

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: P551491

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-82-96-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: P551491  
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-82-96-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC 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**

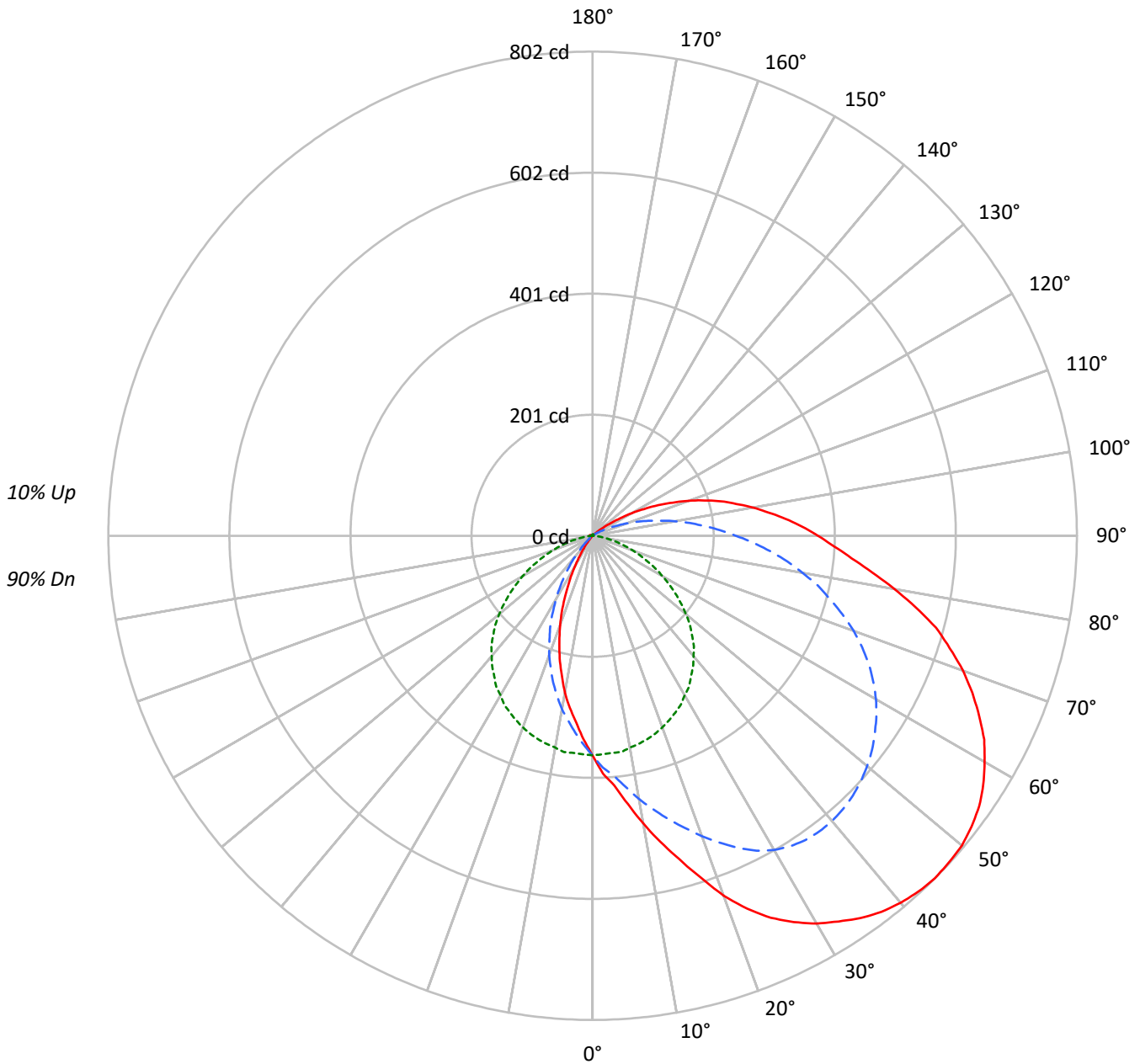
Lumens per Lamp: N/A  
Luminaire Lumens: 1798.1 lumens  
Efficiency: N/A  
Efficacy: 76.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-82-96-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°	3915	3915	3915
5°	4297	3857	3218
10°	4864	3810	2653
15°	5450	3762	2067
20°	6147	3700	1522
25°	6724	3629	1000
30°	7154	3535	563
35°	7526	3432	248
40°	7855	3305	59
45°	8139	3147	0
50°	8377	2937	0
55°	8557	2670	0
60°	8648	2361	0
65°	8683	2011	0
70°	8655	1640	0
75°	8545	1208	7
80°	8198	740	37
85°	7925	351	51



