

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: P551533

Luminaire Tested: **FCC-X-2-LD4-2LO-35-UNV-81-87-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: P551533  
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-35-UNV-81-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

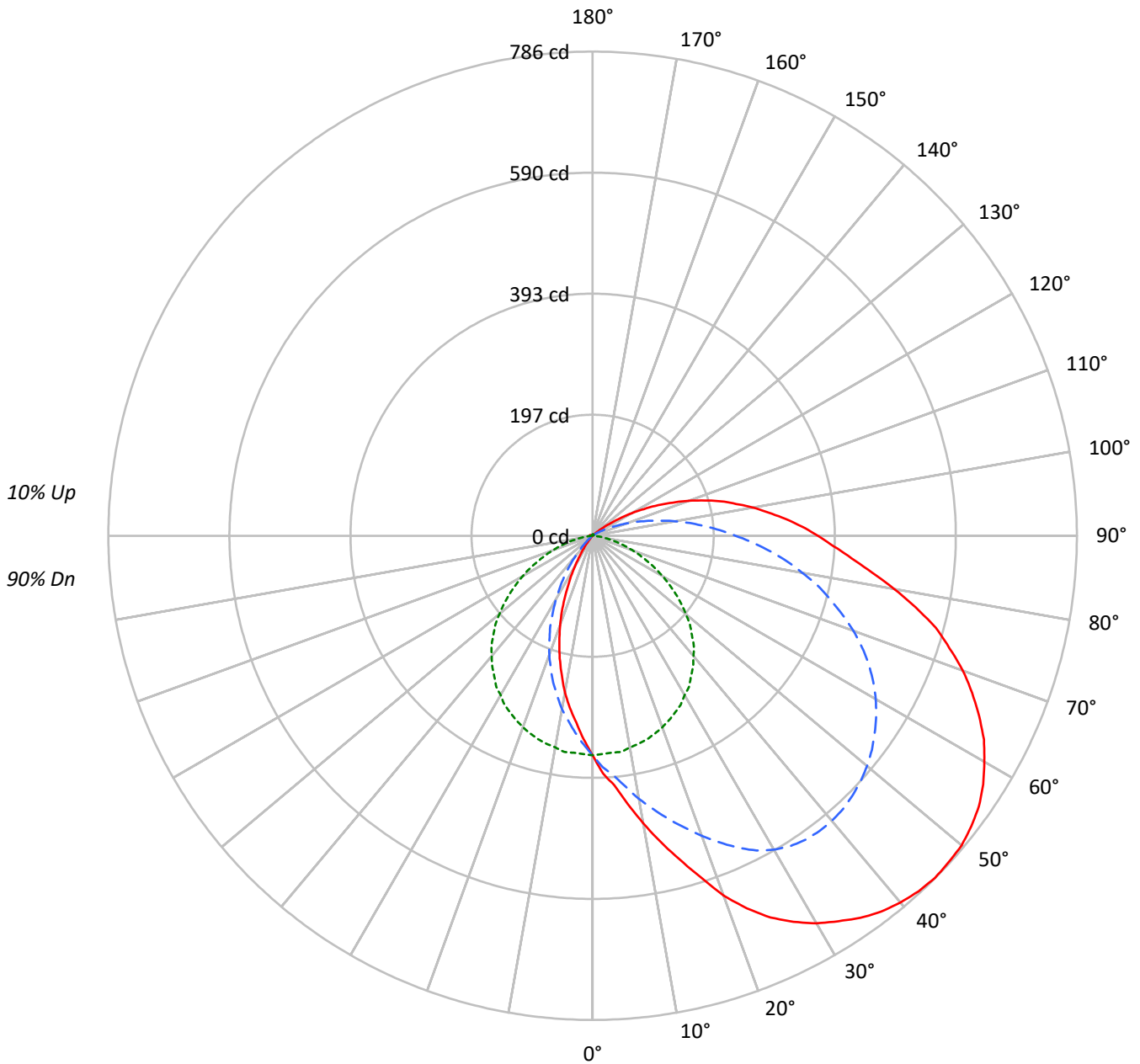
Lumens per Lamp: N/A  
Luminaire Lumens: 1761.1 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (A<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-35-UNV-81-87-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°	3834	3834	3834
5°	4209	3778	3152
10°	4763	3731	2597
15°	5338	3684	2024
20°	6020	3624	1490
25°	6586	3554	979
30°	7007	3462	552
35°	7371	3361	243
40°	7694	3238	58
45°	7972	3082	0
50°	8203	2877	0
55°	8381	2616	0
60°	8470	2313	0
65°	8505	1968	0
70°	8477	1605	0
75°	8368	1183	7
80°	8030	725	37
85°	7761	346	50



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.1	1.9
10°-20°	102.2	5.8
20°-30°	165.4	9.4
30°-40°	212.5	12.1
40°-50°	240.6	13.7
50°-60°	249.2	14.2
60°-70°	235.1	13.3
70°-80°	197.0	11.2
80°-90°	142.8	8.1
90°-100°	93.8	5.3
100°-110°	54.2	3.1
110°-120°	23.9	1.4
120°-130°	6.5	0.4
130°-140°	1.5	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	301.7	17.1
0°-40°	514.2	29.2
0°-60°	1004.1	57.0
0°-90°	1578.9	89.7
90°-120°	172.0	9.8
90°-150°	180.9	10.3
90°-180°	182.0	10.3
0°-180°	1761.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	356	356	356	356	356	
5°	407	390	354	321	304	41
15°	543	476	342	247	206	157
25°	684	559	317	162	102	316
35°	757	602	278	79	25	475
45°	786	596	228	18	0	606
55°	766	559	164	0	0	684
65°	692	495	98	0	0	685
75°	577	399	42	0	0	605
85°	422	289	7	2	3	360
90°	366	232	2	3	3	201
95°	314	181	1	3	4	246
105°	216	94	1	2	4	228
115°	118	31	1	1	2	118
125°	35	4	2	1	2	35
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°	356.2	356.2	356.2	356.2	356.2	356.2	356.2	356.2	356.2	356.2	356.2
2.5°	386.2	385.7	384.3	382.1	378.9	373.5	368.9	364.8	359.4	354.8	346.2
