

# 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-PF-4FT-H-8-35-ITL85159.003.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]ITL85159.003 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]08/04/15  
[ISSUEDATE]04/27/16  
[MANUFAC]FINELITE, INC.  
[LUMCAT]FINELITE S17-LED-ACF-PF-4ft-H-8-35  
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 28.3 WATTS  
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 29.0 WATTS  
[ABSOLUTE LUMENS]2571  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL85159. 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	2571
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	28.3
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)	0.26 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.27 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1686	1371	1184
55	1804	1416	979
65	1884	1447	798
75	1925	1453	584
85	1932	1427	267

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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>	151.667	151.667	151.667	151.667	151.667	151.667	151.667	151.667	151.667
<b>2.5</b>	150.111	150.111	150.111	150.889	151.667	152.444	154.000	154.778	155.556
<b>5.0</b>	150.111	149.333	149.333	150.111	150.889	154.000	157.111	159.444	160.222
<b>7.5</b>	152.444	150.889	149.333	148.556	150.111	154.778	160.222	164.889	167.222
<b>10.0</b>	154.778	153.222	150.111	147.000	148.556	154.778	163.333	170.333	173.444
<b>12.5</b>	157.889	155.556	150.111	145.444	147.000	154.778	167.222	175.778	179.667
<b>15.0</b>	162.556	159.444	151.667	143.889	144.667	154.778	169.556	180.444	184.333
<b>17.5</b>	166.444	162.556	152.444	141.556	141.556	153.222	171.889	182.778	185.889
<b>20.0</b>	171.889	167.222	154.000	140.000	138.444	151.667	171.889	182.778	185.889
<b>22.5</b>	177.333	171.111	154.778	137.667	134.556	149.333	171.111	181.222	182.000
<b>25.0</b>	183.556	175.778	156.333	135.333	129.889	147.000	168.778	176.556	177.333
<b>27.5</b>	189.778	181.222	157.889	132.222	126.000	143.889	165.667	171.111	170.333
<b>30.0</b>	196.000	185.111	158.667	129.111	120.556	139.222	161.000	164.111	163.333
<b>32.5</b>	202.222	190.556	160.222	126.000	115.111	135.333	155.556	157.111	156.333
<b>35.0</b>	208.444	195.222	161.000	122.889	109.667	129.889	149.333	150.889	150.889
<b>37.5</b>	213.889	199.889	162.556	119.778	103.444	124.444	143.111	146.222	147.000
<b>40.0</b>	220.111	203.778	163.333	115.889	97.222	118.222	136.889	141.556	144.667
<b>42.5</b>	225.556	207.667	164.111	112.778	91.000	112.778	131.444	139.222	143.111
<b>45.0</b>	231.000	211.556	164.111	108.889	84.778	106.556	126.000	138.444	143.889
<b>47.5</b>	235.667	214.667	164.111	104.222	77.778	100.333	122.111	137.667	144.667
<b>50.0</b>	238.778	217.000	164.111	100.333	70.778	94.111	118.222	136.889	145.444
<b>52.5</b>	241.889	219.333	164.111	96.444	64.556	88.667	115.111	136.889	146.222
<b>55.0</b>	244.222	220.111	163.333	91.778	58.333	82.444	112.000	136.889	147.000
<b>57.5</b>	245.778	220.889	161.778	87.889	52.889	77.000	108.889	136.111	146.222
<b>60.0</b>	245.778	220.889	160.222	83.222	46.667	72.333	106.556	134.556	145.444
<b>62.5</b>	245.778	219.333	157.889	78.556	41.222	67.667	104.222	133.000	143.111
<b>65.0</b>	244.222	218.556	155.556	74.667	36.556	63.000	101.111	129.889	140.000
<b>67.5</b>	241.889	215.444	151.667	70.000	31.111	59.111	97.222	126.000	136.111
<b>70.0</b>	239.556	212.333	148.556	66.111	26.444	55.222	93.333	122.111	132.222
<b>72.5</b>	235.667	209.222	144.667	61.444	21.778	51.333	89.444	117.444	127.556
<b>75.0</b>	231.000	204.556	140.000	56.778	17.889	47.444	84.778	112.778	122.889
<b>77.5</b>	225.556	199.111	134.556	52.111	13.222	44.333	80.111	108.111	117.444
<b>80.0</b>	219.333	193.667	129.111	47.444	9.333	40.444	75.444	102.667	112.000
<b>82.5</b>	213.111	187.444	123.667	42.778	6.222	36.556	70.778	98.000	108.111
<b>85.0</b>	206.111	181.222	117.444	38.111	3.889	32.667	66.889	92.556	101.889
<b>87.5</b>	198.333	174.222	111.222	33.444	1.556	29.556	61.444	86.333	94.889
<b>90.0</b>	191.333	167.222	105.000	30.333	0.000	24.111	52.889	75.444	84.000
<b>92.5</b>	185.111	161.778	101.889	32.667	7.778	21.778	45.111	65.333	73.111
<b>95.0</b>	182.000	159.444	102.667	45.111	19.444	26.444	45.111	63.000	70.778
<b>97.5</b>	179.667	159.444	110.444	62.222	33.444	32.667	50.556	65.333	73.111
<b>100.0</b>	181.222	163.333	124.444	80.889	48.222	43.556	56.778	70.778	76.222
<b>102.5</b>	187.444	174.222	144.667	102.667	66.889	57.556	64.556	76.222	81.667
<b>105.0</b>	199.889	191.333	171.111	126.000	85.556	73.889	73.889	82.444	86.333
<b>107.5</b>	220.111	214.667	199.111	150.889	106.556	92.556	87.111	90.222	94.111
<b>110.0</b>	246.556	244.222	231.000	177.333	129.111	111.222	102.667	101.889	102.667
<b>112.5</b>	280.000	280.000	262.889	204.556	152.444	130.667	119.000	115.889	115.111
<b>115.0</b>	319.667	319.667	298.667	233.333	175.778	151.667	137.667	131.444	129.889
<b>117.5</b>	364.778	363.222	333.667	262.111	199.889	171.889	156.333	148.556	146.222
<b>120.0</b>	411.444	407.556	370.222	290.889	225.556	193.667	176.556	167.222	163.333
<b>122.5</b>	458.889	448.000	404.444	319.667	250.444	215.444	196.778	185.889	182.000
<b>125.0</b>	504.000	490.000	438.667	347.667	275.333	235.667	217.000	206.111	201.444
<b>127.5</b>	544.444	526.556	469.000	374.889	301.000	257.444	238.000	224.778	220.889
<b>130.0</b>	578.667	559.222	496.222	399.000	326.667	279.222	259.000	245.000	241.111
<b>132.5</b>	607.444	585.667	518.778	422.333	350.778	301.778	280.000	265.222	261.333

