

# 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-2-ID-4FT-B-H-835-ASY-ITL89599.011.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89599.011 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]08/24/17

[ISSUEDATE]10/30/17

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-2-ID-4ft-B-H-835-ASY

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 46.5 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 48.5 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89599. 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]4690

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4689
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	46.5
Ballast Factor	1.00
CIE Type	General Diffuse
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)	0.18 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	11707	12024	12325
55	10829	11138	11468
65	10031	10283	10590
75	9581	9445	9536
85	9755	9213	8265

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	969.944	969.944	969.944	969.944	969.944	969.944	969.944	969.944	969.944	969.944
2.5	968.389	968.389	968.389	968.389	968.389	968.389	968.389	968.389	969.167	968.389
5.0	962.944	962.944	962.944	962.944	962.944	963.722	962.944	963.722	964.500	964.500
7.5	952.832	953.610	952.832	954.388	955.944	955.944	955.944	956.721	957.499	956.721
10.0	939.609	939.609	940.387	941.165	942.721	943.499	945.832	945.054	945.832	947.388
12.5	924.053	922.497	925.609	927.164	928.720	927.164	931.831	931.831	931.831	934.165
15.0	906.163	903.830	906.941	909.274	912.386	912.386	913.941	913.941	919.386	923.275
17.5	882.051	882.051	884.384	888.273	891.384	890.607	896.829	891.384	896.051	899.940
20.0	859.494	857.938	861.049	864.938	868.827	869.605	871.939	868.050	874.272	878.939
22.5	832.270	833.048	834.603	838.492	843.937	844.715	847.048	843.937	850.938	857.160
25.0	804.268	803.490	805.824	811.269	816.713	815.158	819.825	818.269	823.714	831.492
27.5	773.155	773.933	777.044	780.934	786.378	786.378	791.823	791.823	794.934	804.268
30.0	744.376	743.598	747.487	751.376	756.043	757.599	762.266	763.044	767.711	775.489
32.5	712.485	712.485	714.041	721.819	724.153	727.264	731.931	731.153	736.598	744.376
35.0	679.039	679.039	681.372	687.595	692.262	695.373	697.707	699.262	705.485	712.485
37.5	646.370	646.370	647.926	653.371	658.816	662.705	664.260	665.816	672.038	679.039
40.0	612.924	612.146	615.257	619.146	623.036	628.480	630.036	633.925	637.814	644.815
42.5	580.255	579.478	581.033	585.700	589.589	595.034	596.590	600.479	604.368	609.813
45.0	545.253	545.253	546.809	550.698	555.365	560.032	562.365	564.699	568.588	574.811
47.5	511.029	511.807	513.363	516.474	521.141	526.586	527.364	529.697	534.364	540.587
50.0	476.805	477.583	478.361	482.250	486.139	490.028	492.361	494.695	498.584	504.029
52.5	441.803	443.359	444.137	448.803	451.137	455.026	458.137	459.693	463.582	467.471
55.0	409.135	409.135	410.690	414.579	416.913	420.802	423.135	424.691	427.802	431.691
57.5	375.688	375.688	378.022	381.133	384.244	387.356	388.133	390.467	393.578	397.467
60.0	343.020	343.020	344.575	347.687	350.798	353.131	355.465	355.465	358.576	361.687
62.5	310.351	311.907	312.685	315.018	316.574	319.685	321.241	321.241	324.352	326.685
65.0	279.238	280.794	280.794	283.127	283.905	286.239	287.794	287.794	289.350	292.461
67.5	248.903	249.681	248.903	251.237	252.014	253.570	255.126	254.348	255.904	259.015
70.0	218.568	219.346	218.568	220.901	220.901	221.679	222.457	222.457	224.791	225.569
72.5	190.566	190.566	189.789	190.566	190.566	190.566	191.344	190.566	192.900	193.678
75.0	163.343	162.565	161.787	162.565	161.787	161.009	161.009	159.454	161.787	162.565
77.5	136.119	135.341	135.341	135.341	134.563	132.230	131.452	131.452	131.452	132.230
80.0	108.117	108.117	108.117	108.117	107.340	105.784	104.228	102.672	102.672	102.672
82.5	80.894	81.671	81.671	80.894	80.894	79.338	78.560	76.227	75.449	74.671
85.0	56.003	56.781	56.781	56.003	55.225	52.892	52.114	50.558	49.003	48.225
87.5	35.780	36.558	35.780	34.224	31.891	29.557	27.224	24.890	23.335	21.001
90.0	18.527	18.527	18.012	16.468	14.410	11.836	8.749	5.661	3.088	0.515
92.5	40.141	40.656	40.656	39.627	36.024	32.422	32.422	28.819	27.275	21.614
95.0	80.282	81.311	80.797	79.253	76.165	73.592	71.534	66.387	59.182	44.773
97.5	121.967	122.996	122.482	120.423	121.967	120.938	118.365	108.072	92.633	65.358
100.0	157.991	159.535	161.079	165.711	177.032	177.032	171.886	151.816	126.599	85.428
102.5	202.764	204.822	211.513	225.408	243.420	242.905	229.010	197.618	155.933	104.984
105.0	264.005	267.093	282.531	308.778	321.643	316.497	288.707	241.361	181.664	125.570
107.5	358.697	357.667	384.428	401.925	411.189	395.235	350.462	278.414	205.337	145.125
110.0	479.635	476.547	494.559	504.337	505.881	470.886	400.896	309.807	226.437	165.711
112.5	599.028	595.426	609.321	610.350	592.853	532.641	439.493	335.538	247.537	184.752
115.0	714.820	710.703	716.364	701.954	659.240	579.472	468.827	358.182	267.607	205.852
117.5	807.968	803.851	796.646	770.915	709.159	610.865	490.442	377.223	287.163	226.952
120.0	874.355	870.753	855.828	816.717	740.037	629.906	506.910	395.235	307.748	248.566
122.5	917.069	913.982	892.882	842.963	756.505	642.772	520.805	412.733	328.334	270.180
125.0	937.140	935.081	910.379	853.255	763.195	651.521	533.670	429.715	348.919	291.280
127.5	941.257	939.713	912.952	852.741	764.739	657.182	546.536	447.727	369.504	311.865
130.0	934.052	932.508	905.747	847.080	763.195	661.813	559.917	465.740	390.604	333.994
132.5	920.672	920.157	894.940	838.846	760.622	667.989	572.268	484.266	411.703	356.123

