

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: P550544

Luminaire Tested: **FCC-X-2-LD4-1HI-35-UNV-93-88-ED1D**

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: P550544
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-35-UNV-93-88-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

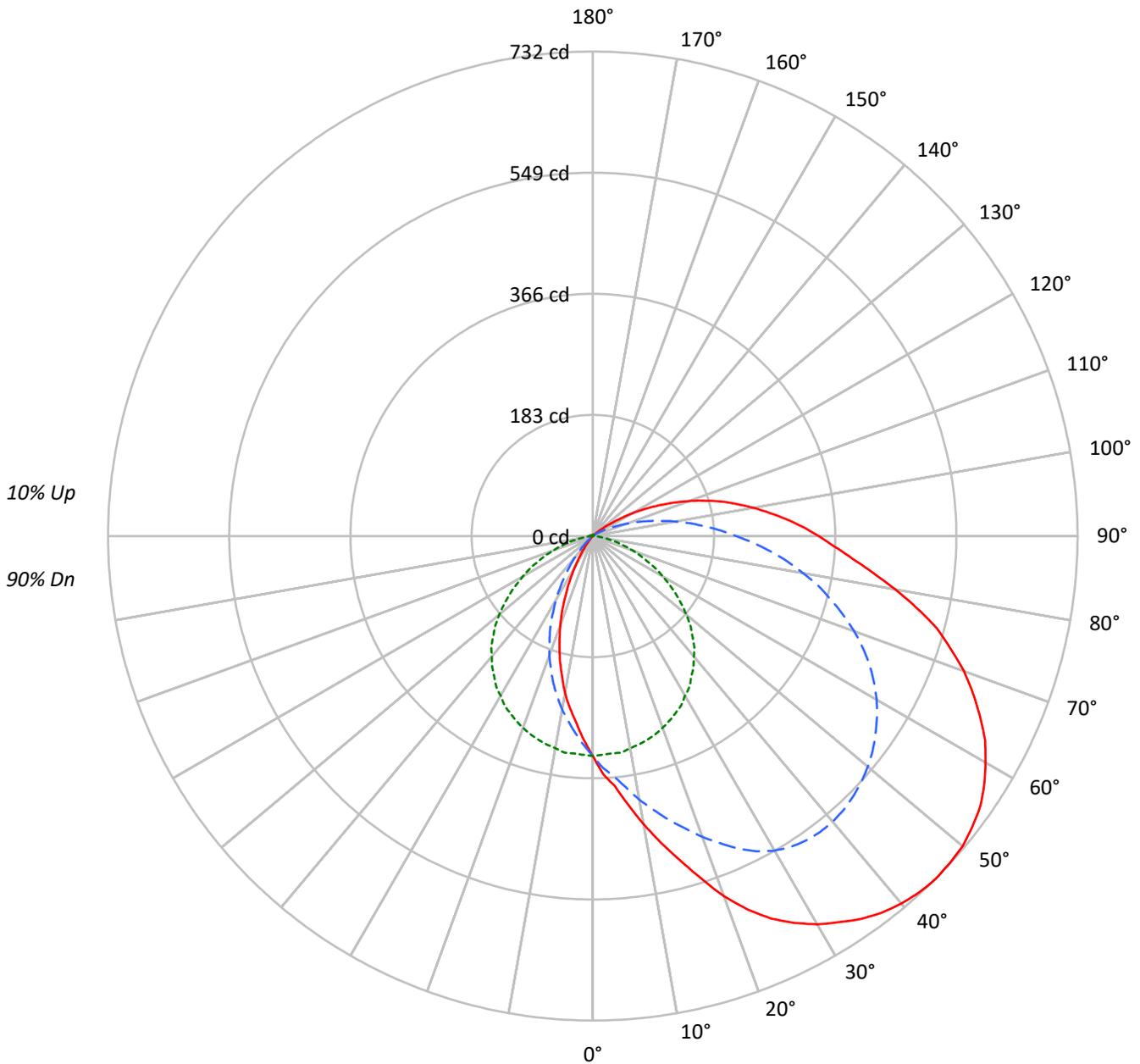
Lumens per Lamp: N/A
Luminaire Lumens: 1642.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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-35-UNV-93-88-ED1D

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3575	3575	3575
5°	3925	3523	2939
10°	4441	3480	2423
15°	4977	3435	1888
20°	5613	3379	1390
25°	6141	3314	913
30°	6533	3227	514
35°	6873	3134	227
40°	7174	3019	54
45°	7433	2874	0
50°	7649	2683	0
55°	7815	2440	0
60°	7898	2157	0
65°	7930	1836	0
70°	7905	1497	0
75°	7804	1103	6
80°	7487	675	34
85°	7237	320	46



