

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: P551603

Luminaire Tested: **FCC-X-2-LD4-2LO-40-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: P551603
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-81-96-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

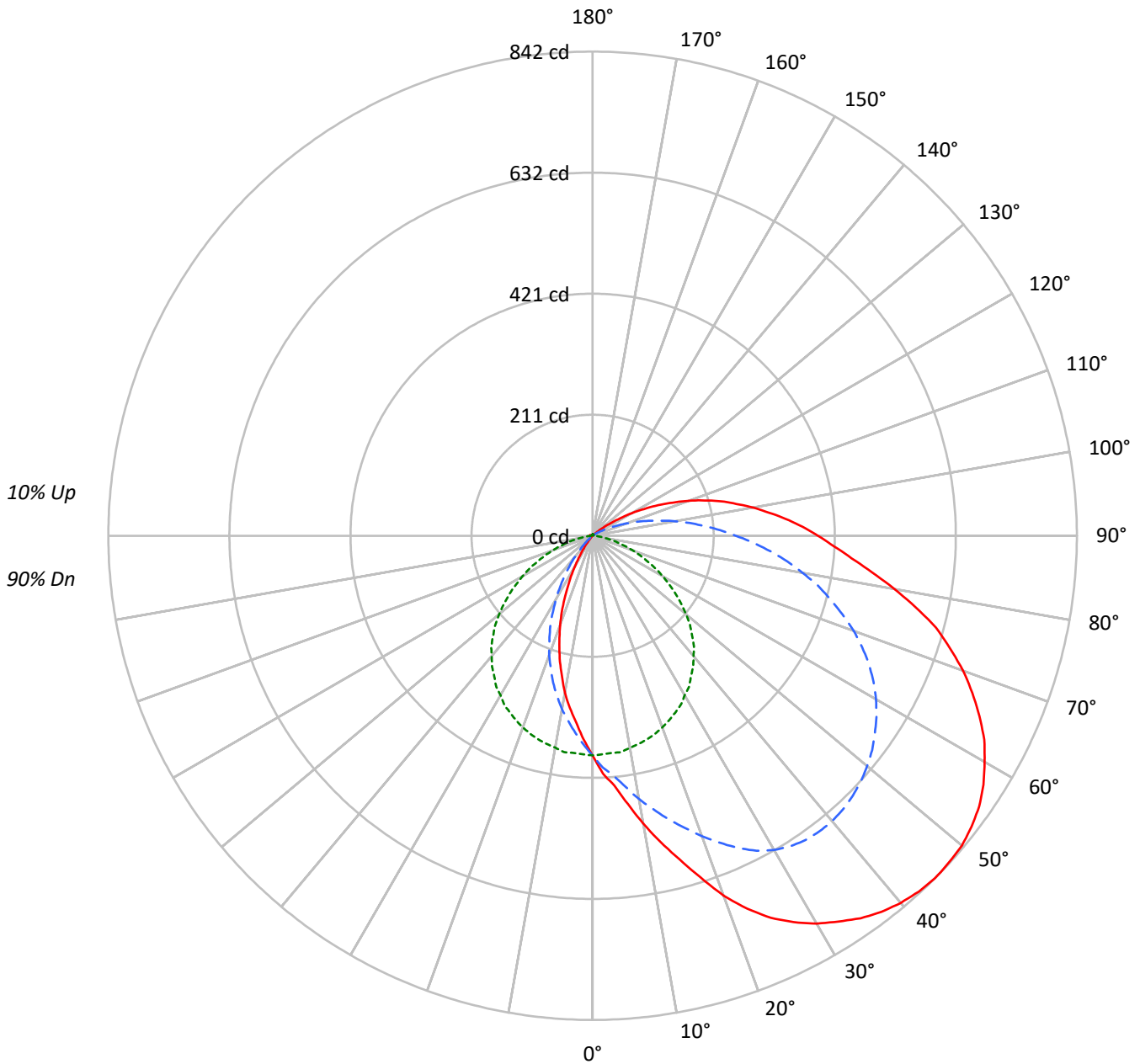
Lumens per Lamp: N/A
Luminaire Lumens: 1888.0 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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

TEST NUMBER: P551603

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-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°	4111	4111	4111
5°	4513	4051	3379
10°	5107	4001	2785
15°	5722	3950	2171
20°	6454	3886	1598
25°	7061	3811	1050
30°	7512	3711	591
35°	7903	3603	261
40°	8249	3471	62
45°	8546	3304	0
50°	8795	3084	0
55°	8985	2804	0
60°	9081	2479	0
65°	9119	2111	0
70°	9089	1722	0
75°	8972	1270	7
80°	8609	776	39
85°	8320	371	53



