

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: P550539

Luminaire Tested: **FCC-X-2-LD4-1HI-35-UNV-93-86-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: P550539
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-93-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

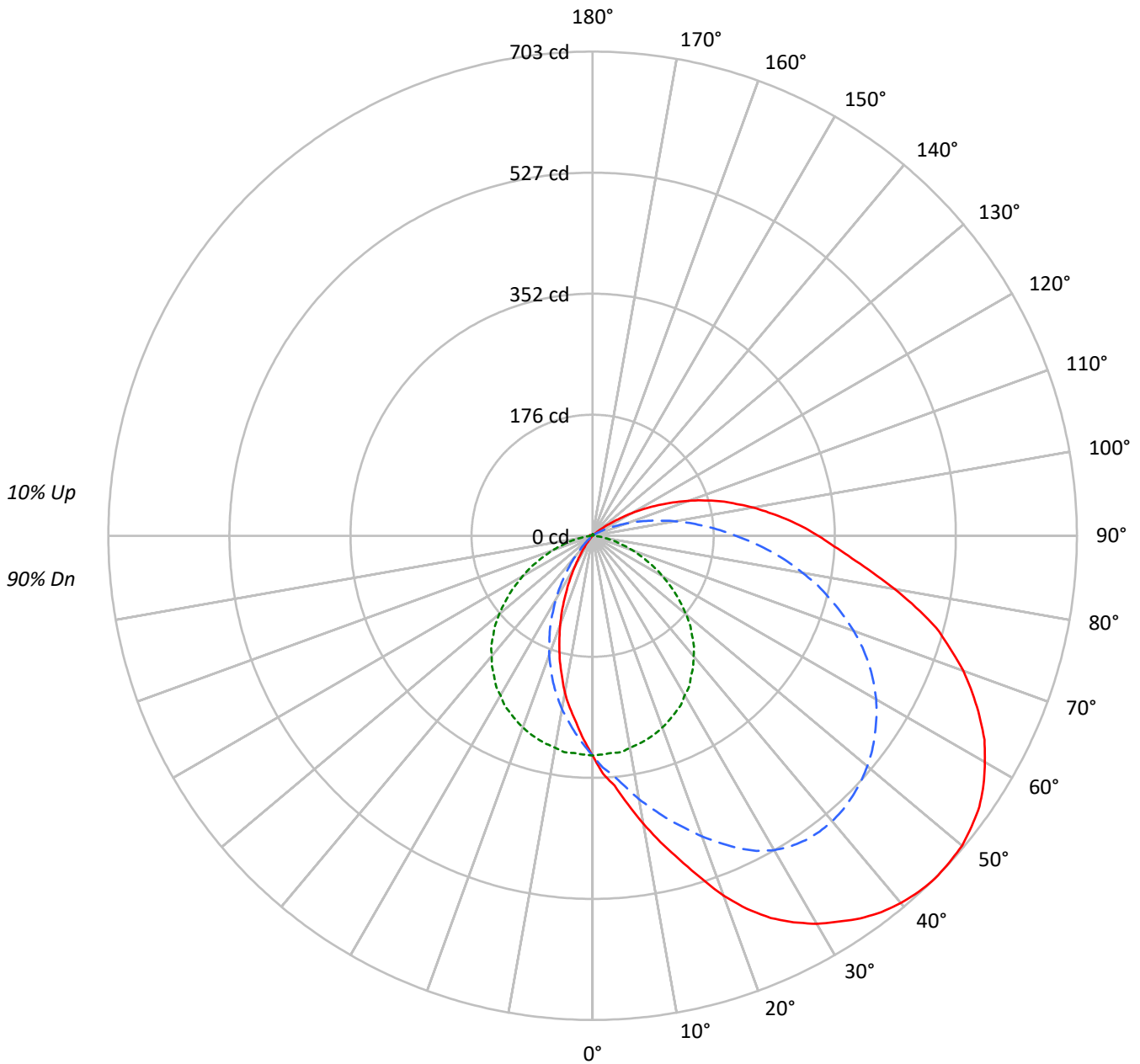
Lumens per Lamp: N/A
Luminaire Lumens: 1576.9 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (A_{in}): 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°	3434	3434	3434
5°	3769	3384	2823
10°	4265	3342	2326
15°	4780	3299	1813
20°	5391	3245	1335
25°	5898	3183	876
30°	6275	3100	494
35°	6601	3010	217
40°	6890	2900	52
45°	7138	2760	0
50°	7347	2577	0
55°	7505	2342	0
60°	7585	2070	0
65°	7617	1764	0
70°	7592	1438	0
75°	7495	1061	6
80°	7192	649	32
85°	6950	310	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.6	1.9
10°-20°	91.5	5.8
20°-30°	148.2	9.4
30°-40°	190.3	12.1
40°-50°	215.4	13.7
50°-60°	223.2	14.2
60°-70°	210.5	13.3
70°-80°	176.4	11.2
80°-90°	127.9	8.1
90°-100°	84.0	5.3
100°-110°	48.5	3.1
110°-120°	21.4	1.4
120°-130°	5.8	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°	270.2	17.1
0°-40°	460.5	29.2
0°-60°	899.2	57.0
0°-90°	1413.9	89.7
90°-120°	154.0	9.8
90°-150°	161.9	10.3
90°-180°	163.0	10.3
0°-180°	1576.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	319	319	319	319	319	
5°	364	350	317	287	273	37
15°	486	426	306	221	184	140
25°	612	500	284	146	91	283
35°	678	539	249	71	22	425
45°	703	534	204	16	0	543
55°	686	500	147	0	0	612
65°	620	443	88	0	0	613
75°	516	357	37	0	0	542
85°	378	259	6	2	2	323
90°	328	208	2	2	3	180
95°	281	162	1	3	4	221
105°	193	84	1	2	3	204
115°	105	28	1	1	2	105
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°	319.0	319.0	319.0	319.0	319.0	319.0	319.0	319.0	319.0	319.0	319.0
2.5°	345.8	345.4	344.2	342.2	339.3	334.4	330.4	326.7	321.8	317.8	310.0
5°	364.1	362.1	360.4	358.4	351.9	347.4	340.1	332.0	324.3	316.6	301.1
7.5°	393.4	390.1	387.7	382.0	373.0	362.9	351.5	343.8	338.5	317.0	290.5
10°	424.6	421.8	416.9	406.8	395.8	381.2	364.9	346.6	330.4	312.5	281.2
