

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: P550653

Luminaire Tested: **FCC-X-2-LD4-1HI-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: P550653  
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-LD4-1HI-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**

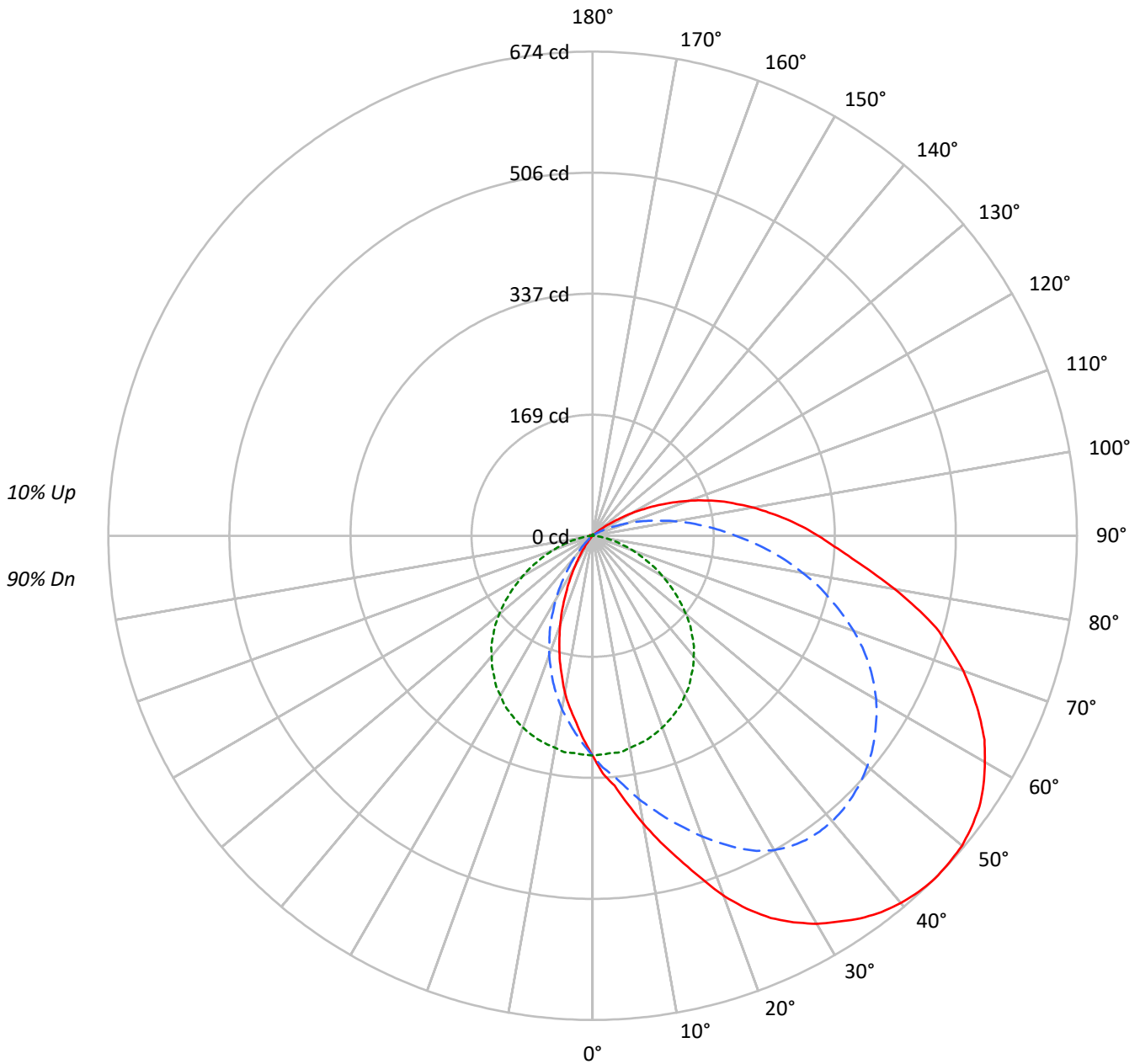
Lumens per Lamp: N/A  
Luminaire Lumens: 1512.1 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
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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CATALOG NUMBER: FCC-X-2-LD4-1HI-50-UNV-82-87-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°	3292	3292	3292
5°	3614	3244	2706
10°	4089	3204	2231
15°	4583	3164	1738
20°	5169	3112	1280
25°	5654	3051	841
30°	6016	2972	474
35°	6329	2885	208
40°	6606	2780	50
45°	6844	2647	0
50°	7044	2470	0
55°	7196	2245	0
60°	7273	1986	0
65°	7303	1691	0
70°	7279	1377	0
75°	7186	1015	6
80°	6894	620	31
85°	6663	295	42



