

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: P551593

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-81-85-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: P551593  
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-81-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

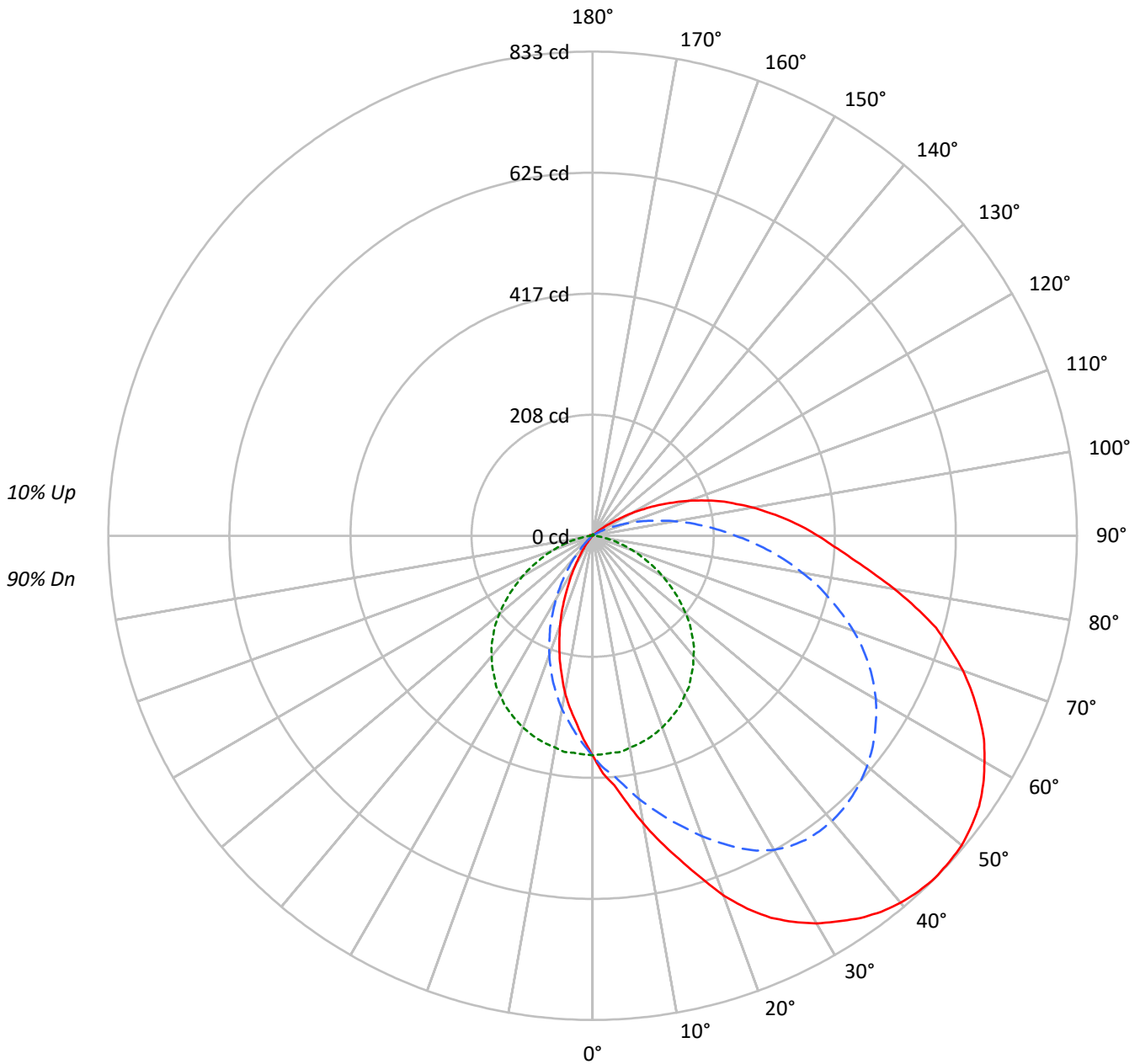
Lumens per Lamp: N/A  
Luminaire Lumens: 1866.9 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551593

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-85-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P551593

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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°	4064	4064	4064
5°	4462	4006	3342
10°	5049	3957	2754
15°	5659	3906	2146
20°	6383	3842	1581
25°	6983	3769	1038
30°	7428	3670	584
35°	7814	3563	258
40°	8157	3432	62
45°	8452	3268	0
50°	8698	3050	0
55°	8886	2774	0
60°	8980	2453	0
65°	9017	2087	0
70°	8986	1701	0
75°	8873	1256	7
80°	8513	769	39
85°	8229	366	53



