

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: P551539

Luminaire Tested: **FCC-X-2-LD4-2LO-35-UNV-81-96-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: P551539
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-35-UNV-81-96-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

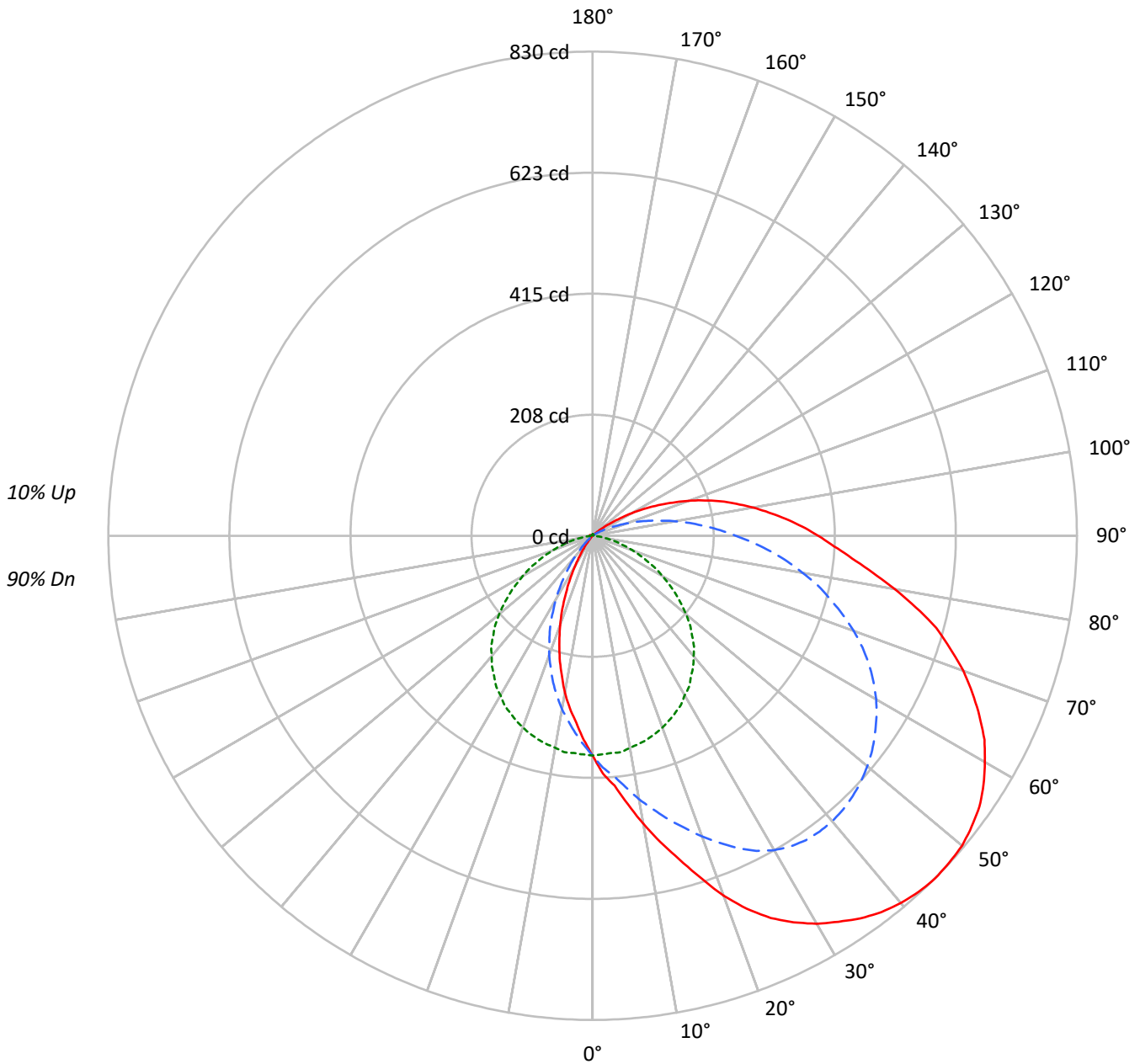
Lumens per Lamp: N/A
Luminaire Lumens: 1861.9 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): 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: P551539

