

# 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 : S17-LED-ACF-SF-4FT-S-8-35-ITL85160.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85160.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]09/07/15

[ISSUEDATE]04/27/16

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE S17-LED-ACF-SF-4ft-S-8-35

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 14.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 16.1 WATTS

[ABSOLUTE]LUMENS]1094

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85160. 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	1094
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	14.5
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 w/Sides
Luminous Length (0-180)	0.04 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.04 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	20	92	2369
55	0	0	2137
65	0	0	1839
75	0	0	1579
85	0	0	1098

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
<b>0.0</b>	43.801	43.801	43.801	43.801	43.801	43.801	43.801	43.801	43.801
<b>2.5</b>	37.661	38.070	39.298	41.345	43.801	46.667	49.123	50.760	51.170
<b>5.0</b>	32.339	32.749	35.205	38.889	43.801	49.123	54.444	57.719	58.947
<b>7.5</b>	27.836	28.246	31.520	36.433	43.801	51.988	59.766	65.497	67.544
<b>10.0</b>	23.333	24.152	27.836	33.977	43.392	54.444	65.497	72.865	75.731
<b>12.5</b>	19.649	20.468	24.561	31.930	42.982	56.901	70.409	79.825	83.099
<b>15.0</b>	16.374	17.193	21.696	29.474	42.164	58.947	75.322	85.556	88.830
<b>17.5</b>	13.099	14.327	18.830	27.427	41.754	60.585	79.415	89.649	92.924
<b>20.0</b>	10.643	11.871	15.965	24.971	40.526	62.222	81.871	92.105	94.971
<b>22.5</b>	8.187	9.415	13.509	22.924	39.708	63.450	83.918	92.924	94.971
<b>25.0</b>	6.550	7.368	11.462	20.877	38.480	63.860	84.737	92.105	93.333
<b>27.5</b>	4.912	5.731	9.415	18.830	37.251	64.269	84.737	90.058	90.058
<b>30.0</b>	4.094	4.503	7.778	16.784	36.023	64.269	83.509	86.784	86.784
<b>32.5</b>	2.865	3.684	6.140	15.146	34.795	63.450	81.462	83.509	83.099
<b>35.0</b>	2.047	2.865	4.912	13.509	33.158	62.222	79.006	80.234	80.234
<b>37.5</b>	0.819	2.047	4.094	11.462	31.520	60.585	76.140	77.778	78.187
<b>40.0</b>	0.409	0.819	3.275	9.825	29.883	58.538	72.865	75.731	76.550
<b>42.5</b>	0.409	0.409	2.047	8.596	28.246	56.491	70.409	74.094	75.731
<b>45.0</b>	0.409	0.409	1.637	6.959	26.199	54.035	67.544	72.865	75.731
<b>47.5</b>	0.000	0.409	0.409	5.731	24.561	51.579	65.088	72.456	75.731
<b>50.0</b>	0.000	0.000	0.409	4.503	22.924	49.123	63.041	72.047	75.731
<b>52.5</b>	0.000	0.000	0.409	3.684	20.877	46.257	61.404	71.637	76.140
<b>55.0</b>	0.000	0.000	0.000	2.456	19.240	43.801	59.766	71.228	76.140
<b>57.5</b>	0.000	0.000	0.000	2.047	17.602	41.345	58.129	70.819	75.731
<b>60.0</b>	0.000	0.000	0.000	1.228	15.965	38.480	56.491	70.000	75.731
<b>62.5</b>	0.000	0.000	0.000	0.409	13.918	36.433	54.444	69.181	74.912
<b>65.0</b>	0.000	0.000	0.000	0.409	12.281	33.977	52.807	68.363	73.684
<b>67.5</b>	0.000	0.000	0.000	0.409	11.053	31.520	50.760	66.316	72.047
<b>70.0</b>	0.000	0.000	0.000	0.000	9.415	29.474	49.123	64.678	70.000
<b>72.5</b>	0.000	0.000	0.000	0.000	7.778	27.427	46.667	62.222	67.544
<b>75.0</b>	0.000	0.000	0.000	0.000	6.550	25.380	44.620	59.766	65.497
<b>77.5</b>	0.000	0.000	0.000	0.000	5.322	23.333	42.164	57.310	62.632
<b>80.0</b>	0.000	0.000	0.000	0.000	4.094	21.287	39.708	54.444	60.175
<b>82.5</b>	0.000	0.000	0.000	0.000	2.865	19.649	37.251	51.988	57.310
<b>85.0</b>	0.000	0.000	0.000	0.000	1.637	17.602	34.795	49.123	54.444
<b>87.5</b>	0.000	0.000	0.000	0.000	0.819	15.556	32.339	45.848	51.170
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	12.690	28.246	41.345	46.257
<b>92.5</b>	0.000	0.000	0.409	2.047	4.094	13.509	27.427	37.661	41.345
<b>95.0</b>	2.047	2.456	3.684	9.415	10.234	14.737	28.246	38.070	41.754
<b>97.5</b>	5.322	6.140	10.643	18.012	17.602	18.830	29.883	39.298	42.573
<b>100.0</b>	11.053	12.690	20.877	28.655	26.608	25.789	32.339	41.345	44.620
<b>102.5</b>	19.240	22.105	33.567	40.526	36.433	34.386	37.661	44.211	47.485
<b>105.0</b>	30.292	33.977	47.485	52.807	47.485	43.801	45.029	48.304	50.760
<b>107.5</b>	43.801	48.713	63.450	67.135	59.357	54.035	54.035	56.491	56.901
<b>110.0</b>	58.129	65.497	80.643	81.462	71.637	65.088	63.860	65.088	65.497
<b>112.5</b>	76.550	84.327	99.474	97.018	84.737	76.140	74.503	74.094	74.503
<b>115.0</b>	97.427	104.795	118.304	113.392	98.246	88.012	85.556	84.737	83.918
<b>117.5</b>	120.351	127.310	138.772	129.766	111.345	99.883	97.018	94.971	94.561
<b>120.0</b>	144.912	151.871	160.058	146.959	125.263	112.164	108.480	106.433	106.023
<b>122.5</b>	171.111	176.842	181.345	163.743	139.591	124.444	120.351	117.895	117.076
<b>125.0</b>	197.719	202.632	202.632	180.526	154.327	137.134	132.222	129.357	128.538
<b>127.5</b>	225.146	227.193	222.690	196.901	169.064	149.825	144.094	140.819	140.000
<b>130.0</b>	250.526	250.526	241.520	212.047	183.392	162.515	155.965	152.281	151.462
<b>132.5</b>	274.269	272.222	259.123	227.193	197.310	175.205	167.836	164.152	162.924