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.2	1.9
10°-20°	108.3	5.8
20°-30°	175.4	9.4
30°-40°	225.3	12.1
40°-50°	255.1	13.7
50°-60°	264.2	14.2
60°-70°	249.2	13.3
70°-80°	208.9	11.2
80°-90°	151.4	8.1
90°-100°	99.5	5.3
100°-110°	57.5	3.1
110°-120°	25.3	1.4
120°-130°	6.8	0.4
130°-140°	1.6	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	319.9	17.1
0°-40°	545.2	29.2
0°-60°	1064.5	57.0
0°-90°	1674.0	89.7
90°-120°	182.3	9.8
90°-150°	191.7	10.3
90°-180°	193.0	10.3
0°-180°	1866.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	378	378	378	378	378	
5°	431	414	375	340	323	43
15°	576	505	362	262	218	166
25°	725	592	336	172	108	335
35°	803	639	295	84	26	504
45°	833	632	242	19	0	643
55°	812	592	174	0	0	725
65°	734	524	104	0	0	726
75°	612	423	44	0	0	641
85°	447	307	7	2	3	382
90°	388	246	2	3	3	213
95°	333	192	1	3	4	261
105°	229	99	1	2	4	242
115°	125	33	1	1	2	125
125°	37	5	2	1	2	37
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°	377.6	377.6	377.6	377.6	377.6	377.6	377.6	377.6	377.6	377.6	377.6
2.5°	409.4	408.9	407.5	405.1	401.7	395.9	391.1	386.8	381.0	376.2	367.1
5°	431.0	428.6	426.7	424.3	416.6	411.3	402.7	393.0	383.9	374.8	356.5
7.5°	465.7	461.8	459.0	452.2	441.6	429.6	416.1	407.0	400.7	375.2	344.0
10°	502.7	499.4	493.6	481.6	468.6	451.3	432.0	410.4	391.1	370.0	332.9
12.5°	539.3	534.5	526.3	510.9	492.6	471.0	444.5	419.0	391.6	366.6	319.9
15°	575.9	570.6	561.9	543.1	519.1	490.7	458.5	426.2	394.0	362.3	306.4
17.5°	615.8	608.6	595.6	574.4	544.1	509.0	471.0	432.0	393.0	357.0	292.0
20°	658.6	648.5	634.5	606.2	570.6	529.2	483.5	437.8	392.6	350.7	275.7
22.5°	694.2	684.1	668.7	639.4	596.5	546.0	494.1	441.6	390.6	343.5	260.3
25°	725.0	716.8	700.0	666.3	621.1	563.8	504.2	444.5	387.8	335.8	243.9
27.5°	749.0	741.3	722.6	687.9	641.8	579.7	511.9	446.0	383.9	328.1	227.1
30°	770.2	762.5	739.9	704.3	655.7	592.2	519.6	446.4	379.1	316.6	208.8
32.5°	786.6	779.4	756.3	718.3	665.3	600.9	523.9	446.0	372.8	308.4	189.1
35°	802.9	795.7	768.8	728.4	672.6	604.7	527.3	443.6	365.1	294.9	170.3
37.5°	815.4	807.3	779.8	735.1	675.9	605.7	526.8	440.2	357.0	283.8	151.5
40°	824.1	815.4	786.1	738.9	676.9	604.2	522.9	434.4	347.3	269.9	131.8
42.5°	829.9	820.2	789.0	744.7	675.0	600.4	517.2	427.2	336.8	257.9	113.1
45°	832.8	822.6	789.5	739.9	671.6	593.2	508.5	418.1	325.2	241.5	94.3
47.5°	831.3	820.2	787.0	734.6	665.3	585.5	498.9	407.0	311.3	227.1	76.5
50°	828.9	817.4	781.8	727.9	656.7	575.9	488.3	393.5	296.8	209.3	60.6
52.5°	821.2	809.7	776.0	718.3	646.6	564.8	473.9	379.6	281.4	192.0	46.2
55°	811.6	801.0	765.9	709.6	633.6	551.3	460.4	364.7	266.5	174.2	33.2
57.5°	796.7	787.0	753.4	695.6	620.6	536.4	445.5	348.3	247.8	156.4	23.1
60°	778.4	768.8	736.1	679.8	605.7	519.6	429.1	331.5	230.9	138.6	14.4
62.5°	759.1	750.0	715.8	660.0	586.9	501.8	411.3	314.6	213.1	122.2	8.7
65°	733.6	725.0	694.2	636.5	566.2	482.5	391.6	294.4	194.8	103.9	4.8
67.5°	706.7	699.0	667.7	614.8	542.2	461.4	371.4	274.7	175.6	88.0	2.4
70°	677.8	668.2	639.4	585.5	517.6	437.3	349.3	254.5	157.3	72.6	0.0
72.5°	644.2	637.0	609.0	558.1	489.3	411.8	326.7	232.4	137.1	57.7	0.5
75°	611.5	602.3	576.8	528.7	461.4	384.9	301.6	211.7	117.4	44.3	0.5
77.5°	569.1	566.2	542.2	495.5	434.9	358.9	274.2	186.7	98.6	31.8	0.5
80°	526.8	523.9	505.1	462.3	404.1	328.1	248.7	163.1	80.3	21.2	0.5
82.5°	484.9	481.1	463.3	427.7	372.8	302.1	222.3	139.5	63.5	13.0	0.5
85°	447.4	442.6	423.4	390.6	340.6	272.8	194.8	116.4	47.1	7.2	1.0
87.5°	415.2	411.8	390.6	357.0	307.9	245.4	170.8	94.3	33.2	3.4	1.4
90°	387.8	380.5	361.8	326.2	277.1	215.0	145.3	75.5	22.1	1.9	1.9
92.5°	360.8	354.6	333.9	297.3	249.7	189.1	120.8	57.7	14.0	1.0	2.4
95°	332.9	326.2	306.0	272.3	221.8	162.6	99.1	42.3	7.7	1.0	2.4
97.5°	305.5	299.2	278.1	244.4	196.8	139.5	78.4	29.8	3.8	1.0	1.9
100°	280.0	272.8	253.5	219.9	171.7	116.4	60.6	19.2	2.4	1.0	1.9
102.5°	253.0	247.3	227.6	194.8	145.8	94.8	45.2	12.0	1.0	1.0	1.4
105°	229.0	221.8	202.5	168.9	124.1	74.6	31.8	7.2	1.0	1.0	1.4



