

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: P551633

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-94-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: P551633  
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-93-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

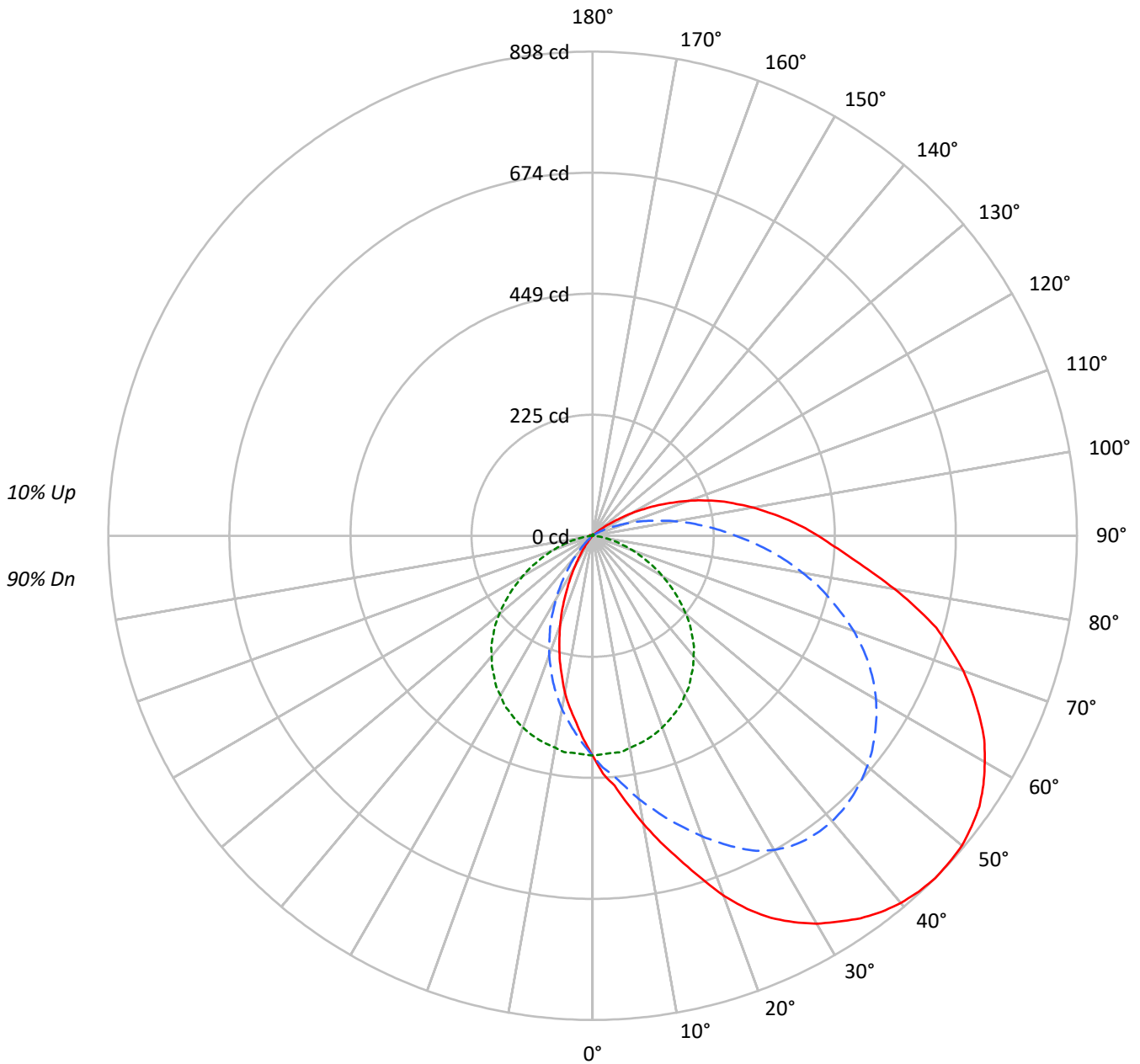
Lumens per Lamp: N/A  
Luminaire Lumens: 2014.1 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P551633

