

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: P550503

Luminaire Tested: **FCC-X-2-LD4-1HI-35-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: P550503  
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-35-UNV-81-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

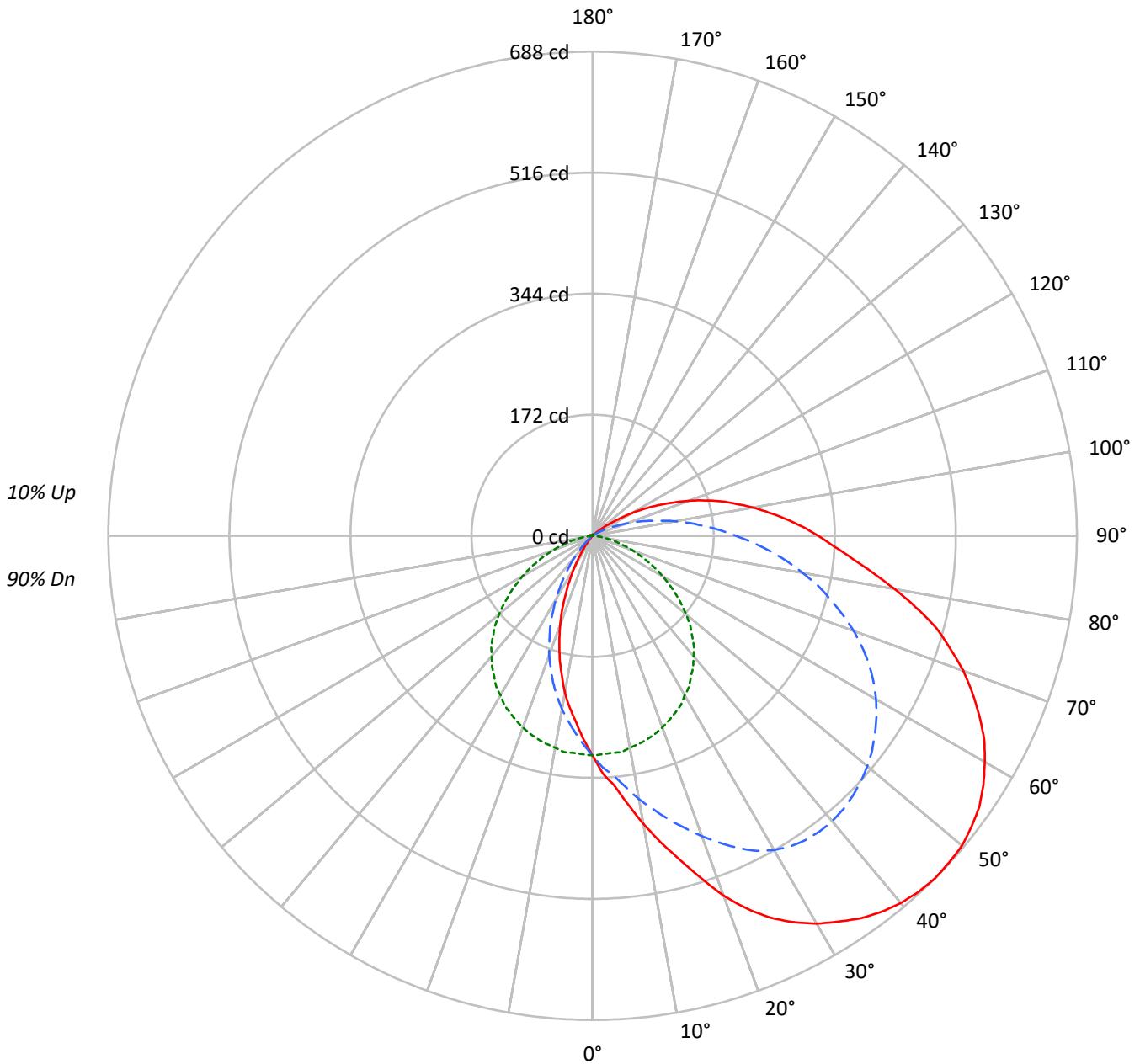
Lumens per Lamp: N/A  
Luminaire Lumens: 1543.1 lumens  
Efficiency: N/A  
Efficacy: 71.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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-35-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°	3359	3359	3359
5°	3687	3310	2762
10°	4173	3270	2276
15°	4677	3228	1774
20°	5275	3175	1306
25°	5771	3114	858
30°	6139	3033	483
35°	6459	2945	213
40°	6742	2837	51
45°	6984	2701	0
50°	7189	2521	0
55°	7343	2291	0
60°	7422	2026	0
65°	7452	1725	0
70°	7427	1406	0
75°	7332	1038	6
80°	7036	635	32
85°	6801	305	44