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.6	1.9
10°-20°	109.5	5.8
20°-30°	177.4	9.4
30°-40°	227.8	12.1
40°-50°	257.9	13.7
50°-60°	267.2	14.2
60°-70°	252.0	13.3
70°-80°	211.2	11.2
80°-90°	153.1	8.1
90°-100°	100.6	5.3
100°-110°	58.1	3.1
110°-120°	25.6	1.4
120°-130°	7.0	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
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0°-30°	323.5	17.1
0°-40°	551.3	29.2
0°-60°	1076.5	57.0
0°-90°	1692.8	89.7
90°-120°	184.4	9.8
90°-150°	194.0	10.3
90°-180°	195.0	10.3
0°-180°	1888.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	382	382	382	382	382	
5°	436	419	379	344	326	44
15°	582	511	366	265	221	168
25°	733	599	340	174	109	339
35°	812	646	298	85	27	509
45°	842	639	244	20	0	650
55°	821	599	176	0	0	733
65°	742	530	105	0	0	734
75°	618	428	45	0	0	649
85°	452	310	7	2	3	386
90°	392	249	2	3	3	215
95°	337	194	1	3	4	264
105°	232	100	1	2	4	244
115°	126	33	2	2	2	126
125°	38	5	2	2	2	37
135°	2	2	2	2	2	3
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°	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9
2.5°	414.0	413.5	412.1	409.6	406.2	400.4	395.5	391.1	385.3	380.4	371.2
5°	435.9	433.5	431.5	429.1	421.3	416.0	407.2	397.5	388.2	379.0	360.5
7.5°	470.9	467.0	464.1	457.3	446.6	434.4	420.8	411.6	405.2	379.5	347.8
10°	508.4	505.0	499.1	487.0	473.8	456.3	436.9	415.0	395.5	374.1	336.7
12.5°	545.4	540.5	532.2	516.7	498.2	476.3	449.5	423.7	396.0	370.7	323.5
15°	582.3	577.0	568.2	549.3	524.9	496.2	463.6	431.0	398.4	366.3	309.9
17.5°	622.7	615.4	602.3	580.9	550.2	514.7	476.3	436.9	397.5	361.0	295.3
20°	666.0	655.8	641.7	613.0	577.0	535.1	488.9	442.7	397.0	354.7	278.8
22.5°	702.0	691.8	676.2	646.5	603.3	552.2	499.6	446.6	395.0	347.4	263.2
25°	733.1	724.9	707.8	673.8	628.1	570.2	509.8	449.5	392.1	339.6	246.7
27.5°	757.5	749.7	730.7	695.7	649.0	586.2	517.6	451.0	388.2	331.8	229.6
30°	778.9	771.1	748.2	712.2	663.1	598.9	525.4	451.5	383.4	320.1	211.1
32.5°	795.4	788.1	764.8	726.3	672.8	607.6	529.8	451.0	377.0	311.8	191.2
35°	812.0	804.7	777.4	736.6	680.1	611.5	533.2	448.5	369.2	298.2	172.2
37.5°	824.6	816.3	788.6	743.4	683.5	612.5	532.7	445.1	361.0	287.0	153.2
40°	833.4	824.6	794.9	747.3	684.5	611.0	528.8	439.3	351.2	272.9	133.3
42.5°	839.2	829.5	797.8	753.1	682.5	607.1	523.0	432.0	340.5	260.8	114.3
45°	842.1	831.9	798.3	748.2	679.1	599.8	514.2	422.8	328.9	244.2	95.4
47.5°	840.7	829.5	795.9	742.9	672.8	592.1	504.5	411.6	314.8	229.6	77.4
50°	838.2	826.6	790.6	736.1	664.1	582.3	493.8	398.0	300.2	211.6	61.3
52.5°	830.4	818.8	784.7	726.3	653.8	571.1	479.2	383.8	284.6	194.1	46.7
55°	820.7	810.0	774.5	717.6	640.7	557.5	465.6	368.8	269.5	176.1	33.6
57.5°	805.6	795.9	761.8	703.5	627.6	542.4	450.5	352.2	250.5	158.1	23.4
60°	787.1	777.4	744.3	687.4	612.5	525.4	434.0	335.2	233.5	140.1	14.6
62.5°	767.7	758.4	723.9	667.5	593.5	507.4	416.0	318.2	215.5	123.6	8.8
65°	741.9	733.1	702.0	643.6	572.6	488.0	396.0	297.7	197.0	105.1	4.9
67.5°	714.7	706.9	675.3	621.7	548.3	466.5	375.6	277.8	177.6	89.0	2.4
70°	685.5	675.7	646.5	592.1	523.5	442.2	353.2	257.4	159.1	73.5	0.0
72.5°	651.4	644.1	615.9	564.3	494.8	416.4	330.3	235.0	138.7	58.4	0.5
75°	618.3	609.1	583.3	534.7	466.5	389.2	305.0	214.1	118.7	44.8	0.5
77.5°	575.5	572.6	548.3	501.1	439.8	362.9	277.3	188.8	99.7	32.1	0.5
80°	532.7	529.8	510.8	467.5	408.7	331.8	251.5	164.9	81.2	21.4	0.5
82.5°	490.4	486.5	468.5	432.5	377.0	305.5	224.8	141.1	64.2	13.1	0.5
85°	452.4	447.6	428.1	395.0	344.4	275.8	197.0	117.7	47.7	7.3	1.0
87.5°	419.8	416.4	395.0	361.0	311.4	248.1	172.7	95.4	33.6	3.4	1.5
90°	392.1	384.8	365.8	329.8	280.2	217.5	146.9	76.4	22.4	1.9	1.9
92.5°	364.9	358.5	337.6	300.7	252.5	191.2	122.1	58.4	14.1	1.0	2.4
95°	336.7	329.8	309.4	275.4	224.3	164.4	100.2	42.8	7.8	1.0	2.4
97.5°	308.9	302.6	281.2	247.1	199.0	141.1	79.3	30.2	3.9	1.0	1.9
100°	283.1	275.8	256.4	222.3	173.7	117.7	61.3	19.5	2.4	1.0	1.9
102.5°	255.9	250.1	230.1	197.0	147.4	95.8	45.7	12.2	1.0	1.0	1.5
105°	231.6	224.3	204.8	170.8	125.5	75.4	32.1	7.3	1.0	1.0	1.5