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

135.0	905.747	904.718	881.045	829.068	758.563	674.164	585.648	502.278	432.289	378.252
137.5	890.823	888.765	867.665	820.834	757.534	680.855	599.543	520.805	452.359	400.382
140.0	874.870	873.841	855.828	814.144	757.534	687.545	612.923	539.332	472.944	422.511
142.5	862.004	861.489	846.051	808.997	758.049	694.235	626.818	557.858	493.015	445.154
145.0	851.197	850.682	836.787	803.851	758.563	701.954	640.713	574.326	512.571	466.254
147.5	841.419	840.390	828.553	799.219	759.078	709.159	653.579	590.280	531.612	487.354
150.0	830.612	830.612	820.319	795.102	760.107	716.364	664.386	604.175	549.624	507.424
152.5	821.863	820.834	813.114	792.014	761.651	721.510	674.164	617.040	566.607	526.466
155.0	814.658	813.114	806.939	788.412	761.137	724.598	680.855	627.848	581.531	544.478
157.5	807.453	805.909	799.734	783.780	758.563	724.598	685.486	637.111	595.426	561.975
160.0	797.675	796.131	789.956	775.546	753.417	722.025	687.545	644.316	607.263	577.414
162.5	784.810	783.780	777.605	765.254	744.154	716.879	687.545	649.462	618.070	591.309
165.0	768.341	767.312	761.137	749.815	732.832	709.674	684.972	653.064	626.304	603.145
167.5	748.786	747.756	742.095	733.347	718.937	699.896	680.340	654.094	631.965	612.923
170.0	726.142	725.113	720.996	713.276	702.984	689.089	673.135	653.064	636.596	620.643
172.5	702.984	702.469	698.866	694.235	686.515	675.708	664.386	650.491	638.140	625.789
175.0	678.281	677.767	675.194	672.106	667.474	661.299	654.094	645.345	637.111	628.877
177.5	653.064	653.064	652.035	650.491	648.433	645.860	642.257	637.626	634.023	629.906
180.0	628.877	628.877	628.877	628.877	628.877	628.877	628.877	628.877	628.877	628.877

