

# 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-S-8-35-FTO-ITL85121.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85121.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]08/04/15

[ISSUEDATE]04/22/16

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S16-LED-ID-DCO-4ft-2E-S-8-35-FTO

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 14.6 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 16.1 WATTS

[ABSOLUTE]LUMENS]1818

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85122. 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	1818
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	14.6
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	2269	2372	2476
55	2190	2302	2400
65	2056	2147	2259
75	1778	1845	1944
85	1184	1283	1283

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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	221.053	221.053	221.053	221.053	221.053
2.5	220.643	220.643	220.643	221.053	221.053
5.0	220.234	220.234	220.643	220.643	220.643
7.5	219.415	219.415	219.825	220.234	220.643
10.0	217.778	218.187	219.006	219.825	219.825
12.5	216.140	215.731	217.778	219.006	219.006
15.0	214.503	213.684	216.550	218.187	218.187
17.5	211.228	210.819	214.503	216.140	216.550
20.0	208.363	207.953	212.047	214.503	214.912
22.5	205.088	204.269	208.772	212.047	212.865
25.0	200.994	200.175	205.497	209.181	210.000
27.5	196.491	196.082	201.813	205.497	206.725
30.0	191.579	191.579	197.310	201.813	202.632
32.5	185.848	186.257	192.398	196.901	198.538
35.0	180.117	180.936	186.667	191.579	193.216
37.5	173.567	174.386	180.526	185.848	187.076
40.0	167.018	167.836	174.386	179.298	181.345
42.5	160.058	160.877	167.018	171.930	173.977
45.0	152.690	153.509	159.649	164.561	166.608
47.5	144.912	145.731	151.871	156.374	158.421
50.0	136.725	137.953	143.275	148.187	149.415
52.5	128.538	129.357	134.678	139.181	140.409
55.0	119.532	120.760	125.673	129.766	130.994
57.5	110.936	111.754	116.257	119.942	121.170
60.0	101.520	102.749	106.433	110.117	111.345
62.5	92.105	92.924	96.608	99.474	100.702
65.0	82.690	83.509	86.374	89.240	90.877
67.5	72.865	73.684	76.140	78.596	79.825
70.0	63.041	63.450	65.906	67.953	69.181
72.5	52.807	53.626	55.673	57.310	58.538
75.0	43.801	44.211	45.439	46.667	47.895
77.5	34.386	34.795	36.023	36.842	37.661
80.0	25.380	25.789	26.608	27.427	27.836
82.5	17.193	17.602	18.012	18.421	18.830
85.0	9.825	10.234	10.643	10.643	10.643
87.5	3.275	3.684	3.684	3.684	3.684
90.0	0.000	0.000	0.000	0.000	0.000
92.5	8.187	8.187	5.322	1.228	0.819
95.0	17.602	19.649	21.696	21.696	20.877
97.5	27.836	31.520	37.661	38.889	38.480
100.0	38.889	44.620	54.035	57.310	57.719
102.5	50.351	58.538	72.047	79.006	82.281
105.0	62.632	72.865	91.696	103.158	108.070
107.5	74.912	88.830	112.164	127.719	133.450
110.0	88.012	104.795	133.450	152.690	159.240
112.5	101.111	120.760	155.146	178.070	185.848
115.0	113.801	136.725	176.433	203.860	212.456
117.5	126.491	152.281	197.719	228.421	238.655
120.0	138.363	167.018	218.187	252.573	264.035
122.5	150.234	181.345	237.427	275.088	287.778
125.0	160.877	194.444	254.620	295.965	309.474
127.5	171.520	205.906	270.175	313.567	328.713
130.0	180.936	216.550	283.275	329.532	345.497
132.5	189.123	225.146	293.918	342.222	359.006

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-S-8-35-FTO-ITL85121.001.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	196.901	232.924	302.105	352.047	368.830
<b>137.5</b>	203.450	238.246	307.427	357.778	374.561
<b>140.0</b>	210.000	242.749	310.702	360.234	377.427
<b>142.5</b>	215.322	246.023	311.520	360.234	376.608
<b>145.0</b>	219.006	248.070	309.883	356.550	372.105
<b>147.5</b>	222.281	248.480	305.789	350.409	365.146
<b>150.0</b>	225.146	248.070	300.877	342.222	356.140
<b>152.5</b>	227.193	247.661	294.737	332.398	344.269
<b>155.0</b>	229.240	246.023	287.778	321.345	331.988
<b>157.5</b>	230.468	244.386	279.591	309.064	318.480
<b>160.0</b>	231.287	242.339	271.813	296.374	304.971
<b>162.5</b>	232.105	240.702	264.444	284.503	291.462
<b>165.0</b>	232.105	238.655	256.667	272.222	277.544
<b>167.5</b>	232.515	237.018	249.708	261.170	266.082
<b>170.0</b>	232.105	235.380	243.567	251.345	254.620
<b>172.5</b>	232.105	234.152	238.655	243.158	245.205
<b>175.0</b>	232.105	232.924	235.380	237.427	238.246
<b>177.5</b>	232.105	232.105	232.924	233.333	233.743
<b>180.0</b>	232.105	232.105	232.105	232.105	232.105

