

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-H-835-ASY-ITL89988.014.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89988.013 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]11/16/17

[ISSUEDATE]12/11/17

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-4-ID-4ft-S-H-835-ASYM

[_INPUT_ELECTRICAL]120.0 VOLTS, 42.8 WATTS

[_INPUT_ELECTRICAL]277.0 VOLTS, 44.7 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]4745

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4745
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	42.8
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.32
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	7875	7930	7939
55	7315	7383	7417
65	6726	6803	6803
75	6129	6104	6079
85	5052	4978	4978

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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	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275
2.5	1113.720	1113.720	1113.720	1113.720	1113.720	1113.720	1113.720	1112.942	1113.720	1113.720
5.0	1109.831	1109.831	1109.831	1109.831	1109.831	1109.831	1109.831	1109.053	1109.053	1109.831
7.5	1102.831	1102.053	1102.053	1102.053	1102.053	1102.053	1101.276	1100.498	1100.498	1100.498
10.0	1091.165	1091.165	1093.498	1092.721	1092.721	1091.165	1091.943	1088.054	1088.054	1088.832
12.5	1076.388	1076.388	1078.721	1079.499	1080.277	1077.944	1077.166	1072.499	1072.499	1074.055
15.0	1058.500	1057.723	1060.833	1063.167	1063.945	1060.056	1060.056	1054.612	1054.612	1057.723
17.5	1035.168	1035.168	1037.501	1041.390	1042.946	1039.835	1039.835	1034.390	1038.279	1039.057
20.0	1011.058	1011.836	1013.391	1017.280	1018.058	1015.725	1020.391	1009.503	1009.503	1012.614
22.5	985.393	984.615	986.948	990.059	992.393	992.393	991.615	983.060	985.393	990.059
25.0	956.617	955.061	956.617	960.505	962.839	960.505	962.061	958.950	955.061	958.172
27.5	924.729	924.729	925.507	929.396	934.840	929.396	931.729	925.507	924.729	928.618
30.0	891.287	891.287	892.064	895.953	899.064	897.509	896.731	892.842	892.064	895.175
32.5	857.844	857.844	857.844	862.510	864.066	863.288	862.510	859.399	860.955	861.733
35.0	819.735	821.290	821.290	827.512	828.290	826.735	825.957	823.624	825.179	825.957
37.5	783.959	784.737	783.959	787.848	792.514	790.181	789.403	788.625	789.403	789.403
40.0	747.405	745.850	745.850	748.961	752.072	750.516	752.072	750.516	752.072	752.072
42.5	708.519	707.741	706.185	710.074	712.407	712.407	713.185	711.630	713.963	713.185
45.0	668.854	668.854	668.854	671.187	672.743	673.520	671.965	672.743	674.298	674.298
47.5	627.634	628.412	628.412	630.745	632.300	633.078	632.300	632.300	633.856	633.856
50.0	586.414	587.969	588.747	588.747	591.080	592.636	592.636	590.303	594.191	593.413
52.5	545.194	547.527	547.527	547.527	550.638	552.193	551.416	549.860	553.749	552.971
55.0	503.974	507.085	507.085	506.307	509.418	508.640	510.196	508.640	511.751	511.751
57.5	462.754	465.865	466.642	467.420	468.198	467.420	468.976	468.198	470.531	471.309
60.0	421.534	424.644	426.200	426.200	426.978	428.533	427.755	426.978	428.533	430.089
62.5	381.869	383.424	385.758	385.758	384.202	387.313	386.535	385.758	388.091	389.646
65.0	341.427	342.982	345.315	345.315	343.760	345.315	344.538	345.315	345.315	346.093
67.5	301.762	303.317	304.095	305.651	304.095	306.428	304.095	302.540	304.873	305.651
70.0	262.875	263.653	265.208	264.431	265.208	265.986	263.653	263.653	264.431	265.208
72.5	224.766	225.544	226.321	226.321	226.321	227.099	224.766	224.766	225.544	226.321
75.0	190.546	188.212	188.212	188.990	188.990	189.768	186.657	186.657	186.657	187.435
77.5	153.992	151.659	153.992	151.659	152.436	153.214	150.103	150.103	148.548	150.103
80.0	118.994	116.661	118.216	117.438	116.661	118.216	115.883	116.661	115.105	114.327
82.5	84.773	83.218	84.773	84.773	83.218	83.996	82.440	83.218	83.218	83.218
85.0	52.886	51.331	52.886	51.331	51.331	52.108	50.553	52.108	51.331	52.108
87.5	24.110	24.110	24.110	23.332	21.777	22.554	21.777	21.777	22.554	21.777
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

