

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: P550513

Luminaire Tested: **FCC-X-2-LD4-1HI-35-UNV-81-94-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: P550513  
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-LD4-1HI-35-UNV-81-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

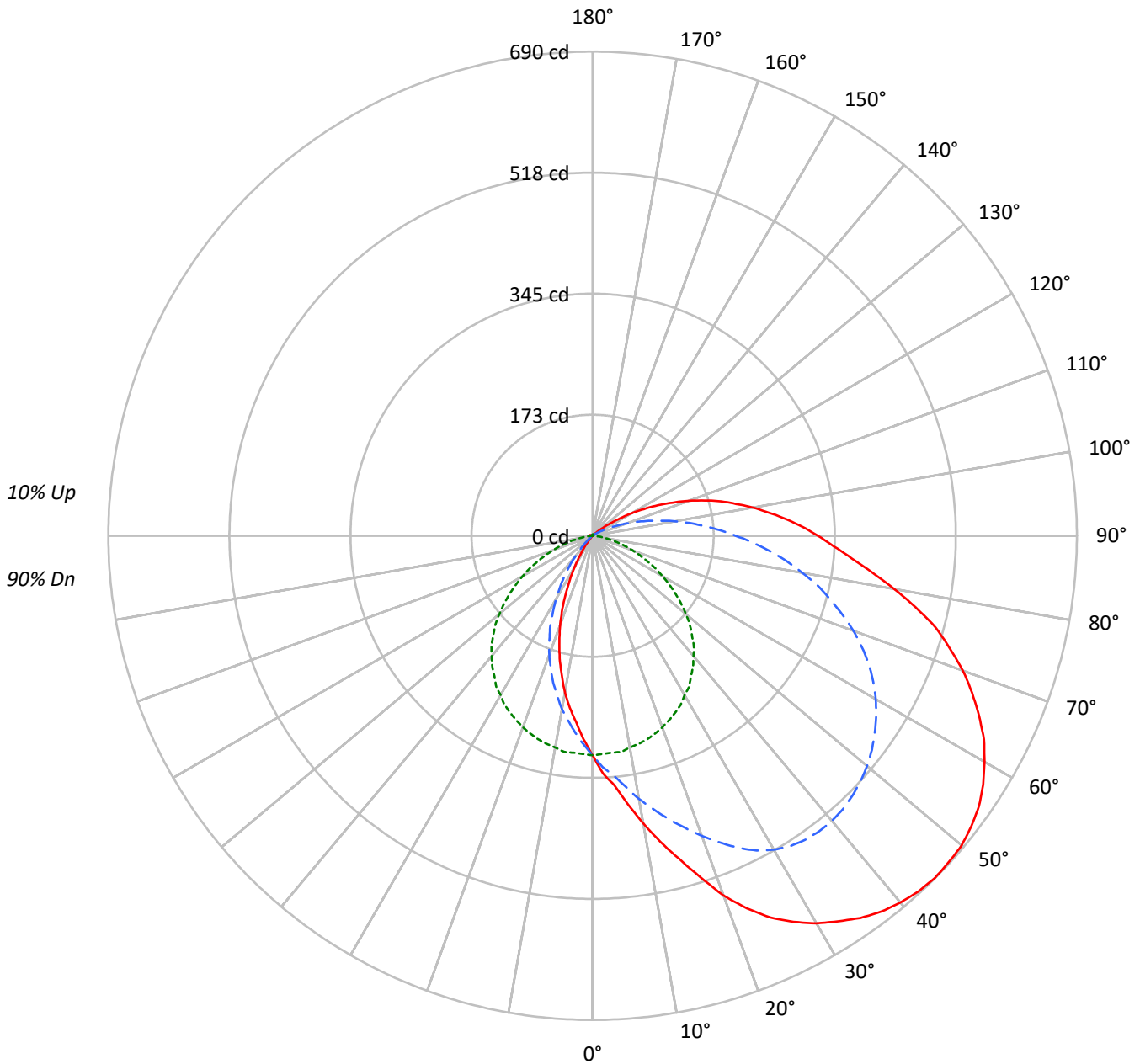
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1546.0 lumens  
Efficiency: N/A  
Efficacy: 71.2 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): 21.7  
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				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	3366	3366	3366
5°	3695	3317	2767
10°	4181	3276	2281
15°	4686	3235	1778
20°	5286	3182	1308
25°	5782	3121	859
30°	6151	3038	484
35°	6471	2951	213
40°	6755	2842	51
45°	6998	2706	0
50°	7202	2526	0
55°	7357	2296	0
60°	7437	2030	0
65°	7467	1727	0
70°	7442	1410	0
75°	7347	1038	6
80°	7049	635	32
85°	6814	305	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.0	1.9
10°-20°	89.7	5.8
20°-30°	145.2	9.4
30°-40°	186.6	12.1
40°-50°	211.2	13.7
50°-60°	218.8	14.2
60°-70°	206.4	13.3
70°-80°	172.9	11.2
80°-90°	125.4	8.1
90°-100°	82.4	5.3
100°-110°	47.6	3.1
110°-120°	21.0	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	264.9	17.1
0°-40°	451.5	29.2
0°-60°	881.5	57.0
0°-90°	1386.1	89.7
90°-120°	151.0	9.8
90°-150°	158.8	10.3
90°-180°	160.0	10.3
0°-180°	1546.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	313	313	313	313	313	
5°	357	343	310	282	267	36
15°	477	418	300	217	181	137
25°	600	491	278	143	89	277
35°	665	529	244	69	22	417
45°	690	524	200	16	0	532
55°	672	491	144	0	0	600
65°	608	434	86	0	0	601
75°	506	350	37	0	0	531
85°	370	254	6	2	2	316
90°	321	204	2	2	3	176
95°	276	159	1	3	4	216
105°	190	82	1	2	3	200
115°	103	27	1	1	2	103
125°	31	4	2	1	2	31
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°	312.7	312.7	312.7	312.7	312.7	312.7	312.7	312.7	312.7	312.7	312.7
2.5°	339.0	338.6	337.4	335.4	332.6	327.9	323.9	320.3	315.5	311.5	304.0
