

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: P551623

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-84-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: P551623
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-93-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

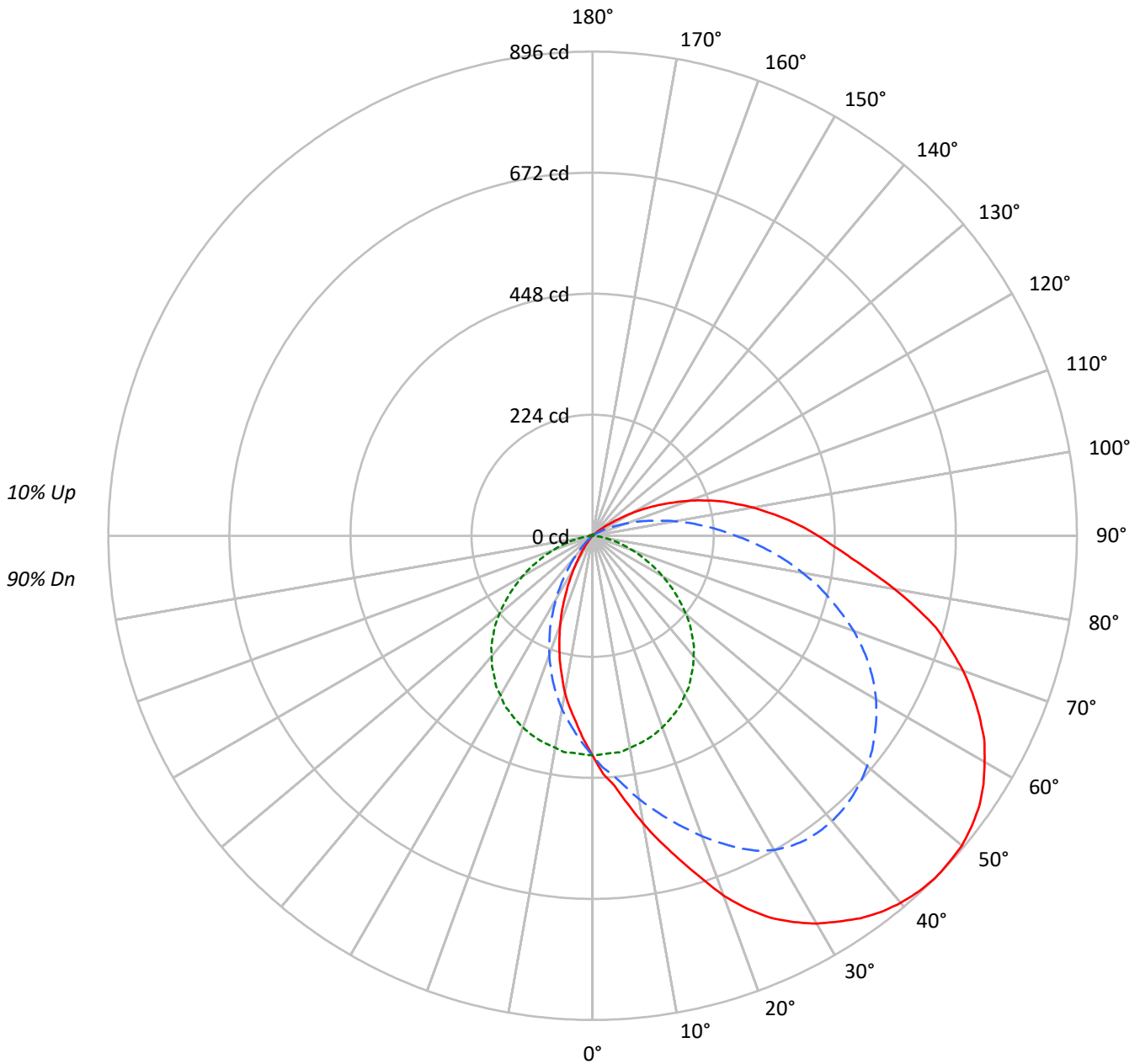
Lumens per Lamp: N/A
Luminaire Lumens: 2009.1 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4374	4374	4374
5°	4801	4311	3596
10°	5434	4257	2964
15°	6090	4203	2309
20°	6868	4135	1701
25°	7513	4055	1117
30°	7994	3948	629
35°	8409	3834	277
40°	8778	3693	66
45°	9094	3517	0
50°	9359	3282	0
55°	9561	2984	0
60°	9663	2639	0
65°	9702	2246	0
70°	9671	1832	0
75°	9548	1350	7
80°	9162	827	42
85°	8854	397	57



