

# 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-V-8-TW-10U90D-ITL87819.900.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87819.900 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-V-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, 40.9 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.7 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87819. 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]3138

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3138
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	40.9
Ballast Factor	1.00
CIE Type	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	9615	9822	9956
55	9182	9384	9512
65	8540	8689	8788
75	7378	7499	7499
85	5176	5297	5176

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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	996	996	996	996	996
2.5	996	996	995	995	996
5.0	992	992	993	993	993
7.5	985	986	987	988	988
10.0	978	977	980	982	980
12.5	968	966	972	973	973
15.0	956	952	960	962	962
17.5	942	937	946	950	949
20.0	924	919	930	935	935
22.5	904	898	911	917	917
25.0	882	876	891	897	897
27.5	858	854	868	875	876
30.0	832	829	844	851	852
32.5	805	801	817	825	826
35.0	777	773	789	798	799
37.5	747	745	760	769	770
40.0	716	714	728	738	739
42.5	683	682	696	705	707
45.0	648	648	662	670	671
47.5	615	613	627	634	635
50.0	577	577	589	597	598
52.5	540	540	552	559	560
55.0	502	502	513	520	520
57.5	464	464	473	481	480
60.0	424	424	433	439	439
62.5	384	384	392	397	397
65.0	344	344	350	354	354
67.5	303	303	308	311	311
70.0	262	263	266	269	269
72.5	221	223	225	227	227
75.0	182	183	185	186	185
77.5	143	145	146	146	146
80.0	107	109	109	109	109
82.5	74	75	75	75	74
85.0	43	44	44	44	43
87.5	16	17	16	17	16
90.0	0	0	0	0	0
92.5	2	2	2	2	2
95.0	5	5	5	5	5
97.5	8	8	8	9	9
100.0	12	12	12	12	12
102.5	16	16	16	16	16
105.0	21	21	21	21	21
107.5	25	25	25	25	25
110.0	30	30	30	30	30
112.5	34	34	34	34	34
115.0	39	39	39	39	39
117.5	43	44	44	43	43
120.0	48	48	48	48	47
122.5	52	52	52	52	52
125.0	57	57	57	56	56
127.5	61	61	61	61	60
130.0	65	65	65	65	64
132.5	69	69	69	69	69

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-V-8-TW-10U90D-ITL87819.900.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	73	73	73	73	72
<b>137.5</b>	77	77	77	77	76
<b>140.0</b>	81	80	80	80	80
<b>142.5</b>	84	84	84	84	83
<b>145.0</b>	88	87	87	87	87
<b>147.5</b>	91	90	90	90	90
<b>150.0</b>	94	93	93	93	93
<b>152.5</b>	96	95	96	96	96
<b>155.0</b>	99	98	99	99	99
<b>157.5</b>	101	100	101	101	101
<b>160.0</b>	103	102	103	103	103
<b>162.5</b>	105	104	105	105	105
<b>165.0</b>	106	106	106	106	106
<b>167.5</b>	108	107	107	107	108
<b>170.0</b>	109	109	109	109	109
<b>172.5</b>	109	109	109	109	110
<b>175.0</b>	110	110	110	110	110
<b>177.5</b>	111	110	110	110	110
<b>180.0</b>	111	111	111	111	111

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S16-LED-ID-DCO-4FT-2E-V-8-TW-10U90D-ITL87819.900.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	364.80	N.A.	11.60
0-30	774.24	N.A.	24.70
0-40	1266.6	N.A.	40.40
0-60	2232.67	N.A.	71.10
0-80	2773.69	N.A.	88.40
0-90	2825.19	N.A.	90.00
10-90	2730.88	N.A.	87.00
20-40	901.80	N.A.	28.70
20-50	1410.76	N.A.	45.00
40-70	1311.51	N.A.	41.80
60-80	541.02	N.A.	17.20
70-80	195.58	N.A.	6.20
80-90	51.51	N.A.	1.60
90-110	27.70	N.A.	0.90
90-120	66.15	N.A.	2.10
90-130	116.67	N.A.	3.70
90-150	227.35	N.A.	7.20
90-180	313.12	N.A.	10.00
110-180	285.43	N.A.	9.10
0-180	3138.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	94.32
10-20	270.48
20-30	409.44
30-40	492.36
40-50	508.96
50-60	457.12
60-70	345.43
70-80	195.58
80-90	51.51
90-100	5.81
100-110	21.88
110-120	38.46
120-130	50.51
130-140	56.23
140-150	54.46
150-160	45.37
160-170	29.96
170-180	10.45

