

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: P551023

Luminaire Tested: **FCC-X-2-LD4-1STD-35-UNV-81-88-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: P551023  
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-81-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

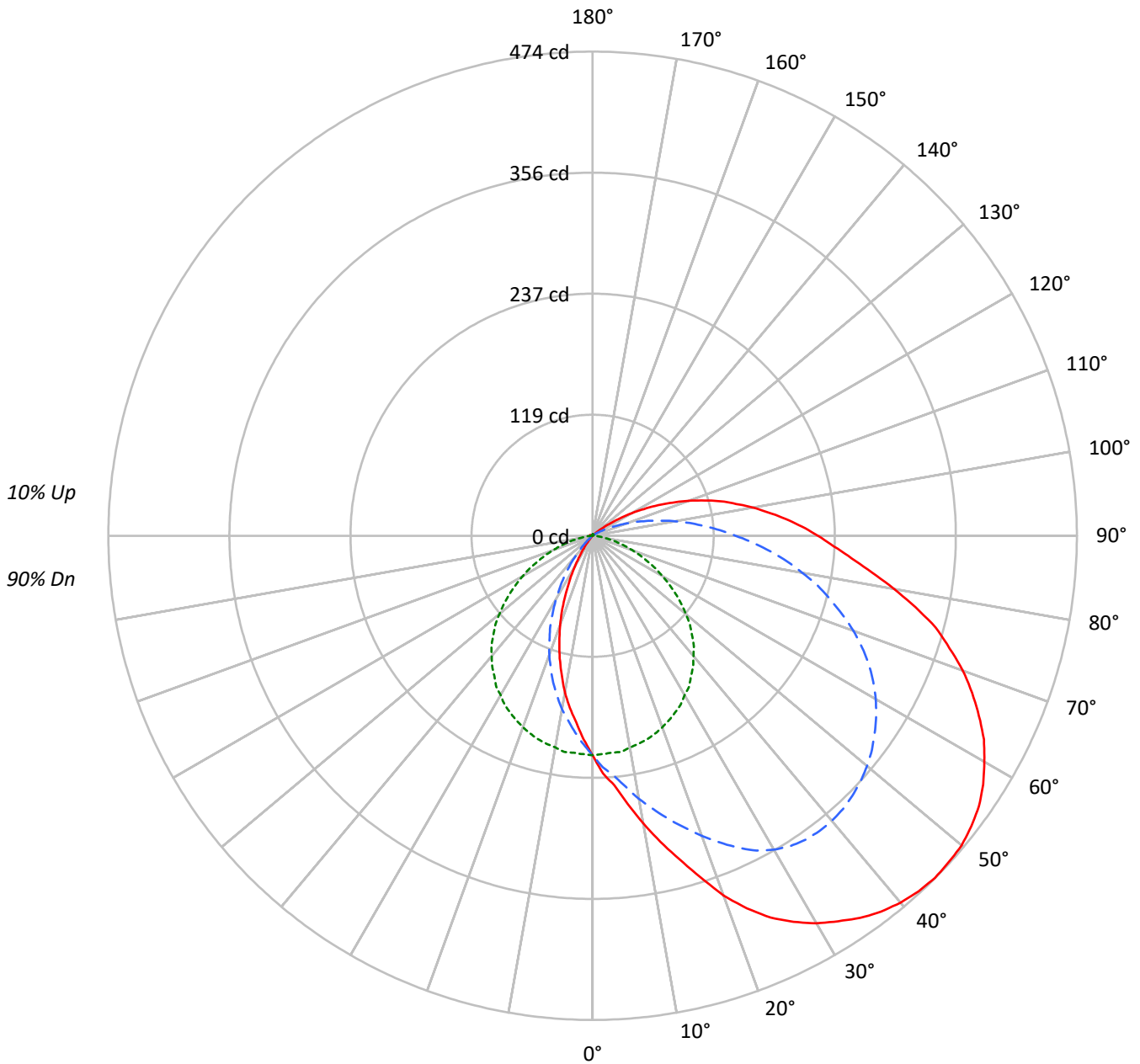
Lumens per Lamp: N/A  
Luminaire Lumens: 1062.0 lumens  
Efficiency: N/A  
Efficacy: 63.6 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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°	2312	2312	2312
5°	2538	2279	1901
10°	2873	2250	1567
15°	3219	2222	1221
20°	3630	2186	899
25°	3972	2144	590
30°	4225	2088	333
35°	4445	2026	147
40°	4640	1952	36
45°	4807	1859	0
50°	4947	1734	0
55°	5055	1578	0
60°	5108	1394	0
65°	5129	1187	0
70°	5112	968	0
75°	5047	715	4
80°	4842	435	23
85°	4681	208	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.6	1.9
10°-20°	61.6	5.8
20°-30°	99.8	9.4
30°-40°	128.2	12.1
40°-50°	145.1	13.7
50°-60°	150.3	14.2
60°-70°	141.8	13.3
70°-80°	118.8	11.2
80°-90°	86.1	8.1
90°-100°	56.6	5.3
100°-110°	32.7	3.1
110°-120°	14.4	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°	182.0	17.1
0°-40°	310.1	29.2
0°-60°	605.5	57.0
0°-90°	952.2	89.7
90°-120°	103.7	9.8
90°-150°	109.1	10.3
90°-180°	110.0	10.4
0°-180°	1062.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	215	215	215	215	215	
5°	245	236	213	194	184	25
15°	328	287	206	149	124	94
25°	412	337	191	98	61	191
35°	457	363	168	48	15	286
45°	474	360	137	11	0	366
55°	462	337	99	0	0	412
65°	417	298	59	0	0	413
75°	348	241	25	0	0	365
85°	254	174	4	1	2	217
90°	221	140	1	2	2	121
95°	189	109	0	2	2	149
105°	130	56	0	1	2	137
115°	71	19	1	1	1	71
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°	214.8	214.8	214.8	214.8	214.8	214.8	214.8	214.8	214.8	214.8	214.8
2.5°	232.9	232.6	231.8	230.4	228.5	225.2	222.5	220.0	216.7	214.0	208.8
5°	245.2	243.8	242.7	241.4	237.0	234.0	229.0	223.6	218.4	213.2	202.8
