

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: P550989

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-93-87-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: P550989  
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-LD4-1STD-30-UNV-93-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

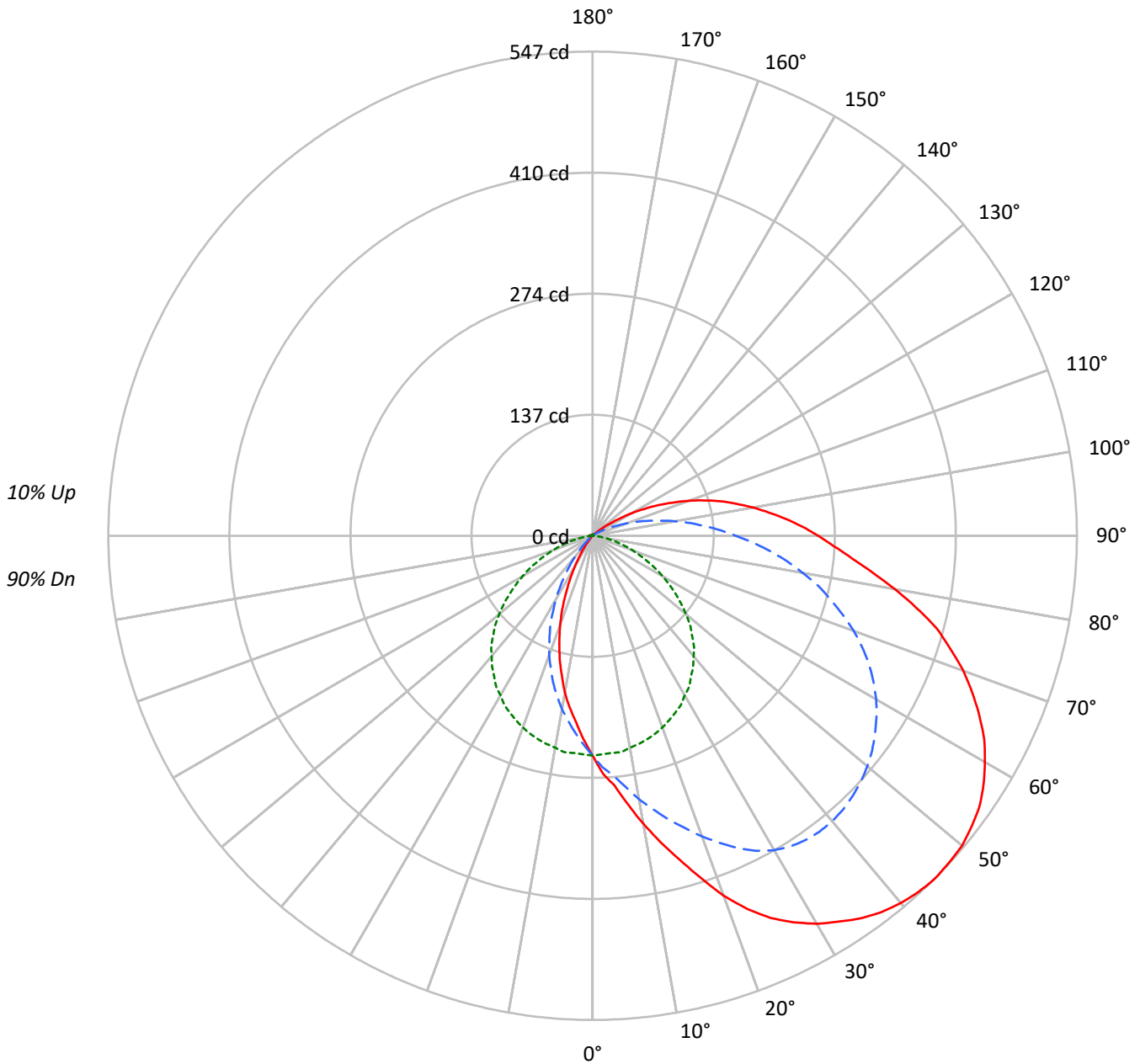
Lumens per Lamp: N/A  
Luminaire Lumens: 1226.9 lumens  
Efficiency: N/A  
Efficacy: 73.5 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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-LD4-1STD-30-UNV-93-87-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°	2672	2672	2672
5°	2933	2632	2196
10°	3319	2600	1810
15°	3720	2567	1410
20°	4194	2525	1039
25°	4589	2477	682
30°	4882	2411	384
35°	5136	2342	169
40°	5361	2256	41
45°	5554	2147	0
50°	5717	2004	0
55°	5840	1823	0
60°	5902	1612	0
65°	5927	1372	0
70°	5907	1117	0
75°	5832	825	4
80°	5595	504	26
85°	5407	239	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.8	1.9
10°-20°	71.2	5.8
20°-30°	115.3	9.4
30°-40°	148.1	12.1
40°-50°	167.6	13.7
50°-60°	173.7	14.2
60°-70°	163.8	13.3
70°-80°	137.2	11.2
80°-90°	99.5	8.1
90°-100°	65.4	5.3
100°-110°	37.8	3.1
110°-120°	16.6	1.4
120°-130°	4.5	0.4
130°-140°	1.0	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	210.2	17.1
0°-40°	358.3	29.2
0°-60°	699.6	57.0
0°-90°	1100.1	89.7
90°-120°	119.8	9.8
90°-150°	126.0	10.3
90°-180°	127.0	10.4
0°-180°	1226.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	248	248	248	248	248	
5°	283	272	246	224	212	29
15°	378	332	238	172	144	109
25°	476	389	221	113	71	220
35°	528	420	194	55	17	331
45°	547	416	159	13	0	423
55°	533	389	114	0	0	476
65°	482	345	68	0	0	477
75°	402	278	29	0	0	422
85°	294	202	5	1	2	251
90°	255	162	1	2	2	140
95°	219	126	1	2	3	172
105°	150	65	1	2	2	159
115°	82	22	1	1	2	82
125°	24	3	1	1	1	24
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	1	0	0
175°	1	1	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°	248.2	248.2	248.2	248.2	248.2	248.2	248.2	248.2	248.2	248.2	248.2
2.5°	269.1	268.7	267.8	266.2	264.0	260.2	257.0	254.2	250.4	247.2	241.2
5°	283.3	281.7	280.4	278.9	273.8	270.3	264.6	258.3	252.3	246.3	234.3
7.5°	306.1	303.5	301.6	297.2	290.2	282.3	273.5	267.5	263.4	246.6	226.1
10°	330.4	328.2	324.4	316.5	307.9	296.6	283.9	269.7	257.0	243.1	218.8
12.5°	354.4	351.3	345.9	335.8	323.8	309.5	292.1	275.4	257.4	240.9	210.3
15°	378.5	375.0	369.3	357.0	341.1	322.5	301.3	280.1	258.9	238.1	201.4
