

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: P551613

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-82-87-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: P551613
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-LD4-2LO-40-UNV-82-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

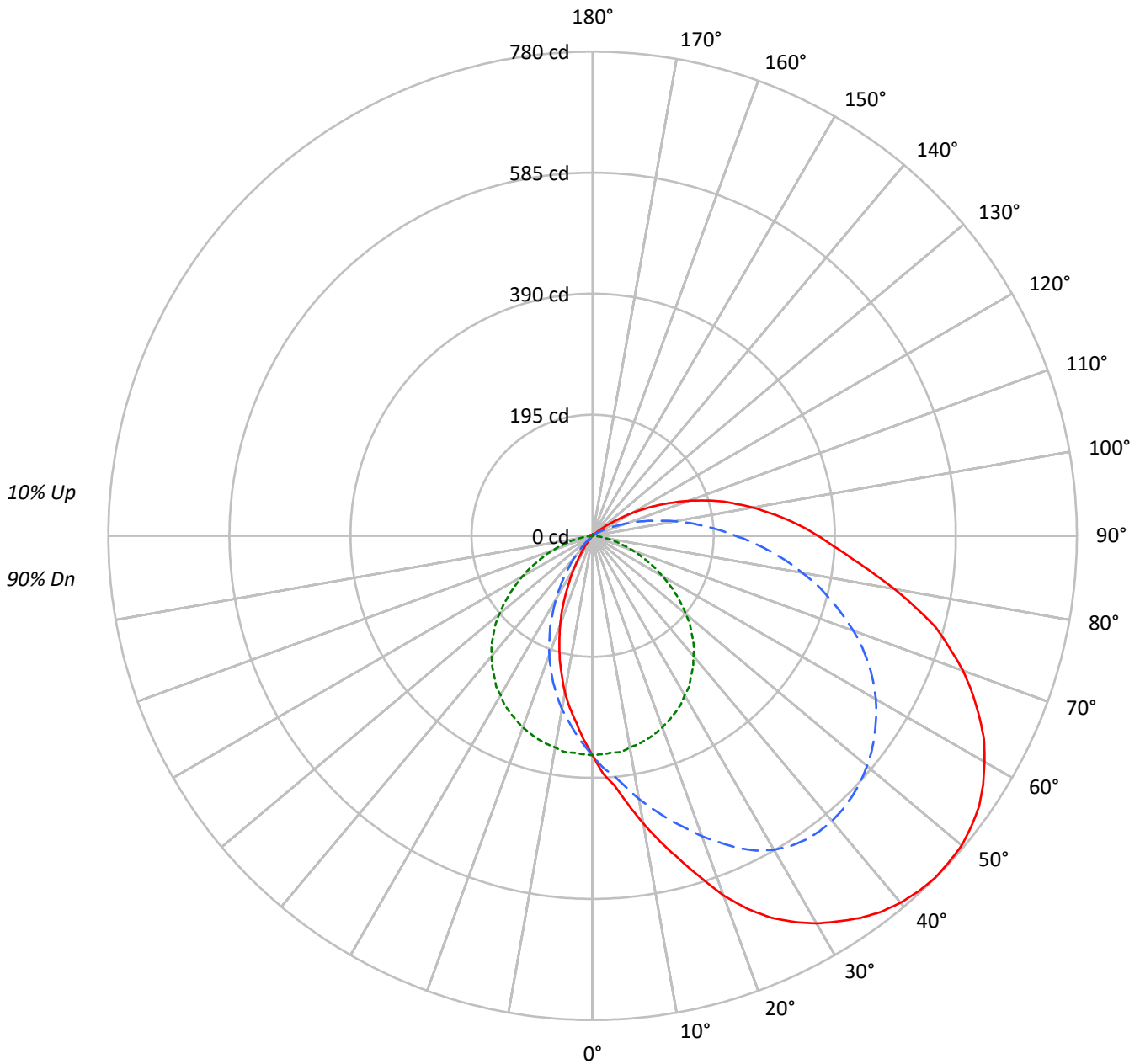
Lumens per Lamp: N/A
Luminaire Lumens: 1748.2 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
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°	3806	3806	3806
5°	4178	3750	3128
10°	4728	3704	2578
15°	5299	3657	2010
20°	5976	3598	1480
25°	6538	3528	972
30°	6955	3436	548
35°	7316	3336	241
40°	7638	3214	58
45°	7913	3059	0
50°	8144	2855	0
55°	8320	2597	0
60°	8408	2295	0
65°	8443	1954	0
70°	8414	1593	0
75°	8307	1174	7
80°	7970	718	37
85°	7704	346	50



