

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: P550957

Luminaire Tested: **FCC-X-2-LD4-1STD-30-UNV-81-87-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: P550957  
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-81-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

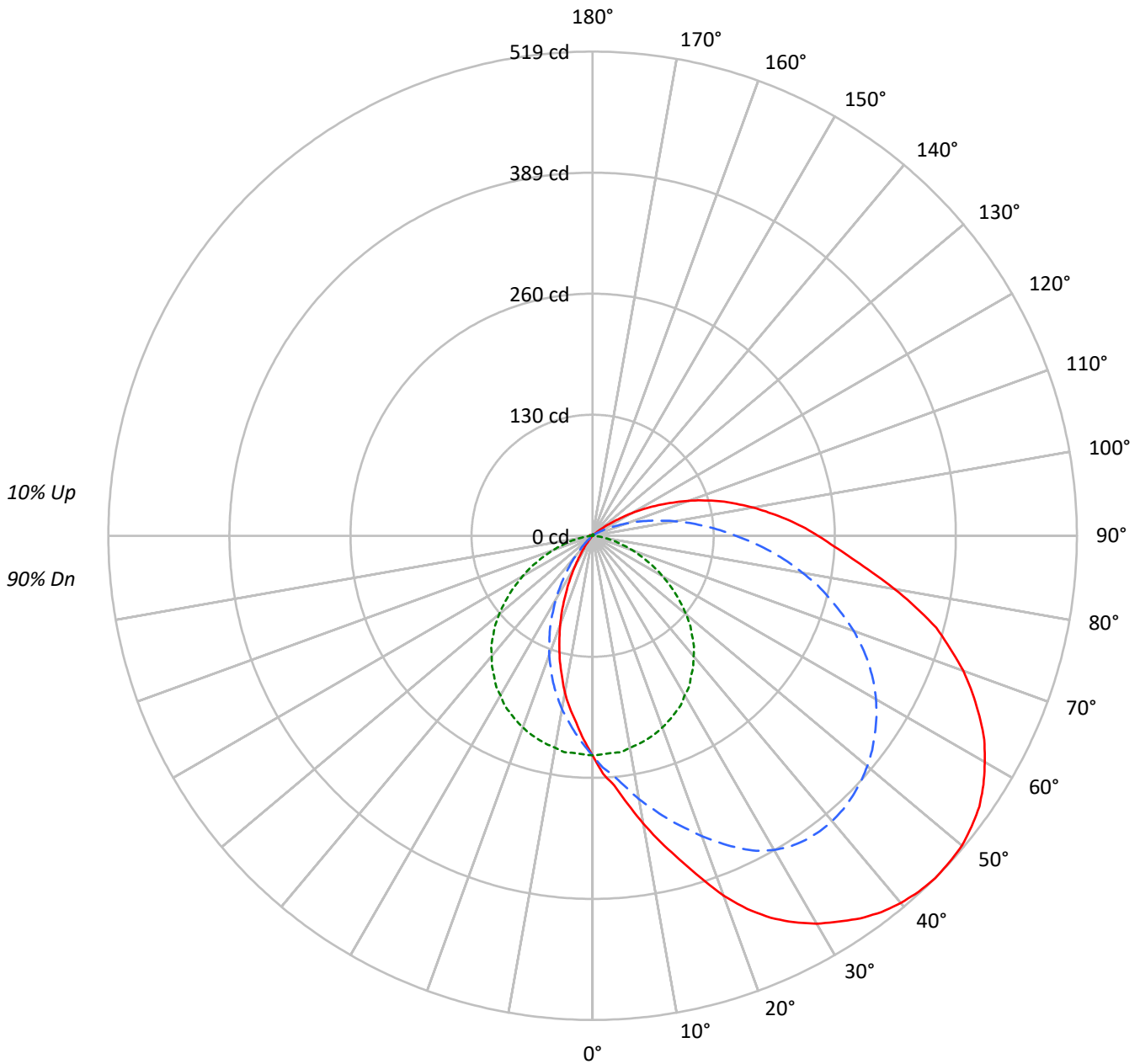
Lumens per Lamp: N/A  
Luminaire Lumens: 1164.0 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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

