

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: P551463

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-84-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: P551463  
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-30-UNV-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

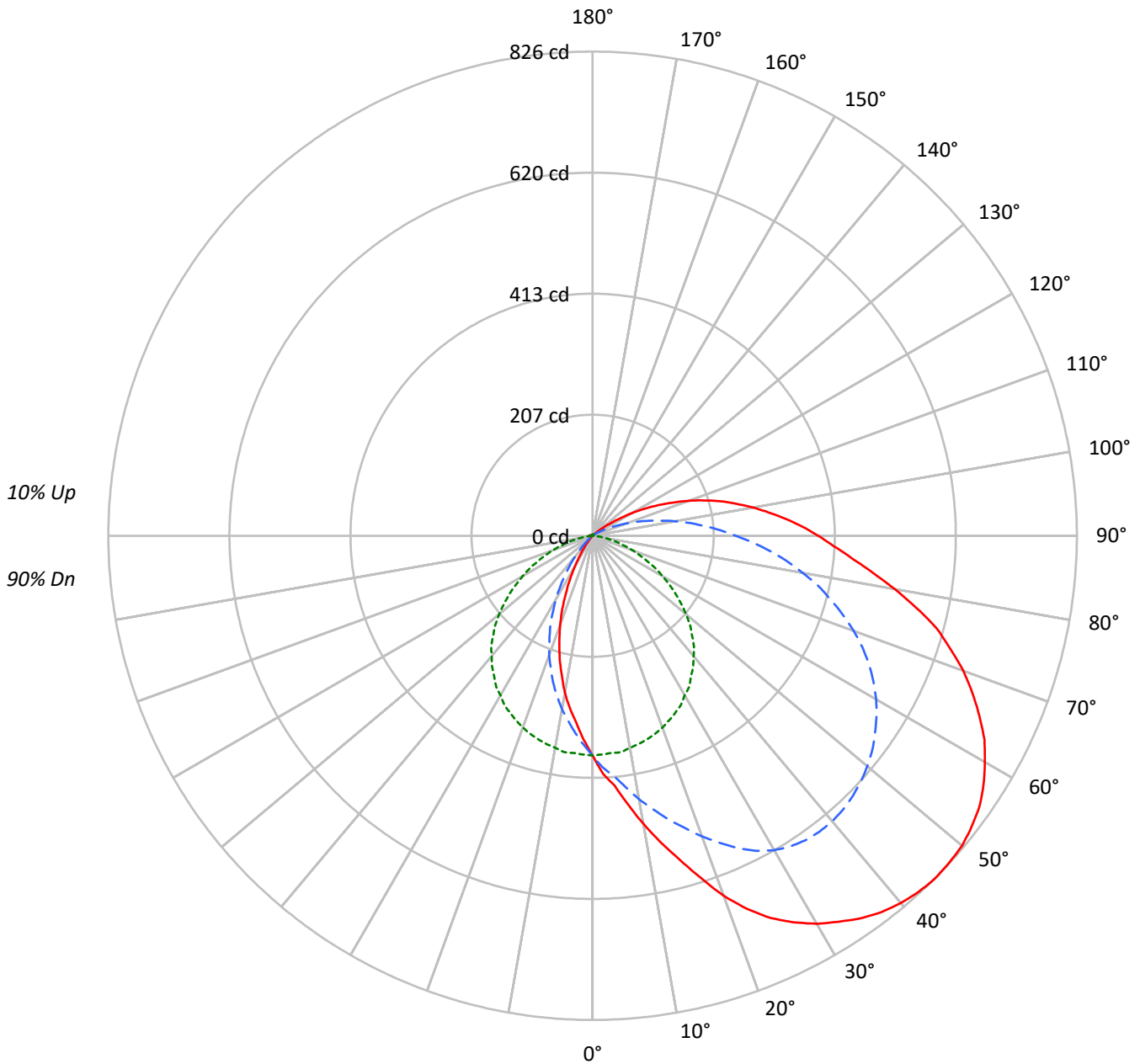
Lumens per Lamp: N/A  
Luminaire Lumens: 1853.0 lumens  
Efficiency: N/A  
Efficacy: 78.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (Ain): 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: P551463

