

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: P551685

Luminaire Tested: **FCC-X-2-LD4-2LO-50-UNV-82-97-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: P551685  
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-50-UNV-82-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

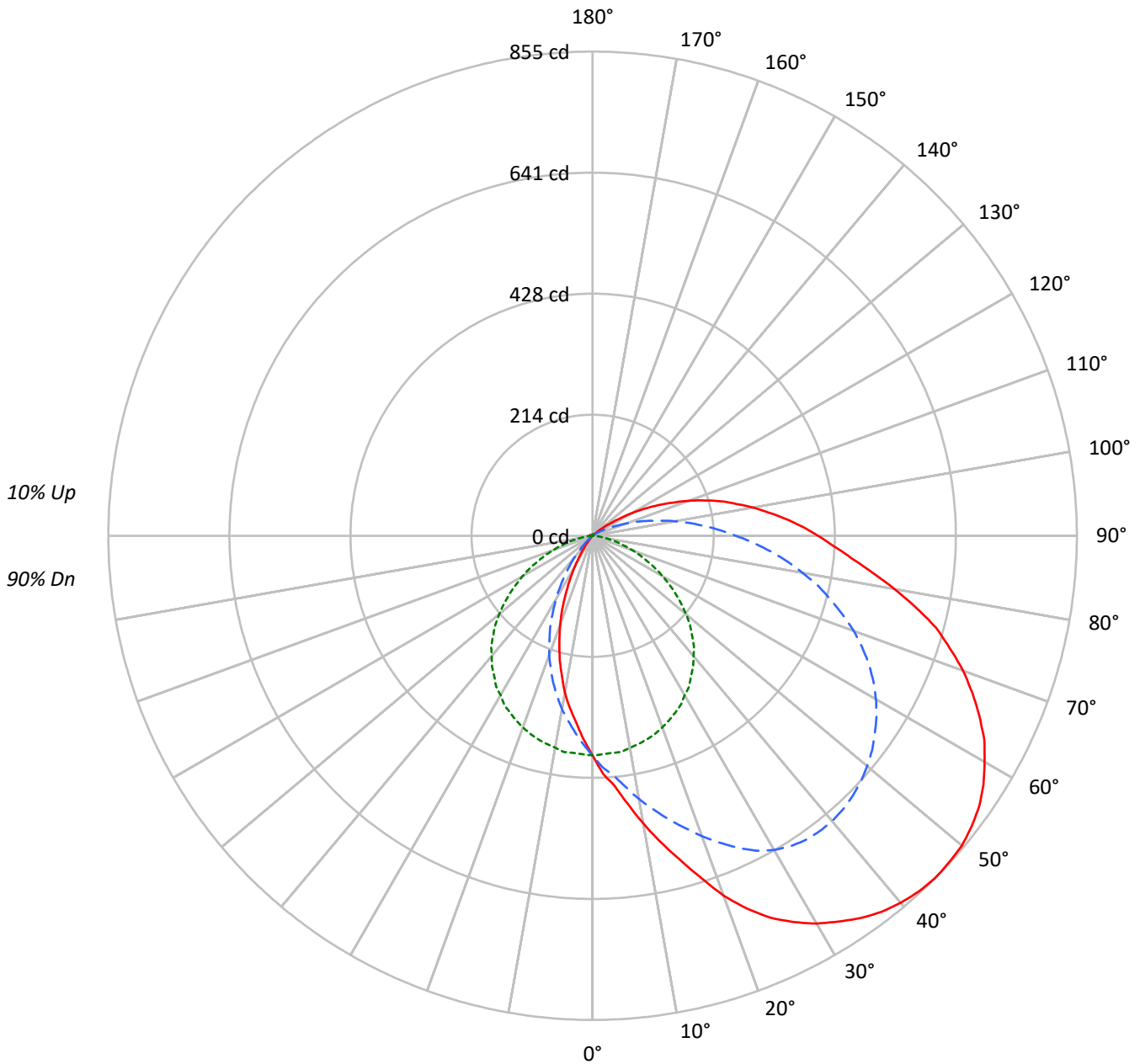
Lumens per Lamp: N/A  
Luminaire Lumens: 1917.1 lumens  
Efficiency: N/A  
Efficacy: 81.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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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### 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°	4174	4174	4174
5°	4582	4113	3432
10°	5185	4063	2829
15°	5811	4011	2204
20°	6553	3945	1623
25°	7169	3870	1065
30°	7627	3768	600
35°	8024	3659	265
40°	8376	3524	63
45°	8678	3356	0
50°	8931	3132	0
55°	9123	2847	0
60°	9220	2518	0
65°	9259	2143	0
70°	9228	1748	0
75°	9110	1287	7
80°	8741	787	40
85°	8449	376	55



