

# 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-B-8-35-ITL85160.002.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85160.002 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-B-8-35

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 18.5 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 19.8 WATTS

[ABSOLUTE]LUMENS]1376

[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	1376
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	18.5
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	25	116	2978
55	0	0	2686
65	0	0	2312
75	0	0	1985
85	0	0	1380

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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>
0.0	55.064	55.064	55.064	55.064	55.064	55.064	55.064	55.064	55.064
2.5	47.345	47.860	49.404	51.977	55.064	58.667	61.754	63.813	64.327
5.0	40.655	41.170	44.257	48.889	55.064	61.754	68.444	72.561	74.105
7.5	34.994	35.509	39.626	45.801	55.064	65.357	75.135	82.339	84.912
10.0	29.333	30.363	34.994	42.713	54.550	68.444	82.339	91.602	95.205
12.5	24.702	25.731	30.877	40.140	54.035	71.532	88.515	100.351	104.468
15.0	20.585	21.614	27.275	37.053	53.006	74.105	94.690	107.556	111.673
17.5	16.468	18.012	23.673	34.480	52.491	76.164	99.836	112.702	116.819
20.0	13.380	14.924	20.070	31.392	50.947	78.222	102.924	115.789	119.392
22.5	10.292	11.836	16.982	28.819	49.918	79.766	105.497	116.819	119.392
25.0	8.234	9.263	14.409	26.246	48.374	80.281	106.526	115.789	117.333
27.5	6.175	7.205	11.836	23.673	46.830	80.795	106.526	113.216	113.216
30.0	5.146	5.661	9.778	21.099	45.287	80.795	104.982	109.099	109.099
32.5	3.602	4.632	7.719	19.041	43.743	79.766	102.409	104.982	104.468
35.0	2.573	3.602	6.175	16.982	41.684	78.222	99.322	100.865	100.865
37.5	1.029	2.573	5.146	14.409	39.626	76.164	95.719	97.778	98.292
40.0	0.515	1.029	4.117	12.351	37.567	73.591	91.602	95.205	96.234
42.5	0.515	0.515	2.573	10.807	35.509	71.018	88.515	93.146	95.205
45.0	0.515	0.515	2.058	8.749	32.936	67.930	84.912	91.602	95.205
47.5	0.000	0.515	0.515	7.205	30.877	64.842	81.825	91.088	95.205
50.0	0.000	0.000	0.515	5.661	28.819	61.754	79.251	90.573	95.205
52.5	0.000	0.000	0.515	4.632	26.246	58.152	77.193	90.058	95.719
55.0	0.000	0.000	0.000	3.088	24.187	55.064	75.135	89.544	95.719
57.5	0.000	0.000	0.000	2.573	22.129	51.977	73.076	89.029	95.205
60.0	0.000	0.000	0.000	1.544	20.070	48.374	71.018	88.000	95.205
62.5	0.000	0.000	0.000	0.515	17.497	45.801	68.444	86.971	94.175
65.0	0.000	0.000	0.000	0.515	15.439	42.713	66.386	85.942	92.632
67.5	0.000	0.000	0.000	0.515	13.895	39.626	63.813	83.368	90.573
70.0	0.000	0.000	0.000	0.000	11.836	37.053	61.754	81.310	88.000
72.5	0.000	0.000	0.000	0.000	9.778	34.480	58.667	78.222	84.912
75.0	0.000	0.000	0.000	0.000	8.234	31.906	56.094	75.135	82.339
77.5	0.000	0.000	0.000	0.000	6.690	29.333	53.006	72.047	78.737
80.0	0.000	0.000	0.000	0.000	5.146	26.760	49.918	68.444	75.649
82.5	0.000	0.000	0.000	0.000	3.602	24.702	46.830	65.357	72.047
85.0	0.000	0.000	0.000	0.000	2.058	22.129	43.743	61.754	68.444
87.5	0.000	0.000	0.000	0.000	1.029	19.556	40.655	57.637	64.327
90.0	0.000	0.000	0.000	0.000	0.000	15.953	35.509	51.977	58.152
92.5	0.000	0.000	0.515	2.573	5.146	16.982	34.480	47.345	51.977
95.0	2.573	3.088	4.632	11.836	12.865	18.526	35.509	47.860	52.491
97.5	6.690	7.719	13.380	22.643	22.129	23.673	37.567	49.404	53.520
100.0	13.895	15.953	26.246	36.023	33.450	32.421	40.655	51.977	56.094
102.5	24.187	27.789	42.199	50.947	45.801	43.228	47.345	55.579	59.696
105.0	38.082	42.713	59.696	66.386	59.696	55.064	56.608	60.725	63.813
107.5	55.064	61.240	79.766	84.398	74.620	67.930	67.930	71.018	71.532
110.0	73.076	82.339	101.380	102.409	90.058	81.825	80.281	81.825	82.339
112.5	96.234	106.012	125.053	121.965	106.526	95.719	93.661	93.146	93.661
115.0	122.480	131.743	148.725	142.550	123.509	110.643	107.556	106.526	105.497
117.5	151.298	160.047	174.456	163.135	139.977	125.567	121.965	119.392	118.877
120.0	182.175	190.924	201.216	184.749	157.474	141.006	136.374	133.801	133.287
122.5	215.111	222.316	227.977	205.848	175.485	156.444	151.298	148.211	147.181
125.0	248.561	254.737	254.737	226.947	194.012	172.398	166.222	162.620	161.591
127.5	283.041	285.614	279.953	247.532	212.538	188.351	181.146	177.029	176.000
130.0	314.947	314.947	303.626	266.573	230.550	204.304	196.070	191.439	190.409
132.5	344.795	342.222	325.754	285.614	248.047	220.257	210.994	206.363	204.819

