

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: P550847

Luminaire Tested: **FCC-X-2-LD4-1LO-40-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: P550847  
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-40-UNV-82-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

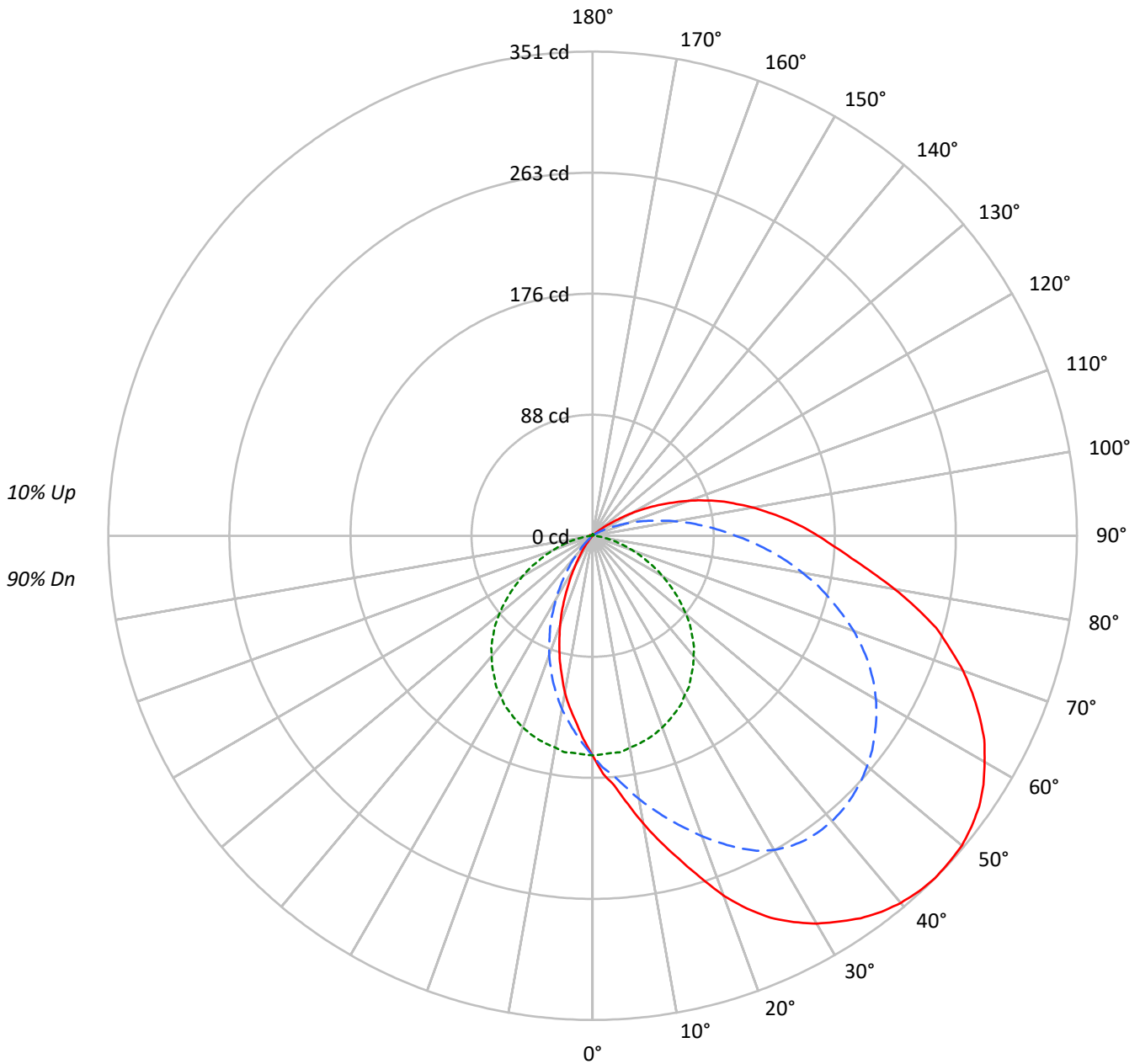
Lumens per Lamp: N/A  
Luminaire Lumens: 786.9 lumens  
Efficiency: N/A  
Efficacy: 67.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (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: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-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	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°	1714	1714	1714
5°	1881	1689	1409
10°	2128	1667	1161
15°	2385	1646	905
20°	2690	1619	666
25°	2943	1588	437
30°	3132	1546	247
35°	3295	1502	109
40°	3439	1447	26
45°	3562	1377	0
50°	3666	1285	0
55°	3745	1169	0
60°	3785	1033	0
65°	3802	880	0
70°	3788	717	0
75°	3739	530	3
80°	3589	323	16
85°	3469	153	22



