

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: P551677

Luminaire Tested: **FCC-X-2-LD4-2LO-50-UNV-82-87-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: P551677  
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-82-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

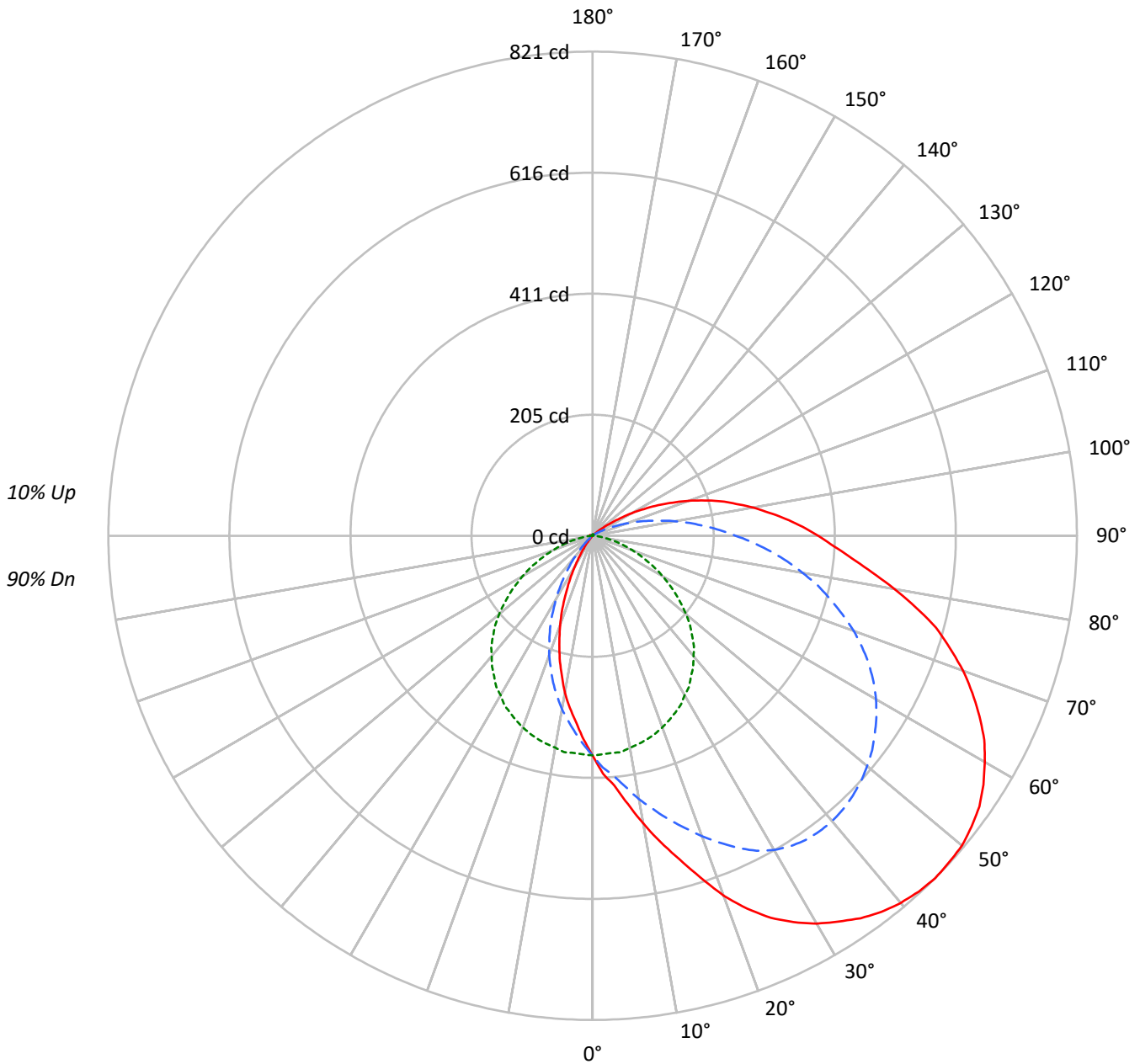
Lumens per Lamp: N/A  
Luminaire Lumens: 1840.9 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (Ain): 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°	4008	4008	4008
5°	4400	3949	3295
10°	4979	3901	2716
15°	5580	3852	2117
20°	6293	3789	1558
25°	6885	3716	1024
30°	7325	3618	577
35°	7705	3514	254
40°	8043	3384	61
45°	8334	3222	0
50°	8577	3008	0
55°	8762	2734	0
60°	8856	2417	0
65°	8891	2059	0
70°	8862	1677	0
75°	8749	1236	7
80°	8394	758	39
85°	8115	361	51



