

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: P551471

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-88-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: P551471
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-30-UNV-81-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

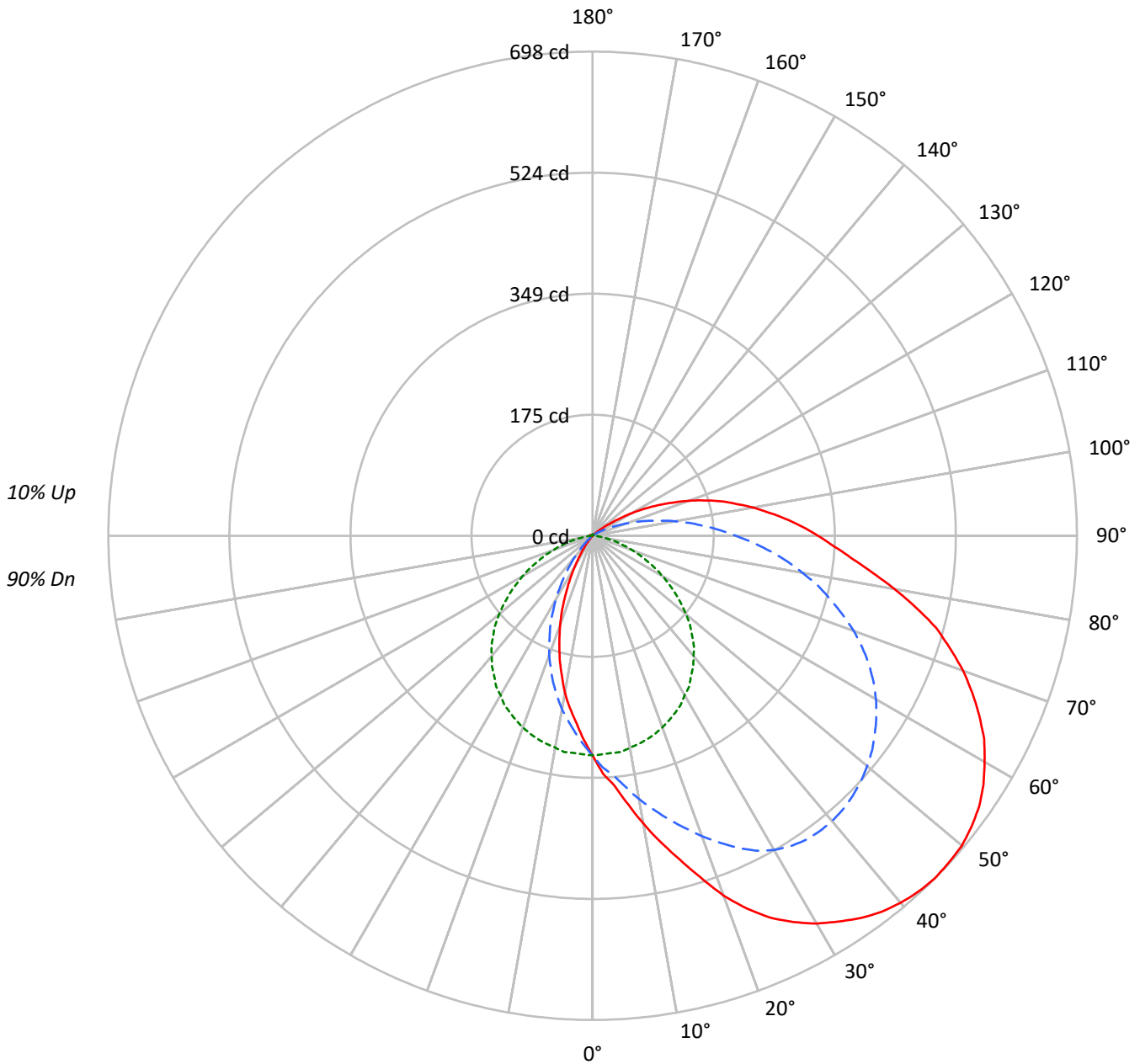
Lumens per Lamp: N/A
Luminaire Lumens: 1564.9 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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°	3408	3408	3408
5°	3740	3357	2801
10°	4233	3316	2309
15°	4744	3275	1799
20°	5350	3221	1325
25°	5853	3159	870
30°	6227	3075	490
35°	6550	2987	216
40°	6838	2877	51
45°	7084	2739	0
50°	7291	2556	0
55°	7448	2325	0
60°	7528	2055	0
65°	7559	1749	0
70°	7533	1427	0
75°	7437	1052	6
80°	7137	642	32
85°	6897	305	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.3	1.9
10°-20°	90.8	5.8
20°-30°	147.0	9.4
30°-40°	188.9	12.1
40°-50°	213.8	13.7
50°-60°	221.5	14.2
60°-70°	208.9	13.3
70°-80°	175.1	11.2
80°-90°	126.9	8.1
90°-100°	83.4	5.3
100°-110°	48.2	3.1
110°-120°	21.2	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°	268.1	17.1
0°-40°	457.0	29.2
0°-60°	892.3	57.0
0°-90°	1403.1	89.7
90°-120°	152.8	9.8
90°-150°	160.7	10.3
90°-180°	162.0	10.4
0°-180°	1564.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	317	317	317	317	317	
5°	361	347	314	285	271	36
15°	483	423	304	219	183	139
25°	608	497	282	144	90	281
35°	673	535	247	70	22	422
45°	698	530	202	16	0	539
55°	680	497	146	0	0	608
65°	615	440	87	0	0	608
75°	512	355	37	0	0	538
85°	375	257	6	2	2	320
90°	325	206	2	2	3	178
95°	279	161	1	3	4	219
105°	192	83	1	2	3	203
115°	104	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°	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6	316.6
2.5°	343.2	342.8	341.6	339.5	336.7	331.9	327.9	324.2	319.4	315.4	307.7
5°	361.3	359.3	357.7	355.7	349.2	344.8	337.5	329.5	321.8	314.1	298.8
7.5°	390.4	387.1	384.7	379.1	370.2	360.1	348.8	341.2	335.9	314.5	288.3
