

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: P551499

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-93-86-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: P551499  
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-93-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

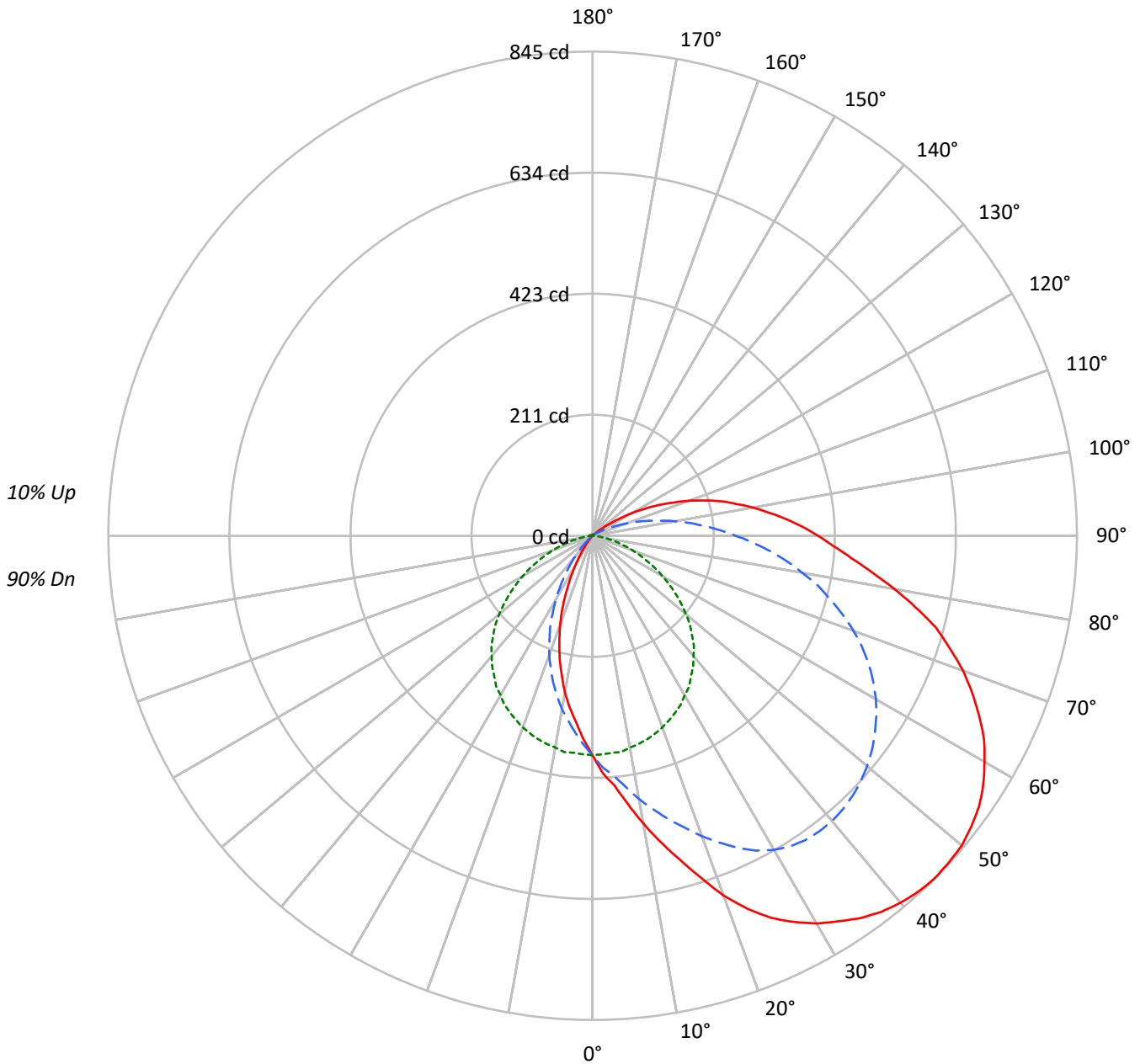
Lumens per Lamp: N/A  
Luminaire Lumens: 1894.1 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-93-86-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°	4124	4124	4124
5°	4527	4064	3390
10°	5123	4014	2794
15°	5741	3963	2178
20°	6475	3898	1603
25°	7084	3824	1053
30°	7536	3722	593
35°	7927	3615	261
40°	8275	3482	62
45°	8573	3315	0
50°	8824	3094	0
55°	9014	2814	0
60°	9109	2488	0
65°	9148	2117	0
70°	9116	1727	0
75°	9001	1273	7
80°	8636	780	39
85°	8348	371	53