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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°	2534	2534	2534
5°	2782	2497	2084
10°	3148	2467	1718
15°	3528	2436	1338
20°	3979	2396	986
25°	4353	2350	647
30°	4631	2288	365
35°	4872	2222	161
40°	5086	2140	39
45°	5269	2038	0
50°	5423	1902	0
55°	5540	1729	0
60°	5599	1529	0
65°	5622	1302	0
70°	5603	1061	0
75°	5532	783	4
80°	5307	479	24
85°	5130	229	33



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	22.6	1.9
10°-20°	67.5	5.8
20°-30°	109.4	9.4
30°-40°	140.5	12.1
40°-50°	159.0	13.7
50°-60°	164.7	14.2
60°-70°	155.4	13.3
70°-80°	130.2	11.2
80°-90°	94.4	8.1
90°-100°	62.0	5.3
100°-110°	35.8	3.1
110°-120°	15.8	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°	199.4	17.1
0°-40°	339.9	29.2
0°-60°	663.7	57.0
0°-90°	1043.6	89.7
90°-120°	113.7	9.8
90°-150°	119.6	10.3
90°-180°	120.0	10.3
0°-180°	1164.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	235	235	235	235	235	
5°	269	258	234	212	201	27
15°	359	315	226	163	136	104
25°	452	369	209	107	67	209
35°	501	398	184	52	16	314
45°	519	394	151	12	0	401
55°	506	369	109	0	0	452
65°	457	327	65	0	0	453
75°	381	264	28	0	0	400
85°	279	191	4	1	2	238
90°	242	153	1	2	2	133
95°	208	120	1	2	3	163
105°	143	62	1	2	2	151
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	235.4	235.4	235.4	235.4	235.4	235.4	235.4	235.4	235.4	235.4	235.4
2.5°	255.2	254.9	254.0	252.5	250.4	246.8	243.8	241.1	237.5	234.5	228.9
5°	268.7	267.2	266.0	264.5	259.7	256.4	251.0	245.0	239.3	233.6	222.3
7.5°	290.3	287.9	286.1	281.9	275.3	267.8	259.4	253.7	249.8	233.9	214.5
10°	313.4	311.3	307.7	300.2	292.1	281.3	269.3	255.8	243.8	230.7	207.6
12.5°	336.2	333.2	328.1	318.5	307.1	293.6	277.1	261.2	244.1	228.6	199.5
15°	359.0	355.7	350.3	338.6	323.6	305.9	285.8	265.7	245.6	225.9	191.1
17.5°	383.9	379.4	371.3	358.1	339.2	317.3	293.6	269.3	245.0	222.6	182.1
20°	410.6	404.3	395.6	377.9	355.7	329.9	301.4	272.9	244.7	218.7	171.9
22.5°	432.8	426.5	416.9	398.6	371.9	340.4	308.0	275.3	243.5	214.2	162.3
25°	452.0	446.9	436.4	415.4	387.2	351.5	314.3	277.1	241.7	209.4	152.1
27.5°	467.0	462.2	450.5	428.9	400.1	361.4	319.1	278.0	239.3	204.6	141.6
30°	480.2	475.4	461.3	439.1	408.8	369.2	323.9	278.3	236.3	197.4	130.2
32.5°	490.4	485.9	471.5	447.8	414.8	374.6	326.6	278.0	232.4	192.3	117.9
35°	500.6	496.1	479.3	454.1	419.3	377.0	328.7	276.5	227.7	183.9	106.2
37.5°	508.4	503.3	486.2	458.3	421.4	377.6	328.4	274.4	222.6	177.0	94.5
40°	513.8	508.4	490.1	460.7	422.0	376.7	326.0	270.8	216.6	168.3	82.2
42.5°	517.4	511.4	491.9	464.3	420.8	374.3	322.4	266.3	210.0	160.8	70.5
45°	519.2	512.9	492.2	461.3	418.7	369.8	317.0	260.6	202.8	150.6	58.8
