

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: P551103

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-82-88-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: P551103  
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-82-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

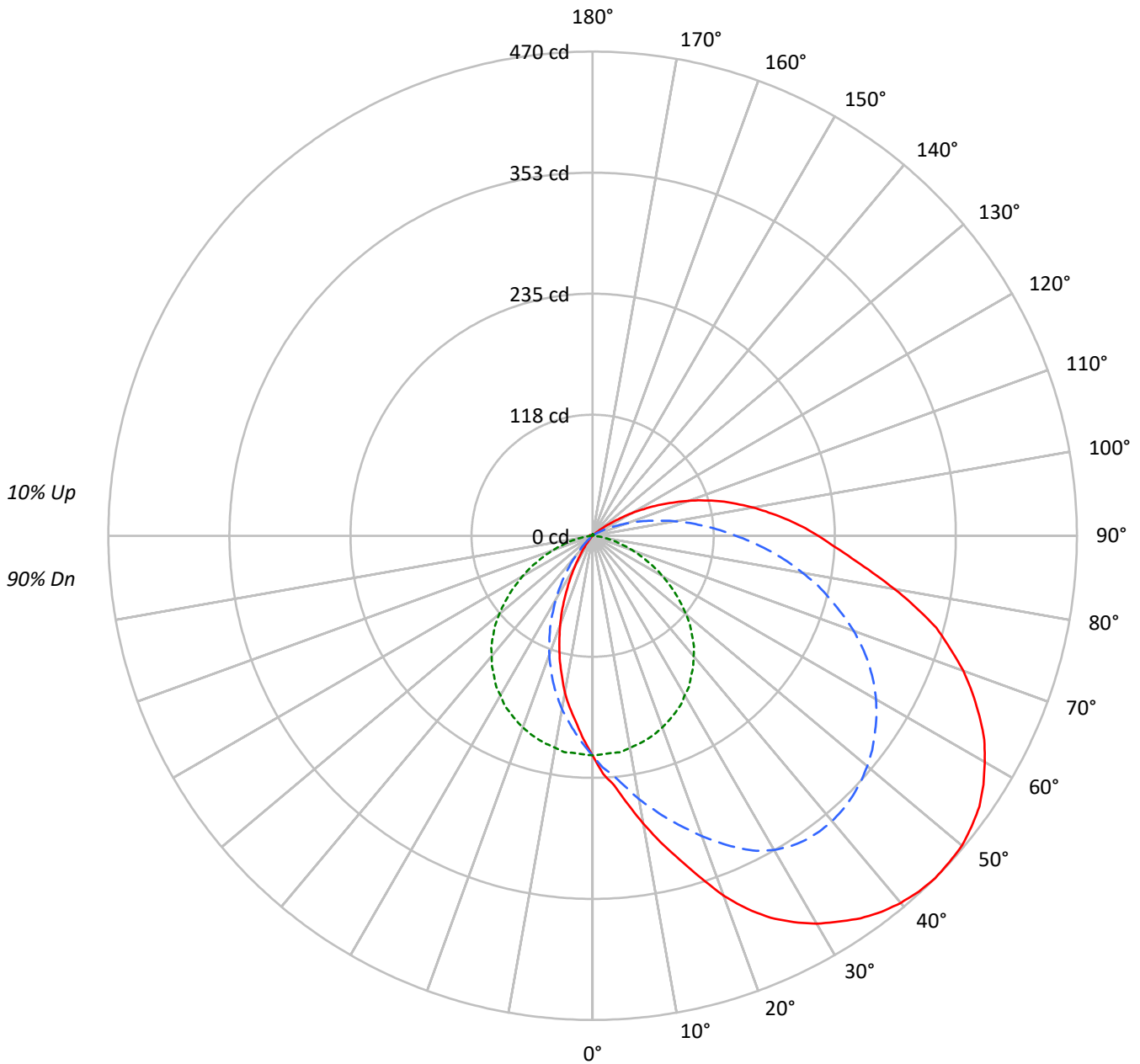
Lumens per Lamp: N/A  
Luminaire Lumens: 1054.0 lumens  
Efficiency: N/A  
Efficacy: 63.1 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (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°	2295	2295	2295
5°	2519	2262	1886
10°	2851	2234	1555
15°	3195	2205	1212
20°	3603	2169	893
25°	3942	2128	586
30°	4194	2072	330
35°	4412	2012	145
40°	4605	1938	35
45°	4771	1844	0
50°	4911	1721	0
55°	5017	1565	0
60°	5069	1384	0
65°	5091	1179	0
70°	5074	960	0
75°	5009	709	4
80°	4806	435	23
85°	4646	208	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.4	1.9
10°-20°	61.1	5.8
20°-30°	99.0	9.4
30°-40°	127.2	12.1
40°-50°	144.0	13.7
50°-60°	149.2	14.2
60°-70°	140.7	13.3
70°-80°	117.9	11.2
80°-90°	85.5	8.1
90°-100°	56.2	5.3
100°-110°	32.4	3.1
110°-120°	14.3	1.4
120°-130°	3.9	0.4
130°-140°	0.9	0.1
140°-150°	0.6	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	180.6	17.1
0°-40°	307.8	29.2
0°-60°	601.0	57.0
0°-90°	945.0	89.7
90°-120°	102.9	9.8
90°-150°	108.3	10.3
90°-180°	109.0	10.3
0°-180°	1054.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	213	213	213	213	213	
5°	243	234	212	192	182	25
15°	325	285	204	148	123	94
25°	409	334	190	97	61	189
35°	453	361	166	47	15	284
45°	470	357	136	11	0	363
55°	458	334	98	0	0	409
65°	414	296	59	0	0	410
75°	345	239	25	0	0	362
85°	253	173	4	1	2	216
90°	219	139	1	2	2	120
95°	188	108	0	2	2	147
105°	129	56	0	1	2	136
115°	70	19	1	1	1	70
125°	21	3	1	1	1	21
135°	1	1	1	1	1	2
145°	0	1	1	1	1	0
155°	0	1	1	1	0	0
165°	0	1	1	1	0	0
175°	0	1	1	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°	213.2	213.2	213.2	213.2	213.2	213.2	213.2	213.2	213.2	213.2	213.2
2.5°	231.1	230.9	230.0	228.7	226.8	223.5	220.8	218.4	215.1	212.4	207.2
5°	243.3	242.0	240.9	239.5	235.2	232.2	227.3	221.9	216.7	211.6	201.2
7.5°	262.9	260.7	259.1	255.3	249.3	242.5	234.9	229.8	226.2	211.8	194.2
10°	283.8	281.9	278.7	271.9	264.5	254.8	243.9	231.7	220.8	208.9	187.9
12.5°	304.5	301.7	297.1	288.4	278.1	265.9	251.0	236.6	221.1	207.0	180.6
15°	325.1	322.1	317.2	306.6	293.0	277.0	258.8	240.6	222.4	204.5	173.0