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.9	1.9
10°-20°	116.6	5.8
20°-30°	188.7	9.4
30°-40°	242.5	12.1
40°-50°	274.5	13.7
50°-60°	284.3	14.2
60°-70°	268.2	13.3
70°-80°	224.7	11.2
80°-90°	162.9	8.1
90°-100°	107.1	5.3
100°-110°	61.8	3.1
110°-120°	27.3	1.4
120°-130°	7.4	0.4
130°-140°	1.7	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°	344.2	17.1
0°-40°	586.7	29.2
0°-60°	1145.5	57.0
0°-90°	1801.2	89.7
90°-120°	196.2	9.8
90°-150°	206.5	10.3
90°-180°	208.0	10.4
0°-180°	2009.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	406	406	406	406	406	
5°	464	445	403	366	347	47
15°	620	543	390	282	235	179
25°	780	638	361	185	116	361
35°	864	687	317	90	28	542
45°	896	680	260	21	0	692
55°	873	638	187	0	0	780
65°	789	564	112	0	0	781
75°	658	455	48	0	0	690
85°	481	330	8	2	3	411
90°	417	265	2	3	4	229
95°	358	207	1	4	5	281
105°	246	107	1	3	4	260
115°	134	35	2	2	3	134
125°	40	5	2	2	2	40
135°	2	2	3	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	3	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°	406.4	406.4	406.4	406.4	406.4	406.4	406.4	406.4	406.4	406.4	406.4
2.5°	440.5	440.0	438.5	435.9	432.3	426.0	420.9	416.2	410.0	404.8	395.0
5°	463.8	461.2	459.2	456.6	448.3	442.6	433.3	422.9	413.1	403.3	383.6
7.5°	501.1	497.0	493.9	486.6	475.2	462.3	447.8	438.0	431.2	403.8	370.1
10°	541.0	537.3	531.1	518.2	504.2	485.6	464.9	441.6	420.9	398.1	358.2
12.5°	580.3	575.1	566.3	549.8	530.1	506.8	478.3	450.9	421.4	394.5	344.3
15°	619.7	614.0	604.6	584.5	558.6	528.0	493.3	458.7	424.0	389.8	329.8
17.5°	662.6	654.9	640.9	618.1	585.5	547.7	506.8	464.9	422.9	384.1	314.2
20°	708.7	697.8	682.8	652.3	614.0	569.4	520.3	471.1	422.4	377.4	296.6
22.5°	747.0	736.1	719.6	688.0	641.9	587.6	531.6	475.2	420.3	369.6	280.1
25°	780.1	771.3	753.2	717.0	668.3	606.7	542.5	478.3	417.2	361.3	262.5
27.5°	806.0	797.7	777.5	740.3	690.6	623.8	550.8	479.9	413.1	353.1	244.3
30°	828.8	820.5	796.2	757.9	705.6	637.3	559.1	480.4	407.9	340.6	224.7
32.5°	846.4	838.6	813.8	772.9	715.9	646.6	563.7	479.9	401.2	331.8	203.4
