

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: P550607

Luminaire Tested: **FCC-X-2-LD4-1HI-40-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: P550607
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-LD4-1HI-40-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 4000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

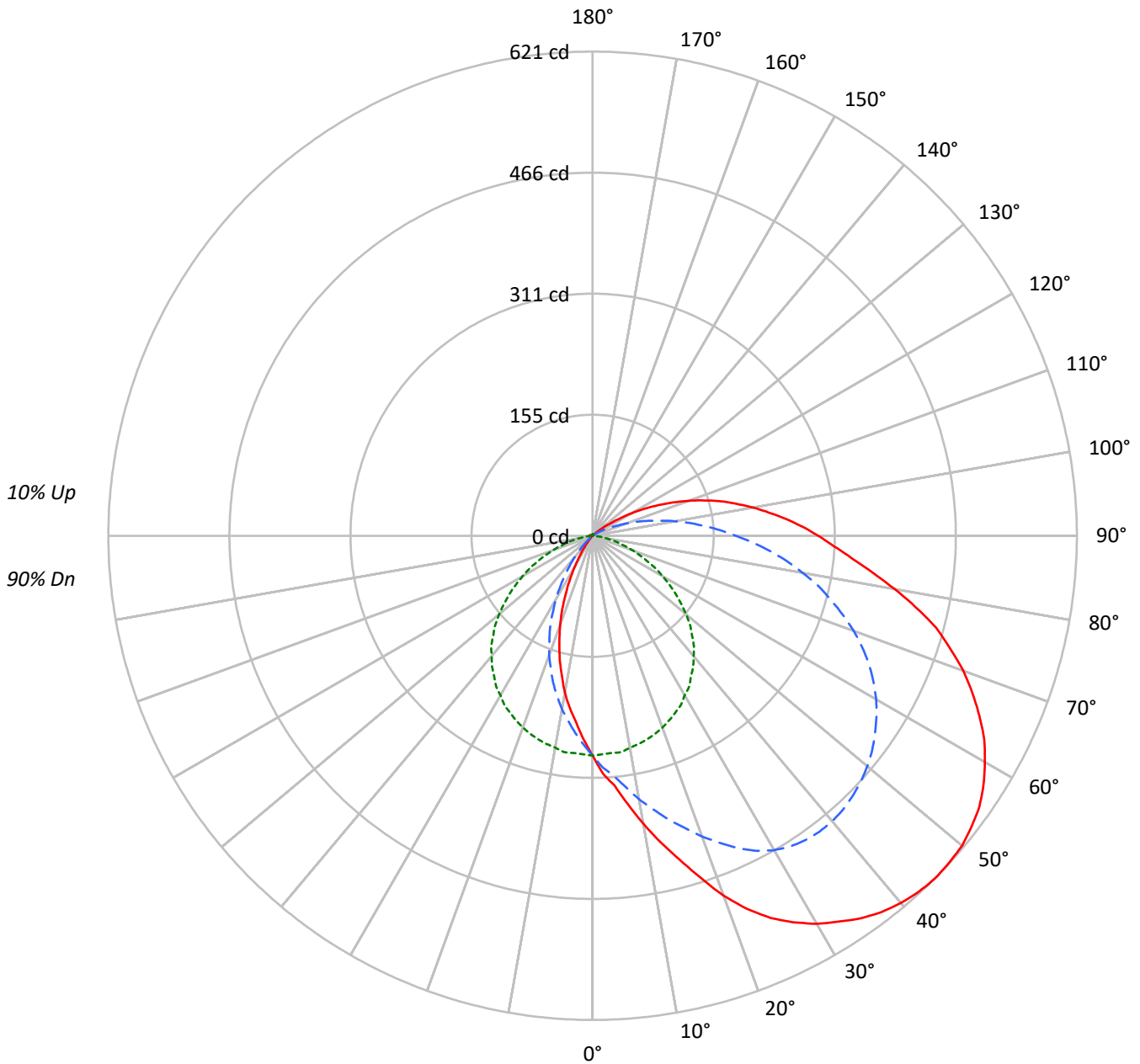
Lumens per Lamp: N/A
Luminaire Lumens: 1393.0 lumens
Efficiency: N/A
Efficacy: 64.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 21.7
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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CATALOG NUMBER: FCC-X-2-LD4-1HI-40-UNV-93-88-ED1D-90

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°	3033	3033	3033
5°	3329	2988	2494
10°	3768	2952	2055
15°	4223	2915	1602
20°	4762	2867	1179
25°	5209	2811	774
30°	5543	2738	436
35°	5831	2658	192
40°	6087	2561	47
45°	6305	2438	0
50°	6490	2275	0
55°	6629	2068	0
60°	6701	1830	0
65°	6728	1557	0
70°	6706	1270	0
75°	6620	936	6
80°	6351	573	29
85°	6139	275	40