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	1.9
10°-20°	106.8	5.8
20°-30°	173.0	9.4
30°-40°	222.2	12.1
40°-50°	251.5	13.7
50°-60°	260.6	14.2
60°-70°	245.7	13.3
70°-80°	205.9	11.2
80°-90°	149.3	8.1
90°-100°	98.1	5.3
100°-110°	56.7	3.1
110°-120°	25.0	1.4
120°-130°	6.8	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°	315.4	17.1
0°-40°	537.6	29.2
0°-60°	1049.7	57.0
0°-90°	1650.6	89.7
90°-120°	179.8	9.8
90°-150°	189.1	10.3
90°-180°	190.0	10.3
0°-180°	1840.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	372	372	372	372	372	
5°	425	408	370	335	318	43
15°	568	498	357	258	215	164
25°	715	584	331	170	106	330
35°	792	630	291	82	26	497
45°	821	624	238	19	0	634
55°	800	584	172	0	0	715
65°	723	517	102	0	0	716
75°	603	417	44	0	0	632
85°	441	302	7	2	3	377
90°	382	243	2	3	3	210
95°	328	190	1	3	4	258
105°	226	98	1	2	4	238
115°	123	32	1	1	2	123
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°	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4
2.5°	403.7	403.2	401.8	399.4	396.1	390.4	385.7	381.4	375.7	371.0	362.0
5°	425.0	422.7	420.8	418.4	410.8	405.6	397.1	387.6	378.6	369.5	351.5
7.5°	459.2	455.4	452.6	445.9	435.5	423.6	410.3	401.3	395.2	370.0	339.2
10°	495.7	492.4	486.7	474.9	462.0	445.0	426.0	404.6	385.7	364.8	328.3
12.5°	531.8	527.0	519.0	503.8	485.8	464.4	438.3	413.2	386.1	361.5	315.5
15°	567.8	562.6	554.1	535.6	511.9	483.9	452.1	420.3	388.5	357.2	302.2
17.5°	607.2	600.1	587.3	566.4	536.5	501.9	464.4	426.0	387.6	352.0	288.0
20°	649.4	639.5	625.7	597.7	562.6	521.8	476.8	431.7	387.1	345.8	271.8
22.5°	684.5	674.6	659.4	630.5	588.2	538.4	487.2	435.5	385.2	338.7	256.6
25°	714.9	706.8	690.2	657.0	612.4	556.0	497.2	438.3	382.4	331.1	240.5
27.5°	738.6	731.0	712.5	678.4	632.8	571.6	504.7	439.8	378.6	323.5	223.9
30°	759.5	751.9	729.6	694.5	646.6	584.0	512.3	440.2	373.8	312.1	205.9
32.5°	775.6	768.5	745.7	708.3	656.1	592.5	516.6	439.8	367.6	304.1	186.4
35°	791.7	784.6	758.1	718.2	663.2	596.3	519.9	437.4	360.1	290.8	167.9
37.5°	804.1	796.0	769.0	724.9	666.5	597.2	519.4	434.1	352.0	279.9	149.4
40°	812.6	804.1	775.1	728.7	667.5	595.8	515.7	428.4	342.5	266.1	130.0
42.5°	818.3	808.8	778.0	734.3	665.6	592.0	510.0	421.3	332.1	254.3	111.5
45°	821.2	811.2	778.5	729.6	662.2	584.9	501.4	412.2	320.7	238.1	93.0
47.5°	819.7	808.8	776.1	724.4	656.1	577.3	491.9	401.3	306.9	223.9	75.4
50°	817.4	806.0	770.9	717.7	647.5	567.8	481.5	388.0	292.7	206.4	59.8
52.5°	809.8	798.4	765.2	708.3	637.6	556.9	467.3	374.3	277.5	189.3	45.5
55°	800.3	789.8	755.2	699.7	624.8	543.6	454.0	359.6	262.8	171.7	32.7
57.5°	785.6	776.1	742.9	686.0	612.0	528.9	439.3	343.5	244.3	154.2	22.8
60°	767.6	758.1	725.8	670.3	597.2	512.3	423.1	326.8	227.7	136.6	14.2
62.5°	748.6	739.6	705.9	650.9	578.7	494.8	405.6	310.2	210.2	120.5	8.5
65°	723.4	714.9	684.5	627.6	558.3	475.8	386.1	290.3	192.1	102.5	4.7
67.5°	696.9	689.3	658.4	606.3	534.6	454.9	366.2	270.9	173.1	86.8	2.4
70°	668.4	658.9	630.5	577.3	510.4	431.2	344.4	250.9	155.1	71.6	0.0
72.5°	635.2	628.1	600.6	550.3	482.4	406.1	322.1	229.1	135.2	56.9	0.5