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-81-96-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°	4054	4054	4054
5°	4450	3995	3332
10°	5036	3946	2747
15°	5644	3896	2140
20°	6365	3832	1576
25°	6963	3758	1035
30°	7408	3660	584
35°	7794	3554	257
40°	8136	3424	61
45°	8428	3260	0
50°	8675	3042	0
55°	8862	2766	0
60°	8956	2446	0
65°	8993	2081	0
70°	8963	1696	0
75°	8849	1251	7
80°	8491	765	39
85°	8206	366	53



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	1.9
10°-20°	108.0	5.8
20°-30°	174.9	9.4
30°-40°	224.7	12.1
40°-50°	254.4	13.7
50°-60°	263.5	14.2
60°-70°	248.5	13.3
70°-80°	208.3	11.2
80°-90°	151.0	8.1
90°-100°	99.2	5.3
100°-110°	57.3	3.1
110°-120°	25.3	1.4
120°-130°	6.8	0.4
130°-140°	1.6	0.1
140°-150°	1.0	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	319.0	17.1
0°-40°	543.7	29.2
0°-60°	1061.7	57.0
0°-90°	1669.4	89.7
90°-120°	181.8	9.8
90°-150°	191.2	10.3
90°-180°	192.0	10.3
0°-180°	1861.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	377	377	377	377	377	
5°	430	413	374	339	322	43
15°	574	504	361	261	218	166
25°	723	591	335	172	108	334
35°	801	637	294	84	26	502
45°	830	631	241	19	0	641
55°	809	591	174	0	0	723
65°	732	523	104	0	0	724
75°	610	422	44	0	0	640
85°	446	306	7	2	3	381
90°	387	245	2	3	3	212
95°	332	192	1	3	4	260
105°	228	99	1	2	4	241
115°	124	33	1	1	2	124
125°	37	5	2	1	2	37
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	2	1	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	376.6	376.6	376.6	376.6	376.6	376.6	376.6	376.6	376.6	376.6	376.6
2.5°	408.3	407.8	406.4	404.0	400.6	394.9	390.1	385.8	380.0	375.2	366.1
5°	429.9	427.5	425.6	423.2	415.5	410.2	401.6	392.0	382.9	373.8	355.5
7.5°	464.4	460.6	457.7	451.0	440.5	428.5	415.0	405.9	399.7	374.2	343.1
10°	501.4	498.0	492.3	480.3	467.3	450.0	430.9	409.3	390.1	369.0	332.0
12.5°	537.8	533.1	524.9	509.5	491.3	469.7	443.3	417.9	390.6	365.6	319.1
15°	574.3	569.0	560.4	541.7	517.7	489.4	457.2	425.1	393.0	361.3	305.6
17.5°	614.1	606.9	594.0	572.9	542.6	507.6	469.7	430.9	392.0	356.0	291.2
20°	656.8	646.8	632.8	604.5	569.0	527.8	482.2	436.6	391.5	349.8	274.9
22.5°	692.3	682.3	666.9	637.6	594.9	544.6	492.7	440.5	389.6	342.6	259.6
25°	723.0	714.9	698.1	664.5	619.4	562.3	502.8	443.3	386.7	334.9	243.3
27.5°	747.0	739.4	720.6	686.1	640.0	578.2	510.5	444.8	382.9	327.2	226.5
30°	768.1	760.5	737.9	702.4	654.0	590.6	518.2	445.2	378.1	315.7	208.2
32.5°	784.5	777.3	754.2	716.3	663.6	599.3	522.5	444.8	371.8	307.5	188.6
35°	800.8	793.6	766.7	726.4	670.8	603.1	525.9	442.4	364.2	294.1	169.8
37.5°	813.2	805.1	777.7	733.1	674.1	604.1	525.4	439.0	356.0	283.1	151.1
40°	821.9	813.2	784.0	737.0	675.1	602.6	521.5	433.3	346.4	269.2	131.5
42.5°	827.6	818.0	786.9	742.7	673.2	598.8	515.8	426.1	335.9	257.2	112.8
