

# 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-H-8-35-ITL85160.003.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL85160.003 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]09/07/15

[ISSUE DATE]04/27/16

[MANUFAC]FINELITE, INC.

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

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 28.4 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.3 WATTS

[ABSOLUTE LUMENS]2079

[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	2079
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	28.4
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	38	175	4501
55	0	0	4059
65	0	0	3494
75	0	0	3000
85	0	0	2086

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**CANDELA TABULATION**

	<b>0.0</b>	<b>22.5</b>	<b>45.0</b>	<b>67.5</b>	<b>90.0</b>	<b>112.5</b>	<b>135.0</b>	<b>157.5</b>	<b>180.0</b>
<b>0.0</b>	83.222	83.222	83.222	83.222	83.222	83.222	83.222	83.222	83.222
<b>2.5</b>	71.556	72.333	74.667	78.556	83.222	88.667	93.333	96.444	97.222
<b>5.0</b>	61.444	62.222	66.889	73.889	83.222	93.333	103.444	109.667	112.000
<b>7.5</b>	52.889	53.667	59.889	69.222	83.222	98.778	113.556	124.444	128.333
<b>10.0</b>	44.333	45.889	52.889	64.556	82.444	103.444	124.444	138.444	143.889
<b>12.5</b>	37.333	38.889	46.667	60.667	81.667	108.111	133.778	151.667	157.889
<b>15.0</b>	31.111	32.667	41.222	56.000	80.111	112.000	143.111	162.556	168.778
<b>17.5</b>	24.889	27.222	35.778	52.111	79.333	115.111	150.889	170.333	176.556
<b>20.0</b>	20.222	22.556	30.333	47.444	77.000	118.222	155.556	175.000	180.444
<b>22.5</b>	15.556	17.889	25.667	43.556	75.444	120.556	159.444	176.556	180.444
<b>25.0</b>	12.444	14.000	21.778	39.667	73.111	121.333	161.000	175.000	177.333
<b>27.5</b>	9.333	10.889	17.889	35.778	70.778	122.111	161.000	171.111	171.111
<b>30.0</b>	7.778	8.556	14.778	31.889	68.444	122.111	158.667	164.889	164.889
<b>32.5</b>	5.444	7.000	11.667	28.778	66.111	120.556	154.778	158.667	157.889
<b>35.0</b>	3.889	5.444	9.333	25.667	63.000	118.222	150.111	152.444	152.444
<b>37.5</b>	1.556	3.889	7.778	21.778	59.889	115.111	144.667	147.778	148.556
<b>40.0</b>	0.778	1.556	6.222	18.667	56.778	111.222	138.444	143.889	145.444
<b>42.5</b>	0.778	0.778	3.889	16.333	53.667	107.333	133.778	140.778	143.889
<b>45.0</b>	0.778	0.778	3.111	13.222	49.778	102.667	128.333	138.444	143.889
<b>47.5</b>	0.000	0.778	0.778	10.889	46.667	98.000	123.667	137.667	143.889
<b>50.0</b>	0.000	0.000	0.778	8.556	43.556	93.333	119.778	136.889	143.889
<b>52.5</b>	0.000	0.000	0.778	7.000	39.667	87.889	116.667	136.111	144.667
<b>55.0</b>	0.000	0.000	0.000	4.667	36.556	83.222	113.556	135.333	144.667
<b>57.5</b>	0.000	0.000	0.000	3.889	33.444	78.556	110.444	134.556	143.889
<b>60.0</b>	0.000	0.000	0.000	2.333	30.333	73.111	107.333	133.000	143.889
<b>62.5</b>	0.000	0.000	0.000	0.778	26.444	69.222	103.444	131.444	142.333
<b>65.0</b>	0.000	0.000	0.000	0.778	23.333	64.556	100.333	129.889	140.000
<b>67.5</b>	0.000	0.000	0.000	0.778	21.000	59.889	96.444	126.000	136.889
<b>70.0</b>	0.000	0.000	0.000	0.000	17.889	56.000	93.333	122.889	133.000
<b>72.5</b>	0.000	0.000	0.000	0.000	14.778	52.111	88.667	118.222	128.333
<b>75.0</b>	0.000	0.000	0.000	0.000	12.444	48.222	84.778	113.556	124.444
<b>77.5</b>	0.000	0.000	0.000	0.000	10.111	44.333	80.111	108.889	119.000
<b>80.0</b>	0.000	0.000	0.000	0.000	7.778	40.444	75.444	103.444	114.333
<b>82.5</b>	0.000	0.000	0.000	0.000	5.444	37.333	70.778	98.778	108.889
<b>85.0</b>	0.000	0.000	0.000	0.000	3.111	33.444	66.111	93.333	103.444
<b>87.5</b>	0.000	0.000	0.000	0.000	1.556	29.556	61.444	87.111	97.222
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	24.111	53.667	78.556	87.889
<b>92.5</b>	0.000	0.000	0.778	3.889	7.778	25.667	52.111	71.556	78.556
<b>95.0</b>	3.889	4.667	7.000	17.889	19.444	28.000	53.667	72.333	79.333
<b>97.5</b>	10.111	11.667	20.222	34.222	33.444	35.778	56.778	74.667	80.889
<b>100.0</b>	21.000	24.111	39.667	54.444	50.556	49.000	61.444	78.556	84.778
<b>102.5</b>	36.556	42.000	63.778	77.000	69.222	65.333	71.556	84.000	90.222
<b>105.0</b>	57.556	64.556	90.222	100.333	90.222	83.222	85.556	91.778	96.444
<b>107.5</b>	83.222	92.556	120.556	127.556	112.778	102.667	102.667	107.333	108.111
<b>110.0</b>	110.444	124.444	153.222	154.778	136.111	123.667	121.333	123.667	124.444
<b>112.5</b>	145.444	160.222	189.000	184.333	161.000	144.667	141.556	140.778	141.556
<b>115.0</b>	185.111	199.111	224.778	215.444	186.667	167.222	162.556	161.000	159.444
<b>117.5</b>	228.667	241.889	263.667	246.556	211.556	189.778	184.333	180.444	179.667
<b>120.0</b>	275.333	288.556	304.111	279.222	238.000	213.111	206.111	202.222	201.444
<b>122.5</b>	325.111	336.000	344.556	311.111	265.222	236.444	228.667	224.000	222.444
<b>125.0</b>	375.667	385.000	385.000	343.000	293.222	260.556	251.222	245.778	244.222
<b>127.5</b>	427.778	431.667	423.111	374.111	321.222	284.667	273.778	267.556	266.000
<b>130.0</b>	476.000	476.000	458.889	402.889	348.444	308.778	296.333	289.333	287.778
<b>132.5</b>	521.111	517.222	492.333	431.667	374.889	332.889	318.889	311.889	309.556

