

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-S-B-835-ASY-ITL89599.013.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89599.013 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]08/24/17
[ISSUE DATE]10/30/17
[MANUFAC]FINELITE, INC.
[LUMCAT]HP-2-ID-4ft-S-B-835-ASY
[INPUT_ELECTRICAL]120.0 VOLTS, 32.7 WATTS
[INPUT_ELECTRICAL]277.0 VOLTS, 35.4 WATTS
[OTHER]see 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
[ABSOLUTE LUMENS]3399

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3399
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	32.7
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	7746	7956	8154
55	7165	7369	7587
65	6637	6803	7007
75	6339	6249	6309
85	6454	6096	5468

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	641.743	641.743	641.743	641.743	641.743	641.743	641.743	641.743	641.743	641.743
2.5	640.713	640.713	640.713	640.713	640.713	640.713	640.713	640.713	641.228	640.713
5.0	637.111	637.111	637.111	637.111	637.111	637.626	637.111	637.626	638.140	638.140
7.5	630.421	630.936	630.421	631.450	632.479	632.479	632.479	632.994	633.509	632.994
10.0	621.672	621.672	622.187	622.701	623.731	624.245	625.789	625.274	625.789	626.818
12.5	611.380	610.350	612.409	613.438	614.467	613.438	616.526	616.526	616.526	618.070
15.0	599.543	597.999	600.058	601.602	603.660	603.660	604.689	604.689	608.292	610.865
17.5	583.590	583.590	585.134	587.707	589.765	589.250	593.368	589.765	592.853	595.426
20.0	568.665	567.636	569.695	572.268	574.841	575.356	576.899	574.326	578.443	581.531
22.5	550.653	551.168	552.197	554.770	558.373	558.887	560.431	558.373	563.004	567.121
25.0	532.127	531.612	533.156	536.758	540.361	539.332	542.419	541.390	544.992	550.139
27.5	511.541	512.056	514.115	516.688	520.290	520.290	523.893	523.893	525.951	532.127
30.0	492.500	491.986	494.559	497.132	500.220	501.249	504.337	504.851	507.939	513.085
32.5	471.400	471.400	472.430	477.576	479.120	481.178	484.266	483.752	487.354	492.500
35.0	449.271	449.271	450.815	454.932	458.020	460.079	461.622	462.652	466.769	471.400
37.5	427.657	427.657	428.686	432.289	435.891	438.464	439.493	440.523	444.640	449.271
40.0	405.528	405.013	407.072	409.645	412.218	415.820	416.850	419.423	421.996	426.628
42.5	383.913	383.399	384.428	387.516	390.089	393.691	394.721	397.294	399.867	403.469
45.0	360.755	360.755	361.784	364.358	367.445	370.533	372.077	373.621	376.194	380.311
47.5	338.111	338.626	339.655	341.714	344.802	348.404	348.919	350.462	353.550	357.667
50.0	315.468	315.982	316.497	319.070	321.643	324.216	325.760	327.304	329.877	333.480
52.5	292.309	293.339	293.853	296.941	298.485	301.058	303.117	304.146	306.719	309.292
55.0	270.695	270.695	271.724	274.297	275.841	278.414	279.958	280.988	283.046	285.619
57.5	248.566	248.566	250.110	252.168	254.227	256.285	256.800	258.344	260.402	262.976
60.0	226.952	226.952	227.981	230.039	232.098	233.642	235.186	235.186	237.244	239.303
62.5	205.337	206.366	206.881	208.425	209.454	211.513	212.542	212.542	214.600	216.144
65.0	184.752	185.781	185.781	187.325	187.840	189.384	190.413	190.413	191.442	193.501
67.5	164.681	165.196	164.681	166.225	166.740	167.769	168.798	168.284	169.313	171.371
70.0	144.611	145.125	144.611	146.155	146.155	146.669	147.184	147.184	148.728	149.243
72.5	126.084	126.084	125.570	126.084	126.084	126.084	126.599	126.084	127.628	128.143
75.0	108.072	107.558	107.043	107.558	107.043	106.528	106.528	105.499	107.043	107.558
77.5	90.060	89.546	89.546	89.546	89.031	87.487	86.972	86.972	86.972	87.487
80.0	71.534	71.534	71.534	71.534	71.019	69.990	68.960	67.931	67.931	67.931
82.5	53.521	54.036	54.036	53.521	53.521	52.492	51.978	50.434	49.919	49.404
85.0	37.053	37.568	37.568	37.053	36.539	34.995	34.480	33.451	32.422	31.907
87.5	23.673	24.188	23.673	22.644	21.100	19.556	18.012	16.468	15.439	13.895
90.0	14.737	14.737	14.327	13.099	11.462	9.415	6.959	4.503	2.456	0.409
92.5	31.930	32.339	32.339	31.520	28.655	25.789	25.789	22.924	21.696	17.193
95.0	63.859	64.678	64.268	63.040	60.584	58.537	56.900	52.806	47.075	35.614
97.5	97.016	97.835	97.426	95.788	97.016	96.198	94.151	85.964	73.683	51.988
100.0	125.671	126.899	128.127	131.811	140.817	140.817	136.724	120.759	100.701	67.952
102.5	161.285	162.922	168.244	179.296	193.624	193.214	182.162	157.191	124.034	83.508
105.0	209.998	212.454	224.734	245.611	255.845	251.751	229.647	191.986	144.501	99.882
107.5	285.318	284.500	305.786	319.704	327.072	314.382	278.769	221.459	163.332	115.437
110.0	381.516	379.060	393.387	401.165	402.393	374.557	318.885	246.430	180.115	131.811
112.5	476.486	473.620	484.673	485.491	471.574	423.679	349.587	266.897	196.898	146.957
115.0	568.590	565.315	569.818	558.356	524.380	460.930	372.920	284.909	212.863	163.741
117.5	642.683	639.408	633.677	613.209	564.087	485.901	390.113	300.055	228.418	180.524
120.0	695.489	692.624	680.752	649.642	588.648	501.047	403.212	314.382	244.792	197.717
122.5	729.465	727.009	710.226	670.519	601.747	511.281	414.264	328.300	261.167	214.910
125.0	745.430	743.793	724.144	678.706	607.069	518.240	424.498	341.809	277.541	231.693
127.5	748.705	747.477	726.191	678.296	608.297	522.743	434.732	356.136	293.915	248.067
130.0	742.974	741.746	720.460	673.793	607.069	526.427	445.375	370.464	310.698	265.670
132.5	732.331	731.921	711.863	667.244	605.022	531.339	455.200	385.200	327.482	283.272

