

# 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-4-ID-4FT-S-B-835-ASY-ITL89988.013.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL89988.013 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]11/16/17  
[ISSUE DATE]12/11/17  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HP-4-ID-4ft-S-B-835-ASYM  
[INPUT\_ELECTRICAL]120.0 VOLTS, 32.8 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 35.3 WATTS  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89988. 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]3754

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3754
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	32.8
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)	0.32 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	5211	5247	5253
55	4841	4885	4908
65	4451	4501	4501
75	4056	4039	4023
85	3343	3294	3294

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	737.980	737.980	737.980	737.980	737.980	737.980	737.980	737.980	737.980	737.980
2.5	736.951	736.951	736.951	736.951	736.951	736.951	736.951	736.436	736.951	736.951
5.0	734.378	734.378	734.378	734.378	734.378	734.378	734.378	733.863	733.863	734.378
7.5	729.746	729.231	729.231	729.231	729.231	729.231	728.717	728.202	728.202	728.202
10.0	722.027	722.027	723.571	723.056	723.056	722.027	722.541	719.968	719.968	720.483
12.5	712.249	712.249	713.793	714.307	714.822	713.278	712.763	709.676	709.676	710.705
15.0	700.412	699.898	701.956	703.500	704.015	701.442	701.442	697.839	697.839	699.898
17.5	684.973	684.973	686.517	689.090	690.120	688.061	688.061	684.459	687.032	687.546
20.0	669.020	669.534	670.564	673.137	673.651	672.107	675.195	667.990	667.990	670.049
22.5	652.037	651.522	653.066	655.125	656.669	656.669	656.154	650.493	652.037	655.125
25.0	632.996	631.966	632.996	635.569	637.113	635.569	636.598	634.539	631.966	634.025
27.5	611.896	611.896	612.410	614.984	618.586	614.984	616.527	612.410	611.896	614.469
30.0	589.767	589.767	590.281	592.854	594.913	593.884	593.369	590.796	590.281	592.340
32.5	567.638	567.638	567.638	570.725	571.755	571.240	570.725	568.667	569.696	570.211
35.0	542.421	543.450	543.450	547.567	548.082	547.052	546.538	544.994	546.023	546.538
37.5	518.748	519.262	518.748	521.321	524.409	522.865	522.350	521.835	522.350	522.350
40.0	494.560	493.531	493.531	495.589	497.648	496.618	497.648	496.618	497.648	497.648
42.5	468.829	468.314	467.285	469.858	471.402	471.402	471.916	470.887	472.431	471.916
45.0	442.582	442.582	442.582	444.126	445.156	445.670	444.641	445.156	446.185	446.185
47.5	415.307	415.822	415.822	417.365	418.395	418.909	418.395	418.395	419.424	419.424
50.0	388.031	389.061	389.575	389.575	391.119	392.149	392.149	390.605	393.178	392.663
52.5	360.756	362.300	362.300	362.300	364.358	365.388	364.873	363.844	366.417	365.902
55.0	333.481	335.539	335.539	335.024	337.083	336.568	337.598	336.568	338.627	338.627
57.5	306.205	308.264	308.778	309.293	309.808	309.293	310.322	309.808	311.351	311.866
60.0	278.930	280.988	282.017	282.017	282.532	283.562	283.047	282.532	283.562	284.591
62.5	252.684	253.713	255.257	255.257	254.227	256.286	255.771	255.257	256.801	257.830
65.0	225.923	226.952	228.496	228.496	227.467	228.496	227.981	228.496	228.496	229.011
67.5	199.677	200.706	201.221	202.250	201.221	202.764	201.221	200.191	201.735	202.250
70.0	173.945	174.460	175.489	174.974	175.489	176.004	174.460	174.460	174.974	175.489
72.5	148.728	149.243	149.757	149.757	149.757	150.272	148.728	148.728	149.243	149.757
75.0	126.085	124.541	124.541	125.055	125.055	125.570	123.511	123.511	123.511	124.026
77.5	101.897	100.353	101.897	100.353	100.868	101.382	99.324	99.324	98.294	99.324
80.0	78.739	77.195	78.224	77.709	77.195	78.224	76.680	77.195	76.165	75.651
82.5	56.095	55.066	56.095	56.095	55.066	55.580	54.551	55.066	55.066	55.066
85.0	34.995	33.966	34.995	33.966	33.966	34.480	33.451	34.480	33.966	34.480
87.5	15.954	15.954	15.954	15.439	14.410	14.924	14.410	14.410	14.924	14.410
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	27.431	27.021	28.250	27.431	26.202	23.746	24.565	25.384	23.746	17.195
95.0	58.137	58.137	60.184	58.955	57.727	59.774	65.097	63.868	52.405	33.981
97.5	91.708	89.661	95.802	98.259	103.991	111.360	111.770	97.850	76.560	49.948
100.0	142.066	140.019	146.979	151.073	159.671	162.946	153.939	129.784	101.125	66.325
102.5	192.014	190.377	197.746	202.659	214.532	212.894	194.061	162.127	123.642	82.701
105.0	238.278	236.640	246.057	259.977	271.850	264.890	236.231	194.880	144.113	99.487
107.5	293.549	291.502	308.697	330.396	335.309	319.342	279.629	224.358	163.356	115.454
110.0	369.699	367.652	391.398	403.681	399.996	371.337	320.161	248.923	181.779	131.831
112.5	462.226	459.361	474.918	476.147	464.274	422.514	352.913	269.803	199.384	148.617
115.0	546.566	543.290	553.116	547.384	522.820	464.274	377.888	288.636	215.760	165.812
117.5	625.582	621.488	625.991	608.796	568.674	493.751	396.311	304.193	232.956	183.417
120.0	689.041	685.356	682.490	654.241	599.789	511.765	409.412	319.342	249.332	201.022
122.5	734.895	732.439	718.928	683.719	616.166	522.001	421.285	334.080	266.937	219.854
125.0	761.916	759.460	741.036	696.410	622.716	527.323	430.702	348.000	283.723	238.278
127.5	771.333	768.876	746.768	697.229	622.307	530.598	440.118	361.511	301.327	256.702
130.0	767.239	764.782	741.446	690.679	618.622	533.055	450.354	375.841	318.113	274.716
132.5	754.547	752.909	729.573	680.853	614.119	535.921	460.589	390.579	336.127	293.549

