

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: P551168

Luminaire Tested: **FCC-X-2-LD4-1STD-50-UNV-82-88-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: P551168  
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-82-88-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

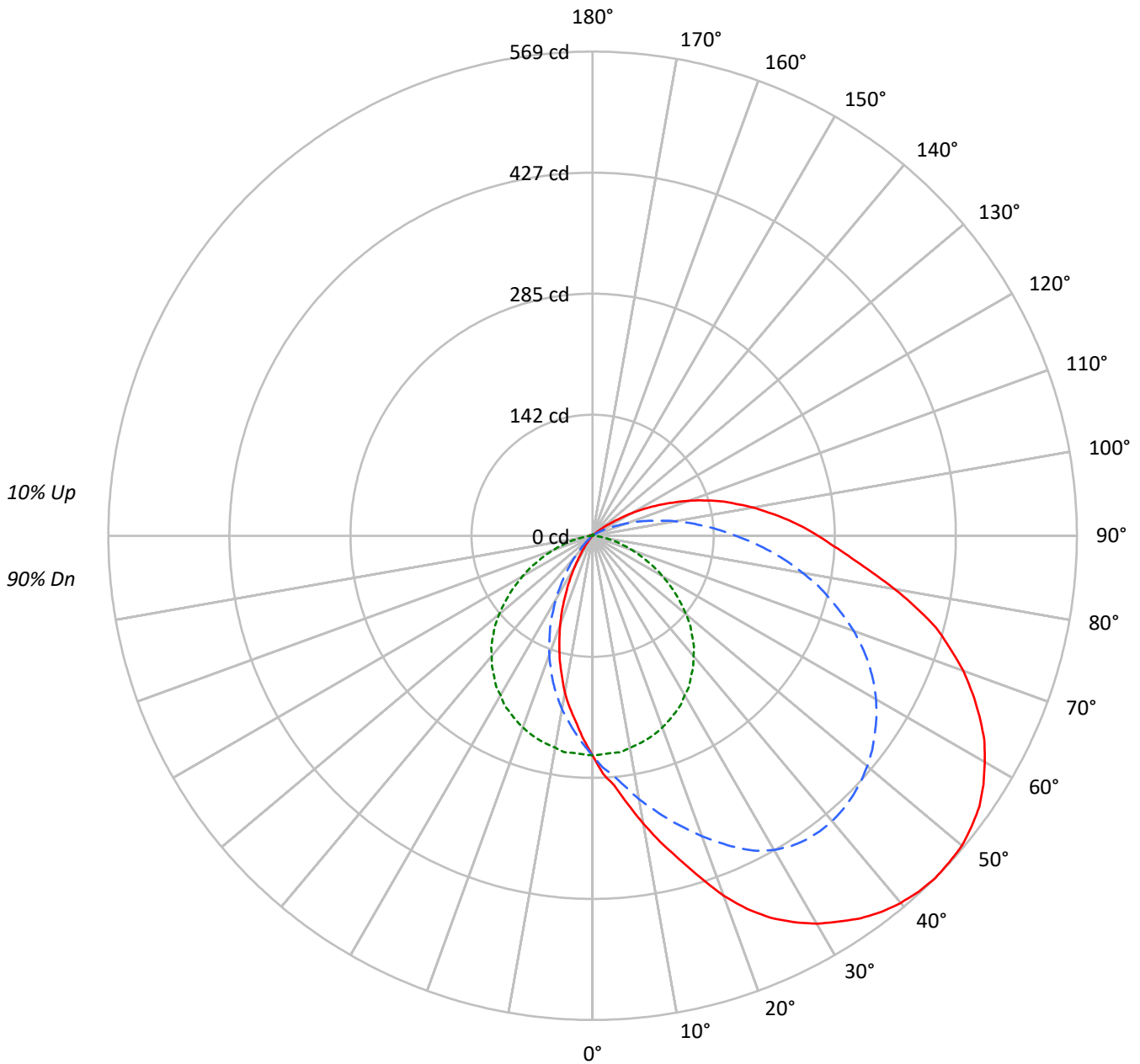
Lumens per Lamp: N/A  
Luminaire Lumens: 1276.0 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P551168

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-88-ED1D

### 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°	2778	2778	2778
5°	3050	2737	2284
10°	3451	2704	1882
15°	3868	2670	1467
20°	4362	2626	1081
25°	4772	2576	710
30°	5077	2507	399
35°	5341	2436	176
40°	5575	2346	43
45°	5775	2234	0
50°	5944	2084	0
55°	6073	1895	0
60°	6138	1676	0
65°	6163	1426	0
70°	6143	1162	0
75°	6064	856	4
80°	5818	526	26
85°	5624	249	37