17.5°	404.7	400.0	391.4	377.5	357.6	334.5	309.5	283.9	258.3	234.6	191.9
20°	432.8	426.2	417.0	398.4	375.0	347.8	317.7	287.7	258.0	230.5	181.2
22.5°	456.2	449.6	439.5	420.2	392.0	358.9	324.7	290.2	256.7	225.7	171.0
25°	476.5	471.1	460.0	437.9	408.2	370.6	331.3	292.1	254.8	220.7	160.3
27.5°	492.3	487.2	474.9	452.1	421.8	381.0	336.4	293.1	252.3	215.6	149.2
30°	506.2	501.1	486.3	462.9	430.9	389.2	341.5	293.4	249.1	208.0	137.2
32.5°	516.9	512.2	497.0	472.0	437.3	394.9	344.3	293.1	245.0	202.7	124.3
35°	527.7	522.9	505.2	478.7	442.0	397.4	346.5	291.5	240.0	193.8	111.9
37.5°	535.9	530.5	512.5	483.1	444.2	398.1	346.2	289.3	234.6	186.5	99.6
40°	541.6	535.9	516.6	485.6	444.8	397.1	343.7	285.5	228.3	177.4	86.6
42.5°	545.4	539.1	518.5	489.4	443.6	394.6	339.9	280.8	221.3	169.5	74.3
45°	547.3	540.6	518.8	486.3	441.4	389.8	334.2	274.8	213.7	158.7	62.0
47.5°	546.3	539.1	517.3	482.8	437.3	384.8	327.9	267.5	204.6	149.2	50.3
50°	544.8	537.2	513.8	478.4	431.6	378.5	320.9	258.6	195.1	137.5	39.8
52.5°	539.7	532.1	510.0	472.0	424.9	371.2	311.4	249.5	185.0	126.2	30.4
55°	533.4	526.4	503.3	466.3	416.4	362.3	302.6	239.7	175.2	114.5	21.8
57.5°	523.6	517.3	495.1	457.2	407.9	352.5	292.8	228.9	162.8	102.8	15.2
60°	511.6	505.2	483.7	446.7	398.1	341.5	282.0	217.8	151.8	91.1	9.5
62.5°	498.9	492.9	470.5	433.8	385.7	329.8	270.3	206.8	140.1	80.3	5.7
65°	482.2	476.5	456.2	418.3	372.1	317.1	257.4	193.5	128.0	68.3	3.2
67.5°	464.5	459.4	438.8	404.1	356.3	303.2	244.1	180.5	115.4	57.9	1.6
70°	445.5	439.2	420.2	384.8	340.2	287.4	229.5	167.3	103.4	47.7	0.0
72.5°	423.4	418.6	400.3	366.8	321.5	270.6	214.7	152.7	90.1	37.9	0.3
75°	401.9	395.8	379.1	347.5	303.2	252.9	198.2	139.1	77.1	29.1	0.3
77.5°	374.0	372.1	356.3	325.7	285.8	235.9	180.2	122.7	64.8	20.9	0.3
80°	346.2	344.3	332.0	303.8	265.6	215.6	163.5	107.2	52.8	13.9	0.3
82.5°	318.7	316.2	304.5	281.1	245.0	198.6	146.1	91.7	41.7	8.5	0.3
85°	294.0	290.9	278.2	256.7	223.8	179.3	128.0	76.5	31.0	4.7	0.6
87.5°	272.9	270.6	256.7	234.6	202.3	161.2	112.2	62.0	21.8	2.2	0.9
90°	254.8	250.1	237.8	214.4	182.1	141.3	95.5	49.6	14.5	1.3	1.3
92.5°	237.1	233.0	219.4	195.4	164.1	124.3	79.4	37.9	9.2	0.6	1.6
95°	218.8	214.4	201.1	179.0	145.8	106.9	65.1	27.8	5.1	0.6	1.6
97.5°	200.8	196.7	182.7	160.6	129.3	91.7	51.5	19.6	2.5	0.6	1.3
100°	184.0	179.3	166.6	144.5	112.9	76.5	39.8	12.6	1.6	0.6	1.3
102.5°	166.3	162.5	149.5	128.0	95.8	62.3	29.7	7.9	0.6	0.6	0.9
105°	150.5	145.8	133.1	111.0	81.6	49.0	20.9	4.7	0.6	0.6	0.9