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CANDELA TABULATION - (Cont.)

135.0	720.460	719.641	700.811	659.466	603.385	536.251	465.843	399.528	343.856	300.874
137.5	708.588	706.951	690.168	652.917	602.566	541.573	476.895	414.264	359.820	318.476
140.0	695.898	695.080	680.752	647.595	602.566	546.894	487.538	429.001	376.195	336.078
142.5	685.665	685.255	672.975	643.501	602.976	552.216	498.591	443.738	392.159	354.089
145.0	677.068	676.659	665.606	639.408	603.385	558.356	509.643	456.837	407.715	370.873
147.5	669.291	668.472	659.057	635.724	603.794	564.087	519.877	469.527	422.861	387.656
150.0	660.694	660.694	652.507	632.449	604.613	569.818	528.473	480.579	437.188	403.621
152.5	653.735	652.917	646.776	629.993	605.841	573.912	536.251	490.813	450.697	418.767
155.0	648.004	646.776	641.864	627.127	605.432	576.368	541.573	499.409	462.568	433.094
157.5	642.273	641.045	636.133	623.443	603.385	576.368	545.257	506.778	473.620	447.012
160.0	634.496	633.268	628.355	616.894	599.291	574.321	546.894	512.509	483.035	459.293
162.5	624.262	623.443	618.531	608.707	591.923	570.227	546.894	516.602	491.632	470.346
165.0	611.163	610.344	605.432	596.426	582.917	564.496	544.847	519.468	498.181	479.761
167.5	595.607	594.788	590.286	583.327	571.865	556.719	541.163	520.286	502.684	487.538
170.0	577.596	576.777	573.502	567.362	559.175	548.122	535.432	519.468	506.368	493.679
172.5	559.175	558.765	555.900	552.216	546.076	537.479	528.473	517.421	507.596	497.772
175.0	539.526	539.117	537.070	534.614	530.930	526.017	520.286	513.327	506.778	500.228
177.5	519.468	519.468	518.649	517.421	515.784	513.737	510.871	507.187	504.322	501.047
180.0	500.228	500.228	500.228	500.228	500.228	500.228	500.228	500.228	500.228	500.228

