

# 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-B-8-TW-10U90D-ITL87814.902.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87814.902 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/14/16

[ISSUEDATE]078/17/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S12-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]1628

[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	1628
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	20.4
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	3859	3765	3808
55	3670	3517	3555
65	3380	3127	3168
75	2882	2540	2634
85	1940	1808	2144

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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	481.684	481.684	481.684	481.684	481.684
2.5	481.684	481.170	481.170	481.170	481.684
5.0	479.626	479.626	479.626	480.140	480.140
7.5	477.053	477.053	477.567	477.567	478.082
10.0	473.450	472.421	474.480	474.994	475.509
12.5	468.304	466.760	469.333	470.877	470.363
15.0	461.614	460.070	463.673	466.246	465.731
17.5	453.895	452.351	457.497	460.070	460.070
20.0	445.146	443.088	449.263	452.866	452.351
22.5	435.368	433.310	440.000	444.632	444.632
25.0	424.561	423.018	430.737	435.368	435.883
27.5	413.240	412.211	419.930	425.076	426.105
30.0	400.374	399.860	408.094	413.754	414.784
32.5	386.994	386.994	395.228	401.404	402.947
35.0	373.099	373.099	381.848	388.538	390.082
37.5	358.175	358.175	367.439	374.643	376.187
40.0	342.737	343.766	352.515	359.719	361.778
42.5	327.298	327.813	337.591	344.281	345.825
45.0	310.316	311.345	320.094	327.813	329.357
47.5	293.848	294.363	303.111	310.316	312.889
50.0	276.351	277.380	286.129	293.333	294.877
52.5	258.339	259.368	268.117	274.807	276.865
55.0	240.327	241.357	249.076	255.766	257.825
57.5	221.801	222.830	229.520	235.696	237.754
60.0	202.760	203.789	209.965	215.626	217.684
62.5	183.719	184.749	189.895	195.556	198.643
65.0	164.164	164.678	170.339	175.485	178.573
67.5	144.608	145.637	150.784	155.415	158.503
70.0	125.053	126.082	130.713	135.345	137.918
72.5	105.497	107.556	111.673	115.789	118.877
75.0	86.971	88.515	92.632	97.778	101.380
77.5	68.959	70.503	75.135	80.795	83.883
80.0	51.462	53.006	59.181	64.842	67.930
82.5	35.509	37.567	43.743	50.947	53.520
85.0	21.099	23.673	31.392	38.596	41.684
87.5	8.234	12.865	21.099	27.789	30.363
90.0	0.000	5.661	13.380	19.556	21.614
92.5	1.544	3.088	8.749	13.895	15.953
95.0	3.088	3.602	7.205	12.865	13.380
97.5	5.146	6.175	8.234	11.322	12.351
100.0	7.205	9.263	12.351	13.380	13.895
102.5	9.778	12.865	15.439	18.012	18.526
105.0	12.865	14.924	19.556	23.158	24.187
107.5	15.439	18.526	23.673	28.304	29.848
110.0	18.526	22.129	28.304	33.965	36.023
112.5	21.614	25.216	33.450	39.626	41.684
115.0	24.702	28.819	38.082	44.772	47.345
117.5	27.275	31.906	42.713	50.433	53.006
120.0	30.363	35.509	46.830	55.064	58.667
122.5	33.965	39.111	50.433	59.696	63.298
125.0	37.567	42.199	53.006	63.813	67.415
127.5	40.140	44.257	55.579	66.901	71.018
130.0	42.199	45.801	57.123	68.959	73.591
132.5	43.743	47.345	58.667	70.503	75.135

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-B-8-TW-10U90D-ITL87814.902.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	45.287	48.374	59.181	71.018	75.649
<b>137.5</b>	46.316	49.404	59.696	70.503	75.135
<b>140.0</b>	47.345	49.918	59.181	69.988	74.105
<b>142.5</b>	48.374	50.433	58.667	68.444	72.047
<b>145.0</b>	49.404	50.947	58.152	66.386	69.988
<b>147.5</b>	49.918	51.462	57.637	64.327	67.415
<b>150.0</b>	50.947	51.977	56.608	62.269	64.842
<b>152.5</b>	50.947	51.977	56.094	60.211	62.269
<b>155.0</b>	51.462	51.977	55.064	58.667	59.696
<b>157.5</b>	51.977	52.491	54.550	57.123	58.152
<b>160.0</b>	51.977	52.491	54.035	55.579	56.094
<b>162.5</b>	51.977	52.491	53.520	54.550	55.064
<b>165.0</b>	51.977	51.977	53.006	53.520	54.035
<b>167.5</b>	51.977	51.977	52.491	53.006	53.520
<b>170.0</b>	51.977	51.977	52.491	52.491	52.491
<b>172.5</b>	51.977	51.977	51.977	51.977	52.491
<b>175.0</b>	51.977	51.977	51.977	51.977	51.977
<b>177.5</b>	51.977	51.977	51.977	51.977	51.977
<b>180.0</b>	51.977	51.977	51.977	51.977	51.977