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CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-93-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	98.0	94.2	83.2	64.5	41.4	19.3	5.7	0.9	0.9	0.9	0.9
115°	81.9	76.2	66.4	50.0	30.7	12.6	2.8	0.9	0.9	0.9	0.9
117.5°	65.4	60.7	53.7	37.9	20.2	8.2	1.6	0.9	0.9	0.9	0.9
120°	51.2	46.8	38.9	26.2	13.6	4.7	0.6	0.9	0.9	0.9	0.9
122.5°	36.7	33.2	26.2	17.1	8.2	2.2	0.9	0.9	1.3	1.3	0.9
125°	24.3	22.4	17.4	10.4	5.1	0.9	0.9	0.9	1.3	1.3	0.9
127.5°	15.8	14.2	10.1	6.0	2.2	0.9	0.9	1.3	1.3	1.3	0.9
130°	8.9	7.9	6.0	3.5	0.9	0.9	0.9	1.3	1.3	1.3	0.9
132.5°	5.1	4.7	3.2	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	0.9	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.6	1.6	1.3
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	248.2	248.2	248.2
2.5°	236.2	231.8	230.5
5°	223.5	216.3	212.1
7.5°	210.9	201.1	196.3
10°	199.2	185.3	180.2
12.5°	185.3	169.2	161.2
15°	172.0	151.1	143.5
17.5°	157.1	133.7	124.9
20°	143.2	116.4	107.2
22.5°	127.4	99.3	89.2
25°	113.2	82.2	70.8
27.5°	97.4	64.8	55.0
30°	82.5	49.6	39.8
32.5°	68.3	36.4	27.5
35°	55.0	24.7	17.4
37.5°	42.4	15.2	8.9
40°	30.7	7.9	4.1
42.5°	20.6	3.8	2.2
45°	12.6	1.9	0.0
47.5°	7.3	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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°	0.3	0.3	0.3
77.5°	0.3	0.6	0.9
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.5	2.5
95°	2.2	2.5	2.8
97.5°	2.5	2.8	2.8
100°	2.2	2.8	3.2
102.5°	1.9	2.8	2.8
105°	1.6	2.2	2.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	0.9	1.3	1.6
117.5°	0.9	1.3	1.3
120°	0.9	0.9	1.3
122.5°	0.9	0.9	1.3
125°	0.9	0.9	1.3
127.5°	1.3	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.3	0.9	0.9
135°	1.3	0.9	0.9
137.5°	1.3	0.9	0.9
140°	1.3	0.9	0.9
142.5°	1.3	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.3	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	132.8	129.0	116.4	95.5	66.7	37.3	13.9	2.5	0.6	0.9	0.9
110°	115.7	112.6	99.6	79.4	53.7	27.8	9.2	1.6	0.9	0.9	0.9







107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)