

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: P550995

Luminaire Tested: **FCC-X-2-LD4-1STD-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: P550995  
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-93-96-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**

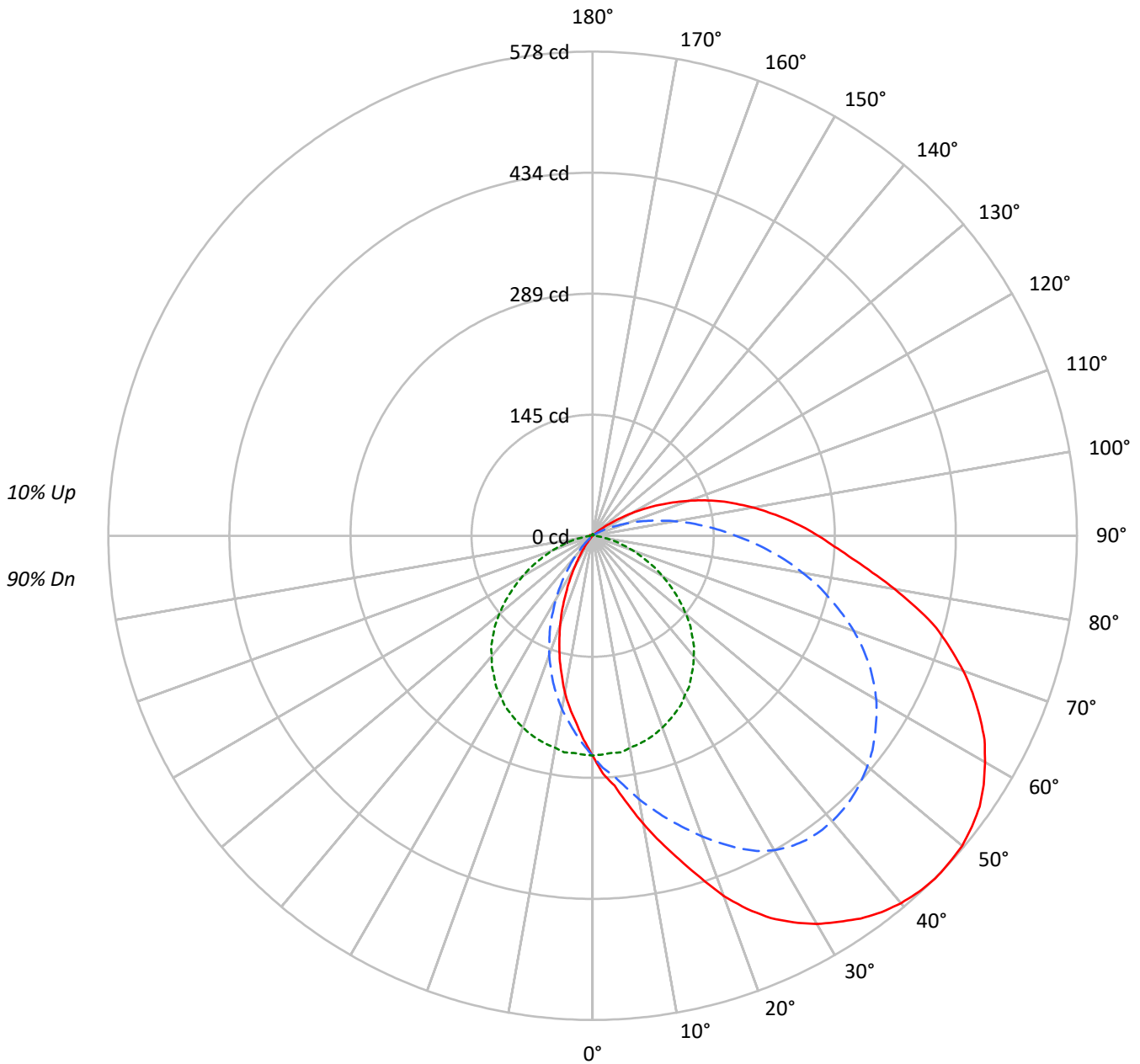
Lumens per Lamp: N/A  
Luminaire Lumens: 1297.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-93-96-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°	2824	2824	2824
5°	3099	2782	2322
10°	3508	2748	1913
15°	3931	2714	1491
20°	4434	2669	1098
25°	4850	2618	721
30°	5161	2549	406
35°	5429	2476	179
40°	5667	2385	43
45°	5871	2271	0
50°	6042	2119	0
55°	6173	1927	0
60°	6238	1704	0
65°	6265	1450	0
70°	6243	1183	0
75°	6164	871	4
80°	5915	533	27
85°	5716	254	37



