

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: P551657

Luminaire Tested: **FCC-X-2-LD4-2LO-50-UNV-81-85-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: P551657
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-50-UNV-81-85-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

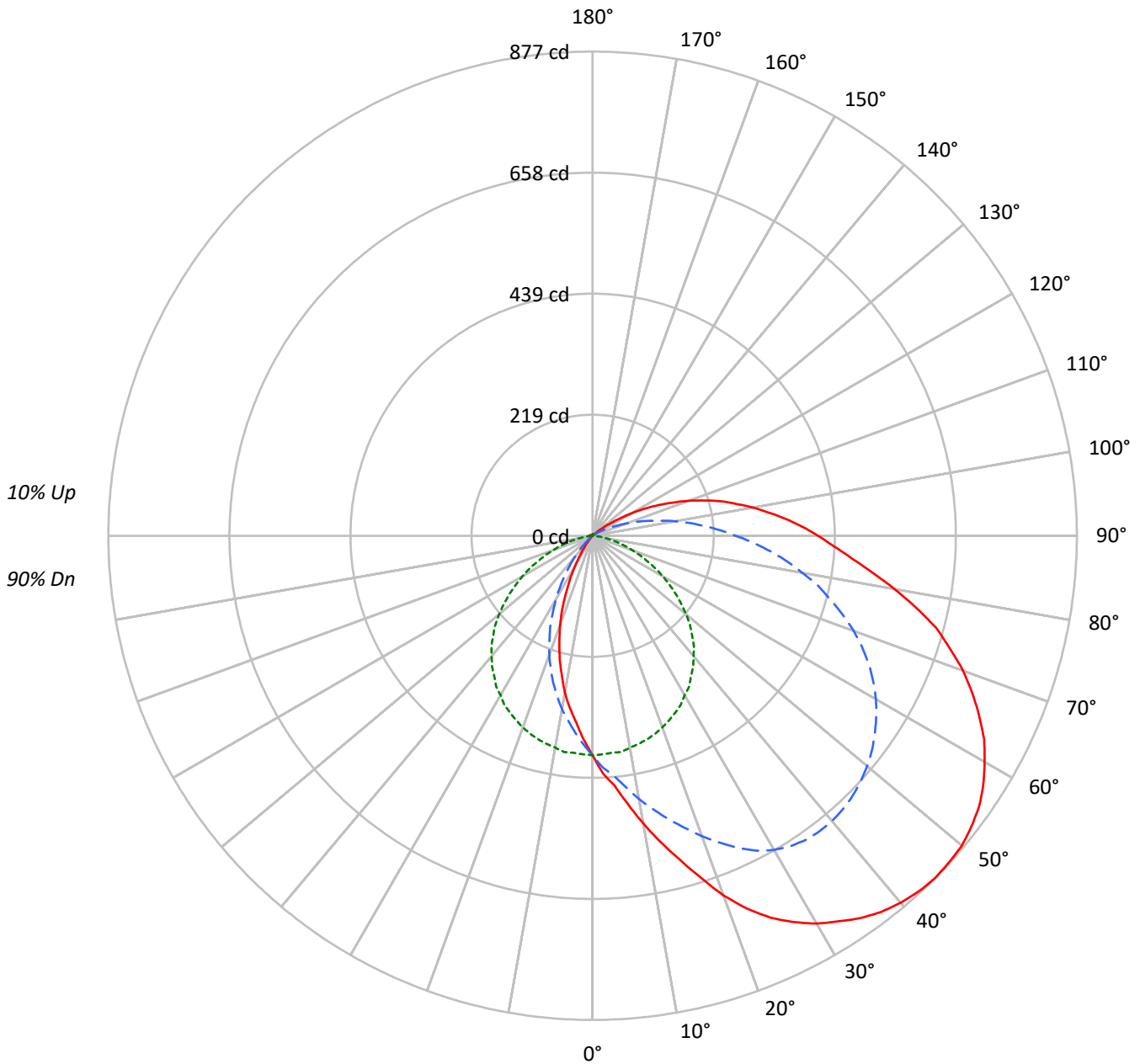
Lumens per Lamp: N/A
Luminaire Lumens: 1965.9 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	4281	4281	4281
5°	4699	4218	3519
10°	5318	4166	2901
15°	5959	4114	2260
20°	6721	4046	1664
25°	7352	3968	1093
30°	7823	3864	615
35°	8229	3752	272
40°	8590	3614	65
45°	8899	3441	0
50°	9159	3212	0
55°	9356	2920	0
60°	9457	2582	0
65°	9496	2197	0
70°	9464	1792	0
75°	9344	1322	7
80°	8964	809	40
85°	8664	386	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	1.9
10°-20°	114.1	5.8
20°-30°	184.7	9.4
30°-40°	237.3	12.1
40°-50°	268.6	13.7
50°-60°	278.3	14.2
60°-70°	262.4	13.3
70°-80°	219.9	11.2
80°-90°	159.4	8.1
90°-100°	104.8	5.3
100°-110°	60.5	3.1
110°-120°	26.7	1.4
120°-130°	7.2	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°	336.9	17.1
0°-40°	574.1	29.2
0°-60°	1120.9	57.0
0°-90°	1762.7	89.7
90°-120°	192.0	9.8
90°-150°	201.9	10.3
90°-180°	203.0	10.3
0°-180°	1965.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	398	398	398	398	398	
5°	454	436	395	358	340	46
15°	606	532	382	276	230	175
25°	763	624	354	181	114	353
35°	846	672	310	88	28	530
45°	877	666	254	20	0	677
55°	855	624	183	0	0	763
65°	773	552	109	0	0	764
75°	644	446	47	0	0	675
85°	471	323	8	2	3	402
90°	408	259	2	3	4	224
95°	351	202	1	4	5	275
105°	241	105	1	2	4	254
115°	131	35	2	2	2	131
125°	39	5	2	2	2	39
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°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	431.1	430.6	429.1	426.6	423.0	416.9	411.9	407.3	401.2	396.2	386.5
5°	453.9	451.4	449.3	446.8	438.7	433.1	424.0	413.9	404.3	394.6	375.4
7.5°	490.4	486.3	483.3	476.2	465.1	452.4	438.2	428.6	422.0	395.1	362.2
10°	529.4	525.8	519.8	507.1	493.4	475.2	454.9	432.1	411.9	389.6	350.6
12.5°	567.9	562.8	554.2	538.0	518.8	496.0	468.1	441.2	412.4	386.0	336.9
15°	606.4	600.8	591.7	571.9	546.6	516.7	482.8	448.8	414.9	381.5	322.7
17.5°	648.4	640.8	627.2	604.9	573.0	536.0	496.0	454.9	413.9	375.9	307.5
20°	693.5	682.9	668.2	638.3	600.8	557.3	509.1	461.0	413.4	369.3	290.3
22.5°	731.0	720.4	704.2	673.3	628.2	575.0	520.3	465.1	411.4	361.7	274.1
25°	763.4	754.8	737.1	701.6	654.0	593.7	530.9	468.1	408.3	353.6	256.8
27.5°	788.8	780.7	760.9	724.4	675.8	610.4	539.0	469.6	404.3	345.5	239.1
30°	811.1	802.9	779.1	741.7	690.5	623.6	547.1	470.1	399.2	333.3	219.9
32.5°	828.3	820.7	796.4	756.3	700.6	632.7	551.7	469.6	392.6	324.7	199.1
