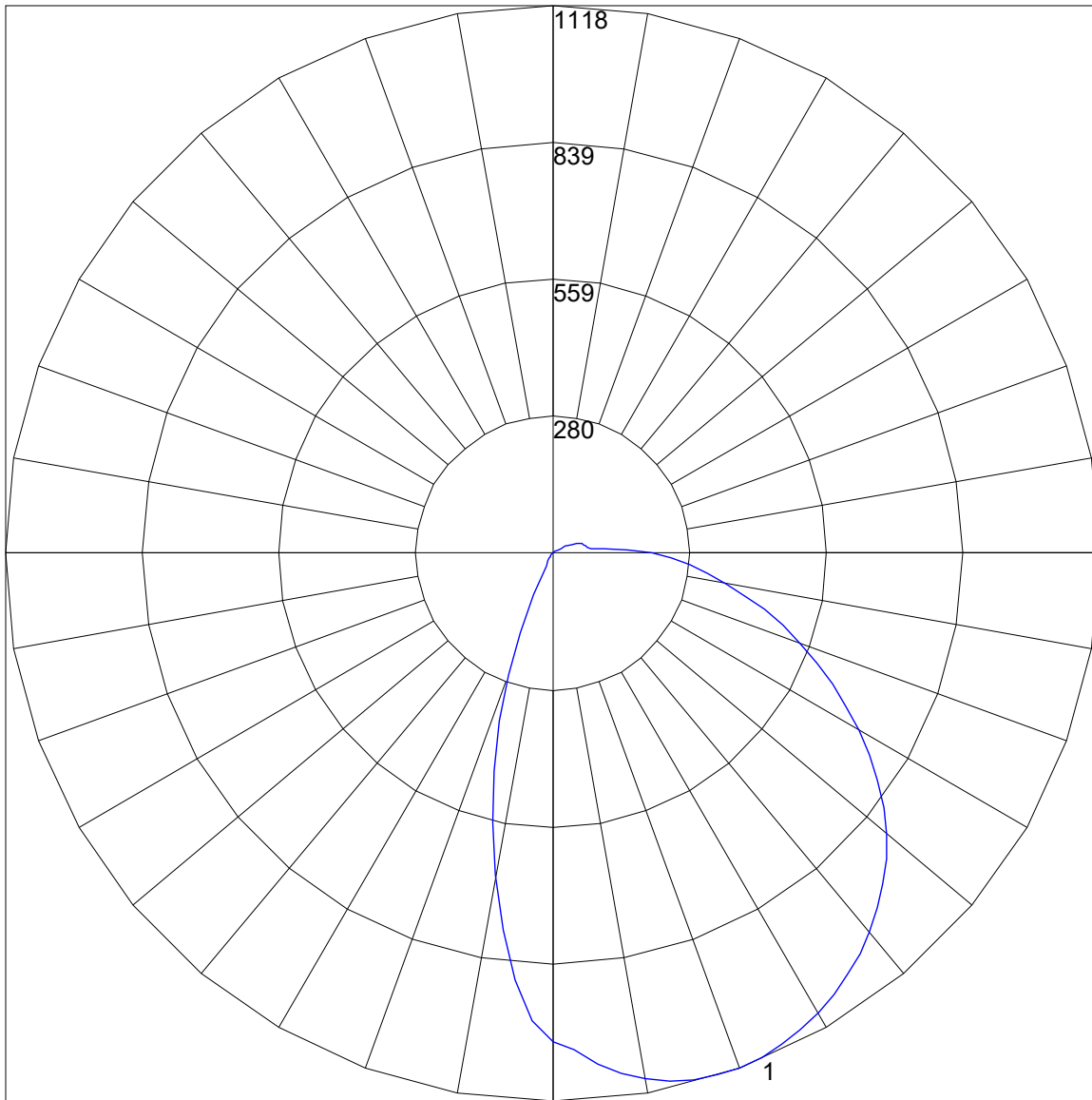
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 1118.392 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)