

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: P550891

Luminaire Tested: **FCC-X-2-LD4-1LO-50-UNV-81-86-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: P550891  
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-LD4-1LO-50-UNV-81-86-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

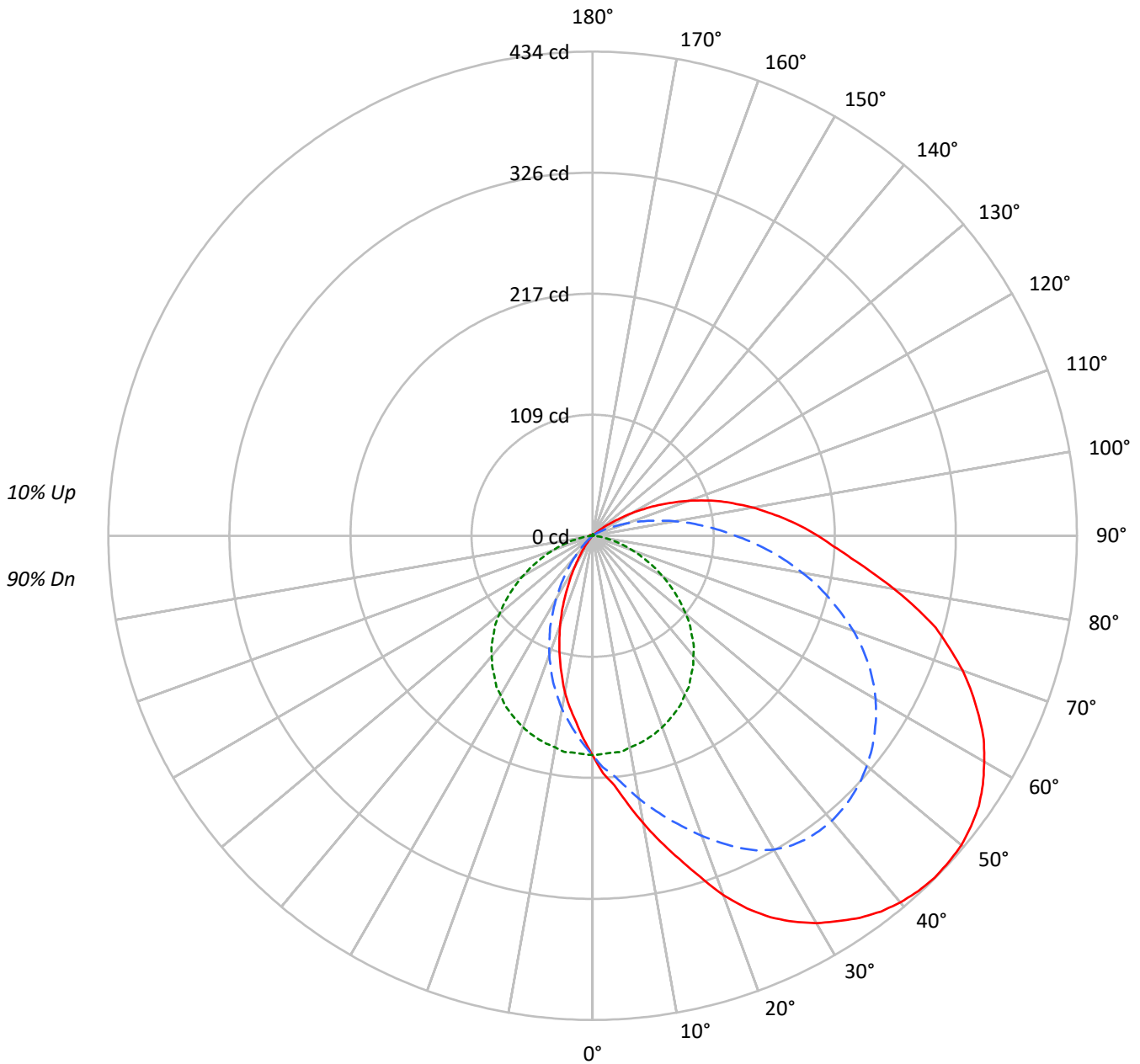
Lumens per Lamp: N/A  
Luminaire Lumens: 972.1 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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

TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**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	37	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°	2116	2116	2116
5°	2323	2085	1740
10°	2629	2060	1434
15°	2946	2034	1117
20°	3323	2001	823
25°	3635	1962	540
30°	3868	1910	305
35°	4068	1855	134
40°	4246	1787	33
45°	4399	1701	0
50°	4528	1589	0
55°	4626	1444	0
60°	4675	1276	0
65°	4695	1087	0
70°	4679	886	0
75°	4619	652	4
80°	4433	399	21
85°	4283	193	28



TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.8	1.9
10°-20°	56.4	5.8
20°-30°	91.3	9.4
30°-40°	117.3	12.1
40°-50°	132.8	13.7
50°-60°	137.6	14.2
60°-70°	129.7	13.3
70°-80°	108.7	11.2
80°-90°	78.8	8.1
90°-100°	51.8	5.3
100°-110°	29.9	3.1
110°-120°	13.2	1.4
120°-130°	3.6	0.4
130°-140°	0.8	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	166.5	17.1
0°-40°	283.8	29.2
0°-60°	554.2	57.0
0°-90°	871.5	89.6
90°-120°	95.0	9.8
90°-150°	100.0	10.3
90°-180°	101.0	10.4
0°-180°	972.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	197	197	197	197	197	
5°	224	216	195	177	168	23
15°	300	263	189	136	114	86
25°	377	308	175	90	56	174
35°	418	332	154	44	14	262
45°	434	329	126	10	0	335
55°	422	308	91	0	0	377
65°	382	273	54	0	0	378
75°	318	220	23	0	0	334
85°	233	160	4	1	2	199
90°	202	128	1	2	2	111
95°	173	100	0	2	2	136
105°	119	52	0	1	2	126
115°	65	17	1	1	1	65
125°	19	2	1	1	1	19
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	1	0	0
180°	1	1	1	1	1	



TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6	196.6
2.5°	213.1	212.9	212.1	210.9	209.1	206.1	203.6	201.4	198.4	195.9	191.1
5°	224.4	223.2	222.2	220.9	216.9	214.1	209.6	204.6	199.9	195.1	185.6
7.5°	242.4	240.4	238.9	235.4	229.9	223.7	216.6	211.9	208.6	195.4	179.1
10°	261.7	260.0	257.0	250.7	243.9	234.9	224.9	213.6	203.6	192.6	173.3
12.5°	280.8	278.3	274.0	266.0	256.5	245.2	231.4	218.2	203.9	190.9	166.6
15°	299.8	297.0	292.5	282.8	270.2	255.5	238.7	221.9	205.1	188.6	159.5
17.5°	320.6	316.8	310.1	299.1	283.3	265.0	245.2	224.9	204.6	185.8	152.0
20°	342.9	337.6	330.4	315.6	297.0	275.5	251.7	227.9	204.4	182.6	143.5
22.5°	361.4	356.2	348.1	332.9	310.6	284.3	257.2	229.9	203.4	178.8	135.5
25°	377.4	373.2	364.4	346.9	323.3	293.5	262.5	231.4	201.9	174.8	127.0
27.5°	390.0	386.0	376.2	358.2	334.1	301.8	266.5	232.2	199.9	170.8	118.2
30°	401.0	397.0	385.2	366.7	341.4	308.3	270.5	232.4	197.4	164.8	108.7
32.5°	409.5	405.7	393.7	373.9	346.4	312.8	272.8	232.2	194.1	160.5	98.4
35°	418.0	414.3	400.2	379.2	350.1	314.8	274.5	230.9	190.1	153.5	88.7
37.5°	424.5	420.3	406.0	382.7	351.9	315.3	274.3	229.2	185.8	147.8	78.9
40°	429.0	424.5	409.3	384.7	352.4	314.6	272.3	226.2	180.8	140.5	68.6
42.5°	432.0	427.0	410.8	387.7	351.4	312.6	269.2	222.4	175.3	134.2	58.9
45°	433.5	428.3	411.0	385.2	349.6	308.8	264.7	217.7	169.3	125.7	49.1
47.5°	432.8	427.0	409.8	382.5	346.4	304.8	259.7	211.9	162.0	118.2	39.8
50°	431.5	425.5	407.0	378.9	341.9	299.8	254.2	204.9	154.5	109.0	31.6
52.5°	427.5	421.5	404.0	373.9	336.6	294.0	246.7	197.6	146.5	99.9	24.0
55°	422.5	417.0	398.7	369.4	329.9	287.0	239.7	189.8	138.8	90.7	17.3
57.5°	414.8	409.8	392.2	362.2	323.1	279.3	231.9	181.3	129.0	81.4	12.0
60°	405.2	400.2	383.2	353.9	315.3	270.5	223.4	172.6	120.2	72.1	7.5
62.5°	395.2	390.5	372.7	343.6	305.6	261.2	214.1	163.8	111.0	63.6	4.5
65°	382.0	377.4	361.4	331.4	294.8	251.2	203.9	153.3	101.4	54.1	2.5
67.5°	367.9	363.9	347.6	320.1	282.3	240.2	193.4	143.0	91.4	45.8	1.3
70°	352.9	347.9	332.9	304.8	269.5	227.7	181.8	132.5	81.9	37.8	0.0
72.5°	335.4	331.6	317.1	290.5	254.7	214.4	170.1	121.0	71.4	30.1	0.3
75°	318.3	313.6	300.3	275.3	240.2	200.4	157.0	110.2	61.1	23.0	0.3
77.5°	296.3	294.8	282.3	258.0	226.4	186.8	142.8	97.2	51.3	16.5	0.3
80°	274.3	272.8	263.0	240.7	210.4	170.8	129.5	84.9	41.8	11.0	0.3
82.5°	252.5	250.5	241.2	222.7	194.1	157.3	115.7	72.6	33.1	6.8	0.3
85°	232.9	230.4	220.4	203.4	177.3	142.0	101.4	60.6	24.5	3.8	0.5
87.5°	216.1	214.4	203.4	185.8	160.3	127.7	88.9	49.1	17.3	1.8	0.8
90°	201.9	198.1	188.3	169.8	144.3	112.0	75.6	39.3	11.5	1.0	1.0
92.5°	187.8	184.6	173.8	154.8	130.0	98.4	62.9	30.1	7.3	0.5	1.3
95°	173.3	169.8	159.3	141.8	115.5	84.7	51.6	22.0	4.0	0.5	1.3
97.5°	159.0	155.8	144.8	127.2	102.4	72.6	40.8	15.5	2.0	0.5	1.0
100°	145.8	142.0	132.0	114.5	89.4	60.6	31.6	10.0	1.3	0.5	1.0
102.5°	131.7	128.7	118.5	101.4	75.9	49.3	23.5	6.3	0.5	0.5	0.8
105°	119.2	115.5	105.4	87.9	64.6	38.8	16.5	3.8	0.5	0.5	0.8



TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	77.6	74.6	65.9	51.1	32.8	15.3	4.5	0.8	0.8	0.8	0.8
115°	64.9	60.4	52.6	39.6	24.3	10.0	2.3	0.8	0.8	0.8	0.8
117.5°	51.8	48.1	42.6	30.1	16.0	6.5	1.3	0.8	0.8	0.8	0.8
120°	40.6	37.1	30.8	20.8	10.8	3.8	0.5	0.8	0.8	0.8	0.8
122.5°	29.1	26.3	20.8	13.5	6.5	1.8	0.8	0.8	1.0	1.0	0.8
125°	19.3	17.8	13.8	8.3	4.0	0.8	0.8	0.8	1.0	1.0	0.8
127.5°	12.5	11.3	8.0	4.8	1.8	0.8	0.8	1.0	1.0	1.0	0.8
130°	7.0	6.3	4.8	2.8	0.8	0.8	0.8	1.0	1.0	1.0	0.8
132.5°	4.0	3.8	2.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.0	1.3	1.3	1.3	1.0
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.0
142.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
145°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
150°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
152.5°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
157.5°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
160°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.3
172.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
175°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
177.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.0
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	196.6	196.6	196.6
2.5°	187.1	183.6	182.6
5°	177.1	171.3	168.1
7.5°	167.1	159.3	155.5
10°	157.8	146.8	142.8
12.5°	146.8	134.0	127.7
15°	136.3	119.7	113.7
17.5°	124.5	105.9	98.9
20°	113.5	92.2	84.9
22.5°	100.9	78.6	70.6
25°	89.7	65.1	56.1
27.5°	77.1	51.3	43.6
30°	65.4	39.3	31.6
32.5°	54.1	28.8	21.8
35°	43.6	19.5	13.8
37.5°	33.6	12.0	7.0
40°	24.3	6.3	3.3
42.5°	16.3	3.0	1.8
45°	10.0	1.5	0.0
47.5°	5.8	0.0	0.0
50°	3.0	0.0	0.0
52.5°	1.3	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	0.5	0.8
80°	0.5	1.0	1.3
82.5°	1.0	1.3	1.3
85°	1.0	1.3	1.5
87.5°	1.3	1.5	1.8
90°	1.5	1.8	1.8
92.5°	1.5	2.0	2.0
95°	1.8	2.0	2.3
97.5°	2.0	2.3	2.3
100°	1.8	2.3	2.5
102.5°	1.5	2.3	2.3
105°	1.3	1.8	2.0





TEST NUMBER: P550891

CATALOG NUMBER: FCC-X-2-LD4-1LO-50-UNV-81-86-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.3	1.3
115°	0.8	1.0	1.3
117.5°	0.8	1.0	1.0
120°	0.8	0.8	1.0
122.5°	0.8	0.8	1.0
125°	0.8	0.8	1.0
127.5°	1.0	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.0	0.8	0.8
135°	1.0	0.8	0.8
137.5°	1.0	0.8	0.8
140°	1.0	0.8	0.8
142.5°	1.0	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.0	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	105.2	102.2	92.2	75.6	52.8	29.6	11.0	2.0	0.5	0.8	0.8
110°	91.7	89.2	78.9	62.9	42.6	22.0	7.3	1.3	0.8	0.8	0.8







107.5°	1.0	1.5	1.8
110°	1.0	1.3	1.5



(END OF REPORT)