10°	421.4	418.6	413.7	403.7	392.8	378.3	362.1	344.0	327.9	310.1	279.1
12.5°	452.1	448.0	441.2	428.3	412.9	394.8	372.6	351.2	328.3	307.3	268.2
15°	482.7	478.3	471.0	455.3	435.1	411.3	384.3	357.3	330.3	303.7	256.9
17.5°	516.2	510.1	499.2	481.5	456.1	426.7	394.8	362.1	329.5	299.2	244.8
20°	552.1	543.6	531.9	508.1	478.3	443.6	405.3	367.0	329.1	294.0	231.1
22.5°	581.9	573.4	560.5	535.9	500.0	457.7	414.2	370.2	327.5	287.9	218.2
25°	607.7	600.9	586.7	558.5	520.6	472.6	422.6	372.6	325.0	281.5	204.5
27.5°	627.9	621.4	605.7	576.7	538.0	485.9	429.1	373.8	321.8	275.0	190.3
30°	645.6	639.2	620.2	590.4	549.6	496.4	435.5	374.2	317.8	265.3	175.0
32.5°	659.3	653.3	633.9	602.1	557.7	503.7	439.2	373.8	312.5	258.5	158.5
35°	673.0	667.0	644.4	610.5	563.8	506.9	442.0	371.8	306.1	247.2	142.8
37.5°	683.5	676.7	653.7	616.2	566.6	507.7	441.6	369.0	299.2	237.9	127.0
40°	690.8	683.5	658.9	619.4	567.4	506.5	438.3	364.1	291.2	226.2	110.5
42.5°	695.6	687.6	661.4	624.3	565.8	503.3	433.5	358.1	282.3	216.1	94.8
45°	698.0	689.6	661.8	620.2	563.0	497.2	426.2	350.4	272.6	202.4	79.0
47.5°	696.8	687.6	659.7	615.8	557.7	490.8	418.2	341.2	260.9	190.3	64.1
50°	694.8	685.1	655.3	610.1	550.5	482.7	409.3	329.9	248.8	175.4	50.8
52.5°	688.4	678.7	650.5	602.1	542.0	473.4	397.2	318.2	235.9	160.9	38.7
55°	680.3	671.4	642.0	594.8	531.1	462.1	385.9	305.7	223.4	146.0	27.8
57.5°	667.8	659.7	631.5	583.1	520.2	449.6	373.4	292.0	207.7	131.1	19.4
60°	652.5	644.4	617.0	569.8	507.7	435.5	359.7	277.8	193.6	116.1	12.1
62.5°	636.3	628.7	600.1	553.3	492.0	420.6	344.8	263.7	178.6	102.4	7.3
65°	615.0	607.7	581.9	533.5	474.6	404.5	328.3	246.8	163.3	87.1	4.0
67.5°	592.4	585.9	559.7	515.4	454.5	386.7	311.3	230.3	147.2	73.8	2.0
70°	568.2	560.1	535.9	490.8	433.9	366.6	292.8	213.3	131.9	60.9	0.0
72.5°	540.0	533.9	510.5	467.8	410.1	345.2	273.8	194.8	114.9	48.4	0.4
75°	512.5	504.9	483.5	443.2	386.7	322.6	252.8	177.4	98.4	37.1	0.4
77.5°	477.1	474.6	454.5	415.4	364.6	300.8	229.9	156.5	82.7	26.6	0.4
