

# 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-B-8-TW-20U80D-ITL87820.902.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87820.902 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/18/16

[ISSUEDATE]08/17/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S16-LED-ID-DCO-4ft-2E-B-8-TW-20U80D

[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: 277.0 VOLTS, 20.4 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 21.8 WATTS

[ABSOLUTE]LUMENS]1694

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87820. 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	1694
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	20.4
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.58 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	4810	4894	4978
55	4603	4678	4763
65	4280	4344	4408
75	3692	3734	3797
85	2602	2602	2726

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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	495.579	495.579	495.579	495.579	495.579
2.5	495.064	495.064	495.064	495.579	495.064
5.0	493.520	493.520	493.520	494.035	494.035
7.5	490.433	490.433	490.947	491.462	491.462
10.0	486.830	485.801	487.860	488.374	487.860
12.5	481.684	480.655	483.228	484.772	483.743
15.0	476.023	473.965	477.567	479.626	478.596
17.5	468.819	466.246	470.877	473.450	472.421
20.0	460.585	457.497	463.158	466.246	465.216
22.5	450.292	447.205	453.895	456.982	456.982
25.0	440.000	436.398	444.117	447.205	447.205
27.5	427.649	425.076	432.281	435.883	436.912
30.0	414.784	412.725	420.444	424.561	425.076
32.5	402.947	399.860	407.579	412.211	412.725
35.0	388.538	385.965	393.170	398.316	399.345
37.5	373.099	371.556	378.760	383.906	384.421
40.0	357.146	355.602	362.807	367.953	368.982
42.5	340.678	339.649	346.854	351.485	352.515
45.0	324.211	322.667	329.871	334.503	335.532
47.5	306.713	305.684	312.374	316.491	318.035
50.0	288.702	287.673	294.363	297.965	299.509
52.5	270.690	270.690	275.322	279.953	280.468
55.0	251.649	251.649	255.766	260.398	260.398
57.5	232.094	232.094	236.211	240.327	240.327
60.0	212.538	212.538	216.140	219.743	219.743
62.5	192.468	192.982	195.556	198.643	198.643
65.0	172.398	172.398	174.971	177.544	177.544
67.5	151.813	151.813	153.871	156.444	156.959
70.0	131.228	131.743	133.287	134.830	135.345
72.5	110.643	111.158	112.187	113.731	114.246
75.0	91.088	91.088	92.117	93.146	93.661
77.5	72.047	72.047	72.561	73.591	74.620
80.0	54.035	54.035	54.035	54.550	55.579
82.5	37.053	37.053	37.053	37.567	38.082
85.0	21.614	22.129	21.614	22.129	22.643
87.5	8.234	8.749	8.234	8.234	8.234
90.0	0.000	0.000	0.000	0.000	0.000
92.5	1.544	1.544	1.029	0.515	0.515
95.0	4.117	4.632	4.632	4.632	5.146
97.5	6.690	7.205	8.234	8.749	9.263
100.0	9.263	10.292	11.836	13.380	14.409
102.5	11.836	13.380	15.953	18.526	19.556
105.0	14.924	16.982	20.585	23.673	24.702
107.5	18.012	21.099	25.731	29.333	30.877
110.0	21.099	24.702	30.877	35.509	37.053
112.5	24.702	28.819	36.023	41.684	43.228
115.0	28.304	32.936	41.170	47.860	49.918
117.5	31.392	36.538	46.316	54.035	56.608
120.0	34.480	40.655	51.462	60.211	62.784
122.5	37.567	44.257	56.608	65.871	68.959
125.0	40.655	47.860	61.240	71.018	74.620
127.5	43.743	51.462	65.357	76.164	79.766
130.0	46.316	54.035	69.474	80.281	84.398
132.5	48.889	56.608	72.561	83.883	88.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-TW-20U80D-ITL87820.902.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	50.947	59.181	74.620	86.456	90.573
<b>137.5</b>	53.006	60.725	76.678	88.515	92.632
<b>140.0</b>	55.064	62.269	77.708	89.544	93.661
<b>142.5</b>	56.608	63.298	78.222	90.058	94.175
<b>145.0</b>	58.152	64.327	78.222	89.544	93.661
<b>147.5</b>	59.181	64.327	77.708	88.515	92.117
<b>150.0</b>	60.211	64.842	76.678	86.971	90.573
<b>152.5</b>	60.725	64.842	75.649	84.398	88.000
<b>155.0</b>	61.240	64.327	74.105	82.339	84.912
<b>157.5</b>	61.754	64.327	72.561	79.251	82.339
<b>160.0</b>	61.754	63.813	70.503	76.164	78.737
<b>162.5</b>	62.269	63.813	68.959	73.591	75.135
<b>165.0</b>	62.269	63.298	67.415	70.503	72.561
<b>167.5</b>	62.269	63.298	65.871	68.444	69.474
<b>170.0</b>	62.269	62.784	64.842	66.386	66.901
<b>172.5</b>	62.784	62.784	63.813	64.842	65.357
<b>175.0</b>	62.784	62.784	63.298	63.298	63.813
<b>177.5</b>	62.784	62.784	62.784	62.784	62.784
<b>180.0</b>	62.784	62.784	62.784	62.784	62.784

