

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: P550767

Luminaire Tested: **FCC-X-2-LD4-1LO-35-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: P550767  
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-LD4-1LO-35-UNV-81-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

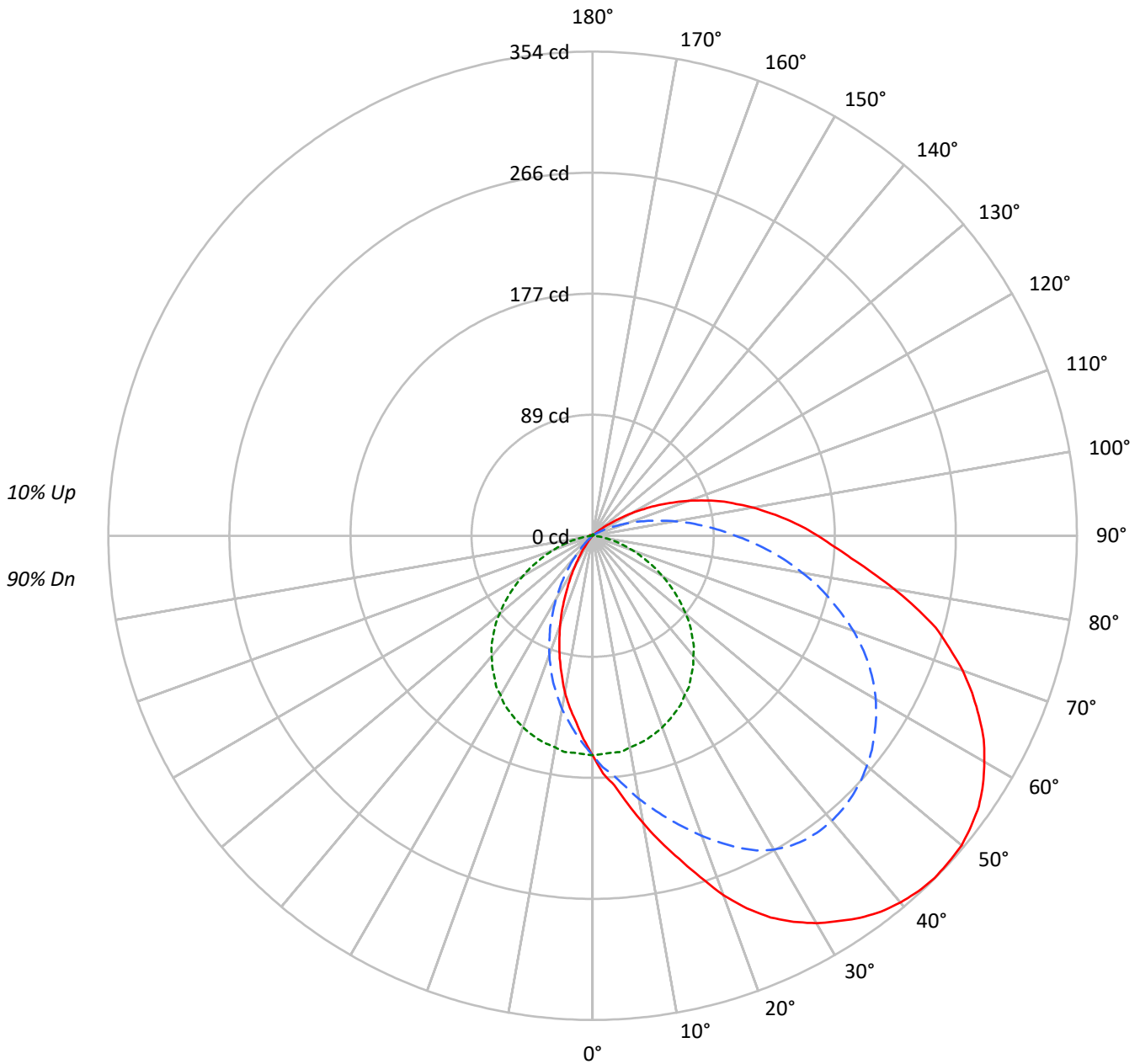
Lumens per Lamp: N/A  
Luminaire Lumens: 792.9 lumens  
Efficiency: N/A  
Efficacy: 67.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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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### 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°	1727	1727	1727
5°	1895	1702	1419
10°	2144	1680	1170
15°	2404	1659	912
20°	2711	1632	672
25°	2965	1600	441
30°	3155	1559	248
35°	3319	1514	109
40°	3464	1457	27
45°	3589	1388	0
50°	3695	1296	0
55°	3774	1178	0
60°	3814	1041	0
65°	3830	886	0
70°	3817	724	0
75°	3768	533	3
80°	3615	326	16
85°	3494	158	22