80°	441.6	439.2	423.4	387.5	338.7	275.0	208.5	136.7	67.3	17.7	0.4
82.5°	406.5	403.3	388.3	358.5	312.5	253.2	186.3	116.9	53.2	10.9	0.4
85°	375.0	371.0	354.9	327.5	285.5	228.7	163.3	97.6	39.5	6.0	0.8
87.5°	348.0	345.2	327.5	299.2	258.1	205.7	143.2	79.0	27.8	2.8	1.2
90°	325.0	319.0	303.3	273.4	232.3	180.3	121.8	63.3	18.6	1.6	1.6
92.5°	302.4	297.2	279.9	249.2	209.3	158.5	101.2	48.4	11.7	0.8	2.0
95°	279.1	273.4	256.5	228.2	185.9	136.3	83.1	35.5	6.5	0.8	2.0
97.5°	256.1	250.8	233.1	204.9	164.9	116.9	65.7	25.0	3.2	0.8	1.6
100°	234.7	228.7	212.5	184.3	144.0	97.6	50.8	16.1	2.0	0.8	1.6
102.5°	212.1	207.3	190.7	163.3	122.2	79.4	37.9	10.1	0.8	0.8	1.2
105°	192.0	185.9	169.8	141.5	104.0	62.5	26.6	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°	125.0	120.2	106.1	82.3	52.8	24.6	7.3	1.2	1.2	1.2	1.2
115°	104.4	97.2	84.7	63.7	39.1	16.1	3.6	1.2	1.2	1.2	1.2
117.5°	83.5	77.4	68.6	48.4	25.8	10.5	2.0	1.2	1.2	1.2	1.2
120°	65.3	59.7	49.6	33.5	17.3	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.8	42.3	33.5	21.8	10.5	2.8	1.2	1.2	1.6	1.6	1.2
125°	31.1	28.6	22.2	13.3	6.5	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.2	18.1	12.9	7.7	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.3	10.1	7.7	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.5	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°	316.6	316.6	316.6
2.5°	301.2	295.6	294.0
5°	285.1	275.8	270.6
7.5°	269.0	256.5	250.4
10°	254.1	236.3	229.9
12.5°	236.3	215.7	205.7
15°	219.4	192.8	183.1
17.5°	200.4	170.6	159.3
20°	182.7	148.4	136.7
22.5°	162.5	126.6	113.7
25°	144.4	104.8	90.3
27.5°	124.2	82.7	70.2
30°	105.3	63.3	50.8
32.5°	87.1	46.4	35.1
35°	70.2	31.5	22.2
37.5°	54.0	19.4	11.3
40°	39.1	10.1	5.2
42.5°	26.2	4.8	2.8
45°	16.1	2.4	0.0
47.5°	9.3	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°	169.4	164.5	148.4	121.8	85.1	47.6	17.7	3.2	0.8	1.2	1.2
110°	147.6	143.6	127.0	101.2	68.6	35.5	11.7	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)