47.5°	518.3	511.4	490.7	458.0	414.8	365.0	311.0	253.7	194.1	141.6	47.7
50°	516.8	509.6	487.4	453.8	409.4	359.0	304.4	245.3	185.1	130.5	37.8
52.5°	512.0	504.8	483.8	447.8	403.1	352.1	295.4	236.6	175.5	119.7	28.8
55°	506.0	499.4	477.5	442.4	395.0	343.7	287.0	227.4	166.2	108.6	20.7
57.5°	496.7	490.7	469.7	433.7	386.9	334.4	277.7	217.2	154.5	97.5	14.4
60°	485.3	479.3	458.9	423.8	377.6	323.9	267.5	206.7	144.0	86.4	9.0
62.5°	473.3	467.6	446.3	411.5	365.9	312.8	256.4	196.2	132.9	76.2	5.4
65°	457.4	452.0	432.8	396.8	353.0	300.8	244.1	183.6	121.5	64.8	3.0
67.5°	440.6	435.8	416.3	383.3	338.0	287.6	231.6	171.3	109.5	54.9	1.5
70°	422.6	416.6	398.6	365.0	322.7	272.6	217.8	158.7	98.1	45.3	0.0
72.5°	401.6	397.1	379.7	347.9	305.0	256.7	203.7	144.9	85.5	36.0	0.3
75°	381.2	375.5	359.6	329.6	287.6	239.9	188.1	132.0	73.2	27.6	0.3
77.5°	354.8	353.0	338.0	308.9	271.1	223.8	171.0	116.4	61.5	19.8	0.3
80°	328.4	326.6	314.9	288.2	251.9	204.6	155.1	101.7	50.1	13.2	0.3
82.5°	302.3	299.9	288.8	266.6	232.4	188.4	138.6	87.0	39.6	8.1	0.3
85°	278.9	275.9	263.9	243.5	212.4	170.1	121.5	72.6	29.4	4.5	0.6
87.5°	258.8	256.7	243.5	222.6	192.0	153.0	106.5	58.8	20.7	2.1	0.9
90°	241.7	237.2	225.6	203.4	172.8	134.1	90.6	47.1	13.8	1.2	1.2
92.5°	225.0	221.1	208.2	185.4	155.7	117.9	75.3	36.0	8.7	0.6	1.5
95°	207.6	203.4	190.8	169.8	138.3	101.4	61.8	26.4	4.8	0.6	1.5
97.5°	190.5	186.6	173.4	152.4	122.7	87.0	48.9	18.6	2.4	0.6	1.2
100°	174.6	170.1	158.1	137.1	107.1	72.6	37.8	12.0	1.5	0.6	1.2
102.5°	157.8	154.2	141.9	121.5	90.9	59.1	28.2	7.5	0.6	0.6	0.9
105°	142.8	138.3	126.3	105.3	77.4	46.5	19.8	4.5	0.6	0.6	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	93.0	89.4	78.9	61.2	39.3	18.3	5.4	0.9	0.9	0.9	0.9
115°	77.7	72.3	63.0	47.4	29.1	12.0	2.7	0.9	0.9	0.9	0.9
117.5°	62.1	57.6	51.0	36.0	19.2	7.8	1.5	0.9	0.9	0.9	0.9
120°	48.6	44.4	36.9	24.9	12.9	4.5	0.6	0.9	0.9	0.9	0.9
122.5°	34.8	31.5	24.9	16.2	7.8	2.1	0.9	0.9	1.2	1.2	0.9
125°	23.1	21.3	16.5	9.9	4.8	0.9	0.9	0.9	1.2	1.2	0.9
127.5°	15.0	13.5	9.6	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



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	235.4	235.4	235.4
2.5°	224.1	219.9	218.7
5°	212.1	205.2	201.3
7.5°	200.1	190.8	186.3
10°	189.0	175.8	171.0
12.5°	175.8	160.5	153.0
15°	163.2	143.4	136.2
17.5°	149.1	126.9	118.5
20°	135.9	110.4	101.7
22.5°	120.9	94.2	84.6
25°	107.4	78.0	67.2
27.5°	92.4	61.5	52.2
30°	78.3	47.1	37.8
32.5°	64.8	34.5	26.1
35°	52.2	23.4	16.5
37.5°	40.2	14.4	8.4
40°	29.1	7.5	3.9
42.5°	19.5	3.6	2.1
45°	12.0	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°	126.0	122.4	110.4	90.6	63.3	35.4	13.2	2.4	0.6	0.9	0.9
110°	109.8	106.8	94.5	75.3	51.0	26.4	8.7	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)