

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: P551167

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-82-88-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: P551167  
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-82-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 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**

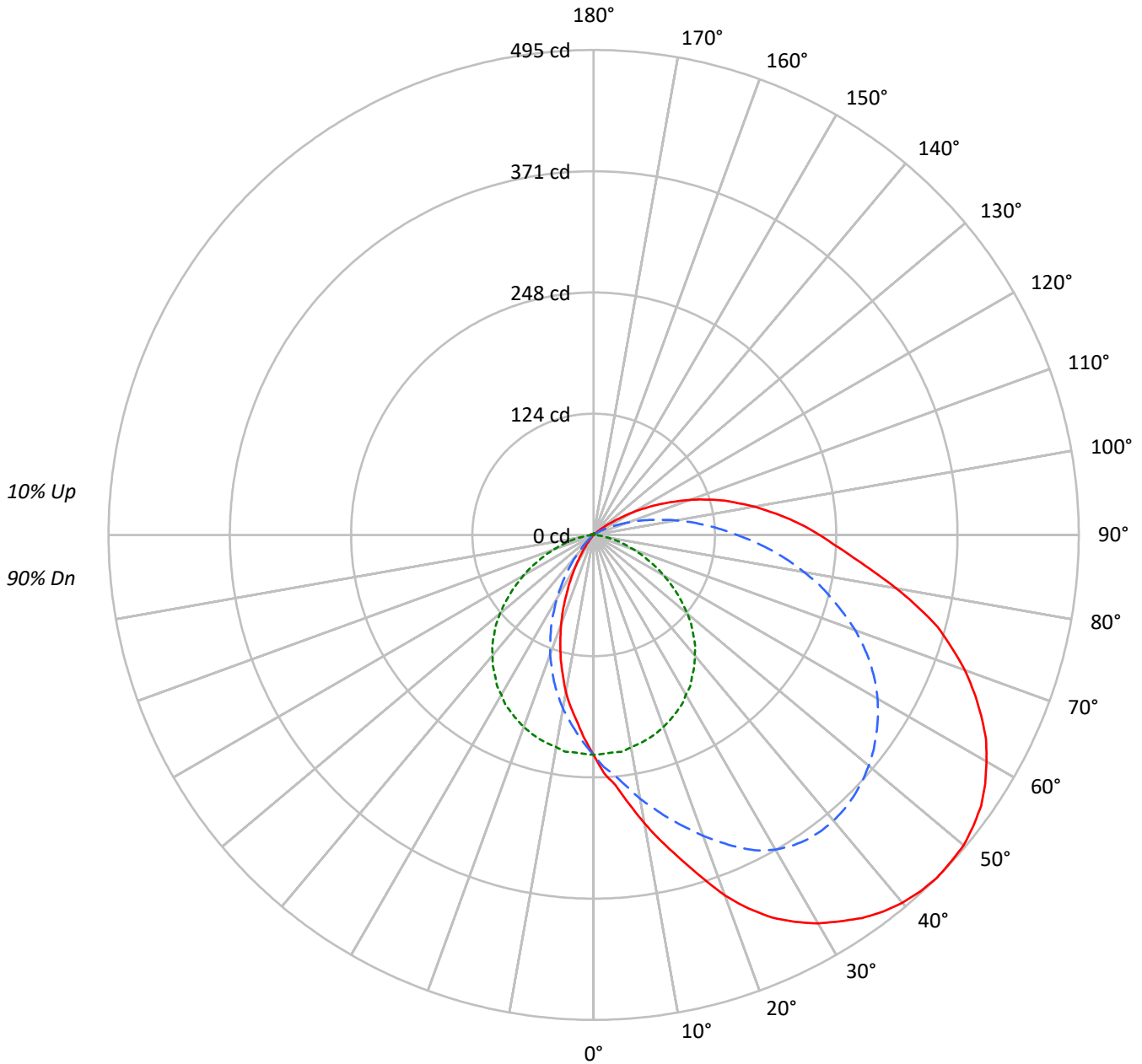
Lumens per Lamp: N/A  
Luminaire Lumens: 1110.0 lumens  
Efficiency: N/A  
Efficacy: 66.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-82-88-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°	2416	2416	2416
5°	2653	2381	1987
10°	3002	2353	1637
15°	3365	2323	1277
20°	3795	2284	940
25°	4151	2240	617
30°	4416	2182	347
35°	4646	2118	153
40°	4850	2041	37
45°	5024	1943	0
50°	5171	1813	0
55°	5283	1648	0
60°	5339	1458	0
65°	5361	1241	0
70°	5343	1012	0
75°	5275	746	4
80°	5062	457	23
85°	4892	219	31



