

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: P550671

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-93-88-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: P550671
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-50-UNV-93-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS 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

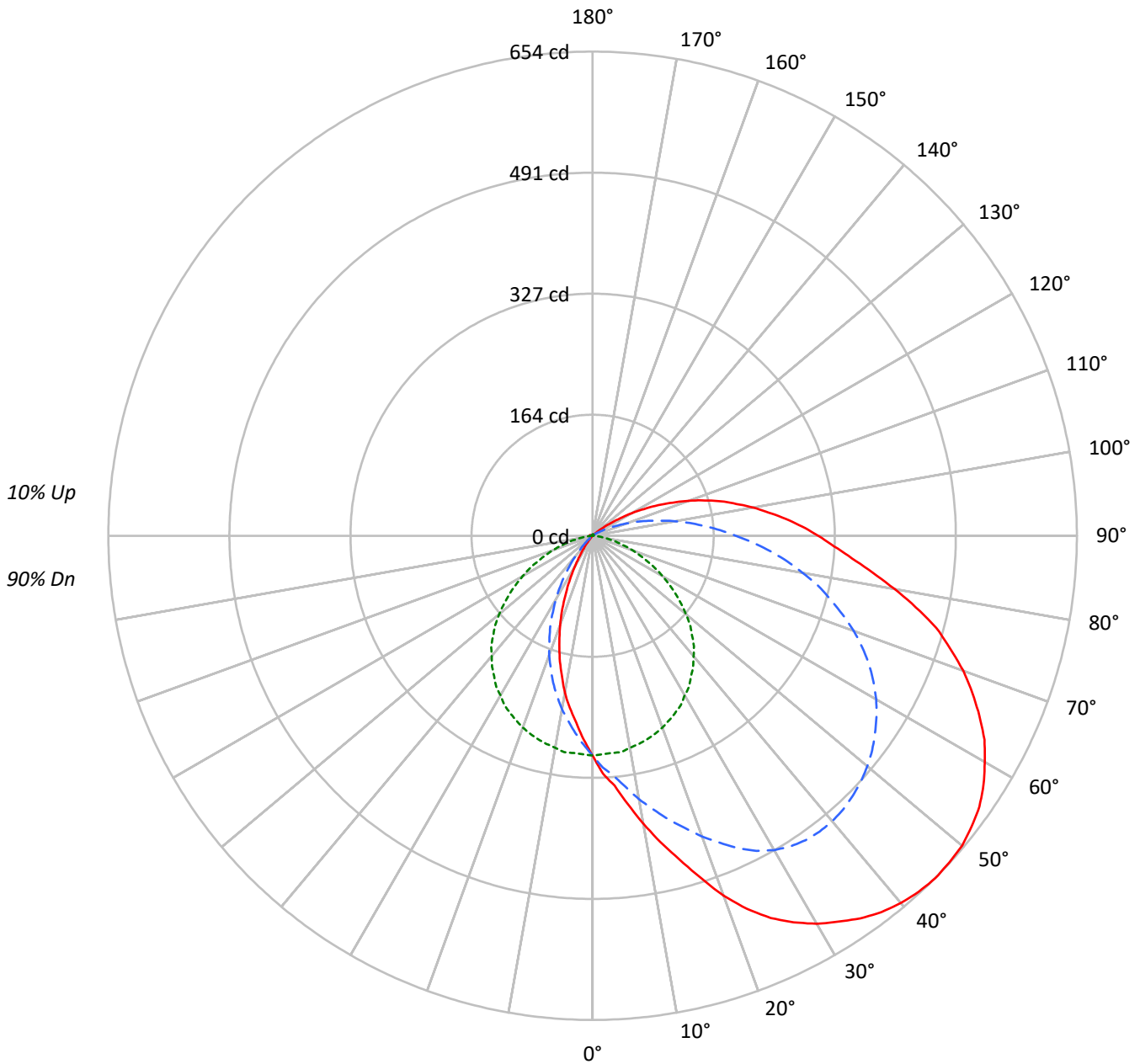
Lumens per Lamp: N/A
Luminaire Lumens: 1467.0 lumens
Efficiency: N/A
Efficacy: 67.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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°	3194	3194	3194
5°	3506	3148	2625
10°	3968	3109	2165
15°	4447	3069	1686
20°	5015	3020	1241
25°	5487	2962	816
30°	5837	2883	459
35°	6140	2800	202
40°	6409	2697	49
45°	6640	2568	0
50°	6834	2396	0
55°	6982	2178	0
60°	7056	1927	0
65°	7086	1641	0
70°	7061	1338	0
75°	6972	987	6
80°	6689	602	31
85°	6467	290	42



