

# 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-2E-B-8-TW-10U90D-ITL87819.902.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87819.902 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/18/16

[ISSUEDATE]08/17/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S16-LED-ID-DCO-4ft-2E-B-8-TW-10U90D

[OTHER]ies file is based on 3500K; see luminaire tech sheet at [www.finelite.com](http://www.finelite.com)

for lumen adjustment factors for other CCT's & CRI's

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 20.4 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 21.8 WATTS

[ABSOLUTE]LUMENS]1615

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87819. 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)

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1615
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	20.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.58 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	4948	5055	5124
55	4725	4829	4895
65	4395	4472	4523
75	3797	3859	3859
85	2664	2726	2664

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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	512.561	512.561	512.561	512.561	512.561
2.5	512.561	512.561	512.047	512.047	512.561
5.0	510.503	510.503	511.018	511.018	511.018
7.5	506.901	507.415	507.930	508.444	508.444
10.0	503.298	502.784	504.327	505.357	504.327
12.5	498.152	497.123	500.211	500.725	500.725
15.0	491.977	489.918	494.035	495.064	495.064
17.5	484.772	482.199	486.830	488.889	488.374
20.0	475.509	472.936	478.596	481.170	481.170
22.5	465.216	462.129	468.819	471.906	471.906
25.0	453.895	450.807	458.526	461.614	461.614
27.5	441.544	439.485	446.690	450.292	450.807
30.0	428.164	426.620	434.339	437.942	438.456
32.5	414.269	412.211	420.444	424.561	425.076
35.0	399.860	397.801	406.035	410.667	411.181
37.5	384.421	383.392	391.111	395.743	396.257
40.0	368.468	367.439	374.643	379.789	380.304
42.5	351.485	350.971	358.175	362.807	363.836
45.0	333.474	333.474	340.678	344.795	345.310
47.5	316.491	315.462	322.667	326.269	326.784
50.0	296.936	296.936	303.111	307.228	307.743
52.5	277.895	277.895	284.070	287.673	288.187
55.0	258.339	258.339	264.000	267.602	267.602
57.5	238.784	238.784	243.415	247.532	247.018
60.0	218.199	218.199	222.830	225.918	225.918
62.5	197.614	197.614	201.731	204.304	204.304
65.0	177.029	177.029	180.117	182.175	182.175
67.5	155.930	155.930	158.503	160.047	160.047
70.0	134.830	135.345	136.889	138.433	138.433
72.5	113.731	114.760	115.789	116.819	116.819
75.0	93.661	94.175	95.205	95.719	95.205
77.5	73.591	74.620	75.135	75.135	75.135
80.0	55.064	56.094	56.094	56.094	56.094
82.5	38.082	38.596	38.596	38.596	38.082
85.0	22.129	22.643	22.643	22.643	22.129
87.5	8.234	8.749	8.234	8.749	8.234
90.0	0.000	0.000	0.000	0.000	0.000
92.5	1.029	1.029	1.029	1.029	1.029
95.0	2.573	2.573	2.573	2.573	2.573
97.5	4.117	4.117	4.117	4.632	4.632
100.0	6.175	6.175	6.175	6.175	6.175
102.5	8.234	8.234	8.234	8.234	8.234
105.0	10.807	10.807	10.807	10.807	10.807
107.5	12.865	12.865	12.865	12.865	12.865
110.0	15.439	15.439	15.439	15.439	15.439
112.5	17.497	17.497	17.497	17.497	17.497
115.0	20.070	20.070	20.070	20.070	20.070
117.5	22.129	22.643	22.643	22.129	22.129
120.0	24.702	24.702	24.702	24.702	24.187
122.5	26.760	26.760	26.760	26.760	26.760
125.0	29.333	29.333	29.333	28.819	28.819
127.5	31.392	31.392	31.392	31.392	30.877
130.0	33.450	33.450	33.450	33.450	32.936
132.5	35.509	35.509	35.509	35.509	35.509

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-TW-10U90D-ITL87819.902.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	37.567	37.567	37.567	37.567	37.053
<b>137.5</b>	39.626	39.626	39.626	39.626	39.111
<b>140.0</b>	41.684	41.170	41.170	41.170	41.170
<b>142.5</b>	43.228	43.228	43.228	43.228	42.713
<b>145.0</b>	45.287	44.772	44.772	44.772	44.772
<b>147.5</b>	46.830	46.316	46.316	46.316	46.316
<b>150.0</b>	48.374	47.860	47.860	47.860	47.860
<b>152.5</b>	49.404	48.889	49.404	49.404	49.404
<b>155.0</b>	50.947	50.433	50.947	50.947	50.947
<b>157.5</b>	51.977	51.462	51.977	51.977	51.977
<b>160.0</b>	53.006	52.491	53.006	53.006	53.006
<b>162.5</b>	54.035	53.520	54.035	54.035	54.035
<b>165.0</b>	54.550	54.550	54.550	54.550	54.550
<b>167.5</b>	55.579	55.064	55.064	55.064	55.579
<b>170.0</b>	56.094	56.094	56.094	56.094	56.094
<b>172.5</b>	56.094	56.094	56.094	56.094	56.608
<b>175.0</b>	56.608	56.608	56.608	56.608	56.608
<b>177.5</b>	57.123	56.608	56.608	56.608	56.608
<b>180.0</b>	57.123	57.123	57.123	57.123	57.123

