

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P551151

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-81-88-ED1D-90**

Issue Date: 7/9/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P551151  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-248-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCC-X-2-LD4-1STD-50-UNV-81-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

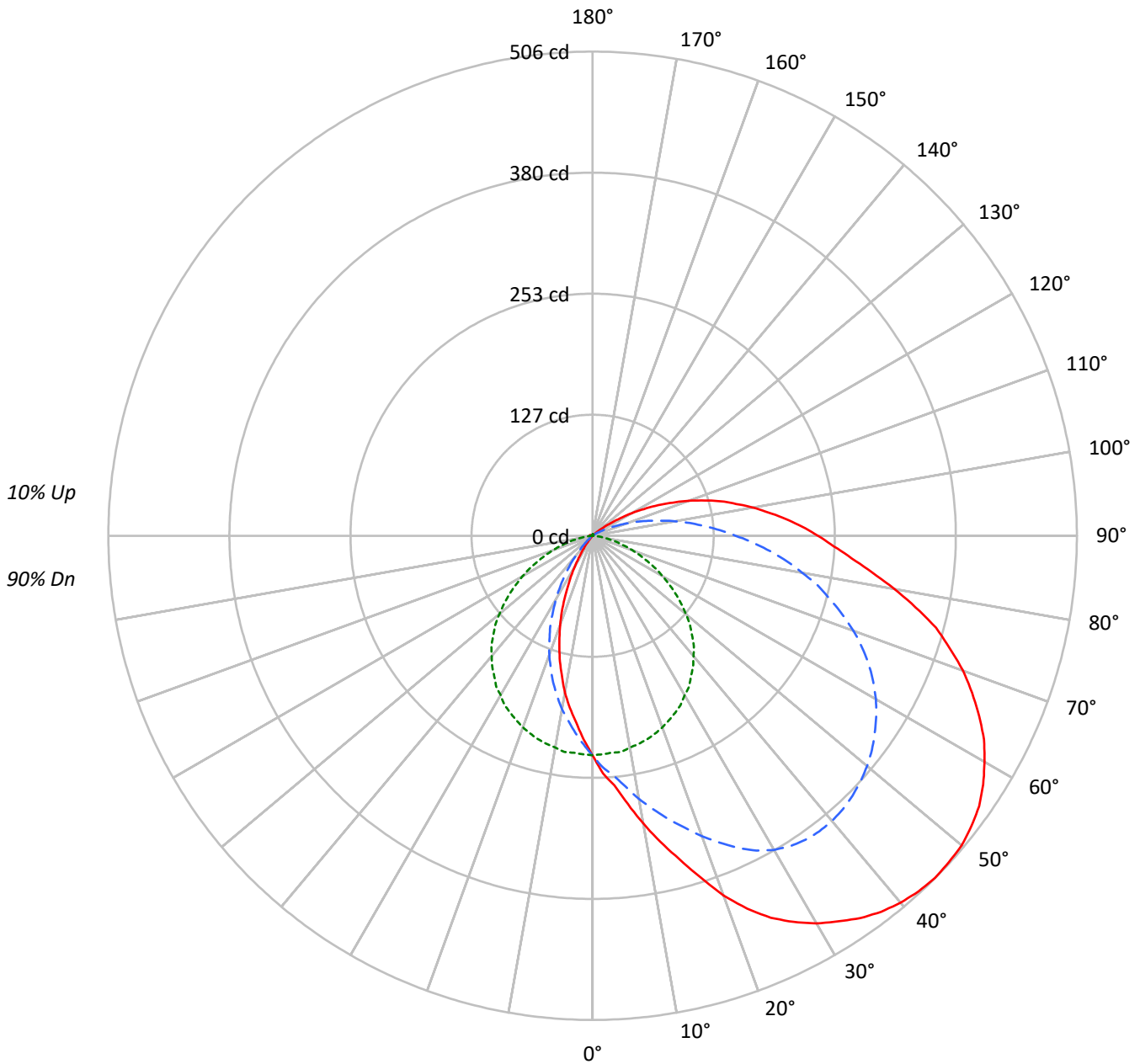
Lumens per Lamp: N/A  
Luminaire Lumens: 1134.1 lumens  
Efficiency: N/A  
Efficacy: 67.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-81-88-ED1D-90

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	90																			
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	67																			
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	53																			
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	43																			
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	36																			
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	30																			
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	26																			
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	23																			
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	20																			
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	18																			
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	16																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	2469	2469	2469
5°	2710	2433	2030
10°	3068	2403	1673
15°	3438	2372	1304
20°	3876	2334	960
25°	4242	2289	631
30°	4512	2229	355
35°	4747	2164	157
40°	4954	2084	38
45°	5133	1985	0
50°	5283	1852	0
55°	5396	1685	0
60°	5455	1490	0
65°	5477	1267	0
70°	5458	1033	0
75°	5389	763	4
80°	5171	468	24
85°	4999	224	33