7.5°	264.9	262.7	261.1	257.2	251.2	244.4	236.7	231.5	228.0	213.4	195.7
10°	286.0	284.1	280.8	273.9	266.5	256.7	245.7	233.4	222.5	210.4	189.4
12.5°	306.8	304.0	299.4	290.6	280.2	267.9	252.9	238.4	222.8	208.5	182.0
15°	327.6	324.6	319.6	309.0	295.3	279.1	260.8	242.5	224.1	206.1	174.3
17.5°	350.3	346.2	338.8	326.7	309.5	289.5	267.9	245.7	223.6	203.1	166.1
20°	374.6	368.9	360.9	344.8	324.6	301.0	275.0	249.0	223.3	199.5	156.8
22.5°	394.9	389.1	380.4	363.7	339.3	310.6	281.0	251.2	222.2	195.4	148.0
25°	412.4	407.7	398.2	379.0	353.3	320.7	286.8	252.9	220.6	191.0	138.7
27.5°	426.1	421.7	411.0	391.3	365.1	329.8	291.2	253.7	218.4	186.6	129.2
30°	438.1	433.7	420.9	400.6	373.0	336.9	295.5	253.9	215.6	180.1	118.8
32.5°	447.4	443.3	430.2	408.6	378.5	341.8	298.0	253.7	212.1	175.4	107.5
35°	456.7	452.6	437.3	414.3	382.6	344.0	299.9	252.3	207.7	167.7	96.9
37.5°	463.8	459.2	443.6	418.1	384.5	344.5	299.6	250.4	203.1	161.5	86.2
40°	468.8	463.8	447.1	420.3	385.0	343.7	297.5	247.1	197.6	153.5	75.0
42.5°	472.1	466.6	448.8	423.6	383.9	341.5	294.2	243.0	191.6	146.7	64.3
45°	473.7	467.9	449.1	420.9	382.0	337.4	289.3	237.8	185.0	137.4	53.6
47.5°	472.9	466.6	447.7	417.9	378.5	333.0	283.8	231.5	177.1	129.2	43.5
50°	471.5	464.9	444.7	414.0	373.5	327.6	277.8	223.8	168.8	119.0	34.5
52.5°	467.1	460.6	441.4	408.6	367.8	321.3	269.5	215.9	160.1	109.2	26.3
55°	461.7	455.6	435.7	403.6	360.4	313.6	261.9	207.4	151.6	99.1	18.9
57.5°	453.2	447.7	428.5	395.7	353.0	305.1	253.4	198.1	140.9	88.9	13.1
60°	442.8	437.3	418.7	386.7	344.5	295.5	244.1	188.5	131.4	78.8	8.2
62.5°	431.8	426.6	407.2	375.5	333.9	285.4	234.0	179.0	121.2	69.5	4.9
65°	417.3	412.4	394.9	362.0	322.1	274.5	222.8	167.5	110.8	59.1	2.7
67.5°	402.0	397.6	379.8	349.7	308.4	262.4	211.3	156.3	99.9	50.1	1.4
70°	385.6	380.1	363.7	333.0	294.4	248.7	198.7	144.8	89.5	41.3	0.0
72.5°	366.4	362.3	346.4	317.4	278.3	234.2	185.8	132.2	78.0	32.8	0.3
75°	347.8	342.6	328.1	300.7	262.4	218.9	171.6	120.4	66.8	25.2	0.3
77.5°	323.7	322.1	308.4	281.9	247.4	204.1	156.0	106.2	56.1	18.1	0.3