**Vert.
Angles**

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	641.743	641.743	641.743	641.743	641.743	641.743
2.5	640.713	640.713	640.713	640.713	640.713	640.199
5.0	637.626	637.626	637.626	637.626	637.111	637.111
7.5	632.994	632.994	632.994	632.479	632.479	631.965
10.0	627.333	626.818	625.274	625.789	625.789	624.245
12.5	618.584	619.099	616.011	616.526	616.011	613.438
15.0	610.865	610.865	606.233	605.719	603.660	600.572
17.5	595.426	596.455	592.853	591.824	589.765	585.648
20.0	581.531	582.560	577.414	578.443	573.297	569.695
22.5	565.578	566.607	561.461	560.946	556.314	552.197
25.0	549.109	550.139	543.963	541.905	537.788	533.156
27.5	531.097	532.127	524.922	522.863	518.232	513.085
30.0	511.541	513.085	505.881	502.793	497.132	492.500
32.5	490.956	492.500	485.810	483.237	476.032	471.400
35.0	470.371	470.371	464.196	461.622	455.447	449.271
37.5	448.757	448.242	443.096	440.008	432.803	426.628
40.0	427.142	426.628	420.452	416.850	408.101	403.984
42.5	403.984	403.469	398.838	393.691	385.972	381.855
45.0	379.796	380.311	375.165	370.533	362.814	358.697
47.5	357.153	357.153	352.006	347.375	340.170	336.567
50.0	333.480	333.480	328.334	323.702	317.012	313.924
52.5	309.807	309.807	305.175	301.058	294.368	291.795
55.0	286.649	286.134	281.502	277.385	271.210	269.666
57.5	263.490	262.461	258.344	254.742	250.110	247.537
60.0	240.846	240.332	235.700	232.098	227.466	225.922
62.5	217.688	217.688	212.542	209.454	205.852	204.308
65.0	195.044	194.530	190.413	188.354	184.237	182.693
67.5	172.401	171.886	168.284	166.740	163.137	162.108
70.0	150.272	149.757	146.669	145.125	142.552	141.523
72.5	128.657	128.657	126.599	124.540	122.482	121.453
75.0	107.558	107.558	106.014	104.470	102.926	102.411
77.5	87.487	87.487	85.943	84.914	84.399	83.885
80.0	67.931	67.931	66.902	66.387	66.387	65.873

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CANDELA TABULATION - (Cont.)

