

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: P551081

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-85-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: P551081  
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-LD4-1STD-40-UNV-81-85-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

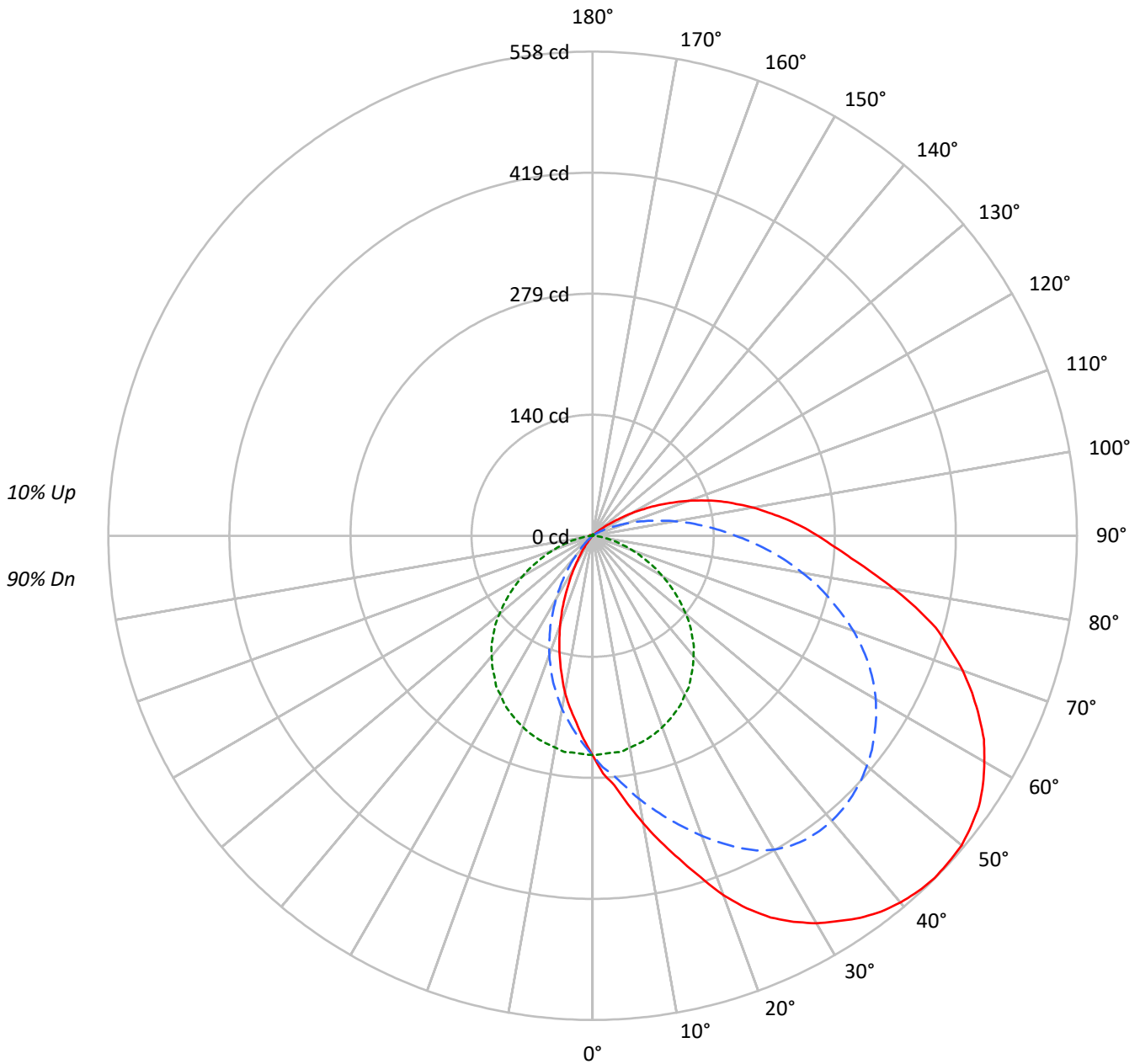
Lumens per Lamp: N/A  
Luminaire Lumens: 1250.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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

TEST NUMBER: P551081

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-85-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°	2721	2721	2721
5°	2988	2682	2237
10°	3381	2649	1844
15°	3788	2615	1437
20°	4273	2573	1058
25°	4675	2523	694
30°	4974	2456	392
35°	5232	2385	172
40°	5461	2298	42
45°	5658	2188	0
50°	5824	2042	0
55°	5949	1857	0
60°	6013	1642	0
65°	6037	1398	0
70°	6017	1139	0
75°	5941	839	4
80°	5700	515	26
85°	5508	244	35



