

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: P550917

Luminaire Tested: **FCC-X-2-LD4-1LO-50-UNV-82-97-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: P550917  
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-50-UNV-82-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

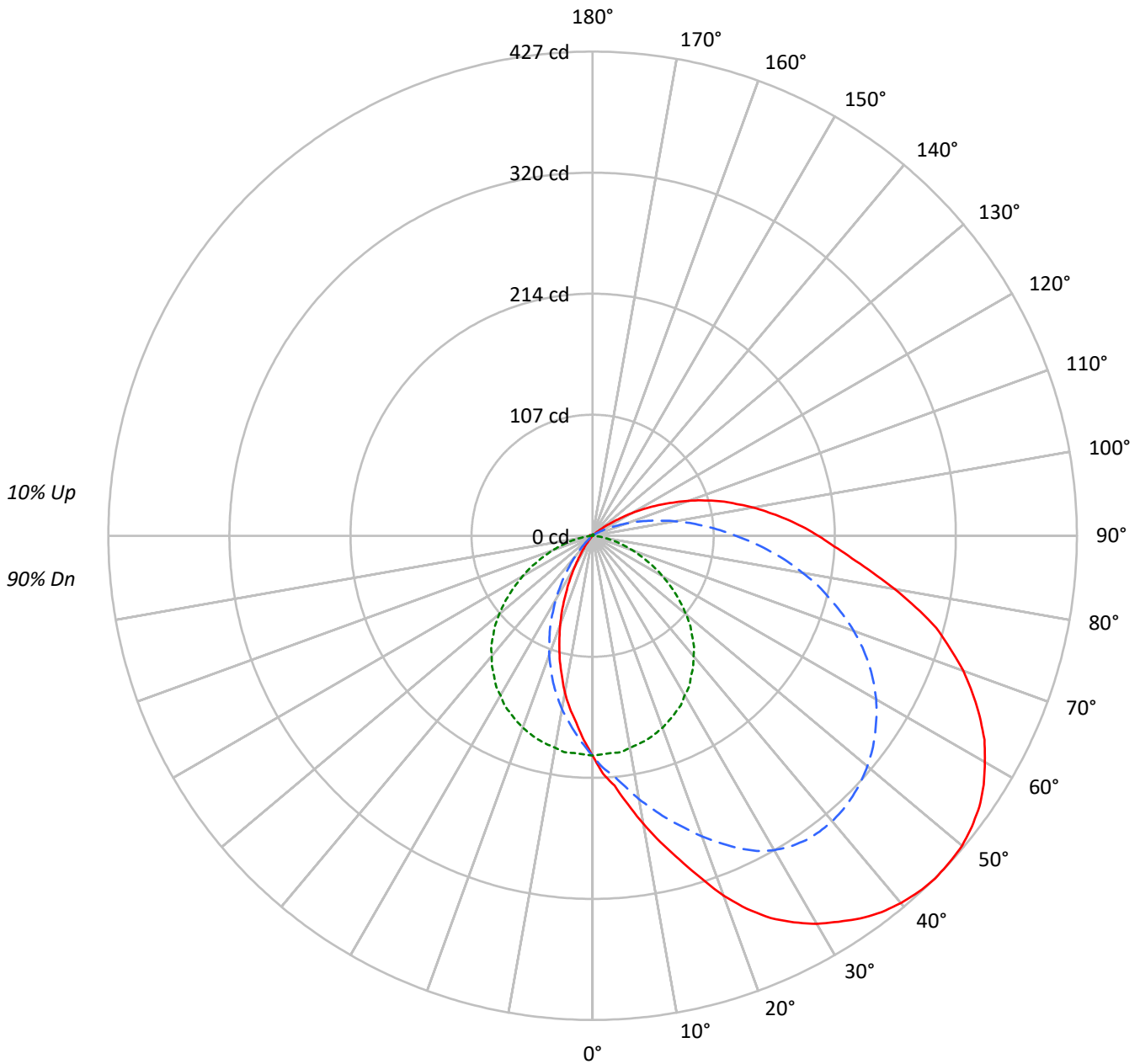
Lumens per Lamp: N/A  
Luminaire Lumens: 957.9 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 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°	2086	2086	2086
5°	2290	2055	1714
10°	2591	2030	1413
15°	2904	2004	1102
20°	3275	1972	811
25°	3583	1934	533
30°	3812	1883	300
35°	4010	1828	132
40°	4186	1761	32
45°	4336	1677	0
50°	4463	1565	0
55°	4559	1424	0
60°	4608	1258	0
65°	4627	1071	0
70°	4611	874	0
75°	4554	644	3
80°	4368	395	19
85°	4223	188	28



