

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: P551150

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-81-87-ED1D**

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: P551150  
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-81-87-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

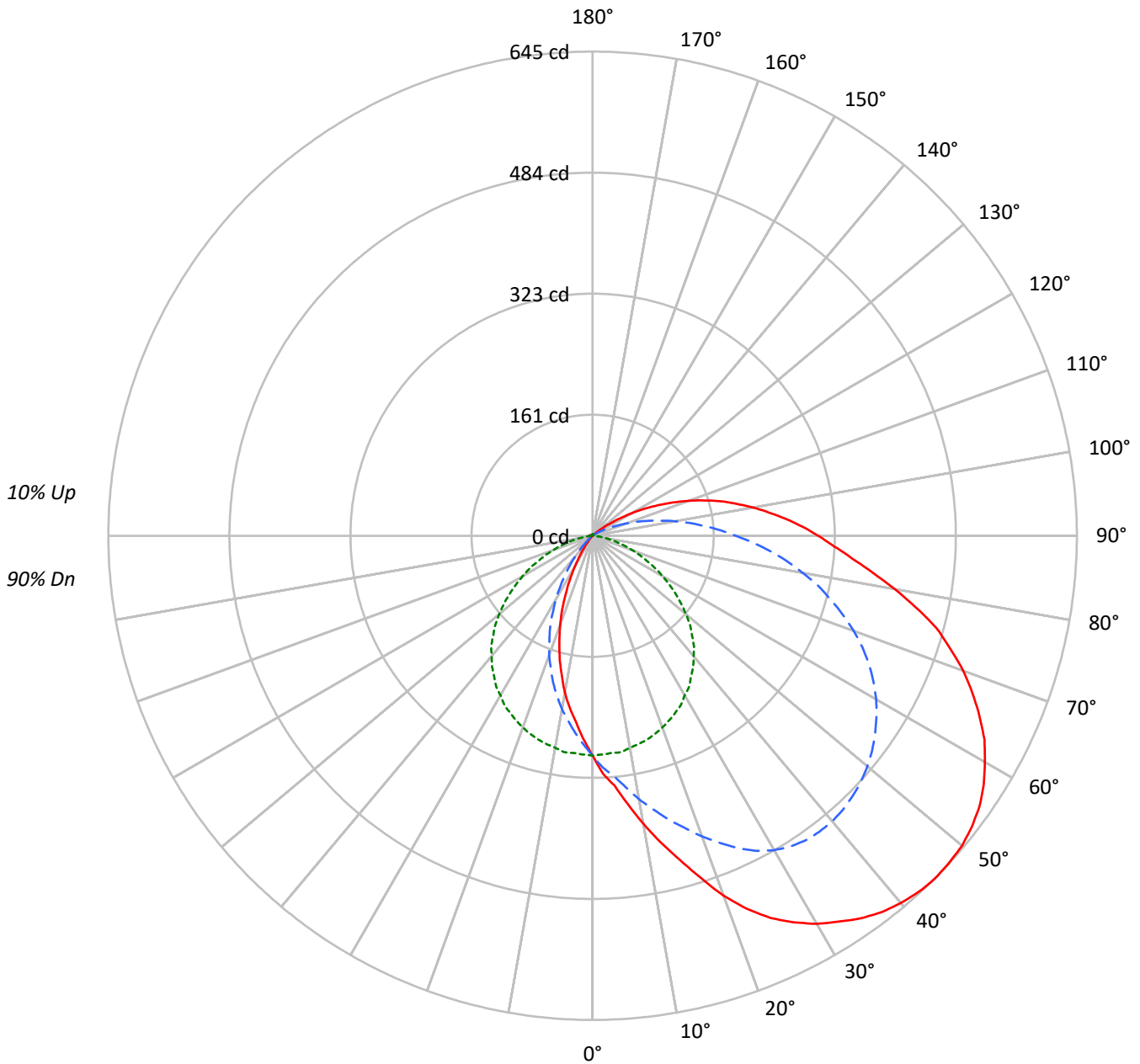
Lumens per Lamp: N/A  
Luminaire Lumens: 1447.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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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CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-81-87-ED1D

### 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°	3151	3151	3151
5°	3459	3105	2590
10°	3913	3066	2134
15°	4386	3028	1664
20°	4946	2978	1225
25°	5412	2921	804
30°	5757	2844	453
35°	6057	2762	200
40°	6322	2660	48
45°	6550	2533	0
50°	6741	2364	0
55°	6887	2150	0
60°	6960	1901	0
65°	6989	1617	0
70°	6966	1319	0
75°	6877	973	6
80°	6598	595	31
85°	6378	285	40



