

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: P550631

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-81-84-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: P550631  
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-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

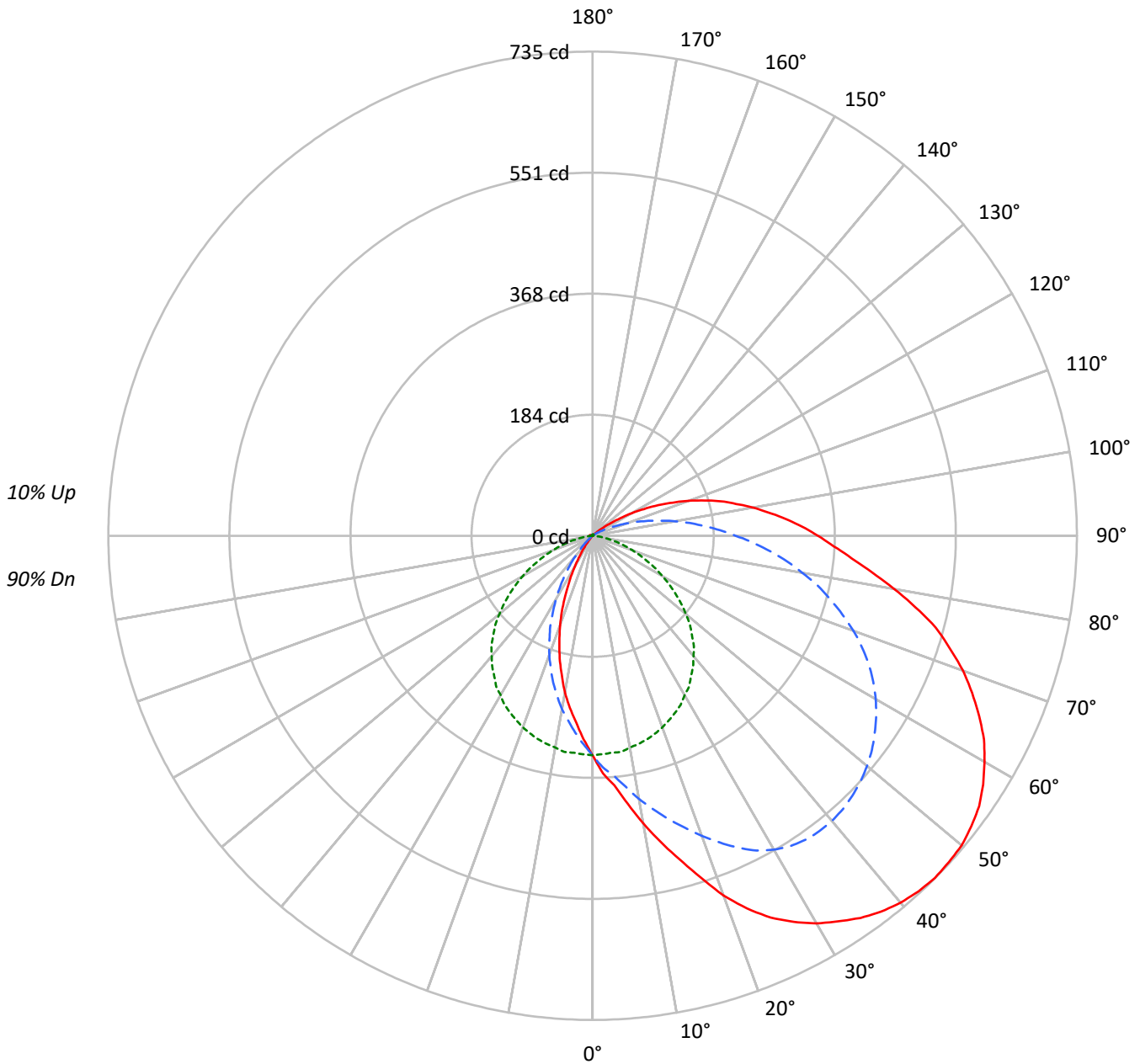
Lumens per Lamp: N/A  
Luminaire Lumens: 1647.0 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-81-84-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°	3585	3585	3585
5°	3937	3534	2948
10°	4455	3491	2430
15°	4992	3446	1894
20°	5631	3390	1395
25°	6160	3324	916
30°	6554	3238	516
35°	6894	3144	227
40°	7196	3028	54
45°	7455	2882	0
50°	7673	2690	0
55°	7839	2446	0
60°	7922	2163	0
65°	7955	1842	0
70°	7928	1502	0
75°	7827	1106	6
80°	7510	678	34
85°	7259	325	46