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.1	1.9
10°-20°	111.2	5.8
20°-30°	180.1	9.4
30°-40°	231.3	12.1
40°-50°	261.9	13.7
50°-60°	271.3	14.2
60°-70°	255.9	13.3
70°-80°	214.4	11.2
80°-90°	155.4	8.1
90°-100°	102.2	5.3
100°-110°	59.0	3.1
110°-120°	26.0	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°	328.5	17.1
0°-40°	559.8	29.2
0°-60°	1093.0	57.0
0°-90°	1718.8	89.7
90°-120°	187.2	9.8
90°-150°	197.0	10.3
90°-180°	198.0	10.3
0°-180°	1917.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	388	388	388	388	388	
5°	443	425	385	349	332	45
15°	591	518	372	269	224	170
25°	744	608	345	177	111	344
35°	824	656	303	86	27	517
45°	855	649	248	20	0	660
55°	833	608	179	0	0	744
65°	753	538	107	0	0	745
75°	628	434	45	0	0	658
85°	459	315	7	2	3	392
90°	398	253	2	3	4	218
95°	342	197	1	4	4	268
105°	235	102	1	2	4	248
115°	128	34	2	2	2	128
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°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8
2.5°	420.4	419.9	418.4	415.9	412.5	406.5	401.6	397.1	391.2	386.3	376.9
5°	442.6	440.1	438.1	435.7	427.8	422.3	413.4	403.6	394.2	384.8	366.0
7.5°	478.2	474.2	471.2	464.3	453.5	441.1	427.3	417.9	411.5	385.3	353.2
10°	516.2	512.7	506.8	494.5	481.1	463.3	443.6	421.4	401.6	379.9	341.8
12.5°	553.7	548.8	540.4	524.6	505.8	483.6	456.4	430.2	402.1	376.4	328.5
15°	591.3	585.8	577.0	557.7	533.0	503.8	470.7	437.7	404.6	372.0	314.7
17.5°	632.3	624.9	611.5	589.8	558.7	522.6	483.6	443.6	403.6	366.5	299.8
20°	676.2	665.9	651.5	622.4	585.8	543.4	496.4	449.5	403.1	360.1	283.0
22.5°	712.8	702.4	686.6	656.5	612.5	560.7	507.3	453.5	401.1	352.7	267.2
25°	744.4	736.0	718.7	684.1	637.7	578.9	517.7	456.4	398.1	344.8	250.4
27.5°	769.1	761.2	741.9	706.4	659.0	595.2	525.6	457.9	394.2	336.9	233.2
30°	790.8	782.9	759.7	723.2	673.3	608.1	533.5	458.4	389.2	325.0	214.4
32.5°	807.6	800.2	776.5	737.5	683.2	617.0	537.9	457.9	382.8	316.6	194.1
35°	824.4	817.0	789.4	747.9	690.6	620.9	541.4	455.4	374.9	302.8	174.9
37.5°	837.3	828.9	800.7	754.8	694.0	621.9	540.9	452.0	366.5	291.4	155.6
40°	846.2	837.3	807.1	758.7	695.0	620.4	536.9	446.1	356.6	277.1	135.3
42.5°	852.1	842.2	810.1	764.7	693.0	616.5	531.0	438.6	345.8	264.8	116.1
45°	855.1	844.7	810.6	759.7	689.6	609.1	522.1	429.3	333.9	248.0	96.8
47.5°	853.6	842.2	808.1	754.3	683.2	601.2	512.2	417.9	319.6	233.2	78.5
50°	851.1	839.2	802.7	747.4	674.3	591.3	501.4	404.1	304.8	214.9	62.2
52.5°	843.2	831.3	796.8	737.5	663.9	579.9	486.6	389.7	289.0	197.1	47.4
55°	833.3	822.5	786.4	728.6	650.6	566.1	472.7	374.4	273.7	178.8	34.1
57.5°	818.0	808.1	773.6	714.3	637.2	550.8	457.4	357.6	254.4	160.5	23.7
60°	799.2	789.4	755.8	698.0	621.9	533.5	440.6	340.3	237.1	142.3	14.8