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.9	1.9
10°-20°	89.5	5.8
20°-30°	145.0	9.4
30°-40°	186.2	12.1
40°-50°	210.8	13.7
50°-60°	218.4	14.2
60°-70°	206.0	13.3
70°-80°	172.6	11.2
80°-90°	125.1	8.1
90°-100°	82.2	5.3
100°-110°	47.5	3.1
110°-120°	21.0	1.4
120°-130°	5.7	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°	264.4	17.1
0°-40°	450.6	29.2
0°-60°	879.8	57.0
0°-90°	1383.4	89.7
90°-120°	150.7	9.8
90°-150°	158.5	10.3
90°-180°	160.0	10.4
0°-180°	1543.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	312	312	312	312	312	
5°	356	342	310	281	267	36
15°	476	417	299	216	180	137
25°	599	490	278	142	89	277
35°	664	528	244	69	22	416
45°	688	523	200	16	0	531
55°	671	490	144	0	0	599
65°	606	433	86	0	0	600
75°	505	350	37	0	0	530
85°	370	253	6	2	2	316
90°	320	203	2	2	3	176
95°	275	159	1	3	4	216
105°	189	82	1	2	3	200
115°	103	27	1	1	2	103
125°	31	4	2	1	2	31
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°	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	338.4	338.0	336.8	334.8	332.0	327.2	323.2	319.7	314.9	310.9	303.4
5°	356.2	354.3	352.7	350.7	344.3	339.9	332.8	324.8	317.3	309.7	294.6
7.5°	384.9	381.7	379.3	373.7	365.0	355.1	343.9	336.4	331.2	310.1	284.3
10°	415.5	412.7	407.9	398.0	387.3	372.9	357.0	339.1	323.2	305.8	275.1
12.5°	445.7	441.7	435.0	422.2	407.1	389.2	367.4	346.3	323.6	303.0	264.4
15°	475.9	471.5	464.4	448.9	429.0	405.5	378.9	352.3	325.6	299.4	253.3
17.5°	508.9	503.0	492.2	474.7	449.7	420.7	389.2	357.0	324.8	295.0	241.3
20°	544.3	536.0	524.4	501.0	471.5	437.4	399.6	361.8	324.4	289.8	227.8
22.5°	573.7	565.4	552.7	528.4	493.0	451.3	408.3	365.0	322.8	283.9	215.1
25°	599.2	592.4	578.5	550.7	513.3	466.0	416.7	367.4	320.5	277.5	201.6
27.5°	619.1	612.7	597.2	568.6	530.4	479.1	423.0	368.6	317.3	271.2	187.7
30°	636.5	630.2	611.5	582.1	541.9	489.4	429.4	369.0	313.3	261.6	172.6
32.5°	650.1	644.1	625.0	593.6	549.9	496.6	433.0	368.6	308.1	254.9	156.3
35°	663.6	657.6	635.4	602.0	555.8	499.8	435.8	366.6	301.8	243.7	140.7
37.5°	673.9	667.2	644.5	607.5	558.6	500.6	435.4	363.8	295.0	234.6	125.2
40°	681.1	673.9	649.7	610.7	559.4	499.4	432.2	359.0	287.1	223.1	108.9
42.5°	685.9	677.9	652.1	615.5	557.8	496.2	427.4	353.1	278.3	213.1	93.4
45°	688.2	679.9	652.5	611.5	555.0	490.2	420.3	345.5	268.8	199.6	77.9
47.5°	687.0	677.9	650.5	607.1	549.9	483.9	412.3	336.4	257.2	187.7	63.2
50°	685.1	675.5	646.1	601.6	542.7	475.9	403.6	325.2	245.3	173.0	50.1
52.5°	678.7	669.2	641.3	593.6	534.4	466.8	391.6	313.7	232.6	158.6	38.2
55°	670.7	662.0	633.0	586.5	523.6	455.6	380.5	301.4	220.3	143.9	27.4
57.5°	658.4	650.5	622.6	574.9	512.9	443.3	368.2	287.9	204.8	129.2	19.1
60°	643.3	635.4	608.3	561.8	500.6	429.4	354.7	273.9	190.8	114.5	11.9
