

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: P550971

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-82-86-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: P550971
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-30-UNV-82-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

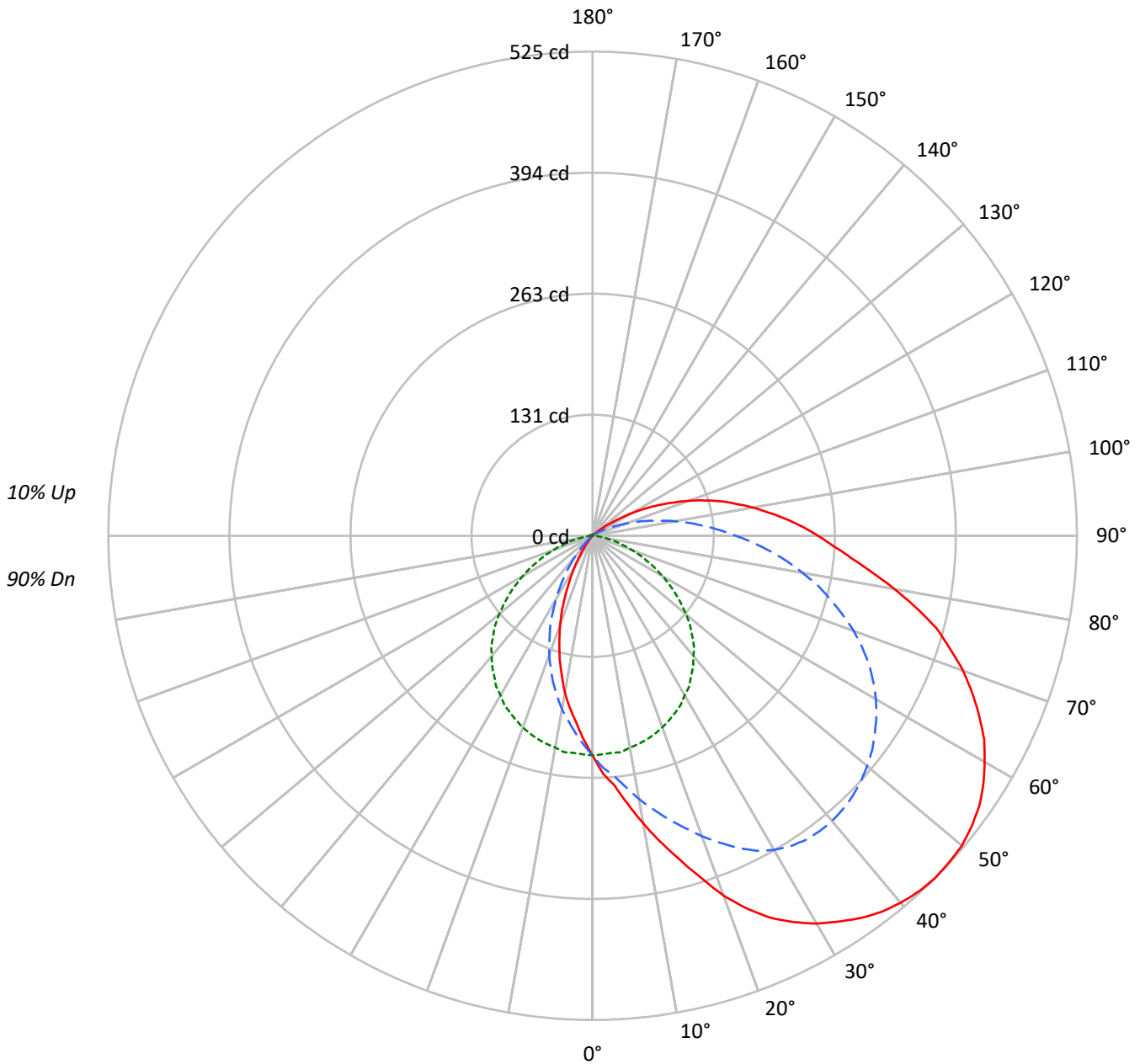
Lumens per Lamp: N/A
Luminaire Lumens: 1176.9 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