82.5	49.404	49.404	48.375	48.890	49.404	48.890
85.0	31.392	31.907	31.392	32.422	32.936	32.422
87.5	13.380	13.895	14.924	16.983	18.012	19.041
90.0	0.000	0.409	4.093	8.187	10.643	11.053
92.5	9.824	12.281	13.918	17.193	18.421	18.830
95.0	24.152	25.789	28.245	33.567	33.976	32.339
97.5	39.298	39.298	42.163	50.350	53.216	51.988
100.0	54.853	52.806	56.491	66.315	72.455	72.046
102.5	69.999	66.724	72.455	83.508	90.057	90.467
105.0	85.555	80.233	88.011	103.566	107.660	107.250
107.5	101.519	94.970	101.929	119.121	126.080	124.034
110.0	117.484	110.116	114.619	135.495	142.454	142.454
112.5	133.449	125.262	126.899	151.460	160.466	160.466
115.0	150.232	140.408	138.770	166.197	178.887	179.706
117.5	167.425	155.963	149.823	179.706	196.080	197.717
120.0	184.208	171.928	161.285	191.577	212.044	214.500
122.5	200.992	187.893	172.747	202.629	226.781	230.056
125.0	217.775	204.267	184.618	212.454	240.699	244.383
127.5	234.149	220.231	196.080	221.050	252.161	257.892
130.0	251.342	236.606	207.132	228.418	261.167	269.763
132.5	268.535	253.798	218.185	235.377	266.488	277.950
135.0	286.137	270.582	228.828	241.927	270.582	282.043
137.5	303.739	287.774	240.699	247.658	273.447	283.681
140.0	320.932	304.967	253.389	253.798	275.085	284.500
142.5	338.125	322.160	268.126	259.938	276.313	283.681
145.0	355.318	339.762	284.090	266.079	277.541	282.862
147.5	372.101	356.955	300.055	272.219	279.178	282.862
150.0	389.294	373.738	315.201	279.178	282.043	283.272
152.5	405.259	390.113	331.985	288.184	284.909	284.909
155.0	420.404	405.668	348.768	300.874	289.821	287.365
157.5	434.732	420.814	365.142	318.476	297.190	293.096
160.0	447.831	435.141	383.972	338.534	309.061	301.692
162.5	459.702	448.240	402.802	358.592	329.119	317.657
165.0	470.346	460.521	422.451	378.651	353.680	342.218
167.5	479.351	470.755	439.235	400.346	376.604	368.007
170.0	486.310	479.761	454.381	424.498	401.984	393.387
172.5	492.041	487.129	469.117	447.422	431.048	424.089
175.0	496.953	493.269	481.398	467.889	457.656	453.562
177.5	499.409	497.772	491.632	485.491	480.989	478.533
180.0	500.228	500.228	500.228	500.228	500.228	500.228

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	230.60	N.A.	6.80
0-30	479.56	N.A.	14.10
0-40	767.14	N.A.	22.60
0-60	1300.96	N.A.	38.30
0-80	1600.01	N.A.	47.10
0-90	1638.18	N.A.	48.20
10-90	1577.72	N.A.	46.40
20-40	536.54	N.A.	15.80
20-50	821.88	N.A.	24.20
40-70	720.70	N.A.	21.20
60-80	299.05	N.A.	8.80
70-80	112.16	N.A.	3.30
80-90	38.17	N.A.	1.10
90-110	212.13	N.A.	6.20
90-120	492.32	N.A.	14.50
90-130	813.68	N.A.	23.90
90-150	1376.05	N.A.	40.50
90-180	1760.56	N.A.	51.80
110-180	1548.44	N.A.	45.60
0-180	3398.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	60.46
10-20	170.14
20-30	248.95
30-40	287.59
40-50	285.33
50-60	248.49
60-70	186.88
70-80	112.16
80-90	38.17
90-100	49.65
100-110	162.48
110-120	280.19
120-130	321.36
130-140	302.13
140-150	260.25
150-160	204.00
160-170	133.43
170-180	47.08

