

# 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-TDO-ITL87818.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87818.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/15/16

[ISSUEDATE]07/27/16

[MANUFAC]FINELITE, INC.

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

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 14.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 16.0 WATTS

[ABSOLUTE]LUMENS]1305

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87818. 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	1305
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	14.5
Ballast Factor	1.00
CIE Type	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	3630	3525	3550
55	3432	3283	3285
65	3152	2908	2898
75	2713	2368	2436
85	1845	1674	1980

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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	455.205	455.205	455.205	455.205	455.205
2.5	455.205	455.205	455.205	455.205	455.205
5.0	453.567	453.567	453.567	453.977	453.977
7.5	450.292	450.702	451.111	451.520	451.520
10.0	447.018	446.608	447.836	448.246	448.655
12.5	442.515	441.287	443.743	444.561	444.152
15.0	436.374	434.737	438.421	439.649	439.240
17.5	429.006	426.550	431.462	433.509	432.690
20.0	420.409	417.953	423.684	426.550	425.731
22.5	410.585	408.947	415.088	417.953	417.953
25.0	400.351	398.713	405.263	408.947	408.947
27.5	389.298	387.661	394.620	398.713	399.123
30.0	377.427	376.199	383.567	388.070	388.889
32.5	364.737	363.918	371.287	376.199	377.427
35.0	351.228	350.819	358.596	363.509	364.737
37.5	337.310	337.310	344.678	350.000	351.637
40.0	322.573	322.982	330.760	335.673	337.310
42.5	307.427	308.246	315.614	320.936	322.573
45.0	291.871	292.281	299.649	305.380	307.018
47.5	275.497	276.316	283.275	289.006	290.643
50.0	258.713	259.942	266.082	271.813	273.860
52.5	241.930	243.158	249.708	255.029	256.257
55.0	224.737	226.374	232.515	237.018	238.246
57.5	207.134	208.772	214.503	218.596	219.825
60.0	189.123	191.170	196.082	200.175	201.404
62.5	171.520	172.749	177.661	181.345	182.164
65.0	153.099	154.737	158.421	162.515	163.333
67.5	134.678	136.316	140.000	143.684	145.322
70.0	116.257	117.895	121.579	125.263	126.901
72.5	99.474	100.292	103.977	107.661	110.526
75.0	81.871	83.099	86.374	90.877	93.743
77.5	64.678	65.906	70.000	74.912	77.778
80.0	48.713	49.532	54.854	59.766	62.632
82.5	33.567	34.795	40.526	46.667	49.942
85.0	20.058	22.105	29.064	35.614	38.480
87.5	7.778	11.871	19.649	25.789	28.655
90.0	0.000	5.322	12.281	17.602	20.058
92.5	0.000	1.637	6.550	11.053	13.099
95.0	0.000	0.000	3.275	7.778	7.778
97.5	0.000	0.000	0.819	2.456	3.684
100.0	0.000	0.000	0.409	0.819	0.819
102.5	0.000	0.000	0.409	0.409	0.409
105.0	0.000	0.000	0.409	0.409	0.409
107.5	0.000	0.000	0.409	0.409	0.409
110.0	0.000	0.000	0.409	0.409	0.409
112.5	0.000	0.409	0.409	0.409	0.409
115.0	0.000	0.409	0.409	0.819	0.409
117.5	0.000	0.409	0.409	0.819	0.409
120.0	0.409	0.409	0.819	0.819	0.409
122.5	0.409	0.409	0.819	0.819	0.819
125.0	0.409	0.409	0.819	0.819	0.819
127.5	0.409	0.409	0.819	0.819	0.819
130.0	0.409	0.819	0.819	0.819	0.819
132.5	0.819	0.819	0.819	0.819	0.819

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-S-8-35-TDO-ITL87818.001.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	0.819	0.819	0.819	0.819	0.819
<b>137.5</b>	0.819	0.819	0.819	0.819	0.819
<b>140.0</b>	0.819	0.819	0.819	0.819	0.819
<b>142.5</b>	0.819	0.819	0.819	0.819	0.819
<b>145.0</b>	0.819	0.819	0.819	0.819	1.228
<b>147.5</b>	0.819	0.819	0.819	0.819	1.228
<b>150.0</b>	0.819	0.819	0.819	0.819	1.228
<b>152.5</b>	0.819	0.819	0.819	0.819	1.228
<b>155.0</b>	0.819	0.819	0.819	0.819	0.819
<b>157.5</b>	0.819	0.819	0.819	0.819	1.228
<b>160.0</b>	0.819	0.819	0.819	0.819	0.819
<b>162.5</b>	0.819	0.819	0.819	0.819	0.819
<b>165.0</b>	0.819	0.819	0.819	0.819	0.819
<b>167.5</b>	0.819	0.819	0.819	0.819	0.819
<b>170.0</b>	0.819	0.819	0.819	0.819	0.819
<b>172.5</b>	0.819	0.819	0.819	0.819	0.819
<b>175.0</b>	0.819	0.819	0.819	0.819	0.819
<b>177.5</b>	0.819	0.819	0.819	0.819	0.819
<b>180.0</b>	0.819	0.819	0.819	0.819	0.819

