

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: P551101

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-82-87-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: P551101
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-40-UNV-82-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

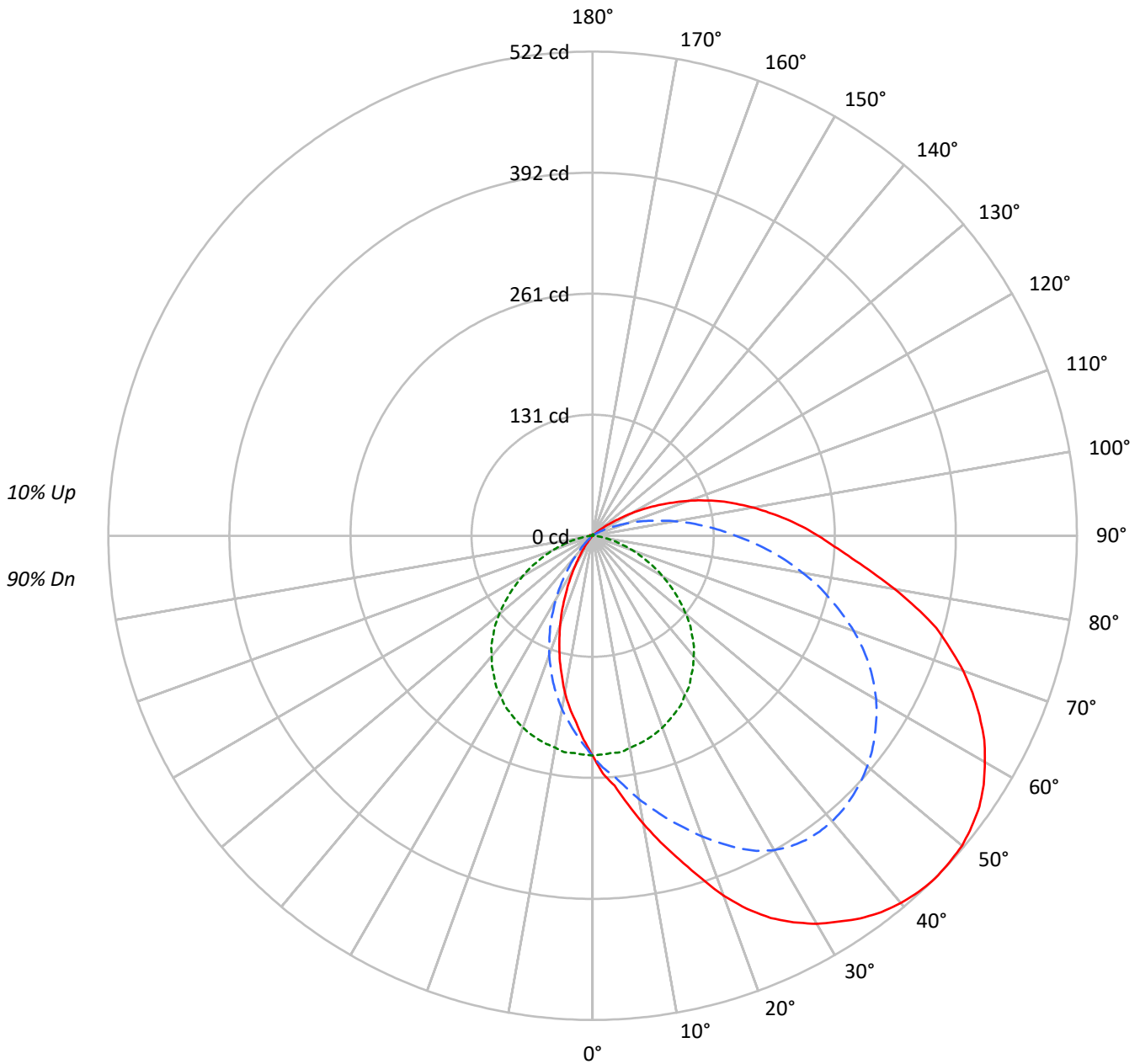
Lumens per Lamp: N/A
Luminaire Lumens: 1171.0 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551101

