

# 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-3E-B-V-8-TW-FTO-ITL85165.912.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85165.912 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]09/09/15

[ISSUEDATE]04/27/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S12-LED-ID-DCO-4ft-3E-B-V-8-TW-FTO

[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

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 42.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 46.1 WATTS

[ABSOLUTE]LUMENS]4423

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85165. 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	4423
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	42.5
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
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	5733	5481	5400
55	5375	5012	4936
65	4880	4461	4311
75	4075	3591	3612
85	2391	2591	2932

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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	749.000	749.000	749.000	749.000	749.000
2.5	748.000	748.000	748.000	748.000	748.000
5.0	744.000	745.000	745.000	745.000	745.000
7.5	740.000	740.000	740.000	740.000	741.000
10.0	733.000	732.000	734.000	734.000	733.000
12.5	724.000	722.000	725.000	725.000	724.000
15.0	713.000	709.000	714.000	714.000	713.000
17.5	700.000	696.000	702.000	702.000	701.000
20.0	685.000	680.000	686.000	687.000	686.000
22.5	668.000	663.000	670.000	671.000	671.000
25.0	649.000	645.000	651.000	653.000	654.000
27.5	629.000	626.000	631.000	635.000	635.000
30.0	608.000	605.000	610.000	615.000	614.000
32.5	585.000	583.000	590.000	592.000	591.000
35.0	561.000	560.000	567.000	570.000	568.000
37.5	538.000	536.000	543.000	545.000	544.000
40.0	513.000	512.000	518.000	520.000	519.000
42.5	488.000	486.000	492.000	494.000	493.000
45.0	461.000	460.000	466.000	467.000	467.000
47.5	434.000	433.000	438.000	441.000	440.000
50.0	407.000	407.000	411.000	413.000	413.000
52.5	380.000	381.000	383.000	386.000	386.000
55.0	352.000	353.000	355.000	358.000	358.000
57.5	324.000	325.000	327.000	330.000	329.000
60.0	295.000	296.000	299.000	302.000	301.000
62.5	266.000	268.000	271.000	273.000	272.000
65.0	237.000	239.000	243.000	244.000	243.000
67.5	208.000	210.000	214.000	216.000	215.000
70.0	179.000	182.000	186.000	188.000	189.000
72.5	150.000	154.000	157.000	163.000	164.000
75.0	123.000	127.000	131.000	138.000	139.000
77.5	96.000	100.000	106.000	113.000	115.000
80.0	70.000	75.000	83.000	91.000	93.000
82.5	47.000	52.000	62.000	72.000	74.000
85.0	26.000	32.000	45.000	55.000	57.000
87.5	8.000	17.000	30.000	40.000	43.000
90.0	0.000	9.000	23.000	34.000	38.000
92.5	16.983	20.070	27.790	33.965	35.509
95.0	35.509	40.140	48.889	55.579	58.667
97.5	56.094	62.784	74.105	81.825	85.427
100.0	78.737	87.485	102.924	113.216	117.848
102.5	103.953	115.275	134.830	149.240	155.415
105.0	130.714	144.608	169.825	188.351	195.556
107.5	158.503	175.485	206.363	229.520	236.210
110.0	187.836	207.906	244.959	272.234	280.468
112.5	216.140	240.842	284.070	314.433	325.240
115.0	247.018	273.778	323.696	358.175	370.012
117.5	277.895	307.228	361.778	401.404	413.754
120.0	308.257	340.678	400.374	443.602	456.983
122.5	338.620	373.099	436.398	483.743	498.667
125.0	368.983	404.491	471.906	521.310	537.263
127.5	398.316	435.368	505.357	556.304	572.772
130.0	427.135	464.187	535.719	587.696	604.164
132.5	455.439	491.977	563.509	615.485	631.953

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-3E-B-V-8-TW-FTO-ITL85165.912.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	481.684	517.193	588.211	640.187	656.140
<b>137.5</b>	507.415	541.380	610.339	660.257	676.211
<b>140.0</b>	531.602	562.994	629.380	677.240	692.164
<b>142.5</b>	553.731	581.520	644.819	689.591	704.000
<b>145.0</b>	575.345	600.047	658.713	700.912	713.778
<b>147.5</b>	593.357	615.485	669.006	707.602	719.953
<b>150.0</b>	611.368	629.895	678.269	713.263	723.556
<b>152.5</b>	627.322	642.246	685.474	716.865	725.614
<b>155.0</b>	640.702	653.567	690.620	718.409	726.643
<b>157.5</b>	653.053	662.830	694.737	717.895	725.614
<b>160.0</b>	663.345	671.579	697.825	716.351	723.556
<b>162.5</b>	672.608	678.269	699.883	714.292	720.982
<b>165.0</b>	680.327	684.444	700.912	712.234	716.865
<b>167.5</b>	686.503	689.591	701.427	709.146	713.263
<b>170.0</b>	691.649	693.708	700.912	706.573	709.661
<b>172.5</b>	695.251	697.310	700.912	704.515	706.573
<b>175.0</b>	698.339	699.368	700.912	702.456	702.971
<b>177.5</b>	700.398	700.398	700.398	701.427	701.427
<b>180.0</b>	700.912	700.912	700.912	700.912	700.912