TEST NUMBER: P550971

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-82-86-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°	2563	2563	2563
5°	2813	2526	2107
10°	3183	2494	1737
15°	3567	2463	1353
20°	4024	2422	996
25°	4402	2376	654
30°	4684	2314	368
35°	4927	2246	163
40°	5142	2163	39
45°	5328	2059	0
50°	5484	1922	0
55°	5601	1748	0
60°	5661	1545	0
65°	5684	1316	0
70°	5665	1073	0
75°	5594	791	4
80°	5367	482	24
85°	5188	229	33



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.8	1.9
10°-20°	68.3	5.8
20°-30°	110.6	9.4
30°-40°	142.0	12.1
40°-50°	160.8	13.7
50°-60°	166.6	14.2
60°-70°	157.1	13.3
70°-80°	131.7	11.2
80°-90°	95.4	8.1
90°-100°	62.7	5.3
100°-110°	36.2	3.1
110°-120°	16.0	1.4
120°-130°	4.3	0.4
130°-140°	1.0	0.1
140°-150°	0.6	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	201.7	17.1
0°-40°	343.7	29.2
0°-60°	671.1	57.0
0°-90°	1055.3	89.7
90°-120°	114.9	9.8
90°-150°	120.9	10.3
90°-180°	122.0	10.4
0°-180°	1176.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	238	238	238	238	238	
5°	272	261	236	214	204	27
15°	363	318	228	165	138	105
25°	457	374	212	109	68	211
35°	506	403	186	53	17	317
45°	525	399	152	12	0	405
55°	512	374	110	0	0	457
65°	462	331	66	0	0	458
75°	386	267	28	0	0	404
85°	282	193	4	1	2	241
90°	244	155	1	2	2	134
95°	210	121	1	2	3	165
105°	144	63	1	2	2	152
115°	79	21	1	1	2	79
125°	23	3	1	1	1	23
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	



