

# 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-4E-H-8-35-20U80D-ITL85163.206.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85163.206 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE] 09/11/15

[ISSUEDATE]08/15/16

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S12-LED-ID-DCO-4ft-4E-H-8-35-20U80D

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 45.6 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 47.9 WATTS

[\_ABSOLUTE]LUMENS]5004

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85163. 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	5004
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	45.6
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.34
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	11387	10793	10633
55	10638	9864	9686
65	9629	8730	8508
75	7977	7033	7076
85	4718	4772	5482

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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	1487.913	1487.913	1487.913	1487.913	1487.913
2.5	1485.940	1485.940	1485.940	1485.940	1485.940
5.0	1480.020	1480.020	1480.020	1480.020	1480.020
7.5	1470.153	1470.153	1470.153	1470.153	1472.126
10.0	1454.366	1452.393	1456.340	1456.340	1456.340
12.5	1438.579	1434.632	1440.553	1440.553	1438.579
15.0	1416.872	1408.979	1416.872	1418.846	1416.872
17.5	1391.218	1383.325	1391.218	1393.192	1391.218
20.0	1361.618	1351.751	1361.618	1363.592	1363.592
22.5	1326.098	1316.231	1328.071	1330.044	1328.071
25.0	1288.604	1280.710	1290.577	1294.524	1292.551
27.5	1251.110	1241.243	1253.083	1255.057	1255.057
30.0	1207.696	1199.803	1209.669	1211.643	1209.669
32.5	1164.282	1156.389	1166.255	1170.202	1166.255
35.0	1118.895	1111.002	1120.868	1122.842	1120.868
37.5	1067.588	1061.668	1071.534	1073.508	1071.534
40.0	1018.254	1012.333	1020.227	1024.174	1022.200
42.5	968.920	963.000	968.920	974.840	970.893
45.0	915.639	911.692	917.612	921.559	919.586
47.5	862.358	858.411	864.332	866.305	864.332
50.0	805.131	803.157	811.051	813.024	811.051
52.5	751.850	749.877	753.823	757.770	757.770
55.0	696.596	694.623	698.569	702.516	702.516
57.5	639.369	639.369	645.289	647.262	647.262
60.0	584.114	582.141	588.061	592.008	592.008
62.5	524.914	526.887	530.834	534.780	536.754
65.0	467.686	469.660	475.580	477.553	479.526
67.5	410.459	412.432	418.352	422.299	422.299
70.0	353.231	357.178	365.072	367.045	370.992
72.5	296.004	301.924	309.817	315.738	321.658
75.0	240.750	248.643	256.537	266.404	272.324
77.5	187.469	195.363	209.176	219.043	222.990
80.0	136.162	146.029	161.815	173.656	177.602
82.5	90.775	100.641	118.402	134.189	140.108
85.0	51.307	63.148	82.881	100.641	106.561
87.5	17.760	31.574	55.254	71.041	76.961
90.0	0.000	11.840	31.574	47.361	53.281
92.5	5.157	69.417	136.057	156.287	138.239
95.0	10.710	82.110	156.287	202.499	216.184
97.5	16.858	88.457	165.014	211.424	226.894
100.0	23.403	95.399	169.377	215.391	230.861
102.5	29.948	96.390	171.162	216.382	231.852
105.0	36.692	98.969	171.757	215.589	230.464
107.5	43.633	102.142	173.741	213.804	228.084
110.0	50.972	105.514	171.757	212.614	225.704
112.5	57.715	109.679	170.964	213.209	224.911
115.0	64.459	114.042	170.964	209.837	224.117
117.5	71.400	118.802	171.162	207.656	219.952
120.0	78.144	124.157	172.154	206.466	217.969
122.5	84.887	129.512	173.344	205.276	216.184
125.0	91.234	134.867	174.534	204.482	214.597
127.5	98.175	140.024	176.121	204.086	213.407
130.0	104.125	144.784	177.707	203.491	212.217
132.5	110.274	148.750	179.691	203.094	211.226

