

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: P551567

Luminaire Tested: **FCC-X-2-LD4-2LO-35-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: P551567
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-35-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 3500K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

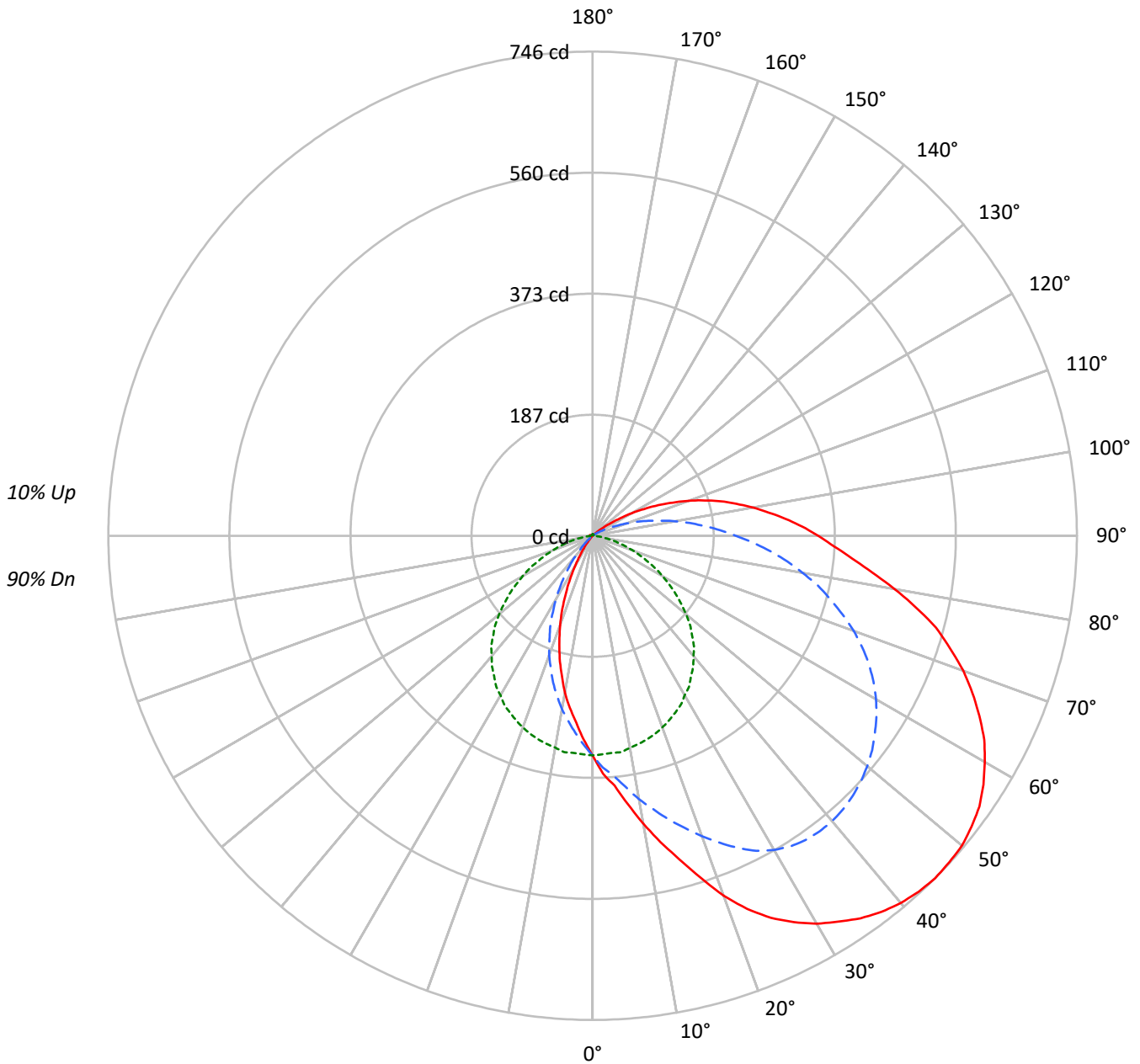
Lumens per Lamp: N/A
Luminaire Lumens: 1673.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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°	3643	3643	3643
5°	3999	3589	2995
10°	4525	3545	2468
15°	5071	3500	1923
20°	5720	3444	1416
25°	6257	3377	930
30°	6657	3289	524
35°	7003	3193	231
40°	7310	3075	55
45°	7573	2928	0
50°	7794	2733	0
55°	7963	2486	0
60°	8047	2198	0
65°	8080	1870	0
70°	8053	1525	0
75°	7951	1126	6
80°	7628	689	36
85°	7373	331	48