5°	406.6	404.3	402.5	400.2	393.0	388.0	379.8	370.7	362.1	353.5	336.2
7.5°	439.2	435.6	432.9	426.5	416.6	405.2	392.5	383.9	378.0	353.9	324.4
10°	474.2	471.0	465.6	454.2	442.0	425.6	407.5	387.1	368.9	348.9	314.0
12.5°	508.7	504.1	496.4	481.9	464.7	444.2	419.3	395.2	369.4	345.8	301.8
15°	543.2	538.2	530.0	512.3	489.6	462.8	432.4	402.0	371.6	341.7	289.1
17.5°	580.8	574.0	561.8	541.8	513.2	480.1	444.2	407.5	370.7	336.7	275.4
20°	621.2	611.7	598.5	571.7	538.2	499.1	456.0	412.9	370.3	330.8	260.0
22.5°	654.8	645.3	630.7	603.1	562.7	515.0	466.0	416.6	368.5	324.0	245.5
25°	683.8	676.1	660.2	628.5	585.8	531.8	475.5	419.3	365.7	316.7	230.1
27.5°	706.5	699.3	681.6	648.9	605.3	546.8	482.8	420.6	362.1	309.5	214.2
30°	726.5	719.2	697.9	664.3	618.5	558.6	490.1	421.1	357.6	298.6	196.9
32.5°	741.9	735.1	713.3	677.5	627.6	566.8	494.2	420.6	351.7	290.9	178.3
35°	757.3	750.5	725.1	687.0	634.4	570.4	497.3	418.4	344.4	278.2	160.6
37.5°	769.1	761.4	735.6	693.4	637.5	571.3	496.9	415.2	336.7	267.7	142.9
40°	777.3	769.1	741.5	697.0	638.5	569.9	493.2	409.8	327.6	254.6	124.3
42.5°	782.8	773.7	744.2	702.4	636.6	566.3	487.8	402.9	317.6	243.2	106.6
45°	785.5	775.9	744.6	697.9	633.5	559.5	479.6	394.3	306.7	227.8	88.9
47.5°	784.1	773.7	742.4	692.9	627.6	552.2	470.6	383.9	293.6	214.2	72.1
50°	781.8	771.0	737.4	686.6	619.4	543.2	460.6	371.2	280.0	197.4	57.2
52.5°	774.6	763.7	731.9	677.5	609.9	532.7	447.0	358.0	265.5	181.1	43.6
55°	765.5	755.5	722.4	669.3	597.6	520.0	434.3	344.0	251.4	164.3	31.3
57.5°	751.4	742.4	710.6	656.1	585.4	506.0	420.2	328.5	233.7	147.5	21.8
60°	734.2	725.1	694.3	641.2	571.3	490.1	404.8	312.6	217.8	130.7	13.6
62.5°	716.0	707.4	675.2	622.6	553.6	473.3	388.0	296.8	201.0	115.3	8.2
65°	692.0	683.8	654.8	600.3	534.1	455.1	369.4	277.7	183.8	98.0	4.5
67.5°	666.6	659.3	629.8	579.9	511.4	435.2	350.3	259.1	165.6	83.0	2.3
70°	639.4	630.3	603.1	552.2	488.3	412.5	329.4	240.0	148.4	68.5	0.0
72.5°	607.6	600.8	574.5	526.4	461.5	388.4	308.1	219.2	129.3	54.5	0.5