75°	602.9	593.9	568.8	521.3	454.9	379.5	297.4	208.7	115.7	43.6	0.5
77.5°	561.2	558.3	534.6	488.6	428.8	353.9	270.4	184.1	97.2	31.3	0.5
80°	519.4	516.6	498.1	455.9	398.5	323.5	245.3	160.8	79.2	20.9	0.5
82.5°	478.2	474.4	456.8	421.7	367.6	297.9	219.2	137.6	62.6	12.8	0.5
85°	441.2	436.4	417.5	385.2	335.9	269.0	192.1	114.8	46.5	7.1	0.9
87.5°	409.4	406.1	385.2	352.0	303.6	241.9	168.4	93.0	32.7	3.3	1.4
90°	382.4	375.2	356.7	321.6	273.2	212.0	143.3	74.5	21.8	1.9	1.9
92.5°	355.8	349.6	329.2	293.2	246.2	186.4	119.1	56.9	13.8	0.9	2.4
95°	328.3	321.6	301.7	268.5	218.7	160.3	97.7	41.7	7.6	0.9	2.4
97.5°	301.2	295.1	274.2	241.0	194.0	137.6	77.3	29.4	3.8	0.9	1.9
100°	276.1	269.0	250.0	216.8	169.4	114.8	59.8	19.0	2.4	0.9	1.9
102.5°	249.5	243.8	224.4	192.1	143.7	93.5	44.6	11.9	0.9	0.9	1.4
105°	225.8	218.7	199.7	166.5	122.4	73.5	31.3	7.1	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°	147.1	141.4	124.8	96.8	62.1	28.9	8.5	1.4	1.4	1.4	1.4
115°	122.9	114.3	99.6	75.0	46.0	19.0	4.3	1.4	1.4	1.4	1.4
117.5°	98.2	91.1	80.6	56.9	30.4	12.3	2.4	1.4	1.4	1.4	1.4
120°	76.8	70.2	58.3	39.4	20.4	7.1	0.9	1.4	1.4	1.4	1.4
122.5°	55.0	49.8	39.4	25.6	12.3	3.3	1.4	1.4	1.9	1.9	1.4
125°	36.5	33.7	26.1	15.7	7.6	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	23.7	21.3	15.2	9.0	3.3	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.3	11.9	9.0	5.2	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.6	7.1	4.7	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	2.4	2.4	1.9
137.5°	0.5	0.5	0.9	0.9	1.4	1.4	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	0.9	1.4	1.4	1.4	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	0.9	0.9	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	0.9	0.9	0.9	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
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	2.4	2.4	2.4	2.4
172.5°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
175°	0.9	0.9	0.9	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.4	2.4	2.4	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°	372.4	372.4	372.4
2.5°	354.4	347.7	345.8
5°	335.4	324.5	318.3
7.5°	316.4	301.7	294.6
10°	298.9	278.0	270.4
12.5°	278.0	253.8	241.9
15°	258.1	226.8	215.4
17.5°	235.8	200.7	187.4
20°	214.9	174.6	160.8
22.5°	191.2	149.0	133.8
25°	169.8	123.3	106.3
27.5°	146.1	97.2	82.5
30°	123.8	74.5	59.8
32.5°	102.5	54.6	41.3
35°	82.5	37.0	26.1
37.5°	63.6	22.8	13.3
40°	46.0	11.9	6.2
42.5°	30.8	5.7	3.3
45°	19.0	2.8	0.0
47.5°	10.9	0.0	0.0
50°	5.7	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	0.9	1.4
80°	0.9	1.9	2.4
82.5°	1.9	2.4	2.4
85°	1.9	2.4	2.8
87.5°	2.4	2.8	3.3
90°	2.8	3.3	3.3
92.5°	2.8	3.8	3.8
95°	3.3	3.8	4.3
97.5°	3.8	4.3	4.3
100°	3.3	4.3	4.7
102.5°	2.8	4.3	4.3
105°	2.4	3.3	3.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.4	1.9	2.4
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°	199.2	193.5	174.6	143.3	100.1	56.0	20.9	3.8	0.9	1.4	1.4
110°	173.6	168.9	149.4	119.1	80.6	41.7	13.8	2.4	1.4	1.4	1.4







107.5°	1.9	2.8	3.3
110°	1.9	2.4	2.8



(END OF REPORT)