5°	356.9	354.9	353.4	351.4	345.0	340.6	333.4	325.5	317.9	310.3	295.2
7.5°	385.6	382.4	380.0	374.5	365.7	355.7	344.6	337.0	331.8	310.7	284.8
10°	416.3	413.5	408.7	398.8	388.0	373.7	357.7	339.8	323.9	306.3	275.7
12.5°	446.6	442.6	435.8	423.1	407.9	390.0	368.1	347.0	324.3	303.6	264.9
15°	476.8	472.5	465.3	449.8	429.8	406.3	379.6	353.0	326.3	300.0	253.8
17.5°	509.9	503.9	493.2	475.7	450.6	421.5	390.0	357.7	325.5	295.6	241.8
20°	545.4	537.0	525.4	501.9	472.5	438.2	400.4	362.5	325.1	290.4	228.3
22.5°	574.8	566.5	553.7	529.4	494.0	452.1	409.1	365.7	323.5	284.4	215.5
25°	600.3	593.6	579.6	551.7	514.3	466.9	417.5	368.1	321.1	278.1	202.0
27.5°	620.3	613.9	598.3	569.7	531.4	480.0	423.9	369.3	317.9	271.7	188.0
30°	637.8	631.4	612.7	583.2	543.0	490.4	430.2	369.7	313.9	262.1	172.9
32.5°	651.3	645.4	626.2	594.8	550.9	497.6	433.8	369.3	308.7	255.4	156.6
35°	664.9	658.9	636.6	603.1	556.9	500.7	436.6	367.3	302.4	244.2	141.0
37.5°	675.2	668.5	645.8	608.7	559.7	501.5	436.2	364.5	295.6	235.0	125.5
40°	682.4	675.2	650.9	611.9	560.5	500.3	433.0	359.7	287.6	223.5	109.2
42.5°	687.2	679.2	653.3	616.7	558.9	497.2	428.2	353.8	278.9	213.5	93.6
45°	689.6	681.2	653.7	612.7	556.1	491.2	421.1	346.2	269.3	200.0	78.1
47.5°	688.4	679.2	651.7	608.3	550.9	484.8	413.1	337.0	257.7	188.0	63.3
50°	686.4	676.8	647.3	602.7	543.8	476.8	404.3	325.9	245.8	173.3	50.2
52.5°	680.0	670.5	642.6	594.8	535.4	467.7	392.4	314.3	233.0	158.9	38.2
55°	672.0	663.3	634.2	587.6	524.7	456.5	381.2	302.0	220.7	144.2	27.5
57.5°	659.7	651.7	623.8	576.0	513.9	444.2	368.9	288.4	205.2	129.5	19.1
60°	644.6	636.6	609.5	562.9	501.5	430.2	355.3	274.5	191.2	114.7	12.0
62.5°	628.6	621.1	592.8	546.6	486.0	415.5	340.6	260.5	176.5	101.2	7.2
65°	607.5	600.3	574.8	527.0	468.9	399.6	324.3	243.8	161.3	86.0	4.0
67.5°	585.2	578.8	552.9	509.1	449.0	382.0	307.5	227.5	145.4	72.9	2.0
70°	561.3	553.3	529.4	484.8	428.6	362.1	289.2	210.7	130.3	60.2	0.0
72.5°	533.4	527.4	504.3	462.1	405.1	341.0	270.5	192.4	113.5	47.8	0.4
75°	506.3	498.8	477.6	437.8	382.0	318.7	249.8	175.3	97.2	36.6	0.4