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-4E-H-8-35-20U80D-ITL85163.206.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	116.025	151.726	181.674	202.896	210.432
<b>137.5</b>	121.579	154.106	183.856	202.697	209.441
<b>140.0</b>	127.132	156.287	186.434	202.697	208.647
<b>142.5</b>	132.289	158.072	188.417	202.896	208.052
<b>145.0</b>	137.049	159.262	190.401	203.292	207.457
<b>147.5</b>	141.611	160.055	191.392	203.887	207.457
<b>150.0</b>	145.775	160.849	190.996	204.284	207.457
<b>152.5</b>	149.742	161.444	189.607	204.086	207.259
<b>155.0</b>	153.312	162.435	187.822	202.102	206.267
<b>157.5</b>	156.486	163.625	185.046	198.929	203.491
<b>160.0</b>	159.262	164.617	181.872	194.962	199.326
<b>162.5</b>	161.840	165.807	178.501	190.004	194.367
<b>165.0</b>	163.824	166.601	175.327	184.252	188.219
<b>167.5</b>	165.609	167.592	173.146	178.699	181.872
<b>170.0</b>	166.997	168.187	171.559	174.732	176.716
<b>172.5</b>	167.989	168.782	170.567	172.352	173.344
<b>175.0</b>	168.782	169.377	169.972	170.766	171.162
<b>177.5</b>	169.377	169.576	169.576	169.972	169.972
<b>180.0</b>	169.576	169.576	169.576	169.576	169.576

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : S12-LED-ID-DCO-4FT-4E-H-8-35-20U80D-ITL85163.206.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	539.60	N.A.	10.80
0-30	1133.35	N.A.	22.60
0-40	1832.35	N.A.	36.60
0-60	3164.37	N.A.	63.20
0-80	3906.65	N.A.	78.10
0-90	4000.4	N.A.	79.90
10-90	3859.89	N.A.	77.10
20-40	1292.75	N.A.	25.80
20-50	1999.8	N.A.	40.00
40-70	1801.47	N.A.	36.00
60-80	742.27	N.A.	14.80
70-80	272.82	N.A.	5.50
80-90	93.75	N.A.	1.90
90-110	295.79	N.A.	5.90
90-120	454.39	N.A.	9.10
90-130	603.98	N.A.	12.10
90-150	852.98	N.A.	17.00
90-180	1003.71	N.A.	20.10
110-180	707.93	N.A.	14.10
0-180	5004.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	140.51
10-20	399.09
20-30	593.75
30-40	699.00
40-50	707.05
50-60	624.97
60-70	469.45
70-80	272.82
80-90	93.75
90-100	131.96
100-110	163.83
110-120	158.61
120-130	149.58
130-140	135.29
140-150	113.71
150-160	84.52
160-170	49.94
170-180	16.28