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-S-8-35-TDO-ITL87818.001.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	166.53	N.A.	12.80
0-30	352.87	N.A.	27.00
0-40	576.61	N.A.	44.20
0-60	1014.34	N.A.	77.70
0-80	1263.58	N.A.	96.80
0-90	1296.79	N.A.	99.40
10-90	1253.68	N.A.	96.10
20-40	410.08	N.A.	31.40
20-50	640.77	N.A.	49.10
40-70	594.65	N.A.	45.60
60-80	249.24	N.A.	19.10
70-80	92.32	N.A.	7.10
80-90	33.21	N.A.	2.50
90-110	5.03	N.A.	0.40
90-120	5.45	N.A.	0.40
90-130	6.05	N.A.	0.50
90-150	7.22	N.A.	0.60
90-180	7.92	N.A.	0.60
110-180	2.89	N.A.	0.20
0-180	1304.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	43.11
10-20	123.42
20-30	186.34
30-40	223.74
40-50	230.69
50-60	207.04
60-70	156.92
70-80	92.32
80-90	33.21
90-100	4.74
100-110	0.29
110-120	0.42
120-130	0.60
130-140	0.63
140-150	0.53
150-160	0.39
160-170	0.23
170-180	0.08

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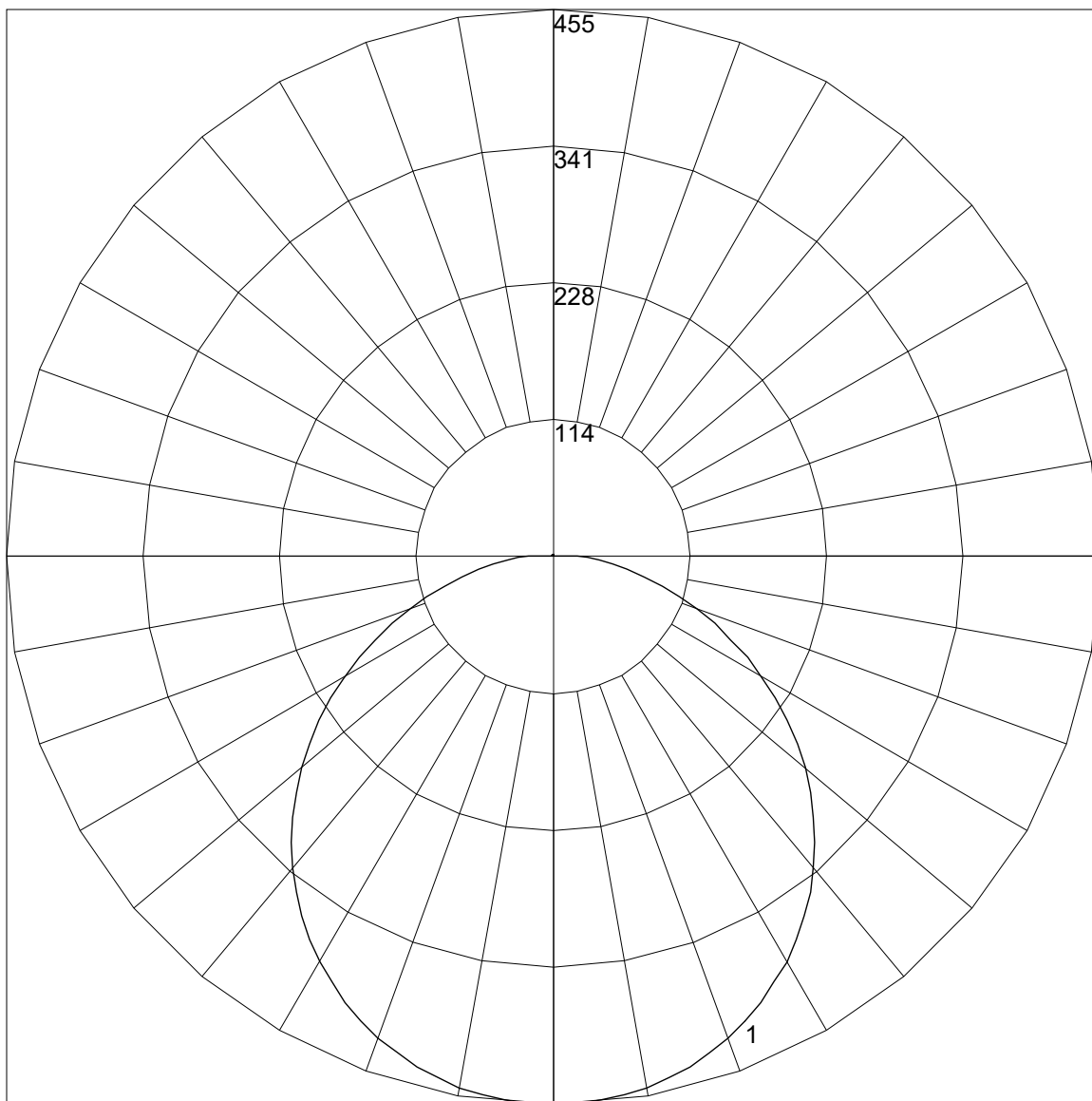
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	76	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 455.205 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)