

# 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-2D-4FT-B-8-35-ITL86715.002.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]ITL86715.002 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]02/12/16  
[ISSUEDATE]03/30/16  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HP-WS-6W-2D-4ft-B-8-35  
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 18.7 WATTS  
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 19.8 WATTS  
[ABSOLUTE]LUMENS]1588  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL86715. 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	1588
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	18.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.52
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.22
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.49 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.19 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3321	3145	2856
55	3059	2950	2600
65	2669	2599	2315
75	2215	2082	1934
85	1698	1525	1129

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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	650.946	650.946	650.946	650.946	650.946	650.946	650.946	650.946	650.946	650.946
2.5	659.180	658.665	658.150	657.121	656.607	655.063	654.548	653.005	651.975	650.946
5.0	672.044	671.015	669.986	667.927	664.840	660.723	657.121	653.005	650.432	648.373
7.5	681.821	681.307	679.763	676.675	673.073	667.413	660.723	653.519	648.373	644.257
10.0	690.054	690.054	687.482	684.394	679.248	671.529	663.296	653.005	643.227	637.567
12.5	695.200	694.686	692.627	688.511	682.336	672.559	661.752	649.402	637.052	628.819
15.0	699.317	698.288	695.200	690.569	683.879	672.044	659.180	644.257	629.334	618.528
17.5	700.346	699.317	697.259	691.084	682.850	669.471	655.063	637.567	620.586	607.207
20.0	699.317	697.773	694.686	689.025	679.763	664.325	648.373	628.305	609.780	593.313
22.5	696.229	694.686	691.598	684.909	674.102	657.636	640.140	618.528	597.944	578.905
25.0	691.598	690.054	686.967	679.248	666.898	649.402	629.848	605.663	584.051	562.953
27.5	684.909	683.365	679.763	671.015	658.150	639.625	617.498	591.769	569.128	545.971
30.0	677.190	675.646	671.015	661.752	647.859	627.790	604.634	577.876	553.176	527.447
32.5	667.413	665.869	660.209	650.432	635.509	614.925	590.226	561.924	535.680	507.892
35.0	656.607	654.548	648.888	637.567	622.130	600.517	574.273	544.942	517.669	488.338
37.5	642.198	641.684	634.994	623.673	607.207	584.565	557.292	527.447	498.115	467.240
40.0	627.790	627.275	620.586	608.750	591.255	568.099	539.282	507.892	478.561	446.143
42.5	613.382	611.323	604.119	591.769	574.273	550.088	520.757	488.338	457.978	424.016
45.0	595.886	593.313	586.109	573.759	555.749	531.563	500.688	468.270	436.880	401.889
47.5	575.303	573.759	566.040	555.234	536.194	510.980	480.105	447.172	414.753	379.247
50.0	553.176	551.632	545.457	533.622	515.097	490.397	459.007	425.045	392.626	356.091
52.5	527.447	526.417	520.757	510.465	492.970	469.813	437.395	404.461	370.499	333.449
55.0	499.145	497.601	492.970	483.707	468.270	445.628	414.753	381.820	347.343	310.293
57.5	469.813	468.270	463.124	454.890	441.511	421.957	391.597	358.664	324.701	287.137