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	371.041	365.895	344.281	303.111	265.544	235.696	225.918	219.743	218.713
<b>137.5</b>	393.170	385.965	361.263	319.579	282.526	251.135	239.813	234.152	233.123
<b>140.0</b>	410.152	401.918	375.158	334.503	297.965	265.544	253.708	247.532	245.988
<b>142.5</b>	424.047	414.784	388.023	347.883	313.918	280.468	267.602	260.398	259.368
<b>145.0</b>	433.310	424.047	397.801	360.749	327.813	294.363	279.953	273.263	271.719
<b>147.5</b>	440.515	431.251	406.550	372.070	341.193	307.743	292.819	285.099	284.070
<b>150.0</b>	444.632	436.398	414.269	382.877	353.544	321.123	305.170	296.936	294.877
<b>152.5</b>	447.205	440.000	420.959	392.655	365.380	333.988	317.520	308.772	306.713
<b>155.0</b>	448.234	442.573	426.105	400.374	375.673	345.310	329.357	319.579	317.520
<b>157.5</b>	449.778	444.632	430.737	408.094	384.936	357.146	340.678	330.901	328.327
<b>160.0</b>	449.263	446.175	434.854	413.754	393.684	367.953	352.515	341.708	339.135
<b>162.5</b>	449.778	446.175	437.427	418.901	400.889	377.731	363.322	352.515	350.456
<b>165.0</b>	449.778	446.690	438.456	423.018	407.064	386.480	373.614	363.836	360.749
<b>167.5</b>	448.234	445.661	438.971	426.105	412.211	395.228	382.877	375.158	372.070
<b>170.0</b>	446.175	444.117	438.456	427.649	416.327	402.433	392.655	385.965	383.906
<b>172.5</b>	442.573	441.544	436.398	428.678	419.415	409.637	401.918	396.772	394.713
<b>175.0</b>	437.427	436.398	433.310	427.649	421.474	414.784	409.637	406.035	405.006
<b>177.5</b>	431.766	430.737	429.708	426.620	423.532	419.930	417.357	415.298	414.784
<b>180.0</b>	424.047	424.047	424.047	424.047	424.047	424.047	424.047	424.047	424.047

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	22.43	N.A.	1.60
0-30	49.04	N.A.	3.60
0-40	80.24	N.A.	5.80
0-60	145.93	N.A.	10.60
0-80	205.76	N.A.	15.00
0-90	227.98	N.A.	16.60
10-90	222.54	N.A.	16.20
20-40	57.81	N.A.	4.20
20-50	90.41	N.A.	6.60
40-70	97.49	N.A.	7.10
60-80	59.84	N.A.	4.30
70-80	28.03	N.A.	2.00
80-90	22.21	N.A.	1.60
90-110	85.30	N.A.	6.20
90-120	207.74	N.A.	15.10
90-130	390.36	N.A.	28.40
90-150	818.95	N.A.	59.50
90-180	1147.74	N.A.	83.40
110-180	1062.43	N.A.	77.20
0-180	1375.71	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	5.44
10-20	16.99
20-30	26.61
30-40	31.20
40-50	32.61
50-60	33.08
60-70	31.81
70-80	28.03
80-90	22.21
90-100	23.97
100-110	61.34
110-120	122.43
120-130	182.62
130-140	216.83
140-150	211.77
150-160	174.24
160-170	114.50
170-180	40.05