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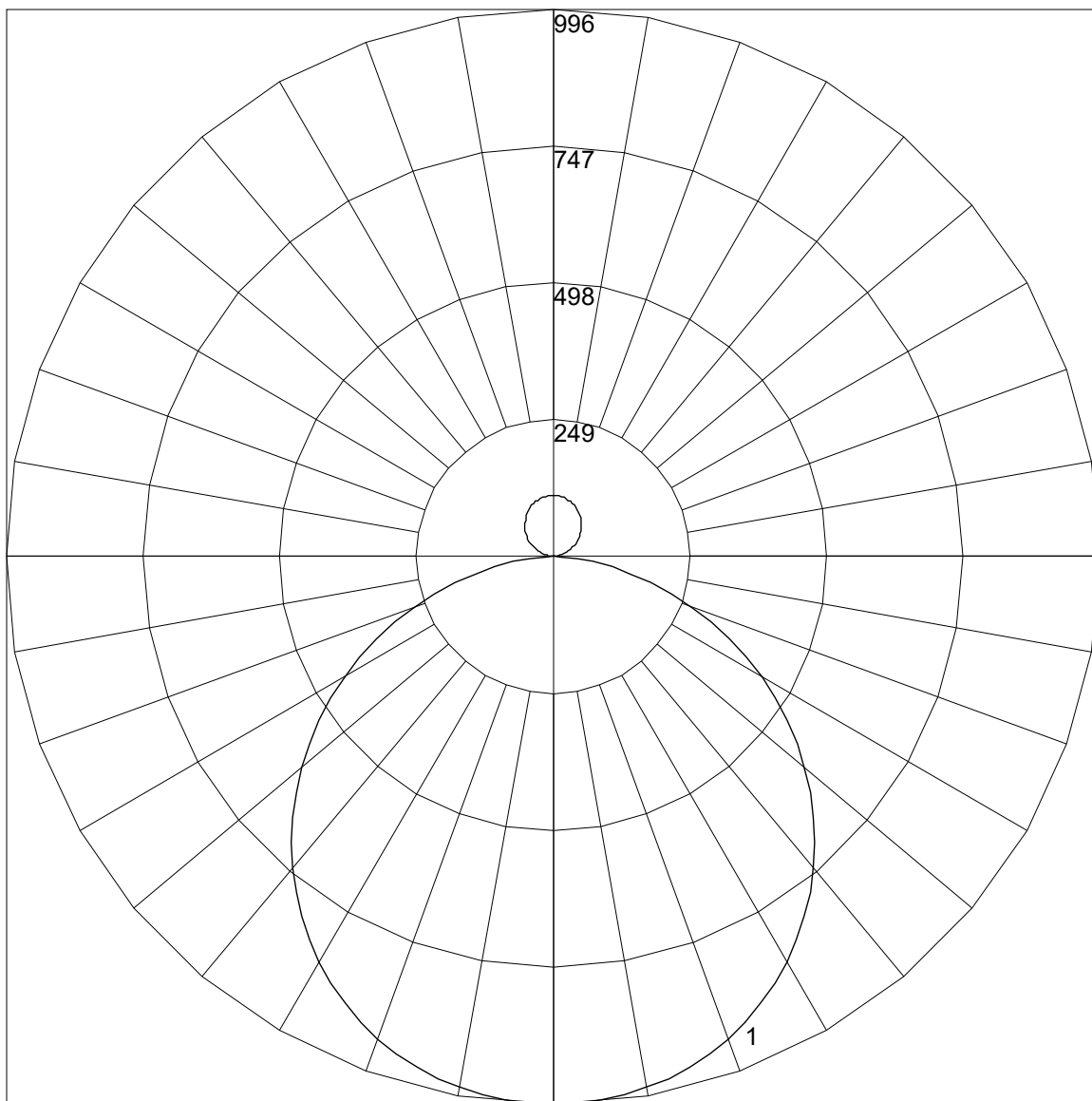
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	107	102	98	94	103	99	95	91	93	89	87	87	85	82	82	80	78	75
2	97	89	82	76	93	86	80	75	81	76	71	76	72	68	72	68	65	63
3	88	78	70	63	85	76	68	62	71	65	60	67	62	58	63	59	55	53
4	81	69	60	54	78	67	59	53	63	56	51	60	54	49	56	52	47	45
5	74	62	53	46	71	60	52	45	57	49	44	54	47	43	51	45	41	39
6	68	55	46	40	66	54	46	40	51	44	38	48	42	37	46	41	36	34
7	63	50	41	35	61	49	41	35	46	39	34	44	38	33	42	36	32	30
8	59	46	37	31	57	45	37	31	42	35	30	40	34	30	38	33	29	27
9	55	42	34	28	53	41	33	28	39	32	27	37	31	27	36	30	26	24
10	52	39	31	26	50	38	30	25	36	29	25	34	28	24	33	28	24	22

POLAR GRAPH



Maximum Candela = 996 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)