

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-I-4FT-S-835-ASY-ITL89988.601.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89988.601 Family Correlation File
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.
[TESTDATE]11/16/17
[ISSUE DATE]02/26/18
[MANUFAC]FINELITE, INC.
[LUMCAT]HP-4-I-4ft-S-835-ASYM
[INPUT_ELECTRICAL]120.0 VOLTS, 14.4 WATTS
[INPUT_ELECTRICAL]277.0 VOLTS, 15.8 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]1816

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1816
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
Total Luminaire Watts	14.4
Ballast Factor	1.00
CIE Type	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	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

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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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
37.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
45.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
62.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	28.249	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	123.643	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	320.160	248.923	181.779	131.831
112.5	462.226	459.361	474.918	476.146	464.274	422.513	352.913	269.803	199.384	148.617
115.0	546.565	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	201.021
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	375.840	318.113	274.716
132.5	754.547	752.909	729.573	680.853	614.118	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	539.605	471.234	405.318	353.732	312.382
137.5	721.384	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	515.859	468.368	425.379	387.713
147.5	668.570	667.342	656.288	634.589	603.883	566.217	527.732	483.516	442.575	406.137
150.0	660.791	658.744	650.147	631.314	605.521	573.177	539.605	497.845	458.951	424.151
152.5	653.831	651.784	644.824	628.857	607.568	580.137	549.022	510.537	474.099	441.346
155.0	647.281	646.053	639.911	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	539.605	512.584	486.382
162.5	635.408	635.817	632.542	624.354	612.071	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	529.780	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	567.445	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	0.000	0.000	0.000	0.000	0.000	0.000
2.5	0.000	0.000	0.000	0.000	0.000	0.000
5.0	0.000	0.000	0.000	0.000	0.000	0.000
7.5	0.000	0.000	0.000	0.000	0.000	0.000
10.0	0.000	0.000	0.000	0.000	0.000	0.000
12.5	0.000	0.000	0.000	0.000	0.000	0.000
15.0	0.000	0.000	0.000	0.000	0.000	0.000
17.5	0.000	0.000	0.000	0.000	0.000	0.000
20.0	0.000	0.000	0.000	0.000	0.000	0.000
22.5	0.000	0.000	0.000	0.000	0.000	0.000
25.0	0.000	0.000	0.000	0.000	0.000	0.000
27.5	0.000	0.000	0.000	0.000	0.000	0.000
30.0	0.000	0.000	0.000	0.000	0.000	0.000
32.5	0.000	0.000	0.000	0.000	0.000	0.000
35.0	0.000	0.000	0.000	0.000	0.000	0.000
37.5	0.000	0.000	0.000	0.000	0.000	0.000
40.0	0.000	0.000	0.000	0.000	0.000	0.000
42.5	0.000	0.000	0.000	0.000	0.000	0.000
45.0	0.000	0.000	0.000	0.000	0.000	0.000
47.5	0.000	0.000	0.000	0.000	0.000	0.000
50.0	0.000	0.000	0.000	0.000	0.000	0.000
52.5	0.000	0.000	0.000	0.000	0.000	0.000
55.0	0.000	0.000	0.000	0.000	0.000	0.000
57.5	0.000	0.000	0.000	0.000	0.000	0.000
60.0	0.000	0.000	0.000	0.000	0.000	0.000
62.5	0.000	0.000	0.000	0.000	0.000	0.000
65.0	0.000	0.000	0.000	0.000	0.000	0.000
67.5	0.000	0.000	0.000	0.000	0.000	0.000
70.0	0.000	0.000	0.000	0.000	0.000	0.000
72.5	0.000	0.000	0.000	0.000	0.000	0.000
75.0	0.000	0.000	0.000	0.000	0.000	0.000
77.5	0.000	0.000	0.000	0.000	0.000	0.000
80.0	0.000	0.000	0.000	0.000	0.000	0.000

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CANDELA TABULATION - (Cont.)

82.5	0.000	0.000	0.000	0.000	0.000	0.000
85.0	0.000	0.000	0.000	0.000	0.000	0.000
87.5	0.000	0.000	0.000	0.000	0.000	0.000
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	76.970	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	123.643	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	207.981	220.673	254.654	270.212
132.5	277.991	263.662	219.854	228.043	257.930	272.259
135.0	296.415	282.085	233.774	235.003	260.386	273.078
137.5	315.247	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	282.494	256.292	266.937	273.078
145.0	372.156	356.598	299.280	263.662	269.803	273.487
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	282.494
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	513.812	501.530	492.932	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	0.00	N.A.	0.00
0-30	0.00	N.A.	0.00
0-40	0.00	N.A.	0.00
0-60	0.00	N.A.	0.00
0-80	0.00	N.A.	0.00
0-90	0.00	N.A.	0.00
10-90	0.00	N.A.	0.00
20-40	0.00	N.A.	0.00
20-50	0.00	N.A.	0.00
40-70	0.00	N.A.	0.00
60-80	0.00	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	236.64	N.A.	13.00
90-120	519.95	N.A.	28.60
90-130	846.28	N.A.	46.60
90-150	1414.27	N.A.	77.90
90-180	1816.11	N.A.	100.00
110-180	1579.47	N.A.	87.00
0-180	1816.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	0.00
10-20	0.00
20-30	0.00
30-40	0.00
40-50	0.00
50-60	0.00
60-70	0.00
70-80	0.00
80-90	0.00
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

