

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: P551587

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-80-96-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: P551587
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-80-96-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .125 PRISMATIC ACRYLIC 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

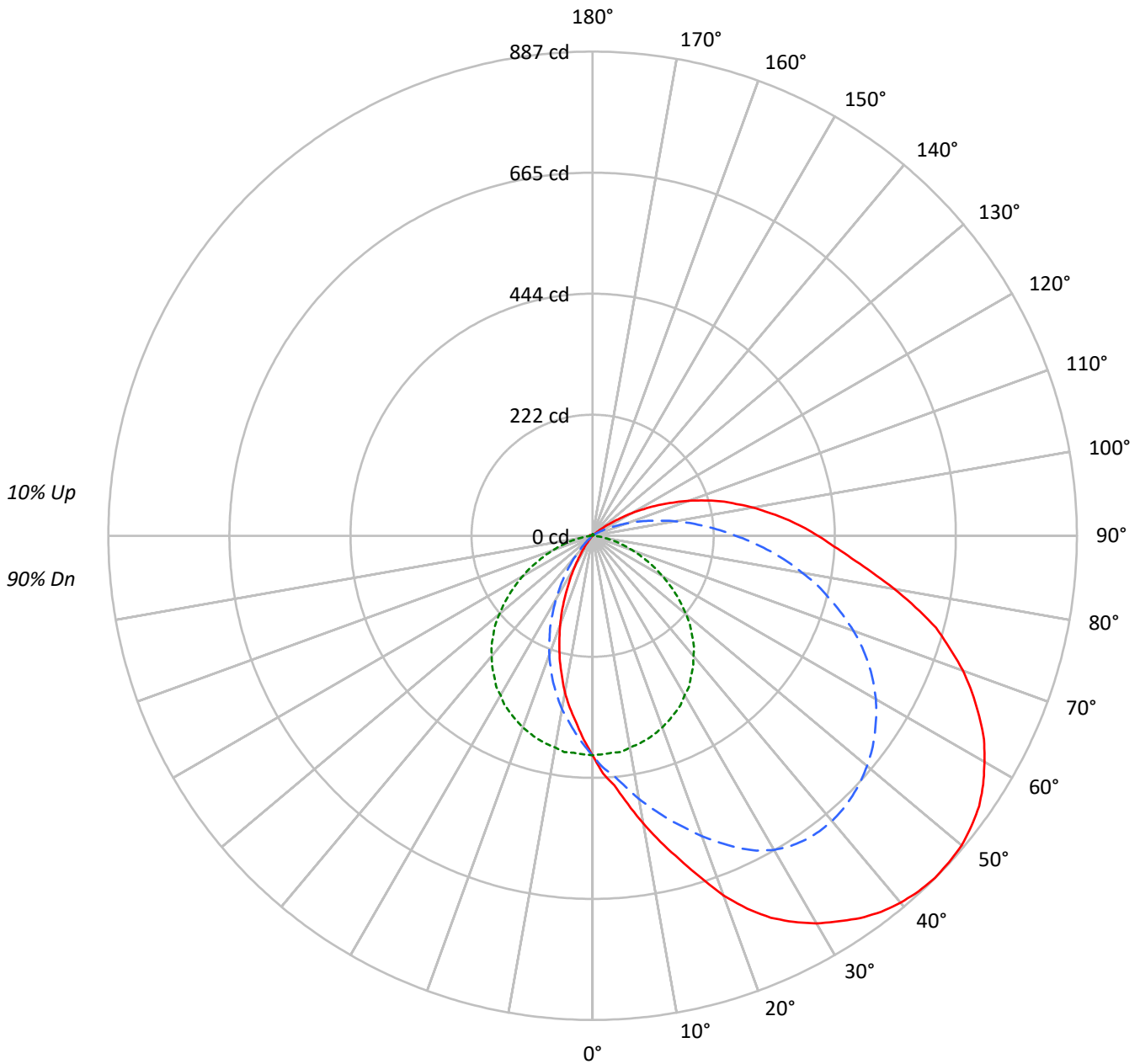
Lumens per Lamp: N/A
Luminaire Lumens: 1987.9 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

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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°	4328	4328	4328
5°	4752	4266	3558
10°	5377	4212	2933
15°	6026	4159	2286
20°	6796	4091	1683
25°	7435	4013	1105
30°	7910	3908	622
35°	8322	3794	274
40°	8686	3655	66
45°	8999	3480	0
50°	9261	3247	0
55°	9462	2952	0
60°	9562	2610	0
65°	9602	2221	0
70°	9570	1813	0
75°	9448	1336	7
80°	9065	816	42
85°	8762	392	57