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.8	1.9
10°-20°	104.3	5.8
20°-30°	168.9	9.4
30°-40°	217.0	12.1
40°-50°	245.6	13.7
50°-60°	254.5	14.2
60°-70°	240.0	13.3
70°-80°	201.1	11.2
80°-90°	145.8	8.1
90°-100°	95.8	5.3
100°-110°	55.3	3.1
110°-120°	24.4	1.4
120°-130°	6.6	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°	308.1	17.1
0°-40°	525.1	29.2
0°-60°	1025.2	57.0
0°-90°	1612.1	89.7
90°-120°	175.6	9.8
90°-150°	184.7	10.3
90°-180°	186.0	10.3
0°-180°	1798.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	364	364	364	364	364	
5°	415	399	361	328	311	42
15°	555	486	349	252	210	160
25°	698	571	323	166	104	323
35°	773	615	284	81	26	485
45°	802	609	233	18	0	619
55°	782	571	168	0	0	698
65°	706	505	100	0	0	699
75°	589	407	43	0	0	618
85°	431	295	7	2	3	368
90°	373	237	2	3	3	205
95°	321	185	1	3	4	252
105°	220	96	1	2	4	233
115°	120	32	1	1	2	120
125°	36	4	2	1	2	36
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°	363.7	363.7	363.7	363.7	363.7	363.7	363.7	363.7	363.7	363.7	363.7
2.5°	394.3	393.8	392.4	390.1	386.9	381.3	376.7	372.5	366.9	362.3	353.5
5°	415.1	412.8	410.9	408.6	401.2	396.1	387.8	378.5	369.7	360.9	343.3
7.5°	448.5	444.8	442.0	435.5	425.3	413.7	400.8	392.0	385.9	361.4	331.3
10°	484.2	480.9	475.3	463.8	451.3	434.6	416.0	395.2	376.7	356.3	320.6
12.5°	519.4	514.7	506.9	492.0	474.4	453.6	428.1	403.5	377.1	353.0	308.1
15°	554.6	549.5	541.1	523.1	499.9	472.6	441.5	410.5	379.4	348.9	295.1
17.5°	593.0	586.1	573.6	553.2	524.0	490.2	453.6	416.0	378.5	343.8	281.2
20°	634.3	624.5	611.1	583.8	549.5	509.6	465.6	421.6	378.1	337.7	265.5
22.5°	668.5	658.8	644.0	615.7	574.5	525.8	475.8	425.3	376.2	330.8	250.6
25°	698.2	690.3	674.1	641.7	598.1	543.0	485.5	428.1	373.4	323.4	234.9
27.5°	721.4	713.9	695.9	662.5	618.0	558.3	493.0	429.5	369.7	316.0	218.7
30°	741.7	734.3	712.6	678.3	631.5	570.3	500.4	429.9	365.1	304.9	201.1
32.5°	757.5	750.5	728.3	691.7	640.7	578.7	504.5	429.5	359.1	297.0	182.1
35°	773.3	766.3	740.4	701.4	647.7	582.4	507.8	427.2	351.6	284.0	164.0
37.5°	785.3	777.4	751.0	707.9	650.9	583.3	507.3	423.9	343.8	273.3	145.9
40°	793.6	785.3	757.0	711.6	651.9	581.9	503.6	418.4	334.5	259.9	126.9
42.5°	799.2	789.9	759.8	717.2	650.0	578.2	498.0	411.4	324.3	248.3	108.9
45°	802.0	792.2	760.3	712.6	646.8	571.3	489.7	402.6	313.2	232.6	90.8
47.5°	800.6	789.9	758.0	707.5	640.7	563.8	480.4	392.0	299.8	218.7	73.7
50°	798.3	787.2	752.9	701.0	632.4	554.6	470.3	379.0	285.9	201.5	58.4
52.5°	790.9	779.7	747.3	691.7	622.7	543.9	456.4	365.5	271.0	184.9	44.5
55°	781.6	771.4	737.6	683.4	610.2	530.9	443.4	351.2	256.7	167.7	32.0
57.5°	767.2	758.0	725.5	669.9	597.7	516.6	429.0	335.4	238.6	150.6	22.2
60°	749.6	740.4	708.9	654.6	583.3	500.4	413.3	319.2	222.4	133.4	13.9
62.5°	731.1	722.3	689.4	635.7	565.2	483.2	396.1	303.0	205.2	117.7	8.3
65°	706.5	698.2	668.5	612.9	545.3	464.7	377.1	283.5	187.6	100.1	4.6
67.5°	680.6	673.2	643.1	592.1	522.1	444.3	357.7	264.5	169.1	84.8	2.3
70°	652.8	643.5	615.7	563.8	498.5	421.1	336.4	245.1	151.5	70.0	0.0
72.5°	620.4	613.4	586.5	537.4	471.2	396.6	314.6	223.8	132.0	55.6	0.5
75°	588.9	580.1	555.5	509.2	444.3	370.6	290.5	203.9	113.0	42.6	0.5
77.5°	548.1	545.3	522.1	477.2	418.8	345.6	264.1	179.8	95.0	30.6	0.5
80°	507.3	504.5	486.5	445.2	389.2	316.0	239.5	157.1	77.4	20.4	0.5