80°	299.6	298.0	287.3	263.0	229.9	186.6	141.5	92.8	45.7	12.0	0.3
82.5°	275.8	273.7	263.5	243.3	212.1	171.9	126.4	79.4	36.1	7.4	0.3
85°	254.5	251.8	240.8	222.2	193.7	155.2	110.8	66.2	26.8	4.1	0.5
87.5°	236.2	234.2	222.2	203.1	175.1	139.6	97.1	53.6	18.9	1.9	0.8
90°	220.6	216.5	205.8	185.5	157.6	122.3	82.6	43.0	12.6	1.1	1.1
92.5°	205.2	201.7	189.9	169.1	142.0	107.5	68.7	32.8	7.9	0.5	1.4
95°	189.4	185.5	174.0	154.9	126.2	92.5	56.4	24.1	4.4	0.5	1.4
97.5°	173.8	170.2	158.2	139.0	111.9	79.4	44.6	17.0	2.2	0.5	1.1
100°	159.3	155.2	144.2	125.1	97.7	66.2	34.5	10.9	1.4	0.5	1.1
102.5°	143.9	140.7	129.4	110.8	82.9	53.9	25.7	6.8	0.5	0.5	0.8
105°	130.3	126.2	115.2	96.1	70.6	42.4	18.1	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°	84.8	81.5	72.0	55.8	35.8	16.7	4.9	0.8	0.8	0.8	0.8
115°	70.9	66.0	57.5	43.2	26.5	10.9	2.5	0.8	0.8	0.8	0.8
117.5°	56.6	52.5	46.5	32.8	17.5	7.1	1.4	0.8	0.8	0.8	0.8
120°	44.3	40.5	33.7	22.7	11.8	4.1	0.5	0.8	0.8	0.8	0.8
122.5°	31.7	28.7	22.7	14.8	7.1	1.9	0.8	0.8	1.1	1.1	0.8
125°	21.1	19.4	15.1	9.0	4.4	0.8	0.8	0.8	1.1	1.1	0.8
127.5°	13.7	12.3	8.8	5.2	1.9	0.8	0.8	1.1	1.1	1.1	0.8
130°	7.7	6.8	5.2	3.0	0.8	0.8	0.8	1.1	1.1	1.1	0.8
132.5°	4.4	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°	214.8	214.8	214.8
2.5°	204.4	200.6	199.5
5°	193.5	187.2	183.6
7.5°	182.5	174.0	169.9
10°	172.4	160.4	156.0
12.5°	160.4	146.4	139.6
15°	148.9	130.8	124.2
17.5°	136.0	115.8	108.1
20°	124.0	100.7	92.8
22.5°	110.3	85.9	77.2
25°	98.0	71.1	61.3
27.5°	84.3	56.1	47.6
30°	71.4	43.0	34.5
32.5°	59.1	31.5	23.8
35°	47.6	21.3	15.1
37.5°	36.7	13.1	7.7
40°	26.5	6.8	3.6
42.5°	17.8	3.3	1.9
45°	10.9	1.6	0.0
47.5°	6.3	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	2.5
97.5°	2.2	2.5	2.5
100°	1.9	2.5	2.7
102.5°	1.6	2.5	2.5
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°	114.9	111.7	100.7	82.6	57.7	32.3	12.0	2.2	0.5	0.8	0.8
110°	100.2	97.4	86.2	68.7	46.5	24.1	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)