

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: P550771

Luminaire Tested: **FCC-X-2-LD4-1LO-35-UNV-81-96-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: P550771  
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-81-96-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

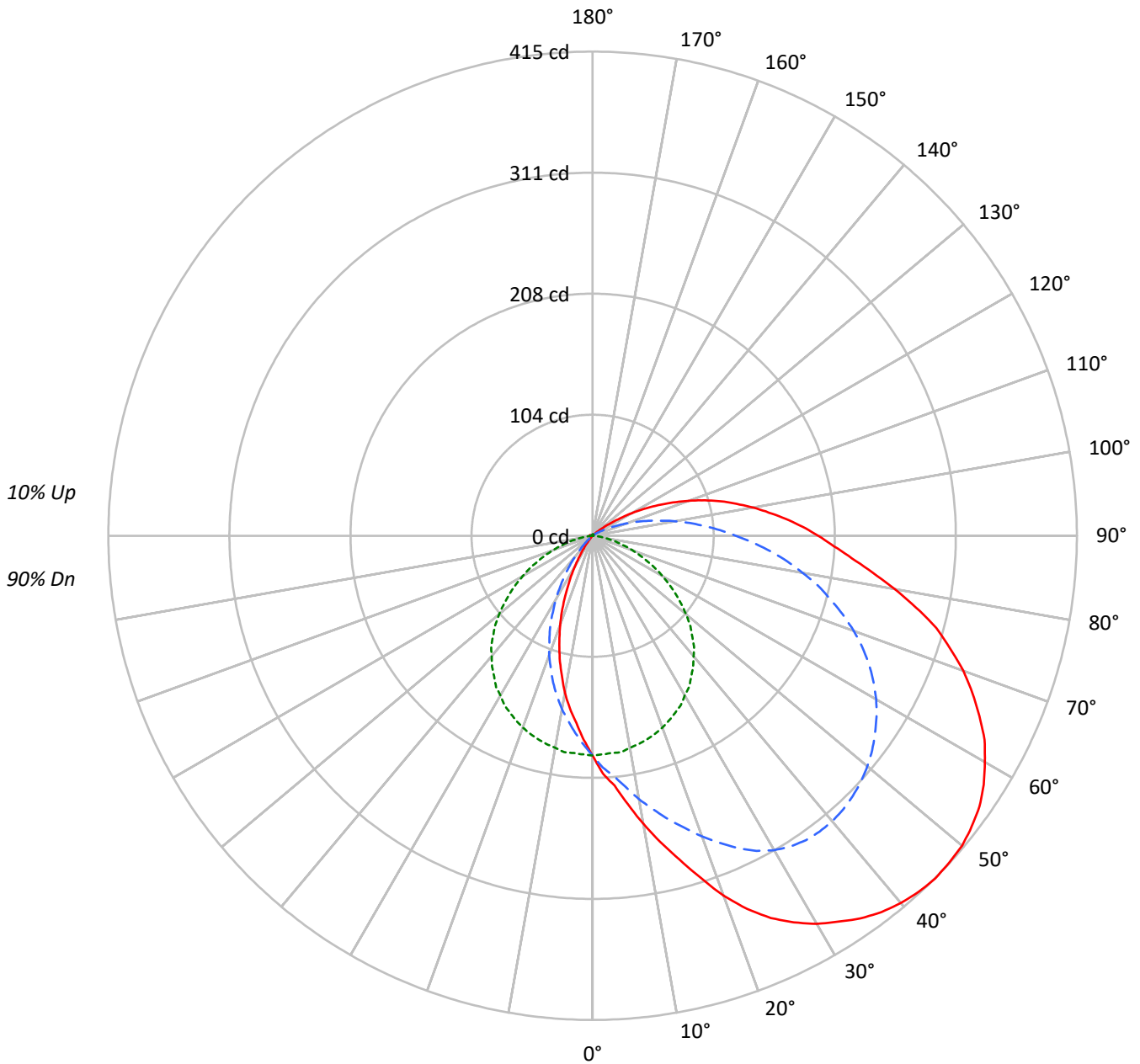
Lumens per Lamp: N/A  
Luminaire Lumens: 931.0 lumens  
Efficiency: N/A  
Efficacy: 79.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (Ain): 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°	2027	2027	2027
5°	2225	1998	1667
10°	2518	1973	1373
15°	2822	1947	1070
20°	3183	1916	788
25°	3482	1879	517
30°	3705	1830	291
35°	3897	1777	128
40°	4067	1712	31
45°	4215	1629	0
50°	4337	1522	0
55°	4431	1382	0
60°	4479	1223	0
65°	4496	1040	0
70°	4481	848	0
75°	4424	627	3
80°	4245	384	19
85°	4103	183	26



