

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: P550829

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-81-87-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: P550829  
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-81-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

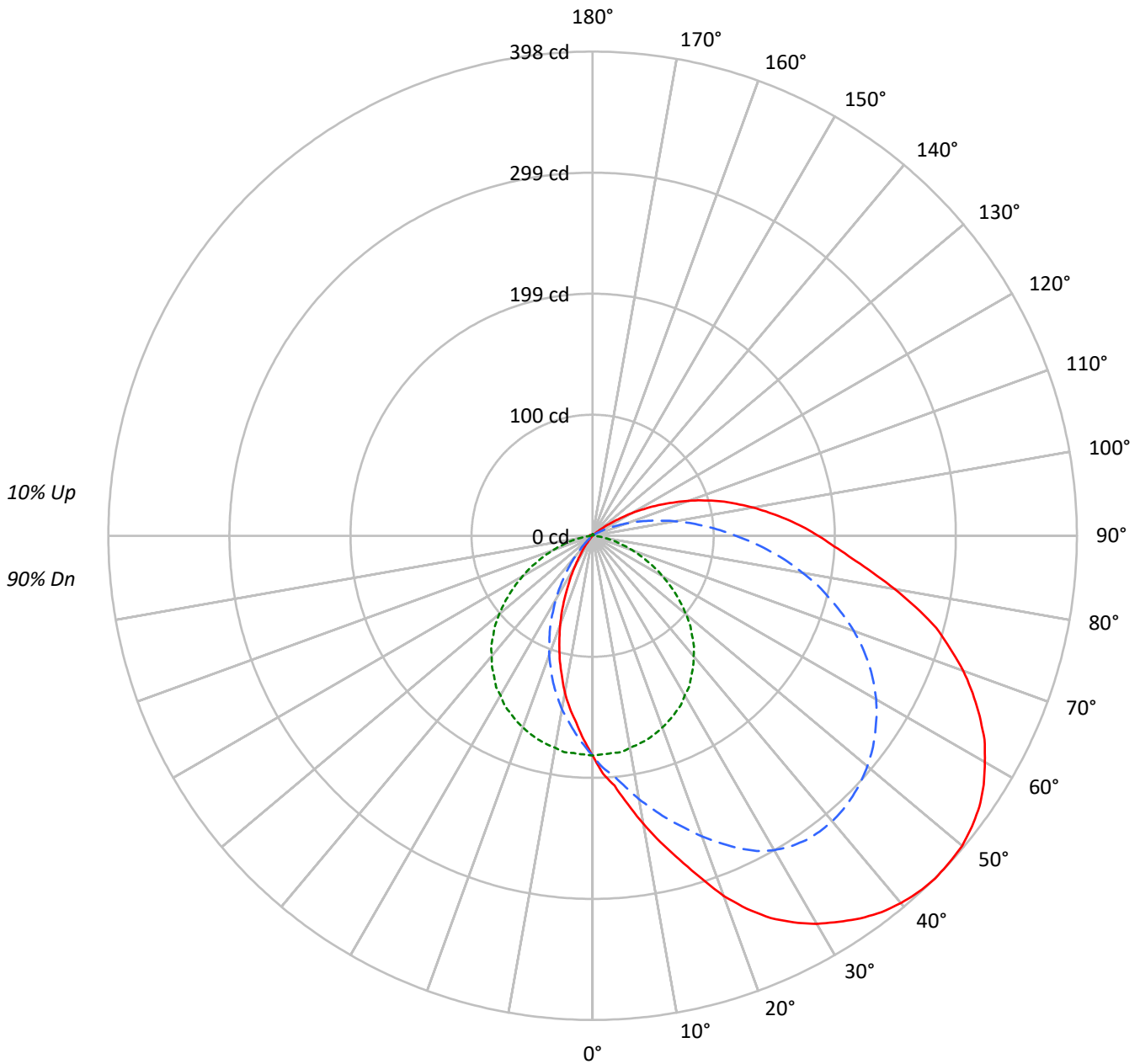
Lumens per Lamp: N/A  
Luminaire Lumens: 893.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