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-87-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°	2550	2550	2550
5°	2799	2513	2096
10°	3167	2481	1728
15°	3550	2450	1346
20°	4003	2410	991
25°	4379	2363	651
30°	4659	2301	367
35°	4901	2235	162
40°	5116	2153	39
45°	5300	2050	0
50°	5455	1914	0
55°	5573	1739	0
60°	5632	1538	0
65°	5656	1310	0
70°	5637	1068	0
75°	5565	788	4
80°	5340	482	24
85°	5161	229	33



TEST NUMBER: P551101

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.7	1.9
10°-20°	67.9	5.8
20°-30°	110.0	9.4
30°-40°	141.3	12.1
40°-50°	160.0	13.7
50°-60°	165.7	14.2
60°-70°	156.3	13.3
70°-80°	131.0	11.2
80°-90°	94.9	8.1
90°-100°	62.4	5.3
100°-110°	36.0	3.1
110°-120°	15.9	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°	200.6	17.1
0°-40°	342.0	29.2
0°-60°	667.7	57.0
0°-90°	1049.9	89.7
90°-120°	114.3	9.8
90°-150°	120.3	10.3
90°-180°	121.0	10.3
0°-180°	1171.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	237	237	237	237	237	
5°	270	260	235	213	202	27
15°	361	317	227	164	137	104
25°	455	372	211	108	68	210
35°	504	401	185	52	17	316
45°	522	397	152	12	0	403
55°	509	372	109	0	0	455
65°	460	329	65	0	0	455
75°	384	265	28	0	0	402
85°	281	192	4	1	2	240
90°	243	154	1	2	2	133
95°	209	121	1	2	3	164
105°	144	62	1	2	2	152
115°	78	21	1	1	2	78
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: P551101

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	236.9	236.9	236.9	236.9	236.9	236.9	236.9	236.9	236.9	236.9	236.9
2.5°	256.8	256.5	255.6	254.1	252.0	248.3	245.3	242.6	239.0	236.0	230.2
5°	270.4	268.8	267.6	266.1	261.3	258.0	252.6	246.5	240.8	235.1	223.6
7.5°	292.1	289.7	287.9	283.6	277.0	269.5	261.0	255.3	251.3	235.4	215.7
10°	315.3	313.2	309.6	302.0	293.9	283.0	271.0	257.4	245.3	232.0	208.8
12.5°	338.2	335.2	330.1	320.4	309.0	295.4	278.8	262.8	245.6	229.9	200.7
15°	361.2	357.9	352.4	340.7	325.6	307.8	287.6	267.3	247.1	227.2	192.2
17.5°	386.2	381.7	373.6	360.3	341.3	319.2	295.4	271.0	246.5	223.9	183.2
20°	413.1	406.7	398.0	380.2	357.9	331.9	303.2	274.6	246.2	220.0	172.9
22.5°	435.4	429.1	419.4	401.0	374.2	342.5	309.9	277.0	245.0	215.4	163.2
25°	454.7	449.6	439.0	417.9	389.5	353.6	316.2	278.8	243.2	210.6	153.0
27.5°	469.8	465.0	453.2	431.5	402.5	363.6	321.1	279.7	240.8	205.8	142.4
30°	483.1	478.3	464.1	441.7	411.3	371.4	325.9	280.0	237.8	198.5	131.0
32.5°	493.3	488.8	474.3	450.5	417.3	376.9	328.6	279.7	233.8	193.4	118.6
35°	503.6	499.1	482.2	456.8	421.8	379.3	330.7	278.2	229.0	185.0	106.8
37.5°	511.4	506.3	489.1	461.1	423.9	379.9	330.4	276.1	223.9	178.0	95.0
40°	516.9	511.4	493.0	463.5	424.5	379.0	328.0	272.5	217.9	169.3	82.7
42.5°	520.5	514.5	494.9	467.1	423.3	376.6	324.4	267.9	211.2	161.7	70.9
45°	522.3	516.0	495.2	464.1	421.2	372.0	318.9	262.2	204.0	151.5	59.1
47.5°	521.4	514.5	493.6	460.8	417.3	367.2	312.9	255.3	195.2	142.4	48.0
50°	519.9	512.7	490.3	456.5	411.9	361.2	306.3	246.8	186.2	131.3	38.0
52.5°	515.1	507.8	486.7	450.5	405.5	354.2	297.2	238.1	176.5	120.4	29.0
55°	509.0	502.4	480.4	445.1	397.4	345.8	288.8	228.7	167.2	109.2	20.8
57.5°	499.7	493.6	472.5	436.3	389.2	336.4	279.4	218.5	155.4	98.1	14.5
60°	488.2	482.2	461.7	426.4	379.9	325.9	269.2	207.9	144.8	86.9	9.1
62.5°	476.1	470.4	449.0	414.0	368.1	314.7	258.0	197.3	133.7	76.6	5.4
65°	460.2	454.7	435.4	399.2	355.1	302.6	245.6	184.7	122.2	65.2	3.0
67.5°	443.3	438.4	418.8	385.6	340.1	289.4	232.9	172.3	110.1	55.2	1.5
70°	425.2	419.1	401.0	367.2	324.7	274.3	219.1	159.6	98.7	45.6	0.0
72.5°	404.0	399.5	382.0	350.0	306.9	258.3	204.9	145.7	86.0	36.2	0.3
75°	383.5	377.8	361.8	331.6	289.4	241.4	189.2	132.8	73.6	27.8	0.3
77.5°	357.0	355.1	340.1	310.8	272.8	225.1	172.0	117.1	61.9	19.9	0.3
80°	330.4	328.6	316.8	290.0	253.5	205.8	156.0	102.3	50.4	13.3	0.3
82.5°	304.2	301.7	290.6	268.2	233.8	189.5	139.4	87.5	39.8	8.1	0.3
85°	280.6	277.6	265.5	245.0	213.6	171.1	122.2	73.0	29.6	4.5	0.6
87.5°	260.4	258.3	245.0	223.9	193.1	153.9	107.1	59.1	20.8	2.1	0.9
90°	243.2	238.7	226.9	204.6	173.8	134.9	91.1	47.4	13.9	1.2	1.2
92.5°	226.3	222.4	209.4	186.5	156.6	118.6	75.7	36.2	8.8	0.6	1.5
95°	208.8	204.6	191.9	170.8	139.1	102.0	62.2	26.6	4.8	0.6	1.5
97.5°	191.6	187.7	174.4	153.3	123.4	87.5	49.2	18.7	2.4	0.6	1.2
100°	175.6	171.1	159.0	137.9	107.7	73.0	38.0	12.1	1.5	0.6	1.2
102.5°	158.7	155.1	142.7	122.2	91.4	59.4	28.4	7.5	0.6	0.6	0.9
105°	143.6	139.1	127.0	105.9	77.8	46.8	19.9	4.5	0.6	0.6	0.9