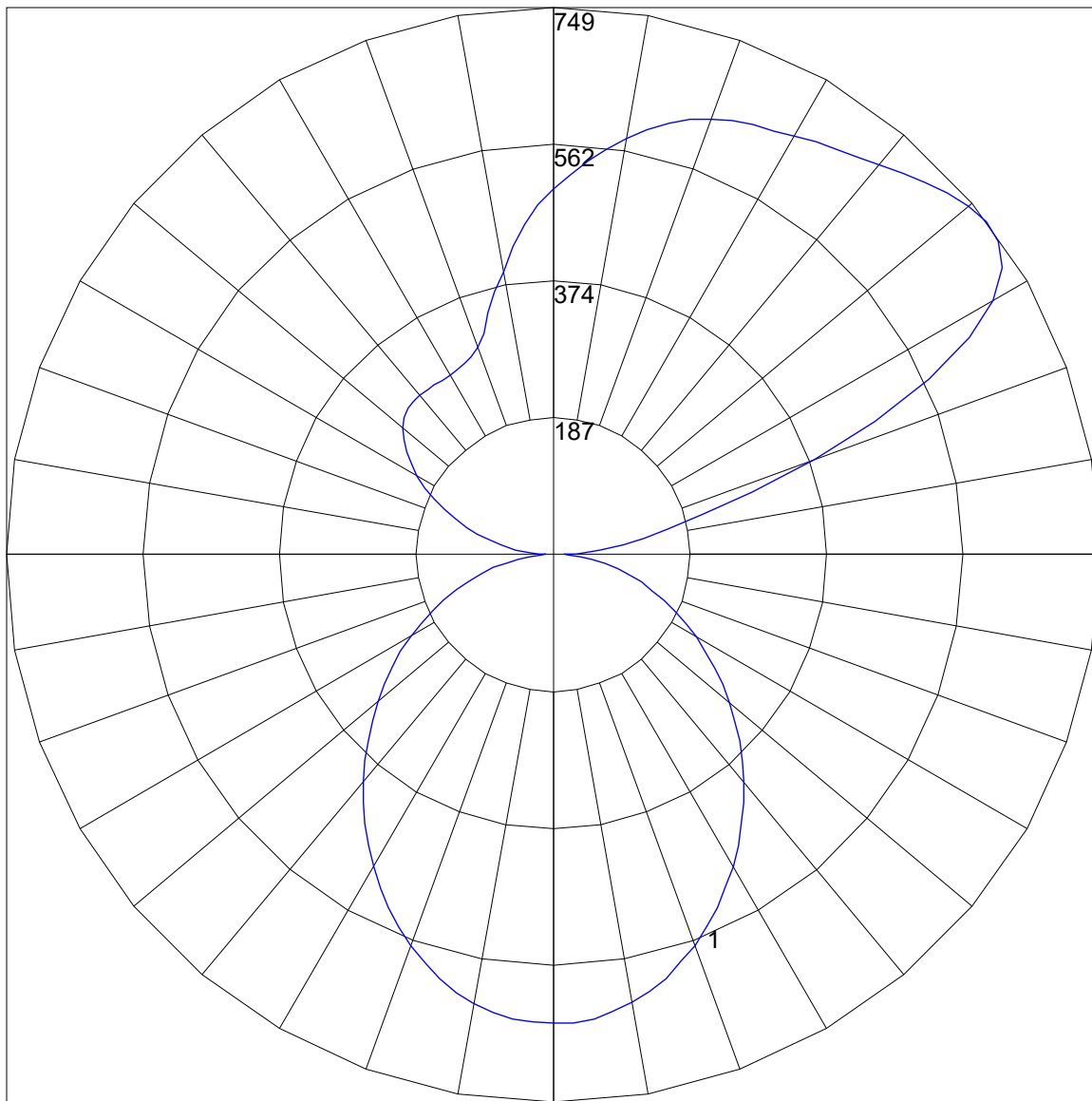
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	97	93	89	85	89	86	82	79	72	70	67	59	58	56	48	47	46	40
2	89	81	75	70	81	75	69	65	63	59	56	52	49	47	42	40	38	34
3	81	71	64	58	74	66	59	54	56	51	47	46	43	40	37	35	33	29
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	31	28	25
5	68	56	48	42	62	52	45	39	44	39	34	37	33	29	30	27	25	21
6	62	50	42	36	57	47	40	34	40	34	30	33	29	26	27	24	22	19
7	58	45	38	32	53	42	35	30	36	31	26	30	26	23	25	22	19	17
8	54	41	34	28	49	38	31	27	33	27	23	28	23	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	13
10	47	35	27	23	43	32	26	21	28	23	19	24	19	17	20	16	14	12

POLAR GRAPH



Maximum Candela = 748.705 Located At Horizontal Angle = 0, Vertical Angle = 127.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)