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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

	90.0	95.0	112.5	135.0	157.5	180.0
0.0	1115.275	1115.275	1115.275	1115.275	1115.275	1115.275
2.5	1113.720	1113.720	1113.720	1113.720	1113.720	1113.720
5.0	1109.053	1109.831	1109.053	1108.275	1107.498	1109.053
7.5	1101.276	1101.276	1100.498	1098.943	1099.720	1099.720
10.0	1090.388	1090.388	1087.276	1088.054	1089.610	1088.054
12.5	1076.388	1075.611	1070.944	1074.055	1076.388	1074.055
15.0	1060.056	1058.500	1051.501	1057.723	1058.500	1056.167
17.5	1041.390	1040.612	1031.279	1036.724	1037.501	1034.390
20.0	1014.169	1012.614	1005.614	1012.614	1012.614	1009.503
22.5	992.393	990.837	979.949	989.282	986.948	983.837
25.0	960.505	958.950	951.950	959.728	956.617	954.283
27.5	930.174	929.396	921.619	928.618	926.285	923.174
30.0	895.953	895.953	889.731	896.731	892.064	890.509
32.5	862.510	863.288	856.289	860.955	857.844	857.066
35.0	826.735	823.624	820.513	824.401	821.290	816.624
37.5	788.625	787.070	783.181	787.848	784.737	780.848
40.0	751.294	749.739	745.850	749.739	747.405	743.517
42.5	713.185	711.630	707.741	711.630	707.741	705.408
45.0	674.298	673.520	668.854	671.965	668.076	665.743
47.5	634.634	633.856	628.412	631.523	627.634	626.078
50.0	594.969	593.413	587.969	591.080	586.414	586.414
52.5	552.193	552.971	547.527	549.860	545.971	545.194
55.0	510.973	510.196	507.085	508.640	504.751	503.196
57.5	469.753	468.198	465.865	467.420	464.309	462.754
60.0	428.533	426.978	425.422	426.200	423.867	421.534
62.5	386.535	387.313	384.202	384.980	383.424	381.091
65.0	345.315	346.093	342.982	343.760	341.427	339.871
67.5	307.984	304.873	300.984	303.317	301.762	300.207
70.0	266.764	264.431	262.097	263.653	262.875	261.320
72.5	227.099	224.766	223.211	225.544	224.766	222.433
75.0	188.990	186.657	185.101	186.657	186.657	185.101
77.5	151.659	149.326	148.548	150.881	150.103	153.214
80.0	116.661	114.327	115.105	115.105	115.105	117.438

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CANDELA TABULATION - (Cont.)

82.5	83.218	83.218	82.440	82.440	83.218	83.996
85.0	52.108	51.331	51.331	51.331	50.553	51.331
87.5	21.777	21.777	20.999	21.777	20.999	21.777
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	403.32	N.A.	8.50
0-30	844.37	N.A.	17.80
0-40	1359.53	N.A.	28.70
0-60	2331.36	N.A.	49.10
0-80	2870.74	N.A.	60.50
0-90	2929.16	N.A.	61.70
10-90	2823.92	N.A.	59.50
20-40	956.21	N.A.	20.20
20-50	1473.63	N.A.	31.10
40-70	1312.61	N.A.	27.70
60-80	539.38	N.A.	11.40
70-80	198.59	N.A.	4.20
80-90	58.42	N.A.	1.20
90-110	236.64	N.A.	5.00
90-120	519.95	N.A.	11.00
90-130	846.28	N.A.	17.80
90-150	1414.27	N.A.	29.80
90-180	1816.11	N.A.	38.30
110-180	1579.47	N.A.	33.30
0-180	4745.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	105.24
10-20	298.08
20-30	441.05
30-40	515.16
40-50	517.41
50-60	454.41
60-70	340.79
70-80	198.59
80-90	58.42
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

