

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: P551476

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D**

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: P551476  
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-81-96-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

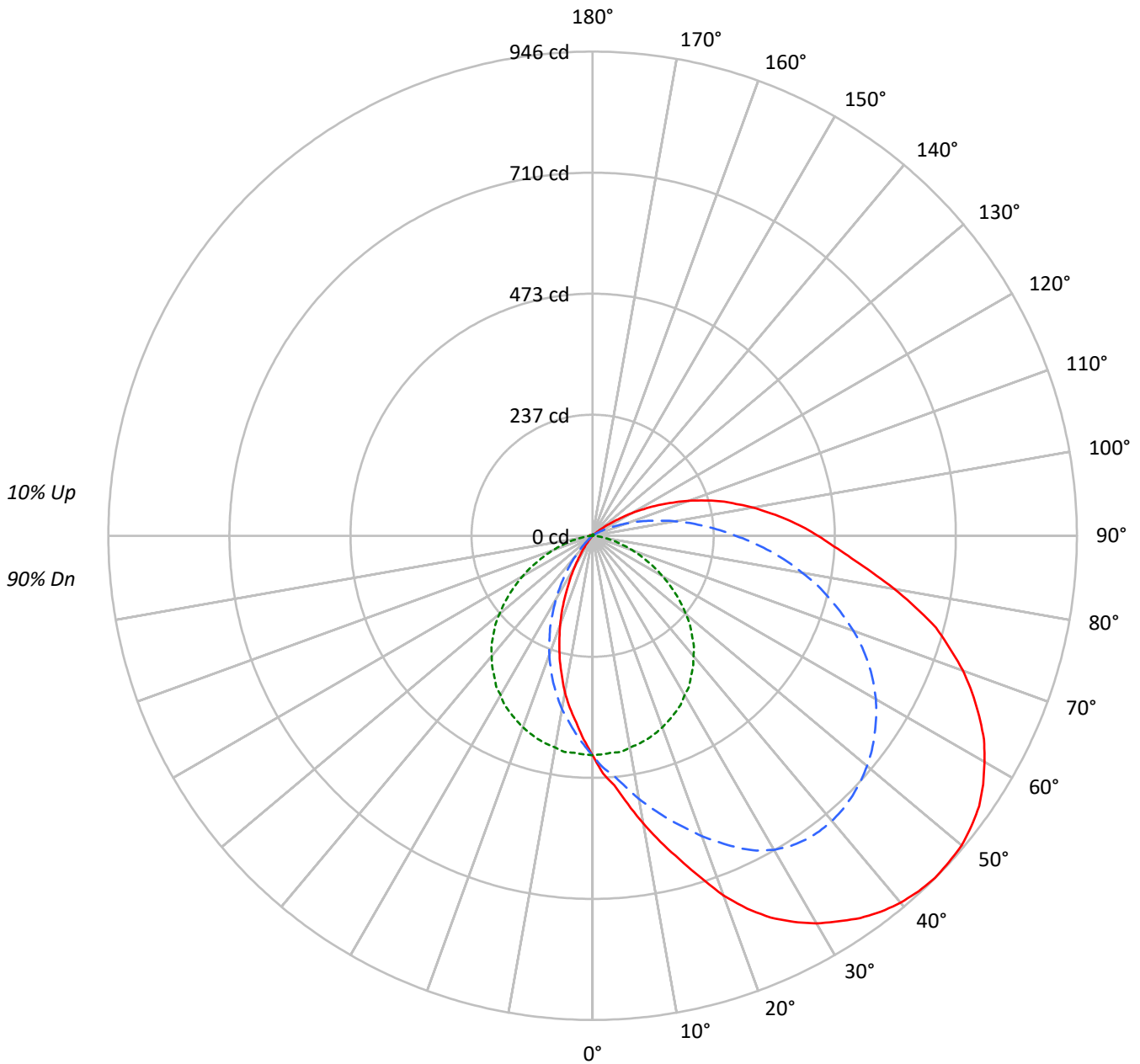
Lumens per Lamp: N/A  
Luminaire Lumens: 2119.9 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**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°	4616	4616	4616
5°	5067	4548	3794
10°	5734	4493	3128
15°	6426	4435	2437
20°	7247	4363	1795
25°	7928	4279	1179
30°	8435	4166	664
35°	8873	4047	292
40°	9263	3898	70
45°	9596	3710	0
50°	9876	3463	0
55°	10090	3150	0
60°	10197	2784	0
65°	10239	2370	0
70°	10205	1933	0
75°	10075	1426	7
80°	9667	871	44
85°	9343	417	61



