

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-H-B-835-ASY-ITL89988.008.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89988.008 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]11/16/17
[ISSUEDATE]12/11/17
[MANUFAC]FINELITE, INC.
[LUMCAT]HP-4-ID-4ft-H-B-835-ASYM
[INPUT_ELECTRICAL]120.0 VOLTS, 46.7 WATTS
[INPUT_ELECTRICAL]277.0 VOLTS, 48.4 WATTS
[OTHER]see 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
[ABSOLUTE LUMENS]5388

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5388
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
Total Luminaire Watts	46.7
Ballast Factor	1.00
CIE Type	Semi-Indirect
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	52.108	51.331	53.664	52.108	49.775	45.109	46.664	48.220	45.109	32.665
95.0	110.439	110.439	114.327	111.994	109.661	113.550	123.660	121.327	99.550	64.552
97.5	174.213	170.324	181.990	186.657	197.545	211.544	212.322	185.879	145.437	94.884
100.0	269.875	265.986	279.208	286.985	303.317	309.539	292.429	246.543	192.101	125.993
102.5	364.759	361.648	375.647	384.980	407.534	404.423	368.647	307.984	234.877	157.103
105.0	452.643	449.532	467.420	493.863	516.418	503.196	448.754	370.203	273.764	188.990
107.5	557.638	553.749	586.414	627.634	636.967	606.635	531.194	426.200	310.317	219.322
110.0	702.297	698.408	743.517	766.849	759.849	705.408	608.190	472.864	345.315	250.431
112.5	878.065	872.621	902.175	904.508	881.954	802.625	670.409	512.529	378.758	282.319
115.0	1038.279	1032.057	1050.723	1039.835	993.170	881.954	717.851	548.305	409.868	314.984
117.5	1188.382	1180.605	1189.160	1156.495	1080.277	937.951	752.850	577.859	442.532	348.426
120.0	1308.932	1301.932	1296.488	1242.824	1139.385	972.171	777.737	606.635	473.642	381.869
122.5	1396.038	1391.372	1365.706	1298.821	1170.494	991.615	800.292	634.634	507.085	417.645
125.0	1447.369	1442.702	1407.704	1322.931	1182.938	1001.725	818.179	661.077	538.972	452.643
127.5	1465.257	1460.590	1418.592	1324.486	1182.160	1007.947	836.067	686.742	572.415	487.641
130.0	1457.479	1452.813	1408.482	1312.043	1175.161	1012.614	855.511	713.963	604.302	521.862
132.5	1433.370	1430.258	1385.928	1293.377	1166.606	1018.058	874.954	741.961	638.522	557.638

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CANDELA TABULATION - (Cont.)

135.0	1402.260	1399.927	1357.929	1273.156	1158.051	1025.057	895.175	769.960	671.965	593.413
137.5	1370.373	1368.817	1329.153	1252.935	1151.051	1033.613	915.397	800.292	706.185	629.189
140.0	1338.486	1336.930	1301.932	1235.824	1147.162	1042.946	935.618	829.846	741.183	664.965
142.5	1310.487	1308.154	1280.155	1222.603	1146.384	1053.056	957.394	860.177	774.626	700.741
145.0	1288.710	1285.600	1260.712	1212.492	1146.384	1063.167	979.949	889.731	808.069	736.517
147.5	1270.045	1267.711	1246.713	1205.493	1147.162	1075.611	1002.503	918.508	840.734	771.515
150.0	1255.268	1251.379	1235.047	1199.271	1150.273	1088.832	1025.057	945.728	871.843	805.736
152.5	1242.046	1238.158	1224.936	1194.604	1154.162	1102.053	1042.946	969.838	900.620	838.401
155.0	1229.602	1227.269	1215.603	1193.049	1159.606	1113.720	1060.833	990.837	927.840	868.732
157.5	1222.603	1220.270	1210.937	1192.271	1163.495	1122.275	1074.055	1009.503	951.950	897.509
160.0	1217.159	1214.825	1207.826	1191.493	1165.050	1127.719	1084.166	1025.057	973.727	923.952
162.5	1207.048	1207.826	1201.604	1186.049	1162.717	1128.497	1090.388	1036.724	991.615	948.062
165.0	1195.382	1195.382	1189.938	1174.383	1154.162	1124.608	1091.165	1045.279	1006.392	968.283
167.5	1175.939	1176.716	1172.050	1158.828	1140.163	1114.497	1086.499	1049.167	1016.502	983.837
170.0	1151.051	1152.606	1147.940	1137.052	1122.275	1101.276	1077.944	1049.945	1023.502	996.281
172.5	1119.941	1122.275	1119.164	1110.609	1098.943	1082.610	1065.500	1046.834	1025.835	1005.614
175.0	1089.610	1088.054	1085.721	1081.055	1073.277	1062.389	1051.501	1039.057	1025.835	1011.836
177.5	1050.723	1050.723	1049.945	1046.834	1043.723	1037.501	1033.613	1026.613	1019.613	1013.391
180.0	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614