### Luminous Intensity Polar Plot





TEST NUMBER: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-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°	1944	1944	1944
5°	2135	1916	1598
10°	2416	1893	1318
15°	2706	1869	1027
20°	3053	1837	756
25°	3340	1802	496
30°	3553	1755	280
35°	3737	1705	124
40°	3902	1642	30
45°	4042	1563	0
50°	4161	1459	0
55°	4250	1326	0
60°	4295	1173	0
65°	4313	998	0
70°	4298	813	0
75°	4244	601	3
80°	4073	366	19
85°	3936	178	26



TEST NUMBER: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.3	1.9
10°-20°	51.8	5.8
20°-30°	83.9	9.4
30°-40°	107.8	12.1
40°-50°	122.0	13.7
50°-60°	126.4	14.2
60°-70°	119.2	13.3
70°-80°	99.9	11.2
80°-90°	72.4	8.1
90°-100°	47.6	5.3
100°-110°	27.5	3.1
110°-120°	12.1	1.4
120°-130°	3.3	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	153.0	17.1
0°-40°	260.8	29.2
0°-60°	509.2	57.0
0°-90°	800.7	89.7
90°-120°	87.2	9.8
90°-150°	91.8	10.3
90°-180°	92.0	10.3
0°-180°	893.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	181	181	181	181	181	
5°	206	198	179	163	154	21
15°	275	242	173	125	104	79
25°	347	283	161	82	52	160
35°	384	305	141	40	13	241
45°	398	302	116	9	0	308
55°	388	283	83	0	0	347
65°	351	251	50	0	0	347
75°	292	202	21	0	0	307
85°	214	147	4	1	1	183
90°	186	118	1	1	2	102
95°	159	92	0	2	2	125
105°	110	48	0	1	2	116
115°	60	16	1	1	1	60
125°	18	2	1	1	1	18
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: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6	180.6
2.5°	195.8	195.6	194.9	193.7	192.1	189.4	187.1	185.0	182.2	179.9	175.6
5°	206.2	205.0	204.1	203.0	199.3	196.7	192.6	188.0	183.6	179.3	170.5
7.5°	222.7	220.9	219.5	216.3	211.2	205.5	199.0	194.7	191.7	179.5	164.5
10°	240.5	238.8	236.1	230.3	224.1	215.8	206.6	196.3	187.1	177.0	159.2
12.5°	257.9	255.6	251.7	244.4	235.6	225.3	212.6	200.4	187.3	175.3	153.0
15°	275.4	272.9	268.8	259.8	248.3	234.7	219.3	203.9	188.5	173.3	146.6
17.5°	294.5	291.1	284.9	274.7	260.2	243.5	225.3	206.6	188.0	170.7	139.7
20°	315.0	310.2	303.5	289.9	272.9	253.1	231.3	209.4	187.8	167.7	131.9
22.5°	332.0	327.2	319.8	305.8	285.3	261.2	236.3	211.2	186.8	164.3	124.5
25°	346.8	342.9	334.8	318.7	297.1	269.7	241.2	212.6	185.5	160.6	116.7