TEST NUMBER: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.1	1.9
10°-20°	123.0	5.8
20°-30°	199.2	9.4
30°-40°	255.9	12.1
40°-50°	289.6	13.7
50°-60°	300.0	14.2
60°-70°	283.0	13.3
70°-80°	237.1	11.2
80°-90°	171.9	8.1
90°-100°	113.0	5.3
100°-110°	65.2	3.1
110°-120°	28.8	1.4
120°-130°	7.8	0.4
130°-140°	1.8	0.1
140°-150°	1.2	0.1
150°-160°	0.8	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	363.2	17.1
0°-40°	619.1	29.2
0°-60°	1208.8	57.0
0°-90°	1900.8	89.7
90°-120°	207.0	9.8
90°-150°	217.7	10.3
90°-180°	219.0	10.3
0°-180°	2119.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	429	429	429	429	429	
5°	490	470	426	386	366	49
15°	654	573	411	297	248	189
25°	823	673	381	196	122	380
35°	912	725	335	95	30	572
45°	946	718	274	22	0	730
55°	922	673	198	0	0	823
65°	833	595	118	0	0	824
75°	694	480	50	0	0	728
85°	508	348	8	2	3	434
90°	440	279	2	3	4	241
95°	378	218	1	4	5	297
105°	260	113	1	3	4	274
115°	142	37	2	2	3	142
125°	42	5	2	2	2	42
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	