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	295.146	291.053	273.860	241.111	211.228	187.485	179.708	174.795	173.977
<b>137.5</b>	312.749	307.018	287.368	254.211	224.737	199.766	190.760	186.257	185.439
<b>140.0</b>	326.257	319.708	298.421	266.082	237.018	211.228	201.813	196.901	195.673
<b>142.5</b>	337.310	329.942	308.655	276.725	249.708	223.099	212.865	207.134	206.316
<b>145.0</b>	344.678	337.310	316.433	286.959	260.760	234.152	222.690	217.368	216.140
<b>147.5</b>	350.409	343.041	323.392	295.965	271.404	244.795	232.924	226.784	225.965
<b>150.0</b>	353.684	347.134	329.532	304.561	281.228	255.439	242.749	236.199	234.561
<b>152.5</b>	355.731	350.000	334.854	312.339	290.643	265.673	252.573	245.614	243.977
<b>155.0</b>	356.550	352.047	338.947	318.480	298.830	274.678	261.988	254.211	252.573
<b>157.5</b>	357.778	353.684	342.632	324.620	306.199	284.094	270.994	263.216	261.170
<b>160.0</b>	357.368	354.912	345.906	329.123	313.158	292.690	280.409	271.813	269.766
<b>162.5</b>	357.778	354.912	347.953	333.216	318.889	300.468	289.006	280.409	278.772
<b>165.0</b>	357.778	355.322	348.772	336.491	323.801	307.427	297.193	289.415	286.959
<b>167.5</b>	356.550	354.503	349.181	338.947	327.895	314.386	304.561	298.421	295.965
<b>170.0</b>	354.912	353.275	348.772	340.175	331.170	320.117	312.339	307.018	305.380
<b>172.5</b>	352.047	351.228	347.134	340.994	333.626	325.848	319.708	315.614	313.977
<b>175.0</b>	347.953	347.134	344.678	340.175	335.263	329.942	325.848	322.982	322.164
<b>177.5</b>	343.450	342.632	341.813	339.357	336.901	334.035	331.988	330.351	329.942
<b>180.0</b>	337.310	337.310	337.310	337.310	337.310	337.310	337.310	337.310	337.310

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	17.84	N.A.	1.60
0-30	39.01	N.A.	3.60
0-40	63.83	N.A.	5.80
0-60	116.08	N.A.	10.60
0-80	163.68	N.A.	15.00
0-90	181.35	N.A.	16.60
10-90	177.02	N.A.	16.20
20-40	45.98	N.A.	4.20
20-50	71.92	N.A.	6.60
40-70	77.55	N.A.	7.10
60-80	47.60	N.A.	4.30
70-80	22.30	N.A.	2.00
80-90	17.67	N.A.	1.60
90-110	67.85	N.A.	6.20
90-120	165.25	N.A.	15.10
90-130	310.51	N.A.	28.40
90-150	651.44	N.A.	59.50
90-180	912.97	N.A.	83.40
110-180	845.12	N.A.	77.20
0-180	1094.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	4.33
10-20	13.52
20-30	21.17
30-40	24.82
40-50	25.94
50-60	26.31
60-70	25.30
70-80	22.30
80-90	17.67
90-100	19.06
100-110	48.79
110-120	97.39
120-130	145.26
130-140	172.48
140-150	168.45
150-160	138.60
160-170	91.08
170-180	31.85