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.9	1.9
10°-20°	95.6	5.8
20°-30°	154.7	9.4
30°-40°	198.8	12.1
40°-50°	225.0	13.7
50°-60°	233.1	14.2
60°-70°	219.8	13.3
70°-80°	184.2	11.2
80°-90°	133.5	8.1
90°-100°	87.8	5.3
100°-110°	50.7	3.1
110°-120°	22.4	1.4
120°-130°	6.1	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	282.2	17.1
0°-40°	481.0	29.2
0°-60°	939.1	57.0
0°-90°	1476.7	89.7
90°-120°	160.8	9.8
90°-150°	169.2	10.3
90°-180°	170.0	10.3
0°-180°	1647.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	333	333	333	333	333	
5°	380	365	331	300	285	38
15°	508	445	320	231	193	146
25°	640	523	296	152	95	296
35°	708	563	260	74	23	444
45°	735	558	213	17	0	567
55°	716	523	154	0	0	639
65°	647	463	92	0	0	640
75°	539	373	39	0	0	566
85°	395	271	6	2	2	337
90°	342	217	2	2	3	188
95°	294	170	1	3	4	230
105°	202	88	1	2	3	213
115°	110	29	1	1	2	110
125°	33	4	2	1	2	33
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°	333.1	333.1	333.1	333.1	333.1	333.1	333.1	333.1	333.1	333.1	333.1
2.5°	361.2	360.7	359.5	357.3	354.4	349.3	345.0	341.2	336.1	331.9	323.8
5°	380.3	378.1	376.4	374.3	367.5	362.9	355.2	346.7	338.7	330.6	314.5
7.5°	410.8	407.4	404.9	398.9	389.6	379.0	367.1	359.0	353.5	331.0	303.4
10°	443.5	440.5	435.4	424.8	413.4	398.1	381.1	362.0	345.0	326.4	293.7
12.5°	475.7	471.5	464.3	450.7	434.6	415.5	392.1	369.6	345.5	323.4	282.2
15°	508.0	503.3	495.7	479.1	457.9	432.9	404.4	376.0	347.6	319.6	270.3
17.5°	543.2	536.9	525.4	506.7	480.0	449.0	415.5	381.1	346.7	314.9	257.6
20°	581.0	572.1	559.8	534.7	503.3	466.8	426.5	386.2	346.3	309.4	243.2
22.5°	612.4	603.5	589.9	564.0	526.2	481.7	435.9	389.6	344.6	303.0	229.6
25°	639.6	632.3	617.5	587.8	547.9	497.4	444.8	392.1	342.1	296.2	215.2
27.5°	660.8	654.0	637.4	606.9	566.1	511.4	451.6	393.4	338.7	289.4	200.3
30°	679.5	672.7	652.7	621.3	578.4	522.4	458.3	393.8	334.4	279.3	184.2
32.5°	693.9	687.5	667.1	633.6	586.9	530.1	462.2	393.4	328.9	272.0	166.8
35°	708.3	701.9	678.2	642.5	593.3	533.5	465.1	391.3	322.1	260.2	150.2
37.5°	719.3	712.1	687.9	648.5	596.3	534.3	464.7	388.3	314.9	250.4	133.7
40°	727.0	719.3	693.5	651.9	597.1	533.0	461.3	383.2	306.4	238.1	116.3
42.5°	732.1	723.6	696.0	657.0	595.4	529.6	456.2	376.9	297.1	227.5	99.7
45°	734.6	725.7	696.4	652.7	592.5	523.3	448.6	368.8	286.9	213.0	83.2
47.5°	733.4	723.6	694.3	648.0	586.9	516.5	440.1	359.0	274.6	200.3	67.5
50°	731.2	721.0	689.6	642.1	579.3	508.0	430.8	347.2	261.9	184.6	53.5
52.5°	724.4	714.3	684.5	633.6	570.4	498.2	418.0	334.8	248.3	169.3	40.7
55°	716.0	706.6	675.6	626.0	558.9	486.4	406.1	321.7	235.1	153.6	29.3
57.5°	702.8	694.3	664.6	613.7	547.5	473.2	393.0	307.3	218.6	137.9	20.4
60°	686.7	678.2	649.3	599.7	534.3	458.3	378.6	292.4	203.7	122.2	12.7
62.5°	669.7	661.6	631.5	582.3	517.8	442.6	362.9	277.6	188.0	107.8	7.6
65°	647.2	639.6	612.4	561.5	499.5	425.7	345.5	259.7	171.9	91.7	4.2
67.5°	623.4	616.6	589.1	542.4	478.3	407.0	327.6	242.3	154.9	77.7	2.1
70°	598.0	589.5	564.0	516.5	456.6	385.8	308.1	224.5	138.8	64.1	0.0
72.5°	568.3	561.9	537.3	492.3	431.6	363.3	288.2	205.0	121.0	50.9	0.4
75°	539.4	531.3	508.8	466.4	407.0	339.5	266.1	186.7	103.6	39.0	0.4