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-TW-20U80D-ITL87820.902.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	181.57	N.A.	10.70
0-30	385.58	N.A.	22.80
0-40	631.27	N.A.	37.30
0-60	1113.8	N.A.	65.80
0-80	1384.74	N.A.	81.80
0-90	1410.54	N.A.	83.30
10-90	1363.62	N.A.	80.50
20-40	449.70	N.A.	26.60
20-50	703.58	N.A.	41.50
40-70	655.59	N.A.	38.70
60-80	270.95	N.A.	16.00
70-80	97.89	N.A.	5.80
80-90	25.80	N.A.	1.50
90-110	27.02	N.A.	1.60
90-120	66.78	N.A.	3.90
90-130	119.76	N.A.	7.10
90-150	223.81	N.A.	13.20
90-180	283.08	N.A.	16.70
110-180	256.06	N.A.	15.10
0-180	1693.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	46.92
10-20	134.65
20-30	204.01
30-40	245.69
40-50	253.88
50-60	228.65
60-70	173.06
70-80	97.89
80-90	25.80
90-100	5.33
100-110	21.68
110-120	39.76
120-130	52.98
130-140	55.95
140-150	48.10
150-160	34.03
160-170	19.16
170-180	6.08

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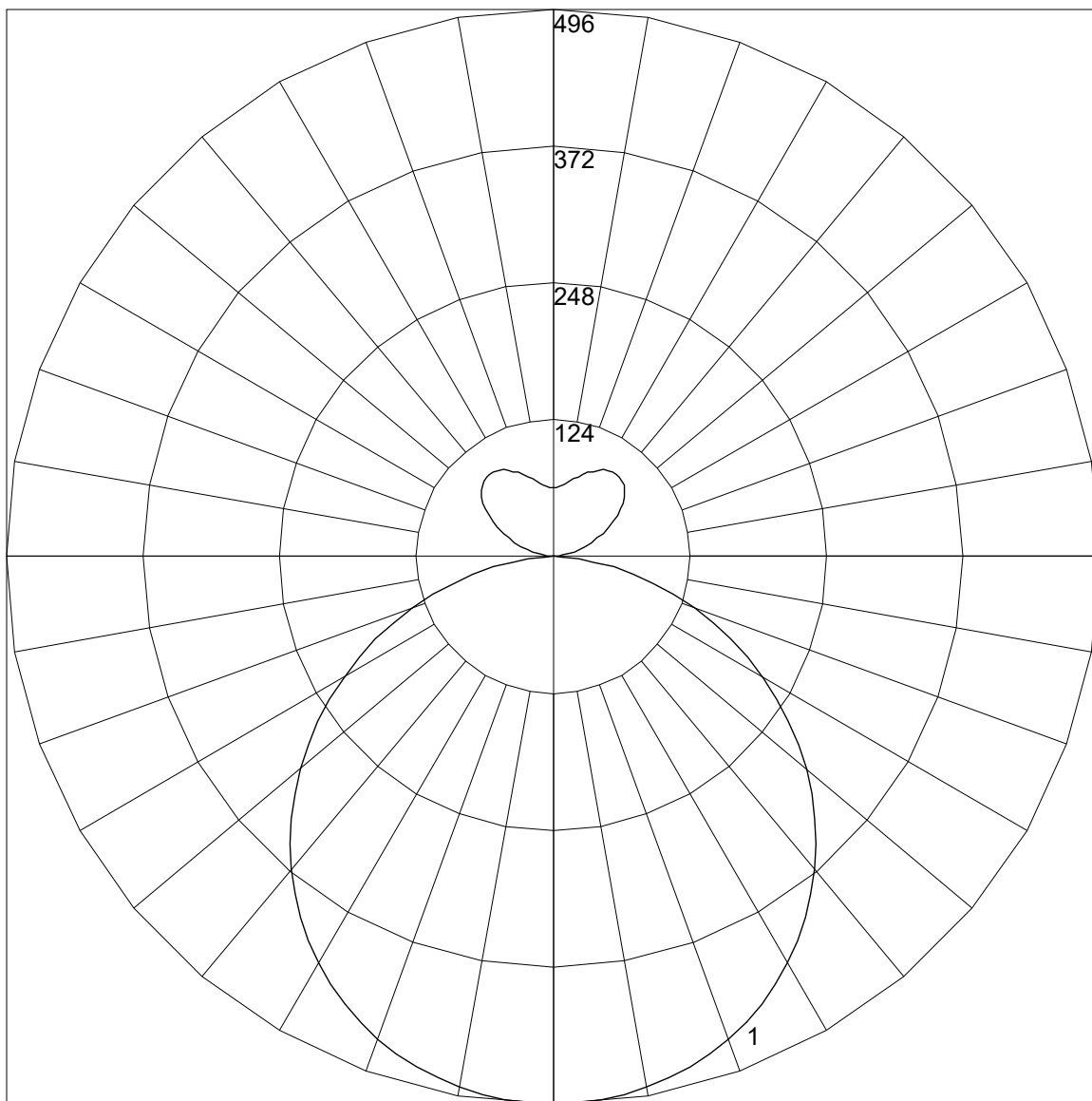
PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-B-8-TW-20U80D-ITL87820.902.IES

## 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	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	105	100	96	92	101	96	93	89	89	86	83	82	80	78	76	75	73	70
2	95	87	81	75	91	84	78	73	78	73	69	72	68	65	67	64	61	58
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	59	55	52	49
4	80	68	59	53	76	65	58	51	61	54	49	57	51	47	53	48	44	42
5	73	61	52	45	70	58	50	44	54	48	42	51	45	40	47	42	38	36
6	67	54	46	39	64	53	44	39	49	42	37	46	40	35	43	38	34	31
7	62	49	41	35	60	48	40	34	45	38	33	42	36	31	39	34	30	28
8	58	45	37	31	56	43	36	30	41	34	29	38	32	28	36	31	27	25
9	54	41	33	28	52	40	32	27	37	31	26	35	29	25	33	28	24	22
10	51	38	30	25	49	37	29	25	35	28	24	33	27	23	31	26	22	20

POLAR GRAPH



Maximum Candela = 495.579 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)