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.4	1.9
10°-20°	85.1	5.8
20°-30°	137.8	9.4
30°-40°	177.0	12.1
40°-50°	200.4	13.7
50°-60°	207.6	14.2
60°-70°	195.8	13.3
70°-80°	164.1	11.2
80°-90°	118.9	8.1
90°-100°	78.2	5.3
100°-110°	45.1	3.1
110°-120°	19.9	1.4
120°-130°	5.4	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°	251.4	17.1
0°-40°	428.4	29.2
0°-60°	836.4	57.0
0°-90°	1315.3	89.7
90°-120°	143.2	9.8
90°-150°	150.6	10.3
90°-180°	152.0	10.4
0°-180°	1467.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	297	297	297	297	297	
5°	339	325	294	267	254	34
15°	452	397	285	206	172	130
25°	570	466	264	135	85	263
35°	631	502	232	66	21	396
45°	654	497	190	15	0	505
55°	638	466	137	0	0	569
65°	576	412	82	0	0	570
75°	480	332	35	0	0	504
85°	352	241	6	2	2	300
90°	305	193	2	2	3	167
95°	262	151	1	3	3	205
105°	180	78	1	2	3	190
115°	98	26	1	1	2	98
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°	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7
2.5°	321.7	321.3	320.2	318.3	315.6	311.1	307.3	303.9	299.4	295.6	288.4
5°	338.7	336.8	335.3	333.4	327.4	323.2	316.4	308.8	301.7	294.5	280.1
7.5°	365.9	362.9	360.6	355.3	347.0	337.6	327.0	319.8	314.9	294.8	270.3
10°	395.0	392.4	387.8	378.4	368.2	354.6	339.5	322.4	307.3	290.7	261.6
12.5°	423.8	420.0	413.5	401.4	387.1	370.1	349.3	329.2	307.7	288.0	251.4
15°	452.5	448.3	441.5	426.8	407.9	385.6	360.2	334.9	309.6	284.6	240.8
17.5°	483.9	478.2	468.0	451.3	427.5	399.9	370.1	339.5	308.8	280.5	229.5
20°	517.5	509.6	498.6	476.3	448.3	415.8	379.9	344.0	308.5	275.6	216.6
22.5°	545.5	537.5	525.4	502.4	468.7	429.0	388.2	347.0	306.9	269.9	204.5
25°	569.7	563.2	550.0	523.5	488.0	443.0	396.2	349.3	304.7	263.9	191.7
27.5°	588.6	582.5	567.8	540.6	504.3	455.5	402.2	350.4	301.7	257.8	178.4
30°	605.2	599.1	581.4	553.4	515.2	465.3	408.3	350.8	297.9	248.7	164.1
32.5°	618.0	612.4	594.2	564.4	522.8	472.1	411.7	350.4	293.0	242.3	148.6
35°	630.9	625.2	604.1	572.3	528.5	475.2	414.3	348.5	286.9	231.7	133.8
37.5°	640.7	634.3	612.8	577.6	531.1	475.9	413.9	345.9	280.5	223.0	119.1
40°	647.5	640.7	617.7	580.6	531.9	474.8	410.9	341.3	272.9	212.1	103.6
42.5°	652.1	644.5	619.9	585.2	530.3	471.8	406.4	335.7	264.6	202.6	88.8
45°	654.3	646.4	620.3	581.4	527.7	466.1	399.6	328.5	255.5	189.8	74.1
47.5°	653.2	644.5	618.4	577.2	522.8	460.0	392.0	319.8	244.6	178.4	60.1
50°	651.3	642.2	614.3	571.9	516.0	452.5	383.7	309.2	233.2	164.4	47.6
52.5°	645.3	636.2	609.7	564.4	508.0	443.8	372.3	298.3	221.1	150.8	36.3
55°	637.7	629.4	601.8	557.6	497.8	433.2	361.8	286.5	209.4	136.8	26.1
57.5°	626.0	618.4	592.0	546.6	487.6	421.5	350.0	273.7	194.7	122.9	18.1
60°	611.6	604.1	578.4	534.1	475.9	408.3	337.2	260.4	181.4	108.9	11.3
62.5°	596.5	589.3	562.5	518.6	461.2	394.3	323.2	247.2	167.5	96.0	6.8
65°	576.5	569.7	545.5	500.1	444.9	379.1	307.7	231.3	153.1	81.7	3.8
67.5°	555.3	549.3	524.7	483.1	426.0	362.5	291.8	215.8	138.0	69.2	1.9
70°	532.6	525.1	502.4	460.0	406.7	343.6	274.4	200.0	123.6	57.1	0.0
72.5°	506.2	500.5	478.6	438.5	384.4	323.6	256.7	182.6	107.7	45.4	0.4
75°	480.5	473.3	453.2	415.4	362.5	302.4	237.0	166.3	92.2	34.8	0.4
77.5°	447.2	444.9	426.0	389.4	341.7	282.0	215.5	146.7	77.5	24.9	0.4
80°	413.9	411.7	396.9	363.3	317.5	257.8	195.4	128.1	63.1	16.6	0.4
82.5°	381.0	378.0	364.0	336.1	293.0	237.4	174.6	109.6	49.9	10.2	0.4