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.0	1.9
10°-20°	83.9	5.8
20°-30°	135.9	9.4
30°-40°	174.6	12.1
40°-50°	197.7	13.7
50°-60°	204.8	14.2
60°-70°	193.1	13.3
70°-80°	161.9	11.2
80°-90°	117.3	8.1
90°-100°	77.1	5.3
100°-110°	44.5	3.1
110°-120°	19.7	1.4
120°-130°	5.3	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	247.9	17.1
0°-40°	422.6	29.2
0°-60°	825.0	57.0
0°-90°	1297.4	89.7
90°-120°	141.3	9.8
90°-150°	148.6	10.3
90°-180°	150.0	10.4
0°-180°	1447.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	293	293	293	293	293	
5°	334	321	290	264	250	34
15°	446	391	281	203	169	129
25°	562	459	260	134	84	260
35°	622	495	229	65	20	390
45°	645	490	187	15	0	498
55°	629	459	135	0	0	562
65°	569	406	80	0	0	563
75°	474	328	34	0	0	497
85°	347	238	6	2	2	296
90°	300	191	2	2	3	165
95°	258	149	1	3	3	202
105°	178	77	1	2	3	187
115°	97	26	1	1	2	97
125°	29	4	2	1	2	29
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	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°	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7	292.7
2.5°	317.3	316.9	315.8	313.9	311.3	306.9	303.1	299.8	295.3	291.6	284.5
5°	334.1	332.2	330.7	328.9	322.9	318.8	312.1	304.6	297.5	290.5	276.3
7.5°	360.9	357.9	355.7	350.5	342.3	333.0	322.5	315.4	310.6	290.8	266.6
10°	389.6	387.0	382.6	373.2	363.2	349.7	334.8	318.0	303.1	286.7	258.0
12.5°	418.0	414.2	407.9	396.0	381.8	365.0	344.5	324.8	303.5	284.1	248.0
15°	446.3	442.2	435.5	421.0	402.3	380.3	355.3	330.4	305.4	280.8	237.5
17.5°	477.3	471.7	461.6	445.2	421.7	394.5	365.0	334.8	304.6	276.7	226.3
20°	510.4	502.6	491.8	469.8	442.2	410.1	374.7	339.3	304.3	271.8	213.6
22.5°	538.0	530.2	518.3	495.5	462.3	423.2	382.9	342.3	302.8	266.2	201.7
25°	561.9	555.6	542.5	516.4	481.4	437.0	390.8	344.5	300.5	260.3	189.0
27.5°	580.5	574.6	560.0	533.2	497.4	449.3	396.7	345.6	297.5	254.3	176.0
30°	596.9	591.0	573.5	545.9	508.2	459.0	402.7	346.0	293.8	245.3	161.8
32.5°	609.6	604.0	586.1	556.7	515.7	465.7	406.0	345.6	289.0	239.0	146.5
35°	622.3	616.7	595.8	564.5	521.3	468.7	408.7	343.8	283.0	228.6	132.0
37.5°	632.0	625.7	604.4	569.7	523.9	469.4	408.3	341.2	276.7	220.0	117.5
40°	638.7	632.0	609.2	572.7	524.6	468.3	405.3	336.7	269.2	209.2	102.2
42.5°	643.2	635.7	611.5	577.2	523.1	465.3	400.8	331.1	261.0	199.9	87.6
45°	645.4	637.6	611.9	573.5	520.5	459.7	394.1	324.0	252.1	187.2	73.1
47.5°	644.3	635.7	610.0	569.4	515.7	453.8	386.7	315.4	241.2	176.0	59.3
50°	642.4	633.5	605.9	564.1	509.0	446.3	378.5	305.0	230.1	162.2	47.0
52.5°	636.5	627.5	601.4	556.7	501.1	437.7	367.3	294.2	218.1	148.8	35.8
55°	629.0	620.8	593.6	550.0	491.1	427.3	356.8	282.6	206.6	135.0	25.7
57.5°	617.5	610.0	583.9	539.2	481.0	415.7	345.3	269.9	192.0	121.2	17.9
60°	603.3	595.8	570.5	526.8	469.4	402.7	332.6	256.9	179.0	107.4	11.2
62.5°	588.4	581.3	554.8	511.6	454.9	388.9	318.8	243.8	165.2	94.7	6.7
65°	568.6	561.9	538.0	493.3	438.9	374.0	303.5	228.2	151.0	80.5	3.7
67.5°	547.7	541.8	517.5	476.5	420.2	357.6	287.8	212.9	136.1	68.2	1.9
70°	525.4	517.9	495.5	453.8	401.2	338.9	270.7	197.2	121.9	56.3	0.0