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**CANDELA TABULATION - (Cont.)**

135.0	630.000	607.444	539.778	445.667	375.667	323.556	301.000	285.444	280.778
137.5	647.111	623.778	556.889	466.667	399.000	345.333	321.222	305.667	300.222
140.0	658.000	634.667	570.111	486.111	420.778	366.333	341.444	325.111	320.444
142.5	665.000	642.444	581.778	504.000	441.778	386.556	360.889	344.556	339.889
145.0	667.333	646.333	591.889	520.333	461.222	406.778	380.333	364.000	358.556
147.5	665.778	647.889	599.667	533.556	479.111	426.222	398.222	380.333	375.667
150.0	665.000	648.667	606.667	548.333	497.000	444.889	416.889	399.000	393.556
152.5	661.111	647.889	612.111	560.778	512.556	463.556	434.778	416.889	410.667
155.0	658.000	646.333	616.778	570.889	527.333	480.667	452.667	434.778	427.778
157.5	653.333	645.556	620.667	578.667	539.778	497.000	469.778	451.111	445.667
160.0	651.000	644.000	623.000	586.444	552.222	511.778	486.889	468.222	462.778
162.5	647.889	641.667	624.556	592.667	562.333	526.556	502.444	486.111	480.667
165.0	644.778	638.556	624.556	597.333	570.889	539.778	518.000	503.222	497.778
167.5	640.111	635.444	623.000	600.444	577.889	552.222	533.556	519.556	515.667
170.0	633.889	630.000	619.889	602.000	583.333	563.111	547.556	536.667	532.778
172.5	626.111	623.778	615.222	602.778	588.000	573.222	560.778	553.000	549.889
175.0	616.778	615.222	609.778	601.222	591.111	581.778	573.222	567.778	566.222
177.5	605.889	605.889	602.778	598.111	593.444	588.778	584.889	581.778	581.000
180.0	594.222	594.222	594.222	594.222	594.222	594.222	594.222	594.222	594.222

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	59.91	N.A.	2.30
0-30	133.15	N.A.	5.20
0-40	227.18	N.A.	8.80
0-60	454.94	N.A.	17.70
0-80	685.92	N.A.	26.70
0-90	779.16	N.A.	30.30
10-90	764.43	N.A.	29.70
20-40	167.27	N.A.	6.50
20-50	276.30	N.A.	10.70
40-70	347.79	N.A.	13.50
60-80	230.98	N.A.	9.00
70-80	110.95	N.A.	4.30
80-90	93.24	N.A.	3.60
90-110	210.83	N.A.	8.20
90-120	418.70	N.A.	16.30
90-130	704.45	N.A.	27.40
90-150	1328.71	N.A.	51.70
90-180	1792.31	N.A.	69.70
110-180	1581.48	N.A.	61.50
0-180	2571.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	14.73
10-20	45.18
20-30	73.24
30-40	94.03
40-50	109.03
50-60	118.74
60-70	120.03
70-80	110.95
80-90	93.24
90-100	83.45
100-110	127.38
110-120	207.86
120-130	285.76
130-140	320.74
140-150	303.52
150-160	246.32
160-170	161.08
170-180	56.20