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.6	1.9
10°-20°	55.6	5.8
20°-30°	90.0	9.4
30°-40°	115.6	12.1
40°-50°	130.9	13.7
50°-60°	135.6	14.2
60°-70°	127.9	13.3
70°-80°	107.2	11.2
80°-90°	77.7	8.1
90°-100°	51.1	5.3
100°-110°	29.5	3.1
110°-120°	13.0	1.4
120°-130°	3.5	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°	164.1	17.1
0°-40°	279.8	29.2
0°-60°	546.2	57.0
0°-90°	858.9	89.7
90°-120°	93.5	9.8
90°-150°	98.3	10.3
90°-180°	99.0	10.3
0°-180°	957.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	194	194	194	194	194	
5°	221	212	192	174	166	22
15°	296	259	186	134	112	85
25°	372	304	172	88	55	172
35°	412	328	151	43	14	258
45°	427	324	124	10	0	330
55°	416	304	89	0	0	372
65°	376	269	53	0	0	372
75°	314	217	23	0	0	329
85°	230	157	4	1	2	196
90°	199	126	1	2	2	109
95°	171	99	0	2	2	134
105°	118	51	0	1	2	124
115°	64	17	1	1	1	64
125°	19	2	1	1	1	19
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°	193.8	193.8	193.8	193.8	193.8	193.8	193.8	193.8	193.8	193.8	193.8
2.5°	210.1	209.8	209.1	207.9	206.1	203.2	200.7	198.5	195.5	193.0	188.3
5°	221.2	219.9	219.0	217.7	213.8	211.1	206.6	201.7	197.0	192.3	182.9
7.5°	239.0	237.0	235.5	232.0	226.6	220.4	213.5	208.8	205.6	192.5	176.5
10°	258.0	256.2	253.3	247.1	240.4	231.5	221.7	210.6	200.7	189.8	170.8
12.5°	276.7	274.3	270.1	262.2	252.8	241.7	228.1	215.0	200.9	188.1	164.2
15°	295.5	292.8	288.3	278.7	266.4	251.8	235.3	218.7	202.2	185.9	157.2
17.5°	316.0	312.3	305.6	294.7	279.2	261.2	241.7	221.7	201.7	183.2	149.8
20°	337.9	332.8	325.6	311.0	292.8	271.5	248.1	224.6	201.4	180.0	141.4
22.5°	356.2	351.0	343.1	328.1	306.1	280.2	253.5	226.6	200.4	176.3	133.5
25°	372.0	367.8	359.2	341.9	318.7	289.3	258.7	228.1	199.0	172.3	125.2
27.5°	384.4	380.4	370.8	353.0	329.3	297.5	262.7	228.8	197.0	168.4	116.5
30°	395.2	391.3	379.7	361.4	336.5	303.9	266.6	229.1	194.5	162.4	107.1
32.5°	403.6	399.9	388.1	368.6	341.4	308.3	268.8	228.8	191.3	158.2	97.0
35°	412.0	408.3	394.5	373.7	345.1	310.3	270.6	227.6	187.4	151.3	87.4
37.5°	418.4	414.2	400.2	377.2	346.8	310.8	270.3	225.9	183.2	145.6	77.8
40°	422.9	418.4	403.4	379.2	347.3	310.0	268.3	222.9	178.2	138.5	67.6
42.5°	425.8	420.9	404.8	382.1	346.3	308.1	265.4	219.2	172.8	132.3	58.0
45°	427.3	422.1	405.1	379.7	344.6	304.4	260.9	214.5	166.9	123.9	48.4
47.5°	426.6	420.9	403.9	376.9	341.4	300.4	256.0	208.8	159.7	116.5	39.2
50°	425.3	419.4	401.1	373.5	337.0	295.5	250.6	201.9	152.3	107.4	31.1
52.5°	421.4	415.5	398.2	368.6	331.8	289.8	243.2	194.8	144.4	98.5	23.7
55°	416.4	411.0	393.0	364.1	325.1	282.9	236.2	187.1	136.8	89.4	17.0
57.5°	408.8	403.9	386.6	357.0	318.4	275.2	228.6	178.7	127.1	80.2	11.8
60°	399.4	394.5	377.7	348.8	310.8	266.6	220.2	170.1	118.5	71.1	7.4