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-84-ED1D-90

### 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°	4034	4034	4034
5°	4429	3976	3317
10°	5012	3927	2734
15°	5616	3876	2131
20°	6335	3814	1569
25°	6931	3740	1031
30°	7373	3642	581
35°	7756	3537	256
40°	8096	3407	61
45°	8388	3243	0
50°	8633	3027	0
55°	8819	2752	0
60°	8913	2433	0
65°	8949	2071	0
70°	8920	1689	0
75°	8807	1245	7
80°	8449	762	39
85°	8168	366	53



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.9	1.9
10°-20°	107.5	5.8
20°-30°	174.1	9.4
30°-40°	223.6	12.1
40°-50°	253.1	13.7
50°-60°	262.3	14.2
60°-70°	247.3	13.3
70°-80°	207.3	11.2
80°-90°	150.3	8.1
90°-100°	98.7	5.3
100°-110°	57.0	3.1
110°-120°	25.2	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°	317.5	17.1
0°-40°	541.1	29.2
0°-60°	1056.5	57.0
0°-90°	1661.4	89.7
90°-120°	180.9	9.8
90°-150°	190.3	10.3
90°-180°	192.0	10.4
0°-180°	1853.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	375	375	375	375	375	
5°	428	411	372	338	320	43
15°	572	501	360	260	217	165
25°	720	588	333	171	107	333
35°	797	634	293	83	26	500
45°	826	628	240	19	0	638
55°	806	588	173	0	0	719
65°	728	520	103	0	0	720
75°	607	420	44	0	0	637
85°	444	304	7	2	3	379
90°	385	244	2	3	3	211
95°	330	191	1	3	4	259
105°	227	99	1	2	4	240
115°	124	33	1	1	2	124
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°	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8	374.8
2.5°	406.3	405.9	404.4	402.0	398.7	393.0	388.2	383.9	378.2	373.4	364.3
5°	427.8	425.4	423.5	421.1	413.5	408.2	399.6	390.1	381.0	372.0	353.8
7.5°	462.2	458.4	455.5	448.8	438.3	426.4	413.0	403.9	397.7	372.4	341.4
10°	499.0	495.6	489.9	478.0	465.1	447.9	428.8	407.3	388.2	367.2	330.4
12.5°	535.2	530.5	522.4	507.1	488.9	467.4	441.2	415.9	388.7	363.8	317.5
15°	571.5	566.3	557.7	539.1	515.2	487.0	455.0	423.0	391.1	359.5	304.2
17.5°	611.2	604.0	591.1	570.1	540.0	505.2	467.4	428.8	390.1	354.3	289.8
20°	653.7	643.6	629.8	601.6	566.3	525.2	479.9	434.5	389.6	348.1	273.6
22.5°	689.0	679.0	663.7	634.6	592.1	541.9	490.4	438.3	387.7	340.9	258.3
25°	719.6	711.4	694.7	661.3	616.4	559.6	500.4	441.2	384.8	333.3	242.1
27.5°	743.4	735.8	717.2	682.8	637.0	575.4	508.0	442.6	381.0	325.6	225.4
30°	764.4	756.8	734.4	699.0	650.8	587.8	515.7	443.1	376.2	314.2	207.2
32.5°	780.7	773.5	750.6	712.9	660.3	596.4	520.0	442.6	370.0	306.1	187.6
35°	796.9	789.7	763.0	722.9	667.5	600.2	523.3	440.2	362.4	292.7	169.0
37.5°	809.3	801.2	774.0	729.6	670.9	601.1	522.8	436.9	354.3	281.7	150.4
40°	817.9	809.3	780.2	733.4	671.8	599.7	519.0	431.2	344.7	267.9	130.8
42.5°	823.6	814.1	783.1	739.1	669.9	595.9	513.3	424.0	334.2	255.9	112.2
45°	826.5	816.5	783.5	734.4	666.6	588.7	504.7	414.9	322.8	239.7	93.6
47.5°	825.1	814.1	781.1	729.1	660.3	581.1	495.1	403.9	308.9	225.4	75.9
50°	822.7	811.2	775.9	722.4	651.8	571.5	484.6	390.6	294.6	207.7	60.2
52.5°	815.0	803.6	770.2	712.9	641.7	560.6	470.3	376.7	279.3	190.5	45.8
