

# 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-2E-V-8-TW-30U70D-ITL87816.900.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL87816.900 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/14/16

[ISSUEDATE]08/17/16

[MANUFAC]FINELITE, INC.

[LUMCAT]S12-LED-ID-DCO-4ft-2E-V-8-TW-30U70D

[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, 40.8 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.7 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL87816. 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]3457

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3457
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	40.8
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 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	6380	6281	6406
55	6063	5874	5998
65	5600	5250	5340
75	4771	4277	4443
85	3311	3052	3601

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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	784	784	784	784	784
2.5	783	783	783	783	783
5.0	781	781	781	781	781
7.5	777	776	777	778	778
10.0	771	770	773	774	775
12.5	764	761	767	769	769
15.0	753	750	758	762	761
17.5	741	739	748	753	754
20.0	728	725	736	743	744
22.5	713	710	723	730	732
25.0	696	694	708	717	719
27.5	677	676	690	701	704
30.0	657	657	672	684	688
32.5	636	637	653	665	669
35.0	613	615	632	645	650
37.5	589	592	609	622	628
40.0	564	568	585	599	605
42.5	541	544	561	575	581
45.0	513	516	534	548	554
47.5	486	489	506	520	526
50.0	458	460	477	491	497
52.5	428	431	447	461	466
55.0	397	401	416	429	435
57.5	367	371	384	396	402
60.0	336	340	352	363	369
62.5	304	308	319	329	335
65.0	272	276	286	296	301
67.5	239	243	253	262	267
70.0	207	211	220	228	233
72.5	175	180	188	196	201
75.0	144	148	156	165	171
77.5	113	118	126	137	141
80.0	85	89	99	109	114
82.5	58	62	73	85	90
85.0	36	40	53	65	70
87.5	14	21	35	47	51
90.0	0	10	23	33	36
92.5	7	10	21	31	35
95.0	14	17	26	40	41
97.5	23	27	37	48	53
100.0	33	40	55	66	71
102.5	45	56	72	90	96
105.0	57	68	93	117	124
107.5	69	84	115	145	155
110.0	82	100	138	174	186
112.5	95	116	162	203	218
115.0	108	131	185	232	249
117.5	120	147	208	261	280
120.0	133	162	229	286	309
122.5	146	177	248	311	335
125.0	159	189	265	332	358
127.5	169	200	278	349	377
130.0	178	208	289	363	391
132.5	186	215	296	371	399

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-V-8-TW-30U70D-ITL87816.900.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	193	220	299	374	402
<b>137.5</b>	199	224	300	372	399
<b>140.0</b>	205	227	297	366	392
<b>142.5</b>	209	228	292	356	380
<b>145.0</b>	213	229	286	343	365
<b>147.5</b>	216	230	278	329	347
<b>150.0</b>	218	230	270	313	329
<b>152.5</b>	220	229	262	297	311
<b>155.0</b>	221	228	255	282	293
<b>157.5</b>	222	227	248	268	277
<b>160.0</b>	222	226	242	257	263
<b>162.5</b>	223	225	236	247	251
<b>165.0</b>	222	224	232	239	242
<b>167.5</b>	222	223	228	233	235
<b>170.0</b>	222	222	226	228	229
<b>172.5</b>	221	222	223	225	225
<b>175.0</b>	221	221	222	222	223
<b>177.5</b>	221	221	221	221	221
<b>180.0</b>	221	221	221	221	221

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-2E-V-8-TW-30U70D-ITL87816.900.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	287.97	N.A.	8.30
0-30	613.49	N.A.	17.70
0-40	1007.93	N.A.	29.20
0-60	1790.16	N.A.	51.80
0-80	2239.54	N.A.	64.80
0-90	2299.5	N.A.	66.50
10-90	2225.23	N.A.	64.40
20-40	719.96	N.A.	20.80
20-50	1130.94	N.A.	32.70
40-70	1065.18	N.A.	30.80
60-80	449.38	N.A.	13.00
70-80	166.43	N.A.	4.80
80-90	59.96	N.A.	1.70
90-110	131.87	N.A.	3.80
90-120	311.34	N.A.	9.00
90-130	543.08	N.A.	15.70
90-150	951.63	N.A.	27.50
90-180	1157.91	N.A.	33.50
110-180	1026.04	N.A.	29.70
0-180	3457.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	74.27
10-20	213.70
20-30	325.52
30-40	394.44
40-50	410.98
50-60	371.25
60-70	282.95
70-80	166.43
80-90	59.96
90-100	33.51
100-110	98.36
110-120	179.48
120-130	231.74
130-140	228.66
140-150	179.88
150-160	118.87
160-170	66.12
170-180	21.29

