

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: P551156

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-81-96-ED1D**

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: P551156
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-LD4-1STD-50-UNV-81-96-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

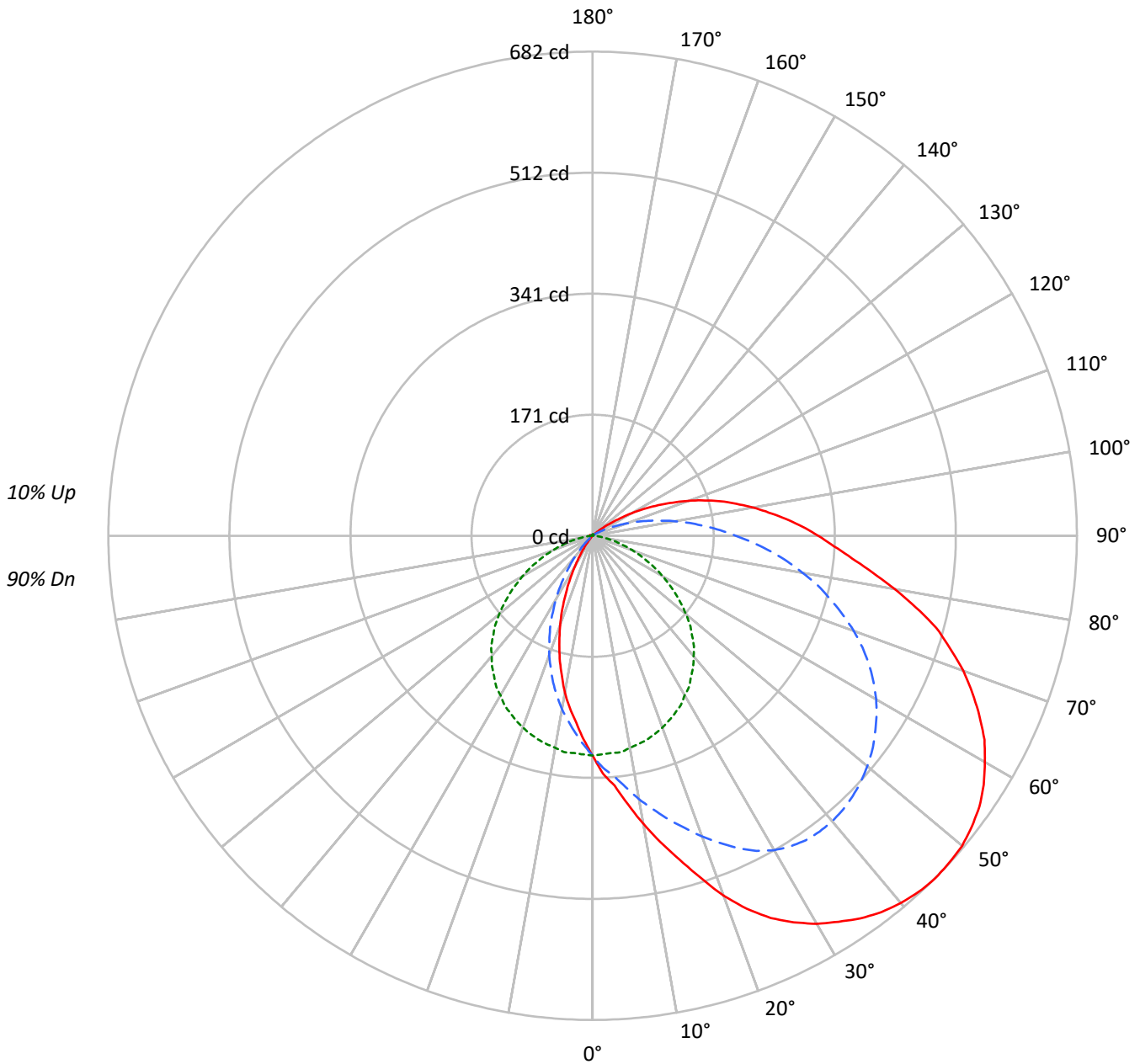
Lumens per Lamp: N/A
Luminaire Lumens: 1530.1 lumens
Efficiency: N/A
Efficacy: 91.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
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				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3331	3331	3331
5°	3656	3282	2738
10°	4138	3242	2257
15°	4637	3201	1759
20°	5230	3149	1295
25°	5722	3088	850
30°	6088	3007	479
35°	6404	2920	211
40°	6684	2813	50
45°	6925	2678	0
50°	7128	2500	0
55°	7282	2272	0
60°	7359	2009	0
65°	7389	1711	0
70°	7365	1394	0
75°	7271	1029	6
80°	6977	628	32
85°	6742	300	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	1.9
10°-20°	88.8	5.8
20°-30°	143.7	9.4
30°-40°	184.6	12.1
40°-50°	209.0	13.7
50°-60°	216.5	14.2
60°-70°	204.2	13.3
70°-80°	171.1	11.2
80°-90°	124.1	8.1
90°-100°	81.5	5.3
100°-110°	47.1	3.1
110°-120°	20.8	1.4
120°-130°	5.6	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	262.1	17.1
0°-40°	446.8	29.2
0°-60°	872.3	57.0
0°-90°	1371.8	89.7
90°-120°	149.4	9.8
90°-150°	157.2	10.3
90°-180°	158.0	10.3
0°-180°	1530.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	310	310	310	310	310	
5°	353	339	307	279	264	36
15°	472	414	297	214	179	136
25°	594	486	275	141	88	275
35°	658	523	242	69	22	413
45°	682	518	198	16	0	527
55°	665	486	143	0	0	594
65°	601	430	85	0	0	595
75°	501	347	36	0	0	526
85°	367	251	6	2	2	313
90°	318	202	2	2	3	174
95°	273	158	1	3	4	214
105°	188	81	1	2	3	198
115°	102	27	1	1	2	102
125°	30	4	2	1	2	30
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	1	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°	309.5	309.5	309.5	309.5	309.5	309.5	309.5	309.5	309.5	309.5	309.5
2.5°	335.5	335.1	333.9	332.0	329.2	324.5	320.5	317.0	312.2	308.3	300.8
5°	353.2	351.3	349.7	347.7	341.4	337.1	330.0	322.1	314.6	307.1	292.1