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.3	1.9
10°-20°	87.7	5.8
20°-30°	142.0	9.4
30°-40°	182.5	12.1
40°-50°	206.6	13.7
50°-60°	214.0	14.2
60°-70°	201.8	13.3
70°-80°	169.1	11.2
80°-90°	122.6	8.1
90°-100°	80.6	5.3
100°-110°	46.5	3.1
110°-120°	20.5	1.4
120°-130°	5.6	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	259.1	17.1
0°-40°	441.5	29.2
0°-60°	862.1	57.0
0°-90°	1355.6	89.7
90°-120°	147.7	9.8
90°-150°	155.4	10.3
90°-180°	156.0	10.3
0°-180°	1512.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	306	306	306	306	306	
5°	349	335	304	276	261	35
15°	466	409	293	212	177	134
25°	587	480	272	140	87	271
35°	650	517	239	68	21	408
45°	674	512	196	16	0	521
55°	657	480	141	0	0	587
65°	594	425	84	0	0	588
75°	495	343	36	0	0	519
85°	362	248	6	2	2	309
90°	314	199	2	2	3	172
95°	270	156	1	3	4	212
105°	186	80	1	2	3	196
115°	101	27	1	1	2	101
125°	30	4	2	1	2	30
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	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°	305.8	305.8	305.8	305.8	305.8	305.8	305.8	305.8	305.8	305.8	305.8
2.5°	331.6	331.2	330.0	328.0	325.3	320.6	316.8	313.2	308.6	304.7	297.3
5°	349.1	347.1	345.6	343.6	337.4	333.1	326.1	318.3	310.9	303.5	288.7
7.5°	377.1	374.0	371.7	366.2	357.7	347.9	337.0	329.6	324.5	303.9	278.6
10°	407.1	404.4	399.7	390.0	379.5	365.5	349.9	332.3	316.8	299.6	269.6
12.5°	436.7	432.9	426.2	413.8	399.0	381.4	360.0	339.3	317.1	296.9	259.1
15°	466.4	462.1	455.1	439.9	420.4	397.4	371.3	345.2	319.1	293.4	248.2
17.5°	498.7	492.9	482.3	465.2	440.6	412.2	381.4	349.9	318.3	289.1	236.5
20°	533.4	525.2	513.9	490.9	462.1	428.6	391.6	354.5	317.9	284.0	223.2
22.5°	562.2	554.0	541.6	517.8	483.1	442.2	400.1	357.7	316.4	278.2	210.8
25°	587.1	580.5	566.9	539.6	503.0	456.6	408.3	360.0	314.0	271.9	197.5
27.5°	606.6	600.4	585.2	557.1	519.7	469.5	414.5	361.2	310.9	265.7	183.9
30°	623.8	617.5	599.2	570.4	531.0	479.6	420.8	361.6	307.0	256.4	169.1
32.5°	637.0	631.2	612.5	581.7	538.8	486.6	424.3	361.2	301.9	249.7	153.1
35°	650.3	644.4	622.6	589.9	544.7	489.7	427.0	359.2	295.7	238.8	137.9
37.5°	660.4	653.8	631.6	595.3	547.4	490.5	426.6	356.5	289.1	229.9	122.7
40°	667.4	660.4	636.6	598.4	548.2	489.3	423.5	351.8	281.3	218.6	106.8
42.5°	672.1	664.3	639.0	603.1	546.6	486.2	418.8	346.0	272.7	208.8	91.6
45°	674.4	666.2	639.3	599.2	543.9	480.4	411.8	338.6	263.4	195.6	76.4
47.5°	673.2	664.3	637.4	594.9	538.8	474.2	404.0	329.6	252.1	183.9	61.9
50°	671.3	661.9	633.1	589.5	531.8	466.4	395.5	318.7	240.4	169.5	49.1
52.5°	665.1	655.7	628.4	581.7	523.6	457.4	383.8	307.4	227.9	155.5	37.4
55°	657.3	648.7	620.3	574.7	513.1	446.5	372.9	295.3	215.8	141.0	26.9
57.5°	645.2	637.4	610.1	563.4	502.6	434.4	360.8	282.1	200.6	126.6	18.7
60°	630.4	622.6	596.1	550.5	490.5	420.8	347.5	268.4	187.0	112.2	11.7
62.5°	614.8	607.4	579.7	534.5	475.3	406.4	333.1	254.8	172.6	99.0	7.0
65°	594.2	587.1	562.2	515.4	458.6	390.8	317.1	238.4	157.8	84.2	3.9
67.5°	572.3	566.1	540.8	497.9	439.1	373.6	300.8	222.5	142.2	71.3	1.9
70°	549.0	541.2	517.8	474.2	419.2	354.2	282.9	206.1	127.4	58.8	0.0