**Vert.
Angles**

Horizontal Angles

	90.0	95.0	112.5	135.0	157.5	180.0
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	17.110	23.332	45.109	70.774	84.773	90.218
95.0	44.331	46.664	71.552	109.661	129.882	136.104
97.5	72.330	70.774	94.884	144.659	174.213	182.768
100.0	101.106	96.439	120.549	173.435	209.989	222.433
102.5	131.438	122.105	146.215	204.545	237.210	249.654
105.0	160.992	150.881	170.324	228.655	267.542	276.097
107.5	192.101	179.657	192.101	251.987	293.985	301.762
110.0	223.211	208.434	213.878	276.097	321.205	328.983
112.5	255.098	237.210	234.877	300.207	347.649	356.981
115.0	286.985	267.542	256.653	321.983	373.314	383.424
117.5	318.872	299.429	279.208	342.204	398.979	409.868
120.0	353.870	332.872	303.317	360.092	421.534	435.533
122.5	389.646	367.092	326.650	377.202	444.088	460.420
125.0	423.867	400.535	349.204	391.979	461.198	482.197
127.5	458.865	433.977	372.536	405.979	475.197	501.640
130.0	493.085	466.642	395.091	419.200	483.752	513.307
132.5	528.083	500.863	417.645	433.200	489.974	517.195
135.0	563.082	535.861	444.088	446.421	494.641	518.751
137.5	598.858	570.859	472.864	460.420	499.307	518.751
140.0	635.411	606.635	503.974	473.642	503.196	518.751
142.5	671.187	640.855	536.639	486.863	507.085	518.751
145.0	706.963	677.409	568.526	500.863	512.529	519.528
147.5	742.739	712.407	601.191	517.973	520.306	523.417
150.0	778.515	748.183	636.189	539.750	528.861	529.639
152.5	811.180	783.181	673.520	570.859	539.750	536.639
155.0	843.067	816.624	713.185	608.968	556.082	549.082
157.5	873.399	848.511	753.627	650.188	584.081	569.304
160.0	901.397	878.843	792.514	692.186	627.634	606.635
162.5	927.063	906.064	830.623	735.739	676.631	656.410
165.0	948.839	930.174	865.621	784.737	725.629	707.741
167.5	967.505	951.173	897.509	831.401	778.515	760.627
170.0	983.837	969.838	927.063	875.732	837.623	823.624
172.5	995.504	985.393	952.728	916.174	889.731	880.398
175.0	1005.614	998.615	976.060	952.728	936.395	930.174
177.5	1010.280	1007.170	995.504	983.837	975.282	972.171
180.0	1012.614	1012.614	1012.614	1012.614	1012.614	1012.614

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	266.88	N.A.	5.00
0-30	558.72	N.A.	10.40
0-40	899.61	N.A.	16.70
0-60	1542.66	N.A.	28.60
0-80	1899.57	N.A.	35.30
0-90	1938.23	N.A.	36.00
10-90	1868.59	N.A.	34.70
20-40	632.73	N.A.	11.70
20-50	975.10	N.A.	18.10
40-70	868.56	N.A.	16.10
60-80	356.91	N.A.	6.60
70-80	131.41	N.A.	2.40
80-90	38.66	N.A.	0.70
90-110	449.53	N.A.	8.30
90-120	987.72	N.A.	18.30
90-130	1607.63	N.A.	29.80
90-150	2686.61	N.A.	49.90
90-180	3449.96	N.A.	64.00
110-180	3000.42	N.A.	55.70
0-180	5388.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