7.5°	381.6	378.5	376.1	370.6	361.9	352.1	341.0	333.5	328.4	307.5	281.9
10°	412.0	409.2	404.5	394.6	384.0	369.8	354.0	336.3	320.5	303.2	272.8
12.5°	441.9	438.0	431.3	418.7	403.7	386.0	364.3	343.4	320.9	300.4	262.2
15°	471.9	467.6	460.5	445.1	425.4	402.1	375.7	349.3	322.9	296.9	251.1
17.5°	504.6	498.7	488.1	470.7	445.9	417.1	386.0	354.0	322.1	292.5	239.3
20°	539.7	531.4	520.0	496.7	467.6	433.7	396.2	358.8	321.7	287.4	225.9
22.5°	568.9	560.6	548.0	524.0	488.9	447.5	404.9	361.9	320.1	281.5	213.3
25°	594.1	587.4	573.6	546.0	509.0	462.1	413.2	364.3	317.8	275.2	199.9
27.5°	613.8	607.5	592.2	563.8	525.9	475.1	419.5	365.5	314.6	268.9	186.1
30°	631.2	624.9	606.3	577.2	537.4	485.3	425.8	365.9	310.7	259.4	171.1
32.5°	644.6	638.7	619.8	588.6	545.2	492.4	429.3	365.5	305.5	252.7	154.9
35°	658.0	652.1	630.0	596.9	551.2	495.6	432.1	363.5	299.2	241.7	139.6
37.5°	668.2	661.5	639.1	602.4	553.9	496.4	431.7	360.7	292.5	232.6	124.2
40°	675.3	668.2	644.2	605.6	554.7	495.2	428.5	356.0	284.6	221.2	108.0
42.5°	680.1	672.2	646.6	610.3	553.1	492.0	423.8	350.1	276.0	211.3	92.6
45°	682.4	674.2	647.0	606.3	550.4	486.1	416.7	342.6	266.5	197.9	77.3
47.5°	681.3	672.2	645.0	602.0	545.2	479.8	408.8	333.5	255.1	186.1	62.7
50°	679.3	669.8	640.6	596.5	538.1	471.9	400.2	322.5	243.2	171.5	49.7
52.5°	673.0	663.5	635.9	588.6	529.9	462.8	388.3	311.1	230.6	157.3	37.8
55°	665.1	656.4	627.6	581.5	519.2	451.8	377.3	298.8	218.4	142.7	27.2
57.5°	652.9	645.0	617.4	570.1	508.6	439.6	365.1	285.4	203.0	128.1	18.9
60°	637.9	630.0	603.2	557.1	496.4	425.8	351.7	271.6	189.2	113.5	11.8
62.5°	622.1	614.6	586.6	540.9	481.0	411.2	337.1	257.8	174.7	100.1	7.1
65°	601.2	594.1	568.9	521.6	464.0	395.4	320.9	241.3	159.7	85.2	3.9
67.5°	579.1	572.8	547.2	503.8	444.3	378.1	304.4	225.1	143.9	72.1	2.0
70°	555.5	547.6	524.0	479.8	424.2	358.4	286.2	208.6	128.9	59.5	0.0
72.5°	527.9	522.0	499.1	457.3	400.9	337.5	267.7	190.4	112.4	47.3	0.4
75°	501.1	493.6	472.7	433.3	378.1	315.4	247.2	173.5	96.2	36.3	0.4
77.5°	466.4	464.0	444.3	406.1	356.4	294.1	224.7	153.0	80.8	26.0	0.4
80°	431.7	429.3	414.0	378.9	331.2	268.9	203.8	133.6	65.8	17.3	0.4
82.5°	397.4	394.2	379.7	350.5	305.5	247.6	182.1	114.3	52.0	10.6	0.4