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

135.0	738.170	736.942	714.834	670.208	609.615	539.606	471.234	405.318	353.732	312.382
137.5	721.385	720.566	699.686	659.563	605.930	544.109	481.878	421.285	371.746	331.215
140.0	704.599	703.780	685.356	650.556	603.883	549.022	492.523	436.843	390.170	350.048
142.5	689.860	688.631	673.893	643.596	603.474	554.344	503.987	452.810	407.775	368.880
145.0	678.396	676.759	663.657	638.274	603.474	559.667	515.860	468.368	425.379	387.714
147.5	668.570	667.342	656.288	634.589	603.883	566.217	527.732	483.516	442.575	406.137
150.0	660.792	658.744	650.147	631.314	605.521	573.177	539.606	497.845	458.951	424.151
152.5	653.832	651.784	644.824	628.857	607.568	580.137	549.022	510.537	474.099	441.346
155.0	647.281	646.053	639.912	628.038	610.434	586.278	558.438	521.591	488.429	457.314
157.5	643.596	642.368	637.455	627.629	612.481	590.782	565.398	531.417	501.121	472.462
160.0	640.730	639.502	635.817	627.220	613.300	593.648	570.721	539.606	512.584	486.382
162.5	635.408	635.817	632.542	624.354	612.072	594.057	573.996	545.747	522.001	499.074
165.0	629.267	629.267	626.401	618.213	607.568	592.010	574.405	550.250	529.779	509.718
167.5	619.031	619.441	616.984	610.024	600.198	586.688	571.949	552.297	535.102	517.907
170.0	605.930	606.749	604.293	598.561	590.782	579.728	567.446	552.707	538.787	524.457
172.5	589.554	590.782	589.144	584.641	578.500	569.902	560.895	551.069	540.015	529.370
175.0	573.587	572.768	571.540	569.083	564.989	559.257	553.525	546.975	540.015	532.645
177.5	553.116	553.116	552.707	551.069	549.431	546.156	544.109	540.424	536.740	533.464
180.0	533.055	533.055	533.055	533.055	533.055	533.055	533.055	533.055	533.055	533.055