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-94-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°	4385	4385	4385
5°	4814	4321	3605
10°	5447	4268	2971
15°	6105	4214	2315
20°	6886	4145	1705
25°	7533	4065	1119
30°	8014	3959	631
35°	8430	3844	277
40°	8800	3702	66
45°	9116	3525	0
50°	9383	3289	0
55°	9585	2992	0
60°	9687	2646	0
65°	9727	2252	0
70°	9694	1837	0
75°	9571	1353	7
80°	9184	827	42
85°	8876	397	57



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.0	1.9
10°-20°	116.8	5.8
20°-30°	189.2	9.4
30°-40°	243.1	12.1
40°-50°	275.1	13.7
50°-60°	285.1	14.2
60°-70°	268.8	13.3
70°-80°	225.3	11.2
80°-90°	163.3	8.1
90°-100°	107.3	5.3
100°-110°	62.0	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°	345.1	17.1
0°-40°	588.1	29.2
0°-60°	1148.3	57.0
0°-90°	1805.7	89.7
90°-120°	196.7	9.8
90°-150°	207.0	10.3
90°-180°	208.0	10.3
0°-180°	2014.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	407	407	407	407	407	
5°	465	447	404	367	348	47
15°	621	545	391	282	236	179
25°	782	639	362	186	116	361
35°	866	689	318	90	28	543
45°	898	682	260	21	0	694
55°	876	639	188	0	0	782
65°	791	566	112	0	0	783
75°	660	456	48	0	0	692
85°	483	331	8	2	3	412
90°	418	265	2	3	4	229
95°	359	207	1	4	5	282
105°	247	107	1	3	4	261
115°	134	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°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4
2.5°	441.6	441.1	439.6	437.0	433.3	427.1	421.9	417.2	411.0	405.8	396.0
5°	465.0	462.4	460.3	457.7	449.4	443.7	434.4	424.0	414.1	404.3	384.5
7.5°	502.4	498.2	495.1	487.8	476.4	463.4	448.9	439.0	432.3	404.8	371.1
10°	542.3	538.7	532.5	519.5	505.5	486.8	466.0	442.7	421.9	399.1	359.1
12.5°	581.8	576.6	567.7	551.1	531.4	508.1	479.5	452.0	422.4	395.4	345.1
15°	621.2	615.5	606.1	585.9	560.0	529.3	494.6	459.8	425.0	390.8	330.6
17.5°	664.3	656.5	642.5	619.6	586.9	549.1	508.1	466.0	424.0	385.1	315.0
20°	710.5	699.6	684.5	653.9	615.5	570.9	521.6	472.3	423.5	378.3	297.4
22.5°	748.9	738.0	721.4	689.7	643.5	589.0	533.0	476.4	421.4	370.5	280.8
25°	782.1	773.3	755.1	718.8	670.0	608.2	543.9	479.5	418.3	362.2	263.1
27.5°	808.0	799.7	779.5	742.1	692.3	625.3	552.2	481.1	414.1	353.9	244.9
30°	830.9	822.6	798.2	759.8	707.3	638.8	560.5	481.6	408.9	341.5	225.2
32.5°	848.5	840.7	815.8	774.8	717.7	648.2	565.1	481.1	402.2	332.7	204.0
35°	866.1	858.4	829.3	785.7	725.5	652.3	568.8	478.5	393.9	318.1	183.7
37.5°	879.6	870.8	841.2	793.0	729.1	653.4	568.3	474.8	385.1	306.2	163.5
40°	889.0	879.6	848.0	797.1	730.2	651.8	564.1	468.6	374.7	291.1	142.2
42.5°	895.2	884.8	851.1	803.4	728.1	647.7	557.9	460.8	363.3	278.2	122.0
45°	898.3	887.4	851.6	798.2	724.5	639.9	548.5	451.0	350.8	260.5	101.7
47.5°	896.8	884.8	849.0	792.5	717.7	631.6	538.2	439.0	335.8	244.9	82.5
50°	894.2	881.7	843.3	785.2	708.4	621.2	526.7	424.5	320.2	225.7	65.4
52.5°	885.9	873.4	837.1	774.8	697.5	609.3	511.2	409.5	303.6	207.1	49.8
55°	875.5	864.1	826.2	765.5	683.5	594.7	496.6	393.4	287.5	187.9	35.8
57.5°	859.4	849.0	812.7	750.4	669.5	578.6	480.6	375.7	267.3	168.7	24.9
60°	839.7	829.3	794.0	733.3	653.4	560.5	462.9	357.6	249.1	149.5	15.6
62.5°	818.9	809.1	772.2	712.0	633.1	541.3	443.7	339.4	229.9	131.8	9.3
65°	791.4	782.1	748.9	686.6	610.8	520.5	422.4	317.6	210.2	112.1	5.2
67.5°	762.4	754.0	720.3	663.2	584.9	497.7	400.6	296.3	189.4	95.0	2.6
70°	731.2	720.8	689.7	631.6	558.4	471.7	376.8	274.5	169.7	78.4	0.0
72.5°	694.9	687.1	657.0	602.0	527.8	444.2	352.4	250.7	147.9	62.3	0.5
75°	659.6	649.7	622.2	570.3	497.7	415.2	325.4	228.3	126.6	47.7	0.5
77.5°	613.9	610.8	584.9	534.5	469.1	387.1	295.8	201.4	106.4	34.3	0.5
80°	568.3	565.1	544.9	498.7	435.9	353.9	268.3	175.9	86.7	22.8	0.5
82.5°	523.1	519.0	499.8	461.4	402.2	325.9	239.8	150.5	68.5	14.0	0.5
85°	482.6	477.4	456.7	421.4	367.4	294.3	210.2	125.6	50.9	7.8	1.0
87.5°	447.9	444.2	421.4	385.1	332.1	264.7	184.2	101.7	35.8	3.6	1.6
90°	418.3	410.5	390.3	351.9	298.9	232.0	156.7	81.5	23.9	2.1	2.1
92.5°	389.2	382.5	360.2	320.7	269.3	204.0	130.3	62.3	15.0	1.0	2.6
95°	359.1	351.9	330.1	293.7	239.2	175.4	106.9	45.7	8.3	1.0	2.6
97.5°	329.5	322.8	300.0	263.6	212.3	150.5	84.6	32.2	4.2	1.0	2.1
100°	302.0	294.3	273.5	237.2	185.3	125.6	65.4	20.8	2.6	1.0	2.1
102.5°	273.0	266.7	245.5	210.2	157.2	102.2	48.8	13.0	1.0	1.0	1.6
105°	247.0	239.2	218.5	182.2	133.9	80.4	34.3	7.8	1.0	1.0	1.6