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	15.4	1.9
10°-20°	46.0	5.8
20°-30°	74.5	9.4
30°-40°	95.7	12.1
40°-50°	108.3	13.7
50°-60°	112.2	14.2
60°-70°	105.8	13.3
70°-80°	88.7	11.2
80°-90°	64.3	8.1
90°-100°	42.2	5.3
100°-110°	24.4	3.1
110°-120°	10.8	1.4
120°-130°	2.9	0.4
130°-140°	0.7	0.1
140°-150°	0.4	0.1
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	135.9	17.1
0°-40°	231.6	29.2
0°-60°	452.1	57.0
0°-90°	711.0	89.7
90°-120°	77.4	9.8
90°-150°	81.4	10.3
90°-180°	82.0	10.3
0°-180°	792.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	160	160	160	160	160	
5°	183	176	159	144	137	18
15°	245	214	154	111	93	71
25°	308	252	143	73	46	142
35°	341	271	125	36	11	214
45°	354	269	103	8	0	273
55°	345	252	74	0	0	308
65°	312	223	44	0	0	308
75°	260	180	19	0	0	272
85°	190	130	3	1	1	162
90°	165	104	1	1	1	90
95°	141	82	0	1	2	111
105°	97	42	0	1	2	103
115°	53	14	1	1	1	53
125°	16	2	1	1	1	16
135°	1	1	1	1	1	1
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	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°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4
2.5°	173.9	173.7	173.1	172.1	170.6	168.2	166.1	164.3	161.8	159.8	155.9
5°	183.1	182.1	181.2	180.2	177.0	174.7	171.0	166.9	163.1	159.2	151.4
7.5°	197.8	196.2	194.9	192.1	187.6	182.5	176.8	172.9	170.2	159.4	146.1
10°	213.5	212.1	209.7	204.5	199.0	191.7	183.5	174.3	166.1	157.1	141.4
12.5°	229.1	227.0	223.5	217.0	209.2	200.0	188.8	178.0	166.3	155.7	135.9
15°	244.6	242.3	238.7	230.7	220.5	208.4	194.7	181.0	167.4	153.9	130.2
17.5°	261.6	258.5	253.0	244.0	231.1	216.2	200.0	183.5	166.9	151.6	124.0
20°	279.7	275.4	269.5	257.5	242.3	224.8	205.4	185.9	166.7	149.0	117.1
22.5°	294.9	290.6	284.0	271.6	253.4	231.9	209.9	187.6	165.9	145.9	110.5
25°	307.9	304.5	297.3	283.0	263.8	239.5	214.1	188.8	164.7	142.6	103.6
27.5°	318.2	314.9	306.9	292.2	272.6	246.2	217.4	189.4	163.1	139.4	96.4
30°	327.1	323.9	314.3	299.1	278.5	251.5	220.7	189.6	161.0	134.5	88.7