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**CANDELA TABULATION - (Cont.)**

135.0	560.778	553.000	520.333	458.111	401.333	356.222	341.444	332.111	330.556
137.5	594.222	583.333	546.000	483.000	427.000	379.556	362.444	353.889	352.333
140.0	619.889	607.444	567.000	505.556	450.333	401.333	383.444	374.111	371.778
142.5	640.889	626.889	586.444	525.778	474.444	423.889	404.444	393.556	392.000
145.0	654.889	640.889	601.222	545.222	495.444	444.889	423.111	413.000	410.667
147.5	665.778	651.778	614.444	562.333	515.667	465.111	442.556	430.889	429.333
150.0	672.000	659.556	626.111	578.667	534.333	485.333	461.222	448.778	445.667
152.5	675.889	665.000	636.222	593.444	552.222	504.778	479.889	466.667	463.556
155.0	677.444	668.889	644.000	605.111	567.778	521.889	497.778	483.000	479.889
157.5	679.778	672.000	651.000	616.778	581.778	539.778	514.889	500.111	496.222
160.0	679.000	674.333	657.222	625.333	595.000	556.111	532.778	516.444	512.556
162.5	679.778	674.333	661.111	633.111	605.889	570.889	549.111	532.778	529.667
165.0	679.778	675.111	662.667	639.333	615.222	584.111	564.667	549.889	545.222
167.5	677.444	673.556	663.444	644.000	623.000	597.333	578.667	567.000	562.333
170.0	674.333	671.222	662.667	646.333	629.222	608.222	593.444	583.333	580.222
172.5	668.889	667.333	659.556	647.889	633.889	619.111	607.444	599.667	596.556
175.0	661.111	659.556	654.889	646.333	637.000	626.889	619.111	613.667	612.111
177.5	652.556	651.000	649.444	644.778	640.111	634.667	630.778	627.667	626.889
180.0	640.889	640.889	640.889	640.889	640.889	640.889	640.889	640.889	640.889