77.5°	471.3	468.9	449.0	410.3	360.1	297.2	227.1	154.6	81.7	26.3	0.4
80°	436.2	433.8	418.3	382.8	334.6	271.7	206.0	135.0	66.5	17.5	0.4
82.5°	401.6	398.4	383.6	354.1	308.7	250.2	184.0	115.5	52.6	10.8	0.4
85°	370.5	366.5	350.6	323.5	282.0	225.9	161.3	96.4	39.0	6.0	0.8
87.5°	343.8	341.0	323.5	295.6	255.0	203.2	141.4	78.1	27.5	2.8	1.2
90°	321.1	315.1	299.6	270.1	229.5	178.1	120.3	62.5	18.3	1.6	1.6
92.5°	298.8	293.6	276.5	246.2	206.8	156.6	100.0	47.8	11.6	0.8	2.0
95°	275.7	270.1	253.4	225.5	183.6	134.6	82.1	35.1	6.4	0.8	2.0
97.5°	253.0	247.8	230.3	202.4	162.9	115.5	64.9	24.7	3.2	0.8	1.6
100°	231.9	225.9	209.9	182.1	142.2	96.4	50.2	15.9	2.0	0.8	1.6
102.5°	209.5	204.8	188.4	161.3	120.7	78.5	37.4	10.0	0.8	0.8	1.2
105°	189.6	183.6	167.7	139.8	102.8	61.7	26.3	6.0	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	123.5	118.7	104.8	81.3	52.2	24.3	7.2	1.2	1.2	1.2	1.2
115°	103.2	96.0	83.7	62.9	38.6	15.9	3.6	1.2	1.2	1.2	1.2
117.5°	82.5	76.5	67.7	47.8	25.5	10.4	2.0	1.2	1.2	1.2	1.2
120°	64.5	59.0	49.0	33.1	17.1	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.2	41.8	33.1	21.5	10.4	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.7	28.3	21.9	13.1	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.9	17.9	12.7	7.6	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.2	10.0	7.6	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	312.7	312.7	312.7
2.5°	297.6	292.0	290.4
5°	281.6	272.5	267.3
7.5°	265.7	253.4	247.4
10°	251.0	233.4	227.1
12.5°	233.4	213.1	203.2
15°	216.7	190.4	180.9
17.5°	198.0	168.5	157.4
20°	180.5	146.6	135.0
22.5°	160.5	125.1	112.3
25°	142.6	103.6	89.2
27.5°	122.7	81.7	69.3
30°	104.0	62.5	50.2
32.5°	86.0	45.8	34.7
35°	69.3	31.1	21.9
37.5°	53.4	19.1	11.2
40°	38.6	10.0	5.2
42.5°	25.9	4.8	2.8
45°	15.9	2.4	0.0
47.5°	9.2	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	167.3	162.5	146.6	120.3	84.1	47.0	17.5	3.2	0.8	1.2	1.2
110°	145.8	141.8	125.5	100.0	67.7	35.1	11.6	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)