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.5	1.9
10°-20°	64.4	5.8
20°-30°	104.3	9.4
30°-40°	134.0	12.1
40°-50°	151.6	13.7
50°-60°	157.1	14.2
60°-70°	148.2	13.3
70°-80°	124.2	11.2
80°-90°	90.0	8.1
90°-100°	59.2	5.3
100°-110°	34.2	3.1
110°-120°	15.1	1.4
120°-130°	4.1	0.4
130°-140°	0.9	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	190.2	17.1
0°-40°	324.1	29.2
0°-60°	632.9	57.0
0°-90°	995.2	89.7
90°-120°	108.4	9.8
90°-150°	114.0	10.3
90°-180°	115.0	10.4
0°-180°	1110.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	224	224	224	224	224	
5°	256	246	223	202	192	26
15°	342	300	215	156	130	99
25°	431	352	200	102	64	199
35°	477	380	175	50	16	299
45°	495	376	144	11	0	382
55°	482	352	104	0	0	431
65°	436	312	62	0	0	432
75°	364	252	26	0	0	381
85°	266	182	4	1	2	227
90°	230	146	1	2	2	126
95°	198	114	1	2	3	155
105°	136	59	1	1	2	144
115°	74	20	1	1	1	74
125°	22	3	1	1	1	22
135°	1	1	1	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	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°	224.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
2.5°	243.4	243.1	242.3	240.8	238.8	235.4	232.5	230.0	226.5	223.7	218.2
5°	256.3	254.8	253.7	252.3	247.7	244.5	239.4	233.7	228.2	222.8	211.9
7.5°	276.9	274.6	272.9	268.9	262.6	255.4	247.4	242.0	238.3	223.1	204.5
10°	298.9	296.9	293.5	286.3	278.6	268.3	256.8	244.0	232.5	220.0	197.9
12.5°	320.6	317.8	312.9	303.8	292.9	280.0	264.3	249.1	232.8	217.9	190.2
15°	342.4	339.2	334.1	322.9	308.6	291.7	272.6	253.4	234.3	215.4	182.2
17.5°	366.1	361.8	354.1	341.5	323.5	302.6	280.0	256.8	233.7	212.2	173.6
20°	391.6	385.6	377.3	360.4	339.2	314.6	287.5	260.3	233.4	208.5	163.9
22.5°	412.7	406.7	397.6	380.1	354.7	324.6	293.7	262.6	232.2	204.2	154.7
25°	431.0	426.2	416.2	396.1	369.3	335.2	299.7	264.3	230.5	199.6	145.0
27.5°	445.3	440.8	429.6	409.0	381.6	344.7	304.3	265.1	228.2	195.1	135.0
30°	457.9	453.3	439.9	418.7	389.8	352.1	308.9	265.4	225.4	188.2	124.1
32.5°	467.6	463.4	449.6	427.0	395.6	357.2	311.5	265.1	221.7	183.3	112.4
35°	477.4	473.1	457.1	433.0	399.9	359.5	313.5	263.7	217.1	175.3	101.3
37.5°	484.8	479.9	463.6	437.0	401.9	360.1	313.2	261.7	212.2	168.8	90.1
40°	490.0	484.8	467.4	439.3	402.4	359.2	310.9	258.3	206.5	160.5	78.4
42.5°	493.4	487.7	469.1	442.8	401.3	357.0	307.5	254.0	200.2	153.3	67.2
45°	495.1	489.1	469.4	439.9	399.3	352.7	302.3	248.6	193.4	143.6	56.1
47.5°	494.2	487.7	467.9	436.8	395.6	348.1	296.6	242.0	185.1	135.0	45.5
50°	492.8	485.9	464.8	432.7	390.4	342.4	290.3	234.0	176.5	124.4	36.0
52.5°	488.2	481.4	461.4	427.0	384.4	335.8	281.7	225.7	167.3	114.1	27.5
55°	482.5	476.2	455.3	421.9	376.7	327.8	273.7	216.8	158.5	103.5	19.7
57.5°	473.7	467.9	447.9	413.6	369.0	318.9	264.9	207.1	147.3	93.0	13.7
60°	462.8	457.1	437.6	404.1	360.1	308.9	255.1	197.1	137.3	82.4	8.6
62.5°	451.3	445.9	425.6	392.4	348.9	298.3	244.5	187.1	126.7	72.6	5.1
65°	436.2	431.0	412.7	378.4	336.6	286.9	232.8	175.0	115.8	61.8	2.9
67.5°	420.2	415.6	397.0	365.5	322.3	274.3	220.8	163.3	104.4	52.3	1.4
70°	403.0	397.3	380.1	348.1	307.8	260.0	207.7	151.3	93.5	43.2	0.0
72.5°	383.0	378.7	362.1	331.8	290.9	244.8	194.2	138.1	81.5	34.3	0.3
75°	363.5	358.1	342.9	314.3	274.3	228.8	179.3	125.8	69.8	26.3	0.3
77.5°	338.4	336.6	322.3	294.6	258.6	213.4	163.0	111.0	58.6	18.9	0.3
80°	313.2	311.5	300.3	274.9	240.3	195.1	147.9	97.0	47.8	12.6	0.3
82.5°	288.3	286.0	275.4	254.3	221.7	179.6	132.1	82.9	37.8	7.7	0.3