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-S-8-35-FTO-ITL85121.001.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	82.04	N.A.	4.50
0-30	176.62	N.A.	9.70
0-40	293.20	N.A.	16.10
0-60	527.97	N.A.	29.00
0-80	661.68	N.A.	36.40
0-90	674.03	N.A.	37.10
10-90	653.03	N.A.	35.90
20-40	211.16	N.A.	11.60
20-50	333.97	N.A.	18.40
40-70	320.17	N.A.	17.60
60-80	133.72	N.A.	7.40
70-80	48.32	N.A.	2.70
80-90	12.34	N.A.	0.70
90-110	117.12	N.A.	6.40
90-120	285.06	N.A.	15.70
90-130	503.12	N.A.	27.70
90-150	916.99	N.A.	50.40
90-180	1144.19	N.A.	62.90
110-180	1027.07	N.A.	56.50
0-180	1818.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	21.00
10-20	61.04
20-30	94.59
30-40	116.58
40-50	122.81
50-60	111.96
60-70	85.40
70-80	48.32
80-90	12.34
90-100	23.45
100-110	93.67
110-120	167.94
120-130	218.06
130-140	224.66
140-150	189.20
150-160	131.52
160-170	72.97
170-180	22.71

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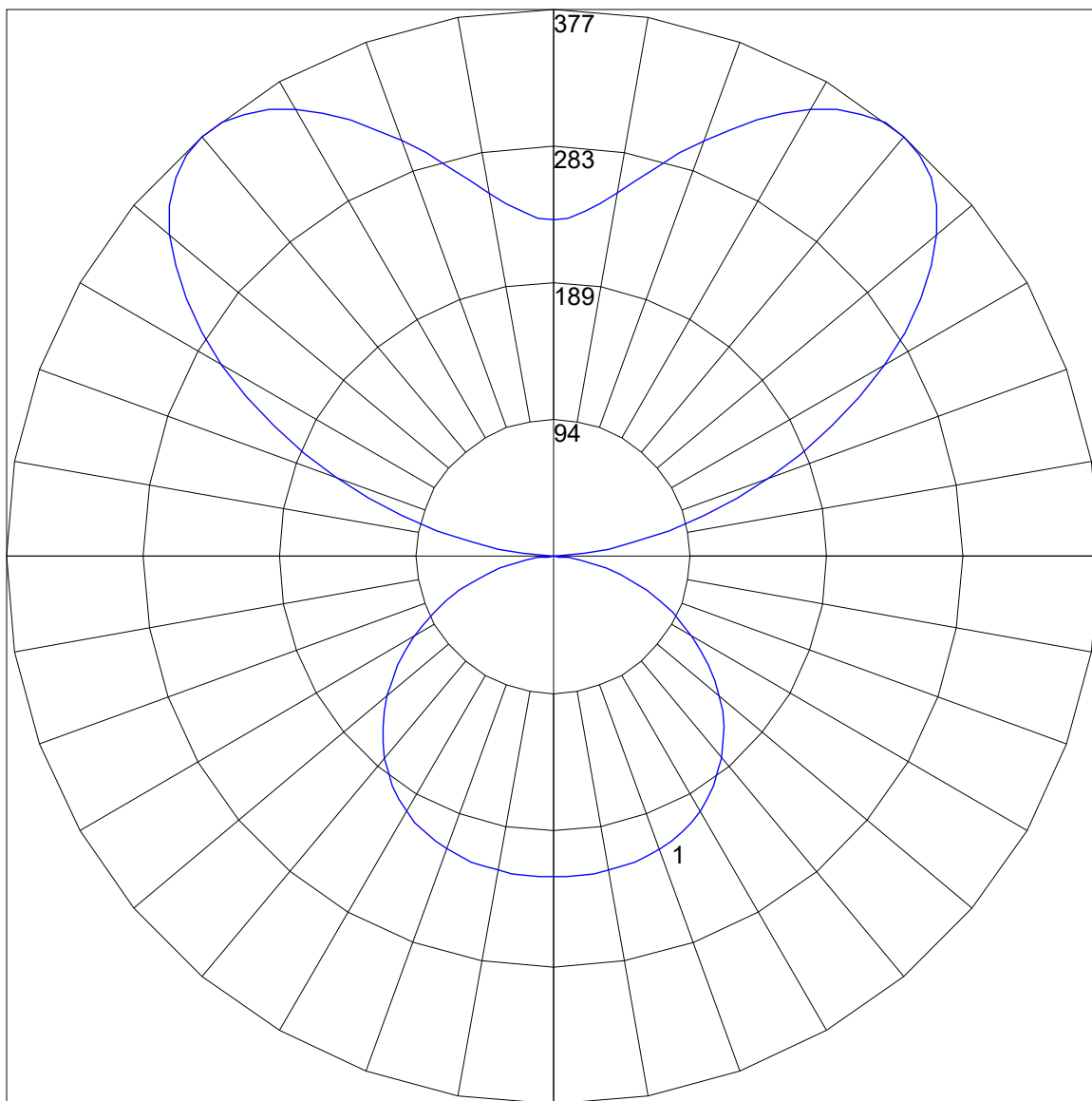
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	90	87	83	86	82	79	76	66	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	66	62	58	54	51	46	43	41	34	32	31	26
3	78	69	62	56	71	63	56	51	51	46	43	40	37	34	30	28	26	21
4	72	61	53	47	65	55	49	43	45	40	36	36	32	29	27	24	22	18
5	66	54	46	40	59	49	42	37	40	35	31	32	28	25	24	21	19	16
6	60	48	40	35	54	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	43	36	30	50	40	33	28	33	27	23	26	22	19	20	17	15	12
8	51	39	32	26	47	36	29	24	30	24	21	24	20	17	18	15	13	11
9	48	36	28	23	43	33	26	22	27	22	18	22	18	15	16	14	12	10
10	45	33	26	21	40	30	24	19	25	20	16	20	16	14	15	13	11	9

POLAR GRAPH



Maximum Candela = 377.427 Located At Horizontal Angle = 90, Vertical Angle = 140  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)