

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: P550828

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D**

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: P550828  
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-81-86-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

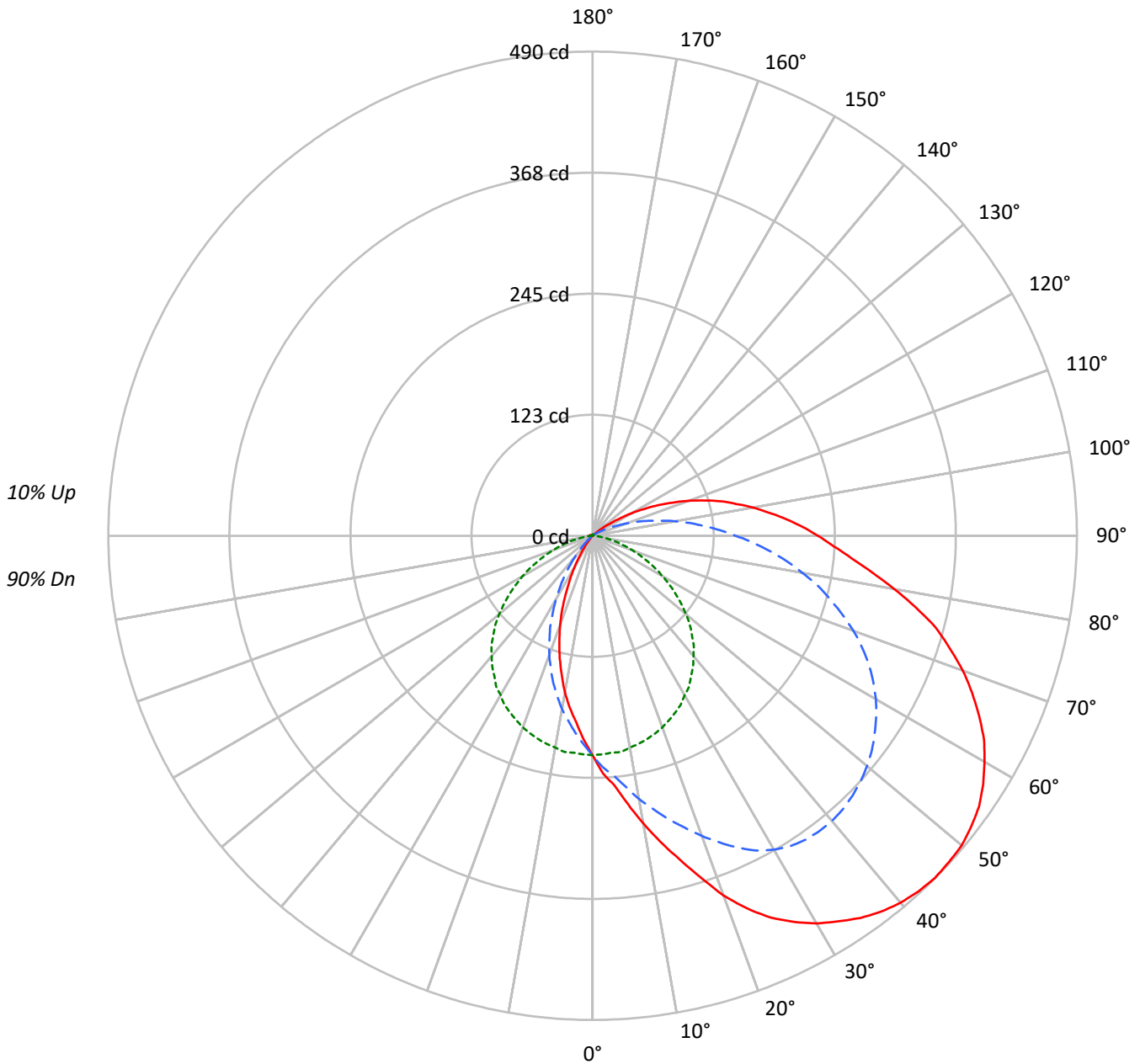
Lumens per Lamp: N/A  
Luminaire Lumens: 1097.9 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

### Luminous Intensity Polar Plot





TEST NUMBER: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	2391	2391	2391
5°	2624	2356	1965
10°	2970	2327	1620
15°	3328	2297	1262
20°	3753	2260	929
25°	4107	2216	611
30°	4369	2159	343
35°	4596	2095	152
40°	4798	2018	37
45°	4970	1921	0
50°	5115	1794	0
55°	5226	1631	0
60°	5282	1442	0
65°	5303	1227	0
70°	5285	1000	0
75°	5218	737	4
80°	5007	450	23
85°	4839	214	31



