

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: P551507

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-93-96-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: P551507  
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-93-96-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

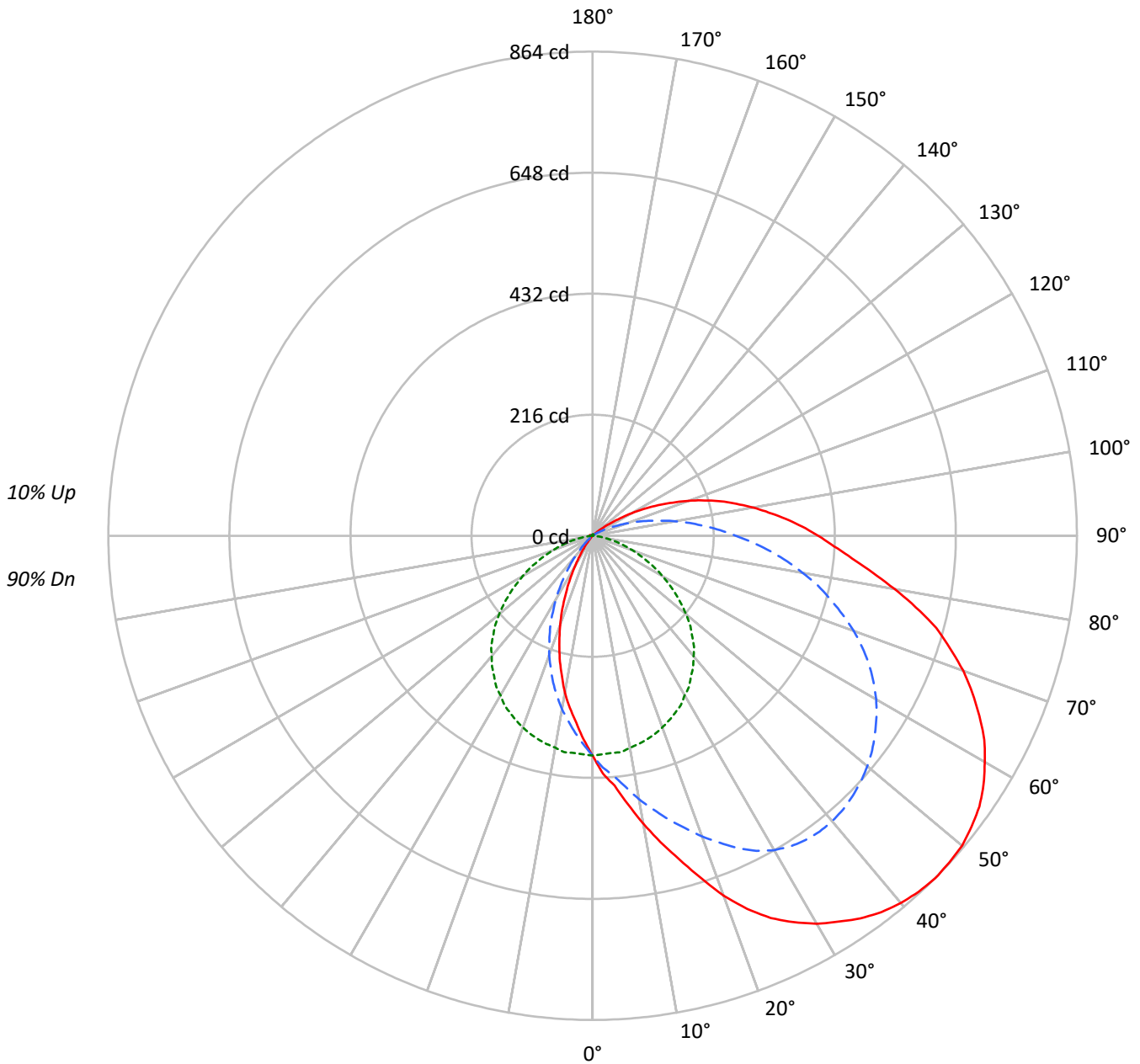
Lumens per Lamp: N/A  
Luminaire Lumens: 1938.0 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-30-UNV-93-96-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°	4219	4219	4219
5°	4632	4158	3469
10°	5241	4107	2859
15°	5875	4054	2228
20°	6625	3988	1641
25°	7248	3912	1078
30°	7711	3809	607
35°	8112	3699	268
40°	8467	3563	64
45°	8772	3392	0
50°	9028	3166	0
55°	9223	2879	0
60°	9322	2545	0
65°	9359	2167	0
70°	9328	1766	0
75°	9210	1302	7
80°	8837	798	40
85°	8541	381	55