82.5°	467.0	463.3	446.2	411.9	359.1	291.0	214.0	134.4	61.2	12.5	0.5
85°	430.9	426.2	407.7	376.2	328.0	262.7	187.6	112.1	45.4	6.9	0.9
87.5°	399.8	396.6	376.2	343.8	296.5	236.3	164.5	90.8	32.0	3.2	1.4
90°	373.4	366.5	348.4	314.1	266.9	207.1	139.9	72.7	21.3	1.9	1.9
92.5°	347.5	341.5	321.5	286.3	240.5	182.1	116.3	55.6	13.4	0.9	2.3
95°	320.6	314.1	294.7	262.2	213.6	156.6	95.4	40.8	7.4	0.9	2.3
97.5°	294.2	288.2	267.8	235.4	189.5	134.4	75.5	28.7	3.7	0.9	1.9
100°	269.6	262.7	244.2	211.7	165.4	112.1	58.4	18.5	2.3	0.9	1.9
102.5°	243.7	238.1	219.1	187.6	140.4	91.3	43.6	11.6	0.9	0.9	1.4
105°	220.5	213.6	195.1	162.6	119.5	71.8	30.6	6.9	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°	143.6	138.1	121.8	94.5	60.7	28.3	8.3	1.4	1.4	1.4	1.4
115°	120.0	111.7	97.3	73.2	44.9	18.5	4.2	1.4	1.4	1.4	1.4
117.5°	95.9	89.0	78.8	55.6	29.7	12.0	2.3	1.4	1.4	1.4	1.4
120°	75.1	68.6	57.0	38.5	19.9	6.9	0.9	1.4	1.4	1.4	1.4
122.5°	53.7	48.6	38.5	25.0	12.0	3.2	1.4	1.4	1.9	1.9	1.4
125°	35.7	32.9	25.5	15.3	7.4	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.2	20.8	14.8	8.8	3.2	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.0	11.6	8.8	5.1	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.4	6.9	4.6	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.9	2.3	2.3	2.3	1.9
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	1.9
142.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
145°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	1.9	1.9	1.9
147.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	1.9	1.9
150°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
152.5°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9
155°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
157.5°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.3	1.9	1.9	2.3
160°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	0.9	0.9	0.9	0.9	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	0.9	0.9	0.9	1.4	1.4	1.4	1.9	2.3	2.3	2.3	2.3
172.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
175°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	2.3
177.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.3	2.3	2.3	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°	363.7	363.7	363.7
2.5°	346.1	339.6	337.7
5°	327.6	316.9	310.9
7.5°	309.0	294.7	287.7
10°	291.9	271.5	264.1
12.5°	271.5	247.9	236.3
15°	252.0	221.5	210.3
17.5°	230.3	196.0	183.0
20°	209.9	170.5	157.1
22.5°	186.7	145.5	130.7
25°	165.9	120.5	103.8
27.5°	142.7	95.0	80.6
30°	120.9	72.7	58.4
32.5°	100.1	53.3	40.3
35°	80.6	36.1	25.5
37.5°	62.1	22.2	13.0
40°	44.9	11.6	6.0
42.5°	30.1	5.6	3.2
45°	18.5	2.8	0.0
47.5°	10.7	0.0	0.0
50°	5.6	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	1.9	2.3
82.5°	1.9	2.3	2.3
85°	1.9	2.3	2.8
87.5°	2.3	2.8	3.2
90°	2.8	3.2	3.2
92.5°	2.8	3.7	3.7
95°	3.2	3.7	4.2
97.5°	3.7	4.2	4.2
100°	3.2	4.2	4.6
102.5°	2.8	4.2	4.2
105°	2.3	3.2	3.7





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.3	2.3
115°	1.4	1.9	2.3
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	0.9
152.5°	1.4	0.9	0.9
155°	1.4	0.9	0.5
157.5°	1.9	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°	194.6	189.0	170.5	139.9	97.8	54.7	20.4	3.7	0.9	1.4	1.4
110°	169.6	164.9	145.9	116.3	78.8	40.8	13.4	2.3	1.4	1.4	1.4







107.5°	1.9	2.8	3.2
110°	1.9	2.3	2.8



(END OF REPORT)