12.5°	455.5	451.5	444.6	431.5	416.1	397.8	375.5	353.9	330.8	309.6	270.2
15°	486.4	481.9	474.6	458.8	438.5	414.5	387.3	360.0	332.8	306.0	258.8
17.5°	520.1	514.0	503.1	485.2	459.6	429.9	397.8	364.9	332.0	301.5	246.7
20°	556.3	547.8	536.0	512.0	481.9	447.0	408.4	369.8	331.6	296.2	232.8
22.5°	586.4	577.8	564.8	540.0	503.9	461.2	417.3	373.0	330.0	290.1	219.8
25°	612.4	605.5	591.2	562.8	524.6	476.2	425.9	375.5	327.5	283.6	206.0
27.5°	632.7	626.2	610.3	581.1	542.1	489.7	432.4	376.7	324.3	277.1	191.8
30°	650.6	644.1	625.0	594.9	553.9	500.2	438.9	377.1	320.2	267.4	176.4
32.5°	664.4	658.3	638.8	606.7	562.0	507.5	442.5	376.7	314.9	260.5	159.7
35°	678.2	672.1	649.4	615.2	568.1	510.8	445.4	374.7	308.4	249.1	143.8
37.5°	688.8	681.9	658.7	620.9	570.9	511.6	445.0	371.8	301.5	239.7	128.0
40°	696.1	688.8	664.0	624.2	571.7	510.4	441.7	366.9	293.4	228.0	111.3
42.5°	701.0	692.8	666.4	629.0	570.1	507.1	436.8	360.8	284.4	217.8	95.5
45°	703.4	694.9	666.8	625.0	567.3	501.0	429.5	353.1	274.7	204.0	79.6
47.5°	702.2	692.8	664.8	620.5	562.0	494.5	421.4	343.8	262.9	191.8	64.6
50°	700.2	690.4	660.3	614.8	554.7	486.4	412.5	332.4	250.7	176.8	51.2
52.5°	693.6	683.9	655.5	606.7	546.1	477.1	400.3	320.6	237.7	162.1	39.0
55°	685.5	676.6	646.9	599.4	535.2	465.7	388.9	308.0	225.1	147.1	28.0
57.5°	672.9	664.8	636.4	587.6	524.2	453.1	376.3	294.2	209.3	132.1	19.5
60°	657.5	649.4	621.7	574.2	511.6	438.9	362.5	280.0	195.1	117.0	12.2
62.5°	641.2	633.5	604.7	557.5	495.8	423.8	347.4	265.8	180.0	103.2	7.3
65°	619.7	612.4	586.4	537.6	478.3	407.6	330.8	248.7	164.6	87.8	4.1
67.5°	596.9	590.4	564.0	519.3	458.0	389.7	313.7	232.0	148.3	74.4	2.0
70°	572.6	564.4	540.0	494.5	437.2	369.4	295.0	215.0	132.9	61.4	0.0
72.5°	544.1	538.0	514.4	471.4	413.3	347.8	275.9	196.3	115.8	48.8	0.4
75°	516.5	508.8	487.2	446.6	389.7	325.1	254.8	178.8	99.2	37.4	0.4
77.5°	480.7	478.3	458.0	418.5	367.3	303.1	231.6	157.7	83.3	26.8	0.4
80°	445.0	442.5	426.7	390.5	341.3	277.1	210.1	137.8	67.9	17.9	0.4
82.5°	409.6	406.4	391.3	361.3	314.9	255.2	187.7	117.8	53.6	11.0	0.4