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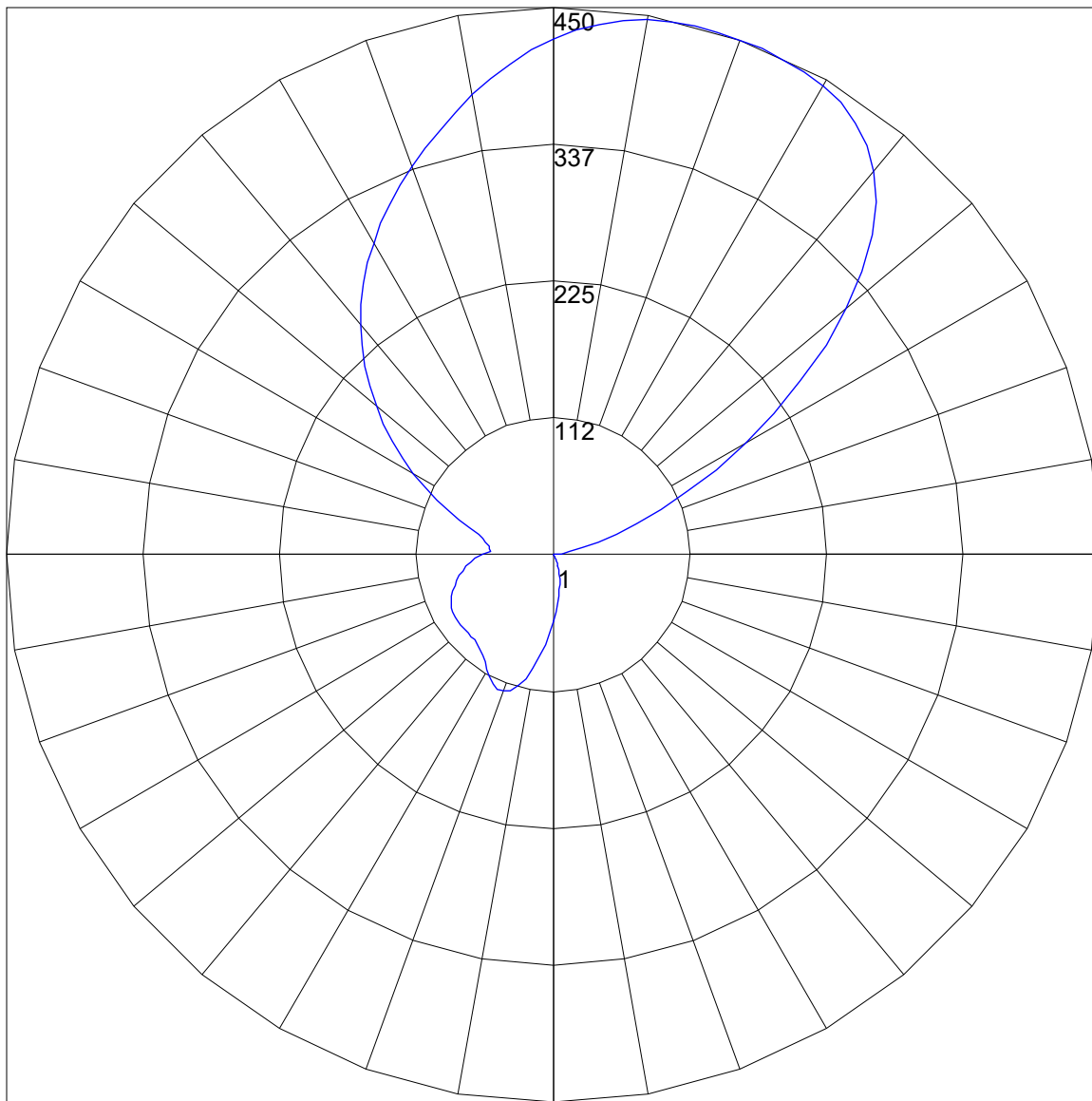
PHOTOMETRIC FILENAME : S17-LED-ACF-SF-4FT-B-8-35-ITL85160.002.IES

## 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	21	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 = 449.778 Located At Horizontal Angle = 0, Vertical Angle = 157.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)