17.5°	347.6	343.6	336.2	324.3	307.2	287.3	265.9	243.9	221.9	201.5	164.9
20°	371.8	366.1	358.2	342.2	322.1	298.8	272.9	247.1	221.6	198.0	155.6
22.5°	391.9	386.2	377.5	360.9	336.8	308.3	278.9	249.3	220.5	193.9	146.9
25°	409.3	404.7	395.2	376.2	350.6	318.3	284.6	251.0	218.9	189.6	137.7
27.5°	422.9	418.5	407.9	388.4	362.3	327.3	289.0	251.8	216.7	185.2	128.2
30°	434.8	430.5	417.7	397.6	370.2	334.3	293.3	252.0	214.0	178.7	117.9
32.5°	444.1	440.0	426.9	405.5	375.6	339.2	295.8	251.8	210.5	174.1	106.7
35°	453.3	449.2	434.0	411.2	379.7	341.4	297.7	250.4	206.1	166.5	96.1
37.5°	460.3	455.7	440.2	415.0	381.6	341.9	297.4	248.5	201.5	160.2	85.6
40°	465.2	460.3	443.8	417.2	382.1	341.1	295.2	245.2	196.1	152.4	74.4
42.5°	468.5	463.1	445.4	420.4	381.0	338.9	292.0	241.2	190.1	145.6	63.8
45°	470.1	464.4	445.7	417.7	379.1	334.9	287.1	236.0	183.6	136.3	53.2
47.5°	469.3	463.1	444.3	414.7	375.6	330.5	281.6	229.8	175.7	128.2	43.2
50°	468.0	461.4	441.3	410.9	370.7	325.1	275.7	222.2	167.6	118.1	34.2
52.5°	463.6	457.1	438.1	405.5	365.0	318.8	267.5	214.3	158.9	108.4	26.1
55°	458.2	452.2	432.4	400.6	357.7	311.2	259.9	205.9	150.5	98.3	18.7
57.5°	449.8	444.3	425.3	392.7	350.4	302.8	251.5	196.6	139.9	88.3	13.0
60°	439.4	434.0	415.5	383.8	341.9	293.3	242.3	187.1	130.4	78.2	8.1
62.5°	428.6	423.4	404.1	372.6	331.3	283.3	232.2	177.6	120.3	69.0	4.9
65°	414.2	409.3	391.9	359.3	319.7	272.4	221.1	166.2	110.0	58.7	2.7
67.5°	399.0	394.6	377.0	347.1	306.1	260.5	209.7	155.1	99.1	49.7	1.4
70°	382.7	377.2	360.9	330.5	292.2	246.9	197.2	143.7	88.8	41.0	0.0
72.5°	363.7	359.6	343.8	315.0	276.2	232.5	184.4	131.2	77.4	32.6	0.3
75°	345.2	340.0	325.6	298.5	260.5	217.3	170.3	119.5	66.3	25.0	0.3
77.5°	321.3	319.7	306.1	279.7	245.5	202.6	154.8	105.4	55.7	17.9	0.3
80°	297.4	295.8	285.2	261.0	228.1	185.2	140.4	92.1	45.4	12.0	0.3
82.5°	273.8	271.6	261.5	241.4	210.5	170.6	125.5	78.8	35.9	7.3	0.3
85°	252.6	249.9	239.0	220.5	192.3	154.0	110.0	65.7	26.6	4.1	0.5
87.5°	234.4	232.5	220.5	201.5	173.8	138.5	96.4	53.2	18.7	1.9	0.8
90°	218.9	214.8	204.2	184.1	156.4	121.4	82.0	42.6	12.5	1.1	1.1
92.5°	203.7	200.2	188.5	167.8	141.0	106.7	68.2	32.6	7.9	0.5	1.4
95°	187.9	184.1	172.7	153.7	125.2	91.8	55.9	23.9	4.3	0.5	1.4
97.5°	172.5	168.9	157.0	138.0	111.1	78.8	44.3	16.8	2.2	0.5	1.1
100°	158.1	154.0	143.1	124.1	97.0	65.7	34.2	10.9	1.4	0.5	1.1
102.5°	142.9	139.6	128.5	110.0	82.3	53.5	25.5	6.8	0.5	0.5	0.8
105°	129.3	125.2	114.3	95.3	70.1	42.1	17.9	4.1	0.5	0.5	0.8