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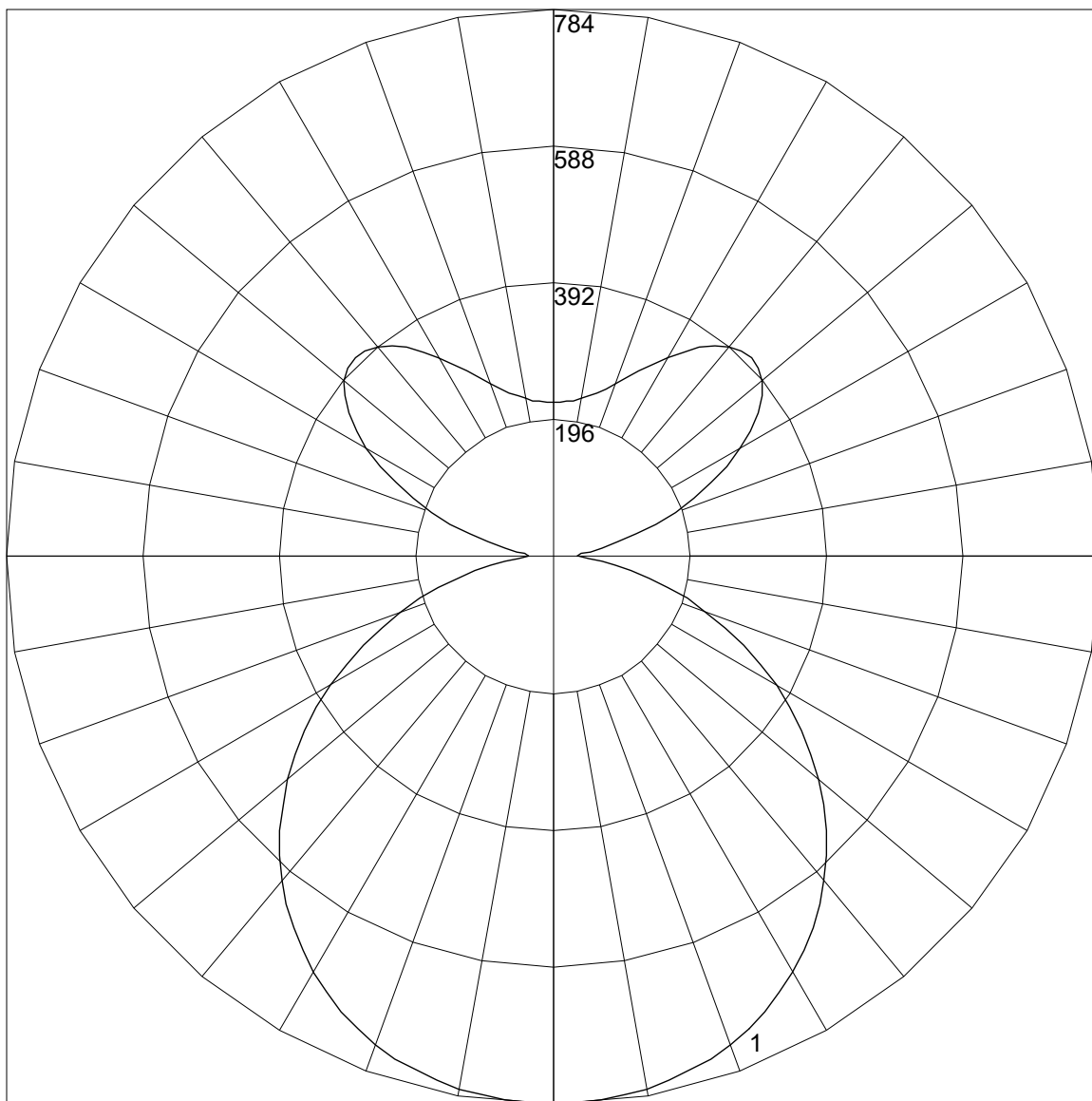
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	111	111	111	111	105	105	105	105	93	93	93	81	81	81	71	71	71	67
1	101	96	92	89	95	91	87	84	81	78	75	71	69	67	62	61	59	55
2	92	84	77	72	86	79	73	69	70	66	62	62	59	56	55	52	50	46
3	84	74	66	60	78	69	63	57	62	56	52	55	50	47	48	45	42	38
4	76	65	57	50	72	61	54	48	55	49	44	49	44	40	43	39	36	33
5	70	58	49	43	66	55	47	41	49	43	38	44	38	34	38	34	31	28
6	65	52	43	37	61	49	41	36	44	38	33	39	34	30	35	31	27	25
7	60	47	39	33	56	45	37	31	40	34	29	36	30	27	32	27	24	22
8	55	43	35	29	52	40	33	28	36	30	26	33	27	24	29	25	22	19
9	52	39	31	26	49	37	30	25	33	27	23	30	25	21	27	23	19	17
10	48	36	28	23	45	34	27	22	31	25	21	28	23	19	25	21	18	16

POLAR GRAPH



Maximum Candela = 784 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)