

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: P550655

Luminaire Tested: **FCC-X-2-LD4-1HI-50-UNV-82-88-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: P550655  
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-82-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

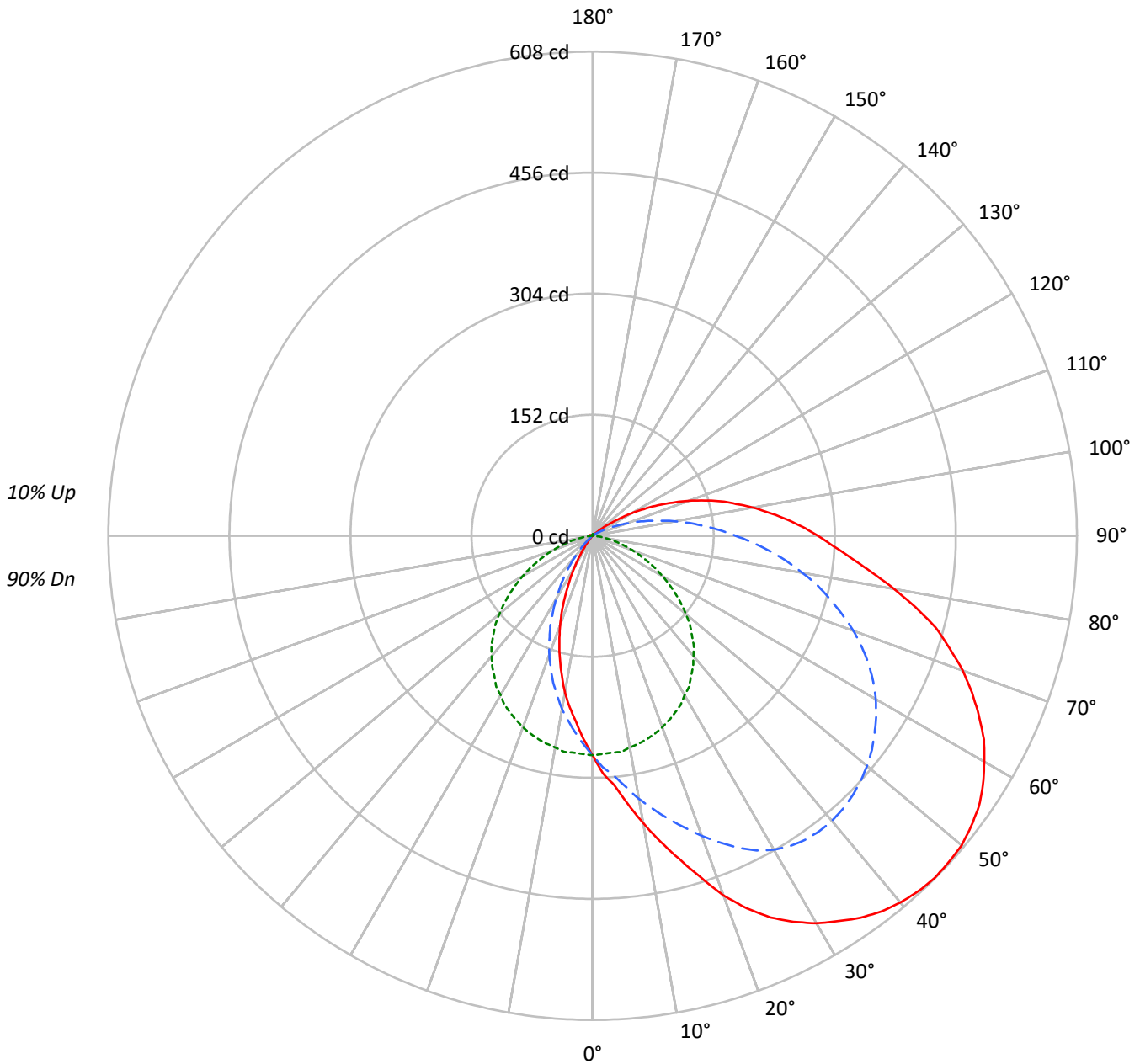
Lumens per Lamp: N/A  
Luminaire Lumens: 1362.1 lumens  
Efficiency: N/A  
Efficacy: 62.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (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-LD4-1HI-50-UNV-82-88-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°	2965	2965	2965
5°	3256	2922	2438
10°	3683	2886	2009
15°	4128	2850	1565
20°	4657	2803	1153
25°	5094	2750	757
30°	5419	2677	426
35°	5701	2599	188
40°	5951	2504	46
45°	6165	2384	0
50°	6345	2226	0
55°	6483	2022	0
60°	6551	1789	0
65°	6578	1522	0
70°	6556	1242	0
75°	6473	916	6
80°	6211	559	29
85°	6003	270	39