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	84.2	80.9	71.4	55.4	35.6	16.6	4.9	0.8	0.8	0.8	0.8
115°	70.3	65.5	57.0	42.9	26.3	10.9	2.4	0.8	0.8	0.8	0.8
117.5°	56.2	52.1	46.2	32.6	17.4	7.1	1.4	0.8	0.8	0.8	0.8
120°	44.0	40.2	33.4	22.5	11.7	4.1	0.5	0.8	0.8	0.8	0.8
122.5°	31.5	28.5	22.5	14.7	7.1	1.9	0.8	0.8	1.1	1.1	0.8
125°	20.9	19.3	14.9	9.0	4.3	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	13.6	12.2	8.7	5.2	1.9	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.6	6.8	5.2	3.0	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.3	4.1	2.7	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1
135°	1.1	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.1	1.4	1.4	1.4	1.1
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.1
142.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
145°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.1	1.1	1.1
147.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.1	1.1
150°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
152.5°	0.3	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.1
155°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
157.5°	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.4	1.1	1.1	1.4
160°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.1	1.1	1.1
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.1	1.1	1.1	1.1
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.1	1.4	1.4	1.4	1.4
172.5°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
175°	0.5	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.4
177.5°	0.3	0.5	0.5	0.8	0.8	1.1	1.1	1.4	1.4	1.4	1.1
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	213.2	213.2	213.2
2.5°	202.9	199.1	198.0
5°	192.0	185.8	182.2
7.5°	181.2	172.7	168.7
10°	171.1	159.2	154.8
12.5°	159.2	145.3	138.5
15°	147.7	129.8	123.3
17.5°	135.0	114.9	107.3
20°	123.0	99.9	92.1
22.5°	109.5	85.3	76.6
25°	97.2	70.6	60.8
27.5°	83.7	55.7	47.3
30°	70.9	42.6	34.2
32.5°	58.7	31.2	23.6
35°	47.3	21.2	14.9
37.5°	36.4	13.0	7.6
40°	26.3	6.8	3.5
42.5°	17.7	3.3	1.9
45°	10.9	1.6	0.0
47.5°	6.2	0.0	0.0
50°	3.3	0.0	0.0
52.5°	1.4	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	0.5	0.8
80°	0.5	1.1	1.4
82.5°	1.1	1.4	1.4
85°	1.1	1.4	1.6
87.5°	1.4	1.6	1.9
90°	1.6	1.9	1.9
92.5°	1.6	2.2	2.2
95°	1.9	2.2	2.4
97.5°	2.2	2.4	2.4
100°	1.9	2.4	2.7
102.5°	1.6	2.4	2.4
105°	1.4	1.9	2.2





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.1	1.4	1.4
115°	0.8	1.1	1.4
117.5°	0.8	1.1	1.1
120°	0.8	0.8	1.1
122.5°	0.8	0.8	1.1
125°	0.8	0.8	1.1
127.5°	1.1	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.1	0.8	0.8
135°	1.1	0.8	0.8
137.5°	1.1	0.8	0.8
140°	1.1	0.8	0.8
142.5°	1.1	0.8	0.8
145°	0.8	0.8	0.8
147.5°	0.8	0.8	0.8
150°	0.8	0.8	0.5
152.5°	0.8	0.5	0.5
155°	0.8	0.5	0.3
157.5°	1.1	0.5	0.3
160°	0.8	0.5	0.3
162.5°	0.8	0.5	0.3
165°	0.8	0.5	0.0
167.5°	0.8	0.5	0.3
170°	0.8	0.5	0.3
172.5°	0.8	0.5	0.3
175°	0.8	0.3	0.3
177.5°	0.8	0.3	0.3
180°	0.8	0.8	0.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	114.1	110.8	99.9	82.0	57.3	32.0	12.0	2.2	0.5	0.8	0.8
110°	99.4	96.7	85.6	68.2	46.2	23.9	7.9	1.4	0.8	0.8	0.8







107.5°	1.1	1.6	1.9
110°	1.1	1.4	1.6



(END OF REPORT)