32.5°	334.1	331.0	321.2	305.1	282.6	255.2	222.5	189.4	158.4	131.0	80.3
35°	341.0	338.0	326.5	309.4	285.7	256.9	224.0	188.4	155.1	125.3	72.3
37.5°	346.4	342.9	331.2	312.2	287.1	257.3	223.7	187.0	151.6	120.6	64.4
40°	350.0	346.4	333.9	313.9	287.5	256.6	222.1	184.5	147.5	114.6	56.0
42.5°	352.5	348.4	335.1	316.3	286.7	255.0	219.7	181.5	143.0	109.5	48.0
45°	353.7	349.4	335.3	314.3	285.3	251.9	216.0	177.6	138.1	102.6	40.1
47.5°	353.1	348.4	334.3	312.0	282.6	248.7	211.9	172.9	132.2	96.4	32.5
50°	352.1	347.2	332.0	309.2	278.9	244.6	207.4	167.1	126.1	88.9	25.7
52.5°	348.8	343.9	329.6	305.1	274.6	239.9	201.3	161.2	119.5	81.5	19.6
55°	344.7	340.2	325.3	301.4	269.1	234.2	195.6	154.9	113.2	74.0	14.1
57.5°	338.4	334.3	320.0	295.5	263.6	227.8	189.2	147.9	105.2	66.4	9.8
60°	330.6	326.5	312.6	288.7	257.3	220.7	182.3	140.8	98.1	58.8	6.1
62.5°	322.4	318.6	304.1	280.4	249.3	213.1	174.7	133.6	90.5	51.9	3.7
65°	311.6	307.9	294.9	270.3	240.5	205.0	166.3	125.1	82.8	44.1	2.0
67.5°	300.2	296.9	283.6	261.1	230.3	196.0	157.7	116.7	74.6	37.4	1.0
70°	287.9	283.8	271.6	248.7	219.9	185.7	148.3	108.1	66.8	30.9	0.0
72.5°	273.6	270.5	258.7	237.0	207.8	174.9	138.7	98.7	58.2	24.5	0.2
75°	259.7	255.8	245.0	224.6	196.0	163.5	128.1	89.9	49.9	18.8	0.2
77.5°	241.7	240.5	230.3	210.5	184.7	152.4	116.5	79.3	41.9	13.5	0.2
80°	223.7	222.5	214.6	196.4	171.6	139.4	105.6	69.3	34.1	9.0	0.2
82.5°	206.0	204.3	196.8	181.7	158.4	128.3	94.4	59.3	27.0	5.5	0.2
85°	190.0	188.0	179.8	165.9	144.7	115.9	82.8	49.4	20.0	3.1	0.4
87.5°	176.3	174.9	165.9	151.6	130.8	104.2	72.5	40.1	14.1	1.4	0.6
90°	164.7	161.6	153.7	138.5	117.7	91.3	61.7	32.1	9.4	0.8	0.8
92.5°	153.3	150.6	141.8	126.3	106.1	80.3	51.3	24.5	5.9	0.4	1.0
95°	141.4	138.5	130.0	115.7	94.2	69.1	42.1	18.0	3.3	0.4	1.0
97.5°	129.8	127.1	118.1	103.8	83.6	59.3	33.3	12.7	1.6	0.4	0.8
100°	118.9	115.9	107.7	93.4	72.9	49.4	25.7	8.2	1.0	0.4	0.8
102.5°	107.5	105.0	96.7	82.8	61.9	40.3	19.2	5.1	0.4	0.4	0.6
105°	97.3	94.2	86.0	71.7	52.7	31.7	13.5	3.1	0.4	0.4	0.6



