

# 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 : S16-LED-ID-DCO-4FT-3E-S-B-835-FTO-ITL88524.013.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL88524.013 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]10/18/16

[ISSUEDATE]01/05/17

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S16-LED-ID-DCO-4ft-3E-S-B-835-FTO

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 24.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 28.0 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL88524. 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]2693

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2693
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	24.5
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)	3.57 ft
Luminous Width (90-270)	0.29 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3754	3708	3647
55	3525	3469	3403
65	3224	3160	3096
75	2737	2674	2632
85	1861	1861	1799

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## CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	411.146	411.146	411.146	411.146	411.146
2.5	410.631	410.631	411.146	410.631	410.631
5.0	408.573	408.573	409.087	408.573	408.573
7.5	406.000	406.000	406.000	406.000	406.000
10.0	402.398	401.883	402.398	401.883	401.369
12.5	397.252	395.708	396.738	396.223	395.708
15.0	391.077	389.019	390.563	390.048	389.019
17.5	383.873	381.300	383.359	382.844	381.300
20.0	376.155	372.553	374.611	374.096	372.553
22.5	366.892	362.776	364.834	364.319	362.776
25.0	356.601	352.484	354.028	353.513	351.970
27.5	345.280	341.164	342.707	341.678	340.134
30.0	333.445	329.843	330.872	329.328	327.785
32.5	321.095	317.493	318.008	316.464	314.920
35.0	308.231	304.629	305.143	303.085	302.056
37.5	294.852	291.250	291.764	289.706	288.162
40.0	281.473	277.871	277.871	275.812	274.269
42.5	267.065	264.492	263.977	261.404	259.861
45.0	252.657	250.084	249.569	246.996	245.452
47.5	237.734	235.676	234.646	232.074	230.530
50.0	222.811	220.753	219.724	216.636	215.607
52.5	207.888	205.316	204.801	201.714	200.684
55.0	192.451	190.393	189.364	186.276	185.762
57.5	177.014	174.956	173.926	170.839	170.324
60.0	161.577	159.518	158.489	155.402	154.887
62.5	145.625	144.081	142.537	139.965	139.965
65.0	129.673	128.644	127.100	124.527	124.527
67.5	113.721	112.692	111.148	109.605	109.090
70.0	97.769	97.255	95.711	94.167	94.167
72.5	82.332	81.817	80.788	79.759	79.245
75.0	67.409	66.895	65.866	64.837	64.837
77.5	52.487	53.001	51.458	51.458	50.943
80.0	39.108	39.108	38.593	38.079	37.564
82.5	26.243	26.758	26.758	26.243	25.729
85.0	15.437	15.437	15.437	14.923	14.923
87.5	5.146	5.146	5.660	5.146	4.631
90.0	0.000	0.000	0.000	0.000	0.000
92.5	11.050	11.459	9.822	10.641	10.641
95.0	24.146	25.783	26.601	24.964	23.737
97.5	38.879	42.153	47.473	47.064	46.246
100.0	55.249	59.342	66.299	70.391	70.391
102.5	72.847	78.167	89.217	94.537	96.174
105.0	91.263	98.221	113.772	121.548	124.003
107.5	110.498	119.502	139.146	150.196	153.470
110.0	130.142	141.601	166.156	179.252	184.163
112.5	149.786	163.701	192.758	209.537	216.494
115.0	169.840	186.210	220.178	240.640	248.416
117.5	189.893	209.128	248.007	271.743	280.747
120.0	209.537	231.637	275.017	302.028	312.669
122.5	229.181	253.736	301.619	331.904	343.363
125.0	248.007	274.608	326.583	360.142	372.829
127.5	266.423	295.071	349.911	387.153	400.249
130.0	284.430	314.306	372.010	411.298	425.622
132.5	301.619	331.904	391.245	432.580	447.722

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-3E-S-B-835-FTO-ITL88524.013.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	318.398	348.274	408.434	450.996	466.548
<b>137.5</b>	333.950	362.597	423.576	466.548	481.281
<b>140.0</b>	348.683	376.103	435.854	478.416	493.558
<b>142.5</b>	362.188	388.380	446.085	488.238	502.152
<b>145.0</b>	374.875	398.612	453.451	493.967	507.882
<b>147.5</b>	386.743	408.024	459.181	497.651	510.338
<b>150.0</b>	396.975	415.800	462.864	498.469	510.338
<b>152.5</b>	406.387	422.758	464.501	497.241	508.291
<b>155.0</b>	414.573	428.078	465.320	494.377	504.199
<b>157.5</b>	421.530	432.989	465.320	489.875	498.878
<b>160.0</b>	428.078	436.672	464.092	484.964	492.330
<b>162.5</b>	433.398	439.946	462.046	478.825	485.373
<b>165.0</b>	437.900	441.992	459.590	472.277	478.007
<b>167.5</b>	441.583	444.448	456.725	466.957	471.049
<b>170.0</b>	444.857	446.494	454.270	461.227	464.501
<b>172.5</b>	446.903	448.131	452.224	456.316	458.362
<b>175.0</b>	448.540	449.359	450.587	452.633	453.451
<b>177.5</b>	449.768	449.768	450.177	450.587	450.996
<b>180.0</b>	449.768	449.768	449.768	449.768	449.768