**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	737.980	737.980	737.980	737.980	737.980	737.980
2.5	736.951	736.951	736.951	736.951	736.951	736.951
5.0	733.863	734.378	733.863	733.349	732.834	733.863
7.5	728.717	728.717	728.202	727.173	727.688	727.688
10.0	721.512	721.512	719.454	719.968	720.997	719.968
12.5	712.249	711.734	708.646	710.705	712.249	710.705
15.0	701.442	700.412	695.780	699.898	700.412	698.868
17.5	689.090	688.576	682.400	686.003	686.517	684.459
20.0	671.078	670.049	665.417	670.049	670.049	667.990
22.5	656.669	655.639	648.434	654.610	653.066	651.008
25.0	635.569	634.539	629.908	635.054	632.996	631.452
27.5	615.498	614.984	609.837	614.469	612.925	610.866
30.0	592.854	592.854	588.737	593.369	590.281	589.252
32.5	570.725	571.240	566.608	569.696	567.638	567.123
35.0	547.052	544.994	542.935	545.508	543.450	540.362
37.5	521.835	520.806	518.233	521.321	519.262	516.689
40.0	497.133	496.104	493.531	496.104	494.560	491.987
42.5	471.916	470.887	468.314	470.887	468.314	466.770
45.0	446.185	445.670	442.582	444.641	442.068	440.524
47.5	419.938	419.424	415.822	417.880	415.307	414.278
50.0	393.692	392.663	389.061	391.119	388.031	388.031
52.5	365.388	365.902	362.300	363.844	361.271	360.756
55.0	338.112	337.598	335.539	336.568	333.995	332.966
57.5	310.837	309.808	308.264	309.293	307.235	306.205
60.0	283.562	282.532	281.503	282.017	280.474	278.930
62.5	255.771	256.286	254.227	254.742	253.713	252.169
65.0	228.496	229.011	226.952	227.467	225.923	224.894
67.5	203.794	201.735	199.162	200.706	199.677	198.647
70.0	176.518	174.974	173.430	174.460	173.945	172.916
72.5	150.272	148.728	147.699	149.243	148.728	147.184
75.0	125.055	123.511	122.482	123.511	123.511	122.482
77.5	100.353	98.809	98.294	99.838	99.324	101.382
80.0	77.195	75.651	76.165	76.165	76.165	77.709

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**CANDELA TABULATION - (Cont.)**