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.0	1.9
10°-20°	65.8	5.8
20°-30°	106.5	9.4
30°-40°	136.9	12.1
40°-50°	154.9	13.7
50°-60°	160.5	14.2
60°-70°	151.4	13.3
70°-80°	126.9	11.2
80°-90°	92.0	8.1
90°-100°	60.4	5.3
100°-110°	34.9	3.1
110°-120°	15.4	1.4
120°-130°	4.2	0.4
130°-140°	1.0	0.1
140°-150°	0.6	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	194.3	17.1
0°-40°	331.2	29.2
0°-60°	646.6	57.0
0°-90°	1016.8	89.7
90°-120°	110.8	9.8
90°-150°	116.6	10.3
90°-180°	117.0	10.3
0°-180°	1134.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	229	229	229	229	229	
5°	262	251	228	207	196	26
15°	350	307	220	159	133	101
25°	440	360	204	105	66	204
35°	488	388	179	51	16	306
45°	506	384	147	12	0	391
55°	493	360	106	0	0	440
65°	446	318	63	0	0	441
75°	371	257	27	0	0	390
85°	272	186	4	1	2	232
90°	236	149	1	2	2	129
95°	202	117	1	2	3	159
105°	139	60	1	2	2	147
115°	76	20	1	1	2	76
125°	22	3	1	1	1	22
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	1	0	0
175°	1	1	2	1	0	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	229.4	229.4	229.4	229.4	229.4	229.4	229.4	229.4	229.4	229.4	229.4
2.5°	248.7	248.4	247.5	246.0	244.0	240.5	237.6	234.9	231.4	228.5	223.0
5°	261.8	260.4	259.2	257.7	253.0	249.8	244.6	238.7	233.2	227.6	216.5
7.5°	282.9	280.5	278.8	274.7	268.2	260.9	252.8	247.2	243.4	227.9	208.9
10°	305.4	303.3	299.8	292.5	284.6	274.1	262.4	249.3	237.6	224.7	202.2
12.5°	327.6	324.6	319.7	310.3	299.2	286.1	270.0	254.5	237.9	222.7	194.3
15°	349.8	346.6	341.3	329.9	315.3	298.0	278.5	258.9	239.3	220.0	186.1
17.5°	374.0	369.6	361.7	348.9	330.5	309.2	286.1	262.4	238.7	216.8	177.4
20°	400.0	393.9	385.4	368.2	346.6	321.4	293.7	265.9	238.4	213.0	167.4
22.5°	421.7	415.5	406.2	388.3	362.3	331.7	300.1	268.2	237.3	208.6	158.1
25°	440.4	435.4	425.2	404.7	377.2	342.5	306.2	270.0	235.5	204.0	148.1
27.5°	455.0	450.3	438.9	417.9	389.8	352.1	310.9	270.9	233.2	199.3	137.9
30°	467.8	463.1	449.4	427.8	398.3	359.7	315.6	271.2	230.3	192.3	126.8
32.5°	477.8	473.4	459.3	436.3	404.1	365.0	318.2	270.9	226.5	187.3	114.8
35°	487.7	483.3	466.9	442.4	408.5	367.3	320.3	269.4	221.8	179.1	103.4
37.5°	495.3	490.3	473.7	446.5	410.5	367.9	320.0	267.4	216.8	172.4	92.0
40°	500.5	495.3	477.5	448.8	411.1	367.0	317.6	263.9	211.0	163.9	80.1
42.5°	504.1	498.2	479.2	452.3	410.0	364.7	314.1	259.5	204.5	156.6	68.7
45°	505.8	499.7	479.5	449.4	407.9	360.3	308.9	253.9	197.5	146.7	57.3
47.5°	504.9	498.2	478.0	446.2	404.1	355.6	303.0	247.2	189.1	137.9	46.5
50°	503.5	496.5	474.8	442.1	398.9	349.8	296.6	239.0	180.3	127.1	36.8
52.5°	498.8	491.8	471.3	436.3	392.7	343.0	287.8	230.5	170.9	116.6	28.1
55°	492.9	486.5	465.2	431.0	384.8	334.9	279.6	221.5	161.9	105.8	20.2
57.5°	483.9	478.0	457.6	422.5	376.9	325.8	270.6	211.6	150.5	95.0	14.0
60°	472.8	466.9	447.1	412.9	367.9	315.6	260.6	201.3	140.3	84.2	8.8
62.5°	461.1	455.5	434.8	400.9	356.5	304.8	249.8	191.1	129.4	74.2	5.3
65°	445.6	440.4	421.7	386.6	343.9	293.1	237.9	178.8	118.3	63.1	2.9
