

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: P551595

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-81-86-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: P551595  
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-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

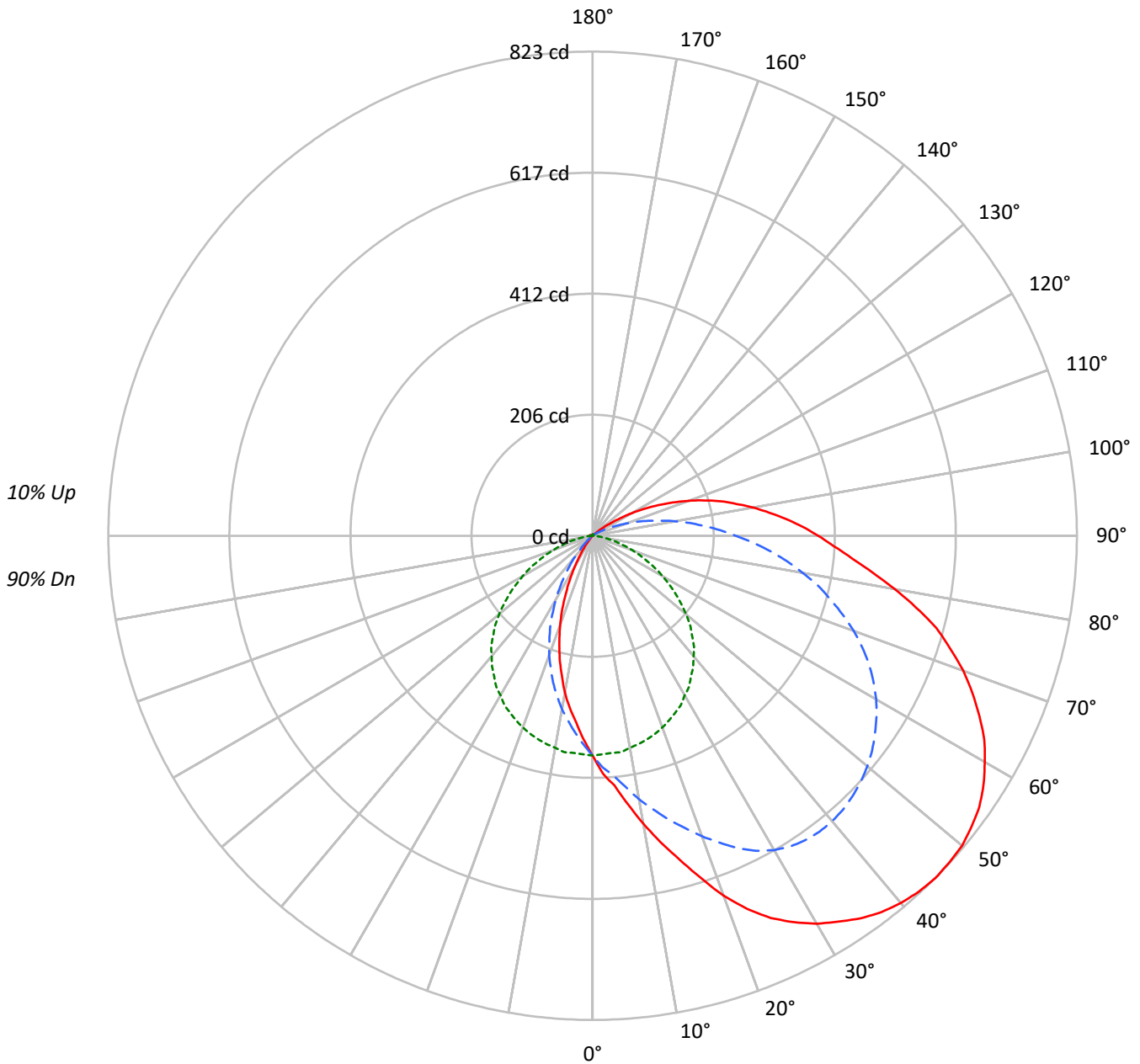
Lumens per Lamp: N/A  
Luminaire Lumens: 1846.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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

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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-86-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°	4019	4019	4019
5°	4412	3960	3304
10°	4993	3912	2723
15°	5596	3862	2123
20°	6311	3800	1563
25°	6904	3726	1027
30°	7345	3628	578
35°	7727	3523	255
40°	8065	3394	61
45°	8356	3231	0
50°	8600	3015	0
55°	8786	2742	0
60°	8879	2424	0
65°	8916	2063	0
70°	8886	1682	0
75°	8773	1242	7
80°	8418	758	39
85°	8137	361	53