TEST NUMBER: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	15.2	1.9
10°-20°	45.7	5.8
20°-30°	73.9	9.4
30°-40°	95.0	12.1
40°-50°	107.5	13.7
50°-60°	111.4	14.2
60°-70°	105.0	13.3
70°-80°	88.0	11.2
80°-90°	63.8	8.1
90°-100°	41.9	5.3
100°-110°	24.2	3.1
110°-120°	10.7	1.4
120°-130°	2.9	0.4
130°-140°	0.7	0.1
140°-150°	0.4	0.1
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	134.8	17.1
0°-40°	229.8	29.2
0°-60°	448.7	57.0
0°-90°	705.6	89.7
90°-120°	76.8	9.8
90°-150°	80.8	10.3
90°-180°	81.0	10.3
0°-180°	786.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	159	159	159	159	159	
5°	182	174	158	143	136	18
15°	243	213	153	110	92	70
25°	306	250	142	73	45	141
35°	338	269	124	35	11	212
45°	351	267	102	8	0	271
55°	342	250	73	0	0	305
65°	309	221	44	0	0	306
75°	258	178	19	0	0	270
85°	189	129	3	1	1	161
90°	163	104	1	1	1	90
95°	140	81	0	1	2	110
105°	96	42	0	1	2	102
115°	52	14	1	1	1	53
125°	16	2	1	1	1	16
135°	1	1	1	1	1	1
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: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	159.2	159.2	159.2	159.2	159.2	159.2	159.2	159.2	159.2	159.2	159.2
2.5°	172.6	172.4	171.8	170.8	169.3	166.9	164.9	163.0	160.6	158.6	154.7
5°	181.7	180.7	179.9	178.9	175.6	173.4	169.7	165.7	161.8	158.0	150.3
7.5°	196.3	194.7	193.5	190.6	186.2	181.1	175.4	171.6	168.9	158.2	145.0
10°	211.9	210.5	208.1	203.0	197.5	190.2	182.1	173.0	164.9	155.9	140.3
12.5°	227.3	225.3	221.9	215.4	207.7	198.5	187.4	176.6	165.1	154.5	134.9
15°	242.7	240.5	236.9	229.0	218.8	206.8	193.3	179.7	166.1	152.7	129.2
17.5°	259.6	256.5	251.1	242.1	229.4	214.6	198.5	182.1	165.7	150.5	123.1
20°	277.6	273.4	267.5	255.5	240.5	223.1	203.8	184.5	165.5	147.8	116.2
22.5°	292.6	288.4	281.9	269.5	251.5	230.2	208.3	186.2	164.7	144.8	109.7
25°	305.6	302.2	295.1	280.9	261.8	237.7	212.5	187.4	163.4	141.5	102.8
27.5°	315.7	312.5	304.6	290.0	270.5	244.4	215.8	188.0	161.8	138.3	95.7
30°	324.7	321.4	311.9	296.9	276.4	249.6	219.0	188.2	159.8	133.4	88.0
32.5°	331.6	328.5	318.8	302.8	280.5	253.3	220.8	188.0	157.2	130.0	79.7
35°	338.5	335.4	324.1	307.0	283.5	254.9	222.3	187.0	153.9	124.3	71.8
37.5°	343.7	340.3	328.7	309.9	284.9	255.3	222.1	185.6	150.5	119.6	63.9
40°	347.4	343.7	331.4	311.5	285.3	254.7	220.4	183.1	146.4	113.8	55.6
42.5°	349.8	345.8	332.6	313.9	284.5	253.1	218.0	180.1	142.0	108.7	47.7
45°	351.0	346.8	332.8	311.9	283.1	250.0	214.4	176.2	137.1	101.8	39.7
47.5°	350.4	345.8	331.8	309.7	280.5	246.8	210.3	171.6	131.2	95.7	32.2
50°	349.4	344.5	329.5	306.8	276.8	242.7	205.8	165.9	125.1	88.2	25.6
52.5°	346.2	341.3	327.1	302.8	272.6	238.1	199.7	160.0	118.6	80.9	19.5
55°	342.1	337.6	322.8	299.1	267.1	232.4	194.1	153.7	112.3	73.4	14.0
57.5°	335.8	331.8	317.6	293.2	261.6	226.1	187.8	146.8	104.4	65.9	9.7
60°	328.1	324.1	310.3	286.5	255.3	219.0	180.9	139.7	97.3	58.4	6.1
62.5°	320.0	316.2	301.8	278.2	247.4	211.5	173.4	132.6	89.8	51.5	3.7
65°	309.3	305.6	292.6	268.3	238.7	203.4	165.1	124.1	82.1	43.8	2.0
67.5°	297.9	294.7	281.5	259.2	228.5	194.5	156.6	115.8	74.0	37.1	1.0
70°	285.7	281.7	269.5	246.8	218.2	184.3	147.2	107.3	66.3	30.6	0.0
72.5°	271.5	268.5	256.7	235.2	206.2	173.6	137.7	97.9	57.8	24.3	0.2
75°	257.7	253.9	243.1	222.9	194.5	162.2	127.2	89.2	49.5	18.7	0.2
77.5°	239.9	238.7	228.5	208.9	183.3	151.3	115.6	78.7	41.6	13.4	0.2
80°	222.1	220.8	212.9	194.9	170.3	138.3	104.8	68.7	33.9	8.9	0.2
82.5°	204.4	202.8	195.3	180.3	157.2	127.4	93.7	58.8	26.8	5.5	0.2
85°	188.6	186.6	178.5	164.7	143.6	115.0	82.1	49.1	19.9	3.0	0.4
87.5°	175.0	173.6	164.7	150.5	129.8	103.4	72.0	39.7	14.0	1.4	0.6
90°	163.4	160.4	152.5	137.5	116.8	90.6	61.2	31.8	9.3	0.8	0.8
92.5°	152.1	149.5	140.7	125.3	105.2	79.7	50.9	24.3	5.9	0.4	1.0
95°	140.3	137.5	129.0	114.8	93.5	68.5	41.8	17.8	3.2	0.4	1.0
97.5°	128.8	126.1	117.2	103.0	82.9	58.8	33.1	12.6	1.6	0.4	0.8
100°	118.0	115.0	106.9	92.7	72.4	49.1	25.6	8.1	1.0	0.4	0.8
102.5°	106.7	104.2	95.9	82.1	61.4	39.9	19.1	5.1	0.4	0.4	0.6
105°	96.5	93.5	85.4	71.2	52.3	31.4	13.4	3.0	0.4	0.4	0.6