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.0	1.9
10°-20°	80.8	5.8
20°-30°	130.9	9.4
30°-40°	168.1	12.1
40°-50°	190.3	13.7
50°-60°	197.2	14.2
60°-70°	185.9	13.3
70°-80°	155.8	11.2
80°-90°	113.0	8.1
90°-100°	74.2	5.3
100°-110°	42.9	3.1
110°-120°	18.9	1.4
120°-130°	5.1	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	238.7	17.1
0°-40°	406.8	29.2
0°-60°	794.2	57.0
0°-90°	1249.0	89.7
90°-120°	136.0	9.8
90°-150°	143.1	10.3
90°-180°	144.0	10.3
0°-180°	1393.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	282	282	282	282	282	
5°	322	309	280	254	241	32
15°	430	377	270	195	163	124
25°	541	442	250	128	80	250
35°	599	476	220	62	20	376
45°	621	472	180	14	0	480
55°	606	442	130	0	0	541
65°	547	391	78	0	0	542
75°	456	316	33	0	0	478
85°	334	229	5	1	2	285
90°	289	184	1	2	2	159
95°	248	143	1	2	3	195
105°	171	74	1	2	3	180
115°	93	25	1	1	2	93
125°	28	3	1	1	1	28
135°	1	1	2	1	1	3
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	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°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8
2.5°	305.5	305.1	304.0	302.2	299.7	295.4	291.8	288.6	284.3	280.7	273.9
5°	321.6	319.8	318.4	316.6	310.8	306.9	300.4	293.3	286.4	279.6	266.0
7.5°	347.5	344.6	342.4	337.4	329.5	320.5	310.5	303.7	299.0	280.0	256.6
10°	375.1	372.6	368.3	359.3	349.6	336.7	322.3	306.2	291.8	276.0	248.4
12.5°	402.4	398.8	392.7	381.2	367.6	351.4	331.7	312.6	292.2	273.5	238.7
15°	429.7	425.7	419.2	405.2	387.3	366.1	342.1	318.0	294.0	270.3	228.6
17.5°	459.4	454.1	444.4	428.6	406.0	379.8	351.4	322.3	293.3	266.3	217.9
20°	491.4	483.9	473.4	452.3	425.7	394.8	360.7	326.6	292.9	261.7	205.7
22.5°	518.0	510.4	498.9	477.0	445.1	407.4	368.6	329.5	291.5	256.3	194.2
25°	540.9	534.8	522.3	497.1	463.4	420.7	376.2	331.7	289.3	250.5	182.0
27.5°	558.9	553.1	539.1	513.3	478.8	432.5	381.9	332.7	286.4	244.8	169.4
30°	574.7	568.9	552.1	525.5	489.2	441.9	387.7	333.1	282.8	236.2	155.8
32.5°	586.9	581.5	564.3	535.9	496.4	448.3	390.9	332.7	278.2	230.1	141.1
35°	599.1	593.7	573.6	543.4	501.8	451.2	393.4	330.9	272.4	220.0	127.1
37.5°	608.4	602.3	581.8	548.5	504.3	451.9	393.0	328.4	266.3	211.8	113.1
40°	614.9	608.4	586.5	551.3	505.0	450.8	390.2	324.1	259.2	201.4	98.4
42.5°	619.2	612.0	588.7	555.6	503.6	448.0	385.9	318.7	251.3	192.4	84.4
45°	621.3	613.8	589.0	552.1	501.1	442.6	379.4	311.9	242.6	180.2	70.4
47.5°	620.3	612.0	587.2	548.1	496.4	436.8	372.2	303.7	232.2	169.4	57.1
50°	618.5	609.8	583.3	543.1	490.0	429.7	364.3	293.6	221.5	156.1	45.2
52.5°	612.7	604.1	579.0	535.9	482.4	421.4	353.6	283.2	210.0	143.2	34.5
55°	605.5	597.6	571.4	529.4	472.7	411.3	343.5	272.1	198.9	129.9	24.8
57.5°	594.4	587.2	562.1	519.0	463.0	400.2	332.4	259.9	184.9	116.7	17.2
60°	580.8	573.6	549.2	507.2	451.9	387.7	320.2	247.3	172.3	103.4	10.8
62.5°	566.4	559.6	534.1	492.5	437.9	374.4	306.9	234.7	159.0	91.2	6.5
65°	547.4	540.9	518.0	474.9	422.5	360.0	292.2	219.7	145.4	77.5	3.6
67.5°	527.3	521.5	498.2	458.7	404.5	344.2	277.1	205.0	131.0	65.7	1.8
70°	505.8	498.6	477.0	436.8	386.2	326.3	260.6	189.9	117.4	54.2	0.0
72.5°	480.6	475.2	454.4	416.4	365.0	307.3	243.7	173.4	102.3	43.1	0.4
75°	456.2	449.4	430.4	394.5	344.2	287.2	225.1	157.9	87.6	33.0	0.4
77.5°	424.6	422.5	404.5	369.7	324.5	267.8	204.6	139.3	73.6	23.7	0.4