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.8	1.9
10°-20°	107.1	5.8
20°-30°	173.4	9.4
30°-40°	222.8	12.1
40°-50°	252.2	13.7
50°-60°	261.3	14.2
60°-70°	246.4	13.3
70°-80°	206.5	11.2
80°-90°	149.7	8.1
90°-100°	98.4	5.3
100°-110°	56.8	3.1
110°-120°	25.1	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°	316.3	17.1
0°-40°	539.1	29.2
0°-60°	1052.5	57.0
0°-90°	1655.1	89.7
90°-120°	180.3	9.8
90°-150°	189.6	10.3
90°-180°	191.0	10.3
0°-180°	1846.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	373	373	373	373	373	
5°	426	409	370	336	319	43
15°	569	499	358	259	216	164
25°	717	586	332	170	107	331
35°	794	631	292	83	26	498
45°	823	625	239	19	0	636
55°	802	586	172	0	0	717
65°	725	518	103	0	0	718
75°	605	418	44	0	0	634
85°	442	303	7	2	3	378
90°	383	243	2	3	3	210
95°	329	190	1	3	4	258
105°	226	98	1	2	4	239
115°	123	33	1	1	2	123
125°	37	4	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°	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4	373.4
2.5°	404.8	404.3	402.9	400.5	397.2	391.5	386.7	382.4	376.7	372.0	362.9
5°	426.2	423.8	421.9	419.5	411.9	406.7	398.1	388.6	379.6	370.5	352.5
7.5°	460.4	456.6	453.8	447.1	436.7	424.8	411.5	402.4	396.2	371.0	340.1
10°	497.1	493.7	488.0	476.1	463.3	446.2	427.2	405.7	386.7	365.8	329.2
12.5°	533.2	528.5	520.4	505.2	487.1	465.7	439.5	414.3	387.2	362.5	316.3
15°	569.4	564.1	555.6	537.0	513.2	485.2	453.3	421.4	389.6	358.2	303.0
17.5°	608.9	601.7	588.9	568.0	538.0	503.3	465.7	427.2	388.6	352.9	288.7
20°	651.2	641.2	627.4	599.3	564.1	523.2	478.0	432.9	388.1	346.8	272.6
22.5°	686.4	676.4	661.2	632.2	589.8	539.9	488.5	436.7	386.2	339.6	257.3
25°	716.8	708.7	692.1	658.8	614.1	557.5	498.5	439.5	383.4	332.0	241.2
27.5°	740.6	733.0	714.5	680.2	634.5	573.2	506.1	440.9	379.6	324.4	224.5
30°	761.5	753.9	731.6	696.4	648.3	585.6	513.7	441.4	374.8	313.0	206.4
32.5°	777.7	770.6	747.8	710.2	657.9	594.1	518.0	440.9	368.6	304.9	186.9
35°	793.9	786.8	760.1	720.2	665.0	597.9	521.3	438.6	361.0	291.6	168.4
37.5°	806.3	798.2	771.1	726.8	668.3	598.9	520.9	435.2	352.9	280.6	149.8
40°	814.8	806.3	777.2	730.6	669.3	597.4	517.1	429.5	343.4	266.9	130.3
42.5°	820.5	811.0	780.1	736.3	667.4	593.6	511.3	422.4	333.0	255.0	111.8
45°	823.4	813.4	780.6	731.6	664.0	586.5	502.8	413.4	321.6	238.8	93.2
47.5°	822.0	811.0	778.2	726.3	657.9	578.9	493.3	402.4	307.8	224.5	75.6
50°	819.6	808.2	773.0	719.7	649.3	569.4	482.8	389.1	293.5	206.9	59.9
52.5°	812.0	800.6	767.3	710.2	639.3	558.4	468.5	375.3	278.3	189.8	45.7
55°	802.5	792.0	757.3	701.6	626.5	545.1	455.2	360.6	263.5	172.2	32.8
57.5°	787.7	778.2	744.9	687.8	613.6	530.4	440.5	344.4	245.0	154.6	22.8
60°	769.6	760.1	727.8	672.1	598.9	513.7	424.3	327.7	228.3	137.0	14.3
62.5°	750.6	741.6	707.8	652.6	580.3	496.1	406.7	311.1	210.7	120.8	8.6
65°	725.4	716.8	686.4	629.3	559.9	477.1	387.2	291.1	192.6	102.7	4.8
67.5°	698.8	691.1	660.2	607.9	536.1	456.2	367.2	271.6	173.6	87.0	2.4
70°	670.2	660.7	632.2	578.9	511.8	432.4	345.3	251.6	155.5	71.8	0.0
72.5°	636.9	629.8	602.2	551.8	483.8	407.2	323.0	229.7	135.6	57.1	0.5
75°	604.6	595.5	570.3	522.8	456.2	380.5	298.2	209.3	116.1	43.8	0.5
77.5°	562.7	559.9	536.1	489.9	430.0	354.9	271.1	184.6	97.5	31.4	0.5
80°	520.9	518.0	499.5	457.1	399.6	324.4	245.9	161.3	79.4	20.9	0.5
82.5°	479.5	475.7	458.1	422.9	368.6	298.7	219.8	137.9	62.8	12.8	0.5
85°	442.4	437.6	418.6	386.2	336.8	269.7	192.6	115.1	46.6	7.1	1.0
87.5°	410.5	407.2	386.2	352.9	304.4	242.6	168.9	93.2	32.8	3.3	1.4
90°	383.4	376.3	357.7	322.5	274.0	212.6	143.7	74.7	21.9	1.9	1.9
92.5°	356.8	350.6	330.1	294.0	246.9	186.9	119.4	57.1	13.8	1.0	2.4
95°	329.2	322.5	302.5	269.2	219.3	160.8	98.0	41.9	7.6	1.0	2.4
97.5°	302.1	295.9	274.9	241.6	194.5	137.9	77.5	29.5	3.8	1.0	1.9
100°	276.8	269.7	250.7	217.4	169.8	115.1	59.9	19.0	2.4	1.0	1.9
102.5°	250.2	244.5	225.0	192.6	144.1	93.7	44.7	11.9	1.0	1.0	1.4
105°	226.4	219.3	200.3	167.0	122.7	73.7	31.4	7.1	1.0	1.0	1.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	147.5	141.7	125.1	97.0	62.3	29.0	8.6	1.4	1.4	1.4	1.4
115°	123.2	114.6	99.9	75.2	46.1	19.0	4.3	1.4	1.4	1.4	1.4
117.5°	98.5	91.3	80.9	57.1	30.4	12.4	2.4	1.4	1.4	1.4	1.4
120°	77.1	70.4	58.5	39.5	20.5	7.1	1.0	1.4	1.4	1.4	1.4
122.5°	55.2	49.9	39.5	25.7	12.4	3.3	1.4	1.4	1.9	1.9	1.4
125°	36.6	33.8	26.2	15.7	7.6	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.8	21.4	15.2	9.0	3.3	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.3	11.9	9.0	5.2	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.6	7.1	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