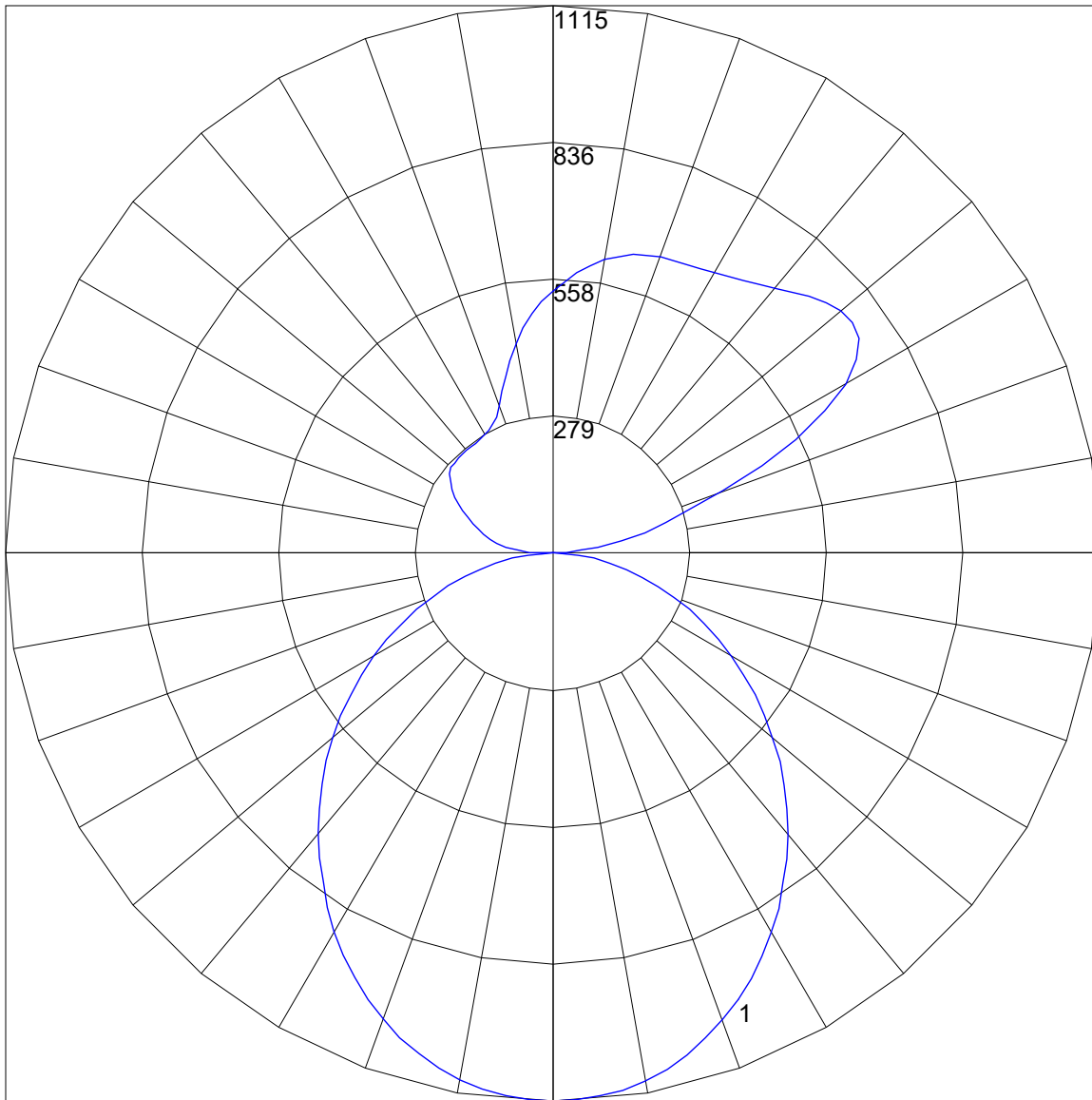
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	100	96	92	88	94	90	86	83	79	76	74	68	67	65	59	58	56	52
2	91	84	77	72	85	79	73	68	69	65	61	60	57	54	52	49	47	43
3	83	74	66	60	78	69	62	57	61	56	51	53	49	46	46	43	40	37
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	38	35	31
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	27
6	65	52	44	38	60	49	42	36	44	38	33	38	33	30	34	30	27	24
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	31	27	24	21
8	55	43	35	29	52	41	33	28	36	30	26	32	27	24	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	25	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	23	19	24	20	17	15

POLAR GRAPH



Maximum Candela = 1115.275 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)