67.5°	429.2	424.6	405.6	373.4	329.3	280.2	225.6	166.8	106.7	53.5	1.5
70°	411.7	405.9	388.3	355.6	314.4	265.6	212.1	154.6	95.6	44.1	0.0
72.5°	391.3	386.9	369.9	339.0	297.2	250.1	198.4	141.1	83.3	35.1	0.3
75°	371.4	365.8	350.4	321.1	280.2	233.8	183.2	128.6	71.3	26.9	0.3
77.5°	345.7	343.9	329.3	301.0	264.2	218.0	166.6	113.4	59.9	19.3	0.3
80°	320.0	318.2	306.8	280.8	245.5	199.3	151.1	99.1	48.8	12.9	0.3
82.5°	294.5	292.2	281.4	259.8	226.5	183.5	135.0	84.7	38.6	7.9	0.3
85°	271.8	268.8	257.1	237.3	206.9	165.7	118.3	70.7	28.6	4.4	0.6
87.5°	252.2	250.1	237.3	216.8	187.0	149.0	103.7	57.3	20.2	2.0	0.9
90°	235.5	231.1	219.7	198.1	168.3	130.6	88.2	45.9	13.4	1.2	1.2
92.5°	219.2	215.4	202.8	180.6	151.7	114.8	73.3	35.1	8.5	0.6	1.5
95°	202.2	198.1	185.8	165.4	134.7	98.8	60.2	25.7	4.7	0.6	1.5
97.5°	185.6	181.8	168.9	148.4	119.5	84.7	47.6	18.1	2.3	0.6	1.2
100°	170.1	165.7	154.0	133.5	104.3	70.7	36.8	11.7	1.5	0.6	1.2
102.5°	153.7	150.2	138.2	118.3	88.5	57.6	27.5	7.3	0.6	0.6	0.9
105°	139.1	134.7	123.0	102.6	75.4	45.3	19.3	4.4	0.6	0.6	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	90.6	87.1	76.8	59.6	38.3	17.8	5.3	0.9	0.9	0.9	0.9
115°	75.7	70.4	61.4	46.2	28.3	11.7	2.6	0.9	0.9	0.9	0.9
117.5°	60.5	56.1	49.7	35.1	18.7	7.6	1.5	0.9	0.9	0.9	0.9
120°	47.3	43.2	35.9	24.3	12.6	4.4	0.6	0.9	0.9	0.9	0.9
122.5°	33.9	30.7	24.3	15.8	7.6	2.0	0.9	0.9	1.2	1.2	0.9
125°	22.5	20.7	16.1	9.6	4.7	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	14.6	13.1	9.4	5.6	2.0	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.2	7.3	5.6	3.2	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	4.7	4.4	2.9	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.5
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.2
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	229.4	229.4	229.4
2.5°	218.3	214.2	213.0
5°	206.6	199.9	196.1
7.5°	194.9	185.8	181.5
10°	184.1	171.2	166.6
12.5°	171.2	156.3	149.0
15°	159.0	139.7	132.7
17.5°	145.2	123.6	115.4
20°	132.4	107.5	99.1
22.5°	117.8	91.8	82.4
25°	104.6	76.0	65.5
27.5°	90.0	59.9	50.8
30°	76.3	45.9	36.8
32.5°	63.1	33.6	25.4
35°	50.8	22.8	16.1
37.5°	39.2	14.0	8.2
40°	28.3	7.3	3.8
42.5°	19.0	3.5	2.0
45°	11.7	1.8	0.0
47.5°	6.7	0.0	0.0
50°	3.5	0.0	0.0
52.5°	1.5	0.0	0.0
55°	0.0	0.0	0.0
57.5°	0.0	0.0	0.0
60°	0.0	0.0	0.0
62.5°	0.0	0.0	0.0
65°	0.0	0.0	0.0
67.5°	0.0	0.0	0.0
70°	0.0	0.0	0.0
72.5°	0.0	0.0	0.0
75°	0.3	0.3	0.3
77.5°	0.3	0.6	0.9
80°	0.6	1.2	1.5
82.5°	1.2	1.5	1.5
85°	1.2	1.5	1.8
87.5°	1.5	1.8	2.0
90°	1.8	2.0	2.0
92.5°	1.8	2.3	2.3
95°	2.0	2.3	2.6
97.5°	2.3	2.6	2.6
100°	2.0	2.6	2.9
102.5°	1.8	2.6	2.6
105°	1.5	2.0	2.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.2	1.5	1.5
115°	0.9	1.2	1.5
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.2	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	122.7	119.2	107.5	88.2	61.7	34.5	12.9	2.3	0.6	0.9	0.9
110°	106.9	104.0	92.0	73.3	49.7	25.7	8.5	1.5	0.9	0.9	0.9







107.5°	1.2	1.8	2.0
110°	1.2	1.5	1.8



(END OF REPORT)