75°	576.7	568.1	544.1	498.7	435.2	363.0	284.5	199.7	110.7	41.7	0.5
77.5°	536.8	534.1	511.4	467.4	410.2	338.5	258.6	176.1	93.0	29.9	0.5
80°	496.9	494.2	476.5	436.1	381.2	309.5	234.6	153.8	75.8	20.0	0.5
82.5°	457.4	453.8	437.0	403.4	351.7	285.0	209.6	131.6	59.9	12.3	0.5
85°	422.0	417.5	399.3	368.5	321.3	257.3	183.8	109.8	44.5	6.8	0.9
87.5°	391.6	388.4	368.5	336.7	290.4	231.4	161.1	88.9	31.3	3.2	1.4
90°	365.7	358.9	341.2	307.7	261.4	202.8	137.0	71.2	20.9	1.8	1.8
92.5°	340.3	334.4	314.9	280.4	235.5	178.3	113.9	54.5	13.2	0.9	2.3
95°	314.0	307.7	288.6	256.8	209.2	153.4	93.5	39.9	7.3	0.9	2.3
97.5°	288.1	282.2	262.3	230.5	185.6	131.6	74.0	28.1	3.6	0.9	1.8
100°	264.1	257.3	239.1	207.4	162.0	109.8	57.2	18.2	2.3	0.9	1.8
102.5°	238.7	233.2	214.6	183.8	137.5	89.4	42.7	11.3	0.9	0.9	1.4
105°	216.0	209.2	191.0	159.3	117.1	70.3	29.9	6.8	0.9	0.9	1.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	140.7	135.2	119.3	92.6	59.4	27.7	8.2	1.4	1.4	1.4	1.4
115°	117.5	109.4	95.3	71.7	44.0	18.2	4.1	1.4	1.4	1.4	1.4
117.5°	93.9	87.1	77.1	54.5	29.0	11.8	2.3	1.4	1.4	1.4	1.4
120°	73.5	67.2	55.8	37.7	19.5	6.8	0.9	1.4	1.4	1.4	1.4
122.5°	52.6	47.6	37.7	24.5	11.8	3.2	1.4	1.4	1.8	1.8	1.4
125°	34.9	32.2	25.0	15.0	7.3	1.4	1.4	1.4	1.8	1.8	1.4
127.5°	22.7	20.4	14.5	8.6	3.2	1.4	1.4	1.8	1.8	1.8	1.4
130°	12.7	11.3	8.6	5.0	1.4	1.4	1.4	1.8	1.8	1.8	1.4
132.5°	7.3	6.8	4.5	0.9	1.4	1.4	1.4	1.8	1.8	1.8	1.8
135°	1.8	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.8	2.3	2.3	2.3	1.8
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.8	2.3	2.3	2.3	1.8
142.5°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8	1.8
145°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	1.8	1.8	1.8
147.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	1.8	1.8
150°	0.5	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	1.8
152.5°	0.5	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	1.8
155°	0.9	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	2.3