TEST NUMBER: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.3	1.9
10°-20°	63.7	5.8
20°-30°	103.2	9.4
30°-40°	132.5	12.1
40°-50°	150.0	13.7
50°-60°	155.4	14.2
60°-70°	146.6	13.3
70°-80°	122.8	11.2
80°-90°	89.0	8.1
90°-100°	58.5	5.3
100°-110°	33.8	3.1
110°-120°	14.9	1.4
120°-130°	4.0	0.4
130°-140°	0.9	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°	188.1	17.1
0°-40°	320.6	29.2
0°-60°	626.0	57.0
0°-90°	984.5	89.7
90°-120°	107.2	9.8
90°-150°	112.7	10.3
90°-180°	113.0	10.3
0°-180°	1097.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	222	222	222	222	222	
5°	254	243	220	200	190	26
15°	339	297	213	154	128	98
25°	426	348	198	101	63	197
35°	472	376	173	49	16	296
45°	490	372	142	11	0	378
55°	477	348	102	0	0	426
65°	432	308	61	0	0	427
75°	360	249	26	0	0	377
85°	263	180	4	1	2	225
90°	228	145	1	2	2	125
95°	196	113	1	2	2	154
105°	135	58	1	1	2	142
115°	73	19	1	1	1	73
125°	22	3	1	1	1	22
135°	1	1	1	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	1	1	0	0
180°	1	1	1	1	1	



TEST NUMBER: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	222.1	222.1	222.1	222.1	222.1	222.1	222.1	222.1	222.1	222.1	222.1
2.5°	240.8	240.5	239.6	238.2	236.2	232.9	230.0	227.5	224.1	221.3	215.9
5°	253.5	252.1	251.0	249.5	245.0	241.9	236.8	231.2	225.8	220.4	209.7
7.5°	273.9	271.6	269.9	266.0	259.7	252.7	244.7	239.4	235.7	220.7	202.3
10°	295.7	293.7	290.3	283.2	275.6	265.4	254.1	241.3	230.0	217.6	195.8
12.5°	317.2	314.3	309.5	300.5	289.7	277.0	261.4	246.4	230.3	215.6	188.1
15°	338.7	335.6	330.5	319.4	305.3	288.6	269.6	250.7	231.7	213.0	180.2
17.5°	362.1	357.9	350.3	337.8	320.0	299.3	277.0	254.1	231.2	209.9	171.7
20°	387.3	381.4	373.2	356.5	335.6	311.2	284.3	257.5	230.9	206.3	162.1
22.5°	408.3	402.3	393.3	376.0	350.8	321.1	290.6	259.7	229.7	202.0	153.1
25°	426.4	421.6	411.7	391.9	365.3	331.6	296.5	261.4	228.0	197.5	143.4
27.5°	440.5	436.0	425.0	404.6	377.4	340.9	301.0	262.3	225.8	193.0	133.5
30°	453.0	448.4	435.1	414.2	385.6	348.3	305.6	262.6	222.9	186.2	122.8
32.5°	462.6	458.3	444.8	422.4	391.3	353.4	308.1	262.3	219.3	181.4	111.2
35°	472.2	468.0	452.1	428.4	395.5	355.6	310.1	260.9	214.7	173.4	100.2
37.5°	479.6	474.8	458.6	432.3	397.5	356.2	309.8	258.9	209.9	166.9	89.1
40°	484.7	479.6	462.3	434.6	398.1	355.4	307.5	255.5	204.3	158.7	77.5
42.5°	488.1	482.4	464.0	438.0	396.9	353.1	304.1	251.2	198.1	151.6	66.5
45°	489.7	483.8	464.3	435.1	395.0	348.9	299.1	245.9	191.3	142.0	55.5
47.5°	488.9	482.4	462.9	432.0	391.3	344.3	293.4	239.4	183.1	133.5	45.0
50°	487.5	480.7	459.8	428.1	386.2	338.7	287.2	231.4	174.6	123.1	35.6
52.5°	483.0	476.2	456.4	422.4	380.3	332.2	278.7	223.2	165.5	112.9	27.2
55°	477.3	471.1	450.4	417.3	372.6	324.2	270.8	214.5	156.7	102.4	19.5
57.5°	468.5	462.9	443.1	409.1	365.0	315.5	262.0	204.8	145.7	92.0	13.6
60°	457.8	452.1	432.9	399.8	356.2	305.6	252.4	194.9	135.8	81.5	8.5
62.5°	446.5	441.1	421.0	388.2	345.2	295.1	241.9	185.0	125.3	71.9	5.1
65°	431.5	426.4	408.3	374.3	333.0	283.8	230.3	173.2	114.6	61.1	2.8
67.5°	415.6	411.1	392.7	361.6	318.9	271.3	218.4	161.6	103.3	51.8	1.4
70°	398.6	393.0	376.0	344.3	304.4	257.2	205.4	149.7	92.5	42.7	0.0
72.5°	378.8	374.6	358.2	328.2	287.7	242.2	192.1	136.7	80.6	34.0	0.3
75°	359.6	354.2	339.2	310.9	271.3	226.3	177.4	124.5	69.0	26.0	0.3
77.5°	334.7	333.0	318.9	291.4	255.8	211.1	161.3	109.8	58.0	18.7	0.3
80°	309.8	308.1	297.1	271.9	237.7	193.0	146.3	95.9	47.2	12.4	0.3
82.5°	285.2	282.9	272.5	251.5	219.3	177.7	130.7	82.0	37.3	7.6	0.3
85°	263.1	260.3	249.0	229.7	200.3	160.4	114.6	68.5	27.7	4.2	0.6
87.5°	244.2	242.2	229.7	209.9	181.1	144.3	100.4	55.5	19.5	2.0	0.8
90°	228.0	223.8	212.8	191.8	163.0	126.5	85.4	44.4	13.0	1.1	1.1
92.5°	212.2	208.5	196.4	174.8	146.8	111.2	71.0	34.0	8.2	0.6	1.4
95°	195.8	191.8	179.9	160.1	130.4	95.6	58.3	24.9	4.5	0.6	1.4
97.5°	179.7	176.0	163.5	143.7	115.7	82.0	46.1	17.5	2.3	0.6	1.1
100°	164.7	160.4	149.1	129.3	101.0	68.5	35.6	11.3	1.4	0.6	1.1
102.5°	148.8	145.4	133.8	114.6	85.7	55.7	26.6	7.1	0.6	0.6	0.8
105°	134.7	130.4	119.1	99.3	73.0	43.9	18.7	4.2	0.6	0.6	0.8



