

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: P551571

Luminaire Tested: **FCC-X-2-LD4-2LO-35-UNV-93-96-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: P551571
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-93-96-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K,
AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

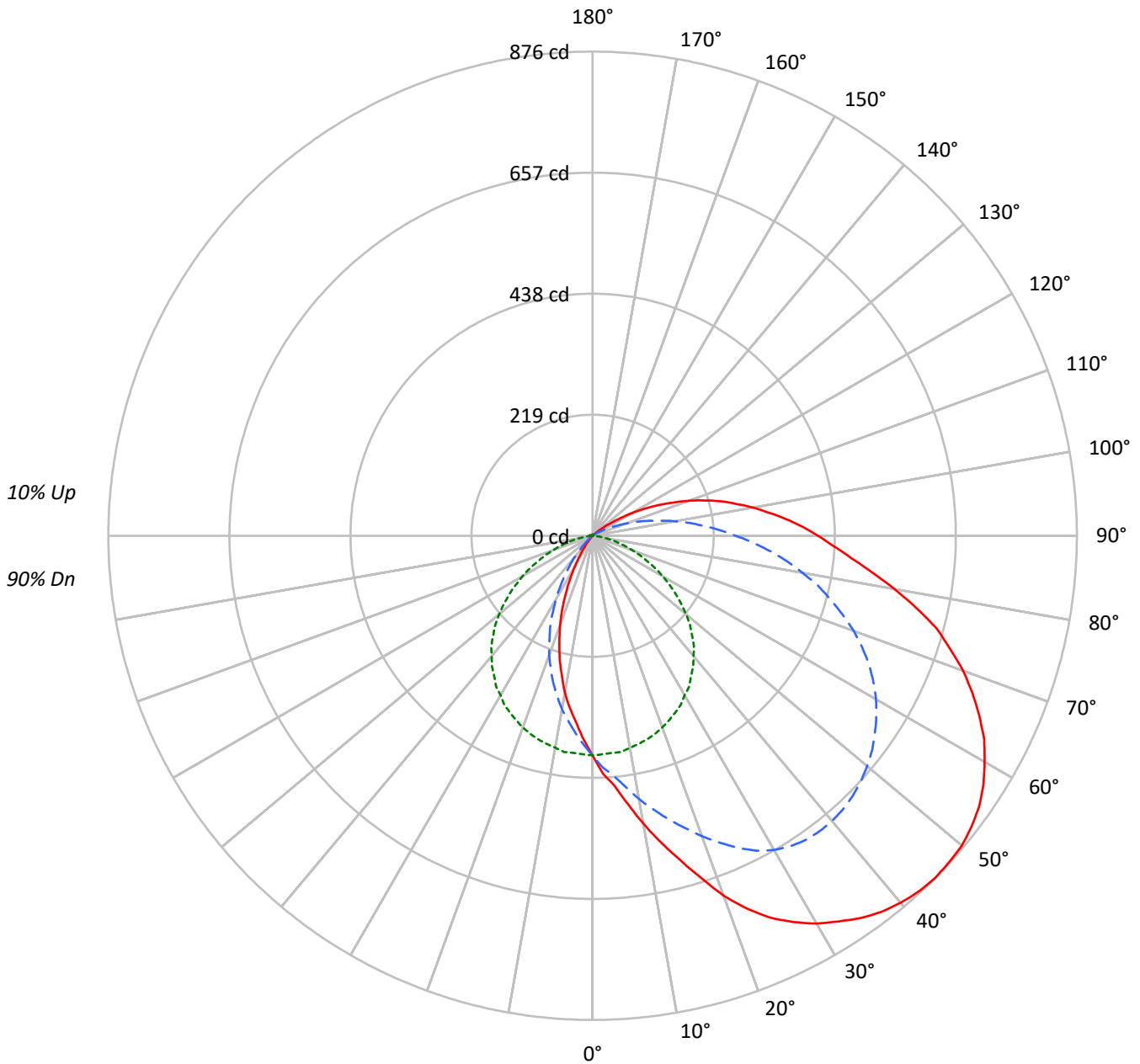
Lumens per Lamp: N/A
Luminaire Lumens: 1963.9 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4277	4277	4277
5°	4694	4213	3516
10°	5311	4162	2898
15°	5953	4109	2258
20°	6714	4042	1663
25°	7346	3964	1092
30°	7814	3860	615
35°	8220	3748	271
40°	8581	3610	65
45°	8890	3438	0
50°	9150	3208	0
55°	9348	2917	0
60°	9446	2580	0
65°	9486	2195	0
70°	9454	1790	0
75°	9333	1322	7
80°	8956	809	40
85°	8657	386	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	1.9
10°-20°	113.9	5.8
20°-30°	184.5	9.4
30°-40°	237.0	12.1
40°-50°	268.3	13.7
50°-60°	278.0	14.2
60°-70°	262.2	13.3
70°-80°	219.7	11.2
80°-90°	159.2	8.1
90°-100°	104.7	5.3
100°-110°	60.4	3.1
110°-120°	26.7	1.4
120°-130°	7.2	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	336.5	17.1
0°-40°	573.5	29.2
0°-60°	1119.8	57.0
0°-90°	1760.9	89.7
90°-120°	191.8	9.8
90°-150°	201.7	10.3
90°-180°	203.0	10.3
0°-180°	1963.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	397	397	397	397	397	
5°	453	436	394	358	340	46
15°	606	531	381	275	230	175
25°	763	623	353	181	113	352
35°	845	672	310	88	28	530
45°	876	665	254	20	0	676
55°	854	623	183	0	0	762
65°	772	552	109	0	0	764
75°	643	445	47	0	0	675
85°	471	323	8	2	3	402
90°	408	259	2	3	4	224
95°	350	202	1	4	5	275
105°	241	104	1	2	4	254
115°	131	35	2	2	2	131
125°	39	5	2	2	2	39
135°	2	2	2	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	2	2	0	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	397.3	397.3	397.3	397.3	397.3	397.3	397.3	397.3	397.3	397.3	397.3
2.5°	430.7	430.2	428.6	426.1	422.6	416.5	411.4	406.9	400.8	395.8	386.1
5°	453.4	450.9	448.9	446.4	438.3	432.7	423.6	413.5	403.8	394.2	375.0
7.5°	489.9	485.8	482.8	475.7	464.6	451.9	437.8	428.1	421.6	394.7	361.8