27.5°	358.3	354.6	345.6	329.1	307.0	277.3	244.8	213.3	183.6	156.9	108.6
30°	368.4	364.7	353.9	336.9	313.6	283.3	248.5	213.5	181.3	151.4	99.9
32.5°	376.2	372.8	361.7	343.5	318.2	287.4	250.6	213.3	178.3	147.5	90.4
35°	384.0	380.6	367.7	348.4	321.7	289.2	252.2	212.2	174.6	141.1	81.5
37.5°	390.0	386.1	373.0	351.6	323.3	289.7	252.0	210.5	170.7	135.8	72.5
40°	394.2	390.0	376.0	353.4	323.8	289.0	250.1	207.8	166.1	129.1	63.0
42.5°	396.9	392.3	377.4	356.2	322.8	287.2	247.4	204.3	161.1	123.3	54.1
45°	398.3	393.5	377.6	353.9	321.2	283.7	243.2	200.0	155.6	115.5	45.1
47.5°	397.6	392.3	376.5	351.4	318.2	280.0	238.6	194.7	148.9	108.6	36.6
50°	396.5	390.9	373.9	348.1	314.1	275.4	233.6	188.2	142.0	100.1	29.0
52.5°	392.8	387.3	371.2	343.5	309.3	270.1	226.7	181.6	134.6	91.8	22.1
55°	388.2	383.1	366.3	339.4	303.0	263.7	220.2	174.4	127.5	83.3	15.9
57.5°	381.1	376.5	360.3	332.7	296.8	256.6	213.1	166.6	118.5	74.8	11.0
60°	372.3	367.7	352.1	325.1	289.7	248.5	205.3	158.5	110.5	66.3	6.9
62.5°	363.1	358.7	342.4	315.7	280.7	240.0	196.7	150.5	101.9	58.4	4.1
65°	350.9	346.8	332.0	304.4	270.8	230.8	187.3	140.8	93.2	49.7	2.3
67.5°	338.0	334.3	319.4	294.1	259.3	220.7	177.6	131.4	84.0	42.1	1.2
70°	324.2	319.6	305.8	280.0	247.6	209.2	167.1	121.7	75.2	34.7	0.0
72.5°	308.1	304.7	291.3	266.9	234.0	197.0	156.2	111.1	65.6	27.6	0.2
75°	292.5	288.1	275.9	252.9	220.7	184.1	144.3	101.2	56.1	21.2	0.2
77.5°	272.2	270.8	259.3	237.0	208.0	171.7	131.2	89.3	47.2	15.2	0.2
80°	252.0	250.6	241.6	221.1	193.3	156.9	119.0	78.0	38.4	10.1	0.2
82.5°	231.9	230.1	221.6	204.6	178.3	144.5	106.3	66.7	30.4	6.2	0.2
85°	214.0	211.7	202.5	186.8	162.9	130.5	93.2	55.7	22.6	3.5	0.5
87.5°	198.6	197.0	186.8	170.7	147.3	117.4	81.7	45.1	15.9	1.6	0.7
90°	185.5	182.0	173.0	156.0	132.5	102.9	69.5	36.1	10.6	0.9	0.9
92.5°	172.6	169.6	159.7	142.2	119.4	90.4	57.8	27.6	6.7	0.5	1.2
95°	159.2	156.0	146.3	130.2	106.1	77.8	47.4	20.2	3.7	0.5	1.2
97.5°	146.1	143.1	133.0	116.9	94.1	66.7	37.5	14.3	1.8	0.5	0.9
100°	133.9	130.5	121.3	105.2	82.1	55.7	29.0	9.2	1.2	0.5	0.9
102.5°	121.0	118.3	108.8	93.2	69.7	45.3	21.6	5.8	0.5	0.5	0.7
105°	109.5	106.1	96.9	80.8	59.4	35.7	15.2	3.5	0.5	0.5	0.7



