

# 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-3E-B-B-8TW-FTO-ITL88524.902.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL88524.902 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]10/18/16

[ISSUEDATE]01/12/17

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S16-LED-ID-DCO-4ft-3E-B-B-8TW-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's

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 31.1 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 35.1 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL88524. 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)

[\_ABSOLUTELUMENS]3110

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3110
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	31.1
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.57 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	3755	3709	3648
55	3526	3469	3403
65	3224	3160	3096
75	2737	2674	2632
85	1861	1861	1799

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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	411.201	411.201	411.201	411.201	411.201
2.5	410.687	410.687	411.201	410.687	410.687
5.0	408.628	408.628	409.143	408.628	408.628
7.5	406.055	406.055	406.055	406.055	406.055
10.0	402.452	401.938	402.452	401.938	401.423
12.5	397.306	395.762	396.791	396.277	395.762
15.0	391.130	389.072	390.616	390.101	389.072
17.5	383.925	381.352	383.411	382.896	381.352
20.0	376.205	372.603	374.662	374.147	372.603
22.5	366.942	362.825	364.883	364.369	362.825
25.0	356.649	352.532	354.076	353.561	352.017
27.5	345.327	341.210	342.754	341.724	340.180
30.0	333.490	329.887	330.917	329.373	327.829
32.5	321.138	317.536	318.051	316.507	314.963
35.0	308.272	304.670	305.184	303.126	302.097
37.5	294.892	291.289	291.804	289.745	288.201
40.0	281.511	277.908	277.908	275.850	274.306
42.5	267.101	264.528	264.013	261.440	259.896
45.0	252.691	250.117	249.603	247.030	245.486
47.5	237.766	235.707	234.678	232.105	230.561
50.0	222.841	220.783	219.753	216.666	215.636
52.5	207.917	205.343	204.829	201.741	200.712
55.0	192.477	190.419	189.389	186.301	185.787
57.5	177.038	174.979	173.950	170.862	170.347
60.0	161.599	159.540	158.511	155.423	154.908
62.5	145.645	144.101	142.557	139.983	139.983
65.0	129.691	128.661	127.117	124.544	124.544
67.5	113.737	112.707	111.163	109.619	109.105
70.0	97.783	97.268	95.724	94.180	94.180
72.5	82.343	81.829	80.799	79.770	79.255
75.0	67.418	66.904	65.875	64.845	64.845
77.5	52.494	53.008	51.464	51.464	50.950
80.0	39.113	39.113	38.598	38.084	37.569
82.5	26.247	26.762	26.762	26.247	25.732
85.0	15.439	15.439	15.439	14.925	14.925
87.5	5.146	5.146	5.661	5.146	4.632
90.0	0.000	0.000	0.000	0.000	0.000
92.5	13.895	14.410	12.351	13.381	13.381
95.0	30.364	32.423	33.452	31.393	29.849
97.5	48.891	53.008	59.699	59.184	58.155
100.0	69.477	74.624	83.372	88.519	88.519
102.5	91.607	98.297	112.193	118.883	120.942
105.0	114.766	123.515	143.071	152.850	155.937
107.5	138.954	150.276	174.979	188.875	192.992
110.0	163.657	178.067	208.946	225.415	231.590
112.5	188.360	205.858	242.398	263.498	272.247
115.0	213.578	234.163	276.879	302.611	312.390
117.5	238.795	262.984	311.875	341.724	353.046
120.0	263.498	291.289	345.841	379.808	393.189
122.5	288.201	319.080	379.293	417.377	431.787
125.0	311.875	345.327	410.687	452.888	468.842
127.5	335.034	371.059	440.021	486.854	503.323
130.0	357.678	395.247	467.812	517.218	535.231
132.5	379.293	417.377	492.001	543.980	563.022

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-3E-B-B-8TW-FTO-ITL88524.902.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	400.394	437.963	513.616	567.139	586.695
<b>137.5</b>	419.950	455.975	532.658	586.695	605.222
<b>140.0</b>	438.478	472.959	548.097	601.620	620.662
<b>142.5</b>	455.461	488.398	560.963	613.971	631.469
<b>145.0</b>	471.415	501.264	570.227	621.176	638.674
<b>147.5</b>	486.340	513.101	577.432	625.808	641.762
<b>150.0</b>	499.206	522.879	582.063	626.838	641.762
<b>152.5</b>	511.042	531.628	584.122	625.294	639.189
<b>155.0</b>	521.335	538.319	585.151	621.691	634.043
<b>157.5</b>	530.084	544.494	585.151	616.030	627.352
<b>160.0</b>	538.319	549.126	583.607	609.854	619.118
<b>162.5</b>	545.009	553.243	581.034	602.135	610.369
<b>165.0</b>	550.670	555.817	577.946	593.900	601.105
<b>167.5</b>	555.302	558.904	574.344	587.210	592.356
<b>170.0</b>	559.419	561.478	571.256	580.005	584.122
<b>172.5</b>	561.992	563.536	568.683	573.829	576.402
<b>175.0</b>	564.051	565.080	566.624	569.197	570.227
<b>177.5</b>	565.595	565.595	566.109	566.624	567.139
<b>180.0</b>	565.595	565.595	565.595	565.595	565.595