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.4	1.9
10°-20°	79.0	5.8
20°-30°	128.0	9.4
30°-40°	164.4	12.1
40°-50°	186.1	13.7
50°-60°	192.8	14.2
60°-70°	181.8	13.3
70°-80°	152.4	11.2
80°-90°	110.4	8.1
90°-100°	72.6	5.3
100°-110°	41.9	3.1
110°-120°	18.5	1.4
120°-130°	5.0	0.4
130°-140°	1.2	0.1
140°-150°	0.8	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	233.4	17.1
0°-40°	397.7	29.2
0°-60°	776.6	57.0
0°-90°	1221.2	89.7
90°-120°	133.0	9.8
90°-150°	140.0	10.3
90°-180°	141.0	10.4
0°-180°	1362.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	276	276	276	276	276	
5°	314	302	273	248	236	32
15°	420	368	264	191	159	121
25°	529	432	245	126	79	244
35°	586	466	215	61	19	367
45°	608	461	176	14	0	469
55°	592	432	127	0	0	529
65°	535	383	76	0	0	530
75°	446	309	32	0	0	468
85°	326	224	5	1	2	279
90°	283	180	1	2	2	155
95°	243	140	1	2	3	191
105°	167	72	1	2	3	176
115°	91	24	1	1	2	91
125°	27	3	1	1	1	27
135°	1	1	2	1	1	3
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°	275.5	275.5	275.5	275.5	275.5	275.5	275.5	275.5	275.5	275.5	275.5
2.5°	298.7	298.3	297.3	295.5	293.0	288.8	285.3	282.2	278.0	274.4	267.8
5°	314.5	312.7	311.3	309.5	303.9	300.1	293.7	286.7	280.1	273.4	260.1
7.5°	339.7	336.9	334.8	329.9	322.2	313.4	303.6	296.9	292.3	273.7	250.9
10°	366.7	364.3	360.1	351.3	341.8	329.2	315.2	299.4	285.3	269.9	242.9
12.5°	393.4	389.9	383.9	372.7	359.4	343.6	324.3	305.7	285.7	267.4	233.4
15°	420.1	416.2	409.9	396.2	378.7	358.0	334.5	310.9	287.4	264.3	223.6
17.5°	449.2	444.0	434.5	419.0	396.9	371.3	343.6	315.2	286.7	260.4	213.0
20°	480.5	473.1	462.9	442.2	416.2	386.1	352.7	319.4	286.4	255.8	201.1
22.5°	506.4	499.1	487.8	466.4	435.2	398.3	360.4	322.2	285.0	250.6	189.9
25°	528.9	522.9	510.6	486.1	453.1	411.3	367.8	324.3	282.9	245.0	177.9
27.5°	546.4	540.8	527.1	501.9	468.2	422.9	373.4	325.3	280.1	239.4	165.7
30°	561.9	556.3	539.8	513.8	478.4	432.0	379.0	325.7	276.6	230.9	152.3
32.5°	573.8	568.5	551.7	524.0	485.4	438.3	382.2	325.3	272.0	225.0	137.9