60.0	439.453	437.909	432.249	424.016	411.151	394.170	367.412	334.993	301.030	264.495
62.5	409.607	407.549	401.889	393.141	380.791	366.382	342.197	311.322	277.874	241.854
65.0	378.732	376.674	371.014	361.751	349.401	333.964	315.439	287.137	254.203	219.212
67.5	347.857	345.799	340.653	330.876	320.070	304.633	286.108	262.437	231.047	196.056
70.0	317.497	314.924	309.778	300.001	289.195	273.758	255.747	236.193	207.377	173.414
72.5	287.651	285.593	279.933	270.156	258.835	243.397	224.872	207.891	183.191	150.773
75.0	257.806	255.747	250.601	241.339	229.504	212.522	195.027	180.104	159.520	128.645
77.5	228.989	227.445	221.785	213.037	201.716	185.250	167.239	150.773	134.820	107.033
80.0	201.202	199.658	193.997	187.308	175.472	159.520	141.510	123.500	107.033	85.935
82.5	174.443	172.900	169.297	161.064	150.258	134.820	117.325	98.800	80.275	64.323
85.0	148.200	146.141	143.054	135.335	125.043	110.635	94.683	76.673	56.089	41.681
87.5	122.985	121.441	118.354	111.150	100.858	88.508	72.041	56.604	38.079	15.437
90.0	98.285	96.741	94.169	87.994	78.731	67.410	53.002	39.108	23.671	4.117
92.5	67.410	65.352	63.294	57.633	49.400	39.623	26.244	15.952	8.233	1.029
95.0	33.962	32.419	31.390	27.273	21.612	15.952	11.321	7.719	3.087	0.000
97.5	15.437	14.923	14.408	13.379	12.350	10.292	7.719	4.631	1.029	0.000
100.0	10.806	10.806	10.292	9.777	8.748	7.204	5.146	2.058	0.515	0.000
102.5	8.233	8.233	8.233	7.719	6.690	5.660	3.087	1.029	0.515	0.000
105.0	6.690	6.690	6.175	6.175	5.146	3.602	1.029	0.515	0.000	0.000
107.5	5.146	5.146	5.146	4.631	3.602	1.029	0.515	0.515	0.000	0.000
110.0	4.117	4.117	3.602	2.573	0.515	0.515	0.515	0.000	0.000	0.000
112.5	1.029	1.029	0.515	0.515	0.515	0.515	0.515	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	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	650.946	650.946	650.946	650.946	650.946
2.5	649.917	647.344	643.227	640.655	640.140
5.0	646.830	639.111	629.334	620.071	616.984
7.5	642.198	628.819	608.750	592.798	586.623
10.0	634.480	613.382	584.565	560.380	551.117
12.5	625.217	595.886	556.263	524.874	510.465
15.0	614.411	575.817	525.388	486.280	468.784
17.5	602.575	554.205	492.455	446.143	426.074
20.0	588.167	530.534	457.978	404.976	382.334
22.5	572.730	505.320	421.957	363.809	339.624
25.0	556.263	478.561	385.936	323.157	297.943
27.5	538.253	450.774	351.974	283.020	256.262
30.0	519.213	422.472	315.953	243.912	216.639
32.5	498.630	393.141	280.962	205.833	178.560
35.0	477.017	363.809	246.999	169.297	142.025
37.5	454.890	334.478	213.037	134.306	107.033
40.0	432.249	305.147	180.104	101.373	74.614
42.5	409.093	276.331	148.714	69.983	44.769
45.0	385.422	248.029	116.810	41.681	19.040
47.5	361.751	219.212	89.537	16.981	5.146
50.0	337.566	191.939	62.779	5.146	3.602
52.5	313.895	165.695	37.564	4.117	2.573
55.0	290.224	139.452	14.923	3.087	2.058
57.5	266.553	114.237	5.660	2.573	1.544
60.0	242.883	89.537	4.117	2.058	1.029
62.5	219.727	66.381	3.087	1.544	0.515
65.0	196.570	44.254	2.573	1.029	0.515
67.5	173.414	24.185	2.058	1.029	0.000
70.0	151.287	7.719	1.544	0.515	0.000
72.5	129.160	4.117	1.544	0.515	0.000
75.0	107.548	3.087	1.029	0.515	0.000
77.5	86.964	2.573	1.029	0.515	0.000
80.0	66.896	2.058	0.515	0.515	0.000