TEST NUMBER: P551168

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.7	1.9
10°-20°	74.0	5.8
20°-30°	119.9	9.4
30°-40°	154.0	12.1
40°-50°	174.3	13.7
50°-60°	180.6	14.2
60°-70°	170.3	13.3
70°-80°	142.7	11.2
80°-90°	103.5	8.1
90°-100°	68.0	5.3
100°-110°	39.3	3.1
110°-120°	17.3	1.4
120°-130°	4.7	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°	218.6	17.1
0°-40°	372.6	29.2
0°-60°	727.5	57.0
0°-90°	1144.0	89.7
90°-120°	124.6	9.8
90°-150°	131.1	10.3
90°-180°	132.0	10.3
0°-180°	1276.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	258	258	258	258	258	
5°	295	283	256	232	221	30
15°	394	345	248	179	149	113
25°	496	405	230	118	74	229
35°	549	436	202	57	18	344
45°	569	432	165	13	0	439
55°	555	405	119	0	0	495
65°	501	358	71	0	0	496
75°	418	289	30	0	0	438
85°	306	210	5	1	2	261
90°	265	168	1	2	2	145
95°	228	131	1	2	3	179
105°	156	68	1	2	3	165
115°	85	23	1	1	2	85
125°	25	3	1	1	1	25
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°	258.1	258.1	258.1	258.1	258.1	258.1	258.1	258.1	258.1	258.1	258.1
2.5°	279.8	279.5	278.5	276.8	274.5	270.6	267.3	264.4	260.4	257.1	250.9
5°	294.6	293.0	291.6	290.0	284.7	281.1	275.2	268.6	262.4	256.1	243.6
7.5°	318.3	315.6	313.7	309.1	301.8	293.6	284.4	278.2	273.9	256.5	235.1
10°	343.6	341.3	337.3	329.1	320.2	308.4	295.3	280.5	267.3	252.8	227.5
12.5°	368.6	365.3	359.7	349.2	336.7	321.9	303.8	286.4	267.6	250.5	218.6
15°	393.6	390.0	384.0	371.2	354.8	335.4	313.3	291.3	269.3	247.6	209.4
17.5°	420.9	415.9	407.0	392.6	371.9	347.9	321.9	295.3	268.6	244.0	199.6
20°	450.1	443.2	433.7	414.3	390.0	361.7	330.4	299.2	268.3	239.7	188.4
22.5°	474.5	467.5	457.0	437.0	407.7	373.2	337.7	301.8	267.0	234.8	177.9
25°	495.5	489.9	478.4	455.4	424.5	385.3	344.6	303.8	265.0	229.5	166.7
27.5°	511.9	506.7	493.9	470.2	438.6	396.2	349.8	304.8	262.4	224.2	155.2
30°	526.4	521.1	505.7	481.4	448.1	404.7	355.1	305.1	259.1	216.3	142.7
32.5°	537.6	532.6	516.9	490.9	454.7	410.7	358.1	304.8	254.8	210.8	129.2
35°	548.8	543.8	525.4	497.8	459.7	413.3	360.4	303.1	249.6	201.6	116.4
37.5°	557.3	551.7	533.0	502.4	462.0	414.0	360.0	300.8	244.0	194.0	103.6
40°	563.2	557.3	537.3	505.0	462.6	413.0	357.4	296.9	237.4	184.5	90.1
42.5°	567.2	560.6	539.2	509.0	461.3	410.3	353.5	292.0	230.2	176.2	77.3
45°	569.1	562.2	539.6	505.7	459.0	405.4	347.5	285.7	222.3	165.1	64.4
47.5°	568.2	560.6	537.9	502.1	454.7	400.1	341.0	278.2	212.7	155.2	52.3
50°	566.5	558.6	534.3	497.5	448.8	393.6	333.7	269.0	202.9	143.0	41.4
52.5°	561.3	553.4	530.3	490.9	441.9	386.0	323.9	259.4	192.3	131.2	31.6
55°	554.7	547.4	523.4	485.0	433.0	376.8	314.7	249.2	182.2	119.0	22.7
57.5°	544.5	537.9	514.9	475.4	424.1	366.6	304.5	238.0	169.3	106.9	15.8
60°	532.0	525.4	503.1	464.6	414.0	355.1	293.3	226.5	157.8	94.7	9.9
62.5°	518.8	512.6	489.2	451.1	401.1	342.9	281.1	215.0	145.7	83.5	5.9
65°	501.4	495.5	474.5	435.0	387.0	329.8	267.6	201.2	133.2	71.0	3.3
67.5°	483.0	477.7	456.4	420.2	370.6	315.3	253.8	187.7	120.0	60.2	1.6
70°	463.3	456.7	437.0	400.1	353.8	298.9	238.7	173.9	107.5	49.6	0.0
72.5°	440.3	435.3	416.3	381.4	334.4	281.4	223.3	158.8	93.7	39.5	0.3
75°	417.9	411.7	394.2	361.3	315.3	263.0	206.2	144.7	80.2	30.2	0.3
77.5°	389.0	387.0	370.6	338.7	297.2	245.3	187.4	127.6	67.4	21.7	0.3
80°	360.0	358.1	345.2	316.0	276.2	224.2	170.0	111.5	54.9	14.5	0.3
82.5°	331.4	328.8	316.6	292.3	254.8	206.5	151.9	95.4	43.4	8.9	0.3
85°	305.8	302.5	289.3	267.0	232.8	186.4	133.2	79.6	32.2	4.9	0.7
87.5°	283.8	281.4	267.0	244.0	210.4	167.7	116.7	64.4	22.7	2.3	1.0
90°	265.0	260.1	247.3	222.9	189.4	147.0	99.3	51.6	15.1	1.3	1.3
92.5°	246.6	242.3	228.2	203.2	170.6	129.2	82.5	39.5	9.5	0.7	1.6
95°	227.5	222.9	209.1	186.1	151.6	111.1	67.7	28.9	5.3	0.7	1.6
97.5°	208.8	204.5	190.0	167.0	134.5	95.4	53.6	20.4	2.6	0.7	1.3
100°	191.4	186.4	173.3	150.3	117.4	79.6	41.4	13.2	1.6	0.7	1.3
102.5°	172.9	169.0	155.5	133.2	99.6	64.8	30.9	8.2	0.7	0.7	1.0
105°	156.5	151.6	138.4	115.4	84.8	51.0	21.7	4.9	0.7	0.7	1.0