10°	528.8	525.3	519.2	506.6	492.9	474.7	454.5	431.7	411.4	389.2	350.2
12.5°	567.3	562.3	553.6	537.5	518.2	495.4	467.6	440.8	411.9	385.6	336.5
15°	605.8	600.2	591.1	571.4	546.1	516.2	482.3	448.4	414.5	381.1	322.4
17.5°	647.8	640.2	626.5	604.3	572.4	535.4	495.4	454.5	413.5	375.5	307.2
20°	692.8	682.2	667.5	637.7	600.2	556.7	508.6	460.5	413.0	368.9	290.0
22.5°	730.3	719.6	703.4	672.6	627.5	574.4	519.7	464.6	410.9	361.3	273.8
25°	762.7	754.1	736.3	700.9	653.3	593.1	530.4	467.6	407.9	353.2	256.6
27.5°	788.0	779.9	760.1	723.7	675.1	609.8	538.5	469.1	403.8	345.1	238.9
30°	810.2	802.1	778.3	740.9	689.8	623.0	546.6	469.6	398.8	333.0	219.6
32.5°	827.4	819.8	795.6	755.6	699.9	632.1	551.1	469.1	392.2	324.4	198.9
35°	844.6	837.1	808.7	766.2	707.5	636.1	554.7	466.6	384.1	310.2	179.2
37.5°	857.8	849.2	820.3	773.3	711.0	637.2	554.2	463.1	375.5	298.6	159.4
40°	866.9	857.8	826.9	777.3	712.0	635.6	550.1	457.0	365.4	283.9	138.7
42.5°	873.0	862.9	830.0	783.4	710.0	631.6	544.0	449.4	354.3	271.3	118.9
45°	876.0	865.4	830.5	778.3	706.5	624.0	534.9	439.8	342.1	254.1	99.2
47.5°	874.5	862.9	827.9	772.8	699.9	615.9	524.8	428.1	327.4	238.9	80.5
50°	872.0	859.8	822.4	765.7	690.8	605.8	513.7	414.0	312.2	220.1	63.8
52.5°	863.9	851.7	816.3	755.6	680.2	594.1	498.5	399.3	296.1	201.9	48.6
55°	853.8	842.6	805.7	746.5	666.5	580.0	484.3	383.6	280.4	183.2	34.9
57.5°	838.1	827.9	792.5	731.8	652.8	564.3	468.6	366.4	260.6	164.5	24.3
60°	818.8	808.7	774.3	715.1	637.2	546.6	451.4	348.7	242.9	145.8	15.2
62.5°	798.6	789.0	753.0	694.3	617.4	527.8	432.7	331.0	224.2	128.5	9.1
65°	771.8	762.7	730.3	669.5	595.7	507.6	411.9	309.7	205.0	109.3	5.1
67.5°	743.4	735.3	702.4	646.8	570.3	485.3	390.7	289.0	184.7	92.6	2.5
70°	713.1	702.9	672.6	615.9	544.5	460.0	367.4	267.7	165.5	76.4	0.0
72.5°	677.6	670.0	640.7	587.0	514.7	433.2	343.6	244.4	144.2	60.7	0.5
75°	643.2	633.6	606.8	556.2	485.3	404.9	317.3	222.7	123.5	46.6	0.5
77.5°	598.7	595.7	570.3	521.3	457.5	377.5	288.5	196.4	103.7	33.4	0.5
80°	554.2	551.1	531.4	486.3	425.1	345.1	261.6	171.6	84.5	22.3	0.5
82.5°	510.1	506.1	487.4	449.9	392.2	317.8	233.8	146.8	66.8	13.7	0.5