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-3E-B-B-8TW-FTO-ITL88524.902.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	148.74	N.A.	4.80
0-30	311.55	N.A.	10.00
0-40	502.03	N.A.	16.10
0-60	862.76	N.A.	27.70
0-80	1058.34	N.A.	34.00
0-90	1076.34	N.A.	34.60
10-90	1037.52	N.A.	33.40
20-40	353.28	N.A.	11.40
20-50	545.26	N.A.	17.50
40-70	486.24	N.A.	15.60
60-80	195.58	N.A.	6.30
70-80	70.08	N.A.	2.30
80-90	17.99	N.A.	0.60
90-110	186.24	N.A.	6.00
90-120	452.71	N.A.	14.60
90-130	809.31	N.A.	26.00
90-150	1547.78	N.A.	49.80
90-180	2033.7	N.A.	65.40
110-180	1847.46	N.A.	59.40
0-180	3110.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	38.81
10-20	109.93
20-30	162.80
30-40	190.48
40-50	191.98
50-60	168.76
60-70	125.50
70-80	70.08
80-90	17.99
90-100	38.71
100-110	147.53
110-120	266.47
120-130	356.61
130-140	387.05
140-150	351.42
150-160	268.26
160-170	163.39
170-180	54.26

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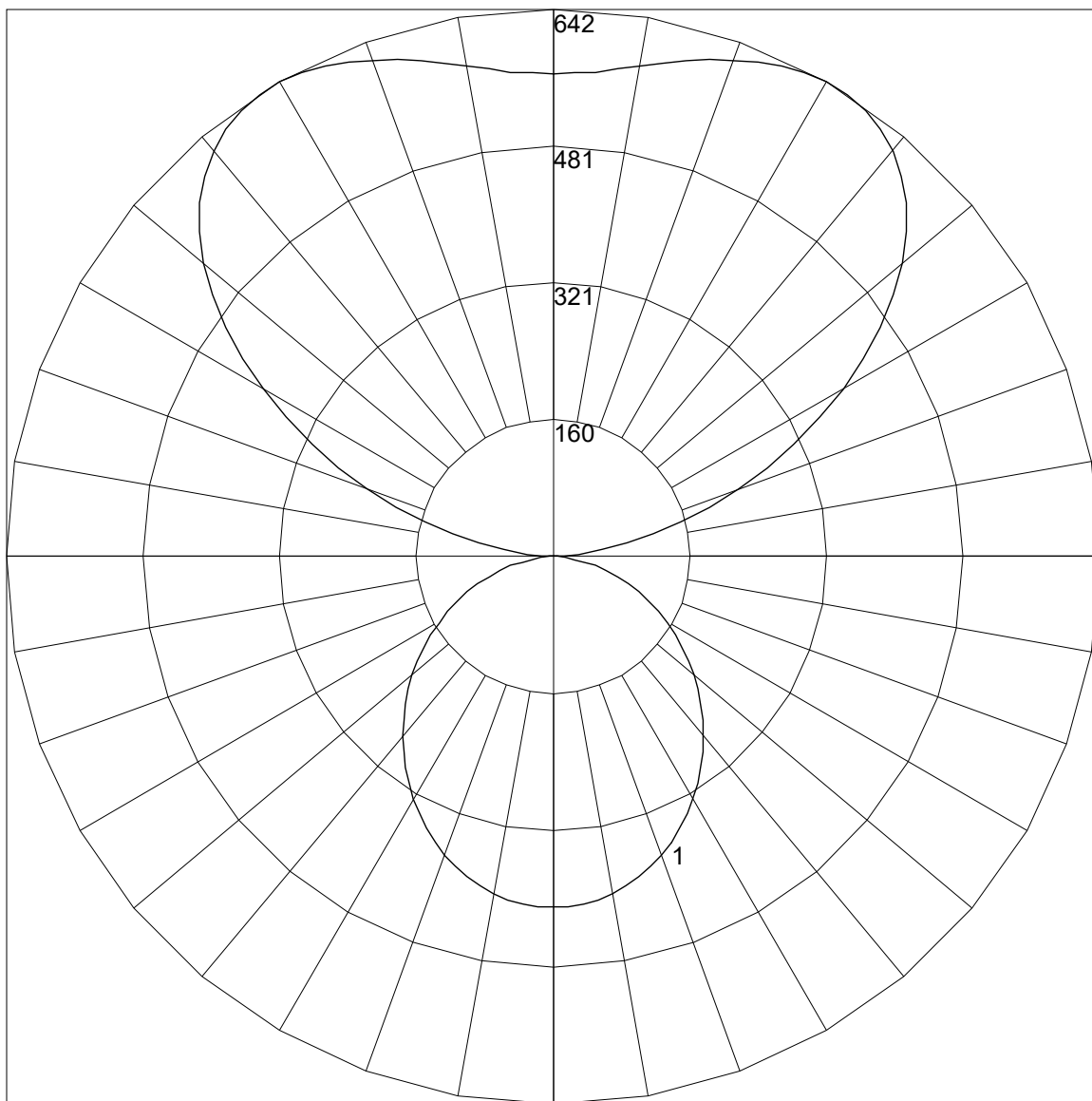
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35
1	94	90	86	83	85	82	78	75	65	63	61	51	49	48	37	36	35	29
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	33	31	30	24
3	78	69	62	56	70	63	56	52	50	46	42	39	36	34	29	27	25	21
4	72	61	53	47	64	55	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	13
7	56	44	36	31	50	40	33	28	32	27	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	29	25	30	25	21	23	20	17	18	15	13	11
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9

POLAR GRAPH



Maximum Candela = 641.762 Located At Horizontal Angle = 90, Vertical Angle = 147.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)