

# 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 : S12-LED-ID-DCO-4FT-2E-S-8-35-10U90D-ITL87814.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87814.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/14/16

[ISSUEDATE]07/27/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S12-LED-ID-DCO-4ft-2E-S-8-35-10U90D

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 14.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 16.0 WATTS

[ABSOLUTE]LUMENS]1295

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87814. 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	1295
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	14.5
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.32 ft
Luminous Width (90-270)	0.36 ft
Luminous Height	0.03 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3070	2995	3029
55	2919	2798	2828
65	2689	2487	2520
75	2292	2020	2095
85	1543	1438	1706

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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	383.158	383.158	383.158	383.158	383.158
2.5	383.158	382.749	382.749	382.749	383.158
5.0	381.520	381.520	381.520	381.930	381.930
7.5	379.474	379.474	379.883	379.883	380.292
10.0	376.608	375.789	377.427	377.836	378.246
12.5	372.515	371.287	373.333	374.561	374.152
15.0	367.193	365.965	368.830	370.877	370.468
17.5	361.053	359.825	363.918	365.965	365.965
20.0	354.094	352.456	357.368	360.234	359.825
22.5	346.316	344.678	350.000	353.684	353.684
25.0	337.719	336.491	342.632	346.316	346.725
27.5	328.713	327.895	334.035	338.129	338.947
30.0	318.480	318.070	324.620	329.123	329.942
32.5	307.836	307.836	314.386	319.298	320.526
35.0	296.784	296.784	303.743	309.064	310.292
37.5	284.912	284.912	292.281	298.012	299.240
40.0	272.632	273.450	280.409	286.140	287.778
42.5	260.351	260.760	268.538	273.860	275.088
45.0	246.842	247.661	254.620	260.760	261.988
47.5	233.743	234.152	241.111	246.842	248.889
50.0	219.825	220.643	227.602	233.333	234.561
52.5	205.497	206.316	213.275	218.596	220.234
55.0	191.170	191.988	198.129	203.450	205.088
57.5	176.433	177.251	182.573	187.485	189.123
60.0	161.287	162.105	167.018	171.520	173.158
62.5	146.140	146.959	151.053	155.556	158.012
65.0	130.585	130.994	135.497	139.591	142.047
67.5	115.029	115.848	119.942	123.626	126.082
70.0	99.474	100.292	103.977	107.661	109.708
72.5	83.918	85.556	88.830	92.105	94.561
75.0	69.181	70.409	73.684	77.778	80.643
77.5	54.854	56.082	59.766	64.269	66.725
80.0	40.936	42.164	47.076	51.579	54.035
82.5	28.246	29.883	34.795	40.526	42.573
85.0	16.784	18.830	24.971	30.702	33.158
87.5	6.550	10.234	16.784	22.105	24.152
90.0	0.000	4.503	10.643	15.556	17.193
92.5	1.228	2.456	6.959	11.053	12.690
95.0	2.456	2.865	5.731	10.234	10.643
97.5	4.094	4.912	6.550	9.006	9.825
100.0	5.731	7.368	9.825	10.643	11.053
102.5	7.778	10.234	12.281	14.327	14.737
105.0	10.234	11.871	15.556	18.421	19.240
107.5	12.281	14.737	18.830	22.515	23.743
110.0	14.737	17.602	22.515	27.018	28.655
112.5	17.193	20.058	26.608	31.520	33.158
115.0	19.649	22.924	30.292	35.614	37.661
117.5	21.696	25.380	33.977	40.117	42.164
120.0	24.152	28.246	37.251	43.801	46.667
122.5	27.018	31.111	40.117	47.485	50.351
125.0	29.883	33.567	42.164	50.760	53.626
127.5	31.930	35.205	44.211	53.216	56.491
130.0	33.567	36.433	45.439	54.854	58.538
132.5	34.795	37.661	46.667	56.082	59.766

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-S-8-35-10U90D-ITL87814.001.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	36.023	38.480	47.076	56.491	60.175
<b>137.5</b>	36.842	39.298	47.485	56.082	59.766
<b>140.0</b>	37.661	39.708	47.076	55.673	58.947
<b>142.5</b>	38.480	40.117	46.667	54.444	57.310
<b>145.0</b>	39.298	40.526	46.257	52.807	55.673
<b>147.5</b>	39.708	40.936	45.848	51.170	53.626
<b>150.0</b>	40.526	41.345	45.029	49.532	51.579
<b>152.5</b>	40.526	41.345	44.620	47.895	49.532
<b>155.0</b>	40.936	41.345	43.801	46.667	47.485
<b>157.5</b>	41.345	41.754	43.392	45.439	46.257
<b>160.0</b>	41.345	41.754	42.982	44.211	44.620
<b>162.5</b>	41.345	41.754	42.573	43.392	43.801
<b>165.0</b>	41.345	41.345	42.164	42.573	42.982
<b>167.5</b>	41.345	41.345	41.754	42.164	42.573
<b>170.0</b>	41.345	41.345	41.754	41.754	41.754
<b>172.5</b>	41.345	41.345	41.345	41.345	41.754
<b>175.0</b>	41.345	41.345	41.345	41.345	41.345
<b>177.5</b>	41.345	41.345	41.345	41.345	41.345
<b>180.0</b>	41.345	41.345	41.345	41.345	41.345