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.1	1.9
10°-20°	75.2	5.8
20°-30°	121.8	9.4
30°-40°	156.5	12.1
40°-50°	177.2	13.7
50°-60°	183.6	14.2
60°-70°	173.1	13.3
70°-80°	145.1	11.2
80°-90°	105.2	8.1
90°-100°	69.1	5.3
100°-110°	39.9	3.1
110°-120°	17.6	1.4
120°-130°	4.8	0.4
130°-140°	1.1	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°	222.2	17.1
0°-40°	378.7	29.2
0°-60°	739.5	57.0
0°-90°	1162.9	89.7
90°-120°	126.7	9.8
90°-150°	133.2	10.3
90°-180°	134.0	10.3
0°-180°	1297.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	262	262	262	262	262	
5°	299	288	260	236	224	30
15°	400	351	252	182	152	115
25°	504	412	233	120	75	233
35°	558	444	205	58	18	350
45°	578	439	168	13	0	447
55°	564	412	121	0	0	503
65°	510	364	72	0	0	504
75°	425	294	31	0	0	446
85°	311	213	5	1	2	265
90°	269	171	1	2	2	148
95°	231	134	1	2	3	181
105°	159	69	1	2	3	168
115°	87	23	1	1	2	87
125°	26	3	1	1	1	26
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°	262.4	262.4	262.4	262.4	262.4	262.4	262.4	262.4	262.4	262.4	262.4
2.5°	284.4	284.1	283.1	281.4	279.1	275.1	271.7	268.7	264.7	261.3	255.0
5°	299.4	297.8	296.4	294.8	289.4	285.7	279.7	273.0	266.7	260.3	247.6
7.5°	323.5	320.8	318.8	314.2	306.8	298.4	289.1	282.7	278.4	260.7	239.0
10°	349.2	346.9	342.9	334.5	325.5	313.5	300.1	285.1	271.7	257.0	231.3
12.5°	374.6	371.3	365.6	354.9	342.2	327.2	308.8	291.1	272.0	254.7	222.2
15°	400.0	396.4	390.4	377.3	360.6	340.9	318.5	296.1	273.7	251.7	212.9
17.5°	427.8	422.8	413.7	399.0	378.0	353.6	327.2	300.1	273.0	248.0	202.9
20°	457.5	450.5	440.8	421.1	396.4	367.6	335.9	304.1	272.7	243.6	191.5
22.5°	482.3	475.2	464.5	444.2	414.4	379.3	343.2	306.8	271.4	238.6	180.8
25°	503.6	498.0	486.3	462.9	431.5	391.7	350.2	308.8	269.4	233.3	169.4
27.5°	520.4	515.0	502.0	477.9	445.8	402.7	355.6	309.8	266.7	227.9	157.7
30°	535.1	529.7	514.0	489.3	455.5	411.4	360.9	310.1	263.4	219.9	145.0
32.5°	546.4	541.4	525.4	499.0	462.2	417.4	364.0	309.8	259.0	214.2	131.3
35°	557.8	552.8	534.1	506.0	467.2	420.1	366.3	308.1	253.7	204.9	118.3
37.5°	566.5	560.8	541.7	510.7	469.6	420.8	366.0	305.8	248.0	197.2	105.3
40°	572.5	566.5	546.1	513.3	470.2	419.8	363.3	301.8	241.3	187.5	91.6
42.5°	576.5	569.8	548.1	517.4	468.9	417.1	359.3	296.8	233.9	179.1	78.5
45°	578.5	571.5	548.4	514.0	466.6	412.1	353.3	290.4	225.9	167.8	65.5
47.5°	577.5	569.8	546.8	510.3	462.2	406.7	346.6	282.7	216.2	157.7	53.1
50°	575.8	567.8	543.1	505.7	456.2	400.0	339.2	273.4	206.2	145.4	42.1
52.5°	570.5	562.5	539.1	499.0	449.2	392.4	329.2	263.7	195.5	133.3	32.1
55°	563.8	556.5	532.1	493.0	440.1	383.0	319.8	253.3	185.2	121.0	23.1
57.5°	553.4	546.8	523.4	483.3	431.1	372.6	309.5	242.0	172.1	108.6	16.0
60°	540.7	534.1	511.3	472.2	420.8	360.9	298.1	230.3	160.4	96.3	10.0
62.5°	527.4	521.0	497.3	458.5	407.7	348.6	285.7	218.6	148.1	84.9	6.0
65°	509.7	503.6	482.3	442.2	393.4	335.2	272.0	204.5	135.4	72.2	3.3
67.5°	490.9	485.6	463.9	427.1	376.7	320.5	258.0	190.8	122.0	61.2	1.7
70°	470.9	464.2	444.2	406.7	359.6	303.8	242.6	176.8	109.3	50.5	0.0
72.5°	447.5	442.5	423.1	387.7	339.9	286.1	226.9	161.4	95.2	40.1	0.3
75°	424.8	418.4	400.7	367.3	320.5	267.4	209.5	147.1	81.5	30.7	0.3
77.5°	395.4	393.4	376.7	344.2	302.1	249.3	190.5	129.7	68.5	22.1	0.3