TEST NUMBER: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8
2.5°	464.9	464.3	462.7	460.0	456.1	449.6	444.1	439.2	432.6	427.2	416.8
5°	489.5	486.7	484.5	481.8	473.1	467.1	457.2	446.3	435.9	425.5	404.8
7.5°	528.8	524.4	521.1	513.5	501.5	487.8	472.5	462.1	455.0	426.1	390.6
10°	570.9	567.0	560.5	546.8	532.1	512.4	490.6	466.0	444.1	420.1	378.0
12.5°	612.4	606.9	597.6	580.1	559.4	534.8	504.8	475.8	444.7	416.3	363.3
15°	653.9	647.9	638.0	616.7	589.4	557.2	520.6	484.0	447.4	411.3	348.0
17.5°	699.2	691.0	676.3	652.3	617.8	578.0	534.8	490.6	446.3	405.3	331.6
20°	747.8	736.4	720.5	688.3	647.9	600.9	549.0	497.1	445.8	398.2	313.0
22.5°	788.3	776.8	759.3	726.0	677.4	620.0	561.0	501.5	443.6	390.0	295.5
25°	823.2	813.9	794.8	756.6	705.2	640.2	572.5	504.8	440.3	381.3	277.0
27.5°	850.5	841.8	820.5	781.2	728.7	658.3	581.2	506.4	435.9	372.6	257.8
30°	874.6	865.8	840.2	799.7	744.6	672.5	590.0	506.9	430.5	359.4	237.1
32.5°	893.2	885.0	858.7	815.6	755.5	682.3	594.9	506.4	423.4	350.2	214.7
35°	911.7	903.5	872.9	827.1	763.7	686.7	598.7	503.7	414.6	334.9	193.4
37.5°	925.9	916.6	885.5	834.7	767.5	687.8	598.2	499.8	405.3	322.3	172.1
40°	935.8	925.9	892.6	839.1	768.6	686.1	593.8	493.3	394.4	306.5	149.7
42.5°	942.3	931.4	895.9	845.6	766.4	681.7	587.2	485.1	382.4	292.8	128.4
45°	945.6	934.1	896.4	840.2	762.6	673.6	577.4	474.7	369.3	274.2	107.1
47.5°	944.0	931.4	893.7	834.2	755.5	664.8	566.5	462.1	353.4	257.8	86.9
50°	941.2	928.1	887.7	826.5	745.7	653.9	554.5	446.9	337.1	237.6	68.8
52.5°	932.5	919.4	881.1	815.6	734.2	641.3	538.1	431.0	319.6	218.0	52.4
55°	921.6	909.5	869.7	805.8	719.4	626.0	522.8	414.1	302.6	197.8	37.7
57.5°	904.6	893.7	855.5	789.9	704.7	609.1	505.8	395.5	281.3	177.5	26.2
60°	883.9	872.9	835.8	771.9	687.8	590.0	487.3	376.4	262.2	157.3	16.4
62.5°	862.0	851.6	812.9	749.5	666.5	569.8	467.1	357.3	242.0	138.8	9.8
65°	833.1	823.2	788.3	722.7	643.0	547.9	444.7	334.3	221.2	118.0	5.5
67.5°	802.5	793.7	758.2	698.1	615.7	523.9	421.7	311.9	199.4	100.0	2.7
70°	769.7	758.8	726.0	664.8	587.8	496.6	396.6	289.0	178.6	82.5	0.0
72.5°	731.5	723.3	691.6	633.7	555.6	467.6	370.9	263.9	155.7	65.6	0.5
75°	694.3	683.9	655.0	600.4	523.9	437.0	342.5	240.4	133.3	50.3	0.5
77.5°	646.2	643.0	615.7	562.7	493.8	407.5	311.4	212.0	112.0	36.1	0.5
80°	598.2	594.9	573.6	525.0	458.9	372.6	282.4	185.2	91.2	24.0	0.5
82.5°	550.6	546.3	526.1	485.6	423.4	343.1	252.4	158.4	72.1	14.7	0.5
85°	508.0	502.6	480.7	443.6	386.8	309.7	221.2	132.2	53.5	8.2	1.1
87.5°	471.4	467.6	443.6	405.3	349.6	278.6	193.9	107.1	37.7	3.8	1.6
90°	440.3	432.1	410.8	370.4	314.7	244.2	165.0	85.8	25.1	2.2	2.2
92.5°	409.7	402.6	379.1	337.6	283.5	214.7	137.1	65.6	15.8	1.1	2.7
95°	378.0	370.4	347.4	309.2	251.8	184.6	112.5	48.1	8.7	1.1	2.7
97.5°	346.9	339.8	315.7	277.5	223.4	158.4	89.0	33.9	4.4	1.1	2.2
100°	317.9	309.7	287.9	249.6	195.0	132.2	68.8	21.9	2.7	1.1	2.2
102.5°	287.3	280.8	258.4	221.2	165.5	107.6	51.3	13.7	1.1	1.1	1.6
105°	260.0	251.8	230.0	191.7	140.9	84.7	36.1	8.2	1.1	1.1	1.6