62.5°	779.5	770.1	735.0	677.7	602.6	515.2	422.3	323.1	218.8	125.5	8.9
65°	753.3	744.4	712.8	653.5	581.4	495.4	402.1	302.3	200.1	106.7	4.9
67.5°	725.6	717.7	685.6	631.3	556.7	473.7	381.3	282.1	180.3	90.4	2.5
70°	696.0	686.1	656.5	601.2	531.5	449.0	358.6	261.3	161.5	74.6	0.0
72.5°	661.4	654.0	625.4	573.0	502.4	422.8	335.4	238.6	140.8	59.3	0.5
75°	627.8	618.4	592.3	542.9	473.7	395.2	309.7	217.3	120.5	45.4	0.5
77.5°	584.4	581.4	556.7	508.8	446.5	368.5	281.6	191.7	101.3	32.6	0.5
80°	540.9	537.9	518.7	474.7	414.9	336.9	255.4	167.5	82.5	21.7	0.5
82.5°	497.9	494.0	475.7	439.1	382.8	310.2	228.2	143.3	65.2	13.3	0.5
85°	459.4	454.4	434.7	401.1	349.7	280.1	200.1	119.5	48.4	7.4	1.0
87.5°	426.3	422.8	401.1	366.5	316.1	251.9	175.4	96.8	34.1	3.5	1.5
90°	398.1	390.7	371.5	334.9	284.5	220.8	149.2	77.6	22.7	2.0	2.0
92.5°	370.5	364.1	342.8	305.3	256.4	194.1	124.0	59.3	14.3	1.0	2.5
95°	341.8	334.9	314.2	279.6	227.7	167.0	101.8	43.5	7.9	1.0	2.5
97.5°	313.7	307.2	285.5	250.9	202.0	143.3	80.5	30.6	4.0	1.0	2.0
100°	287.5	280.1	260.3	225.7	176.3	119.5	62.2	19.8	2.5	1.0	2.0
102.5°	259.8	253.9	233.6	200.1	149.7	97.3	46.4	12.3	1.0	1.0	1.5
105°	235.1	227.7	208.0	173.4	127.4	76.6	32.6	7.4	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°	153.1	147.2	129.9	100.8	64.7	30.1	8.9	1.5	1.5	1.5	1.5
115°	127.9	119.0	103.7	78.0	47.9	19.8	4.4	1.5	1.5	1.5	1.5
117.5°	102.3	94.8	84.0	59.3	31.6	12.8	2.5	1.5	1.5	1.5	1.5
120°	80.0	73.1	60.8	41.0	21.2	7.4	1.0	1.5	1.5	1.5	1.5
122.5°	57.3	51.9	41.0	26.7	12.8	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.0	35.1	27.2	16.3	7.9	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.7	22.2	15.8	9.4	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.8	12.3	9.4	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.9	7.4	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	2.5	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°	387.8	387.8	387.8
2.5°	369.0	362.1	360.1
5°	349.2	337.9	331.5
7.5°	329.5	314.2	306.8
10°	311.2	289.5	281.6
12.5°	289.5	264.3	251.9
15°	268.7	236.1	224.3
17.5°	245.5	208.9	195.1
20°	223.8	181.8	167.5
22.5°	199.1	155.1	139.3
25°	176.8	128.4	110.6
27.5°	152.1	101.3	86.0
30°	128.9	77.6	62.2
32.5°	106.7	56.8	43.0
35°	86.0	38.5	27.2
37.5°	66.2	23.7	13.8
40°	47.9	12.3	6.4
42.5°	32.1	5.9	3.5
45°	19.8	3.0	0.0
47.5°	11.4	0.0	0.0
50°	5.9	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	4.4
97.5°	4.0	4.4	4.4
100°	3.5	4.4	4.9
102.5°	3.0	4.4	4.4
105°	2.5	3.5	4.0





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**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°	207.5	201.5	181.8	149.2	104.2	58.3	21.7	4.0	1.0	1.5	1.5
110°	180.8	175.9	155.6	124.0	84.0	43.5	14.3	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)