80°	393.0	390.9	376.9	344.9	301.5	244.8	185.6	121.7	59.9	15.8	0.4
82.5°	361.8	358.9	345.7	319.1	278.2	225.4	165.8	104.1	47.4	9.7	0.4
85°	333.8	330.2	315.9	291.5	254.1	203.5	145.4	86.9	35.2	5.4	0.7
87.5°	309.8	307.3	291.5	266.3	229.7	183.1	127.4	70.4	24.8	2.5	1.1
90°	289.3	283.9	269.9	243.4	206.8	160.4	108.4	56.4	16.5	1.4	1.4
92.5°	269.2	264.5	249.1	221.8	186.3	141.1	90.1	43.1	10.4	0.7	1.8
95°	248.4	243.4	228.3	203.2	165.5	121.3	73.9	31.6	5.7	0.7	1.8
97.5°	227.9	223.3	207.5	182.3	146.8	104.1	58.5	22.3	2.9	0.7	1.4
100°	208.9	203.5	189.2	164.0	128.1	86.9	45.2	14.4	1.8	0.7	1.4
102.5°	188.8	184.5	169.8	145.4	108.8	70.7	33.7	9.0	0.7	0.7	1.1
105°	170.9	165.5	151.1	126.0	92.6	55.6	23.7	5.4	0.7	0.7	1.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	111.3	107.0	94.4	73.2	47.0	21.9	6.5	1.1	1.1	1.1	1.1
115°	93.0	86.5	75.4	56.7	34.8	14.4	3.2	1.1	1.1	1.1	1.1
117.5°	74.3	68.9	61.0	43.1	23.0	9.3	1.8	1.1	1.1	1.1	1.1
120°	58.1	53.1	44.2	29.8	15.4	5.4	0.7	1.1	1.1	1.1	1.1
122.5°	41.6	37.7	29.8	19.4	9.3	2.5	1.1	1.1	1.4	1.4	1.1
125°	27.6	25.5	19.7	11.8	5.7	1.1	1.1	1.1	1.4	1.4	1.1
127.5°	17.9	16.2	11.5	6.8	2.5	1.1	1.1	1.4	1.4	1.4	1.1
130°	10.1	9.0	6.8	3.9	1.1	1.1	1.1	1.4	1.4	1.4	1.1
132.5°	5.7	5.4	3.6	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.4	1.8	1.8	1.8	1.4
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.4
142.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
145°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
150°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
152.5°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
157.5°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
160°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.8
172.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
175°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
177.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.4
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	281.8	281.8	281.8
2.5°	268.1	263.1	261.7
5°	253.8	245.5	240.9
7.5°	239.4	228.3	222.9
10°	226.1	210.3	204.6
12.5°	210.3	192.0	183.1
15°	195.3	171.6	163.0
17.5°	178.4	151.8	141.8
20°	162.6	132.1	121.7
22.5°	144.7	112.7	101.2
25°	128.5	93.3	80.4
27.5°	110.6	73.6	62.5
30°	93.7	56.4	45.2
32.5°	77.5	41.3	31.2
35°	62.5	28.0	19.7
37.5°	48.1	17.2	10.1
40°	34.8	9.0	4.7
42.5°	23.3	4.3	2.5
45°	14.4	2.2	0.0
47.5°	8.3	0.0	0.0
50°	4.3	0.0	0.0
52.5°	1.8	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	0.7	1.1
80°	0.7	1.4	1.8
82.5°	1.4	1.8	1.8
85°	1.4	1.8	2.2
87.5°	1.8	2.2	2.5
90°	2.2	2.5	2.5
92.5°	2.2	2.9	2.9
95°	2.5	2.9	3.2
97.5°	2.9	3.2	3.2
100°	2.5	3.2	3.6
102.5°	2.2	3.2	3.2
105°	1.8	2.5	2.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.4	1.8	1.8
115°	1.1	1.4	1.8
117.5°	1.1	1.4	1.4
120°	1.1	1.1	1.4
122.5°	1.1	1.1	1.4
125°	1.1	1.1	1.4
127.5°	1.4	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.4	1.1	1.1
135°	1.4	1.1	1.1
137.5°	1.4	1.1	1.1
140°	1.4	1.1	1.1
142.5°	1.4	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.4	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	150.8	146.4	132.1	108.4	75.7	42.4	15.8	2.9	0.7	1.1	1.1
110°	131.4	127.8	113.1	90.1	61.0	31.6	10.4	1.8	1.1	1.1	1.1





107.5°	1.4	2.2	2.5
110°	1.4	1.8	2.2



(END OF REPORT)