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.4	1.9
10°-20°	97.1	5.8
20°-30°	157.2	9.4
30°-40°	201.9	12.1
40°-50°	228.5	13.7
50°-60°	236.8	14.2
60°-70°	223.3	13.3
70°-80°	187.1	11.2
80°-90°	135.6	8.1
90°-100°	89.2	5.3
100°-110°	51.5	3.1
110°-120°	22.7	1.4
120°-130°	6.2	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	286.6	17.1
0°-40°	488.6	29.2
0°-60°	953.9	57.0
0°-90°	1500.0	89.7
90°-120°	163.4	9.8
90°-150°	171.9	10.3
90°-180°	173.0	10.3
0°-180°	1673.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	338	338	338	338	338	
5°	386	371	336	305	289	39
15°	516	452	325	234	196	149
25°	650	531	301	154	97	300
35°	720	572	264	75	24	451
45°	746	567	216	17	0	576
55°	727	531	156	0	0	649
65°	657	470	93	0	0	650
75°	548	379	40	0	0	575
85°	401	275	6	2	3	342
90°	348	220	2	3	3	191
95°	298	172	1	3	4	234
105°	205	89	1	2	3	217
115°	112	30	1	1	2	112
125°	33	4	2	1	2	33
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°	338.4	338.4	338.4	338.4	338.4	338.4	338.4	338.4	338.4	338.4	338.4
2.5°	366.9	366.4	365.1	363.0	360.0	354.8	350.5	346.6	341.4	337.1	328.9
5°	386.3	384.1	382.4	380.2	373.3	368.6	360.8	352.2	344.0	335.8	319.4
7.5°	417.3	413.8	411.3	405.2	395.7	385.0	372.9	364.7	359.1	336.3	308.2
10°	450.5	447.5	442.3	431.5	419.9	404.4	387.1	367.7	350.5	331.5	298.3
12.5°	483.3	478.9	471.6	457.8	441.4	422.0	398.3	375.5	350.9	328.5	286.7
15°	516.0	511.3	503.5	486.7	465.1	439.7	410.8	381.9	353.1	324.6	274.6
17.5°	551.8	545.3	533.7	514.7	487.6	456.1	422.0	387.1	352.2	319.9	261.7
20°	590.2	581.1	568.6	543.2	511.3	474.2	433.2	392.3	351.8	314.3	247.0
22.5°	622.1	613.0	599.2	572.9	534.6	489.3	442.7	395.7	350.0	307.8	233.2
25°	649.7	642.3	627.2	597.1	556.5	505.2	451.8	398.3	347.5	300.9	218.6
27.5°	671.2	664.3	647.5	616.5	575.1	519.5	458.7	399.6	344.0	294.0	203.5
30°	690.2	683.3	663.0	631.1	587.6	530.7	465.6	400.1	339.7	283.7	187.1
32.5°	704.8	698.4	677.7	643.6	596.2	538.4	469.5	399.6	334.1	276.3	169.4
35°	719.5	713.0	688.9	652.7	602.7	541.9	472.5	397.5	327.2	264.3	152.6
37.5°	730.7	723.4	698.8	658.7	605.7	542.7	472.0	394.4	319.9	254.3	135.8
40°	738.5	730.7	704.4	662.2	606.5	541.5	468.6	389.3	311.2	241.8	118.1
42.5°	743.6	735.0	707.0	667.3	604.8	538.0	463.4	382.8	301.8	231.1	101.3
45°	746.2	737.2	707.4	663.0	601.8	531.5	455.7	374.6	291.4	216.4	84.5
47.5°	744.9	735.0	705.3	658.3	596.2	524.6	447.0	364.7	278.9	203.5	68.5
50°	742.8	732.4	700.5	652.2	588.4	516.0	437.6	352.6	266.0	187.5	54.3
52.5°	735.9	725.5	695.4	643.6	579.4	506.1	424.6	340.1	252.2	172.0	41.4
55°	727.3	717.8	686.3	635.9	567.7	494.0	412.6	326.8	238.8	156.1	29.7
57.5°	713.9	705.3	675.1	623.4	556.1	480.7	399.2	312.1	222.0	140.1	20.7
60°	697.5	688.9	659.6	609.1	542.7	465.6	384.5	297.0	206.9	124.2	12.9
62.5°	680.3	672.1	641.5	591.5	525.9	449.6	368.6	281.9	191.0	109.5	7.8
65°	657.4	649.7	622.1	570.3	507.4	432.4	350.9	263.8	174.6	93.1	4.3
67.5°	633.3	626.4	598.4	550.9	485.8	413.4	332.8	246.2	157.3	78.9	2.2
70°	607.4	598.8	572.9	524.6	463.9	391.9	313.0	228.0	141.0	65.1	0.0
72.5°	577.2	570.8	545.8	500.1	438.4	369.0	292.7	208.2	122.9	51.7	0.4
75°	547.9	539.7	516.9	473.8	413.4	344.9	270.3	189.7	105.2	39.7	0.4
77.5°	510.0	507.4	485.8	444.0	389.7	321.6	245.7	167.3	88.4	28.5	0.4
80°	472.0	469.5	452.6	414.3	362.1	294.0	222.9	146.1	72.0	19.0	0.4
82.5°	434.5	431.1	415.1	383.2	334.1	270.7	199.2	125.0	56.9	11.6	0.4
85°	400.9	396.6	379.4	350.0	305.2	244.4	174.6	104.3	42.2	6.5	0.9
87.5°	372.0	369.0	350.0	319.9	275.9	219.9	153.0	84.5	29.7	3.0	1.3
90°	347.5	341.0	324.2	292.3	248.3	192.7	130.2	67.7	19.8	1.7	1.7
92.5°	323.3	317.7	299.2	266.4	223.7	169.4	108.2	51.7	12.5	0.9	2.2
95°	298.3	292.3	274.2	244.0	198.7	145.7	88.8	37.9	6.9	0.9	2.2
97.5°	273.7	268.1	249.2	219.0	176.3	125.0	70.3	26.7	3.4	0.9	1.7
100°	250.9	244.4	227.2	197.0	153.9	104.3	54.3	17.2	2.2	0.9	1.7
102.5°	226.8	221.6	203.9	174.6	130.6	84.9	40.5	10.8	0.9	0.9	1.3
105°	205.2	198.7	181.5	151.3	111.2	66.8	28.5	6.5	0.9	0.9	1.3