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-B-8-TW-10U90D-ITL87814.902.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	176.40	N.A.	10.80
0-30	374.46	N.A.	23.00
0-40	612.89	N.A.	37.60
0-60	1081.79	N.A.	66.50
0-80	1349.67	N.A.	82.90
0-90	1385.48	N.A.	85.10
10-90	1339.86	N.A.	82.30
20-40	436.49	N.A.	26.80
20-50	683.21	N.A.	42.00
40-70	637.66	N.A.	39.20
60-80	267.88	N.A.	16.50
70-80	99.12	N.A.	6.10
80-90	35.80	N.A.	2.20
90-110	30.44	N.A.	1.90
90-120	66.91	N.A.	4.10
90-130	113.77	N.A.	7.00
90-150	196.65	N.A.	12.10
90-180	242.40	N.A.	14.90
110-180	211.96	N.A.	13.00
0-180	1627.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	45.62
10-20	130.78
20-30	198.07
30-40	238.43
40-50	246.72
50-60	222.18
60-70	168.76
70-80	99.12
80-90	35.80
90-100	10.12
100-110	20.33
110-120	36.47
120-130	46.86
130-140	45.96
140-150	36.91
150-160	25.73
160-170	15.06
170-180	4.97

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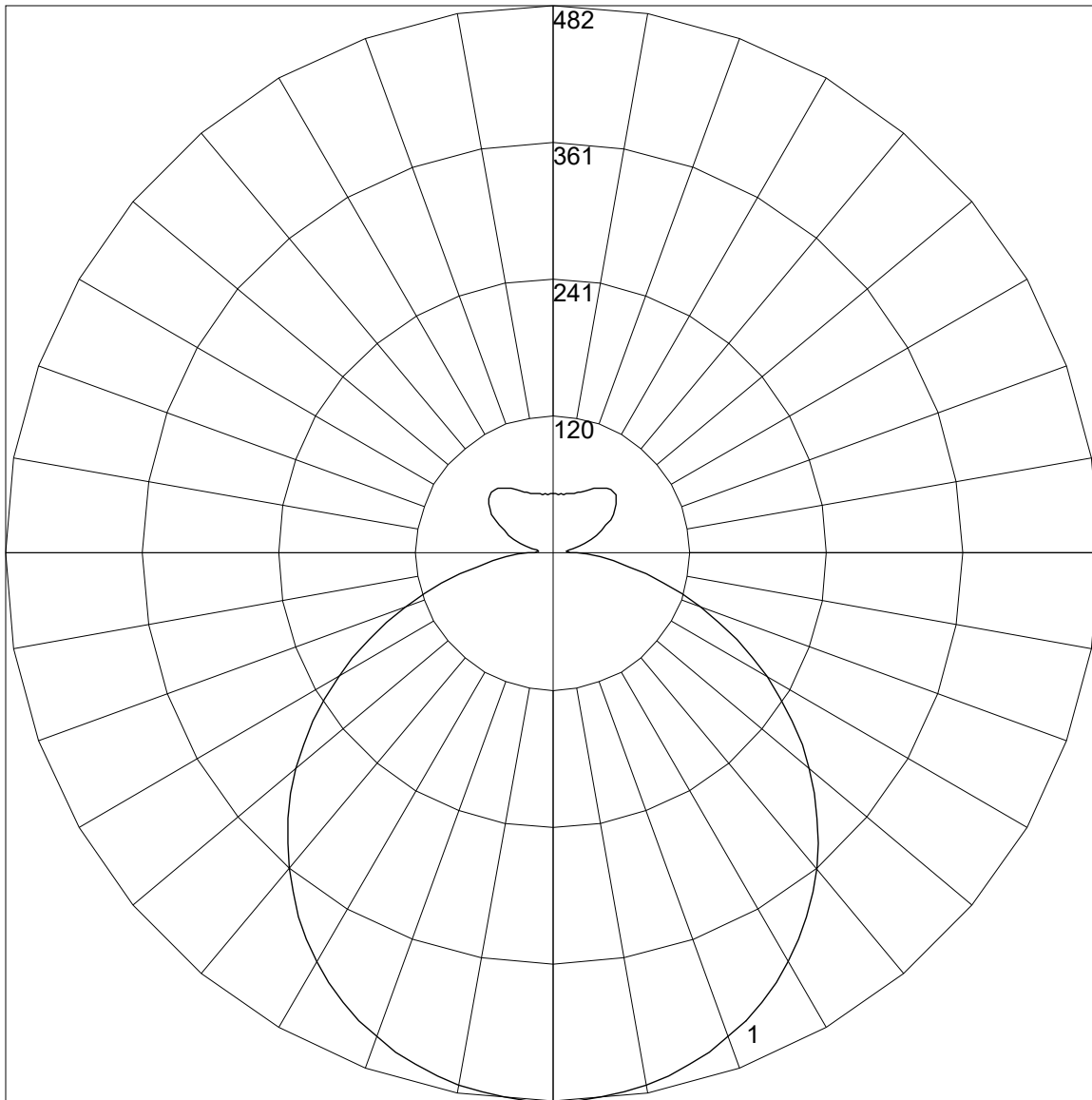
PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-B-8-TW-10U90D-ITL87814.902.IES

## 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 = 481.684 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)