TEST NUMBER: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	62.9	60.4	53.3	41.4	26.6	12.4	3.7	0.6	0.6	0.6	0.6
115°	52.5	48.9	42.6	32.0	19.7	8.1	1.8	0.6	0.6	0.6	0.6
117.5°	42.0	38.9	34.5	24.3	13.0	5.3	1.0	0.6	0.6	0.6	0.6
120°	32.9	30.0	24.9	16.8	8.7	3.0	0.4	0.6	0.6	0.6	0.6
122.5°	23.5	21.3	16.8	11.0	5.3	1.4	0.6	0.6	0.8	0.8	0.6
125°	15.6	14.4	11.2	6.7	3.2	0.6	0.6	0.6	0.8	0.8	0.6
127.5°	10.1	9.1	6.5	3.9	1.4	0.6	0.6	0.8	0.8	0.8	0.6
130°	5.7	5.1	3.9	2.2	0.6	0.6	0.6	0.8	0.8	0.8	0.6
132.5°	3.2	3.0	2.0	0.4	0.6	0.6	0.6	0.8	0.8	0.8	0.8
135°	0.8	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8
137.5°	0.2	0.2	0.4	0.4	0.6	0.6	0.8	1.0	1.0	1.0	0.8
140°	0.2	0.2	0.4	0.6	0.6	0.6	0.8	1.0	1.0	1.0	0.8
142.5°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8	0.8
145°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	0.8	0.8	0.8
147.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	0.8	0.8
150°	0.2	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	0.8
152.5°	0.2	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	0.8
155°	0.4	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	1.0
157.5°	0.4	0.4	0.4	0.6	0.8	0.8	0.8	1.0	0.8	0.8	1.0
160°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8
162.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8
165°	0.4	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	0.8	0.8
167.5°	0.4	0.4	0.4	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8
170°	0.4	0.4	0.4	0.6	0.6	0.6	0.8	1.0	1.0	1.0	1.0
172.5°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	1.0
175°	0.4	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	1.0
177.5°	0.2	0.4	0.4	0.6	0.6	0.8	0.8	1.0	1.0	1.0	0.8
180°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6