82.5	55.066	55.066	54.551	54.551	55.066	55.580
85.0	34.480	33.966	33.966	33.966	33.451	33.966
87.5	14.410	14.410	13.895	14.410	13.895	14.410
90.0	0.000	0.000	0.000	0.000	0.000	0.000
92.5	9.007	12.282	23.746	37.257	44.626	47.492
95.0	23.337	24.565	37.666	57.727	68.372	71.647
97.5	38.075	37.257	49.948	76.151	91.708	96.212
100.0	53.224	50.767	63.459	91.299	110.541	117.092
102.5	69.191	64.278	76.969	107.675	124.871	131.421
105.0	84.748	79.426	89.661	120.367	140.838	145.341
107.5	101.125	94.574	101.125	132.650	154.758	158.852
110.0	117.501	109.722	112.588	145.341	169.087	173.181
112.5	134.287	124.871	123.642	158.033	183.007	187.920
115.0	151.073	140.838	135.106	169.497	196.518	201.840
117.5	167.859	157.624	146.979	180.141	210.029	215.760
120.0	186.283	175.228	159.671	189.558	221.901	229.271
122.5	205.116	193.243	171.953	198.565	233.774	242.372
125.0	223.130	210.847	183.826	206.344	242.781	253.836
127.5	241.553	228.452	196.108	213.713	250.151	264.071
130.0	259.567	245.647	207.982	220.673	254.655	270.212
132.5	277.991	263.662	219.854	228.043	257.930	272.259
135.0	296.414	282.085	233.774	235.003	260.386	273.078
137.5	315.248	300.509	248.923	242.372	262.843	273.078
140.0	334.490	319.342	265.299	249.332	264.890	273.078
142.5	353.323	337.356	282.495	256.292	266.937	273.078
145.0	372.156	356.598	299.280	263.662	269.803	273.488
147.5	390.989	375.022	316.476	272.669	273.897	275.534
150.0	409.822	393.855	334.899	284.132	278.400	278.810
152.5	427.017	412.278	354.551	300.509	284.132	282.495
155.0	443.803	429.883	375.431	320.570	292.730	289.045
157.5	459.770	446.669	396.721	342.269	307.469	299.690
160.0	474.509	462.636	417.191	364.377	330.396	319.342
162.5	488.019	476.965	437.252	387.304	356.189	345.544
165.0	499.483	489.657	455.676	413.097	381.982	372.565
167.5	509.309	500.711	472.462	437.662	409.822	400.405
170.0	517.907	510.537	488.019	460.998	440.937	433.568
172.5	524.048	518.725	501.530	482.288	468.368	463.455
175.0	529.370	525.685	513.813	501.530	492.933	489.657
177.5	531.827	530.189	524.048	517.907	513.403	511.765
180.0	533.055	533.055	533.055	533.055	533.055	533.055

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	266.88	N.A.	7.10
0-30	558.72	N.A.	14.90
0-40	899.61	N.A.	24.00
0-60	1542.66	N.A.	41.10
0-80	1899.57	N.A.	50.60
0-90	1938.23	N.A.	51.60
10-90	1868.59	N.A.	49.80
20-40	632.73	N.A.	16.90
20-50	975.10	N.A.	26.00
40-70	868.56	N.A.	23.10
60-80	356.91	N.A.	9.50
70-80	131.41	N.A.	3.50
80-90	38.66	N.A.	1.00
90-110	236.64	N.A.	6.30
90-120	519.95	N.A.	13.80
90-130	846.28	N.A.	22.50
90-150	1414.27	N.A.	37.70
90-180	1816.11	N.A.	48.40
110-180	1579.47	N.A.	42.10
0-180	3754.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	69.64
10-20	197.24
20-30	291.85
30-40	340.88
40-50	342.37
50-60	300.68
60-70	225.50
70-80	131.41
80-90	38.66
90-100	60.01
100-110	176.63
110-120	283.31
120-130	326.33
130-140	304.96
140-150	263.03
150-160	210.22
160-170	141.33
170-180	50.29