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.0	1.9
10°-20°	54.0	5.8
20°-30°	87.5	9.4
30°-40°	112.4	12.1
40°-50°	127.2	13.7
50°-60°	131.8	14.2
60°-70°	124.3	13.3
70°-80°	104.1	11.2
80°-90°	75.5	8.1
90°-100°	49.6	5.3
100°-110°	28.7	3.1
110°-120°	12.6	1.4
120°-130°	3.4	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	159.5	17.1
0°-40°	271.9	29.2
0°-60°	530.8	57.0
0°-90°	834.7	89.7
90°-120°	90.9	9.8
90°-150°	95.7	10.3
90°-180°	96.0	10.3
0°-180°	931.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	188	188	188	188	188	
5°	215	206	187	170	161	22
15°	287	252	181	130	109	83
25°	362	295	167	86	54	167
35°	400	318	147	42	13	251
45°	415	315	120	10	0	321
55°	405	295	87	0	0	361
65°	366	262	52	0	0	362
75°	305	211	22	0	0	320
85°	223	153	4	1	1	191
90°	193	123	1	1	2	106
95°	166	96	0	2	2	130
105°	114	50	0	1	2	121
115°	62	16	1	1	1	62
125°	18	2	1	1	1	18
135°	1	1	1	1	1	2
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°	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3	188.3
2.5°	204.2	203.9	203.2	202.0	200.3	197.4	195.0	192.9	190.0	187.6	183.0
5°	214.9	213.7	212.8	211.6	207.8	205.1	200.8	196.0	191.4	186.9	177.8
7.5°	232.2	230.3	228.9	225.5	220.2	214.2	207.5	203.0	199.8	187.1	171.5
10°	250.7	249.0	246.1	240.1	233.7	225.0	215.4	204.6	195.0	184.5	166.0
12.5°	268.9	266.5	262.4	254.8	245.7	234.9	221.7	209.0	195.3	182.8	159.5
15°	287.2	284.5	280.2	270.8	258.8	244.7	228.6	212.5	196.5	180.6	152.8
17.5°	307.1	303.5	297.0	286.4	271.3	253.8	234.9	215.4	196.0	178.0	145.6
20°	328.4	323.4	316.4	302.3	284.5	263.9	241.1	218.3	195.8	174.9	137.5
22.5°	346.2	341.1	333.5	318.8	297.5	272.3	246.4	220.2	194.8	171.3	129.8
25°	361.5	357.4	349.0	332.3	309.7	281.2	251.4	221.7	193.4	167.4	121.6
27.5°	373.5	369.7	360.3	343.1	320.0	289.1	255.3	222.4	191.4	163.6	113.2
30°	384.1	380.2	369.0	351.2	327.0	295.3	259.1	222.6	189.0	157.9	104.1
32.5°	392.2	388.6	377.1	358.2	331.8	299.6	261.2	222.4	185.9	153.8	94.3
35°	400.4	396.8	383.4	363.2	335.4	301.6	262.9	221.2	182.1	147.1	84.9
37.5°	406.6	402.5	388.9	366.6	337.1	302.0	262.7	219.5	178.0	141.5	75.6
40°	410.9	406.6	392.0	368.5	337.5	301.3	260.8	216.6	173.2	134.6	65.7
42.5°	413.8	409.0	393.4	371.4	336.6	299.4	257.9	213.0	167.9	128.6	56.4
45°	415.3	410.2	393.7	369.0	334.9	295.8	253.6	208.5	162.2	120.4	47.0
47.5°	414.5	409.0	392.5	366.3	331.8	292.0	248.8	203.0	155.2	113.2	38.1
50°	413.3	407.6	389.8	363.0	327.5	287.2	243.5	196.2	148.0	104.4	30.2
52.5°	409.5	403.7	387.0	358.2	322.4	281.6	236.3	189.3	140.3	95.7	23.0
55°	404.7	399.4	381.9	353.8	315.9	274.9	229.6	181.8	132.9	86.8	16.6
57.5°	397.3	392.5	375.7	346.9	309.5	267.5	222.1	173.7	123.5	78.0	11.5
60°	388.2	383.4	367.0	339.0	302.0	259.1	214.0	165.3	115.2	69.1	7.2
62.5°	378.6	374.0	357.0	329.1	292.7	250.2	205.1	156.9	106.3	60.9	4.3
65°	365.8	361.5	346.2	317.4	282.4	240.6	195.3	146.8	97.2	51.8	2.4
67.5°	352.4	348.6	333.0	306.6	270.4	230.1	185.2	137.0	87.6	43.9	1.2
70°	338.0	333.2	318.8	292.0	258.1	218.1	174.2	126.9	78.4	36.2	0.0
72.5°	321.2	317.6	303.7	278.3	244.0	205.4	162.9	115.9	68.4	28.8	0.2
75°	304.9	300.4	287.6	263.6	230.1	191.9	150.4	105.6	58.5	22.1	0.2