35°	845.5	837.9	809.5	767.0	708.2	636.8	555.2	467.1	384.5	310.5	179.3
37.5°	858.7	850.1	821.2	774.1	711.8	637.8	554.7	463.5	375.9	298.9	159.6
40°	867.8	858.7	827.8	778.1	712.8	636.3	550.7	457.5	365.8	284.2	138.8
42.5°	873.9	863.7	830.8	784.2	710.7	632.2	544.6	449.9	354.6	271.5	119.0
45°	876.9	866.3	831.3	779.1	707.2	624.6	535.5	440.2	342.5	254.3	99.3
47.5°	875.4	863.7	828.8	773.6	700.6	616.5	525.3	428.6	327.8	239.1	80.5
50°	872.9	860.7	823.2	766.5	691.5	606.4	514.2	414.4	312.6	220.4	63.8
52.5°	864.8	852.6	817.1	756.3	680.9	594.7	499.0	399.7	296.4	202.1	48.6
55°	854.6	843.5	806.5	747.2	667.2	580.6	484.8	384.0	280.7	183.4	35.0
57.5°	838.9	828.8	793.3	732.5	653.5	564.8	469.1	366.8	260.9	164.6	24.3
60°	819.7	809.5	775.1	715.8	637.8	547.1	451.9	349.0	243.2	145.9	15.2
62.5°	799.4	789.8	753.8	695.0	618.0	528.4	433.1	331.3	224.4	128.7	9.1
65°	772.6	763.4	731.0	670.2	596.3	508.1	412.4	310.0	205.2	109.4	5.1
67.5°	744.2	736.1	703.1	647.4	570.9	485.8	391.1	289.3	184.9	92.7	2.5
70°	713.8	703.7	673.3	616.5	545.1	460.5	367.8	268.0	165.7	76.5	0.0
72.5°	678.3	670.7	641.3	587.6	515.2	433.6	344.0	244.7	144.4	60.8	0.5
75°	643.9	634.3	607.4	556.7	485.8	405.3	317.6	222.9	123.6	46.6	0.5
77.5°	599.3	596.3	570.9	521.8	458.0	377.9	288.8	196.6	103.9	33.4	0.5
80°	554.7	551.7	531.9	486.8	425.5	345.5	261.9	171.7	84.6	22.3	0.5
82.5°	510.6	506.6	487.8	450.4	392.6	318.1	234.0	146.9	66.9	13.7	0.5
85°	471.1	466.1	445.8	411.4	358.7	287.2	205.2	122.6	49.6	7.6	1.0
87.5°	437.2	433.6	411.4	375.9	324.2	258.4	179.8	99.3	35.0	3.5	1.5
90°	408.3	400.7	381.0	343.5	291.8	226.4	153.0	79.5	23.3	2.0	2.0
92.5°	379.9	373.4	351.6	313.1	262.9	199.1	127.2	60.8	14.7	1.0	2.5
95°	350.6	343.5	322.2	286.7	233.5	171.2	104.4	44.6	8.1	1.0	2.5
97.5°	321.7	315.1	292.8	257.3	207.2	146.9	82.6	31.4	4.1	1.0	2.0
100°	294.8	287.2	267.0	231.5	180.9	122.6	63.8	20.3	2.5	1.0	2.0
102.5°	266.5	260.4	239.6	205.2	153.5	99.8	47.6	12.7	1.0	1.0	1.5
105°	241.1	233.5	213.3	177.8	130.7	78.5	33.4	7.6	1.0	1.0	1.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	157.0	151.0	133.2	103.3	66.4	30.9	9.1	1.5	1.5	1.5	1.5
115°	131.2	122.1	106.4	80.0	49.1	20.3	4.6	1.5	1.5	1.5	1.5
117.5°	104.9	97.3	86.1	60.8	32.4	13.2	2.5	1.5	1.5	1.5	1.5
120°	82.1	75.0	62.3	42.0	21.8	7.6	1.0	1.5	1.5	1.5	1.5
122.5°	58.8	53.2	42.0	27.4	13.2	3.5	1.5	1.5	2.0	2.0	1.5
125°	39.0	36.0	27.9	16.7	8.1	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	25.3	22.8	16.2	9.6	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	14.2	12.7	9.6	5.6	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	8.1	7.6	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	2.5	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: P551657