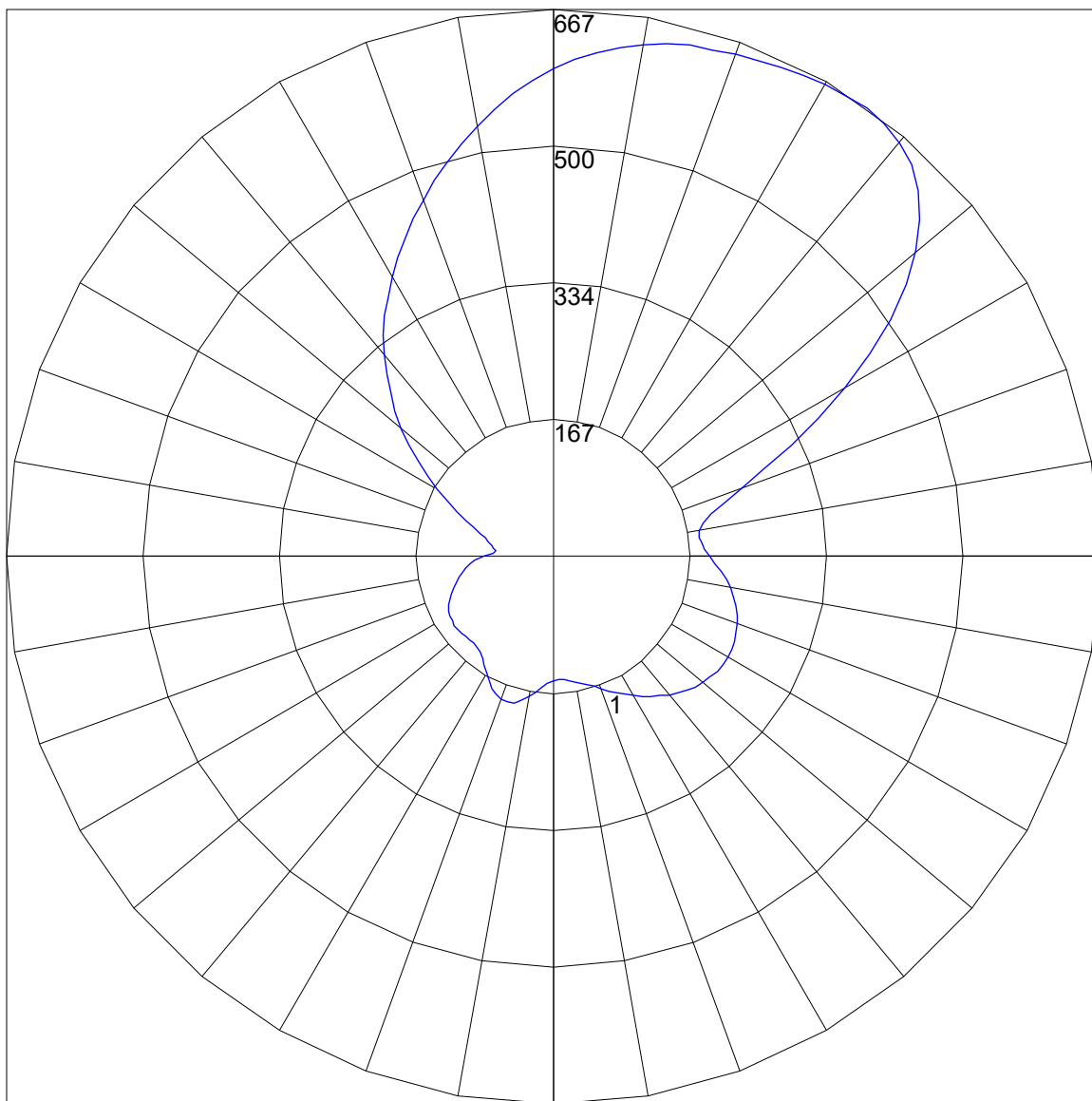
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30
1	92	87	82	78	82	78	74	70	61	58	56	45	43	42	31	30	29	22
2	83	75	68	62	74	67	61	56	52	48	45	39	36	33	26	24	23	17
3	75	65	57	51	67	58	51	46	45	41	37	33	30	27	22	20	18	14
4	68	57	49	42	61	51	44	38	40	35	31	29	26	23	20	17	15	11
5	62	50	42	36	55	45	38	33	35	30	26	26	22	19	18	15	13	9
6	57	45	37	31	51	40	33	28	32	26	22	23	20	17	16	13	11	8
7	53	40	32	27	47	36	29	24	28	23	19	21	17	15	14	12	10	7
8	49	36	29	23	43	33	26	21	26	21	17	19	15	13	13	11	9	6
9	45	33	25	20	40	30	23	19	23	18	15	18	14	11	12	10	8	5
10	42	30	23	18	38	27	21	16	21	17	13	16	13	10	11	9	7	5

POLAR GRAPH



Maximum Candela = 667.333 Located At Horizontal Angle = 0, Vertical Angle = 145  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)