85°	351.6	347.8	332.6	306.9	267.6	214.3	153.1	91.5	37.0	5.7	0.8
87.5°	326.2	323.6	306.9	280.5	241.9	192.8	134.2	74.1	26.1	2.6	1.1
90°	304.7	299.0	284.3	256.3	217.7	169.0	114.2	59.3	17.4	1.5	1.5
92.5°	283.5	278.6	262.3	233.6	196.2	148.6	94.9	45.4	11.0	0.8	1.9
95°	261.6	256.3	240.4	214.0	174.3	127.8	77.9	33.3	6.0	0.8	1.9
97.5°	240.0	235.1	218.5	192.0	154.6	109.6	61.6	23.4	3.0	0.8	1.5
100°	220.0	214.3	199.2	172.8	135.0	91.5	47.6	15.1	1.9	0.8	1.5
102.5°	198.8	194.3	178.8	153.1	114.5	74.5	35.5	9.5	0.8	0.8	1.1
105°	179.9	174.3	159.1	132.7	97.5	58.6	24.9	5.7	0.8	0.8	1.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	117.2	112.6	99.4	77.1	49.5	23.1	6.8	1.1	1.1	1.1	1.1
115°	97.9	91.1	79.4	59.7	36.7	15.1	3.4	1.1	1.1	1.1	1.1
117.5°	78.2	72.6	64.3	45.4	24.2	9.8	1.9	1.1	1.1	1.1	1.1
120°	61.2	55.9	46.5	31.4	16.3	5.7	0.8	1.1	1.1	1.1	1.1
122.5°	43.8	39.7	31.4	20.4	9.8	2.6	1.1	1.1	1.5	1.5	1.1
125°	29.1	26.8	20.8	12.5	6.0	1.1	1.1	1.1	1.5	1.5	1.1
127.5°	18.9	17.0	12.1	7.2	2.6	1.1	1.1	1.5	1.5	1.5	1.1
130°	10.6	9.5	7.2	4.2	1.1	1.1	1.1	1.5	1.5	1.5	1.1
132.5°	6.0	5.7	3.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5
135°	1.5	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5
137.5°	0.4	0.4	0.8	0.8	1.1	1.1	1.5	1.9	1.9	1.9	1.5
140°	0.4	0.4	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.5
142.5°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
145°	0.4	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.5	1.5	1.5
147.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.5	1.5
150°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
152.5°	0.4	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.5
155°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
157.5°	0.8	0.8	0.8	1.1	1.5	1.5	1.5	1.9	1.5	1.5	1.9
160°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5
165°	0.8	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.5	1.5	1.5
167.5°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5
170°	0.8	0.8	0.8	1.1	1.1	1.1	1.5	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.1	1.1	1.5	1.5	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	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°	296.7	296.7	296.7
2.5°	282.4	277.1	275.6
5°	267.3	258.6	253.6
7.5°	252.1	240.4	234.7
10°	238.1	221.5	215.5
12.5°	221.5	202.2	192.8
15°	205.6	180.7	171.6
17.5°	187.9	159.9	149.3
20°	171.2	139.1	128.1
22.5°	152.3	118.7	106.6
25°	135.3	98.3	84.7
27.5°	116.4	77.5	65.8
30°	98.7	59.3	47.6
32.5°	81.7	43.5	32.9
35°	65.8	29.5	20.8
37.5°	50.7	18.1	10.6
40°	36.7	9.5	4.9
42.5°	24.6	4.5	2.6
45°	15.1	2.3	0.0
47.5°	8.7	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	0.8	1.1
80°	0.8	1.5	1.9
82.5°	1.5	1.9	1.9
85°	1.5	1.9	2.3
87.5°	1.9	2.3	2.6
90°	2.3	2.6	2.6
92.5°	2.3	3.0	3.0
95°	2.6	3.0	3.4
97.5°	3.0	3.4	3.4
100°	2.6	3.4	3.8
102.5°	2.3	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	0.8
152.5°	1.1	0.8	0.8
155°	1.1	0.8	0.4
157.5°	1.5	0.8	0.4
160°	1.1	0.8	0.4
162.5°	1.1	0.8	0.4
165°	1.1	0.8	0.0
167.5°	1.1	0.8	0.4
170°	1.1	0.8	0.4
172.5°	1.1	0.8	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°	158.8	154.2	139.1	114.2	79.8	44.6	16.6	3.0	0.8	1.1	1.1
110°	138.4	134.6	119.1	94.9	64.3	33.3	11.0	1.9	1.1	1.1	1.1





107.5°	1.5	2.3	2.6
110°	1.5	1.9	2.3



(END OF REPORT)