

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: P551591

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-81-84-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: P551591
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-LD4-2LO-40-UNV-81-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

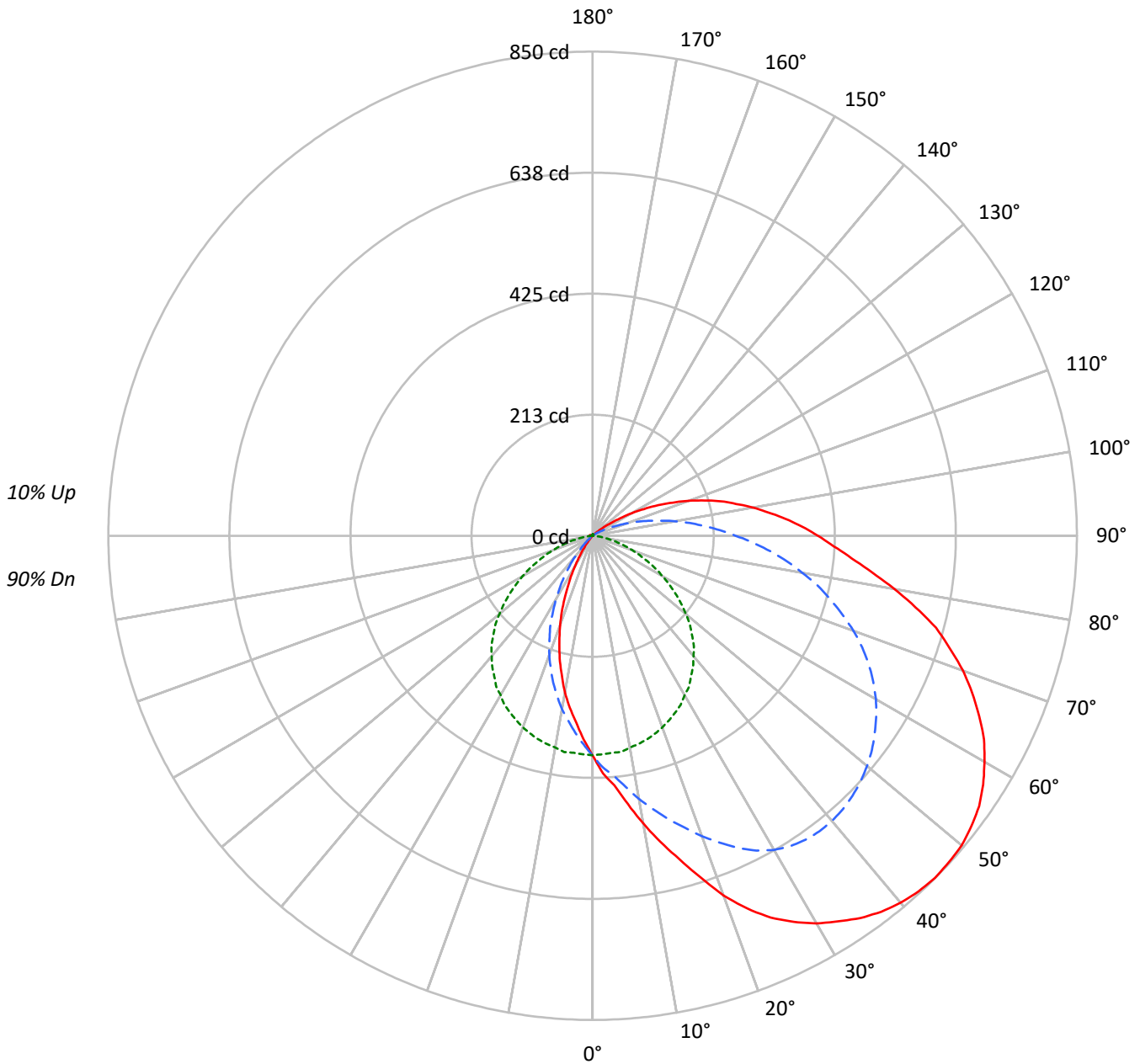
Lumens per Lamp: N/A
Luminaire Lumens: 1905.1 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
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

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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-84-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°	4147	4147	4147
5°	4553	4087	3410
10°	5153	4037	2810
15°	5774	3985	2190
20°	6512	3920	1613
25°	7124	3845	1059
30°	7580	3744	597
35°	7974	3636	263
40°	8324	3502	63
45°	8623	3334	0
50°	8875	3112	0
55°	9066	2830	0
60°	9162	2502	0
65°	9201	2129	0
70°	9169	1736	0
75°	9053	1282	7
80°	8686	783	40
85°	8396	376	53