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.5	1.9
10°-20°	115.3	5.8
20°-30°	186.8	9.4
30°-40°	239.9	12.1
40°-50°	271.6	13.7
50°-60°	281.4	14.2
60°-70°	265.4	13.3
70°-80°	222.4	11.2
80°-90°	161.2	8.1
90°-100°	105.9	5.3
100°-110°	61.2	3.1
110°-120°	27.0	1.4
120°-130°	7.3	0.4
130°-140°	1.7	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°	340.6	17.1
0°-40°	580.5	29.2
0°-60°	1133.5	57.0
0°-90°	1782.4	89.7
90°-120°	194.1	9.8
90°-150°	204.1	10.3
90°-180°	205.0	10.3
0°-180°	1987.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	402	402	402	402	402	
5°	459	441	399	362	344	46
15°	613	538	386	279	233	177
25°	772	631	358	183	115	357
35°	855	680	314	89	28	536
45°	887	673	257	20	0	685
55°	864	631	185	0	0	772
65°	781	558	111	0	0	773
75°	651	451	47	0	0	683
85°	476	327	8	2	3	407
90°	413	262	2	3	4	226
95°	354	205	1	4	5	278
105°	244	106	1	3	4	257
115°	133	35	2	2	3	133
125°	39	5	2	2	2	39
135°	2	2	3	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	3	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°	402.1	402.1	402.1	402.1	402.1	402.1	402.1	402.1	402.1	402.1	402.1
2.5°	435.9	435.4	433.9	431.3	427.7	421.6	416.5	411.9	405.7	400.6	390.9
5°	459.0	456.4	454.4	451.8	443.6	438.0	428.8	418.5	408.8	399.1	379.6
7.5°	495.9	491.8	488.7	481.5	470.3	457.4	443.1	433.4	426.7	399.6	366.3
10°	535.3	531.7	525.6	512.8	498.9	480.5	460.0	437.0	416.5	393.9	354.5
12.5°	574.2	569.1	560.4	544.0	524.6	501.5	473.3	446.2	417.0	390.3	340.7
15°	613.2	607.5	598.3	578.3	552.7	522.5	488.2	453.9	419.5	385.7	326.3
17.5°	655.7	648.0	634.2	611.6	579.4	542.0	501.5	460.0	418.5	380.1	310.9
20°	701.3	690.5	675.7	645.4	607.5	563.5	514.8	466.2	418.0	373.4	293.5
22.5°	739.2	728.4	712.0	680.8	635.2	581.4	526.1	470.3	416.0	365.8	277.1
25°	772.0	763.3	745.3	709.5	661.3	600.4	536.8	473.3	412.9	357.6	259.7
27.5°	797.6	789.4	769.4	732.5	683.4	617.3	545.0	474.9	408.8	349.4	241.8
30°	820.1	811.9	787.9	749.9	698.2	630.6	553.2	475.4	403.7	337.1	222.3
32.5°	837.5	829.9	805.3	764.8	708.5	639.8	557.9	474.9	397.0	328.4	201.3
35°	855.0	847.3	818.6	775.6	716.1	643.9	561.4	472.3	388.8	314.0	181.3
37.5°	868.3	859.6	830.4	782.7	719.7	644.9	560.9	468.7	380.1	302.2	161.4
40°	877.5	868.3	837.0	786.8	720.8	643.4	556.8	462.6	369.9	287.4	140.4
42.5°	883.6	873.4	840.1	793.0	718.7	639.3	550.7	454.9	358.6	274.6	120.4
45°	886.7	876.0	840.6	787.9	715.1	631.6	541.5	445.2	346.3	257.2	100.4
47.5°	885.2	873.4	838.1	782.2	708.5	623.4	531.2	433.4	331.4	241.8	81.4
50°	882.6	870.3	832.4	775.1	699.2	613.2	519.9	419.0	316.1	222.8	64.5
52.5°	874.4	862.1	826.3	764.8	688.5	601.4	504.6	404.2	299.7	204.4	49.2
55°	864.2	852.9	815.5	755.6	674.6	587.1	490.2	388.3	283.8	185.4	35.3
57.5°	848.3	838.1	802.2	740.7	660.8	571.2	474.4	370.9	263.8	166.5	24.6
60°	828.8	818.6	783.8	723.8	644.9	553.2	456.9	352.9	245.9	147.5	15.4
62.5°	808.3	798.6	762.2	702.8	625.0	534.3	438.0	335.0	226.9	130.1	9.2
65°	781.2	772.0	739.2	677.7	602.9	513.8	417.0	313.5	207.5	110.6	5.1
67.5°	752.5	744.3	711.0	654.7	577.3	491.3	395.5	292.5	187.0	93.7	2.6
70°	721.8	711.5	680.8	623.4	551.2	465.6	371.9	271.0	167.5	77.4	0.0
72.5°	685.9	678.2	648.5	594.2	521.0	438.5	347.8	247.4	146.0	61.5	0.5
75°	651.1	641.4	614.2	563.0	491.3	409.8	321.2	225.4	125.0	47.1	0.5
77.5°	606.0	602.9	577.3	527.6	463.1	382.1	292.0	198.8	105.0	33.8	0.5
80°	560.9	557.9	537.9	492.3	430.3	349.4	264.8	173.7	85.5	22.5	0.5
82.5°	516.4	512.3	493.3	455.4	397.0	321.7	236.7	148.6	67.6	13.8	0.5
85°	476.4	471.3	450.8	416.0	362.7	290.5	207.5	124.0	50.2	7.7	1.0
87.5°	442.1	438.5	416.0	380.1	327.8	261.3	181.9	100.4	35.3	3.6	1.5
90°	412.9	405.2	385.2	347.3	295.1	229.0	154.7	80.4	23.6	2.0	2.0
92.5°	384.2	377.5	355.5	316.6	265.9	201.3	128.6	61.5	14.9	1.0	2.6
95°	354.5	347.3	325.8	289.9	236.2	173.1	105.5	45.1	8.2	1.0	2.6
97.5°	325.3	318.6	296.1	260.2	209.5	148.6	83.5	31.8	4.1	1.0	2.0
100°	298.1	290.5	270.0	234.1	182.9	124.0	64.5	20.5	2.6	1.0	2.0
102.5°	269.4	263.3	242.3	207.5	155.2	100.9	48.2	12.8	1.0	1.0	1.5
105°	243.8	236.2	215.7	179.8	132.2	79.4	33.8	7.7	1.0	1.0	1.5