157.5°	0.9	0.9	0.9	1.4	1.8	1.8	1.8	2.3	1.8	1.8	2.3
160°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8
165°	0.9	0.9	0.9	0.9	1.4	1.4	1.8	1.8	1.8	1.8	1.8
167.5°	0.9	0.9	0.9	1.4	1.4	1.4	1.8	1.8	1.8	1.8	1.8
170°	0.9	0.9	0.9	1.4	1.4	1.4	1.8	2.3	2.3	2.3	2.3
172.5°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	2.3
175°	0.9	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	2.3
177.5°	0.5	0.9	0.9	1.4	1.4	1.8	1.8	2.3	2.3	2.3	1.8
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°	356.2	356.2	356.2
2.5°	339.0	332.6	330.8
5°	320.8	310.4	304.5
7.5°	302.7	288.6	281.8
10°	285.9	265.9	258.6
12.5°	265.9	242.8	231.4
15°	246.8	216.9	206.0
17.5°	225.5	191.9	179.2
20°	205.6	167.0	153.8
22.5°	182.9	142.5	128.0
25°	162.4	118.0	101.6
27.5°	139.8	93.0	79.0
30°	118.4	71.2	57.2
32.5°	98.0	52.2	39.5
35°	79.0	35.4	25.0
37.5°	60.8	21.8	12.7
40°	44.0	11.3	5.9
42.5°	29.5	5.4	3.2
45°	18.2	2.7	0.0
47.5°	10.4	0.0	0.0
50°	5.4	0.0	0.0
52.5°	2.3	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	0.9	1.4
80°	0.9	1.8	2.3
82.5°	1.8	2.3	2.3
85°	1.8	2.3	2.7
87.5°	2.3	2.7	3.2
90°	2.7	3.2	3.2
92.5°	2.7	3.6	3.6
95°	3.2	3.6	4.1
97.5°	3.6	4.1	4.1
100°	3.2	4.1	4.5
102.5°	2.7	4.1	4.1
105°	2.3	3.2	3.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.8	2.3	2.3
115°	1.4	1.8	2.3
117.5°	1.4	1.8	1.8
120°	1.4	1.4	1.8
122.5°	1.4	1.4	1.8
125°	1.4	1.4	1.8
127.5°	1.8	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.8	1.4	1.4
135°	1.8	1.4	1.4
137.5°	1.8	1.4	1.4
140°	1.8	1.4	1.4
142.5°	1.8	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	0.9
152.5°	1.4	0.9	0.9
155°	1.4	0.9	0.5
157.5°	1.8	0.9	0.5
160°	1.4	0.9	0.5
162.5°	1.4	0.9	0.5
165°	1.4	0.9	0.0
167.5°	1.4	0.9	0.5
170°	1.4	0.9	0.5
172.5°	1.4	0.9	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°	190.6	185.1	167.0	137.0	95.7	53.5	20.0	3.6	0.9	1.4	1.4
110°	166.1	161.5	142.9	113.9	77.1	39.9	13.2	2.3	1.4	1.4	1.4







107.5°	1.8	2.7	3.2
110°	1.8	2.3	2.7



(END OF REPORT)