85°	470.7	465.6	445.3	410.9	358.3	286.9	205.0	122.5	49.6	7.6	1.0
87.5°	436.7	433.2	410.9	375.5	323.9	258.1	179.7	99.2	34.9	3.5	1.5
90°	407.9	400.3	380.6	343.1	291.5	226.2	152.8	79.5	23.3	2.0	2.0
92.5°	379.6	373.0	351.2	312.8	262.7	198.9	127.0	60.7	14.7	1.0	2.5
95°	350.2	343.1	321.9	286.4	233.3	171.1	104.3	44.5	8.1	1.0	2.5
97.5°	321.4	314.8	292.5	257.1	207.0	146.8	82.5	31.4	4.0	1.0	2.0
100°	294.5	286.9	266.7	231.3	180.7	122.5	63.8	20.2	2.5	1.0	2.0
102.5°	266.2	260.1	239.4	205.0	153.3	99.7	47.6	12.7	1.0	1.0	1.5
105°	240.9	233.3	213.1	177.6	130.6	78.4	33.4	7.6	1.0	1.0	1.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	156.9	150.8	133.1	103.2	66.3	30.9	9.1	1.5	1.5	1.5	1.5
115°	131.1	122.0	106.3	80.0	49.1	20.2	4.6	1.5	1.5	1.5	1.5
117.5°	104.8	97.2	86.0	60.7	32.4	13.2	2.5	1.5	1.5	1.5	1.5
120°	82.0	74.9	62.2	42.0	21.8	7.6	1.0	1.5	1.5	1.5	1.5
122.5°	58.7	53.1	42.0	27.3	13.2	3.5	1.5	1.5	2.0	2.0	1.5
125°	39.0	35.9	27.8	16.7	8.1	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.3	22.8	16.2	9.6	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.2	12.7	9.6	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.1	7.6	5.1	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	397.3	397.3	397.3
2.5°	378.0	371.0	368.9
5°	357.8	346.2	339.6
7.5°	337.6	321.9	314.3
10°	318.8	296.6	288.5
12.5°	296.6	270.8	258.1
15°	275.3	241.9	229.8
17.5°	251.5	214.1	199.9
20°	229.3	186.2	171.6
22.5°	203.9	158.9	142.7
25°	181.2	131.6	113.4
27.5°	155.9	103.7	88.1
30°	132.1	79.5	63.8
32.5°	109.3	58.2	44.0
35°	88.1	39.5	27.8
37.5°	67.8	24.3	14.2
40°	49.1	12.7	6.6
42.5°	32.9	6.1	3.5
45°	20.2	3.0	0.0
47.5°	11.6	0.0	0.0
50°	6.1	0.0	0.0
52.5°	2.5	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	1.0	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.0	4.0
95°	3.5	4.0	4.6
97.5°	4.0	4.6	4.6
100°	3.5	4.6	5.1
102.5°	3.0	4.6	4.6
105°	2.5	3.5	4.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	212.6	206.5	186.2	152.8	106.8	59.7	22.3	4.0	1.0	1.5	1.5
110°	185.2	180.2	159.4	127.0	86.0	44.5	14.7	2.5	1.5	1.5	1.5





107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)