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-80-96-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	158.8	152.7	134.7	104.5	67.1	31.2	9.2	1.5	1.5	1.5	1.5
115°	132.7	123.5	107.6	80.9	49.7	20.5	4.6	1.5	1.5	1.5	1.5
117.5°	106.0	98.4	87.1	61.5	32.8	13.3	2.6	1.5	1.5	1.5	1.5
120°	83.0	75.8	63.0	42.5	22.0	7.7	1.0	1.5	1.5	1.5	1.5
122.5°	59.4	53.8	42.5	27.7	13.3	3.6	1.5	1.5	2.0	2.0	1.5
125°	39.4	36.4	28.2	16.9	8.2	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.6	23.1	16.4	9.7	3.6	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.3	12.8	9.7	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.2	7.7	5.1	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	2.6	2.6	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.6	2.6	2.6	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.6	2.6	2.6	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.6
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.6	2.0	2.0	2.6
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	2.6	2.6	2.6	2.6
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	2.6
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	2.6
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.6	2.6	2.6	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



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	402.1	402.1	402.1
2.5°	382.7	375.5	373.4
5°	362.2	350.4	343.7
7.5°	341.7	325.8	318.1
10°	322.7	300.2	292.0
12.5°	300.2	274.1	261.3
15°	278.7	244.9	232.6
17.5°	254.6	216.7	202.3
20°	232.1	188.5	173.7
22.5°	206.4	160.8	144.5
25°	183.4	133.2	114.7
27.5°	157.8	105.0	89.1
30°	133.7	80.4	64.5
32.5°	110.6	58.9	44.6
35°	89.1	40.0	28.2
37.5°	68.6	24.6	14.3
40°	49.7	12.8	6.7
42.5°	33.3	6.1	3.6
45°	20.5	3.1	0.0
47.5°	11.8	0.0	0.0
50°	6.1	0.0	0.0
52.5°	2.6	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	2.6
82.5°	2.0	2.6	2.6
85°	2.0	2.6	3.1
87.5°	2.6	3.1	3.6
90°	3.1	3.6	3.6
92.5°	3.1	4.1	4.1
95°	3.6	4.1	4.6
97.5°	4.1	4.6	4.6
100°	3.6	4.6	5.1
102.5°	3.1	4.6	4.6
105°	2.6	3.6	4.1



TEST NUMBER: P551587

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-80-96-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.6	2.6
115°	1.5	2.0	2.6
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°	215.1	209.0	188.5	154.7	108.1	60.4	22.5	4.1	1.0	1.5	1.5
110°	187.5	182.4	161.4	128.6	87.1	45.1	14.9	2.6	1.5	1.5	1.5





107.5°	2.0	3.1	3.6
110°	2.0	2.6	3.1



(END OF REPORT)