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.7	1.9
10°-20°	109.9	5.8
20°-30°	177.9	9.4
30°-40°	228.6	12.1
40°-50°	258.7	13.7
50°-60°	268.1	14.2
60°-70°	252.8	13.3
70°-80°	211.9	11.2
80°-90°	153.6	8.1
90°-100°	100.9	5.3
100°-110°	58.3	3.1
110°-120°	25.7	1.4
120°-130°	7.0	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°	324.5	17.1
0°-40°	553.1	29.2
0°-60°	1079.9	57.0
0°-90°	1698.1	89.7
90°-120°	185.0	9.8
90°-150°	194.6	10.3
90°-180°	196.0	10.3
0°-180°	1894.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	383	383	383	383	383	
5°	437	420	380	345	328	44
15°	584	512	368	266	222	168
25°	736	601	341	175	109	340
35°	814	648	299	85	27	511
45°	845	642	245	20	0	652
55°	823	601	177	0	0	735
65°	744	532	105	0	0	736
75°	620	429	45	0	0	651
85°	454	311	7	2	3	388
90°	393	250	2	3	3	216
95°	338	195	1	3	4	265
105°	232	101	1	2	4	245
115°	126	33	2	2	2	127
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°	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1
2.5°	415.3	414.8	413.4	410.9	407.5	401.7	396.8	392.4	386.5	381.6	372.4
5°	437.3	434.8	432.9	430.5	422.6	417.3	408.5	398.7	389.5	380.2	361.6
7.5°	472.4	468.5	465.6	458.8	448.0	435.8	422.2	412.9	406.5	380.7	348.9
10°	510.0	506.6	500.7	488.5	475.4	457.8	438.3	416.3	396.8	375.3	337.7
12.5°	547.1	542.2	533.9	518.3	499.8	477.8	450.9	425.1	397.3	371.9	324.5
15°	584.2	578.8	570.0	551.0	526.6	497.8	465.1	432.4	399.7	367.5	310.9
17.5°	624.7	617.4	604.2	582.7	552.0	516.3	477.8	438.3	398.7	362.1	296.2
20°	668.1	657.9	643.7	614.9	578.8	536.8	490.5	444.1	398.2	355.8	279.6
22.5°	704.2	694.0	678.4	648.6	605.2	553.9	501.2	448.0	396.3	348.5	264.0
25°	735.5	727.2	710.1	675.9	630.1	572.0	511.5	450.9	393.4	340.7	247.4
27.5°	759.9	752.1	733.0	697.9	651.0	588.1	519.3	452.4	389.5	332.8	230.4
30°	781.4	773.5	750.6	714.5	665.2	600.8	527.1	452.9	384.6	321.1	211.8
32.5°	797.9	790.6	767.2	728.6	675.0	609.6	531.5	452.4	378.2	312.8	191.8
35°	814.5	807.2	779.9	738.9	682.3	613.5	534.9	450.0	370.4	299.2	172.8
37.5°	827.2	818.9	791.1	745.7	685.7	614.4	534.4	446.6	362.1	287.9	153.7
40°	836.0	827.2	797.5	749.6	686.7	613.0	530.5	440.7	352.4	273.8	133.7
42.5°	841.9	832.1	800.4	755.5	684.7	609.1	524.6	433.4	341.6	261.6	114.7
45°	844.8	834.5	800.9	750.6	681.3	601.8	515.9	424.1	329.9	245.0	95.7
47.5°	843.3	832.1	798.4	745.2	675.0	593.9	506.1	412.9	315.8	230.4	77.6
50°	840.9	829.2	793.1	738.4	666.2	584.2	495.4	399.2	301.1	212.3	61.5
52.5°	833.1	821.4	787.2	728.6	655.9	573.0	480.7	385.1	285.5	194.7	46.9
55°	823.3	812.6	777.0	719.9	642.7	559.3	467.1	369.9	270.4	176.7	33.7
57.5°	808.2	798.4	764.3	705.7	629.6	544.2	451.9	353.3	251.3	158.6	23.4
60°	789.6	779.9	746.7	689.6	614.4	527.1	435.3	336.3	234.3	140.6	14.6
62.5°	770.1	760.9	726.2	669.6	595.4	509.0	417.3	319.2	216.2	124.0	8.8
65°	744.3	735.5	704.2	645.7	574.4	489.5	397.3	298.7	197.7	105.4	4.9
67.5°	716.9	709.1	677.4	623.7	550.0	468.0	376.8	278.7	178.1	89.3	2.4
70°	687.6	677.9	648.6	593.9	525.1	443.6	354.3	258.2	159.6	73.7	0.0
72.5°	653.5	646.2	617.9	566.1	496.3	417.8	331.4	235.7	139.1	58.6	0.5
75°	620.3	611.0	585.2	536.4	468.0	390.4	306.0	214.7	119.1	44.9	0.5