62.5°	389.5	384.8	367.3	338.7	301.2	257.5	211.1	161.4	109.4	62.7	4.4
65°	376.5	372.0	356.2	326.6	290.5	247.6	200.9	151.1	100.0	53.3	2.5
67.5°	362.6	358.7	342.6	315.5	278.2	236.7	190.6	141.0	90.1	45.2	1.2
70°	347.8	342.9	328.1	300.4	265.6	224.4	179.2	130.6	80.7	37.3	0.0
72.5°	330.5	326.8	312.5	286.4	251.1	211.3	167.6	119.2	70.4	29.6	0.2
75°	313.8	309.1	296.0	271.3	236.7	197.5	154.8	108.6	60.2	22.7	0.2
77.5°	292.0	290.5	278.2	254.3	223.2	184.2	140.7	95.8	50.6	16.3	0.2
80°	270.3	268.8	259.2	237.2	207.4	168.4	127.6	83.7	41.2	10.9	0.2
82.5°	248.8	246.9	237.7	219.5	191.3	155.0	114.0	71.6	32.6	6.7	0.2
85°	229.6	227.1	217.2	200.4	174.8	140.0	100.0	59.7	24.2	3.7	0.5
87.5°	213.0	211.3	200.4	183.2	158.0	125.9	87.6	48.4	17.0	1.7	0.7
90°	199.0	195.3	185.6	167.4	142.2	110.3	74.5	38.8	11.4	1.0	1.0
92.5°	185.1	181.9	171.3	152.6	128.1	97.0	62.0	29.6	7.2	0.5	1.2
95°	170.8	167.4	157.0	139.7	113.8	83.4	50.9	21.7	3.9	0.5	1.2
97.5°	156.8	153.5	142.7	125.4	101.0	71.6	40.2	15.3	2.0	0.5	1.0
100°	143.7	140.0	130.1	112.8	88.1	59.7	31.1	9.9	1.2	0.5	1.0
102.5°	129.8	126.9	116.8	100.0	74.8	48.6	23.2	6.2	0.5	0.5	0.7
105°	117.5	113.8	103.9	86.6	63.7	38.3	16.3	3.7	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°	76.5	73.6	64.9	50.4	32.3	15.1	4.4	0.7	0.7	0.7	0.7
115°	63.9	59.5	51.8	39.0	23.9	9.9	2.2	0.7	0.7	0.7	0.7
117.5°	51.1	47.4	42.0	29.6	15.8	6.4	1.2	0.7	0.7	0.7	0.7
120°	40.0	36.5	30.4	20.5	10.6	3.7	0.5	0.7	0.7	0.7	0.7
122.5°	28.6	25.9	20.5	13.3	6.4	1.7	0.7	0.7	1.0	1.0	0.7
125°	19.0	17.5	13.6	8.1	3.9	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.3	11.1	7.9	4.7	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.9	6.2	4.7	2.7	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.9	3.7	2.5	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°	193.8	193.8	193.8
2.5°	184.4	180.9	180.0
5°	174.5	168.8	165.6
7.5°	164.7	157.0	153.3
10°	155.5	144.7	140.7
12.5°	144.7	132.1	125.9
15°	134.3	118.0	112.1
17.5°	122.7	104.4	97.5
20°	111.8	90.8	83.7
22.5°	99.5	77.5	69.6
25°	88.4	64.2	55.3
27.5°	76.0	50.6	43.0
30°	64.4	38.8	31.1
32.5°	53.3	28.4	21.5
35°	43.0	19.3	13.6
37.5°	33.1	11.8	6.9
40°	23.9	6.2	3.2
42.5°	16.0	3.0	1.7
45°	9.9	1.5	0.0
47.5°	5.7	0.0	0.0
50°	3.0	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	1.5
87.5°	1.2	1.5	1.7
90°	1.5	1.7	1.7
92.5°	1.5	2.0	2.0
95°	1.7	2.0	2.2
97.5°	2.0	2.2	2.2
100°	1.7	2.2	2.5
102.5°	1.5	2.2	2.2
105°	1.2	1.7	2.0





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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°	103.7	100.7	90.8	74.5	52.1	29.1	10.9	2.0	0.5	0.7	0.7
110°	90.3	87.9	77.8	62.0	42.0	21.7	7.2	1.2	0.7	0.7	0.7







107.5°	1.0	1.5	1.7
110°	1.0	1.2	1.5



(END OF REPORT)