

# 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-8-35-10U90D-ITL87819.002.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87819.002 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/18/16

[ISSUEDATE]07/26/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S16-LED-ID-DCO-4ft-2E-B-8-35-10U90D

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 18.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 19.8 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)	87
Total Luminaire Watts	18.5
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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-35-10U90D-ITL87819.002.IES****CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0.0</b>	512.561	512.561	512.561	512.561	512.561
<b>2.5</b>	512.561	512.561	512.047	512.047	512.561
<b>5.0</b>	510.503	510.503	511.018	511.018	511.018
<b>7.5</b>	506.901	507.415	507.930	508.444	508.444
<b>10.0</b>	503.298	502.784	504.327	505.357	504.327
<b>12.5</b>	498.152	497.123	500.211	500.725	500.725
<b>15.0</b>	491.977	489.918	494.035	495.064	495.064
<b>17.5</b>	484.772	482.199	486.830	488.889	488.374
<b>20.0</b>	475.509	472.936	478.596	481.170	481.170
<b>22.5</b>	465.216	462.129	468.819	471.906	471.906
<b>25.0</b>	453.895	450.807	458.526	461.614	461.614
<b>27.5</b>	441.544	439.485	446.690	450.292	450.807
<b>30.0</b>	428.164	426.620	434.339	437.942	438.456
<b>32.5</b>	414.269	412.211	420.444	424.561	425.076
<b>35.0</b>	399.860	397.801	406.035	410.667	411.181
<b>37.5</b>	384.421	383.392	391.111	395.743	396.257
<b>40.0</b>	368.468	367.439	374.643	379.789	380.304
<b>42.5</b>	351.485	350.971	358.175	362.807	363.836
<b>45.0</b>	333.474	333.474	340.678	344.795	345.310
<b>47.5</b>	316.491	315.462	322.667	326.269	326.784
<b>50.0</b>	296.936	296.936	303.111	307.228	307.743
<b>52.5</b>	277.895	277.895	284.070	287.673	288.187
<b>55.0</b>	258.339	258.339	264.000	267.602	267.602
<b>57.5</b>	238.784	238.784	243.415	247.532	247.018
<b>60.0</b>	218.199	218.199	222.830	225.918	225.918
<b>62.5</b>	197.614	197.614	201.731	204.304	204.304
<b>65.0</b>	177.029	177.029	180.117	182.175	182.175
<b>67.5</b>	155.930	155.930	158.503	160.047	160.047
<b>70.0</b>	134.830	135.345	136.889	138.433	138.433
<b>72.5</b>	113.731	114.760	115.789	116.819	116.819
<b>75.0</b>	93.661	94.175	95.205	95.719	95.205
<b>77.5</b>	73.591	74.620	75.135	75.135	75.135
<b>80.0</b>	55.064	56.094	56.094	56.094	56.094
<b>82.5</b>	38.082	38.596	38.596	38.596	38.082
<b>85.0</b>	22.129	22.643	22.643	22.643	22.129
<b>87.5</b>	8.234	8.749	8.234	8.749	8.234
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	1.029	1.029	1.029	1.029	1.029
<b>95.0</b>	2.573	2.573	2.573	2.573	2.573
<b>97.5</b>	4.117	4.117	4.117	4.632	4.632
<b>100.0</b>	6.175	6.175	6.175	6.175	6.175
<b>102.5</b>	8.234	8.234	8.234	8.234	8.234
<b>105.0</b>	10.807	10.807	10.807	10.807	10.807
<b>107.5</b>	12.865	12.865	12.865	12.865	12.865
<b>110.0</b>	15.439	15.439	15.439	15.439	15.439
<b>112.5</b>	17.497	17.497	17.497	17.497	17.497
<b>115.0</b>	20.070	20.070	20.070	20.070	20.070
<b>117.5</b>	22.129	22.643	22.643	22.129	22.129
<b>120.0</b>	24.702	24.702	24.702	24.702	24.187
<b>122.5</b>	26.760	26.760	26.760	26.760	26.760
<b>125.0</b>	29.333	29.333	29.333	28.819	28.819
<b>127.5</b>	31.392	31.392	31.392	31.392	30.877
<b>130.0</b>	33.450	33.450	33.450	33.450	32.936
<b>132.5</b>	35.509	35.509	35.509	35.509	35.509