**Vert. Horizontal Angles**

	<u>90.0</u>	<u>95.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	969.944	969.944	969.944	969.944	969.944	969.944
2.5	968.389	968.389	968.389	968.389	968.389	967.611
5.0	963.722	963.722	963.722	963.722	962.944	962.944
7.5	956.721	956.721	956.721	955.944	955.944	955.166
10.0	948.165	947.388	945.054	945.832	945.832	943.499
12.5	934.942	935.720	931.053	931.831	931.053	927.164
15.0	923.275	923.275	916.275	915.497	912.386	907.719
17.5	899.940	901.496	896.051	894.496	891.384	885.162
20.0	878.939	880.495	872.717	874.272	866.494	861.049
22.5	854.827	856.382	848.604	847.826	840.826	834.603
25.0	829.936	831.492	822.158	819.047	812.824	805.824
27.5	802.713	804.268	793.379	790.268	783.267	775.489
30.0	773.155	775.489	764.599	759.932	751.376	744.376
32.5	742.043	744.376	734.264	730.375	719.486	712.485
35.0	710.930	710.930	701.596	697.707	688.373	679.039
37.5	678.261	677.483	669.705	665.038	654.149	644.815
40.0	645.592	644.815	635.481	630.036	616.813	610.591
42.5	610.591	609.813	602.812	595.034	583.367	577.144
45.0	574.033	574.811	567.033	560.032	548.365	542.142
47.5	539.809	539.809	532.030	525.030	514.141	508.696
50.0	504.029	504.029	496.251	489.250	479.139	474.472
52.5	468.249	468.249	461.249	455.026	444.914	441.025
55.0	433.247	432.469	425.469	419.246	409.912	407.579
57.5	398.245	396.689	390.467	385.022	378.022	374.132
60.0	364.021	363.243	356.243	350.798	343.798	341.464
62.5	329.019	329.019	321.241	316.574	311.129	308.796
65.0	294.795	294.017	287.794	284.683	278.460	276.127
67.5	260.570	259.793	254.348	252.014	246.570	245.014
70.0	227.124	226.346	221.679	219.346	215.457	213.901
72.5	194.456	194.456	191.344	188.233	185.122	183.566
75.0	162.565	162.565	160.231	157.898	155.565	154.787
77.5	132.230	132.230	129.896	128.341	127.563	126.785
80.0	102.672	102.672	101.117	100.339	100.339	99.561

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**CANDELA TABULATION - (Cont.)**