TEST NUMBER: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	169.3	162.8	143.7	111.4	71.6	33.3	9.8	1.6	1.6	1.6	1.6
115°	141.5	131.7	114.7	86.3	53.0	21.9	4.9	1.6	1.6	1.6	1.6
117.5°	113.1	104.9	92.9	65.6	35.0	14.2	2.7	1.6	1.6	1.6	1.6
120°	88.5	80.8	67.2	45.3	23.5	8.2	1.1	1.6	1.6	1.6	1.6
122.5°	63.4	57.4	45.3	29.5	14.2	3.8	1.6	1.6	2.2	2.2	1.6
125°	42.1	38.8	30.0	18.0	8.7	1.6	1.6	1.6	2.2	2.2	1.6
127.5°	27.3	24.6	17.5	10.4	3.8	1.6	1.6	2.2	2.2	2.2	1.6
130°	15.3	13.7	10.4	6.0	1.6	1.6	1.6	2.2	2.2	2.2	1.6
132.5°	8.7	8.2	5.5	1.1	1.6	1.6	1.6	2.2	2.2	2.2	2.2
135°	2.2	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.2
137.5°	0.5	0.5	1.1	1.1	1.6	1.6	2.2	2.7	2.7	2.7	2.2
140°	0.5	0.5	1.1	1.6	1.6	1.6	2.2	2.7	2.7	2.7	2.2
142.5°	0.5	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.2	2.2
145°	0.5	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.2	2.2	2.2
147.5°	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.2	2.2
150°	0.5	1.1	1.1	1.6	2.2	2.2	2.2	2.7	2.2	2.2	2.2
152.5°	0.5	1.1	1.1	1.6	2.2	2.2	2.2	2.7	2.2	2.2	2.2
155°	1.1	1.1	1.1	1.6	2.2	2.2	2.2	2.7	2.2	2.2	2.7
157.5°	1.1	1.1	1.1	1.6	2.2	2.2	2.2	2.7	2.2	2.2	2.7
160°	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.2	2.2	2.2	2.2
162.5°	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.2	2.2	2.2	2.2
165°	1.1	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.2	2.2	2.2
167.5°	1.1	1.1	1.1	1.6	1.6	1.6	2.2	2.2	2.2	2.2	2.2
170°	1.1	1.1	1.1	1.6	1.6	1.6	2.2	2.7	2.7	2.7	2.7
172.5°	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.7	2.7
175°	1.1	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.7	2.7
177.5°	0.5	1.1	1.1	1.6	1.6	2.2	2.2	2.7	2.7	2.7	2.2
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: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	428.8	428.8	428.8
2.5°	408.1	400.4	398.2
5°	386.2	373.7	366.5
7.5°	364.4	347.4	339.2
10°	344.2	320.1	311.4
12.5°	320.1	292.3	278.6
15°	297.2	261.1	248.0
17.5°	271.5	231.1	215.8
20°	247.5	201.0	185.2
22.5°	220.1	171.5	154.0
25°	195.6	142.0	122.4
27.5°	168.3	112.0	95.1
30°	142.6	85.8	68.8
32.5°	118.0	62.8	47.5
35°	95.1	42.6	30.0
37.5°	73.2	26.2	15.3
40°	53.0	13.7	7.1
42.5°	35.5	6.6	3.8
45°	21.9	3.3	0.0
47.5°	12.6	0.0	0.0
50°	6.6	0.0	0.0
52.5°	2.7	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	1.1	1.6
80°	1.1	2.2	2.7
82.5°	2.2	2.7	2.7
85°	2.2	2.7	3.3
87.5°	2.7	3.3	3.8
90°	3.3	3.8	3.8
92.5°	3.3	4.4	4.4
95°	3.8	4.4	4.9
97.5°	4.4	4.9	4.9
100°	3.8	4.9	5.5
102.5°	3.3	4.9	4.9
105°	2.7	3.8	4.4





TEST NUMBER: P551476

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-81-96-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.2	2.7	2.7
115°	1.6	2.2	2.7
117.5°	1.6	2.2	2.2
120°	1.6	1.6	2.2
122.5°	1.6	1.6	2.2
125°	1.6	1.6	2.2
127.5°	2.2	1.6	1.6
130°	1.6	1.6	1.6
132.5°	2.2	1.6	1.6
135°	2.2	1.6	1.6
137.5°	2.2	1.6	1.6
140°	2.2	1.6	1.6
142.5°	2.2	1.6	1.6
145°	1.6	1.6	1.6
147.5°	1.6	1.6	1.6
150°	1.6	1.6	1.1
152.5°	1.6	1.1	1.1
155°	1.6	1.1	0.5
157.5°	2.2	1.1	0.5
160°	1.6	1.1	0.5
162.5°	1.6	1.1	0.5
165°	1.6	1.1	0.0
167.5°	1.6	1.1	0.5
170°	1.6	1.1	0.5
172.5°	1.6	1.1	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°	229.4	222.9	201.0	165.0	115.3	64.5	24.0	4.4	1.1	1.6	1.6
110°	199.9	194.5	172.1	137.1	92.9	48.1	15.8	2.7	1.6	1.6	1.6







107.5°	2.2	3.3	3.8
110°	2.2	2.7	3.3



(END OF REPORT)