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-TW-10U90D-ITL87819.902.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	187.73	N.A.	11.60
0-30	398.44	N.A.	24.70
0-40	651.82	N.A.	40.40
0-60	1148.98	N.A.	71.10
0-80	1427.4	N.A.	88.40
0-90	1453.9	N.A.	90.00
10-90	1405.36	N.A.	87.00
20-40	464.08	N.A.	28.70
20-50	726.00	N.A.	45.00
40-70	674.93	N.A.	41.80
60-80	278.42	N.A.	17.20
70-80	100.65	N.A.	6.20
80-90	26.51	N.A.	1.60
90-110	14.25	N.A.	0.90
90-120	34.04	N.A.	2.10
90-130	60.04	N.A.	3.70
90-150	117.00	N.A.	7.20
90-180	161.14	N.A.	10.00
110-180	146.89	N.A.	9.10
0-180	1615.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	48.54
10-20	139.19
20-30	210.71
30-40	253.38
40-50	261.92
50-60	235.24
60-70	177.77
70-80	100.65
80-90	26.51
90-100	2.99
100-110	11.26
110-120	19.79
120-130	26.00
130-140	28.94
140-150	28.02
150-160	23.35
160-170	15.42
170-180	5.38

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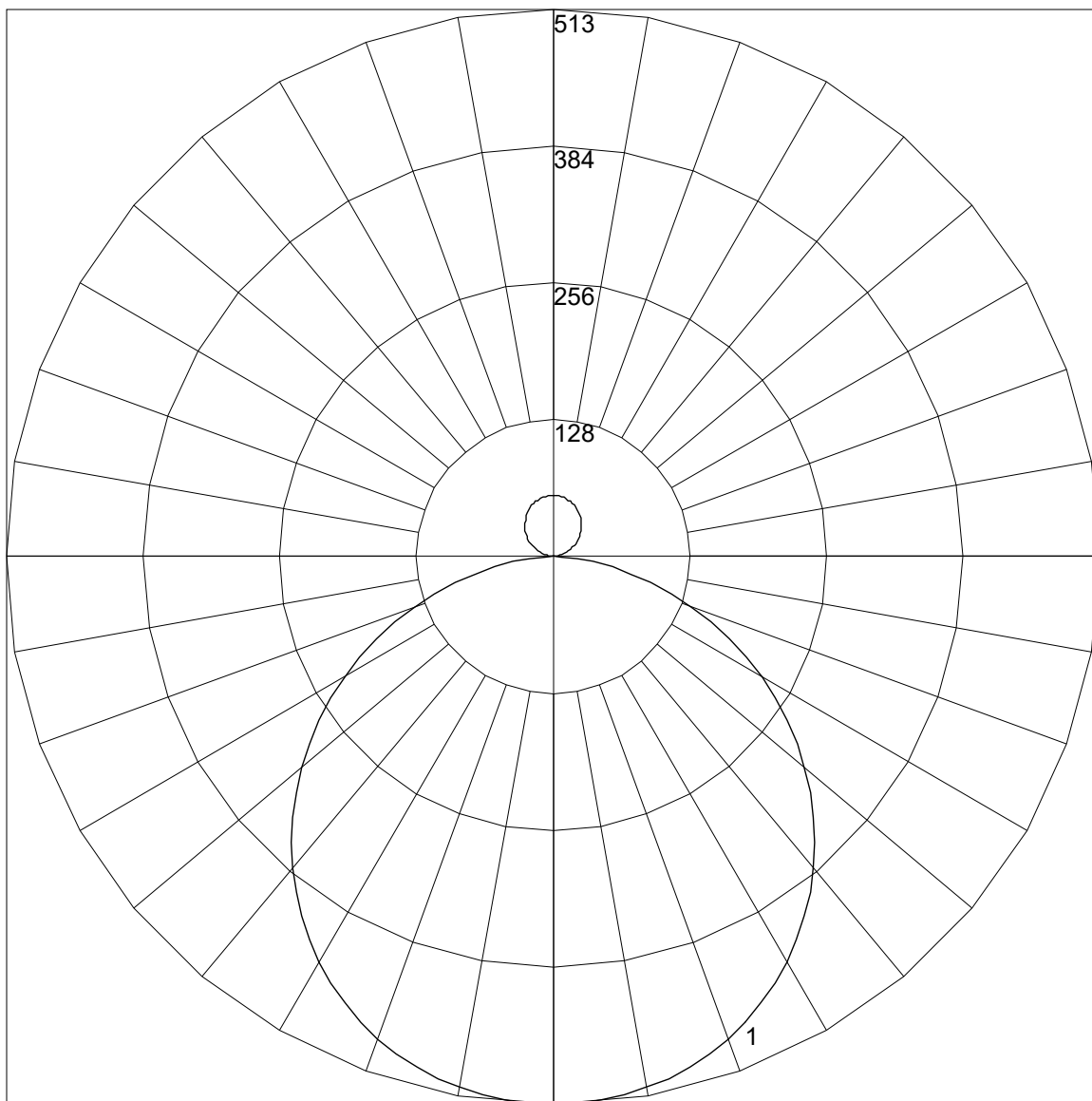
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	107	102	98	94	103	99	95	91	93	89	87	87	85	82	82	80	78	75
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	68	65	63
3	88	78	70	63	85	76	68	62	71	65	60	67	62	58	63	59	55	53
4	81	69	60	54	78	67	59	53	63	56	51	60	54	49	56	52	47	45
5	74	61	53	46	71	60	52	45	57	49	44	54	47	43	51	45	41	39
6	68	55	46	40	66	54	46	40	51	44	38	48	42	37	46	41	36	34
7	63	50	41	35	61	49	41	35	46	39	34	44	38	33	42	36	32	30
8	59	46	37	31	57	45	37	31	42	35	30	40	34	30	38	33	29	27
9	55	42	34	28	53	41	33	28	39	32	27	37	31	27	36	30	26	24
10	52	39	31	26	50	38	30	25	36	29	25	34	28	24	33	28	24	22

POLAR GRAPH



Maximum Candela = 512.561 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)