82.5	74.671	74.671	73.115	73.893	74.671	73.893
85.0	47.447	48.225	47.447	49.003	49.781	49.003
87.5	20.223	21.001	22.557	25.668	27.224	28.779
90.0	0.000	0.515	5.146	10.293	13.380	13.895
92.5	12.351	15.439	17.497	21.614	23.158	23.673
95.0	30.363	32.422	35.509	42.200	42.714	40.656
97.5	49.404	49.404	53.007	63.299	66.902	65.358
100.0	68.960	66.387	71.019	83.370	91.089	90.575
102.5	88.002	83.885	91.089	104.984	113.218	113.733
105.0	107.558	100.867	110.645	130.201	135.347	134.833
107.5	127.628	119.394	128.143	149.757	158.506	155.933
110.0	147.699	138.435	144.096	170.342	179.091	179.091
112.5	167.769	157.476	159.535	190.413	201.735	201.735
115.0	188.869	176.518	174.459	208.940	224.893	225.922
117.5	210.483	196.074	188.354	225.922	246.507	248.566
120.0	231.583	216.144	202.764	240.846	266.578	269.666
122.5	252.683	236.215	217.174	254.742	285.105	289.222
125.0	273.783	256.800	232.098	267.093	302.602	307.234
127.5	294.368	276.870	246.507	277.900	317.012	324.216
130.0	315.982	297.456	260.402	287.163	328.334	339.141
132.5	337.597	319.070	274.297	295.912	335.024	349.433
135.0	359.726	340.170	287.678	304.146	340.170	354.580
137.5	381.855	361.784	302.602	311.351	343.772	356.638
140.0	403.469	383.399	318.555	319.070	345.831	357.667
142.5	425.084	405.013	337.082	326.790	347.375	356.638
145.0	446.698	427.142	357.153	334.509	348.919	355.609
147.5	467.798	448.757	377.223	342.228	350.977	355.609
150.0	489.412	469.856	396.264	350.977	354.580	356.123
152.5	509.483	490.442	417.364	362.299	358.182	358.182
155.0	528.524	509.998	438.464	378.252	364.358	361.270
157.5	546.536	529.039	459.049	400.382	373.621	368.474
160.0	563.004	547.051	482.722	425.598	388.545	379.282
162.5	577.929	563.519	506.395	450.815	413.762	399.352
165.0	591.309	578.958	531.097	476.032	444.640	430.230
167.5	602.631	591.824	552.197	503.307	473.459	462.652
170.0	611.380	603.145	571.239	533.670	505.366	494.559
172.5	618.584	612.409	589.765	562.490	541.905	533.156
175.0	624.760	620.128	605.204	588.221	575.356	570.209
177.5	627.848	625.789	618.070	610.350	604.689	601.602
180.0	628.877	628.877	628.877	628.877	628.877	628.877

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	348.54	N.A.	7.40
0-30	724.81	N.A.	15.50
0-40	1159.48	N.A.	24.70
0-60	1966.31	N.A.	41.90
0-80	2418.29	N.A.	51.60
0-90	2475.71	N.A.	52.80
10-90	2384.33	N.A.	50.80
20-40	810.94	N.A.	17.30
20-50	1242.2	N.A.	26.50
40-70	1089.29	N.A.	23.20
60-80	451.99	N.A.	9.60
70-80	169.53	N.A.	3.60
80-90	57.41	N.A.	1.20
90-110	266.68	N.A.	5.70
90-120	618.93	N.A.	13.20
90-130	1022.94	N.A.	21.80
90-150	1729.95	N.A.	36.90
90-180	2213.35	N.A.	47.20
110-180	1946.67	N.A.	41.50
0-180	4689.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	91.38
10-20	257.16
20-30	376.27
30-40	434.67
40-50	431.26
50-60	375.57
60-70	282.46
70-80	169.53
80-90	57.41
90-100	62.42
100-110	204.26
110-120	352.25
120-130	404.01
130-140	379.83
140-150	327.18
150-160	256.47
160-170	167.74
170-180	59.19