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	1.9
10°-20°	110.5	5.8
20°-30°	179.0	9.4
30°-40°	229.9	12.1
40°-50°	260.2	13.7
50°-60°	269.6	14.2
60°-70°	254.3	13.3
70°-80°	213.1	11.2
80°-90°	154.5	8.1
90°-100°	101.5	5.3
100°-110°	58.6	3.1
110°-120°	25.9	1.4
120°-130°	7.0	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	326.4	17.1
0°-40°	556.3	29.2
0°-60°	1086.2	57.0
0°-90°	1708.0	89.7
90°-120°	186.0	9.8
90°-150°	195.8	10.3
90°-180°	197.0	10.3
0°-180°	1905.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	385	385	385	385	385	
5°	440	422	382	347	329	44
15°	588	515	370	267	223	169
25°	740	604	343	176	110	342
35°	819	652	301	85	27	514
45°	850	645	246	20	0	656
55°	828	604	178	0	0	739
65°	749	535	106	0	0	741
75°	624	432	45	0	0	654
85°	456	313	7	2	3	390
90°	396	251	2	3	3	217
95°	340	196	1	3	4	267
105°	234	101	1	2	4	247
115°	127	34	2	2	2	127
125°	38	5	2	2	2	38
135°	2	2	2	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	2	2	0	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	385.3	385.3	385.3	385.3	385.3	385.3	385.3	385.3	385.3	385.3	385.3
2.5°	417.7	417.2	415.8	413.3	409.9	404.0	399.1	394.7	388.8	383.9	374.5
5°	439.8	437.4	435.4	433.0	425.1	419.7	410.9	401.0	391.7	382.4	363.7
7.5°	475.2	471.2	468.3	461.4	450.6	438.4	424.6	415.3	408.9	382.9	351.0
10°	513.0	509.5	503.6	491.4	478.1	460.4	440.8	418.7	399.1	377.5	339.7
12.5°	550.3	545.4	537.0	521.3	502.7	480.6	453.6	427.6	399.6	374.0	326.4
15°	587.6	582.2	573.3	554.2	529.7	500.7	467.8	434.9	402.0	369.6	312.7
17.5°	628.3	621.0	607.7	586.1	555.2	519.3	480.6	440.8	401.0	364.2	298.0
20°	672.0	661.7	647.5	618.5	582.2	540.0	493.3	446.7	400.6	357.8	281.3
22.5°	708.3	698.0	682.3	652.4	608.7	557.1	504.1	450.6	398.6	350.5	265.6
25°	739.7	731.4	714.2	679.9	633.7	575.3	514.4	453.6	395.6	342.6	248.9
27.5°	764.3	756.4	737.3	701.9	654.8	591.5	522.3	455.0	391.7	334.8	231.7
30°	785.9	778.0	755.0	718.6	669.1	604.3	530.1	455.5	386.8	323.0	213.0
32.5°	802.6	795.2	771.7	732.9	678.9	613.1	534.6	455.0	380.4	314.6	192.9
35°	819.3	811.9	784.4	743.2	686.2	617.0	538.0	452.6	372.6	300.9	173.8
37.5°	832.0	823.7	795.7	750.1	689.7	618.0	537.5	449.1	364.2	289.6	154.6
40°	840.9	832.0	802.1	754.0	690.7	616.5	533.6	443.3	354.4	275.4	134.5
42.5°	846.8	836.9	805.0	759.9	688.7	612.6	527.7	435.9	343.6	263.1	115.4
45°	849.7	839.4	805.5	755.0	685.3	605.2	518.9	426.6	331.8	246.4	96.2
47.5°	848.2	836.9	803.1	749.6	678.9	597.4	509.0	415.3	317.6	231.7	78.0
50°	845.8	834.0	797.7	742.7	670.0	587.6	498.2	401.5	302.9	213.5	61.9
52.5°	837.9	826.1	791.8	732.9	659.7	576.3	483.5	387.3	287.2	195.9	47.1
55°	828.1	817.3	781.5	724.0	646.5	562.5	469.8	372.1	271.9	177.7	33.9
57.5°	812.9	803.1	768.7	709.8	633.2	547.3	454.5	355.4	252.8	159.5	23.6
60°	794.2	784.4	751.0	693.6	618.0	530.1	437.9	338.2	235.6	141.4	14.7
62.5°	774.6	765.3	730.4	673.5	598.9	512.0	419.7	321.0	217.5	124.7	8.8
65°	748.6	739.7	708.3	649.4	577.8	492.3	399.6	300.4	198.8	106.0	4.9
67.5°	721.1	713.2	681.3	627.3	553.2	470.7	379.0	280.3	179.2	89.8	2.5
70°	691.6	681.8	652.4	597.4	528.2	446.2	356.4	259.7	160.5	74.1	0.0
72.5°	657.3	649.9	621.4	569.4	499.2	420.2	333.3	237.1	139.9	58.9	0.5
75°	623.9	614.6	588.6	539.5	470.7	392.7	307.8	216.0	119.8	45.2	0.5
77.5°	580.7	577.8	553.2	505.6	443.7	366.2	279.8	190.5	100.6	32.4	0.5
80°	537.5	534.6	515.4	471.7	412.3	334.8	253.8	166.4	82.0	21.6	0.5
82.5°	494.8	490.9	472.7	436.4	380.4	308.3	226.8	142.4	64.8	13.3	0.5
85°	456.5	451.6	432.0	398.6	347.5	278.3	198.8	118.8	48.1	7.4	1.0
87.5°	423.6	420.2	398.6	364.2	314.2	250.3	174.3	96.2	33.9	3.4	1.5
90°	395.6	388.3	369.1	332.8	282.7	219.4	148.2	77.1	22.6	2.0	2.0
92.5°	368.2	361.8	340.7	303.4	254.8	192.9	123.2	58.9	14.2	1.0	2.5
95°	339.7	332.8	312.2	277.8	226.3	165.9	101.1	43.2	7.9	1.0	2.5
97.5°	311.7	305.3	283.7	249.4	200.8	142.4	80.0	30.4	3.9	1.0	2.0
100°	285.7	278.3	258.7	224.3	175.2	118.8	61.9	19.6	2.5	1.0	2.0
102.5°	258.2	252.3	232.2	198.8	148.7	96.7	46.1	12.3	1.0	1.0	1.5
105°	233.7	226.3	206.7	172.3	126.6	76.1	32.4	7.4	1.0	1.0	1.5