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	1.9
10°-20°	101.4	5.8
20°-30°	164.2	9.4
30°-40°	211.0	12.1
40°-50°	238.8	13.7
50°-60°	247.4	14.2
60°-70°	233.3	13.3
70°-80°	195.5	11.2
80°-90°	141.7	8.1
90°-100°	93.2	5.3
100°-110°	53.8	3.1
110°-120°	23.8	1.4
120°-130°	6.5	0.4
130°-140°	1.5	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	299.5	17.1
0°-40°	510.5	29.2
0°-60°	996.7	57.0
0°-90°	1567.3	89.7
90°-120°	170.7	9.8
90°-150°	179.7	10.3
90°-180°	181.0	10.4
0°-180°	1748.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	354	354	354	354	354	
5°	404	388	351	318	302	41
15°	539	473	339	245	204	155
25°	679	555	314	161	101	314
35°	752	598	276	78	25	471
45°	780	592	226	18	0	602
55°	760	555	163	0	0	679
65°	687	491	97	0	0	680
75°	572	396	41	0	0	600
85°	419	287	7	2	3	358
90°	363	230	2	3	3	199
95°	312	180	1	3	4	245
105°	214	93	1	2	4	226
115°	117	31	1	1	2	117
125°	35	4	2	1	2	35
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6	353.6
2.5°	383.3	382.9	381.5	379.3	376.1	370.7	366.2	362.1	356.7	352.2	343.7
5°	403.6	401.3	399.5	397.3	390.1	385.1	377.0	368.0	359.4	350.9	333.8
7.5°	436.0	432.4	429.7	423.4	413.5	402.2	389.6	381.1	375.2	351.3	322.0
10°	470.7	467.5	462.1	450.9	438.7	422.5	404.5	384.2	366.2	346.4	311.7
12.5°	504.9	500.4	492.8	478.3	461.2	441.0	416.2	392.3	366.6	343.2	299.5
15°	539.2	534.2	526.1	508.5	486.0	459.4	429.2	399.1	368.9	339.2	286.9
17.5°	576.5	569.8	557.6	537.8	509.4	476.5	441.0	404.5	368.0	334.2	273.4
20°	616.6	607.2	594.1	567.5	534.2	495.5	452.7	409.9	367.5	328.4	258.1
22.5°	650.0	640.5	626.1	598.6	558.5	511.2	462.6	413.5	365.7	321.6	243.7
25°	678.8	671.1	655.4	623.8	581.5	527.9	472.0	416.2	363.0	314.4	228.4
27.5°	701.3	694.1	676.5	644.1	600.9	542.8	479.2	417.5	359.4	307.2	212.6
30°	721.1	713.9	692.7	659.4	613.9	554.5	486.5	418.0	354.9	296.4	195.5
32.5°	736.4	729.7	708.1	672.5	622.9	562.6	490.5	417.5	349.1	288.7	177.0
35°	751.7	745.0	719.8	681.9	629.7	566.2	493.7	415.3	341.9	276.1	159.4
37.5°	763.5	755.8	730.1	688.2	632.8	567.1	493.2	412.1	334.2	265.7	141.9
40°	771.6	763.5	736.0	691.8	633.7	565.7	489.6	406.7	325.2	252.7	123.4
42.5°	777.0	768.0	738.7	697.2	631.9	562.1	484.2	400.0	315.3	241.4	105.8
45°	779.7	770.2	739.1	692.7	628.8	555.4	476.1	391.4	304.5	226.1	88.3
47.5°	778.3	768.0	736.9	687.8	622.9	548.2	467.1	381.1	291.4	212.6	71.6
50°	776.1	765.3	731.9	681.5	614.8	539.2	457.2	368.4	277.9	195.9	56.8
52.5°	768.9	758.1	726.5	672.5	605.4	528.8	443.7	355.4	263.5	179.7	43.2
55°	759.9	749.9	717.1	664.4	593.2	516.2	431.1	341.4	249.5	163.1	31.1
57.5°	745.9	736.9	705.4	651.3	581.0	502.2	417.1	326.1	232.0	146.4	21.6
60°	728.8	719.8	689.1	636.4	567.1	486.5	401.8	310.3	216.2	129.7	13.5
62.5°	710.8	702.2	670.2	618.0	549.5	469.8	385.1	294.6	199.5	114.4	8.1
65°	686.9	678.8	650.0	595.9	530.1	451.8	366.6	275.7	182.4	97.3	4.5
67.5°	661.7	654.5	625.2	575.6	507.6	432.0	347.7	257.2	164.4	82.4	2.3
70°	634.6	625.6	598.6	548.2	484.7	409.4	327.0	238.3	147.3	68.0	0.0
72.5°	603.1	596.4	570.2	522.5	458.1	385.6	305.8	217.6	128.4	54.1	0.5
75°	572.5	563.9	540.1	495.0	432.0	360.3	282.4	198.2	109.9	41.4	0.5
77.5°	532.8	530.1	507.6	463.9	407.2	336.0	256.7	174.8	92.3	29.7	0.5
80°	493.2	490.5	472.9	432.9	378.4	307.2	232.9	152.7	75.2	19.8	0.5
82.5°	454.0	450.4	433.8	400.4	349.1	282.9	208.1	130.6	59.5	12.2	0.5
85°	418.9	414.4	396.4	365.7	318.9	255.4	182.4	109.0	44.1	6.8	0.9
87.5°	388.7	385.6	365.7	334.2	288.3	229.7	159.9	88.3	31.1	3.2	1.4
90°	363.0	356.3	338.7	305.4	259.4	201.3	136.0	70.7	20.7	1.8	1.8
