

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: P551632

Luminaire Tested: **FCC-X-2-LD4-2LO-40-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: P551632
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-93-88-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

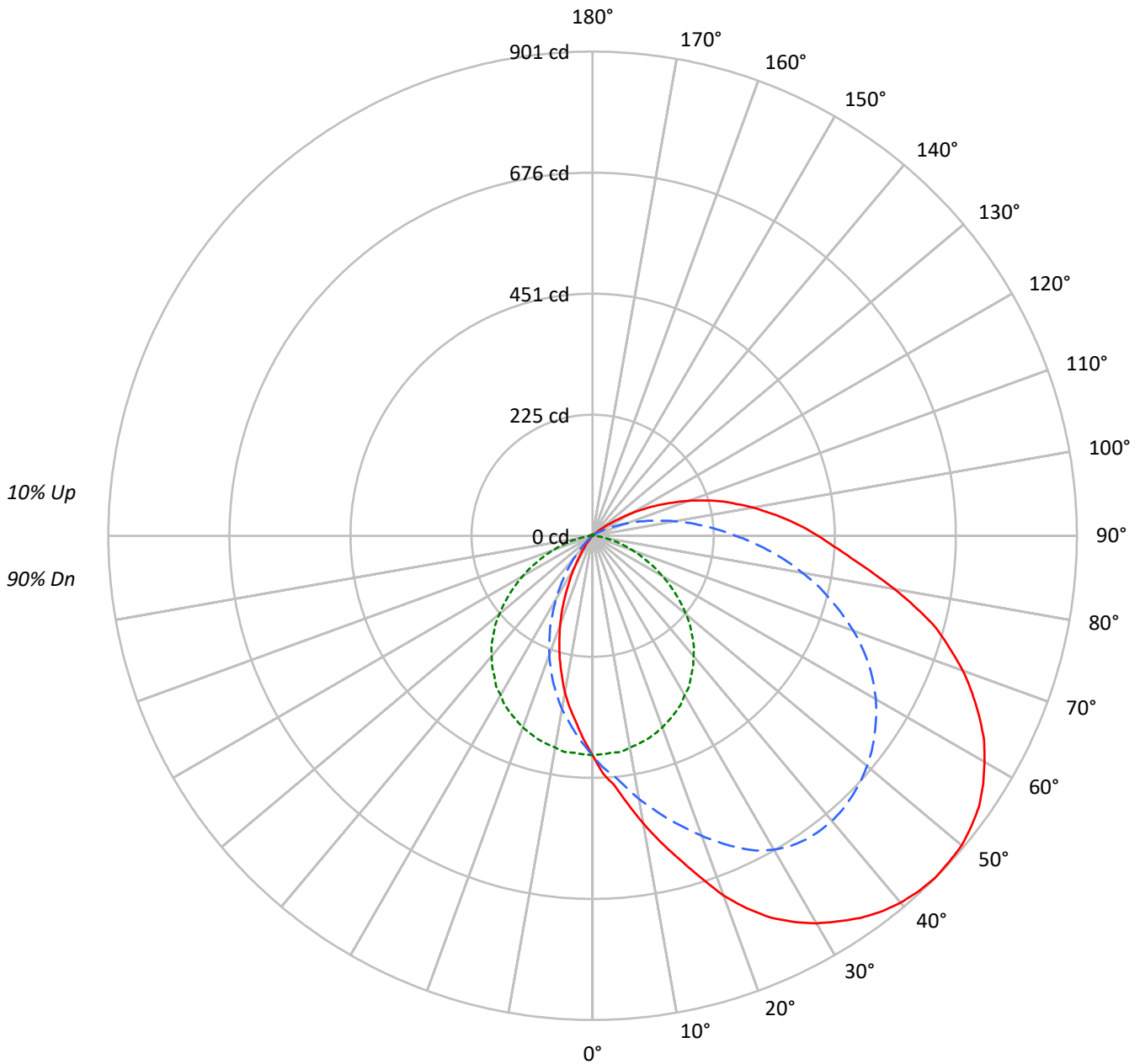
Lumens per Lamp: N/A
Luminaire Lumens: 2019.1 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

