

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: P551017

Luminaire Tested: **FCC-X-2-LD4-1STD-35-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: P551017
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-35-UNV-81-85-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

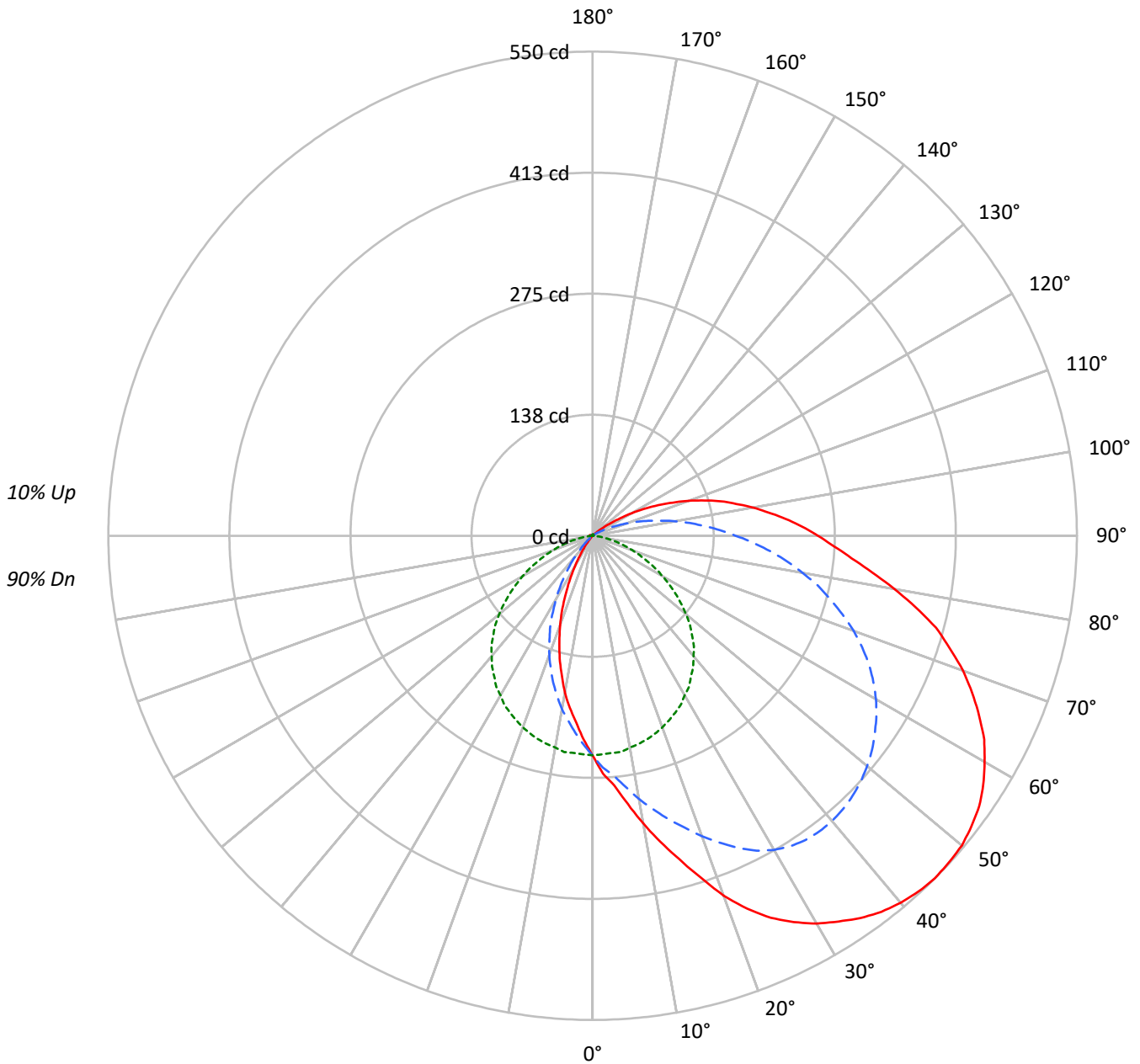
Lumens per Lamp: N/A
Luminaire Lumens: 1233.1 lumens
Efficiency: N/A
Efficacy: 73.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (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

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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°	2685	2685	2685
5°	2947	2645	2207
10°	3335	2613	1819
15°	3737	2579	1417
20°	4216	2537	1044
25°	4611	2489	686
30°	4906	2424	386
35°	5161	2354	170
40°	5387	2266	41
45°	5582	2158	0
50°	5744	2014	0
55°	5868	1831	0
60°	5931	1619	0
65°	5955	1378	0
70°	5936	1124	0
75°	5859	828	4
80°	5622	508	26
85°	5435	244	35