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-S-8-35-10U90D-ITL87814.001.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	140.31	N.A.	10.80
0-30	297.87	N.A.	23.00
0-40	487.53	N.A.	37.60
0-60	860.52	N.A.	66.50
0-80	1073.6	N.A.	82.90
0-90	1102.08	N.A.	85.10
10-90	1065.79	N.A.	82.30
20-40	347.21	N.A.	26.80
20-50	543.47	N.A.	42.00
40-70	507.23	N.A.	39.20
60-80	213.09	N.A.	16.50
70-80	78.85	N.A.	6.10
80-90	28.48	N.A.	2.20
90-110	24.22	N.A.	1.90
90-120	53.22	N.A.	4.10
90-130	90.50	N.A.	7.00
90-150	156.42	N.A.	12.10
90-180	192.82	N.A.	14.90
110-180	168.60	N.A.	13.00
0-180	1294.9	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	36.29
10-20	104.03
20-30	157.55
30-40	189.66
40-50	196.26
50-60	176.74
60-70	134.24
70-80	78.85
80-90	28.48
90-100	8.05
100-110	16.17
110-120	29.01
120-130	37.28
130-140	36.56
140-150	29.36
150-160	20.46
160-170	11.98
170-180	3.95

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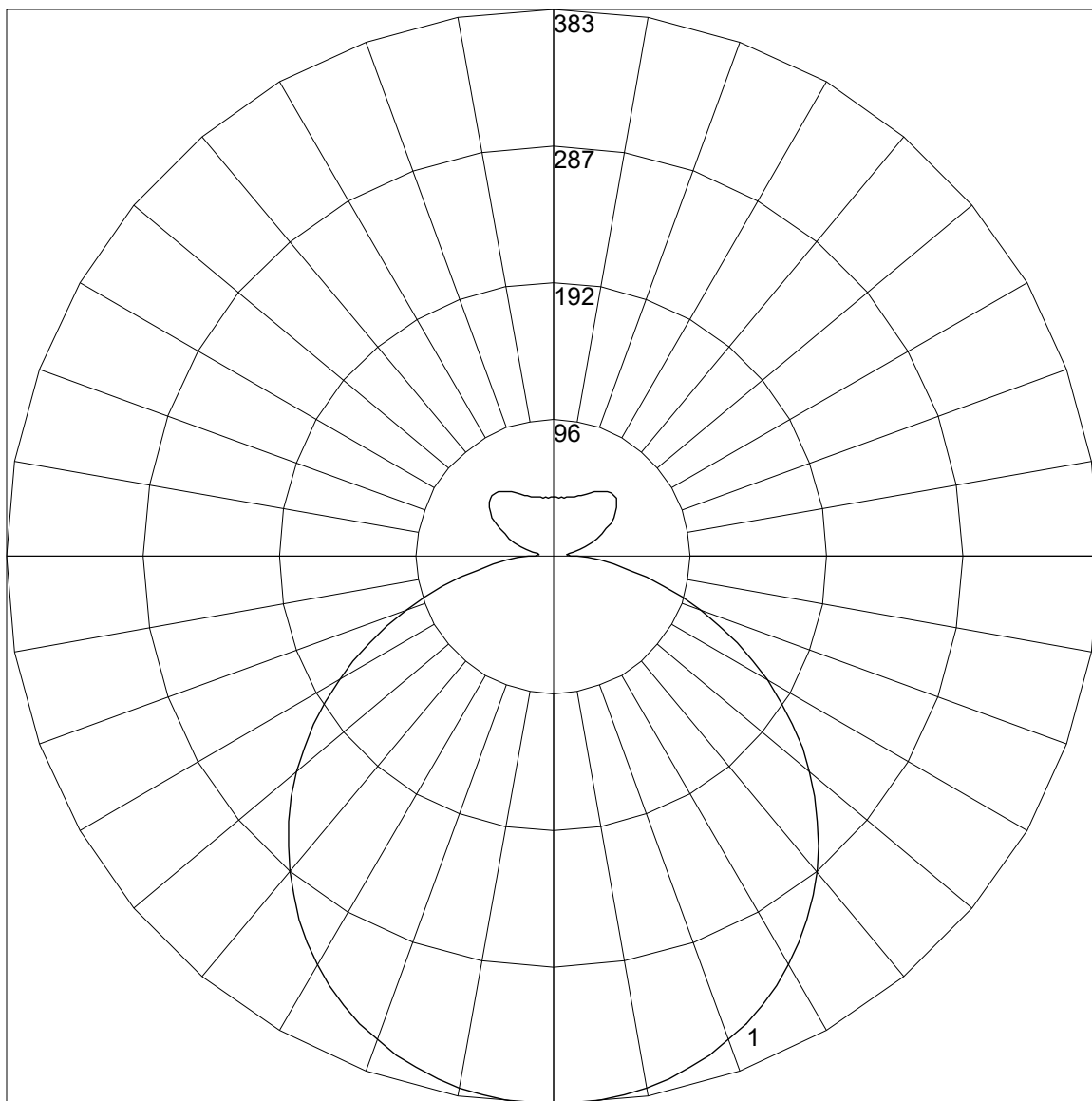
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85
1	105	100	96	92	101	97	93	89	90	87	84	83	81	79	77	75	74	71
2	96	87	81	75	92	84	78	73	78	73	69	73	69	65	68	64	62	59
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	49
4	80	68	59	53	76	65	58	51	61	54	49	57	51	47	53	49	45	42
5	73	60	52	45	70	58	50	44	55	48	42	51	45	41	48	43	39	36
6	67	54	46	39	65	53	44	38	49	42	37	46	40	36	43	38	34	32
7	62	49	41	35	60	48	40	34	45	38	33	42	36	31	40	34	30	28
8	58	45	36	31	56	43	36	30	41	34	29	39	33	28	36	31	27	25
9	54	41	33	28	52	40	32	27	38	31	26	36	30	25	34	28	24	22
10	51	38	30	25	49	37	29	24	35	28	24	33	27	23	31	26	22	20

POLAR GRAPH



Maximum Candela = 383.158 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)