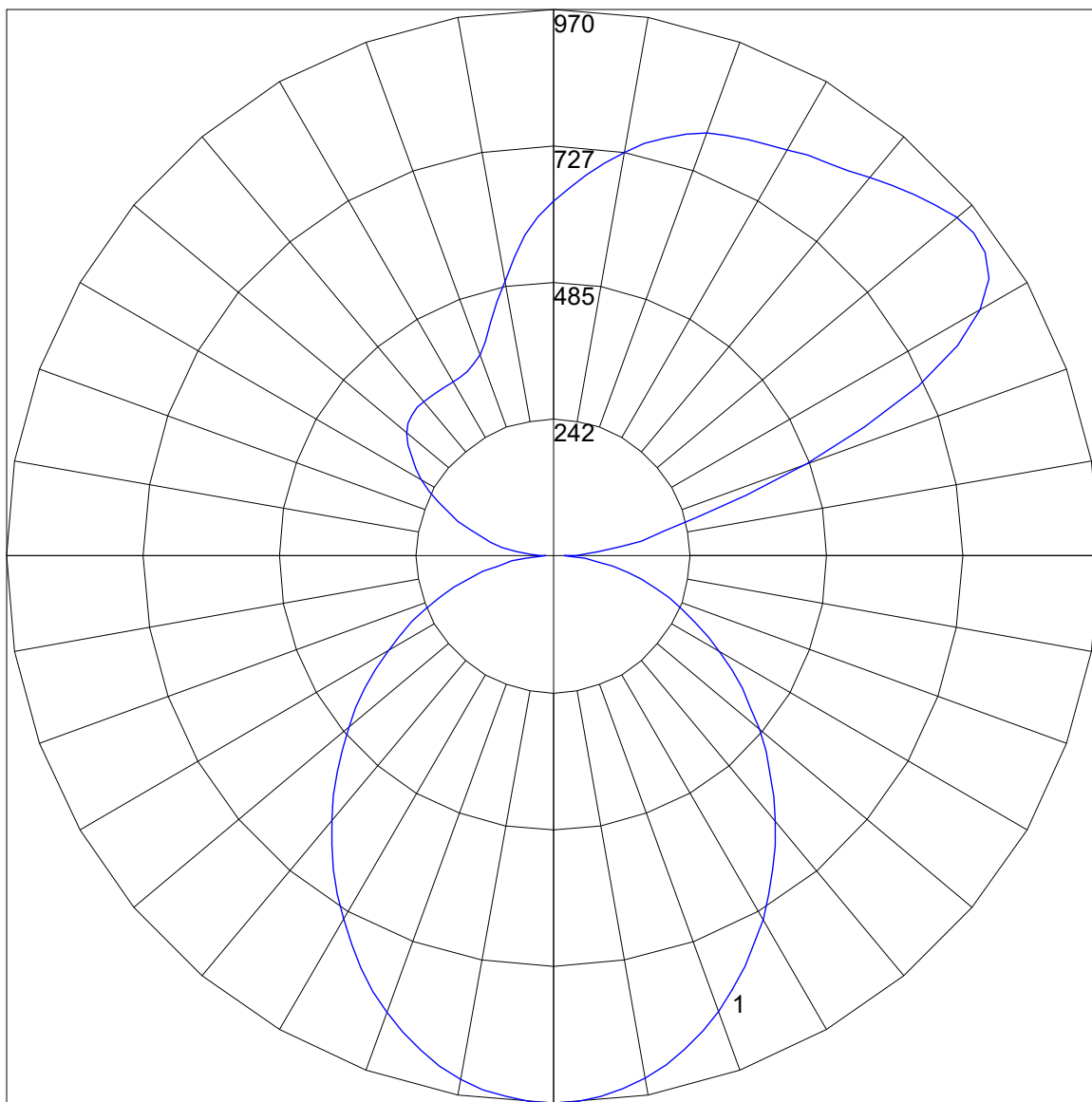
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	98	94	90	86	91	87	84	81	74	72	69	62	61	59	52	50	49	44
2	89	82	76	71	83	76	71	66	65	61	57	55	52	49	45	43	41	37
3	82	72	65	59	75	67	60	55	57	52	48	48	45	42	40	38	35	31
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	30	27
5	69	57	49	43	63	53	46	40	46	40	36	39	34	31	32	29	27	23
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	21
7	58	46	38	32	54	43	36	31	37	32	27	32	27	24	27	23	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	19	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	13

POLAR GRAPH



Maximum Candela = 969.944 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)