35°	864.0	856.2	827.2	783.8	723.7	650.7	567.4	477.3	392.9	317.3	183.3
37.5°	877.5	868.7	839.1	791.0	727.3	651.7	566.9	473.7	384.1	305.4	163.1
40°	886.8	877.5	845.9	795.1	728.4	650.2	562.7	467.5	373.8	290.4	141.8
42.5°	893.0	882.6	849.0	801.4	726.3	646.1	556.5	459.7	362.4	277.5	121.7
45°	896.1	885.2	849.5	796.2	722.7	638.3	547.2	449.9	349.9	259.9	101.5
47.5°	894.5	882.6	846.9	790.5	715.9	630.0	536.8	438.0	334.9	244.3	82.3
50°	891.9	879.5	841.2	783.2	706.6	619.7	525.4	423.5	319.4	225.2	65.2
52.5°	883.7	871.2	835.0	772.9	695.8	607.7	509.9	408.4	302.8	206.6	49.7
55°	873.3	861.9	824.1	763.6	681.8	593.3	495.4	392.4	286.8	187.4	35.7
57.5°	857.3	846.9	810.7	748.6	667.8	577.2	479.4	374.8	266.6	168.2	24.8
60°	837.6	827.2	792.0	731.5	651.7	559.1	461.8	356.7	248.5	149.1	15.5
62.5°	816.9	807.1	770.3	710.2	631.6	539.9	442.6	338.6	229.3	131.5	9.3
65°	789.4	780.1	747.0	684.9	609.3	519.2	421.4	316.8	209.7	111.8	5.2
67.5°	760.5	752.2	718.5	661.6	583.4	496.4	399.6	295.6	189.0	94.7	2.6
70°	729.4	719.0	688.0	630.0	557.0	470.6	375.8	273.8	169.3	78.2	0.0
72.5°	693.2	685.4	655.4	600.5	526.5	443.1	351.5	250.0	147.5	62.1	0.5
75°	658.0	648.1	620.7	568.9	496.4	414.1	324.6	227.8	126.3	47.6	0.5
77.5°	612.4	609.3	583.4	533.2	468.0	386.2	295.1	200.9	106.1	34.2	0.5
80°	566.9	563.7	543.6	497.5	434.8	353.1	267.6	175.5	86.5	22.8	0.5
82.5°	521.8	517.7	498.5	460.2	401.2	325.1	239.2	150.1	68.3	14.0	0.5
85°	481.4	476.3	455.6	420.3	366.5	293.5	209.7	125.3	50.7	7.8	1.0
87.5°	446.8	443.1	420.3	384.1	331.3	264.0	183.8	101.5	35.7	3.6	1.6
90°	417.2	409.5	389.3	351.0	298.2	231.4	156.3	81.3	23.8	2.1	2.1
92.5°	388.3	381.5	359.3	319.9	268.7	203.4	129.9	62.1	15.0	1.0	2.6
95°	358.2	351.0	329.2	293.0	238.6	175.0	106.6	45.6	8.3	1.0	2.6
97.5°	328.7	322.0	299.2	263.0	211.7	150.1	84.4	32.1	4.1	1.0	2.1
100°	301.3	293.5	272.8	236.6	184.8	125.3	65.2	20.7	2.6	1.0	2.1
102.5°	272.3	266.1	244.9	209.7	156.9	102.0	48.7	12.9	1.0	1.0	1.6
105°	246.4	238.6	217.9	181.7	133.6	80.2	34.2	7.8	1.0	1.0	1.6