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-3E-S-B-835-FTO-ITL88524.013.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	148.72	N.A.	5.50
0-30	311.50	N.A.	11.60
0-40	501.96	N.A.	18.60
0-60	862.65	N.A.	32.00
0-80	1058.2	N.A.	39.30
0-90	1076.19	N.A.	40.00
10-90	1037.38	N.A.	38.50
20-40	353.23	N.A.	13.10
20-50	545.19	N.A.	20.20
40-70	486.17	N.A.	18.10
60-80	195.55	N.A.	7.30
70-80	70.07	N.A.	2.60
80-90	17.99	N.A.	0.70
90-110	148.10	N.A.	5.50
90-120	360.00	N.A.	13.40
90-130	643.57	N.A.	23.90
90-150	1230.82	N.A.	45.70
90-180	1617.22	N.A.	60.00
110-180	1469.12	N.A.	54.50
0-180	2693.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	38.81
10-20	109.92
20-30	162.78
30-40	190.45
40-50	191.95
50-60	168.74
60-70	125.48
70-80	70.07
80-90	17.99
90-100	30.78
100-110	117.31
110-120	211.90
120-130	283.58
130-140	307.79
140-150	279.45
150-160	213.33
160-170	129.93
170-180	43.15

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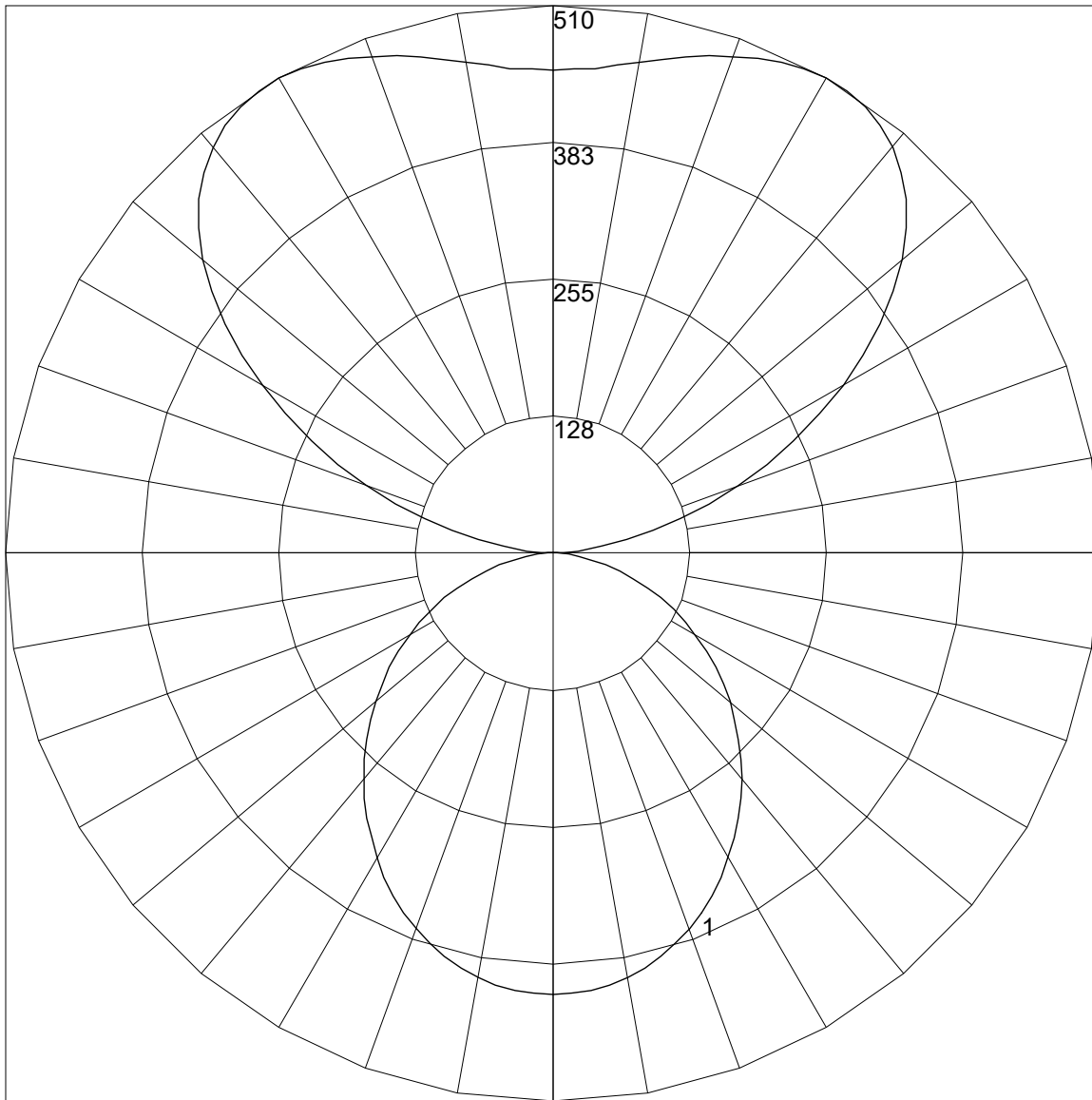
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	96	91	87	84	87	83	80	77	68	66	64	54	53	51	41	40	40	34
2	87	80	74	69	79	73	68	63	60	56	53	48	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	53	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	34	30	27	26	23	21	18
6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	21	19	16
7	57	44	37	31	51	41	34	29	34	29	25	27	24	21	21	19	17	14
8	52	40	33	27	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	20	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	18	21	17	15	17	14	12	10

POLAR GRAPH



Maximum Candela = 510.338 Located At Horizontal Angle = 90, Vertical Angle = 147.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)