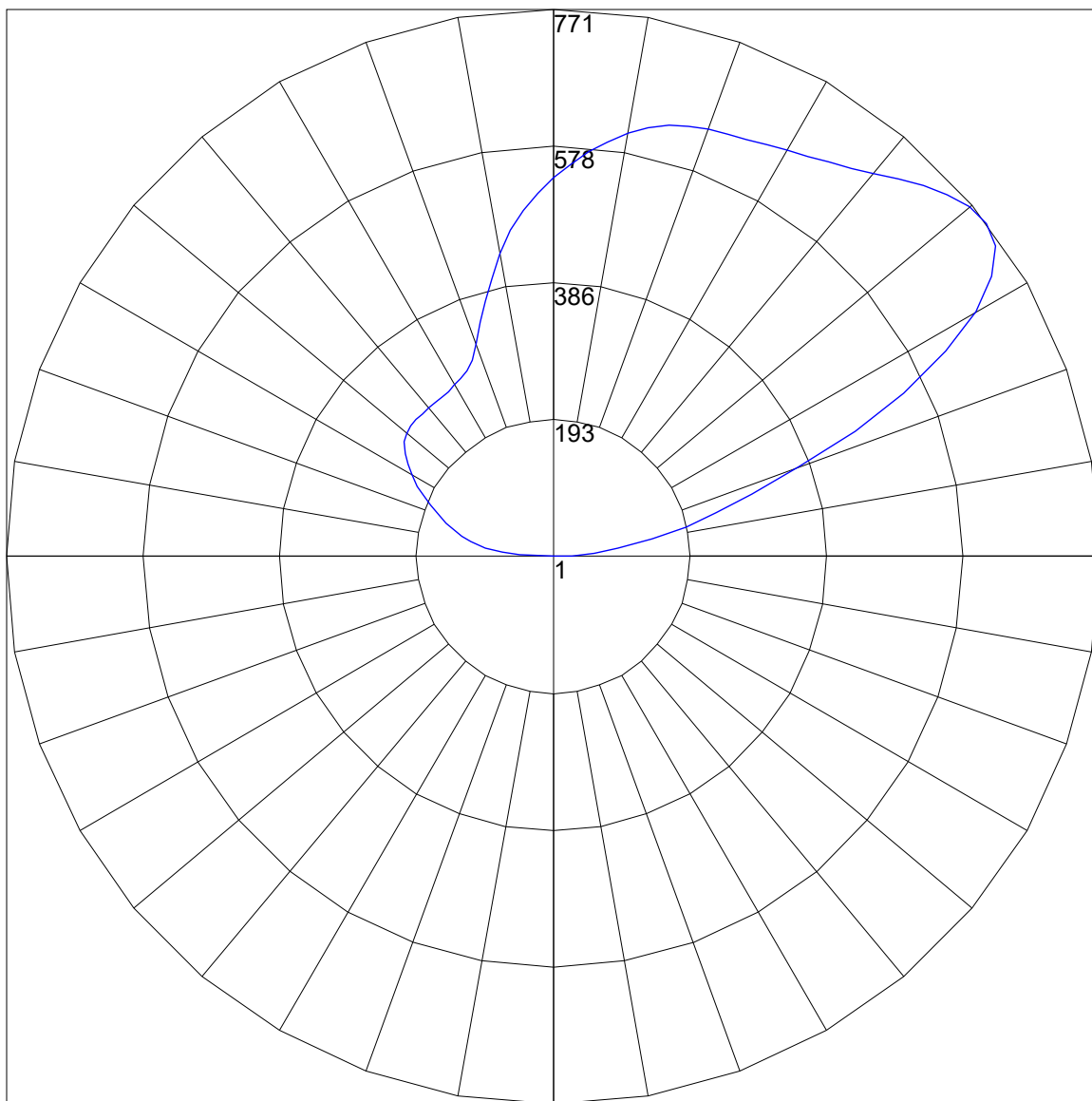
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	28	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

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.)