

# 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-H-8-35-30U70D-ITL87821.003.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87821.003 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/19/16

[ISSUEDATE]07/26/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S16-LED-ID-DCO-4ft-2E-H-8-35-30U70D

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 28.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.2 WATTS

[ABSOLUTE]LUMENS]2726

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87821. 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	2726
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.40
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	6451	6613	6740
55	6189	6345	6487
65	5754	5889	6024
75	4982	5076	5171
85	3651	3558	3558

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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	660.333	660.333	660.333	660.333	660.333
2.5	660.333	659.556	659.556	659.556	659.556
5.0	657.222	657.222	657.222	658.000	658.000
7.5	654.111	654.111	654.889	655.667	655.667
10.0	649.444	647.889	651.000	651.778	651.778
12.5	643.222	640.889	645.556	647.111	646.333
15.0	635.444	631.556	637.778	640.889	640.111
17.5	626.111	622.222	629.222	633.111	632.333
20.0	615.222	610.556	619.111	623.778	623.778
22.5	602.000	597.333	607.444	612.111	612.889
25.0	588.000	583.333	594.222	600.444	601.222
27.5	573.222	569.333	580.222	586.444	587.222
30.0	556.889	553.000	564.667	571.667	573.222
32.5	538.222	535.889	548.333	555.333	556.889
35.0	520.333	518.000	530.444	537.444	539.000
37.5	500.111	498.556	510.222	517.222	519.556
40.0	479.111	477.556	490.000	497.000	499.333
42.5	457.333	457.333	469.000	475.222	479.111
45.0	434.778	434.778	445.667	452.667	454.222
47.5	411.444	412.222	421.556	429.333	431.667
50.0	387.333	388.111	397.444	404.444	406.000
52.5	362.444	364.000	373.333	378.778	380.333
55.0	338.333	338.333	346.889	352.333	354.667
57.5	312.667	312.667	319.667	325.889	327.444
60.0	286.222	286.222	292.444	297.889	299.444
62.5	259.000	259.778	265.222	269.111	271.444
65.0	231.778	232.556	237.222	240.333	242.667
67.5	204.556	204.556	208.444	211.556	213.889
70.0	176.556	177.333	180.444	182.778	184.333
72.5	149.333	150.111	152.444	154.000	155.556
75.0	122.889	122.889	125.222	126.000	127.556
77.5	96.444	98.000	98.778	98.778	100.333
80.0	73.889	73.111	73.889	73.889	74.667
82.5	50.556	50.556	50.556	50.556	50.556
85.0	30.333	29.556	29.556	29.556	29.556
87.5	11.667	11.667	10.889	10.889	10.889
90.0	0.000	0.000	0.000	0.000	0.000
92.5	3.889	3.889	2.333	1.556	1.556
95.0	10.889	11.667	12.444	13.222	13.222
97.5	17.889	20.222	22.556	25.667	26.444
100.0	24.889	28.778	34.222	38.889	40.444
102.5	33.444	38.111	46.667	53.667	56.000
105.0	42.000	49.000	60.667	69.222	73.111
107.5	51.333	59.889	74.667	86.333	91.000
110.0	60.667	71.556	90.222	104.222	110.444
112.5	70.778	83.222	105.778	122.889	129.111
115.0	80.111	94.889	122.111	140.778	147.778
117.5	89.444	106.556	137.667	159.444	167.222
120.0	98.778	118.222	153.222	177.333	186.667
122.5	108.111	129.889	168.778	195.222	204.556
125.0	116.667	140.000	182.000	210.778	222.444
127.5	125.222	149.333	194.444	225.556	237.222
130.0	133.000	157.889	205.333	238.000	249.667
132.5	140.000	165.667	213.889	248.111	260.556

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-30U70D-ITL87821.003.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	146.222	171.889	220.889	255.889	268.333
<b>137.5</b>	152.444	177.333	226.333	261.333	273.000
<b>140.0</b>	157.111	181.222	229.444	263.667	276.111
<b>142.5</b>	161.000	183.556	230.222	264.444	276.111
<b>145.0</b>	164.889	185.889	230.222	262.889	273.778
<b>147.5</b>	168.000	186.667	227.889	259.000	269.111
<b>150.0</b>	170.333	186.667	224.778	254.333	263.667
<b>152.5</b>	171.889	186.667	220.889	247.333	256.667
<b>155.0</b>	173.444	185.889	215.444	239.556	248.111
<b>157.5</b>	174.222	184.333	210.778	231.000	238.778
<b>160.0</b>	175.000	183.556	205.333	222.444	228.667
<b>162.5</b>	175.778	182.000	199.111	213.111	219.333
<b>165.0</b>	175.778	180.444	193.667	204.556	209.222
<b>167.5</b>	176.556	179.667	189.000	196.778	200.667
<b>170.0</b>	176.556	178.889	185.111	189.778	192.111
<b>172.5</b>	176.556	178.111	181.222	184.333	185.889
<b>175.0</b>	176.556	177.333	178.889	180.444	180.444
<b>177.5</b>	176.556	176.556	177.333	177.333	177.333
<b>180.0</b>	176.556	176.556	176.556	176.556	176.556