77.5°	577.4	574.4	550.0	502.7	441.2	364.1	278.2	189.4	100.0	32.2	0.5
80°	534.4	531.5	512.4	469.0	410.0	332.8	252.3	165.4	81.5	21.5	0.5
82.5°	491.9	488.0	470.0	433.9	378.2	306.5	225.5	141.5	64.4	13.2	0.5
85°	453.9	449.0	429.5	396.3	345.5	276.7	197.7	118.1	47.8	7.3	1.0
87.5°	421.2	417.8	396.3	362.1	312.3	248.9	173.3	95.7	33.7	3.4	1.5
90°	393.4	386.0	367.0	330.9	281.1	218.2	147.4	76.6	22.4	2.0	2.0
92.5°	366.0	359.7	338.7	301.6	253.3	191.8	122.5	58.6	14.2	1.0	2.4
95°	337.7	330.9	310.4	276.2	225.0	165.0	100.5	42.9	7.8	1.0	2.4
97.5°	309.9	303.6	282.1	247.9	199.6	141.5	79.6	30.3	3.9	1.0	2.0
100°	284.0	276.7	257.2	223.0	174.2	118.1	61.5	19.5	2.4	1.0	2.0
102.5°	256.7	250.9	230.8	197.7	147.9	96.1	45.9	12.2	1.0	1.0	1.5
105°	232.3	225.0	205.5	171.3	125.9	75.6	32.2	7.3	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°	151.3	145.4	128.4	99.6	63.9	29.8	8.8	1.5	1.5	1.5	1.5
115°	126.4	117.6	102.5	77.1	47.3	19.5	4.4	1.5	1.5	1.5	1.5
117.5°	101.0	93.7	83.0	58.6	31.2	12.7	2.4	1.5	1.5	1.5	1.5
120°	79.1	72.2	60.0	40.5	21.0	7.3	1.0	1.5	1.5	1.5	1.5
122.5°	56.6	51.2	40.5	26.4	12.7	3.4	1.5	1.5	2.0	2.0	1.5
125°	37.6	34.7	26.8	16.1	7.8	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.4	22.0	15.6	9.3	3.4	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.7	12.2	9.3	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.8	7.3	4.9	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	2.4	2.4	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.4	2.4	2.4	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.4	2.4	2.4	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.4	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.4	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.4	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.4	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.4	2.0	2.0	2.4
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.4	2.0	2.0	2.4
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	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.4	2.4	2.4	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°	383.1	383.1	383.1
2.5°	364.6	357.7	355.8
5°	345.0	333.8	327.5
7.5°	325.5	310.4	303.1
10°	307.5	286.0	278.2
12.5°	286.0	261.1	248.9
15°	265.5	233.3	221.6
17.5°	242.6	206.4	192.8
20°	221.1	179.6	165.4
22.5°	196.7	153.2	137.6
25°	174.7	126.9	109.3
27.5°	150.3	100.0	84.9
30°	127.4	76.6	61.5
32.5°	105.4	56.1	42.5
35°	84.9	38.1	26.8
37.5°	65.4	23.4	13.7
40°	47.3	12.2	6.3
42.5°	31.7	5.9	3.4
45°	19.5	2.9	0.0
47.5°	11.2	0.0	0.0
50°	5.9	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	1.5
80°	1.0	2.0	2.4
82.5°	2.0	2.4	2.4
85°	2.0	2.4	2.9
87.5°	2.4	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.9	3.9
95°	3.4	3.9	4.4
97.5°	3.9	4.4	4.4
100°	3.4	4.4	4.9
102.5°	2.9	4.4	4.4
105°	2.4	3.4	3.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	2.0	2.4	2.4
115°	1.5	2.0	2.4
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°	205.0	199.1	179.6	147.4	103.0	57.6	21.5	3.9	1.0	1.5	1.5
110°	178.6	173.7	153.7	122.5	83.0	42.9	14.2	2.4	1.5	1.5	1.5







107.5°	2.0	2.9	3.4
110°	2.0	2.4	2.9



(END OF REPORT)