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.9	1.9
10°-20°	71.5	5.8
20°-30°	115.8	9.4
30°-40°	148.8	12.1
40°-50°	168.4	13.7
50°-60°	174.5	14.2
60°-70°	164.6	13.3
70°-80°	137.9	11.2
80°-90°	100.0	8.1
90°-100°	65.7	5.3
100°-110°	38.0	3.1
110°-120°	16.8	1.4
120°-130°	4.6	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	211.3	17.1
0°-40°	360.1	29.2
0°-60°	703.0	57.0
0°-90°	1105.5	89.7
90°-120°	120.4	9.8
90°-150°	126.7	10.3
90°-180°	128.0	10.4
0°-180°	1233.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	249	249	249	249	249	
5°	285	273	248	225	213	29
15°	380	333	239	173	144	110
25°	479	391	222	114	71	221
35°	530	422	195	55	18	333
45°	550	418	160	13	0	425
55°	536	391	115	0	0	479
65°	484	346	69	0	0	479
75°	404	279	29	0	0	424
85°	296	202	5	1	2	252
90°	256	162	1	2	2	140
95°	220	127	1	2	3	172
105°	151	66	1	2	2	160
115°	82	22	1	1	2	82
125°	24	3	1	1	1	24
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	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°	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4	249.4
2.5°	270.4	270.1	269.1	267.5	265.3	261.5	258.3	255.4	251.6	248.5	242.4
5°	284.7	283.1	281.8	280.2	275.1	271.6	265.9	259.6	253.5	247.5	235.4
7.5°	307.5	305.0	303.1	298.7	291.7	283.7	274.8	268.8	264.7	247.8	227.2
10°	332.0	329.8	326.0	318.0	309.5	298.0	285.3	271.0	258.3	244.3	219.9
12.5°	356.2	353.0	347.6	337.4	325.3	311.0	293.6	276.7	258.6	242.1	211.3
15°	380.3	376.8	371.1	358.7	342.8	324.1	302.8	281.5	260.2	239.2	202.4
17.5°	406.7	401.9	393.3	379.4	359.3	336.1	311.0	285.3	259.6	235.7	192.9
20°	435.0	428.3	419.1	400.3	376.8	349.5	319.3	289.1	259.3	231.6	182.1
22.5°	458.5	451.8	441.6	422.2	394.0	360.6	326.3	291.7	258.0	226.8	171.9
25°	478.8	473.4	462.3	440.0	410.2	372.4	333.0	293.6	256.1	221.8	161.1
27.5°	494.7	489.6	477.2	454.3	423.8	382.8	338.0	294.5	253.5	216.7	150.0
30°	508.7	503.6	488.6	465.1	433.0	391.1	343.1	294.8	250.4	209.1	137.9
32.5°	519.5	514.7	499.4	474.3	439.4	396.8	346.0	294.5	246.2	203.7	124.9
35°	530.3	525.5	507.7	481.0	444.2	399.4	348.2	292.9	241.1	194.8	112.5
37.5°	538.5	533.1	515.0	485.5	446.4	400.0	347.9	290.7	235.7	187.5	100.1
40°	544.2	538.5	519.1	488.0	447.0	399.1	345.4	286.9	229.4	178.2	87.1
42.5°	548.1	541.7	521.1	491.8	445.8	396.5	341.5	282.1	222.4	170.3	74.7
45°	550.0	543.3	521.4	488.6	443.5	391.7	335.8	276.1	214.8	159.5	62.3
47.5°	549.0	541.7	519.8	485.2	439.4	386.7	329.5	268.8	205.6	150.0	50.5
50°	547.4	539.8	516.3	480.7	433.7	380.3	322.5	259.9	196.0	138.2	40.0
52.5°	542.3	534.7	512.5	474.3	427.0	373.0	312.9	250.7	185.9	126.8	30.5
55°	536.0	529.0	505.8	468.6	418.4	364.1	304.1	240.8	176.0	115.0	21.9
57.5°	526.1	519.8	497.5	459.4	409.9	354.3	294.2	230.0	163.6	103.3	15.3
60°	514.1	507.7	486.1	448.9	400.0	343.1	283.4	218.9	152.5	91.5	9.5
62.5°	501.4	495.3	472.8	435.9	387.6	331.4	271.6	207.8	140.7	80.7	5.7
65°	484.5	478.8	458.5	420.3	374.0	318.7	258.6	194.4	128.7	68.6	3.2
67.5°	466.7	461.6	441.0	406.0	358.1	304.7	245.3	181.4	116.0	58.1	1.6
70°	447.7	441.3	422.2	386.7	341.9	288.8	230.7	168.1	103.9	48.0	0.0
72.5°	425.4	420.7	402.2	368.5	323.1	272.0	215.7	153.5	90.5	38.1	0.3