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.8	1.9
10°-20°	95.3	5.8
20°-30°	154.3	9.4
30°-40°	198.2	12.1
40°-50°	224.3	13.7
50°-60°	232.4	14.2
60°-70°	219.2	13.3
70°-80°	183.7	11.2
80°-90°	133.1	8.1
90°-100°	87.5	5.3
100°-110°	50.5	3.1
110°-120°	22.3	1.4
120°-130°	6.1	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	281.3	17.1
0°-40°	479.5	29.2
0°-60°	936.2	57.0
0°-90°	1472.2	89.7
90°-120°	160.4	9.8
90°-150°	168.7	10.3
90°-180°	170.0	10.4
0°-180°	1642.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	332	332	332	332	332	
5°	379	364	330	299	284	38
15°	506	444	319	230	192	146
25°	638	521	295	152	95	295
35°	706	562	259	74	23	443
45°	732	556	212	17	0	565
55°	714	521	153	0	0	637
65°	645	461	91	0	0	638
75°	538	372	39	0	0	564
85°	394	270	6	2	2	336
90°	341	216	2	2	3	187
95°	293	169	1	3	4	230
105°	201	87	1	2	3	213
115°	110	29	1	1	2	110
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°	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1	332.1
2.5°	360.1	359.6	358.4	356.3	353.3	348.2	344.0	340.2	335.1	330.9	322.8
5°	379.1	377.0	375.3	373.2	366.4	361.8	354.1	345.7	337.6	329.6	313.5
7.5°	409.6	406.2	403.6	397.7	388.4	377.8	366.0	357.9	352.4	330.0	302.5
10°	442.1	439.2	434.1	423.5	412.1	396.9	379.9	360.9	344.0	325.4	292.8
12.5°	474.3	470.1	462.9	449.3	433.3	414.2	390.9	368.5	344.4	322.4	281.4
15°	506.5	501.8	494.2	477.7	456.5	431.6	403.2	374.9	346.5	318.6	269.5
17.5°	541.6	535.2	523.8	505.2	478.5	447.6	414.2	379.9	345.7	313.9	256.8
20°	579.2	570.3	558.1	533.1	501.8	465.4	425.2	385.0	345.3	308.4	242.4
22.5°	610.5	601.7	588.1	562.3	524.6	480.2	434.5	388.4	343.6	302.1	228.9
25°	637.6	630.4	615.6	586.0	546.2	495.9	443.4	390.9	341.0	295.3	214.5
27.5°	658.8	652.0	635.5	605.0	564.4	509.8	450.2	392.2	337.6	288.6	199.7
30°	677.4	670.6	650.7	619.4	576.7	520.8	457.0	392.6	333.4	278.4	183.6
32.5°	691.8	685.4	665.1	631.7	585.2	528.5	460.8	392.2	327.9	271.2	166.3
35°	706.2	699.8	676.1	640.6	591.5	531.8	463.7	390.1	321.1	259.4	149.8
37.5°	717.2	710.0	685.9	646.5	594.5	532.7	463.3	387.1	313.9	249.6	133.3
40°	724.8	717.2	691.4	649.9	595.3	531.4	459.9	382.1	305.5	237.4	115.9
42.5°	729.9	721.4	693.9	655.0	593.6	528.0	454.8	375.7	296.2	226.8	99.4
45°	732.4	723.5	694.3	650.7	590.7	521.7	447.2	367.7	286.0	212.4	82.9
47.5°	731.1	721.4	692.2	646.1	585.2	514.9	438.8	357.9	273.7	199.7	67.3
50°	729.0	718.9	687.5	640.2	577.5	506.5	429.5	346.1	261.1	184.1	53.3
52.5°	722.2	712.1	682.5	631.7	568.7	496.7	416.8	333.8	247.5	168.8	40.6
55°	713.8	704.5	673.6	624.1	557.2	484.9	404.9	320.7	234.4	153.2	29.2
57.5°	700.7	692.2	662.6	611.8	545.8	471.8	391.8	306.3	217.9	137.5	20.3
60°	684.6	676.1	647.4	597.8	532.7	457.0	377.4	291.5	203.1	121.9	12.7
62.5°	667.7	659.6	629.6	580.5	516.2	441.3	361.8	276.7	187.4	107.5	7.6
65°	645.2	637.6	610.5	559.8	498.0	424.4	344.4	258.9	171.4	91.4	4.2
67.5°	621.5	614.8	587.3	540.7	476.8	405.8	326.6	241.6	154.4	77.4	2.1
70°	596.2	587.7	562.3	514.9	455.3	384.6	307.2	223.8	138.4	63.9	0.0
72.5°	566.5	560.2	535.7	490.8	430.3	362.2	287.3	204.4	120.6	50.8	0.4
75°	537.8	529.7	507.3	465.0	405.8	338.5	265.3	186.2	103.2	38.9	0.4
77.5°	500.5	498.0	476.8	435.8	382.5	315.6	241.2	164.2	86.7	27.9	0.4
80°	463.3	460.8	444.3	406.6	355.4	288.6	218.7	143.4	70.7	18.6	0.4
82.5°	426.5	423.1	407.4	376.1	327.9	265.7	195.5	122.7	55.8	11.4	0.4
85°	393.5	389.3	372.3	343.6	299.6	239.9	171.4	102.4	41.5	6.3	0.8
87.5°	365.1	362.2	343.6	313.9	270.8	215.8	150.2	82.9	29.2	3.0	1.3
90°	341.0	334.7	318.2	286.9	243.7	189.1	127.8	66.4	19.5	1.7	1.7
92.5°	317.3	311.8	293.6	261.5	219.6	166.3	106.2	50.8	12.3	0.8	2.1
95°	292.8	286.9	269.1	239.5	195.1	143.0	87.2	37.2	6.8	0.8	2.1
97.5°	268.7	263.2	244.6	214.9	173.0	122.7	69.0	26.2	3.4	0.8	1.7
100°	246.2	239.9	223.0	193.4	151.0	102.4	53.3	16.9	2.1	0.8	1.7
102.5°	222.6	217.5	200.1	171.4	128.2	83.4	39.8	10.6	0.8	0.8	1.3
105°	201.4	195.1	178.1	148.5	109.2	65.6	27.9	6.3	0.8	0.8	1.3