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-35-10U90D-ITL87819.002.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-8-35-10U90D-ITL87819.002.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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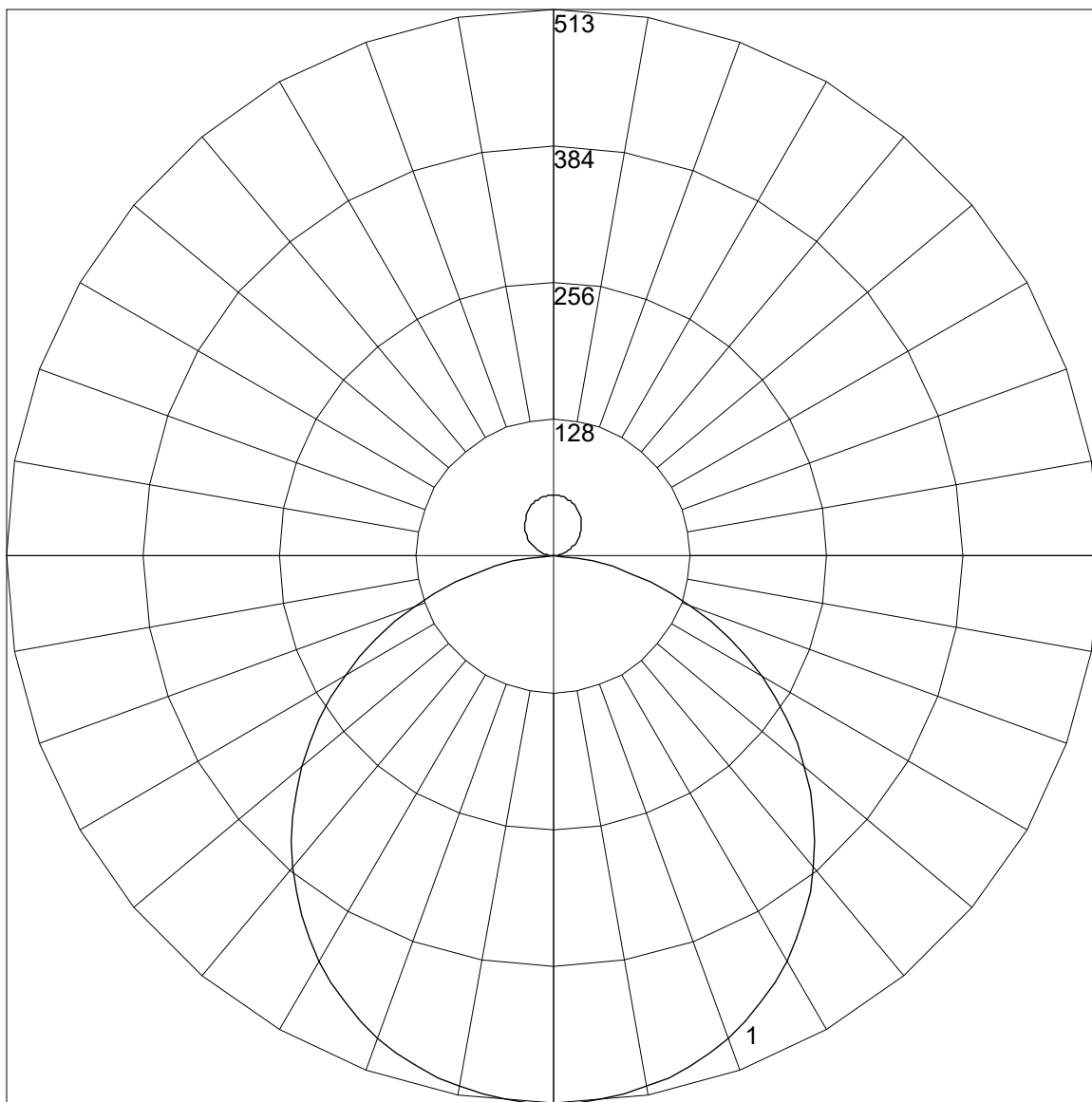
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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)