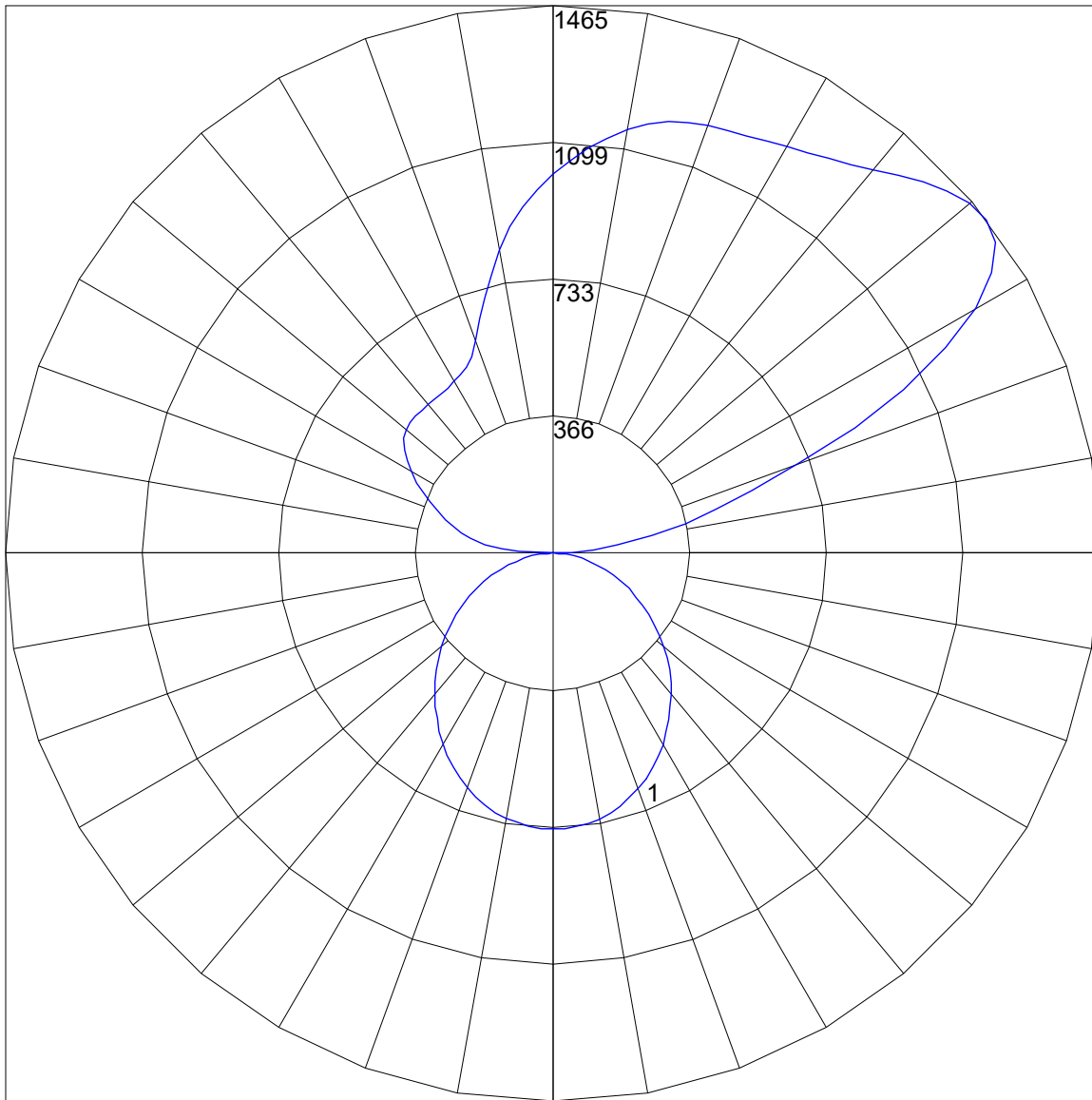
Zone	Lumens
0-10	69.64
10-20	197.24
20-30	291.85
30-40	340.88
40-50	342.37
50-60	300.68
60-70	225.50
70-80	131.41
80-90	38.66
90-100	114.00
100-110	335.53
110-120	538.19
120-130	619.90
130-140	579.32
140-150	499.66
150-160	399.34
160-170	268.47
170-180	95.54

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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36
1	95	90	87	83	85	82	79	76	66	64	62	51	50	49	38	37	36	30
2	86	79	73	68	78	72	66	62	58	54	51	45	43	41	33	32	31	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	30	28	26	21
4	72	61	53	47	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	55	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	14	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	15	13	11	9

POLAR GRAPH



Maximum Candela = 1465.257 Located At Horizontal Angle = 0, Vertical Angle = 127.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)