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-H-8-35-30U70D-ITL87821.003.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	242.40	N.A.	8.90
0-30	515.82	N.A.	18.90
0-40	846.37	N.A.	31.00
0-60	1498.23	N.A.	55.00
0-80	1864.89	N.A.	68.40
0-90	1899.78	N.A.	69.70
10-90	1837.23	N.A.	67.40
20-40	603.97	N.A.	22.20
20-50	946.77	N.A.	34.70
40-70	886.01	N.A.	32.50
60-80	366.66	N.A.	13.40
70-80	132.51	N.A.	4.90
80-90	34.89	N.A.	1.30
90-110	77.72	N.A.	2.90
90-120	194.41	N.A.	7.10
90-130	350.71	N.A.	12.90
90-150	655.54	N.A.	24.00
90-180	826.49	N.A.	30.30
110-180	748.77	N.A.	27.50
0-180	2726.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	62.55
10-20	179.84
20-30	273.42
30-40	330.55
40-50	342.80
50-60	309.07
60-70	234.15
70-80	132.51
80-90	34.89
90-100	14.80
100-110	62.92
110-120	116.69
120-130	156.30
130-140	164.47
140-150	140.35
150-160	98.64
160-170	55.06
170-180	17.25

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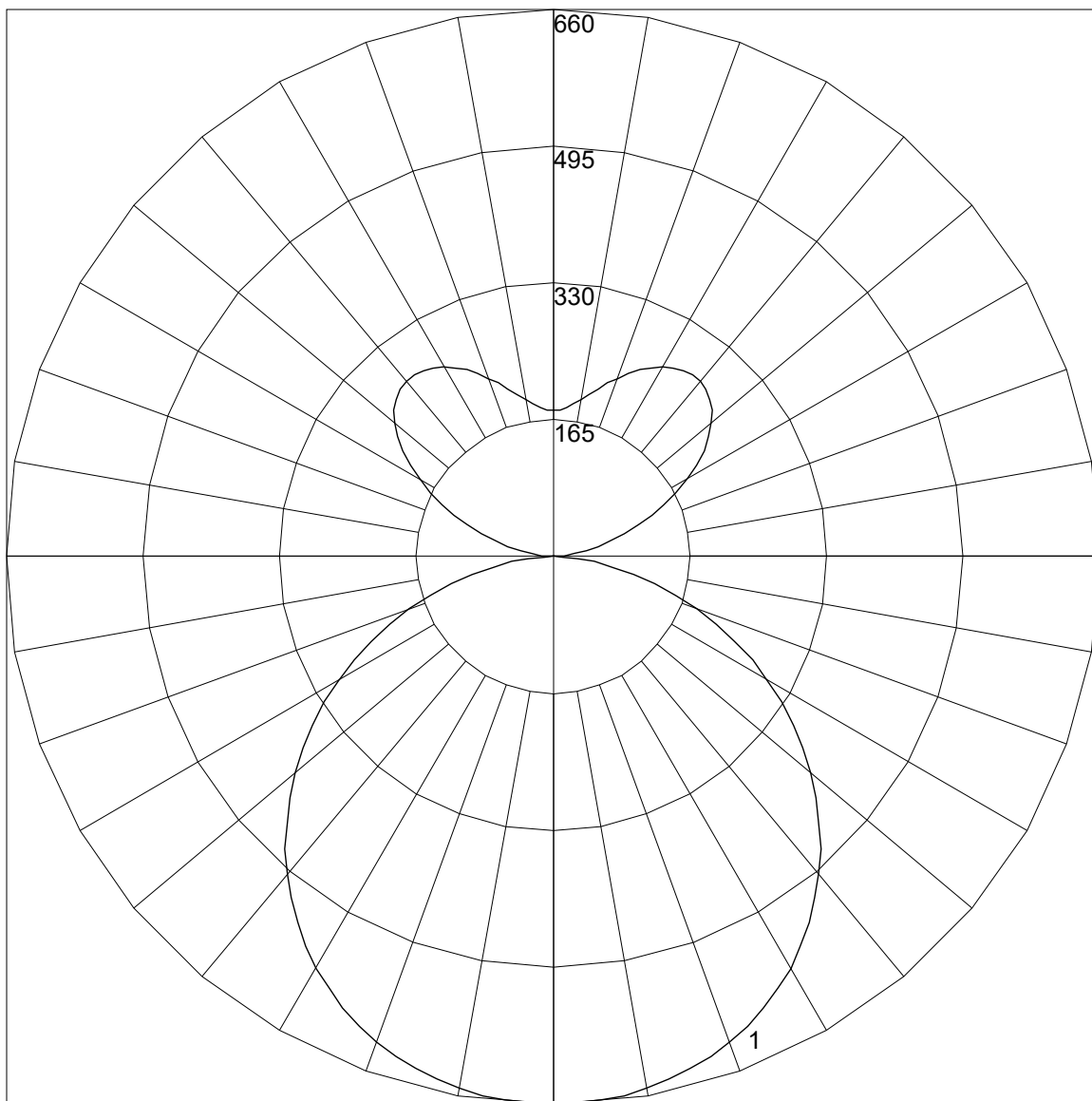
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	102	97	93	90	96	92	89	85	83	80	77	74	71	70	65	64	62	58
2	93	85	78	73	87	80	75	70	72	68	64	64	61	58	57	55	52	48
3	84	74	67	61	79	71	64	58	63	58	53	57	52	49	50	47	44	41
4	77	66	57	51	73	62	55	49	56	50	45	50	45	41	45	41	38	35
5	71	59	50	44	67	56	48	42	50	44	39	45	40	36	40	36	33	30
6	65	53	44	38	61	50	42	37	45	39	34	41	35	31	37	32	29	26
7	60	48	39	33	57	45	38	32	41	35	30	37	32	28	33	29	26	23
8	56	43	35	30	53	41	34	29	37	31	27	34	29	25	31	26	23	21
9	52	40	32	26	49	38	30	26	34	28	24	31	26	22	28	24	21	19
10	49	36	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17

POLAR GRAPH



Maximum Candela = 660.333 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)