45°	830.5	820.4	787.3	737.9	669.8	591.6	507.1	416.9	324.3	240.9	94.0
47.5°	829.1	818.0	784.9	732.6	663.6	583.9	497.5	405.9	310.4	226.5	76.3
50°	826.7	815.2	779.7	725.9	654.9	574.3	487.0	392.5	296.0	208.7	60.5
52.5°	819.0	807.5	773.9	716.3	644.8	563.3	472.6	378.6	280.7	191.4	46.1
55°	809.4	798.9	763.8	707.7	631.9	549.8	459.2	363.7	265.8	173.7	33.1
57.5°	794.5	784.9	751.4	693.8	618.9	535.0	444.3	347.4	247.1	155.9	23.0
60°	776.3	766.7	734.1	677.9	604.1	518.2	428.0	330.6	230.3	138.2	14.4
62.5°	757.1	748.0	713.9	658.3	585.3	500.4	410.2	313.8	212.5	121.9	8.6
65°	731.7	723.0	692.3	634.8	564.7	481.2	390.6	293.6	194.3	103.6	4.8
67.5°	704.8	697.1	666.0	613.2	540.7	460.1	370.4	274.0	175.1	87.8	2.4
70°	676.0	666.4	637.6	583.9	516.3	436.1	348.3	253.8	156.9	72.4	0.0
72.5°	642.4	635.2	607.4	556.6	487.9	410.7	325.8	231.7	136.7	57.6	0.5
75°	609.8	600.7	575.3	527.3	460.1	383.8	300.8	211.1	117.1	44.1	0.5
77.5°	567.6	564.7	540.7	494.2	433.7	357.9	273.5	186.2	98.4	31.7	0.5
80°	525.4	522.5	503.8	461.1	403.0	327.2	248.1	162.6	80.1	21.1	0.5
82.5°	483.6	479.8	462.0	426.5	371.8	301.3	221.7	139.1	63.3	13.0	0.5
85°	446.2	441.4	422.2	389.6	339.7	272.0	194.3	116.1	47.0	7.2	1.0
87.5°	414.1	410.7	389.6	356.0	307.1	244.7	170.3	94.0	33.1	3.4	1.4
90°	386.7	379.5	360.8	325.3	276.4	214.5	144.9	75.3	22.1	1.9	1.9
92.5°	359.8	353.6	333.0	296.5	249.0	188.6	120.4	57.6	13.9	1.0	2.4
95°	332.0	325.3	305.1	271.6	221.2	162.2	98.8	42.2	7.7	1.0	2.4
97.5°	304.7	298.4	277.3	243.7	196.2	139.1	78.2	29.7	3.8	1.0	1.9
100°	279.2	272.0	252.9	219.3	171.3	116.1	60.5	19.2	2.4	1.0	1.9
102.5°	252.4	246.6	226.9	194.3	145.4	94.5	45.1	12.0	1.0	1.0	1.4
105°	228.4	221.2	202.0	168.4	123.8	74.4	31.7	7.2	1.0	1.0	1.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	148.7	143.0	126.2	97.9	62.9	29.3	8.6	1.4	1.4	1.4	1.4
115°	124.3	115.6	100.8	75.8	46.5	19.2	4.3	1.4	1.4	1.4	1.4
117.5°	99.3	92.1	81.6	57.6	30.7	12.5	2.4	1.4	1.4	1.4	1.4
120°	77.7	71.0	59.0	39.8	20.6	7.2	1.0	1.4	1.4	1.4	1.4
122.5°	55.7	50.4	39.8	25.9	12.5	3.4	1.4	1.4	1.9	1.9	1.4
125°	36.9	34.1	26.4	15.8	7.7	1.4	1.4	1.4	1.9	1.9	1.4
127.5°	24.0	21.6	15.4	9.1	3.4	1.4	1.4	1.9	1.9	1.9	1.4
130°	13.4	12.0	9.1	5.3	1.4	1.4	1.4	1.9	1.9	1.9	1.4
132.5°	7.7	7.2	4.8	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9
135°	1.9	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9
137.5°	0.5	0.5	1.0	1.0	1.4	1.4	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	1.0	1.0	1.0	1.4	1.9	1.9	1.9	2.4	1.9	1.9	2.4
160°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.4	1.4	1.9	1.9	1.9	1.9	1.9
167.5°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	1.9	1.9	1.9	1.9
170°	1.0	1.0	1.0	1.4	1.4	1.4	1.9	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.4	1.4	1.9	1.9	2.4	2.4	2.4	1.9
180°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P551539