35°	585.7	580.5	560.8	531.3	490.6	441.2	384.6	323.6	266.4	215.1	124.2
37.5°	594.9	588.9	568.9	536.3	493.1	441.9	384.3	321.1	260.4	207.1	110.6
40°	601.2	594.9	573.5	539.1	493.8	440.8	381.5	316.9	253.4	196.9	96.2
42.5°	605.4	598.4	575.6	543.3	492.4	438.0	377.3	311.6	245.7	188.1	82.5
45°	607.5	600.1	575.9	539.8	489.9	432.7	371.0	305.0	237.2	176.2	68.8
47.5°	606.5	598.4	574.2	535.9	485.4	427.1	363.9	296.9	227.1	165.7	55.8
50°	604.7	596.3	570.3	531.0	479.1	420.1	356.2	287.1	216.5	152.7	44.2
52.5°	599.1	590.7	566.1	524.0	471.7	412.0	345.7	276.9	205.3	140.0	33.7
55°	592.1	584.3	558.7	517.7	462.2	402.2	335.9	266.0	194.4	127.0	24.2
57.5°	581.2	574.2	549.6	507.5	452.7	391.3	325.0	254.1	180.7	114.1	16.8
60°	567.8	560.8	537.0	495.9	441.9	379.0	313.1	241.8	168.5	101.1	10.5
62.5°	553.8	547.1	522.2	481.5	428.2	366.0	300.1	229.5	155.5	89.1	6.3
65°	535.2	528.9	506.4	464.3	413.1	352.0	285.7	214.8	142.1	75.8	3.5
67.5°	515.6	509.9	487.1	448.5	395.5	336.6	270.9	200.4	128.1	64.2	1.8
70°	494.5	487.5	466.4	427.1	377.6	319.0	254.8	185.7	114.8	53.0	0.0
72.5°	469.9	464.7	444.3	407.1	356.9	300.4	238.3	169.5	100.0	42.1	0.4
75°	446.1	439.4	420.8	385.7	336.6	280.8	220.0	154.4	85.6	32.3	0.4
77.5°	415.2	413.1	395.5	361.5	317.3	261.8	200.0	136.2	71.9	23.2	0.4
80°	384.3	382.2	368.5	337.3	294.8	239.4	181.4	119.0	58.6	15.4	0.4
82.5°	353.8	351.0	338.0	312.0	272.0	220.4	162.1	101.8	46.3	9.5	0.4
85°	326.4	322.9	308.8	285.0	248.5	199.0	142.1	84.9	34.4	5.3	0.7
87.5°	302.9	300.4	285.0	260.4	224.6	179.0	124.6	68.8	24.2	2.5	1.1
90°	282.9	277.6	263.9	237.9	202.2	156.9	106.0	55.1	16.1	1.4	1.4
92.5°	263.2	258.7	243.6	216.9	182.1	137.9	88.1	42.1	10.2	0.7	1.8
95°	242.9	237.9	223.2	198.6	161.8	118.6	72.3	30.9	5.6	0.7	1.8
97.5°	222.9	218.3	202.9	178.3	143.5	101.8	57.2	21.8	2.8	0.7	1.4
100°	204.3	199.0	185.0	160.4	125.3	84.9	44.2	14.0	1.8	0.7	1.4
102.5°	184.6	180.4	166.0	142.1	106.3	69.1	33.0	8.8	0.7	0.7	1.1
105°	167.1	161.8	147.8	123.2	90.5	54.4	23.2	5.3	0.7	0.7	1.1