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.5	1.9
10°-20°	112.4	5.8
20°-30°	182.1	9.4
30°-40°	233.9	12.1
40°-50°	264.8	13.7
50°-60°	274.3	14.2
60°-70°	258.7	13.3
70°-80°	216.8	11.2
80°-90°	157.1	8.1
90°-100°	103.3	5.3
100°-110°	59.6	3.1
110°-120°	26.3	1.4
120°-130°	7.1	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	332.1	17.1
0°-40°	565.9	29.2
0°-60°	1105.0	57.0
0°-90°	1737.6	89.7
90°-120°	189.2	9.8
90°-150°	199.1	10.3
90°-180°	200.0	10.3
0°-180°	1938.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	392	392	392	392	392	
5°	447	430	389	353	335	45
15°	598	524	376	272	227	172
25°	753	615	349	179	112	348
35°	834	663	306	87	28	523
45°	864	656	251	20	0	667
55°	842	615	181	0	0	752
65°	762	544	108	0	0	753
75°	635	439	46	0	0	666
85°	464	318	8	2	3	397
90°	402	255	2	3	4	221
95°	346	200	1	4	4	271
105°	238	103	1	2	4	251
115°	129	34	2	2	2	130
125°	38	5	2	2	2	38
135°	2	2	2	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	2	2	0	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	392.0	392.0	392.0	392.0	392.0	392.0	392.0	392.0	392.0	392.0	392.0
2.5°	425.0	424.5	423.0	420.5	417.0	411.0	406.0	401.5	395.5	390.5	381.0
5°	447.4	444.9	442.9	440.5	432.5	427.0	418.0	408.0	398.5	389.0	370.0
7.5°	483.4	479.4	476.4	469.4	458.4	445.9	432.0	422.5	416.0	389.5	357.1
10°	521.8	518.4	512.4	499.9	486.4	468.4	448.4	426.0	406.0	384.0	345.6
12.5°	559.8	554.8	546.3	530.3	511.4	488.9	461.4	435.0	406.5	380.5	332.1
15°	597.8	592.3	583.3	563.8	538.8	509.4	475.9	442.4	409.0	376.0	318.1
17.5°	639.2	631.7	618.2	596.3	564.8	528.3	488.9	448.4	408.0	370.5	303.1
20°	683.6	673.2	658.7	629.2	592.3	549.3	501.9	454.4	407.5	364.0	286.1
22.5°	720.6	710.1	694.1	663.7	619.2	566.8	512.9	458.4	405.5	356.6	270.2
25°	752.6	744.1	726.6	691.6	644.7	585.3	523.3	461.4	402.5	348.6	253.2
27.5°	777.5	769.5	750.1	714.1	666.2	601.7	531.3	462.9	398.5	340.6	235.7
30°	799.5	791.5	768.0	731.1	680.7	614.7	539.3	463.4	393.5	328.6	216.7
32.5°	816.5	809.0	785.0	745.6	690.6	623.7	543.8	462.9	387.0	320.1	196.3
35°	833.5	826.0	798.0	756.1	698.1	627.7	547.3	460.4	379.0	306.1	176.8
37.5°	846.4	838.0	809.5	763.0	701.6	628.7	546.8	456.9	370.5	294.6	157.3
40°	855.4	846.4	816.0	767.0	702.6	627.2	542.8	450.9	360.6	280.2	136.8
42.5°	861.4	851.4	819.0	773.0	700.6	623.2	536.8	443.4	349.6	267.7	117.4
45°	864.4	853.9	819.5	768.0	697.1	615.7	527.8	434.0	337.6	250.7	97.9
47.5°	862.9	851.4	817.0	762.5	690.6	607.7	517.9	422.5	323.1	235.7	79.4
50°	860.4	848.4	811.5	755.6	681.6	597.8	506.9	408.5	308.1	217.2	62.9
52.5°	852.4	840.5	805.5	745.6	671.2	586.3	491.9	394.0	292.1	199.3	47.9
55°	842.4	831.5	795.0	736.6	657.7	572.3	477.9	378.5	276.7	180.8	34.5
57.5°	827.0	817.0	782.0	722.1	644.2	556.8	462.4	361.5	257.2	162.3	24.0
60°	808.0	798.0	764.0	705.6	628.7	539.3	445.4	344.1	239.7	143.8	15.0
62.5°	788.0	778.5	743.1	685.1	609.2	520.9	427.0	326.6	221.2	126.8	9.0
65°	761.5	752.6	720.6	660.7	587.8	500.9	406.5	305.6	202.2	107.9	5.0
67.5°	733.6	725.6	693.1	638.2	562.8	478.9	385.5	285.1	182.3	91.4	2.5
70°	703.6	693.6	663.7	607.7	537.3	453.9	362.5	264.2	163.3	75.4	0.0
72.5°	668.7	661.2	632.2	579.3	507.9	427.5	339.1	241.2	142.3	59.9	0.5
75°	634.7	625.2	598.8	548.8	478.9	399.5	313.1	219.7	121.8	45.9	0.5
77.5°	590.8	587.8	562.8	514.4	451.4	372.5	284.6	193.8	102.4	33.0	0.5
80°	546.8	543.8	524.3	479.9	419.5	340.6	258.2	169.3	83.4	22.0	0.5
82.5°	503.4	499.4	480.9	443.9	387.0	313.6	230.7	144.8	65.9	13.5	0.5
85°	464.4	459.4	439.5	405.5	353.6	283.1	202.2	120.8	48.9	7.5	1.0
87.5°	431.0	427.5	405.5	370.5	319.6	254.7	177.3	97.9	34.5	3.5	1.5
90°	402.5	395.0	375.5	338.6	287.6	223.2	150.8	78.4	23.0	2.0	2.0
92.5°	374.5	368.0	346.6	308.6	259.2	196.3	125.3	59.9	14.5	1.0	2.5
95°	345.6	338.6	317.6	282.6	230.2	168.8	102.9	43.9	8.0	1.0	2.5
97.5°	317.1	310.6	288.6	253.7	204.2	144.8	81.4	31.0	4.0	1.0	2.0
100°	290.6	283.1	263.2	228.2	178.3	120.8	62.9	20.0	2.5	1.0	2.0
102.5°	262.7	256.7	236.2	202.2	151.3	98.4	46.9	12.5	1.0	1.0	1.5
105°	237.7	230.2	210.2	175.3	128.8	77.4	33.0	7.5	1.0	1.0	1.5