TEST NUMBER: P551101

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-87-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	93.5	89.9	79.4	61.6	39.5	18.4	5.4	0.9	0.9	0.9	0.9
115°	78.2	72.7	63.4	47.7	29.3	12.1	2.7	0.9	0.9	0.9	0.9
117.5°	62.5	57.9	51.3	36.2	19.3	7.8	1.5	0.9	0.9	0.9	0.9
120°	48.9	44.7	37.1	25.0	13.0	4.5	0.6	0.9	0.9	0.9	0.9
122.5°	35.0	31.7	25.0	16.3	7.8	2.1	0.9	0.9	1.2	1.2	0.9
125°	23.2	21.4	16.6	10.0	4.8	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.1	13.6	9.7	5.7	2.1	0.9	0.9	1.2	1.2	1.2	0.9
130°	8.4	7.5	5.7	3.3	0.9	0.9	0.9	1.2	1.2	1.2	0.9
132.5°	4.8	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: P551101

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-82-87-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	236.9	236.9	236.9
2.5°	225.4	221.2	220.0
5°	213.3	206.4	202.5
7.5°	201.3	191.9	187.4
10°	190.1	176.8	172.0
12.5°	176.8	161.4	153.9
15°	164.1	144.2	137.0
17.5°	150.0	127.6	119.2
20°	136.7	111.0	102.3
22.5°	121.6	94.7	85.1
25°	108.0	78.5	67.6
27.5°	92.9	61.9	52.5
30°	78.8	47.4	38.0
32.5°	65.2	34.7	26.3
35°	52.5	23.5	16.6
37.5°	40.4	14.5	8.4
40°	29.3	7.5	3.9
42.5°	19.6	3.6	2.1
45°	12.1	1.8	0.0
47.5°	6.9	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°	126.7	123.1	111.0	91.1	63.7	35.6	13.3	2.4	0.6	0.9	0.9
110°	110.4	107.4	95.0	75.7	51.3	26.6	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)