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	33.90	N.A.	1.60
0-30	74.12	N.A.	3.60
0-40	121.27	N.A.	5.80
0-60	220.55	N.A.	10.60
0-80	310.98	N.A.	15.00
0-90	344.56	N.A.	16.60
10-90	336.34	N.A.	16.20
20-40	87.37	N.A.	4.20
20-50	136.65	N.A.	6.60
40-70	147.35	N.A.	7.10
60-80	90.44	N.A.	4.30
70-80	42.37	N.A.	2.00
80-90	33.57	N.A.	1.60
90-110	128.92	N.A.	6.20
90-120	313.97	N.A.	15.10
90-130	589.97	N.A.	28.40
90-150	1237.74	N.A.	59.50
90-180	1734.65	N.A.	83.40
110-180	1605.72	N.A.	77.20
0-180	2079.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	8.22
10-20	25.68
20-30	40.22
30-40	47.16
40-50	49.28
50-60	50.00
60-70	48.07
70-80	42.37
80-90	33.57
90-100	36.22
100-110	92.70
110-120	185.04
120-130	276.00
130-140	327.70
140-150	320.06
150-160	263.34
160-170	173.05
170-180	60.52

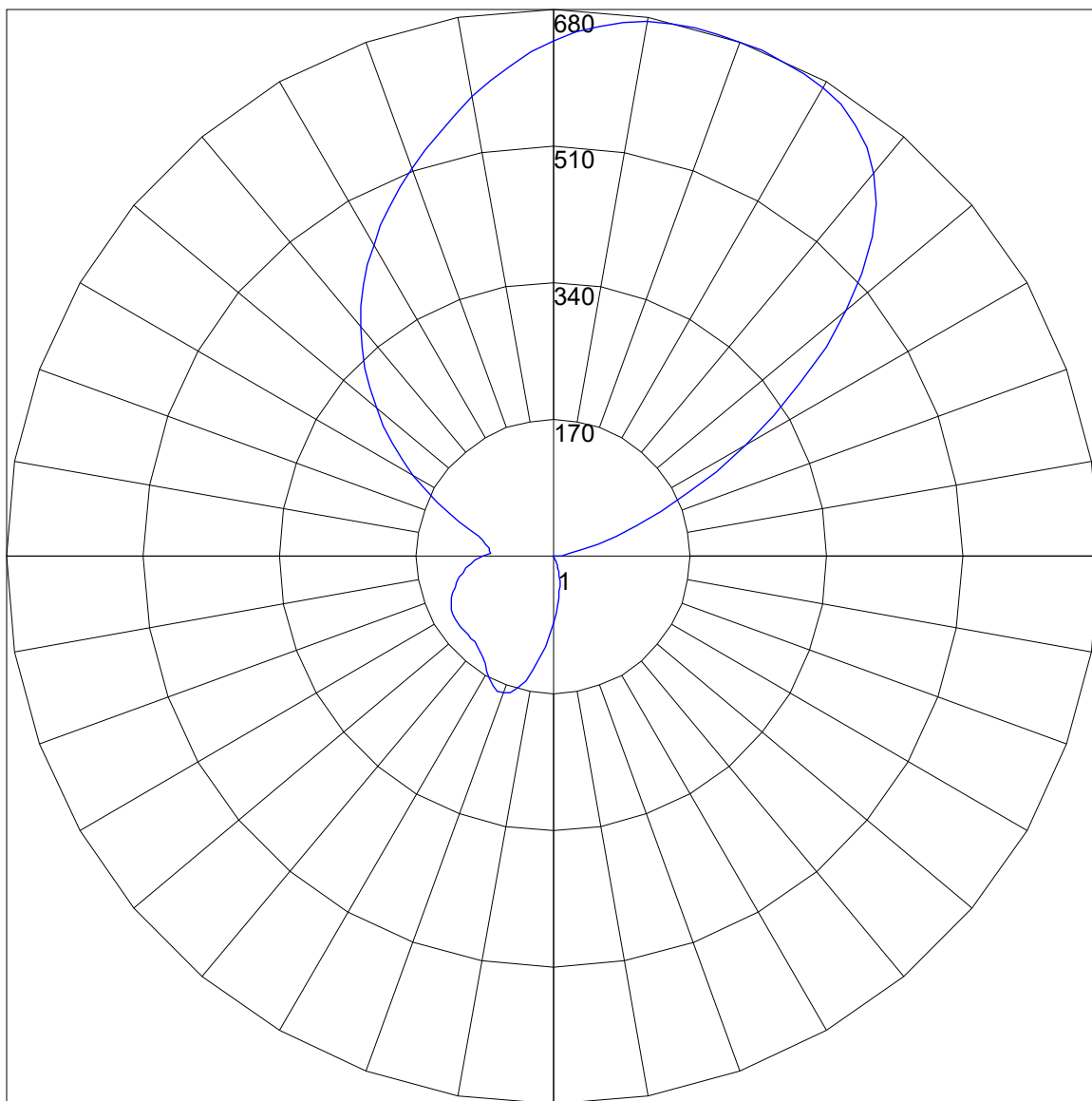
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 = 679.778 Located At Horizontal Angle = 0, Vertical Angle = 157.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)