72.5°	521.7	515.8	493.2	451.9	396.2	333.5	264.5	188.2	111.0	46.8	0.4
75°	495.2	487.8	467.1	428.2	373.6	311.7	244.3	171.4	95.1	35.8	0.4
77.5°	460.9	458.6	439.1	401.3	352.2	290.6	222.1	151.2	79.9	25.7	0.4
80°	426.6	424.3	409.1	374.4	327.3	265.7	201.4	132.1	65.1	17.1	0.4
82.5°	392.7	389.6	375.2	346.4	301.9	244.7	180.0	113.0	51.4	10.5	0.4
85°	362.3	358.4	342.9	316.4	275.8	220.9	157.8	94.3	38.2	5.8	0.8
87.5°	336.2	333.5	316.4	289.1	249.3	198.7	138.3	76.4	26.9	2.7	1.2
90°	314.0	308.2	293.0	264.2	224.4	174.2	117.7	61.2	17.9	1.6	1.6
92.5°	292.2	287.1	270.4	240.8	202.2	153.1	97.8	46.8	11.3	0.8	1.9
95°	269.6	264.2	247.8	220.5	179.6	131.7	80.3	34.3	6.2	0.8	1.9
97.5°	247.4	242.3	225.2	197.9	159.3	113.0	63.5	24.2	3.1	0.8	1.6
100°	226.8	220.9	205.3	178.1	139.1	94.3	49.1	15.6	1.9	0.8	1.6
102.5°	204.9	200.3	184.3	157.8	118.1	76.8	36.6	9.7	0.8	0.8	1.2
105°	185.5	179.6	164.0	136.8	100.5	60.4	25.7	5.8	0.8	0.8	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	120.8	116.1	102.5	79.5	51.0	23.8	7.0	1.2	1.2	1.2	1.2
115°	100.9	93.9	81.8	61.6	37.8	15.6	3.5	1.2	1.2	1.2	1.2
117.5°	80.6	74.8	66.2	46.8	24.9	10.1	1.9	1.2	1.2	1.2	1.2
120°	63.1	57.7	47.9	32.3	16.8	5.8	0.8	1.2	1.2	1.2	1.2
122.5°	45.2	40.9	32.3	21.0	10.1	2.7	1.2	1.2	1.6	1.6	1.2
125°	30.0	27.7	21.4	12.9	6.2	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.5	17.5	12.5	7.4	2.7	1.2	1.2	1.6	1.6	1.6	1.2
130°	10.9	9.7	7.4	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.2	5.8	3.9	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	1.9	1.9	1.9	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	1.9	1.9	1.9	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.9
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	1.9	1.6	1.6	1.9
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.9	1.9	1.9	1.9
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	1.9
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	1.9
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.9	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	305.8	305.8	305.8
2.5°	291.0	285.6	284.0
5°	275.5	266.5	261.4
7.5°	259.9	247.8	241.9
10°	245.5	228.3	222.1
12.5°	228.3	208.4	198.7
15°	211.9	186.2	176.9
17.5°	193.6	164.8	153.9
20°	176.5	143.4	132.1
22.5°	157.0	122.3	109.9
25°	139.5	101.3	87.3
27.5°	120.0	79.9	67.8
30°	101.7	61.2	49.1
32.5°	84.2	44.8	33.9
35°	67.8	30.4	21.4
37.5°	52.2	18.7	10.9
40°	37.8	9.7	5.1
42.5°	25.3	4.7	2.7
45°	15.6	2.3	0.0
47.5°	9.0	0.0	0.0
50°	4.7	0.0	0.0
52.5°	1.9	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.2
80°	0.8	1.6	1.9
82.5°	1.6	1.9	1.9
85°	1.6	1.9	2.3
87.5°	1.9	2.3	2.7
90°	2.3	2.7	2.7
92.5°	2.3	3.1	3.1
95°	2.7	3.1	3.5
97.5°	3.1	3.5	3.5
100°	2.7	3.5	3.9
102.5°	2.3	3.5	3.5
105°	1.9	2.7	3.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	1.9	1.9
115°	1.2	1.6	1.9
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	163.6	159.0	143.4	117.7	82.2	46.0	17.1	3.1	0.8	1.2	1.2
110°	142.6	138.7	122.7	97.8	66.2	34.3	11.3	1.9	1.2	1.2	1.2







107.5°	1.6	2.3	2.7
110°	1.6	1.9	2.3



(END OF REPORT)