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	373.4	373.4	373.4
2.5°	355.3	348.7	346.8
5°	336.3	325.4	319.2
7.5°	317.3	302.5	295.4
10°	299.7	278.7	271.1
12.5°	278.7	254.5	242.6
15°	258.8	227.4	216.0
17.5°	236.4	201.2	187.9
20°	215.5	175.0	161.3
22.5°	191.7	149.4	134.1
25°	170.3	123.7	106.6
27.5°	146.5	97.5	82.8
30°	124.2	74.7	59.9
32.5°	102.7	54.7	41.4
35°	82.8	37.1	26.2
37.5°	63.7	22.8	13.3
40°	46.1	11.9	6.2
42.5°	30.9	5.7	3.3
45°	19.0	2.9	0.0
47.5°	10.9	0.0	0.0
50°	5.7	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	3.3
90°	2.9	3.3	3.3
92.5°	2.9	3.8	3.8
95°	3.3	3.8	4.3
97.5°	3.8	4.3	4.3
100°	3.3	4.3	4.8
102.5°	2.9	4.3	4.3
105°	2.4	3.3	3.8





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**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°	199.8	194.1	175.0	143.7	100.4	56.1	20.9	3.8	1.0	1.4	1.4
110°	174.1	169.3	149.8	119.4	80.9	41.9	13.8	2.4	1.4	1.4	1.4







107.5°	1.9	2.9	3.3
110°	1.9	2.4	2.9



(END OF REPORT)