77.5°	283.8	282.4	270.4	247.1	216.9	179.0	136.7	93.1	49.2	15.8	0.2
80°	262.7	261.2	251.9	230.5	201.5	163.6	124.0	81.3	40.1	10.6	0.2
82.5°	241.8	239.9	231.0	213.3	185.9	150.7	110.8	69.6	31.7	6.5	0.2
85°	223.1	220.7	211.1	194.8	169.8	136.0	97.2	58.1	23.5	3.6	0.5
87.5°	207.0	205.4	194.8	178.0	153.5	122.3	85.2	47.0	16.6	1.7	0.7
90°	193.4	189.8	180.4	162.6	138.2	107.2	72.4	37.7	11.0	1.0	1.0
92.5°	179.9	176.8	166.5	148.3	124.5	94.3	60.2	28.8	7.0	0.5	1.2
95°	166.0	162.6	152.6	135.8	110.6	81.1	49.4	21.1	3.8	0.5	1.2
97.5°	152.3	149.2	138.7	121.9	98.1	69.6	39.1	14.9	1.9	0.5	1.0
100°	139.6	136.0	126.4	109.6	85.6	58.1	30.2	9.6	1.2	0.5	1.0
102.5°	126.2	123.3	113.5	97.2	72.7	47.3	22.6	6.0	0.5	0.5	0.7
105°	114.2	110.6	101.0	84.2	61.9	37.2	15.8	3.6	0.5	0.5	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.4	71.5	63.1	48.9	31.4	14.6	4.3	0.7	0.7	0.7	0.7
115°	62.1	57.8	50.4	37.9	23.3	9.6	2.2	0.7	0.7	0.7	0.7
117.5°	49.7	46.1	40.8	28.8	15.4	6.2	1.2	0.7	0.7	0.7	0.7
120°	38.9	35.5	29.5	19.9	10.3	3.6	0.5	0.7	0.7	0.7	0.7
122.5°	27.8	25.2	19.9	13.0	6.2	1.7	0.7	0.7	1.0	1.0	0.7
125°	18.5	17.0	13.2	7.9	3.8	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.0	10.8	7.7	4.6	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.7	6.0	4.6	2.6	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.8	3.6	2.4	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.2	1.2	1.2	1.0
140°	0.2	0.2	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.0
142.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
145°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
150°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
152.5°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
157.5°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
160°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	188.3	188.3	188.3
2.5°	179.2	175.8	174.9
5°	169.6	164.1	161.0
7.5°	160.0	152.6	149.0
10°	151.1	140.6	136.7
12.5°	140.6	128.3	122.3
15°	130.5	114.7	108.9
17.5°	119.2	101.5	94.8
20°	108.7	88.3	81.3
22.5°	96.7	75.3	67.7
25°	85.9	62.4	53.7
27.5°	73.9	49.2	41.7
30°	62.6	37.7	30.2
32.5°	51.8	27.6	20.9
35°	41.7	18.7	13.2
37.5°	32.1	11.5	6.7
40°	23.3	6.0	3.1
42.5°	15.6	2.9	1.7
45°	9.6	1.4	0.0
47.5°	5.5	0.0	0.0
50°	2.9	0.0	0.0
52.5°	1.2	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	0.5	0.7
80°	0.5	1.0	1.2
82.5°	1.0	1.2	1.2
85°	1.0	1.2	1.4
87.5°	1.2	1.4	1.7
90°	1.4	1.7	1.7
92.5°	1.4	1.9	1.9
95°	1.7	1.9	2.2
97.5°	1.9	2.2	2.2
100°	1.7	2.2	2.4
102.5°	1.4	2.2	2.2
105°	1.2	1.7	1.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.2	1.2
115°	0.7	1.0	1.2
117.5°	0.7	1.0	1.0
120°	0.7	0.7	1.0
122.5°	0.7	0.7	1.0
125°	0.7	0.7	1.0
127.5°	1.0	0.7	0.7
130°	0.7	0.7	0.7
132.5°	1.0	0.7	0.7
135°	1.0	0.7	0.7
137.5°	1.0	0.7	0.7
140°	1.0	0.7	0.7
142.5°	1.0	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	1.0	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	100.8	97.9	88.3	72.4	50.6	28.3	10.6	1.9	0.5	0.7	0.7
110°	87.8	85.4	75.6	60.2	40.8	21.1	7.0	1.2	0.7	0.7	0.7







107.5°	1.0	1.4	1.7
110°	1.0	1.2	1.4



(END OF REPORT)