TEST NUMBER: P551603

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-96-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	150.8	145.0	127.9	99.2	63.7	29.7	8.8	1.5	1.5	1.5	1.5
115°	126.0	117.2	102.2	76.9	47.2	19.5	4.4	1.5	1.5	1.5	1.5
117.5°	100.7	93.4	82.7	58.4	31.1	12.6	2.4	1.5	1.5	1.5	1.5
120°	78.8	72.0	59.8	40.4	20.9	7.3	1.0	1.5	1.5	1.5	1.5
122.5°	56.4	51.1	40.4	26.3	12.6	3.4	1.5	1.5	1.9	1.9	1.5
125°	37.5	34.5	26.8	16.1	7.8	1.5	1.5	1.5	1.9	1.9	1.5
127.5°	24.3	21.9	15.6	9.2	3.4	1.5	1.5	1.9	1.9	1.9	1.5
130°	13.6	12.2	9.2	5.4	1.5	1.5	1.5	1.9	1.9	1.9	1.5
132.5°	7.8	7.3	4.9	1.0	1.5	1.5	1.5	1.9	1.9	1.9	1.9
135°	1.9	1.0	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	1.9
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	1.9	2.4	2.4	2.4	1.9
140°	0.5	0.5	1.0	1.5	1.5	1.5	1.9	2.4	2.4	2.4	1.9
142.5°	0.5	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	1.9	1.9
145°	0.5	1.0	1.0	1.5	1.5	1.9	1.9	2.4	1.9	1.9	1.9
147.5°	1.0	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	1.9	1.9
150°	0.5	1.0	1.0	1.5	1.9	1.9	1.9	2.4	1.9	1.9	1.9
152.5°	0.5	1.0	1.0	1.5	1.9	1.9	1.9	2.4	1.9	1.9	1.9
155°	1.0	1.0	1.0	1.5	1.9	1.9	1.9	2.4	1.9	1.9	2.4
157.5°	1.0	1.0	1.0	1.5	1.9	1.9	1.9	2.4	1.9	1.9	2.4
160°	1.0	1.0	1.0	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9
165°	1.0	1.0	1.0	1.0	1.5	1.5	1.9	1.9	1.9	1.9	1.9
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	1.9	1.9	1.9	1.9	1.9
170°	1.0	1.0	1.0	1.5	1.5	1.5	1.9	2.4	2.4	2.4	2.4
172.5°	1.0	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	2.4	2.4
175°	1.0	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	2.4	2.4
177.5°	0.5	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	2.4	1.9
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	381.9	381.9	381.9
2.5°	363.4	356.6	354.7
5°	344.0	332.8	326.4
7.5°	324.5	309.4	302.1
10°	306.5	285.1	277.3
12.5°	285.1	260.3	248.1
15°	264.7	232.5	220.9
17.5°	241.8	205.8	192.2
20°	220.4	179.0	164.9
22.5°	196.1	152.8	137.2
25°	174.2	126.5	109.0
27.5°	149.8	99.7	84.6
30°	127.0	76.4	61.3
32.5°	105.1	55.9	42.3
35°	84.6	37.9	26.8
37.5°	65.2	23.4	13.6
40°	47.2	12.2	6.3
42.5°	31.6	5.8	3.4
45°	19.5	2.9	0.0
47.5°	11.2	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	1.5
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	3.9	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°	2.4	3.4	3.9



TEST NUMBER: P551603

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-81-96-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.9	2.4	2.4
115°	1.5	1.9	2.4
117.5°	1.5	1.9	1.9
120°	1.5	1.5	1.9
122.5°	1.5	1.5	1.9
125°	1.5	1.5	1.9
127.5°	1.9	1.5	1.5
130°	1.5	1.5	1.5
132.5°	1.9	1.5	1.5
135°	1.9	1.5	1.5
137.5°	1.9	1.5	1.5
140°	1.9	1.5	1.5
142.5°	1.9	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°	1.9	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°	204.3	198.5	179.0	146.9	102.7	57.4	21.4	3.9	1.0	1.5	1.5
110°	178.1	173.2	153.2	122.1	82.7	42.8	14.1	2.4	1.5	1.5	1.5





107.5°	1.9	2.9	3.4
110°	1.9	2.4	2.9



(END OF REPORT)