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	154.8	148.8	131.3	101.9	65.4	30.5	9.0	1.5	1.5	1.5	1.5
115°	129.3	120.3	104.9	78.9	48.4	20.0	4.5	1.5	1.5	1.5	1.5
117.5°	103.4	95.9	84.9	59.9	32.0	13.0	2.5	1.5	1.5	1.5	1.5
120°	80.9	73.9	61.4	41.4	21.5	7.5	1.0	1.5	1.5	1.5	1.5
122.5°	57.9	52.4	41.4	27.0	13.0	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.5	35.5	27.5	16.5	8.0	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.0	22.5	16.0	9.5	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.0	12.5	9.5	5.5	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.0	7.5	5.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	392.0	392.0	392.0
2.5°	373.0	366.0	364.0
5°	353.1	341.6	335.1
7.5°	333.1	317.6	310.1
10°	314.6	292.6	284.6
12.5°	292.6	267.2	254.7
15°	271.7	238.7	226.7
17.5°	248.2	211.2	197.3
20°	226.2	183.8	169.3
22.5°	201.2	156.8	140.8
25°	178.8	129.8	111.9
27.5°	153.8	102.4	86.9
30°	130.3	78.4	62.9
32.5°	107.9	57.4	43.4
35°	86.9	39.0	27.5
37.5°	66.9	24.0	14.0
40°	48.4	12.5	6.5
42.5°	32.5	6.0	3.5
45°	20.0	3.0	0.0
47.5°	11.5	0.0	0.0
50°	6.0	0.0	0.0
52.5°	2.5	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	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.0	4.0
95°	3.5	4.0	4.5
97.5°	4.0	4.5	4.5
100°	3.5	4.5	5.0
102.5°	3.0	4.5	4.5
105°	2.5	3.5	4.0





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CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-96-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	209.7	203.7	183.8	150.8	105.4	58.9	22.0	4.0	1.0	1.5	1.5
110°	182.8	177.8	157.3	125.3	84.9	43.9	14.5	2.5	1.5	1.5	1.5







107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)