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.2	1.9
10°-20°	72.5	5.8
20°-30°	117.4	9.4
30°-40°	150.9	12.1
40°-50°	170.8	13.7
50°-60°	176.9	14.2
60°-70°	166.8	13.3
70°-80°	139.8	11.2
80°-90°	101.3	8.1
90°-100°	66.6	5.3
100°-110°	38.5	3.1
110°-120°	17.0	1.4
120°-130°	4.6	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	214.2	17.1
0°-40°	365.0	29.2
0°-60°	712.7	57.0
0°-90°	1120.7	89.7
90°-120°	122.1	9.8
90°-150°	128.5	10.3
90°-180°	129.0	10.3
0°-180°	1250.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	253	253	253	253	253	
5°	289	277	251	228	216	29
15°	386	338	242	175	146	111
25°	485	397	225	115	72	224
35°	538	428	197	56	18	337
45°	558	423	162	13	0	430
55°	543	397	117	0	0	485
65°	491	351	70	0	0	486
75°	409	283	30	0	0	429
85°	300	205	5	1	2	256
90°	260	165	1	2	2	142
95°	223	129	1	2	3	175
105°	153	66	1	2	3	162
115°	83	22	1	1	2	84
125°	25	3	1	1	1	25
135°	1	1	2	1	1	2
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°	252.8	252.8	252.8	252.8	252.8	252.8	252.8	252.8	252.8	252.8	252.8
2.5°	274.1	273.8	272.8	271.2	268.9	265.1	261.9	259.0	255.1	251.9	245.8
5°	288.6	287.0	285.7	284.1	278.9	275.4	269.6	263.2	257.0	250.9	238.7
7.5°	311.8	309.2	307.3	302.8	295.7	287.6	278.6	272.5	268.3	251.2	230.3
10°	336.6	334.3	330.5	322.4	313.7	302.1	289.2	274.7	261.9	247.7	222.9
12.5°	361.1	357.8	352.4	342.1	329.8	315.3	297.6	280.5	262.2	245.4	214.2
15°	385.5	382.0	376.2	363.6	347.5	328.5	307.0	285.4	263.8	242.5	205.2
17.5°	412.3	407.5	398.8	384.6	364.3	340.8	315.3	289.2	263.2	239.0	195.5
20°	440.9	434.2	424.8	405.8	382.0	354.3	323.7	293.1	262.8	234.8	184.6
22.5°	464.8	458.0	447.7	428.1	399.4	365.6	330.8	295.7	261.5	230.0	174.3
25°	485.4	479.9	468.6	446.1	415.8	377.5	337.6	297.6	259.6	224.8	163.3
27.5°	501.5	496.3	483.8	460.6	429.7	388.1	342.7	298.6	257.0	219.7	152.0
30°	515.7	510.5	495.4	471.5	439.0	396.5	347.9	298.9	253.8	211.9	139.8
32.5°	526.6	521.8	506.3	480.9	445.5	402.3	350.8	298.6	249.6	206.5	126.6
35°	537.6	532.7	514.7	487.7	450.3	404.9	353.0	297.0	244.5	197.4	114.0
37.5°	546.0	540.5	522.1	492.2	452.5	405.5	352.7	294.7	239.0	190.0	101.5
40°	551.7	546.0	526.3	494.7	453.2	404.6	350.1	290.9	232.6	180.7	88.3
42.5°	555.6	549.2	528.2	498.6	451.9	402.0	346.3	286.0	225.5	172.6	75.7
45°	557.5	550.8	528.6	495.4	449.6	397.1	340.5	279.9	217.7	161.7	63.1
47.5°	556.6	549.2	526.9	491.8	445.5	392.0	334.0	272.5	208.4	152.0	51.2
50°	555.0	547.2	523.4	487.3	439.7	385.5	326.9	263.5	198.7	140.1	40.6
52.5°	549.8	542.1	519.5	480.9	432.9	378.1	317.3	254.1	188.4	128.5	30.9
55°	543.4	536.3	512.8	475.1	424.2	369.1	308.2	244.1	178.4	116.6	22.2
57.5°	533.4	526.9	504.4	465.8	415.5	359.1	298.3	233.2	165.9	104.7	15.5
60°	521.2	514.7	492.8	455.1	405.5	347.9	287.3	221.9	154.6	92.8	9.7
62.5°	508.3	502.1	479.3	441.9	393.0	335.9	275.4	210.7	142.7	81.8	5.8
65°	491.2	485.4	464.8	426.1	379.1	323.1	262.2	197.1	130.4	69.6	3.2
67.5°	473.2	468.0	447.1	411.6	363.0	308.9	248.7	183.9	117.6	58.9	1.6
70°	453.8	447.4	428.1	392.0	346.6	292.8	233.8	170.4	105.3	48.6	0.0
72.5°	431.3	426.5	407.8	373.6	327.6	275.7	218.7	155.6	91.8	38.7	0.3
75°	409.4	403.3	386.2	354.0	308.9	257.7	202.0	141.7	78.6	29.6	0.3
77.5°	381.0	379.1	363.0	331.8	291.2	240.3	183.6	125.0	66.0	21.3	0.3
80°	352.7	350.8	338.2	309.5	270.6	219.7	166.5	109.2	53.8	14.2	0.3
82.5°	324.7	322.1	310.2	286.3	249.6	202.3	148.8	93.4	42.5	8.7	0.3
85°	299.5	296.3	283.4	261.5	228.0	182.6	130.4	77.9	31.6	4.8	0.6
87.5°	278.0	275.7	261.5	239.0	206.1	164.3	114.3	63.1	22.2	2.3	1.0
90°	259.6	254.8	242.2	218.4	185.5	144.0	97.3	50.6	14.8	1.3	1.3
92.5°	241.6	237.4	223.5	199.1	167.2	126.6	80.8	38.7	9.3	0.6	1.6
95°	222.9	218.4	204.9	182.3	148.5	108.9	66.4	28.3	5.2	0.6	1.6
97.5°	204.5	200.3	186.2	163.6	131.7	93.4	52.5	20.0	2.6	0.6	1.3
100°	187.5	182.6	169.7	147.2	115.0	77.9	40.6	12.9	1.6	0.6	1.3
102.5°	169.4	165.6	152.4	130.4	97.6	63.5	30.3	8.1	0.6	0.6	1.0
105°	153.3	148.5	135.6	113.1	83.1	49.9	21.3	4.8	0.6	0.6	1.0