92.5°	337.8	332.0	312.6	278.4	233.8	177.0	113.1	54.1	13.1	0.9	2.3
95°	311.7	305.4	286.5	254.9	207.6	152.2	92.8	39.6	7.2	0.9	2.3
97.5°	286.0	280.2	260.3	228.8	184.2	130.6	73.4	27.9	3.6	0.9	1.8
100°	262.1	255.4	237.4	205.8	160.8	109.0	56.8	18.0	2.3	0.9	1.8
102.5°	236.9	231.5	213.0	182.4	136.5	88.7	42.3	11.3	0.9	0.9	1.4
105°	214.4	207.6	189.6	158.1	116.2	69.8	29.7	6.8	0.9	0.9	1.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	139.6	134.2	118.5	91.9	59.0	27.5	8.1	1.4	1.4	1.4	1.4
115°	116.7	108.6	94.6	71.2	43.7	18.0	4.1	1.4	1.4	1.4	1.4
117.5°	93.2	86.5	76.6	54.1	28.8	11.7	2.3	1.4	1.4	1.4	1.4
120°	73.0	66.7	55.4	37.4	19.4	6.8	0.9	1.4	1.4	1.4	1.4
122.5°	52.2	47.3	37.4	24.3	11.7	3.2	1.4	1.4	1.8	1.8	1.4
125°	34.7	32.0	24.8	14.9	7.2	1.4	1.4	1.4	1.8	1.8	1.4
127.5°	22.5	20.3	14.4	8.6	3.2	1.4	1.4	1.8	1.8	1.8	1.4
130°	12.6	11.3	8.6	5.0	1.4	1.4	1.4	1.8	1.8	1.8	1.4
132.5°	7.2	6.8	4.5	0.9	1.4	1.4	1.4	1.8	1.8	1.8	1.8
135°	1.8	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.8	2.3	2.3	2.3	1.8
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.8	2.3	2.3	2.3	1.8
142.5°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8	1.8
145°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	1.8	1.8	1.8
147.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8	1.8
150°	0.5	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	1.8
152.5°	0.5	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	1.8
155°	0.9	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	2.3
157.5°	0.9	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	2.3
160°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8
165°	0.9	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8
167.5°	0.9	0.9	0.9	1.4	1.4	1.4	1.8	1.8	1.8	1.8	1.8
170°	0.9	0.9	0.9	1.4	1.4	1.4	1.8	2.3	2.3	2.3	2.3
172.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	2.3
175°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	2.3
177.5°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	1.8
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	353.6	353.6	353.6
2.5°	336.5	330.2	328.4
5°	318.4	308.1	302.2
7.5°	300.4	286.5	279.7
10°	283.8	263.9	256.7
12.5°	263.9	241.0	229.7
15°	245.0	215.3	204.5
17.5°	223.9	190.5	177.9
20°	204.0	165.8	152.7
22.5°	181.5	141.4	127.0
25°	161.2	117.1	100.9
27.5°	138.7	92.3	78.4
30°	117.6	70.7	56.8
32.5°	97.3	51.8	39.2
35°	78.4	35.1	24.8
37.5°	60.4	21.6	12.6
40°	43.7	11.3	5.9
42.5°	29.3	5.4	3.2
45°	18.0	2.7	0.0
47.5°	10.4	0.0	0.0
50°	5.4	0.0	0.0
52.5°	2.3	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°	0.5	0.5	0.5
77.5°	0.5	0.9	1.4
80°	0.9	1.8	2.3
82.5°	1.8	2.3	2.3
85°	1.8	2.3	2.7
87.5°	2.3	2.7	3.2
90°	2.7	3.2	3.2
92.5°	2.7	3.6	3.6
95°	3.2	3.6	4.1
97.5°	3.6	4.1	4.1
100°	3.2	4.1	4.5
102.5°	2.7	4.1	4.1
105°	2.3	3.2	3.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.8	2.3	2.3
115°	1.4	1.8	2.3
117.5°	1.4	1.8	1.8
120°	1.4	1.4	1.8
122.5°	1.4	1.4	1.8
125°	1.4	1.4	1.8
127.5°	1.8	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.8	1.4	1.4
135°	1.8	1.4	1.4
137.5°	1.8	1.4	1.4
140°	1.8	1.4	1.4
142.5°	1.8	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	0.9
152.5°	1.4	0.9	0.9
155°	1.4	0.9	0.5
157.5°	1.8	0.9	0.5
160°	1.4	0.9	0.5
162.5°	1.4	0.9	0.5
165°	1.4	0.9	0.0
167.5°	1.4	0.9	0.5
170°	1.4	0.9	0.5
172.5°	1.4	0.9	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	189.2	183.8	165.8	136.0	95.0	53.1	19.8	3.6	0.9	1.4	1.4
110°	164.9	160.3	141.9	113.1	76.6	39.6	13.1	2.3	1.4	1.4	1.4





107.5°	1.8	2.7	3.2
110°	1.8	2.3	2.7



(END OF REPORT)