TEST NUMBER: P551591

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-84-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	152.2	146.3	129.1	100.1	64.3	29.9	8.8	1.5	1.5	1.5	1.5
115°	127.1	118.3	103.1	77.6	47.6	19.6	4.4	1.5	1.5	1.5	1.5
117.5°	101.6	94.2	83.4	58.9	31.4	12.8	2.5	1.5	1.5	1.5	1.5
120°	79.5	72.6	60.4	40.7	21.1	7.4	1.0	1.5	1.5	1.5	1.5
122.5°	56.9	51.5	40.7	26.5	12.8	3.4	1.5	1.5	2.0	2.0	1.5
125°	37.8	34.9	27.0	16.2	7.9	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.5	22.1	15.7	9.3	3.4	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.7	12.3	9.3	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.9	7.4	4.9	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



TEST NUMBER: P551591

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	385.3	385.3	385.3
2.5°	366.7	359.8	357.8
5°	347.0	335.8	329.4
7.5°	327.4	312.2	304.8
10°	309.3	287.7	279.8
12.5°	287.7	262.6	250.3
15°	267.0	234.6	222.9
17.5°	244.0	207.6	193.9
20°	222.4	180.6	166.4
22.5°	197.8	154.1	138.4
25°	175.7	127.6	110.0
27.5°	151.2	100.6	85.4
30°	128.1	77.1	61.9
32.5°	106.0	56.5	42.7
35°	85.4	38.3	27.0
37.5°	65.8	23.6	13.7
40°	47.6	12.3	6.4
42.5°	31.9	5.9	3.4
45°	19.6	2.9	0.0
47.5°	11.3	0.0	0.0
50°	5.9	0.0	0.0
52.5°	2.5	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°	0.5	0.5	0.5
77.5°	0.5	1.0	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	2.9
87.5°	2.5	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.9	3.9
95°	3.4	3.9	4.4
97.5°	3.9	4.4	4.4
100°	3.4	4.4	4.9
102.5°	2.9	4.4	4.4
105°	2.5	3.4	3.9



TEST NUMBER: P551591

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-84-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	206.2	200.3	180.6	148.2	103.6	57.9	21.6	3.9	1.0	1.5	1.5
110°	179.7	174.8	154.6	123.2	83.4	43.2	14.2	2.5	1.5	1.5	1.5





107.5°	2.0	2.9	3.4
110°	2.0	2.5	2.9



(END OF REPORT)