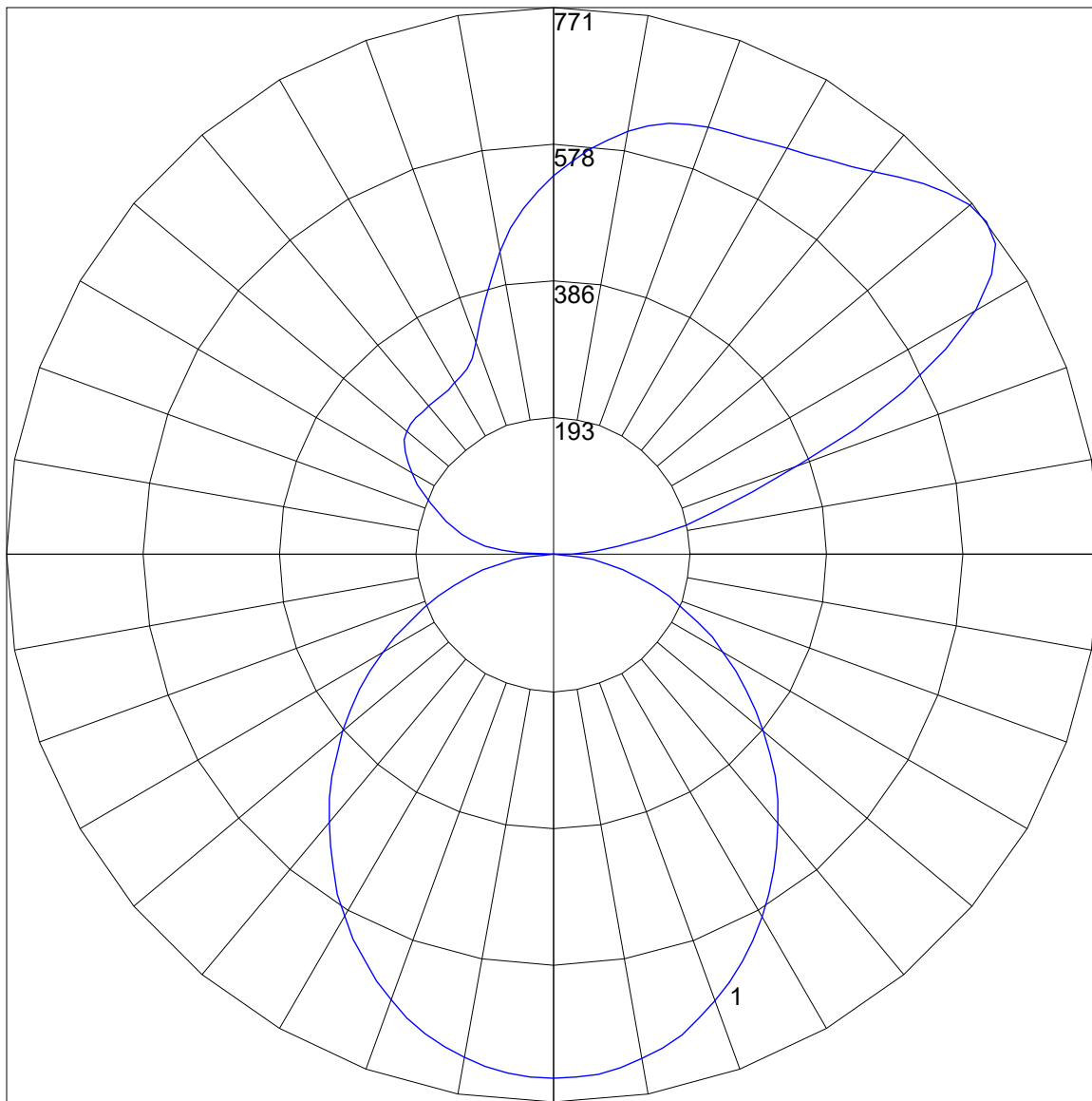
IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : HP-4-ID-4FT-S-B-835-ASY-ITL89988.013.IES

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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	98	94	90	86	91	87	83	80	74	71	69	62	60	58	51	50	48	43
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41	36
3	81	72	64	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31
4	74	64	56	49	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	48	42	63	53	45	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20
7	58	46	38	32	54	43	36	30	37	31	27	31	27	24	26	23	20	18
8	54	42	34	28	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	30	25	46	36	29	24	31	25	21	26	22	19	22	19	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	21	17	15	13

POLAR GRAPH



Maximum Candela = 771.333 Located At Horizontal Angle = 0, Vertical Angle = 127.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)