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-3E-B-V-8-TW-FTO-ITL85165.912.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	271.70	N.A.	6.10
0-30	571.20	N.A.	12.90
0-40	924.71	N.A.	20.90
0-60	1600.39	N.A.	36.20
0-80	1979.14	N.A.	44.70
0-90	2029.53	N.A.	45.90
10-90	1958.79	N.A.	44.30
20-40	653.01	N.A.	14.80
20-50	1011.13	N.A.	22.90
40-70	914.80	N.A.	20.70
60-80	378.75	N.A.	8.60
70-80	139.63	N.A.	3.20
80-90	50.39	N.A.	1.10
90-110	233.61	N.A.	5.30
90-120	546.17	N.A.	12.30
90-130	958.87	N.A.	21.70
90-150	1811.43	N.A.	41.00
90-180	2393.18	N.A.	54.10
110-180	2159.57	N.A.	48.80
0-180	4422.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	70.74
10-20	200.96
20-30	299.50
30-40	353.51
40-50	358.12
50-60	317.56
60-70	239.12
70-80	139.63
80-90	50.39
90-100	56.67
100-110	176.94
110-120	312.56
120-130	412.69
130-140	445.53
140-150	407.03
150-160	316.94
160-170	197.92
170-180	66.89

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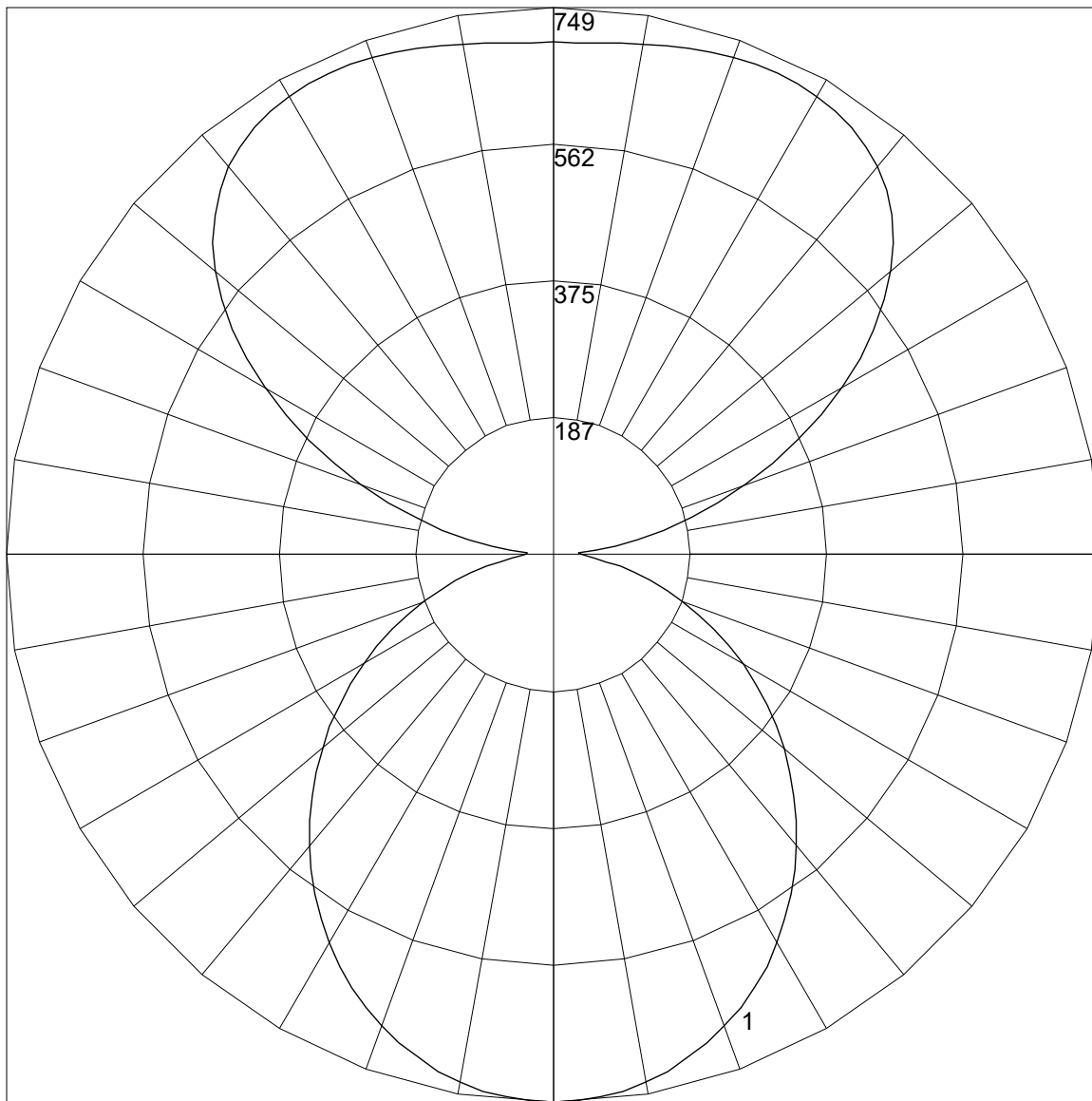
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	97	92	88	85	89	85	81	78	71	68	66	58	56	55	46	45	44	38
2	88	80	74	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32
3	80	71	63	57	73	65	59	53	54	50	46	45	41	38	36	33	31	27
4	73	62	55	48	67	58	51	45	48	43	39	40	36	33	32	29	27	23
5	67	56	47	41	61	51	44	39	43	38	33	36	32	28	29	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	31	52	42	34	29	35	30	26	29	25	22	24	21	18	15
8	53	41	33	28	49	38	31	26	32	27	23	27	23	19	22	19	16	14
9	49	37	30	25	45	34	28	23	29	24	20	25	20	17	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

POLAR GRAPH



Maximum Candela = 749 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)