55°	805.5	795.0	760.1	704.3	628.8	547.2	456.9	361.9	264.5	172.8	32.9
57.5°	790.7	781.1	747.7	690.4	615.9	532.4	442.1	345.7	245.9	155.2	22.9
60°	772.6	763.0	730.5	674.7	601.1	515.7	425.9	329.0	229.2	137.5	14.3
62.5°	753.5	744.4	710.5	655.1	582.5	498.0	408.2	312.3	211.5	121.3	8.6
65°	728.1	719.6	689.0	631.7	562.0	478.9	388.7	292.2	193.4	103.1	4.8
67.5°	701.4	693.8	662.7	610.2	538.1	457.9	368.6	272.6	174.3	87.4	2.4
70°	672.8	663.2	634.6	581.1	513.8	434.0	346.6	252.6	156.1	72.1	0.0
72.5°	639.3	632.2	604.5	553.9	485.6	408.7	324.2	230.6	136.1	57.3	0.5
75°	606.9	597.8	572.5	524.7	457.9	382.0	299.4	210.1	116.5	43.9	0.5
77.5°	564.9	562.0	538.1	491.8	431.6	356.2	272.2	185.3	97.9	31.5	0.5
80°	522.8	520.0	501.3	458.9	401.1	325.6	246.9	161.9	79.7	21.0	0.5
82.5°	481.3	477.5	459.8	424.5	370.0	299.9	220.6	138.5	63.0	12.9	0.5
85°	444.1	439.3	420.2	387.7	338.1	270.7	193.4	115.5	46.8	7.2	1.0
87.5°	412.1	408.7	387.7	354.3	305.6	243.5	169.5	93.6	32.9	3.3	1.4
90°	384.8	377.7	359.1	323.7	275.0	213.4	144.2	75.0	22.0	1.9	1.9
92.5°	358.1	351.9	331.4	295.1	247.8	187.6	119.8	57.3	13.8	1.0	2.4
95°	330.4	323.7	303.7	270.3	220.1	161.4	98.4	42.0	7.6	1.0	2.4
97.5°	303.2	297.0	276.0	242.6	195.3	138.5	77.8	29.6	3.8	1.0	1.9
100°	277.9	270.7	251.6	218.2	170.5	115.5	60.2	19.1	2.4	1.0	1.9
102.5°	251.2	245.4	225.8	193.4	144.7	94.1	44.9	11.9	1.0	1.0	1.4
105°	227.3	220.1	201.0	167.6	123.2	74.0	31.5	7.2	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°	148.0	142.3	125.6	97.4	62.5	29.1	8.6	1.4	1.4	1.4	1.4
115°	123.7	115.1	100.3	75.4	46.3	19.1	4.3	1.4	1.4	1.4	1.4
117.5°	98.8	91.7	81.2	57.3	30.6	12.4	2.4	1.4	1.4	1.4	1.4
120°	77.4	70.7	58.7	39.6	20.5	7.2	1.0	1.4	1.4	1.4	1.4
122.5°	55.4	50.1	39.6	25.8	12.4	3.3	1.4	1.4	1.9	1.9	1.4
125°	36.8	33.9	26.3	15.8	7.6	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.9	21.5	15.3	9.1	3.3	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.4	11.9	9.1	5.3	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.6	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: P551463

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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	374.8	374.8	374.8
2.5°	356.7	350.0	348.1
5°	337.6	326.6	320.4
7.5°	318.5	303.7	296.5
10°	300.8	279.8	272.2
12.5°	279.8	255.4	243.5
15°	259.7	228.2	216.8
17.5°	237.3	202.0	188.6
20°	216.3	175.7	161.9
22.5°	192.4	149.9	134.6
25°	170.9	124.1	107.0
27.5°	147.1	97.9	83.1
30°	124.6	75.0	60.2
32.5°	103.1	54.9	41.5
35°	83.1	37.2	26.3
37.5°	64.0	22.9	13.4
40°	46.3	11.9	6.2
42.5°	31.0	5.7	3.3
45°	19.1	2.9	0.0
47.5°	11.0	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





TEST NUMBER: P551463

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-84-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°	200.5	194.8	175.7	144.2	100.7	56.3	21.0	3.8	1.0	1.4	1.4
110°	174.8	170.0	150.4	119.8	81.2	42.0	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)