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CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-93-88-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	133.6	128.5	113.4	87.9	56.5	26.3	7.8	1.3	1.3	1.3	1.3
115°	111.7	103.9	90.5	68.1	41.8	17.2	3.9	1.3	1.3	1.3	1.3
117.5°	89.2	82.8	73.3	51.7	27.6	11.2	2.2	1.3	1.3	1.3	1.3
120°	69.8	63.8	53.0	35.8	18.5	6.5	0.9	1.3	1.3	1.3	1.3
122.5°	50.0	45.3	35.8	23.3	11.2	3.0	1.3	1.3	1.7	1.7	1.3
125°	33.2	30.6	23.7	14.2	6.9	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.6	19.4	13.8	8.2	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	12.1	10.8	8.2	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.9	6.5	4.3	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.2	2.2	2.2	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	338.4	338.4	338.4
2.5°	322.0	316.0	314.3
5°	304.8	294.9	289.3
7.5°	287.5	274.2	267.7
10°	271.6	252.6	245.7
12.5°	252.6	230.6	219.9
15°	234.5	206.1	195.7
17.5°	214.3	182.4	170.3
20°	195.3	158.6	146.1
22.5°	173.7	135.4	121.6
25°	154.3	112.1	96.6
27.5°	132.8	88.4	75.0
30°	112.5	67.7	54.3
32.5°	93.1	49.6	37.5
35°	75.0	33.6	23.7
37.5°	57.8	20.7	12.1
40°	41.8	10.8	5.6
42.5°	28.0	5.2	3.0
45°	17.2	2.6	0.0
47.5°	9.9	0.0	0.0
50°	5.2	0.0	0.0
52.5°	2.2	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	0.9	1.3
80°	0.9	1.7	2.2
82.5°	1.7	2.2	2.2
85°	1.7	2.2	2.6
87.5°	2.2	2.6	3.0
90°	2.6	3.0	3.0
92.5°	2.6	3.4	3.4
95°	3.0	3.4	3.9
97.5°	3.4	3.9	3.9
100°	3.0	3.9	4.3
102.5°	2.6	3.9	3.9
105°	2.2	3.0	3.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.7	2.2	2.2
115°	1.3	1.7	2.2
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.7	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	181.1	175.9	158.6	130.2	91.0	50.9	19.0	3.4	0.9	1.3	1.3
110°	157.8	153.5	135.8	108.2	73.3	37.9	12.5	2.2	1.3	1.3	1.3





107.5°	1.7	2.6	3.0
110°	1.7	2.2	2.6



(END OF REPORT)