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	63.3	60.9	53.7	41.7	26.8	12.5	3.7	0.6	0.6	0.6	0.6
115°	52.9	49.2	42.9	32.3	19.8	8.2	1.8	0.6	0.6	0.6	0.6
117.5°	42.3	39.2	34.7	24.5	13.1	5.3	1.0	0.6	0.6	0.6	0.6
120°	33.1	30.2	25.1	17.0	8.8	3.1	0.4	0.6	0.6	0.6	0.6
122.5°	23.7	21.5	17.0	11.0	5.3	1.4	0.6	0.6	0.8	0.8	0.6
125°	15.7	14.5	11.2	6.7	3.3	0.6	0.6	0.6	0.8	0.8	0.6
127.5°	10.2	9.2	6.5	3.9	1.4	0.6	0.6	0.8	0.8	0.8	0.6
130°	5.7	5.1	3.9	2.2	0.6	0.6	0.6	0.8	0.8	0.8	0.6
132.5°	3.3	3.1	2.0	0.4	0.6	0.6	0.6	0.8	0.8	0.8	0.8
135°	0.8	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8
137.5°	0.2	0.2	0.4	0.4	0.6	0.6	0.8	1.0	1.0	1.0	0.8
140°	0.2	0.2	0.4	0.6	0.6	0.6	0.8	1.0	1.0	1.0	0.8
142.5°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8	0.8
145°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	0.8	0.8	0.8
147.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8	0.8
150°	0.2	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	0.8
152.5°	0.2	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	0.8
155°	0.4	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	1.0
157.5°	0.4	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	1.0
160°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8
162.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8
165°	0.4	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8
167.5°	0.4	0.4	0.4	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8
170°	0.4	0.4	0.4	0.6	0.6	0.6	0.8	1.0	1.0	1.0	1.0
172.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	1.0
175°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	1.0
177.5°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	0.8
180°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	160.4	160.4	160.4
2.5°	152.6	149.8	149.0
5°	144.5	139.8	137.1
7.5°	136.3	130.0	126.9
10°	128.7	119.7	116.5
12.5°	119.7	109.3	104.2
15°	111.2	97.7	92.8
17.5°	101.6	86.4	80.7
20°	92.6	75.2	69.3
22.5°	82.3	64.2	57.6
25°	73.2	53.1	45.8
27.5°	62.9	41.9	35.6
30°	53.3	32.1	25.7
32.5°	44.1	23.5	17.8
35°	35.6	15.9	11.2
37.5°	27.4	9.8	5.7
40°	19.8	5.1	2.7
42.5°	13.3	2.5	1.4
45°	8.2	1.2	0.0
47.5°	4.7	0.0	0.0
50°	2.5	0.0	0.0
52.5°	1.0	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°	0.2	0.2	0.2
77.5°	0.2	0.4	0.6
80°	0.4	0.8	1.0
82.5°	0.8	1.0	1.0
85°	0.8	1.0	1.2
87.5°	1.0	1.2	1.4
90°	1.2	1.4	1.4
92.5°	1.2	1.6	1.6
95°	1.4	1.6	1.8
97.5°	1.6	1.8	1.8
100°	1.4	1.8	2.0
102.5°	1.2	1.8	1.8
105°	1.0	1.4	1.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	0.8	1.0	1.0
115°	0.6	0.8	1.0
117.5°	0.6	0.8	0.8
120°	0.6	0.6	0.8
122.5°	0.6	0.6	0.8
125°	0.6	0.6	0.8
127.5°	0.8	0.6	0.6
130°	0.6	0.6	0.6
132.5°	0.8	0.6	0.6
135°	0.8	0.6	0.6
137.5°	0.8	0.6	0.6
140°	0.8	0.6	0.6
142.5°	0.8	0.6	0.6
145°	0.6	0.6	0.6
147.5°	0.6	0.6	0.6
150°	0.6	0.6	0.4
152.5°	0.6	0.4	0.4
155°	0.6	0.4	0.2
157.5°	0.8	0.4	0.2
160°	0.6	0.4	0.2
162.5°	0.6	0.4	0.2
165°	0.6	0.4	0.0
167.5°	0.6	0.4	0.2
170°	0.6	0.4	0.2
172.5°	0.6	0.4	0.2
175°	0.6	0.2	0.2
177.5°	0.6	0.2	0.2
180°	0.6	0.6	0.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	85.8	83.4	75.2	61.7	43.1	24.1	9.0	1.6	0.4	0.6	0.6
110°	74.8	72.7	64.4	51.3	34.7	18.0	5.9	1.0	0.6	0.6	0.6







107.5°	0.8	1.2	1.4
110°	0.8	1.0	1.2



(END OF REPORT)