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	160.9	154.7	136.5	105.9	68.0	31.7	9.3	1.6	1.6	1.6	1.6
115°	134.4	125.1	109.0	82.0	50.3	20.8	4.7	1.6	1.6	1.6	1.6
117.5°	107.4	99.6	88.2	62.3	33.2	13.5	2.6	1.6	1.6	1.6	1.6
120°	84.1	76.8	63.8	43.1	22.3	7.8	1.0	1.6	1.6	1.6	1.6
122.5°	60.2	54.5	43.1	28.0	13.5	3.6	1.6	1.6	2.1	2.1	1.6
125°	40.0	36.8	28.5	17.1	8.3	1.6	1.6	1.6	2.1	2.1	1.6
127.5°	25.9	23.4	16.6	9.9	3.6	1.6	1.6	2.1	2.1	2.1	1.6
130°	14.5	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: P551633

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-94-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	407.4	407.4	407.4
2.5°	387.7	380.4	378.3
5°	366.9	355.0	348.2
7.5°	346.1	330.1	322.3
10°	326.9	304.1	295.8
12.5°	304.1	277.6	264.7
15°	282.3	248.1	235.6
17.5°	257.9	219.5	205.0
20°	235.1	191.0	175.9
22.5°	209.1	163.0	146.3
25°	185.8	134.9	116.2
27.5°	159.8	106.4	90.3
30°	135.4	81.5	65.4
32.5°	112.1	59.7	45.1
35°	90.3	40.5	28.5
37.5°	69.5	24.9	14.5
40°	50.3	13.0	6.7
42.5°	33.7	6.2	3.6
45°	20.8	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	4.2	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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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-94-ED1D-90

**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°	218.0	211.7	191.0	156.7	109.5	61.2	22.8	4.2	1.0	1.6	1.6
110°	189.9	184.7	163.5	130.3	88.2	45.7	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)