TEST NUMBER: P550971

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	238.1	238.1	238.1	238.1	238.1	238.1	238.1	238.1	238.1	238.1	238.1
2.5°	258.1	257.8	256.9	255.4	253.2	249.6	246.6	243.8	240.2	237.2	231.4
5°	271.7	270.2	269.0	267.5	262.6	259.3	253.8	247.8	242.0	236.3	224.7
7.5°	293.6	291.2	289.3	285.1	278.4	270.8	262.3	256.6	252.6	236.6	216.8
10°	316.9	314.8	311.2	303.6	295.4	284.5	272.4	258.7	246.6	233.2	209.9
12.5°	340.0	336.9	331.8	322.1	310.6	296.9	280.2	264.2	246.9	231.1	201.7
15°	363.0	359.7	354.2	342.4	327.2	309.4	289.0	268.7	248.4	228.4	193.2
17.5°	388.2	383.7	375.5	362.1	343.0	320.9	296.9	272.4	247.8	225.0	184.1
20°	415.2	408.8	400.0	382.1	359.7	333.6	304.8	276.0	247.5	221.1	173.8
22.5°	437.6	431.3	421.6	403.1	376.1	344.2	311.5	278.4	246.3	216.5	164.1
25°	457.1	451.9	441.3	420.0	391.5	355.5	317.8	280.2	244.4	211.7	153.8
27.5°	472.2	467.4	455.5	433.7	404.6	365.5	322.7	281.1	242.0	206.8	143.2
30°	485.6	480.7	466.5	444.0	413.4	373.3	327.5	281.4	239.0	199.6	131.6
32.5°	495.9	491.3	476.8	452.8	419.4	378.8	330.3	281.1	235.0	194.4	119.2
35°	506.2	501.6	484.6	459.2	424.0	381.2	332.4	279.6	230.2	185.9	107.4
37.5°	514.1	508.9	491.6	463.4	426.1	381.8	332.1	277.5	225.0	178.9	95.5
40°	519.5	514.1	495.6	465.8	426.7	380.9	329.7	273.9	219.0	170.1	83.1
42.5°	523.2	517.1	497.4	469.5	425.5	378.5	326.0	269.3	212.3	162.6	71.3
45°	525.0	518.6	497.7	466.5	423.4	374.0	320.6	263.6	205.0	152.2	59.4
47.5°	524.1	517.1	496.2	463.1	419.4	369.1	314.5	256.6	196.2	143.2	48.2
50°	522.6	515.3	492.8	458.9	414.0	363.0	307.8	248.1	187.1	131.9	38.2
52.5°	517.7	510.4	489.2	452.8	407.6	356.1	298.7	239.3	177.4	121.0	29.1
55°	511.6	505.0	482.8	447.3	399.4	347.6	290.2	229.9	168.0	109.8	20.9
57.5°	502.2	496.2	474.9	438.6	391.2	338.2	280.8	219.6	156.2	98.6	14.6
60°	490.7	484.6	464.0	428.5	381.8	327.5	270.5	209.0	145.6	87.3	9.1
62.5°	478.6	472.8	451.3	416.1	370.0	316.3	259.3	198.3	134.4	77.0	5.5
65°	462.5	457.1	437.6	401.2	357.0	304.2	246.9	185.6	122.8	65.5	3.0
67.5°	445.5	440.7	421.0	387.6	341.8	290.9	234.1	173.2	110.7	55.5	1.5
70°	427.3	421.3	403.1	369.1	326.3	275.7	220.2	160.4	99.2	45.8	0.0
72.5°	406.1	401.5	384.0	351.8	308.4	259.6	205.9	146.5	86.4	36.4	0.3
75°	385.5	379.7	363.6	333.3	290.9	242.6	190.2	133.4	74.0	27.9	0.3
77.5°	358.8	357.0	341.8	312.4	274.2	226.3	172.9	117.7	62.2	20.0	0.3
80°	332.1	330.3	318.4	291.5	254.8	206.8	156.8	102.8	50.6	13.3	0.3
82.5°	305.7	303.3	292.1	269.6	235.0	190.5	140.1	88.0	40.0	8.2	0.3
85°	282.1	279.0	266.9	246.3	214.7	172.0	122.8	73.4	29.7	4.5	0.6
87.5°	261.7	259.6	246.3	225.0	194.1	154.7	107.7	59.4	20.9	2.1	0.9
90°	244.4	239.9	228.1	205.6	174.7	135.6	91.6	47.6	14.0	1.2	1.2
92.5°	227.5	223.5	210.5	187.4	157.4	119.2	76.1	36.4	8.8	0.6	1.5
95°	209.9	205.6	192.9	171.7	139.8	102.5	62.5	26.7	4.9	0.6	1.5
97.5°	192.6	188.6	175.3	154.1	124.0	88.0	49.4	18.8	2.4	0.6	1.2
100°	176.5	172.0	159.8	138.6	108.3	73.4	38.2	12.1	1.5	0.6	1.2
102.5°	159.5	155.9	143.5	122.8	91.9	59.7	28.5	7.6	0.6	0.6	0.9
105°	144.4	139.8	127.7	106.5	78.2	47.0	20.0	4.5	0.6	0.6	0.9