TEST NUMBER: P551632

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-88-ED1D

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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°	4396	4396	4396
5°	4825	4332	3614
10°	5461	4279	2978
15°	6119	4223	2321
20°	6902	4156	1710
25°	7551	4075	1122
30°	8033	3968	633
35°	8451	3853	278
40°	8821	3712	67
45°	9140	3534	0
50°	9406	3298	0
55°	9609	2998	0
60°	9712	2651	0
65°	9751	2258	0
70°	9718	1841	0
75°	9595	1358	7
80°	9207	831	42
85°	8898	397	57



TEST NUMBER: P551632

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-88-ED1D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.1	1.9
10°-20°	117.1	5.8
20°-30°	189.7	9.4
30°-40°	243.7	12.1
40°-50°	275.8	13.7
50°-60°	285.8	14.2
60°-70°	269.5	13.3
70°-80°	225.8	11.2
80°-90°	163.7	8.1
90°-100°	107.6	5.3
100°-110°	62.1	3.1
110°-120°	27.4	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°	345.9	17.1
0°-40°	589.6	29.2
0°-60°	1151.2	57.0
0°-90°	1810.2	89.7
90°-120°	197.2	9.8
90°-150°	207.5	10.3
90°-180°	209.0	10.4
0°-180°	2019.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	408	408	408	408	408	
5°	466	448	405	368	349	47
15°	623	546	392	283	236	180
25°	784	641	363	186	116	362
35°	868	691	319	90	29	545
45°	901	684	261	21	0	695
55°	878	641	188	0	0	784
65°	793	567	112	0	0	785
75°	661	458	48	0	0	694
85°	484	332	8	2	3	413
90°	419	266	2	3	4	230
95°	360	208	1	4	5	282
105°	248	107	1	3	4	261
115°	135	36	2	2	3	135
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°	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4	408.4
2.5°	442.7	442.2	440.7	438.0	434.4	428.2	423.0	418.3	412.0	406.8	396.9
5°	466.1	463.5	461.5	458.9	450.5	444.8	435.4	425.0	415.2	405.3	385.5
7.5°	503.6	499.4	496.3	489.0	477.6	464.6	450.0	440.1	433.4	405.8	372.0
10°	543.7	540.0	533.8	520.8	506.7	488.0	467.2	443.8	423.0	400.1	360.0
12.5°	583.2	578.0	569.2	552.5	532.7	509.3	480.7	453.1	423.5	396.4	346.0
15°	622.7	617.0	607.7	587.4	561.3	530.7	495.8	460.9	426.1	391.7	331.4
17.5°	665.9	658.1	644.1	621.2	588.4	550.4	509.3	467.2	425.0	386.0	315.8
20°	712.2	701.3	686.2	655.5	617.0	572.3	522.8	473.4	424.5	379.3	298.1
22.5°	750.7	739.8	723.1	691.4	645.1	590.5	534.3	477.6	422.4	371.5	281.5
25°	784.0	775.2	757.0	720.5	671.6	609.7	545.2	480.7	419.3	363.1	263.8
27.5°	810.0	801.7	781.4	744.0	694.0	626.9	553.5	482.3	415.2	354.8	245.6
30°	832.9	824.6	800.1	761.6	709.1	640.4	561.9	482.8	410.0	342.3	225.8
32.5°	850.6	842.8	817.8	776.7	719.5	649.8	566.6	482.3	403.2	333.5	204.5
35°	868.3	860.5	831.4	787.7	727.3	654.0	570.2	479.7	394.9	318.9	184.2
37.5°	881.8	873.0	843.3	794.9	730.9	655.0	569.7	476.0	386.0	306.9	163.9
40°	891.2	881.8	850.1	799.1	732.0	653.4	565.5	469.8	375.6	291.9	142.5
42.5°	897.4	887.0	853.2	805.3	729.9	649.3	559.3	462.0	364.2	278.9	122.3
45°	900.6	889.6	853.7	800.1	726.3	641.5	549.9	452.1	351.7	261.2	102.0
47.5°	899.0	887.0	851.1	794.4	719.5	633.1	539.5	440.1	336.6	245.6	82.7
50°	896.4	883.9	845.4	787.1	710.1	622.7	528.1	425.6	321.0	226.3	65.6
52.5°	888.1	875.6	839.2	776.7	699.2	610.8	512.4	410.5	304.3	207.6	49.9
55°	877.7	866.2	828.2	767.4	685.2	596.2	497.9	394.3	288.2	188.3	35.9
57.5°	861.5	851.1	814.7	752.3	671.1	580.1	481.8	376.7	267.9	169.1	25.0
60°	841.8	831.4	796.0	735.1	655.0	561.9	464.1	358.5	249.7	149.8	15.6
62.5°	821.0	811.1	774.1	713.8	634.7	542.6	444.8	340.2	230.5	132.1	9.4
65°	793.4	784.0	750.7	688.3	612.3	521.8	423.5	318.4	210.7	112.4	5.2
67.5°	764.2	755.9	722.1	664.9	586.3	498.9	401.6	297.1	189.9	95.2	2.6
70°	733.0	722.6	691.4	633.1	559.8	472.9	377.7	275.2	170.1	78.6	0.0
72.5°	696.6	688.8	658.6	603.5	529.1	445.3	353.2	251.3	148.3	62.4	0.5
75°	661.2	651.4	623.8	571.8	498.9	416.2	326.2	228.9	126.9	47.9	0.5
77.5°	615.5	612.3	586.3	535.9	470.3	388.1	296.5	201.9	106.7	34.3	0.5
80°	569.7	566.6	546.3	500.0	437.0	354.8	269.0	176.4	86.9	22.9	0.5
82.5°	524.4	520.2	501.0	462.5	403.2	326.7	240.4	150.9	68.7	14.0	0.5
85°	483.8	478.6	457.8	422.4	368.3	295.0	210.7	125.9	51.0	7.8	1.0
87.5°	449.0	445.3	422.4	386.0	333.0	265.3	184.7	102.0	35.9	3.6	1.6
90°	419.3	411.5	391.2	352.7	299.7	232.6	157.1	81.7	23.9	2.1	2.1
92.5°	390.2	383.4	361.1	321.5	270.0	204.5	130.6	62.4	15.1	1.0	2.6
95°	360.0	352.7	330.9	294.5	239.8	175.8	107.2	45.8	8.3	1.0	2.6
97.5°	330.4	323.6	300.7	264.3	212.8	150.9	84.8	32.3	4.2	1.0	2.1
100°	302.8	295.0	274.2	237.8	185.7	125.9	65.6	20.8	2.6	1.0	2.1
102.5°	273.7	267.4	246.1	210.7	157.6	102.5	48.9	13.0	1.0	1.0	1.6
105°	247.6	239.8	219.0	182.6	134.2	80.6	34.3	7.8	1.0	1.0	1.6