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	108.8	104.6	92.3	71.6	46.0	21.4	6.3	1.1	1.1	1.1	1.1
115°	90.9	84.6	73.7	55.5	34.0	14.0	3.2	1.1	1.1	1.1	1.1
117.5°	72.6	67.4	59.7	42.1	22.5	9.1	1.8	1.1	1.1	1.1	1.1
120°	56.9	51.9	43.2	29.1	15.1	5.3	0.7	1.1	1.1	1.1	1.1
122.5°	40.7	36.9	29.1	19.0	9.1	2.5	1.1	1.1	1.4	1.4	1.1
125°	27.0	24.9	19.3	11.6	5.6	1.1	1.1	1.1	1.4	1.4	1.1
127.5°	17.5	15.8	11.2	6.7	2.5	1.1	1.1	1.4	1.4	1.4	1.1
130°	9.8	8.8	6.7	3.9	1.1	1.1	1.1	1.4	1.4	1.4	1.1
132.5°	5.6	5.3	3.5	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4
137.5°	0.4	0.4	0.7	0.7	1.1	1.1	1.4	1.8	1.8	1.8	1.4
140°	0.4	0.4	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.4
142.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
145°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.4	1.4
150°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
152.5°	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
157.5°	0.7	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.4	1.4	1.8
160°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.1	1.1	1.1	1.4	1.8	1.8	1.8	1.8
172.5°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
175°	0.7	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.8
177.5°	0.4	0.7	0.7	1.1	1.1	1.4	1.4	1.8	1.8	1.8	1.4
180°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	275.5	275.5	275.5
2.5°	262.2	257.3	255.8
5°	248.1	240.1	235.5
7.5°	234.1	223.2	217.9
10°	221.1	205.7	200.0
12.5°	205.7	187.8	179.0
15°	190.9	167.8	159.3
17.5°	174.4	148.5	138.6
20°	159.0	129.2	119.0
22.5°	141.4	110.2	99.0
25°	125.6	91.2	78.6
27.5°	108.1	71.9	61.1
30°	91.6	55.1	44.2
32.5°	75.8	40.4	30.5
35°	61.1	27.4	19.3
37.5°	47.0	16.8	9.8
40°	34.0	8.8	4.6
42.5°	22.8	4.2	2.5
45°	14.0	2.1	0.0
47.5°	8.1	0.0	0.0
50°	4.2	0.0	0.0
52.5°	1.8	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	0.7	1.1
80°	0.7	1.4	1.8
82.5°	1.4	1.8	1.8
85°	1.4	1.8	2.1
87.5°	1.8	2.1	2.5
90°	2.1	2.5	2.5
92.5°	2.1	2.8	2.8
95°	2.5	2.8	3.2
97.5°	2.8	3.2	3.2
100°	2.5	3.2	3.5
102.5°	2.1	3.2	3.2
105°	1.8	2.5	2.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.4	1.8	1.8
115°	1.1	1.4	1.8
117.5°	1.1	1.4	1.4
120°	1.1	1.1	1.4
122.5°	1.1	1.1	1.4
125°	1.1	1.1	1.4
127.5°	1.4	1.1	1.1
130°	1.1	1.1	1.1
132.5°	1.4	1.1	1.1
135°	1.4	1.1	1.1
137.5°	1.4	1.1	1.1
140°	1.4	1.1	1.1
142.5°	1.4	1.1	1.1
145°	1.1	1.1	1.1
147.5°	1.1	1.1	1.1
150°	1.1	1.1	0.7
152.5°	1.1	0.7	0.7
155°	1.1	0.7	0.4
157.5°	1.4	0.7	0.4
160°	1.1	0.7	0.4
162.5°	1.1	0.7	0.4
165°	1.1	0.7	0.0
167.5°	1.1	0.7	0.4
170°	1.1	0.7	0.4
172.5°	1.1	0.7	0.4
175°	1.1	0.4	0.4
177.5°	1.1	0.4	0.4
180°	1.1	1.1	1.1



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	147.4	143.2	129.2	106.0	74.1	41.4	15.4	2.8	0.7	1.1	1.1
110°	128.4	124.9	110.6	88.1	59.7	30.9	10.2	1.8	1.1	1.1	1.1







107.5°	1.4	2.1	2.5
110°	1.4	1.8	2.1



(END OF REPORT)