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CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-85-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	99.8	96.0	84.7	65.7	42.2	19.6	5.8	1.0	1.0	1.0	1.0
115°	83.4	77.6	67.6	50.9	31.2	12.9	2.9	1.0	1.0	1.0	1.0
117.5°	66.7	61.8	54.8	38.7	20.6	8.4	1.6	1.0	1.0	1.0	1.0
120°	52.2	47.7	39.6	26.7	13.9	4.8	0.6	1.0	1.0	1.0	1.0
122.5°	37.4	33.8	26.7	17.4	8.4	2.3	1.0	1.0	1.3	1.3	1.0
125°	24.8	22.9	17.7	10.6	5.2	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.1	14.5	10.3	6.1	2.3	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.0	8.1	6.1	3.5	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.2	4.8	3.2	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	252.8	252.8	252.8
2.5°	240.6	236.1	234.8
5°	227.7	220.3	216.1
7.5°	214.8	204.9	200.0
10°	202.9	188.7	183.6
12.5°	188.7	172.3	164.3
15°	175.2	154.0	146.2
17.5°	160.1	136.2	127.2
20°	145.9	118.5	109.2
22.5°	129.8	101.1	90.8
25°	115.3	83.7	72.1
27.5°	99.2	66.0	56.0
30°	84.1	50.6	40.6
32.5°	69.6	37.0	28.0
35°	56.0	25.1	17.7
37.5°	43.2	15.5	9.0
40°	31.2	8.1	4.2
42.5°	20.9	3.9	2.3
45°	12.9	1.9	0.0
47.5°	7.4	0.0	0.0
50°	3.9	0.0	0.0
52.5°	1.6	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°	0.3	0.3	0.3
77.5°	0.3	0.6	1.0
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.3
90°	1.9	2.3	2.3
92.5°	1.9	2.6	2.6
95°	2.3	2.6	2.9
97.5°	2.6	2.9	2.9
100°	2.3	2.9	3.2
102.5°	1.9	2.9	2.9
105°	1.6	2.3	2.6





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.6
152.5°	1.0	0.6	0.6
155°	1.0	0.6	0.3
157.5°	1.3	0.6	0.3
160°	1.0	0.6	0.3
162.5°	1.0	0.6	0.3
165°	1.0	0.6	0.0
167.5°	1.0	0.6	0.3
170°	1.0	0.6	0.3
172.5°	1.0	0.6	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	135.3	131.4	118.5	97.3	68.0	38.0	14.2	2.6	0.6	1.0	1.0
110°	117.9	114.7	101.5	80.8	54.8	28.3	9.3	1.6	1.0	1.0	1.0







107.5°	1.3	1.9	2.3
110°	1.3	1.6	1.9



(END OF REPORT)