80°	366.0	364.0	350.9	321.2	280.7	227.9	172.8	113.3	55.8	14.7	0.3
82.5°	336.9	334.2	321.8	297.1	259.0	209.9	154.4	96.9	44.1	9.0	0.3
85°	310.8	307.5	294.1	271.4	236.6	189.5	135.4	80.9	32.8	5.0	0.7
87.5°	288.4	286.1	271.4	248.0	213.9	170.4	118.6	65.5	23.1	2.3	1.0
90°	269.4	264.4	251.3	226.6	192.5	149.4	100.9	52.5	15.4	1.3	1.3
92.5°	250.7	246.3	231.9	206.5	173.5	131.3	83.9	40.1	9.7	0.7	1.7
95°	231.3	226.6	212.6	189.2	154.1	113.0	68.8	29.4	5.3	0.7	1.7
97.5°	212.2	207.9	193.2	169.8	136.7	96.9	54.5	20.7	2.7	0.7	1.3
100°	194.5	189.5	176.1	152.7	119.3	80.9	42.1	13.4	1.7	0.7	1.3
102.5°	175.8	171.8	158.1	135.4	101.3	65.8	31.4	8.4	0.7	0.7	1.0
105°	159.1	154.1	140.7	117.3	86.2	51.8	22.1	5.0	0.7	0.7	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	103.6	99.6	87.9	68.2	43.8	20.4	6.0	1.0	1.0	1.0	1.0
115°	86.6	80.5	70.2	52.8	32.4	13.4	3.0	1.0	1.0	1.0	1.0
117.5°	69.2	64.2	56.8	40.1	21.4	8.7	1.7	1.0	1.0	1.0	1.0
120°	54.1	49.5	41.1	27.7	14.4	5.0	0.7	1.0	1.0	1.0	1.0
122.5°	38.8	35.1	27.7	18.0	8.7	2.3	1.0	1.0	1.3	1.3	1.0
125°	25.7	23.7	18.4	11.0	5.3	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.7	15.0	10.7	6.3	2.3	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.4	8.4	6.3	3.7	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.3	5.0	3.3	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.3	1.7	1.7	1.7	1.3
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.3	1.7	1.7	1.7	1.3
142.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3	1.3
145°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.3	1.3	1.3
147.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3	1.3
150°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.3
152.5°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.3
155°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.7
157.5°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.7
160°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.7	1.7	1.7	1.7
172.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.7
175°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.7
177.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	262.4	262.4	262.4
2.5°	249.7	245.0	243.6
5°	236.3	228.6	224.3
7.5°	222.9	212.6	207.5
10°	210.5	195.8	190.5
12.5°	195.8	178.8	170.4
15°	181.8	159.8	151.7
17.5°	166.1	141.4	132.0
20°	151.4	123.0	113.3
22.5°	134.7	104.9	94.2
25°	119.6	86.9	74.9
27.5°	102.9	68.5	58.2
30°	87.2	52.5	42.1
32.5°	72.2	38.4	29.1
35°	58.2	26.1	18.4
37.5°	44.8	16.0	9.4
40°	32.4	8.4	4.3
42.5°	21.7	4.0	2.3
45°	13.4	2.0	0.0
47.5°	7.7	0.0	0.0
50°	4.0	0.0	0.0
52.5°	1.7	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°	0.3	0.3	0.3
77.5°	0.3	0.7	1.0
80°	0.7	1.3	1.7
82.5°	1.3	1.7	1.7
85°	1.3	1.7	2.0
87.5°	1.7	2.0	2.3
90°	2.0	2.3	2.3
92.5°	2.0	2.7	2.7
95°	2.3	2.7	3.0
97.5°	2.7	3.0	3.0
100°	2.3	3.0	3.3
102.5°	2.0	3.0	3.0
105°	1.7	2.3	2.7





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.7	1.7
115°	1.0	1.3	1.7
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.3	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	140.4	136.4	123.0	100.9	70.5	39.4	14.7	2.7	0.7	1.0	1.0
110°	122.3	119.0	105.3	83.9	56.8	29.4	9.7	1.7	1.0	1.0	1.0







107.5°	1.3	2.0	2.3
110°	1.3	1.7	2.0



(END OF REPORT)