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	397.7	397.7	397.7
2.5°	378.4	371.3	369.3
5°	358.2	346.5	339.9
7.5°	337.9	322.2	314.6
10°	319.2	296.9	288.8
12.5°	296.9	271.0	258.4
15°	275.6	242.2	230.0
17.5°	251.8	214.3	200.1
20°	229.5	186.4	171.7
22.5°	204.2	159.1	142.9
25°	181.4	131.7	113.5
27.5°	156.0	103.9	88.1
30°	132.2	79.5	63.8
32.5°	109.4	58.3	44.1
35°	88.1	39.5	27.9
37.5°	67.9	24.3	14.2
40°	49.1	12.7	6.6
42.5°	32.9	6.1	3.5
45°	20.3	3.0	0.0
47.5°	11.7	0.0	0.0
50°	6.1	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	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.1	4.1
95°	3.5	4.1	4.6
97.5°	4.1	4.6	4.6
100°	3.5	4.6	5.1
102.5°	3.0	4.6	4.6
105°	2.5	3.5	4.1



TEST NUMBER: P551657

CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-81-85-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°	212.8	206.7	186.4	153.0	106.9	59.8	22.3	4.1	1.0	1.5	1.5
110°	185.4	180.3	159.6	127.2	86.1	44.6	14.7	2.5	1.5	1.5	1.5





107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)