75°	403.8	397.8	380.9	349.2	304.7	254.2	199.2	139.8	77.5	29.2	0.3
77.5°	375.9	374.0	358.1	327.2	287.2	237.0	181.1	123.3	65.1	21.0	0.3
80°	347.9	346.0	333.6	305.3	266.9	216.7	164.3	107.7	53.1	14.0	0.3
82.5°	320.3	317.7	306.0	282.4	246.2	199.5	146.8	92.1	41.9	8.6	0.3
85°	295.5	292.3	279.6	258.0	224.9	180.1	128.7	76.9	31.1	4.8	0.6
87.5°	274.2	272.0	258.0	235.7	203.3	162.0	112.8	62.3	21.9	2.2	1.0
90°	256.1	251.3	238.9	215.4	183.0	142.0	95.9	49.9	14.6	1.3	1.3
92.5°	238.3	234.2	220.5	196.3	164.9	124.9	79.7	38.1	9.2	0.6	1.6
95°	219.9	215.4	202.1	179.8	146.5	107.4	65.4	28.0	5.1	0.6	1.6
97.5°	201.7	197.6	183.6	161.4	129.9	92.1	51.8	19.7	2.5	0.6	1.3
100°	184.9	180.1	167.4	145.2	113.4	76.9	40.0	12.7	1.6	0.6	1.3
102.5°	167.1	163.3	150.3	128.7	96.3	62.6	29.9	7.9	0.6	0.6	1.0
105°	151.2	146.5	133.8	111.5	82.0	49.2	21.0	4.8	0.6	0.6	1.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	98.5	94.7	83.6	64.8	41.6	19.4	5.7	1.0	1.0	1.0	1.0
115°	82.3	76.6	66.7	50.2	30.8	12.7	2.9	1.0	1.0	1.0	1.0
117.5°	65.8	61.0	54.0	38.1	20.3	8.3	1.6	1.0	1.0	1.0	1.0
120°	51.5	47.0	39.1	26.4	13.7	4.8	0.6	1.0	1.0	1.0	1.0
122.5°	36.9	33.4	26.4	17.2	8.3	2.2	1.0	1.0	1.3	1.3	1.0
125°	24.5	22.6	17.5	10.5	5.1	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	15.9	14.3	10.2	6.0	2.2	1.0	1.0	1.3	1.3	1.3	1.0
130°	8.9	7.9	6.0	3.5	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.1	4.8	3.2	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.6	0.6	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.6	0.6	0.6	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.6	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.6	0.6	0.6	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.6	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.6	0.6	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.3
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	249.4	249.4	249.4
2.5°	237.3	232.9	231.6
5°	224.6	217.3	213.2
7.5°	211.9	202.1	197.3
10°	200.2	186.2	181.1
12.5°	186.2	170.0	162.0
15°	172.8	151.9	144.2
17.5°	157.9	134.4	125.5
20°	143.9	116.9	107.7
22.5°	128.0	99.8	89.6
25°	113.7	82.6	71.2
27.5°	97.9	65.1	55.3
30°	82.9	49.9	40.0
32.5°	68.6	36.5	27.6
35°	55.3	24.8	17.5
37.5°	42.6	15.3	8.9
40°	30.8	7.9	4.1
42.5°	20.7	3.8	2.2
45°	12.7	1.9	0.0
47.5°	7.3	0.0	0.0
50°	3.8	0.0	0.0
52.5°	1.6	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°	0.3	0.3	0.3
77.5°	0.3	0.6	1.0
80°	0.6	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	1.9
87.5°	1.6	1.9	2.2
90°	1.9	2.2	2.2
92.5°	1.9	2.5	2.5
95°	2.2	2.5	2.9
97.5°	2.5	2.9	2.9
100°	2.2	2.9	3.2
102.5°	1.9	2.9	2.9
105°	1.6	2.2	2.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.3	1.6	1.6
115°	1.0	1.3	1.6
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.6
152.5°	1.0	0.6	0.6
155°	1.0	0.6	0.3
157.5°	1.3	0.6	0.3
160°	1.0	0.6	0.3
162.5°	1.0	0.6	0.3
165°	1.0	0.6	0.0
167.5°	1.0	0.6	0.3
170°	1.0	0.6	0.3
172.5°	1.0	0.6	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	133.4	129.6	116.9	95.9	67.0	37.5	14.0	2.5	0.6	1.0	1.0
110°	116.3	113.1	100.1	79.7	54.0	28.0	9.2	1.6	1.0	1.0	1.0





107.5°	1.3	1.9	2.2
110°	1.3	1.6	1.9



(END OF REPORT)