85°	266.0	263.1	251.7	232.2	202.5	162.2	115.8	69.2	28.0	4.3	0.6
87.5°	246.8	244.8	232.2	212.2	183.1	145.9	101.5	56.1	19.7	2.0	0.9
90°	230.5	226.2	215.1	193.9	164.7	127.9	86.4	44.9	13.2	1.1	1.1
92.5°	214.5	210.8	198.5	176.8	148.4	112.4	71.8	34.3	8.3	0.6	1.4
95°	197.9	193.9	181.9	161.9	131.9	96.7	58.9	25.2	4.6	0.6	1.4
97.5°	181.6	177.9	165.3	145.3	117.0	82.9	46.6	17.7	2.3	0.6	1.1
100°	166.5	162.2	150.7	130.7	102.1	69.2	36.0	11.4	1.4	0.6	1.1
102.5°	150.4	147.0	135.3	115.8	86.7	56.3	26.9	7.2	0.6	0.6	0.9
105°	136.1	131.9	120.4	100.4	73.8	44.3	18.9	4.3	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°	88.7	85.2	75.2	58.3	37.5	17.4	5.1	0.9	0.9	0.9	0.9
115°	74.1	68.9	60.1	45.2	27.7	11.4	2.6	0.9	0.9	0.9	0.9
117.5°	59.2	54.9	48.6	34.3	18.3	7.4	1.4	0.9	0.9	0.9	0.9
120°	46.3	42.3	35.2	23.7	12.3	4.3	0.6	0.9	0.9	0.9	0.9
122.5°	33.2	30.0	23.7	15.4	7.4	2.0	0.9	0.9	1.1	1.1	0.9
125°	22.0	20.3	15.7	9.4	4.6	0.9	0.9	0.9	1.1	1.1	0.9
127.5°	14.3	12.9	9.2	5.4	2.0	0.9	0.9	1.1	1.1	1.1	0.9
130°	8.0	7.2	5.4	3.1	0.9	0.9	0.9	1.1	1.1	1.1	0.9
132.5°	4.6	4.3	2.9	0.6	0.9	0.9	0.9	1.1	1.1	1.1	1.1
135°	1.1	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.1
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.1	1.4	1.4	1.4	1.1
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.1	1.4	1.4	1.4	1.1
142.5°	0.3	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.1	1.1
145°	0.3	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.1	1.1	1.1
147.5°	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.1	1.1
150°	0.3	0.6	0.6	0.9	1.1	1.1	1.1	1.4	1.1	1.1	1.1
152.5°	0.3	0.6	0.6	0.9	1.1	1.1	1.1	1.4	1.1	1.1	1.1
155°	0.6	0.6	0.6	0.9	1.1	1.1	1.1	1.4	1.1	1.1	1.4
157.5°	0.6	0.6	0.6	0.9	1.1	1.1	1.1	1.4	1.1	1.1	1.4
160°	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.1	1.1	1.1
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.1	1.1	1.1	1.1	1.1
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.1	1.4	1.4	1.4	1.4
172.5°	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.4	1.4
175°	0.6	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.4	1.4
177.5°	0.3	0.6	0.6	0.9	0.9	1.1	1.1	1.4	1.4	1.4	1.1
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°	224.5	224.5	224.5
2.5°	213.7	209.7	208.5
5°	202.2	195.6	191.9
7.5°	190.8	181.9	177.6
10°	180.2	167.6	163.0
12.5°	167.6	153.0	145.9
15°	155.6	136.7	129.9
17.5°	142.2	121.0	113.0
20°	129.6	105.3	97.0
22.5°	115.3	89.8	80.7
25°	102.4	74.4	64.1
27.5°	88.1	58.6	49.8
30°	74.7	44.9	36.0
32.5°	61.8	32.9	24.9
35°	49.8	22.3	15.7
37.5°	38.3	13.7	8.0
40°	27.7	7.2	3.7
42.5°	18.6	3.4	2.0
45°	11.4	1.7	0.0
47.5°	6.6	0.0	0.0
50°	3.4	0.0	0.0
52.5°	1.4	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	1.1	1.4
82.5°	1.1	1.4	1.4
85°	1.1	1.4	1.7
87.5°	1.4	1.7	2.0
90°	1.7	2.0	2.0
92.5°	1.7	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°	1.7	2.6	2.6
105°	1.4	2.0	2.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.1	1.4	1.4
115°	0.9	1.1	1.4
117.5°	0.9	1.1	1.1
120°	0.9	0.9	1.1
122.5°	0.9	0.9	1.1
125°	0.9	0.9	1.1
127.5°	1.1	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.1	0.9	0.9
135°	1.1	0.9	0.9
137.5°	1.1	0.9	0.9
140°	1.1	0.9	0.9
142.5°	1.1	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°	1.1	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°	120.1	116.7	105.3	86.4	60.4	33.8	12.6	2.3	0.6	0.9	0.9
110°	104.7	101.8	90.1	71.8	48.6	25.2	8.3	1.4	0.9	0.9	0.9







107.5°	1.1	1.7	2.0
110°	1.1	1.4	1.7



(END OF REPORT)