TEST NUMBER: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	87.7	84.3	74.4	57.7	37.1	17.3	5.1	0.8	0.8	0.8	0.8
115°	73.3	68.2	59.4	44.7	27.4	11.3	2.5	0.8	0.8	0.8	0.8
117.5°	58.6	54.3	48.1	34.0	18.1	7.4	1.4	0.8	0.8	0.8	0.8
120°	45.8	41.9	34.8	23.5	12.2	4.2	0.6	0.8	0.8	0.8	0.8
122.5°	32.8	29.7	23.5	15.3	7.4	2.0	0.8	0.8	1.1	1.1	0.8
125°	21.8	20.1	15.6	9.3	4.5	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	14.1	12.7	9.1	5.4	2.0	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.9	7.1	5.4	3.1	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.5	4.2	2.8	0.6	0.8	0.8	0.8	1.1	1.1	1.1	1.1
135°	1.1	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1
137.5°	0.3	0.3	0.6	0.6	0.8	0.8	1.1	1.4	1.4	1.4	1.1
140°	0.3	0.3	0.6	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.1
142.5°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
145°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.1	1.1	1.1
147.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
150°	0.3	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
152.5°	0.3	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
155°	0.6	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
157.5°	0.6	0.6	0.6	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
160°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.6	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1
167.5°	0.6	0.6	0.6	0.8	0.8	0.8	1.1	1.1	1.1	1.1	1.1
170°	0.6	0.6	0.6	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.4
172.5°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
175°	0.6	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
177.5°	0.3	0.6	0.6	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.1
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: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	222.1	222.1	222.1
2.5°	211.3	207.4	206.3
5°	200.0	193.5	189.8
7.5°	188.7	179.9	175.7
10°	178.2	165.8	161.3
12.5°	165.8	151.4	144.3
15°	153.9	135.2	128.4
17.5°	140.6	119.7	111.8
20°	128.2	104.1	95.9
22.5°	114.0	88.8	79.8
25°	101.3	73.6	63.4
27.5°	87.1	58.0	49.2
30°	73.8	44.4	35.6
32.5°	61.1	32.5	24.6
35°	49.2	22.1	15.6
37.5°	37.9	13.6	7.9
40°	27.4	7.1	3.7
42.5°	18.4	3.4	2.0
45°	11.3	1.7	0.0
47.5°	6.5	0.0	0.0
50°	3.4	0.0	0.0
52.5°	1.4	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	0.8
80°	0.6	1.1	1.4
82.5°	1.1	1.4	1.4
85°	1.1	1.4	1.7
87.5°	1.4	1.7	2.0
90°	1.7	2.0	2.0
92.5°	1.7	2.3	2.3
95°	2.0	2.3	2.5
97.5°	2.3	2.5	2.5
100°	2.0	2.5	2.8
102.5°	1.7	2.5	2.5
105°	1.4	2.0	2.3





TEST NUMBER: P550828

CATALOG NUMBER: FCC-X-2-LD4-1LO-40-UNV-81-86-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.1	1.4	1.4
115°	0.8	1.1	1.4
117.5°	0.8	1.1	1.1
120°	0.8	0.8	1.1
122.5°	0.8	0.8	1.1
125°	0.8	0.8	1.1
127.5°	1.1	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.1	0.8	0.8
135°	1.1	0.8	0.8
137.5°	1.1	0.8	0.8
140°	1.1	0.8	0.8
142.5°	1.1	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.6
152.5°	0.8	0.6	0.6
155°	0.8	0.6	0.3
157.5°	1.1	0.6	0.3
160°	0.8	0.6	0.3
162.5°	0.8	0.6	0.3
165°	0.8	0.6	0.0
167.5°	0.8	0.6	0.3
170°	0.8	0.6	0.3
172.5°	0.8	0.6	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°	118.8	115.4	104.1	85.4	59.7	33.4	12.4	2.3	0.6	0.8	0.8
110°	103.6	100.7	89.1	71.0	48.1	24.9	8.2	1.4	0.8	0.8	0.8







107.5°	1.1	1.7	2.0
110°	1.1	1.4	1.7



(END OF REPORT)