TEST NUMBER: P551168

CATALOG NUMBER: FCC-X-2-LD4-1STD-50-UNV-82-88-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	101.9	98.0	86.5	67.1	43.1	20.1	5.9	1.0	1.0	1.0	1.0
115°	85.2	79.2	69.0	51.9	31.9	13.2	3.0	1.0	1.0	1.0	1.0
117.5°	68.1	63.1	55.9	39.5	21.0	8.5	1.6	1.0	1.0	1.0	1.0
120°	53.3	48.7	40.4	27.3	14.1	4.9	0.7	1.0	1.0	1.0	1.0
122.5°	38.1	34.5	27.3	17.8	8.5	2.3	1.0	1.0	1.3	1.3	1.0
125°	25.3	23.3	18.1	10.9	5.3	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.4	14.8	10.5	6.2	2.3	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.2	8.2	6.2	3.6	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.3	4.9	3.3	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.3	1.6	1.6	1.6	1.3
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.3
142.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
145°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.3	1.3	1.3
147.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.3	1.3
150°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
152.5°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.3
155°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
157.5°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.6	1.3	1.3	1.6
160°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.6	1.6	1.6	1.6
172.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
175°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	1.6
177.5°	0.3	0.7	0.7	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°	258.1	258.1	258.1
2.5°	245.6	241.0	239.7
5°	232.5	224.9	220.6
7.5°	219.3	209.1	204.2
10°	207.1	192.7	187.4
12.5°	192.7	175.9	167.7
15°	178.9	157.2	149.3
17.5°	163.4	139.1	129.9
20°	148.9	121.0	111.5
22.5°	132.5	103.2	92.7
25°	117.7	85.5	73.7
27.5°	101.3	67.4	57.2
30°	85.8	51.6	41.4
32.5°	71.0	37.8	28.6
35°	57.2	25.6	18.1
37.5°	44.1	15.8	9.2
40°	31.9	8.2	4.3
42.5°	21.4	3.9	2.3
45°	13.2	2.0	0.0
47.5°	7.6	0.0	0.0
50°	3.9	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	0.7	1.0
80°	0.7	1.3	1.6
82.5°	1.3	1.6	1.6
85°	1.3	1.6	2.0
87.5°	1.6	2.0	2.3
90°	2.0	2.3	2.3
92.5°	2.0	2.6	2.6
95°	2.3	2.6	3.0
97.5°	2.6	3.0	3.0
100°	2.3	3.0	3.3
102.5°	2.0	3.0	3.0
105°	1.6	2.3	2.6





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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	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.3	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	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°	138.1	134.1	121.0	99.3	69.4	38.8	14.5	2.6	0.7	1.0	1.0
110°	120.3	117.1	103.6	82.5	55.9	28.9	9.5	1.6	1.0	1.0	1.0







107.5°	1.3	2.0	2.3
110°	1.3	1.6	2.0



(END OF REPORT)