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CANDELA TABULATION - (Cont.)

82.5	46.827	1.544	0.515	0.000	0.000
85.0	27.787	1.029	0.000	0.000	0.000
87.5	8.748	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	229.51	N.A.	14.50
0-30	469.45	N.A.	29.60
0-40	738.20	N.A.	46.50
0-60	1221.91	N.A.	76.90
0-80	1514.32	N.A.	95.30
0-90	1573.22	N.A.	99.10
10-90	1512.18	N.A.	95.20
20-40	508.69	N.A.	32.00
20-50	767.13	N.A.	48.30
40-70	659.55	N.A.	41.50
60-80	292.41	N.A.	18.40
70-80	116.57	N.A.	7.30
80-90	58.90	N.A.	3.70
90-110	14.85	N.A.	0.90
90-120	14.98	N.A.	0.90
90-130	14.98	N.A.	0.90
90-150	14.98	N.A.	0.90
90-180	14.98	N.A.	0.90
110-180	0.13	N.A.	0.00
0-180	1588.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	61.04
10-20	168.47
20-30	239.94
30-40	268.75
40-50	258.44
50-60	225.27
60-70	175.83
70-80	116.57
80-90	58.90
90-100	13.01
100-110	1.83
110-120	0.13
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

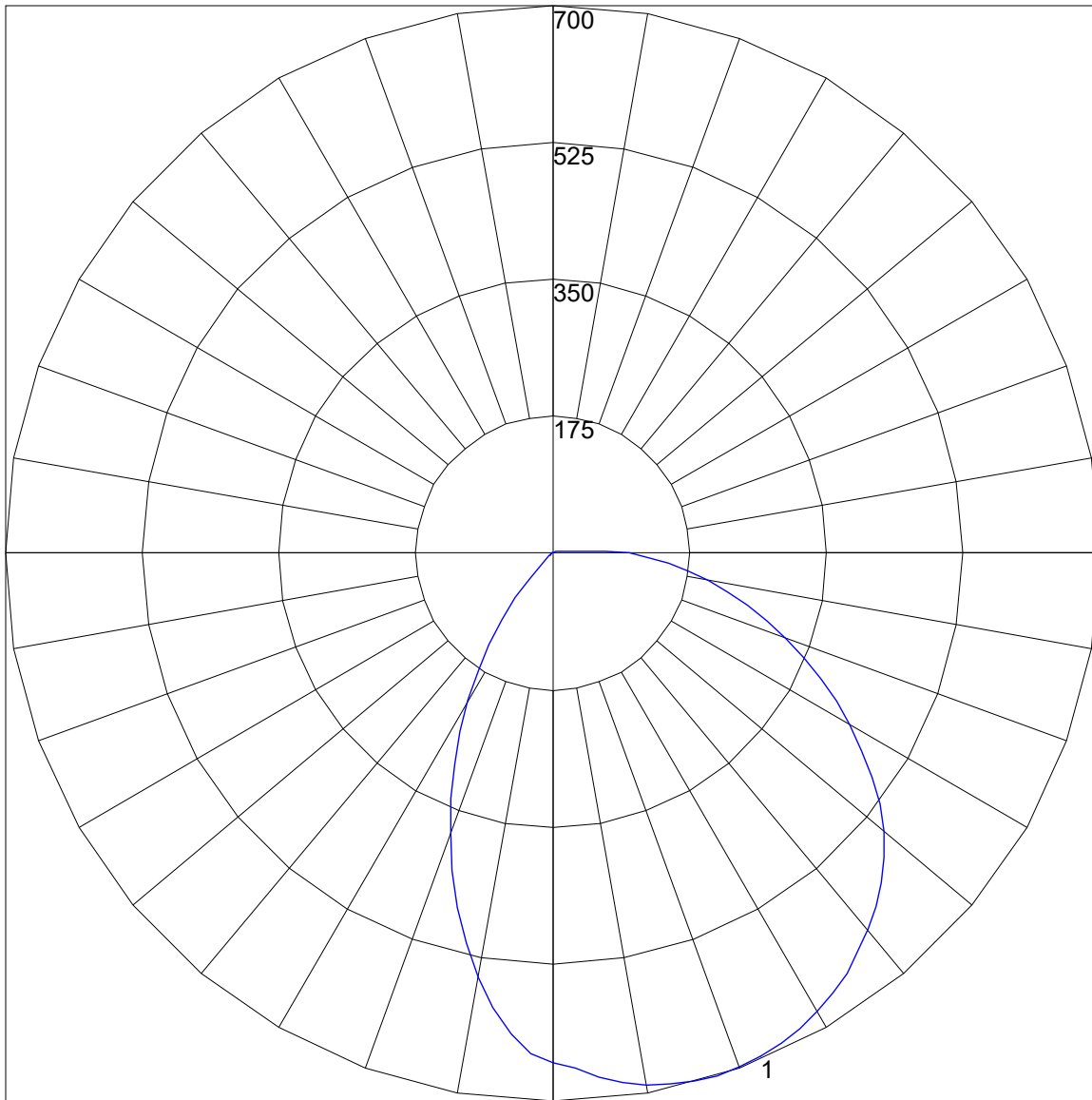
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86	84	82
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	90	79	71	64	87	78	70	64	74	68	63	72	66	61	69	64	60	58
4	82	70	62	55	80	69	61	55	66	59	54	64	58	53	62	56	52	50
5	76	63	54	48	74	62	54	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

POLAR GRAPH



Maximum Candela = 700.346 Located At Horizontal Angle = 0, Vertical Angle = 17.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)