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	376.6	376.6	376.6
2.5°	358.4	351.7	349.8
5°	339.2	328.2	321.9
7.5°	320.0	305.1	298.0
10°	302.3	281.2	273.5
12.5°	281.2	256.7	244.7
15°	261.0	229.3	217.8
17.5°	238.5	203.0	189.5
20°	217.3	176.6	162.6
22.5°	193.4	150.7	135.3
25°	171.8	124.7	107.5
27.5°	147.8	98.4	83.5
30°	125.2	75.3	60.5
32.5°	103.6	55.2	41.7
35°	83.5	37.4	26.4
37.5°	64.3	23.0	13.4
40°	46.5	12.0	6.2
42.5°	31.2	5.8	3.4
45°	19.2	2.9	0.0
47.5°	11.0	0.0	0.0
50°	5.8	0.0	0.0
52.5°	2.4	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°	0.5	0.5	0.5
77.5°	0.5	1.0	1.4
80°	1.0	1.9	2.4
82.5°	1.9	2.4	2.4
85°	1.9	2.4	2.9
87.5°	2.4	2.9	3.4
90°	2.9	3.4	3.4
92.5°	2.9	3.8	3.8
95°	3.4	3.8	4.3
97.5°	3.8	4.3	4.3
100°	3.4	4.3	4.8
102.5°	2.9	4.3	4.3
105°	2.4	3.4	3.8



TEST NUMBER: P551539

CATALOG NUMBER: FCC-X-2-LD4-2LO-35-UNV-81-96-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.4	1.9	2.4
117.5°	1.4	1.9	1.9
120°	1.4	1.4	1.9
122.5°	1.4	1.4	1.9
125°	1.4	1.4	1.9
127.5°	1.9	1.4	1.4
130°	1.4	1.4	1.4
132.5°	1.9	1.4	1.4
135°	1.9	1.4	1.4
137.5°	1.9	1.4	1.4
140°	1.9	1.4	1.4
142.5°	1.9	1.4	1.4
145°	1.4	1.4	1.4
147.5°	1.4	1.4	1.4
150°	1.4	1.4	1.0
152.5°	1.4	1.0	1.0
155°	1.4	1.0	0.5
157.5°	1.9	1.0	0.5
160°	1.4	1.0	0.5
162.5°	1.4	1.0	0.5
165°	1.4	1.0	0.0
167.5°	1.4	1.0	0.5
170°	1.4	1.0	0.5
172.5°	1.4	1.0	0.5
175°	1.4	0.5	0.5
177.5°	1.4	0.5	0.5
180°	1.4	1.4	1.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	201.5	195.8	176.6	144.9	101.2	56.6	21.1	3.8	1.0	1.4	1.4
110°	175.6	170.8	151.1	120.4	81.6	42.2	13.9	2.4	1.4	1.4	1.4





107.5°	1.9	2.9	3.4
110°	1.9	2.4	2.9



(END OF REPORT)