62.5°	627.4	619.9	591.6	545.5	485.1	414.7	339.9	260.0	176.1	101.0	7.2
65°	606.3	599.2	573.7	526.0	468.0	398.8	323.6	243.3	161.0	85.9	4.0
67.5°	584.1	577.7	551.9	508.1	448.1	381.3	306.9	227.0	145.1	72.8	2.0
70°	560.2	552.3	528.4	483.9	427.8	361.4	288.7	210.3	130.0	60.0	0.0
72.5°	532.4	526.4	503.4	461.2	404.4	340.3	270.0	192.0	113.3	47.7	0.4
75°	505.3	497.8	476.7	437.0	381.3	318.1	249.3	174.9	97.0	36.6	0.4
77.5°	470.4	468.0	448.1	409.5	359.4	296.6	226.6	154.3	81.5	26.2	0.4
80°	435.4	433.0	417.5	382.1	334.0	271.2	205.6	134.8	66.4	17.5	0.4
82.5°	400.8	397.6	382.9	353.5	308.1	249.7	183.7	115.3	52.5	10.7	0.4
85°	369.8	365.8	349.9	322.8	281.5	225.4	161.0	96.2	39.0	6.0	0.8
87.5°	343.1	340.3	322.8	295.0	254.5	202.8	141.1	77.9	27.4	2.8	1.2
90°	320.5	314.5	299.0	269.6	229.0	177.7	120.1	62.4	18.3	1.6	1.6
92.5°	298.2	293.0	275.9	245.7	206.4	156.3	99.8	47.7	11.5	0.8	2.0
95°	275.1	269.6	252.9	225.0	183.3	134.4	81.9	35.0	6.4	0.8	2.0
97.5°	252.5	247.3	229.8	202.0	162.6	115.3	64.8	24.7	3.2	0.8	1.6
100°	231.4	225.4	209.5	181.7	141.9	96.2	50.1	15.9	2.0	0.8	1.6
102.5°	209.1	204.4	188.1	161.0	120.5	78.3	37.4	9.9	0.8	0.8	1.2
105°	189.3	183.3	167.4	139.6	102.6	61.6	26.2	6.0	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°	123.3	118.5	104.6	81.1	52.1	24.3	7.2	1.2	1.2	1.2	1.2
115°	103.0	95.8	83.5	62.8	38.6	15.9	3.6	1.2	1.2	1.2	1.2
117.5°	82.3	76.3	67.6	47.7	25.4	10.3	2.0	1.2	1.2	1.2	1.2
120°	64.4	58.8	48.9	33.0	17.1	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.1	41.7	33.0	21.5	10.3	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.6	28.2	21.9	13.1	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.9	17.9	12.7	7.6	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.1	9.9	7.6	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	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	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
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	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	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°	312.1	312.1	312.1
2.5°	297.0	291.4	289.8
5°	281.1	272.0	266.8
7.5°	265.2	252.9	246.9
10°	250.5	233.0	226.6
12.5°	233.0	212.7	202.8
15°	216.3	190.1	180.5
17.5°	197.6	168.2	157.0
20°	180.1	146.3	134.8
22.5°	160.2	124.8	112.1
25°	142.3	103.4	89.1
27.5°	122.5	81.5	69.2
30°	103.8	62.4	50.1
32.5°	85.9	45.7	34.6
35°	69.2	31.0	21.9
37.5°	53.3	19.1	11.1
40°	38.6	9.9	5.2
42.5°	25.8	4.8	2.8
45°	15.9	2.4	0.0
47.5°	9.1	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
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°	167.0	162.2	146.3	120.1	83.9	46.9	17.5	3.2	0.8	1.2	1.2
110°	145.5	141.5	125.2	99.8	67.6	35.0	11.5	2.0	1.2	1.2	1.2







107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)