TEST NUMBER: P550544

CATALOG NUMBER: FCC-X-2-LD4-1HI-35-UNV-93-88-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	131.2	126.1	111.3	86.3	55.4	25.8	7.6	1.3	1.3	1.3	1.3
115°	109.6	102.0	88.9	66.9	41.0	16.9	3.8	1.3	1.3	1.3	1.3
117.5°	87.6	81.2	71.9	50.8	27.1	11.0	2.1	1.3	1.3	1.3	1.3
120°	68.5	62.6	52.0	35.1	18.2	6.3	0.8	1.3	1.3	1.3	1.3
122.5°	49.1	44.4	35.1	22.8	11.0	3.0	1.3	1.3	1.7	1.7	1.3
125°	32.6	30.0	23.3	14.0	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.2	19.0	13.5	8.0	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.8	10.6	8.0	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.8	6.3	4.2	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	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°	332.1	332.1	332.1
2.5°	316.1	310.1	308.4
5°	299.1	289.4	283.9
7.5°	282.2	269.1	262.7
10°	266.6	247.9	241.2
12.5°	247.9	226.4	215.8
15°	230.2	202.2	192.1
17.5°	210.3	179.0	167.1
20°	191.7	155.7	143.4
22.5°	170.5	132.9	119.3
25°	151.5	110.0	94.8
27.5°	130.3	86.7	73.6
30°	110.4	66.4	53.3
32.5°	91.4	48.7	36.8
35°	73.6	33.0	23.3
37.5°	56.7	20.3	11.8
40°	41.0	10.6	5.5
42.5°	27.5	5.1	3.0
45°	16.9	2.5	0.0
47.5°	9.7	0.0	0.0
50°	5.1	0.0	0.0
52.5°	2.1	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	1.3
80°	0.8	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	3.0
90°	2.5	3.0	3.0
92.5°	2.5	3.4	3.4
95°	3.0	3.4	3.8
97.5°	3.4	3.8	3.8
100°	3.0	3.8	4.2
102.5°	2.5	3.8	3.8
105°	2.1	3.0	3.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.3	1.7	2.1
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	0.8
152.5°	1.3	0.8	0.8
155°	1.3	0.8	0.4
157.5°	1.7	0.8	0.4
160°	1.3	0.8	0.4
162.5°	1.3	0.8	0.4
165°	1.3	0.8	0.0
167.5°	1.3	0.8	0.4
170°	1.3	0.8	0.4
172.5°	1.3	0.8	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°	177.7	172.6	155.7	127.8	89.3	49.9	18.6	3.4	0.8	1.3	1.3
110°	154.9	150.6	133.3	106.2	71.9	37.2	12.3	2.1	1.3	1.3	1.3





107.5°	1.7	2.5	3.0
110°	1.7	2.1	2.5



(END OF REPORT)