TEST NUMBER: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	159.2	159.2	159.2
2.5°	151.5	148.6	147.8
5°	143.4	138.7	136.1
7.5°	135.3	129.0	125.9
10°	127.8	118.8	115.6
12.5°	118.8	108.5	103.4
15°	110.3	96.9	92.1
17.5°	100.8	85.8	80.1
20°	91.9	74.6	68.7
22.5°	81.7	63.7	57.2
25°	72.6	52.7	45.4
27.5°	62.5	41.6	35.3
30°	52.9	31.8	25.6
32.5°	43.8	23.3	17.6
35°	35.3	15.8	11.2
37.5°	27.2	9.7	5.7
40°	19.7	5.1	2.6
42.5°	13.2	2.4	1.4
45°	8.1	1.2	0.0
47.5°	4.7	0.0	0.0
50°	2.4	0.0	0.0
52.5°	1.0	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°	0.2	0.2	0.2
77.5°	0.2	0.4	0.6
80°	0.4	0.8	1.0
82.5°	0.8	1.0	1.0
85°	0.8	1.0	1.2
87.5°	1.0	1.2	1.4
90°	1.2	1.4	1.4
92.5°	1.2	1.6	1.6
95°	1.4	1.6	1.8
97.5°	1.6	1.8	1.8
100°	1.4	1.8	2.0
102.5°	1.2	1.8	1.8
105°	1.0	1.4	1.6





TEST NUMBER: P550847

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-82-88-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	0.8	1.0	1.0
115°	0.6	0.8	1.0
117.5°	0.6	0.8	0.8
120°	0.6	0.6	0.8
122.5°	0.6	0.6	0.8
125°	0.6	0.6	0.8
127.5°	0.8	0.6	0.6
130°	0.6	0.6	0.6
132.5°	0.8	0.6	0.6
135°	0.8	0.6	0.6
137.5°	0.8	0.6	0.6
140°	0.8	0.6	0.6
142.5°	0.8	0.6	0.6
145°	0.6	0.6	0.6
147.5°	0.6	0.6	0.6
150°	0.6	0.6	0.4
152.5°	0.6	0.4	0.4
155°	0.6	0.4	0.2
157.5°	0.8	0.4	0.2
160°	0.6	0.4	0.2
162.5°	0.6	0.4	0.2
165°	0.6	0.4	0.0
167.5°	0.6	0.4	0.2
170°	0.6	0.4	0.2
172.5°	0.6	0.4	0.2
175°	0.6	0.2	0.2
177.5°	0.6	0.2	0.2
180°	0.6	0.6	0.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	85.2	82.7	74.6	61.2	42.8	23.9	8.9	1.6	0.4	0.6	0.6
110°	74.2	72.2	63.9	50.9	34.5	17.8	5.9	1.0	0.6	0.6	0.6







107.5°	0.8	1.2	1.4
110°	0.8	1.0	1.2



(END OF REPORT)