85°	377.9	373.8	357.6	330.0	287.7	230.4	164.6	98.3	39.8	6.1	0.8
87.5°	350.7	347.8	330.0	301.5	260.1	207.2	144.3	79.6	28.0	2.8	1.2
90°	327.5	321.4	305.6	275.5	234.1	181.6	122.7	63.8	18.7	1.6	1.6
92.5°	304.8	299.5	282.0	251.1	210.9	159.7	102.0	48.8	11.8	0.8	2.0
95°	281.2	275.5	258.4	230.0	187.3	137.3	83.7	35.8	6.5	0.8	2.0
97.5°	258.0	252.8	234.9	206.4	166.2	117.8	66.2	25.2	3.3	0.8	1.6
100°	236.5	230.4	214.1	185.7	145.1	98.3	51.2	16.3	2.0	0.8	1.6
102.5°	213.7	208.9	192.2	164.6	123.1	80.1	38.2	10.2	0.8	0.8	1.2
105°	193.4	187.3	171.1	142.6	104.8	63.0	26.8	6.1	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°	126.0	121.1	106.9	82.9	53.2	24.8	7.3	1.2	1.2	1.2	1.2
115°	105.2	97.9	85.3	64.2	39.4	16.3	3.7	1.2	1.2	1.2	1.2
117.5°	84.1	78.0	69.1	48.8	26.0	10.6	2.0	1.2	1.2	1.2	1.2
120°	65.8	60.1	50.0	33.7	17.5	6.1	0.8	1.2	1.2	1.2	1.2
122.5°	47.1	42.7	33.7	21.9	10.6	2.8	1.2	1.2	1.6	1.6	1.2
125°	31.3	28.9	22.3	13.4	6.5	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.3	18.3	13.0	7.7	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.4	10.2	7.7	4.5	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.5	6.1	4.1	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°	319.0	319.0	319.0
2.5°	303.5	297.9	296.2
5°	287.3	277.9	272.7
7.5°	271.0	258.4	252.3
10°	256.0	238.1	231.6
12.5°	238.1	217.4	207.2
15°	221.1	194.2	184.5
17.5°	202.0	171.9	160.5
20°	184.1	149.5	137.8
22.5°	163.8	127.6	114.6
25°	145.5	105.7	91.0
27.5°	125.2	83.3	70.7
30°	106.1	63.8	51.2
32.5°	87.8	46.7	35.4
35°	70.7	31.7	22.3
37.5°	54.5	19.5	11.4
40°	39.4	10.2	5.3
42.5°	26.4	4.9	2.8
45°	16.3	2.4	0.0
47.5°	9.3	0.0	0.0
50°	4.9	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	3.3	3.3
95°	2.8	3.3	3.7
97.5°	3.3	3.7	3.7
100°	2.8	3.7	4.1
102.5°	2.4	3.7	3.7
105°	2.0	2.8	3.3



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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°	170.7	165.8	149.5	122.7	85.7	47.9	17.9	3.3	0.8	1.2	1.2
110°	148.7	144.7	128.0	102.0	69.1	35.8	11.8	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)