TEST NUMBER: P550971

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-82-86-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	94.0	90.4	79.8	61.9	39.7	18.5	5.5	0.9	0.9	0.9	0.9
115°	78.6	73.1	63.7	47.9	29.4	12.1	2.7	0.9	0.9	0.9	0.9
117.5°	62.8	58.2	51.6	36.4	19.4	7.9	1.5	0.9	0.9	0.9	0.9
120°	49.1	44.9	37.3	25.2	13.0	4.5	0.6	0.9	0.9	0.9	0.9
122.5°	35.2	31.8	25.2	16.4	7.9	2.1	0.9	0.9	1.2	1.2	0.9
125°	23.4	21.5	16.7	10.0	4.9	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.2	13.6	9.7	5.8	2.1	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.5	7.6	5.8	3.3	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	4.9	4.5	3.0	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2
135°	1.2	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2
137.5°	0.3	0.3	0.6	0.6	0.9	0.9	1.2	1.5	1.5	1.5	1.2
140°	0.3	0.3	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.2
142.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
145°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.2	1.2	1.2
147.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.2	1.2
150°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
152.5°	0.3	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.2
155°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
157.5°	0.6	0.6	0.6	0.9	1.2	1.2	1.2	1.5	1.2	1.2	1.5
160°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.6	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.2	1.2	1.2
167.5°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.2
170°	0.6	0.6	0.6	0.9	0.9	0.9	1.2	1.5	1.5	1.5	1.5
172.5°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
175°	0.6	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.5
177.5°	0.3	0.6	0.6	0.9	0.9	1.2	1.2	1.5	1.5	1.5	1.2
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



TEST NUMBER: P550971

CATALOG NUMBER: FCC-X-2-LD4-1STD-30-UNV-82-86-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	238.1	238.1	238.1
2.5°	226.6	222.3	221.1
5°	214.4	207.4	203.5
7.5°	202.3	192.9	188.3
10°	191.1	177.7	172.9
12.5°	177.7	162.3	154.7
15°	165.0	145.0	137.7
17.5°	150.7	128.3	119.8
20°	137.4	111.6	102.8
22.5°	122.2	95.2	85.5
25°	108.6	78.9	67.9
27.5°	93.4	62.2	52.8
30°	79.2	47.6	38.2
32.5°	65.5	34.9	26.4
35°	52.8	23.7	16.7
37.5°	40.6	14.6	8.5
40°	29.4	7.6	3.9
42.5°	19.7	3.6	2.1
45°	12.1	1.8	0.0
47.5°	7.0	0.0	0.0
50°	3.6	0.0	0.0
52.5°	1.5	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°	0.3	0.3	0.3
77.5°	0.3	0.6	0.9
80°	0.6	1.2	1.5
82.5°	1.2	1.5	1.5
85°	1.2	1.5	1.8
87.5°	1.5	1.8	2.1
90°	1.8	2.1	2.1
92.5°	1.8	2.4	2.4
95°	2.1	2.4	2.7
97.5°	2.4	2.7	2.7
100°	2.1	2.7	3.0
102.5°	1.8	2.7	2.7
105°	1.5	2.1	2.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.2	1.5	1.5
115°	0.9	1.2	1.5
117.5°	0.9	1.2	1.2
120°	0.9	0.9	1.2
122.5°	0.9	0.9	1.2
125°	0.9	0.9	1.2
127.5°	1.2	0.9	0.9
130°	0.9	0.9	0.9
132.5°	1.2	0.9	0.9
135°	1.2	0.9	0.9
137.5°	1.2	0.9	0.9
140°	1.2	0.9	0.9
142.5°	1.2	0.9	0.9
145°	0.9	0.9	0.9
147.5°	0.9	0.9	0.9
150°	0.9	0.9	0.6
152.5°	0.9	0.6	0.6
155°	0.9	0.6	0.3
157.5°	1.2	0.6	0.3
160°	0.9	0.6	0.3
162.5°	0.9	0.6	0.3
165°	0.9	0.6	0.0
167.5°	0.9	0.6	0.3
170°	0.9	0.6	0.3
172.5°	0.9	0.6	0.3
175°	0.9	0.3	0.3
177.5°	0.9	0.3	0.3
180°	0.9	0.9	0.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	127.4	123.7	111.6	91.6	64.0	35.8	13.3	2.4	0.6	0.9	0.9
110°	111.0	108.0	95.5	76.1	51.6	26.7	8.8	1.5	0.9	0.9	0.9





107.5°	1.2	1.8	2.1
110°	1.2	1.5	1.8



(END OF REPORT)