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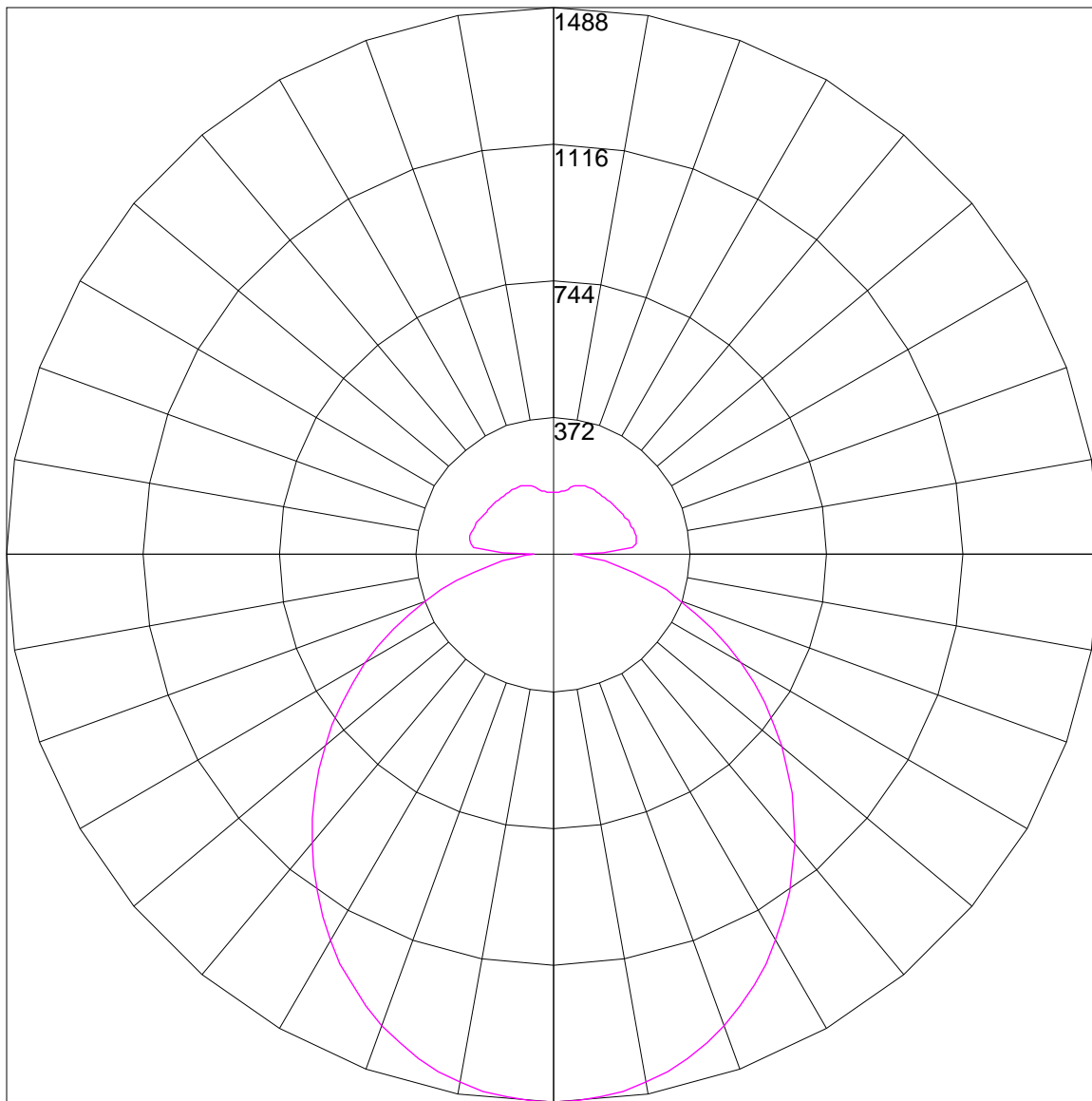
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	84	84	84	80
1	104	100	95	92	99	95	92	88	87	85	82	80	78	76	74	72	70	67
2	95	87	80	75	90	83	77	72	77	72	68	70	66	63	65	62	59	56
3	86	76	68	62	82	73	66	60	67	62	57	62	57	53	57	53	50	47
4	79	68	59	53	75	65	57	51	60	54	48	55	50	46	51	47	43	40
5	73	60	52	45	69	58	50	44	54	47	42	50	44	40	46	41	37	35
6	67	54	46	40	64	52	44	39	49	42	37	45	39	35	42	37	33	31
7	62	49	41	35	59	47	40	34	44	37	32	41	35	31	38	33	29	27
8	58	45	37	31	55	43	36	30	40	34	29	38	32	28	35	30	26	24
9	54	41	33	28	52	40	32	27	37	31	26	35	29	25	32	27	24	22
10	51	38	30	25	48	37	29	25	34	28	24	32	27	23	30	25	22	20

POLAR GRAPH



Maximum Candela = 1487.913 Located At Horizontal Angle = 0, Vertical Angle = 0  
Vertical Plane Through Horizontal Angles (90 - 270)