72.5°	499.3	493.7	472.0	432.5	379.2	319.2	253.2	180.1	106.3	44.7	0.4
75°	473.9	466.8	447.1	409.8	357.6	298.3	233.8	164.1	91.0	34.3	0.4
77.5°	441.1	438.9	420.2	384.0	337.1	278.2	212.5	144.7	76.4	24.6	0.4
80°	408.3	406.0	391.5	358.3	313.2	254.3	192.8	126.4	62.3	16.4	0.4
82.5°	375.8	372.9	359.1	331.5	289.0	234.2	172.3	108.1	49.2	10.1	0.4
85°	346.8	343.0	328.1	302.8	264.0	211.4	151.0	90.2	36.5	5.6	0.7
87.5°	321.8	319.2	302.8	276.7	238.6	190.2	132.4	73.1	25.7	2.6	1.1
90°	300.5	294.9	280.4	252.8	214.8	166.7	112.6	58.5	17.2	1.5	1.5
92.5°	279.6	274.8	258.8	230.4	193.5	146.5	93.6	44.7	10.8	0.7	1.9
95°	258.0	252.8	237.1	211.0	171.9	126.0	76.8	32.8	6.0	0.7	1.9
97.5°	236.8	231.9	215.5	189.4	152.5	108.1	60.8	23.1	3.0	0.7	1.5
100°	217.0	211.4	196.5	170.4	133.1	90.2	47.0	14.9	1.9	0.7	1.5
102.5°	196.1	191.6	176.4	151.0	113.0	73.5	35.0	9.3	0.7	0.7	1.1
105°	177.5	171.9	157.0	130.9	96.2	57.8	24.6	5.6	0.7	0.7	1.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	115.6	111.1	98.1	76.1	48.8	22.7	6.7	1.1	1.1	1.1	1.1
115°	96.6	89.9	78.3	58.9	36.2	14.9	3.4	1.1	1.1	1.1	1.1
117.5°	77.2	71.6	63.4	44.7	23.9	9.7	1.9	1.1	1.1	1.1	1.1
120°	60.4	55.2	45.9	30.9	16.0	5.6	0.7	1.1	1.1	1.1	1.1
122.5°	43.3	39.2	30.9	20.1	9.7	2.6	1.1	1.1	1.5	1.5	1.1
125°	28.7	26.5	20.5	12.3	6.0	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.6	16.8	11.9	7.1	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.4	9.3	7.1	4.1	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.0	5.6	3.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.7	0.7	0.7	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.7	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.7	0.7	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.5
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	292.7	292.7	292.7
2.5°	278.5	273.3	271.8
5°	263.6	255.0	250.2
7.5°	248.7	237.1	231.5
10°	234.9	218.5	212.5
12.5°	218.5	199.5	190.2
15°	202.8	178.2	169.3
17.5°	185.3	157.7	147.3
20°	168.9	137.2	126.4
22.5°	150.3	117.1	105.1
25°	133.5	96.9	83.5
27.5°	114.8	76.4	64.9
30°	97.3	58.5	47.0
32.5°	80.5	42.9	32.4
35°	64.9	29.1	20.5
37.5°	50.0	17.9	10.4
40°	36.2	9.3	4.8
42.5°	24.2	4.5	2.6
45°	14.9	2.2	0.0
47.5°	8.6	0.0	0.0
50°	4.5	0.0	0.0
52.5°	1.9	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°	0.4	0.4	0.4
77.5°	0.4	0.7	1.1
80°	0.7	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.2
87.5°	1.9	2.2	2.6
90°	2.2	2.6	2.6
92.5°	2.2	3.0	3.0
95°	2.6	3.0	3.4
97.5°	3.0	3.4	3.4
100°	2.6	3.4	3.7
102.5°	2.2	3.4	3.4
105°	1.9	2.6	3.0





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.5	1.9	1.9
115°	1.1	1.5	1.9
117.5°	1.1	1.5	1.5
120°	1.1	1.1	1.5
122.5°	1.1	1.1	1.5
125°	1.1	1.1	1.5
127.5°	1.5	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.5	1.1	1.1
135°	1.5	1.1	1.1
137.5°	1.5	1.1	1.1
140°	1.5	1.1	1.1
142.5°	1.5	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.5	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	156.6	152.1	137.2	112.6	78.7	44.0	16.4	3.0	0.7	1.1	1.1
110°	136.5	132.7	117.5	93.6	63.4	32.8	10.8	1.9	1.1	1.1	1.1







107.5°	1.5	2.2	2.6
110°	1.5	1.9	2.2



(END OF REPORT)