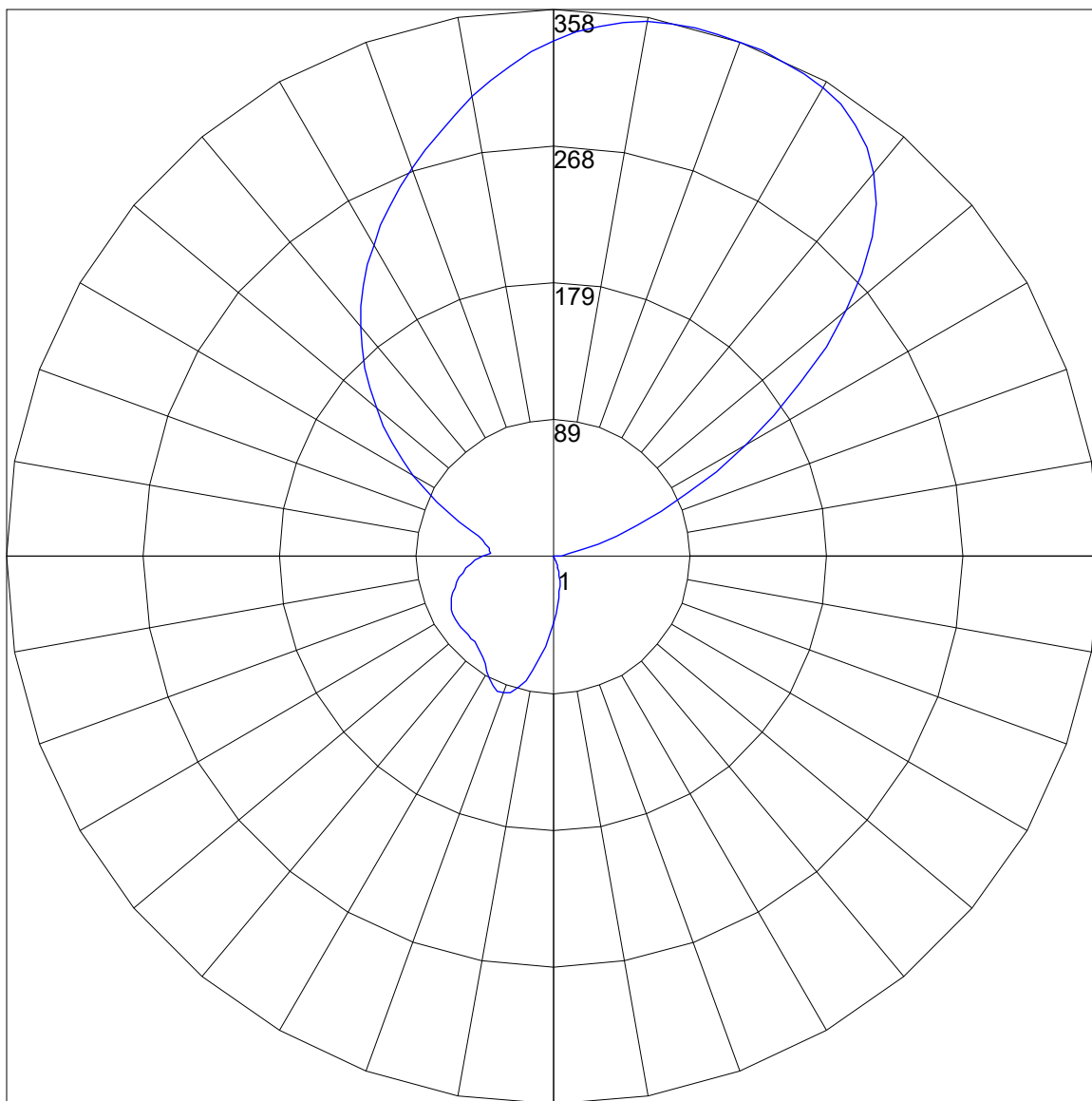
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	99	99	99	99	87	87	87	87	65	65	65	44	44	44	25	25	25	17
1	90	85	81	78	78	75	72	69	55	53	51	38	36	35	21	21	20	12
2	81	74	68	63	71	65	60	56	48	45	42	33	31	29	18	17	16	10
3	74	65	57	52	64	57	51	46	42	38	35	29	26	24	16	15	14	8
4	67	57	49	43	59	50	44	39	37	33	29	25	22	20	14	13	11	7
5	62	50	43	37	54	44	38	33	33	28	25	22	20	17	13	11	10	6
6	57	45	37	32	49	40	33	28	30	25	22	20	17	15	11	10	9	5
7	52	40	33	27	45	36	29	24	27	22	19	18	15	13	10	9	7	4
8	48	36	29	24	42	32	26	21	24	20	16	17	14	11	9	8	7	4
9	45	33	26	21	39	29	23	19	22	18	14	15	12	10	9	7	6	3
10	42	30	23	19	36	27	21	17	20	16	13	14	11	9	8	6	5	3

POLAR GRAPH



Maximum Candela = 357.778 Located At Horizontal Angle = 0, Vertical Angle = 157.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)