85°	366.6	362.7	346.9	320.1	279.1	223.5	159.7	95.4	38.6	5.9	0.8
87.5°	340.2	337.5	320.1	292.5	252.3	201.1	140.0	77.3	27.2	2.8	1.2
90°	317.8	311.8	296.5	267.3	227.1	176.2	119.1	61.9	18.1	1.6	1.6
92.5°	295.7	290.6	273.6	243.6	204.6	154.9	99.0	47.3	11.4	0.8	2.0
95°	272.8	267.3	250.7	223.1	181.7	133.3	81.2	34.7	6.3	0.8	2.0
97.5°	250.3	245.2	227.9	200.3	161.2	114.3	64.3	24.4	3.2	0.8	1.6
100°	229.5	223.5	207.8	180.2	140.7	95.4	49.7	15.8	2.0	0.8	1.6
102.5°	207.4	202.6	186.5	159.7	119.5	77.7	37.1	9.9	0.8	0.8	1.2
105°	187.7	181.7	166.0	138.4	101.7	61.1	26.0	5.9	0.8	0.8	1.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	122.2	117.5	103.7	80.4	51.6	24.0	7.1	1.2	1.2	1.2	1.2
115°	102.1	95.0	82.8	62.3	38.2	15.8	3.5	1.2	1.2	1.2	1.2
117.5°	81.6	75.7	67.0	47.3	25.2	10.3	2.0	1.2	1.2	1.2	1.2
120°	63.9	58.3	48.5	32.7	17.0	5.9	0.8	1.2	1.2	1.2	1.2
122.5°	45.7	41.4	32.7	21.3	10.3	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.4	28.0	21.7	13.0	6.3	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.7	17.7	12.6	7.5	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.0	9.9	7.5	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.3	5.9	3.9	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	309.5	309.5	309.5
2.5°	294.5	289.0	287.4
5°	278.7	269.7	264.5
7.5°	263.0	250.7	244.8
10°	248.4	231.0	224.7
12.5°	231.0	210.9	201.1
15°	214.5	188.4	179.0
17.5°	195.9	166.8	155.7
20°	178.6	145.1	133.6
22.5°	158.9	123.8	111.2
25°	141.1	102.5	88.3
27.5°	121.4	80.8	68.6
30°	102.9	61.9	49.7
32.5°	85.2	45.3	34.3
35°	68.6	30.8	21.7
37.5°	52.8	18.9	11.0
40°	38.2	9.9	5.1
42.5°	25.6	4.7	2.8
45°	15.8	2.4	0.0
47.5°	9.1	0.0	0.0
50°	4.7	0.0	0.0
52.5°	2.0	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°	0.4	0.4	0.4
77.5°	0.4	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.5
97.5°	3.2	3.5	3.5
100°	2.8	3.5	3.9
102.5°	2.4	3.5	3.5
105°	2.0	2.8	3.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



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







107.5°	165.6	160.9	145.1	119.1	83.2	46.5	17.3	3.2	0.8	1.2	1.2
110°	144.3	140.4	124.2	99.0	67.0	34.7	11.4	2.0	1.2	1.2	1.2





107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)