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-84-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	160.5	154.3	136.1	105.6	67.8	31.6	9.3	1.6	1.6	1.6	1.6
115°	134.1	124.8	108.7	81.8	50.2	20.7	4.7	1.6	1.6	1.6	1.6
117.5°	107.2	99.4	88.0	62.1	33.1	13.5	2.6	1.6	1.6	1.6	1.6
120°	83.9	76.6	63.7	43.0	22.3	7.8	1.0	1.6	1.6	1.6	1.6
122.5°	60.0	54.4	43.0	28.0	13.5	3.6	1.6	1.6	2.1	2.1	1.6
125°	39.9	36.8	28.5	17.1	8.3	1.6	1.6	1.6	2.1	2.1	1.6
127.5°	25.9	23.3	16.6	9.8	3.6	1.6	1.6	2.1	2.1	2.1	1.6
130°	14.5	12.9	9.8	5.7	1.6	1.6	1.6	2.1	2.1	2.1	1.6
132.5°	8.3	7.8	5.2	1.0	1.6	1.6	1.6	2.1	2.1	2.1	2.1
135°	2.1	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.1
137.5°	0.5	0.5	1.0	1.0	1.6	1.6	2.1	2.6	2.6	2.6	2.1
140°	0.5	0.5	1.0	1.6	1.6	1.6	2.1	2.6	2.6	2.6	2.1
142.5°	0.5	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.1	2.1
145°	0.5	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.1	2.1	2.1
147.5°	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.1	2.1
150°	0.5	1.0	1.0	1.6	2.1	2.1	2.1	2.6	2.1	2.1	2.1
152.5°	0.5	1.0	1.0	1.6	2.1	2.1	2.1	2.6	2.1	2.1	2.1
155°	1.0	1.0	1.0	1.6	2.1	2.1	2.1	2.6	2.1	2.1	2.6
157.5°	1.0	1.0	1.0	1.6	2.1	2.1	2.1	2.6	2.1	2.1	2.6
160°	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.1	2.1	2.1	2.1
162.5°	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.1	2.1	2.1	2.1
165°	1.0	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.1	2.1	2.1
167.5°	1.0	1.0	1.0	1.6	1.6	1.6	2.1	2.1	2.1	2.1	2.1
170°	1.0	1.0	1.0	1.6	1.6	1.6	2.1	2.6	2.6	2.6	2.6
172.5°	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.6	2.6
175°	1.0	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.6	2.6
177.5°	0.5	1.0	1.0	1.6	1.6	2.1	2.1	2.6	2.6	2.6	2.1
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	406.4	406.4	406.4
2.5°	386.7	379.5	377.4
5°	366.0	354.1	347.4
7.5°	345.3	329.2	321.5
10°	326.1	303.4	295.1
12.5°	303.4	277.0	264.0
15°	281.6	247.4	235.0
17.5°	257.3	219.0	204.5
20°	234.5	190.5	175.5
22.5°	208.6	162.5	146.0
25°	185.3	134.6	116.0
27.5°	159.4	106.1	90.1
30°	135.1	81.3	65.2
32.5°	111.8	59.5	45.0
35°	90.1	40.4	28.5
37.5°	69.4	24.8	14.5
40°	50.2	12.9	6.7
42.5°	33.6	6.2	3.6
45°	20.7	3.1	0.0
47.5°	11.9	0.0	0.0
50°	6.2	0.0	0.0
52.5°	2.6	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	1.6
80°	1.0	2.1	2.6
82.5°	2.1	2.6	2.6
85°	2.1	2.6	3.1
87.5°	2.6	3.1	3.6
90°	3.1	3.6	3.6
92.5°	3.1	4.1	4.1
95°	3.6	4.1	4.7
97.5°	4.1	4.7	4.7
100°	3.6	4.7	5.2
102.5°	3.1	4.7	4.7
105°	2.6	3.6	4.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.1	2.6	2.6
115°	1.6	2.1	2.6
117.5°	1.6	2.1	2.1
120°	1.6	1.6	2.1
122.5°	1.6	1.6	2.1
125°	1.6	1.6	2.1
127.5°	2.1	1.6	1.6
130°	1.6	1.6	1.6
132.5°	2.1	1.6	1.6
135°	2.1	1.6	1.6
137.5°	2.1	1.6	1.6
140°	2.1	1.6	1.6
142.5°	2.1	1.6	1.6
145°	1.6	1.6	1.6
147.5°	1.6	1.6	1.6
150°	1.6	1.6	1.0
152.5°	1.6	1.0	1.0
155°	1.6	1.0	0.5
157.5°	2.1	1.0	0.5
160°	1.6	1.0	0.5
162.5°	1.6	1.0	0.5
165°	1.6	1.0	0.0
167.5°	1.6	1.0	0.5
170°	1.6	1.0	0.5
172.5°	1.6	1.0	0.5
175°	1.6	0.5	0.5
177.5°	1.6	0.5	0.5
180°	1.6	1.6	1.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	217.4	211.2	190.5	156.3	109.2	61.1	22.8	4.1	1.0	1.6	1.6
110°	189.5	184.3	163.1	129.9	88.0	45.6	15.0	2.6	1.6	1.6	1.6





107.5°	2.1	3.1	3.6
110°	2.1	2.6	3.1



(END OF REPORT)