TEST NUMBER: P551632

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-88-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	161.3	155.0	136.8	106.1	68.2	31.7	9.4	1.6	1.6	1.6	1.6
115°	134.7	125.4	109.3	82.2	50.5	20.8	4.7	1.6	1.6	1.6	1.6
117.5°	107.7	99.9	88.4	62.4	33.3	13.5	2.6	1.6	1.6	1.6	1.6
120°	84.3	77.0	64.0	43.2	22.4	7.8	1.0	1.6	1.6	1.6	1.6
122.5°	60.3	54.6	43.2	28.1	13.5	3.6	1.6	1.6	2.1	2.1	1.6
125°	40.1	36.9	28.6	17.2	8.3	1.6	1.6	1.6	2.1	2.1	1.6
127.5°	26.0	23.4	16.6	9.9	3.6	1.6	1.6	2.1	2.1	2.1	1.6
130°	14.6	13.0	9.9	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



TEST NUMBER: P551632

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-88-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	408.4	408.4	408.4
2.5°	388.6	381.3	379.3
5°	367.8	355.9	349.1
7.5°	347.0	330.9	323.1
10°	327.8	304.9	296.5
12.5°	304.9	278.3	265.3
15°	283.0	248.7	236.2
17.5°	258.6	220.1	205.5
20°	235.7	191.5	176.4
22.5°	209.7	163.4	146.7
25°	186.2	135.3	116.5
27.5°	160.2	106.7	90.5
30°	135.8	81.7	65.6
32.5°	112.4	59.8	45.3
35°	90.5	40.6	28.6
37.5°	69.7	25.0	14.6
40°	50.5	13.0	6.8
42.5°	33.8	6.2	3.6
45°	20.8	3.1	0.0
47.5°	12.0	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	4.2	4.2
95°	3.6	4.2	4.7
97.5°	4.2	4.7	4.7
100°	3.6	4.7	5.2
102.5°	3.1	4.7	4.7
105°	2.6	3.6	4.2



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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°	218.5	212.3	191.5	157.1	109.8	61.4	22.9	4.2	1.0	1.6	1.6
110°	190.4	185.2	163.9	130.6	88.4	45.8	15.1	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)