TEST NUMBER: P551593

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	149.1	143.4	126.5	98.1	63.0	29.3	8.7	1.4	1.4	1.4	1.4
115°	124.6	115.9	101.0	76.0	46.7	19.2	4.3	1.4	1.4	1.4	1.4
117.5°	99.6	92.4	81.8	57.7	30.8	12.5	2.4	1.4	1.4	1.4	1.4
120°	77.9	71.2	59.2	39.9	20.7	7.2	1.0	1.4	1.4	1.4	1.4
122.5°	55.8	50.5	39.9	26.0	12.5	3.4	1.4	1.4	1.9	1.9	1.4
125°	37.0	34.2	26.5	15.9	7.7	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	24.1	21.6	15.4	9.1	3.4	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.5	12.0	9.1	5.3	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.7	7.2	4.8	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9
137.5°	0.5	0.5	1.0	1.0	1.4	1.4	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
160°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	1.9
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P551593

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	377.6	377.6	377.6
2.5°	359.4	352.6	350.7
5°	340.1	329.1	322.8
7.5°	320.9	306.0	298.8
10°	303.1	281.9	274.2
12.5°	281.9	257.4	245.4
15°	261.7	230.0	218.4
17.5°	239.1	203.5	190.0
20°	217.9	177.0	163.1
22.5°	193.9	151.1	135.7
25°	172.2	125.1	107.8
27.5°	148.2	98.6	83.7
30°	125.6	75.5	60.6
32.5°	103.9	55.3	41.9
35°	83.7	37.5	26.5
37.5°	64.5	23.1	13.5
40°	46.7	12.0	6.3
42.5°	31.3	5.8	3.4
45°	19.2	2.9	0.0
47.5°	11.1	0.0	0.0
50°	5.8	0.0	0.0
52.5°	2.4	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	1.4
80°	1.0	1.9	2.4
82.5°	1.9	2.4	2.4
85°	1.9	2.4	2.9
87.5°	2.4	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.8	3.8
95°	3.4	3.8	4.3
97.5°	3.8	4.3	4.3
100°	3.4	4.3	4.8
102.5°	2.9	4.3	4.3
105°	2.4	3.4	3.8





TEST NUMBER: P551593

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.4	1.9	2.4
117.5°	1.4	1.9	1.9
120°	1.4	1.4	1.9
122.5°	1.4	1.4	1.9
125°	1.4	1.4	1.9
127.5°	1.9	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.9	1.4	1.4
135°	1.9	1.4	1.4
137.5°	1.9	1.4	1.4
140°	1.9	1.4	1.4
142.5°	1.9	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	1.0
152.5°	1.4	1.0	1.0
155°	1.4	1.0	0.5
157.5°	1.9	1.0	0.5
160°	1.4	1.0	0.5
162.5°	1.4	1.0	0.5
165°	1.4	1.0	0.0
167.5°	1.4	1.0	0.5
170°	1.4	1.0	0.5
172.5°	1.4	1.0	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	202.1	196.3	177.0	145.3	101.5	56.8	21.2	3.8	1.0	1.4	1.4
110°	176.1	171.3	151.5	120.8	81.8	42.3	14.0	2.4	1.4	1.4	1.4







107.5°	1.9	2.9	3.4
110°	1.9	2.4	2.9



(END OF REPORT)