TEST NUMBER: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	71.3	68.6	60.5	46.9	30.1	14.0	4.1	0.7	0.7	0.7	0.7
115°	59.6	55.5	48.3	36.4	22.3	9.2	2.1	0.7	0.7	0.7	0.7
117.5°	47.6	44.2	39.1	27.6	14.7	6.0	1.2	0.7	0.7	0.7	0.7
120°	37.3	34.1	28.3	19.1	9.9	3.5	0.5	0.7	0.7	0.7	0.7
122.5°	26.7	24.2	19.1	12.4	6.0	1.6	0.7	0.7	0.9	0.9	0.7
125°	17.7	16.3	12.7	7.6	3.7	0.7	0.7	0.7	0.9	0.9	0.7
127.5°	11.5	10.4	7.4	4.4	1.6	0.7	0.7	0.9	0.9	0.9	0.7
130°	6.4	5.8	4.4	2.5	0.7	0.7	0.7	0.9	0.9	0.9	0.7
132.5°	3.7	3.5	2.3	0.5	0.7	0.7	0.7	0.9	0.9	0.9	0.9
135°	0.9	0.5	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	0.9
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	0.9	1.2	1.2	1.2	0.9
140°	0.2	0.2	0.5	0.7	0.7	0.7	0.9	1.2	1.2	1.2	0.9
142.5°	0.2	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	0.9	0.9
145°	0.2	0.5	0.5	0.7	0.7	0.9	0.9	1.2	0.9	0.9	0.9
147.5°	0.5	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	0.9	0.9
150°	0.2	0.5	0.5	0.7	0.9	0.9	0.9	1.2	0.9	0.9	0.9
152.5°	0.2	0.5	0.5	0.7	0.9	0.9	0.9	1.2	0.9	0.9	0.9
155°	0.5	0.5	0.5	0.7	0.9	0.9	0.9	1.2	0.9	0.9	1.2
157.5°	0.5	0.5	0.5	0.7	0.9	0.9	0.9	1.2	0.9	0.9	1.2
160°	0.5	0.5	0.5	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9
162.5°	0.5	0.5	0.5	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9
165°	0.5	0.5	0.5	0.5	0.7	0.7	0.9	0.9	0.9	0.9	0.9
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	0.9	0.9	0.9	0.9	0.9
170°	0.5	0.5	0.5	0.7	0.7	0.7	0.9	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	0.9	0.9	1.2	1.2	1.2	0.9
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	180.6	180.6	180.6
2.5°	171.9	168.7	167.7
5°	162.7	157.4	154.4
7.5°	153.5	146.3	142.9
10°	145.0	134.8	131.2
12.5°	134.8	123.1	117.4
15°	125.2	110.0	104.5
17.5°	114.4	97.3	90.9
20°	104.2	84.7	78.0
22.5°	92.7	72.3	64.9
25°	82.4	59.8	51.5
27.5°	70.9	47.2	40.0
30°	60.1	36.1	29.0
32.5°	49.7	26.5	20.0
35°	40.0	17.9	12.7
37.5°	30.8	11.0	6.4
40°	22.3	5.8	3.0
42.5°	15.0	2.8	1.6
45°	9.2	1.4	0.0
47.5°	5.3	0.0	0.0
50°	2.8	0.0	0.0
52.5°	1.2	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	0.5	0.7
80°	0.5	0.9	1.2
82.5°	0.9	1.2	1.2
85°	0.9	1.2	1.4
87.5°	1.2	1.4	1.6
90°	1.4	1.6	1.6
92.5°	1.4	1.8	1.8
95°	1.6	1.8	2.1
97.5°	1.8	2.1	2.1
100°	1.6	2.1	2.3
102.5°	1.4	2.1	2.1
105°	1.2	1.6	1.8





TEST NUMBER: P550829

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-87-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	0.9	1.2	1.2
115°	0.7	0.9	1.2
117.5°	0.7	0.9	0.9
120°	0.7	0.7	0.9
122.5°	0.7	0.7	0.9
125°	0.7	0.7	0.9
127.5°	0.9	0.7	0.7
130°	0.7	0.7	0.7
132.5°	0.9	0.7	0.7
135°	0.9	0.7	0.7
137.5°	0.9	0.7	0.7
140°	0.9	0.7	0.7
142.5°	0.9	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	0.9	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	96.6	93.9	84.7	69.5	48.6	27.2	10.1	1.8	0.5	0.7	0.7
110°	84.2	81.9	72.5	57.8	39.1	20.2	6.7	1.2	0.7	0.7	0.7







107.5°	0.9	1.4	1.6
110°	0.9	1.2	1.4



(END OF REPORT)