77.5°	502.1	499.5	478.3	437.1	383.7	316.6	241.9	164.7	87.0	28.0	0.4
80°	464.7	462.2	445.6	407.8	356.5	289.4	219.4	143.9	70.9	18.7	0.4
82.5°	427.8	424.4	408.7	377.3	328.9	266.5	196.1	123.1	56.0	11.5	0.4
85°	394.7	390.4	373.5	344.6	300.5	240.6	171.9	102.7	41.6	6.4	0.8
87.5°	366.3	363.3	344.6	314.9	271.6	216.4	150.7	83.2	29.3	3.0	1.3
90°	342.1	335.7	319.1	287.7	244.5	189.7	128.2	66.6	19.5	1.7	1.7
92.5°	318.3	312.8	294.5	262.3	220.3	166.8	106.5	50.9	12.3	0.8	2.1
95°	293.7	287.7	269.9	240.2	195.6	143.4	87.4	37.3	6.8	0.8	2.1
97.5°	269.5	264.0	245.3	215.6	173.6	123.1	69.2	26.3	3.4	0.8	1.7
100°	247.0	240.6	223.7	193.9	151.5	102.7	53.5	17.0	2.1	0.8	1.7
102.5°	223.2	218.1	200.7	171.9	128.6	83.6	39.9	10.6	0.8	0.8	1.3
105°	202.0	195.6	178.7	149.0	109.5	65.8	28.0	6.4	0.8	0.8	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	131.6	126.5	111.6	86.6	55.6	25.9	7.6	1.3	1.3	1.3	1.3
115°	109.9	102.3	89.1	67.1	41.2	17.0	3.8	1.3	1.3	1.3	1.3
117.5°	87.8	81.5	72.1	50.9	27.2	11.0	2.1	1.3	1.3	1.3	1.3
120°	68.8	62.8	52.2	35.2	18.2	6.4	0.8	1.3	1.3	1.3	1.3
122.5°	49.2	44.6	35.2	22.9	11.0	3.0	1.3	1.3	1.7	1.7	1.3
125°	32.7	30.1	23.3	14.0	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.2	19.1	13.6	8.1	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.9	10.6	8.1	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.8	6.4	4.2	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7
137.5°	0.4	0.4	0.8	0.8	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.8	0.8	0.8	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
160°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.8	0.8	0.8	0.8	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.8	0.8	0.8	1.3	1.3	1.3	1.7	2.1	2.1	2.1	2.1
172.5°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.8	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.8	0.8	1.3	1.3	1.7	1.7	2.1	2.1	2.1	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	333.1	333.1	333.1
2.5°	317.0	311.1	309.4
5°	300.0	290.3	284.8
7.5°	283.1	269.9	263.5
10°	267.4	248.7	241.9
12.5°	248.7	227.1	216.4
15°	230.9	202.9	192.7
17.5°	210.9	179.5	167.6
20°	192.3	156.2	143.9
22.5°	171.0	133.3	119.7
25°	151.9	110.3	95.1
27.5°	130.7	87.0	73.8
30°	110.8	66.6	53.5
32.5°	91.7	48.8	36.9
35°	73.8	33.1	23.3
37.5°	56.9	20.4	11.9
40°	41.2	10.6	5.5
42.5°	27.6	5.1	3.0
45°	17.0	2.5	0.0
47.5°	9.8	0.0	0.0
50°	5.1	0.0	0.0
52.5°	2.1	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	1.3
80°	0.8	1.7	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.5
87.5°	2.1	2.5	3.0
90°	2.5	3.0	3.0
92.5°	2.5	3.4	3.4
95°	3.0	3.4	3.8
97.5°	3.4	3.8	3.8
100°	3.0	3.8	4.2
102.5°	2.5	3.8	3.8
105°	2.1	3.0	3.4





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.3	1.7	2.1
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.8
152.5°	1.3	0.8	0.8
155°	1.3	0.8	0.4
157.5°	1.7	0.8	0.4
160°	1.3	0.8	0.4
162.5°	1.3	0.8	0.4
165°	1.3	0.8	0.0
167.5°	1.3	0.8	0.4
170°	1.3	0.8	0.4
172.5°	1.3	0.8	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	178.2	173.2	156.2	128.2	89.5	50.1	18.7	3.4	0.8	1.3	1.3
110°	155.3	151.1	133.7	106.5	72.1	37.3	12.3	2.1	1.3	1.3	1.3







107.5°	1.7	2.5	3.0
110°	1.7	2.1	2.5



(END OF REPORT)