

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: P550766

Luminaire Tested: **FCC-X-2-LD4-1LO-35-UNV-81-87-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: P550766  
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-LD4-1LO-35-UNV-81-87-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

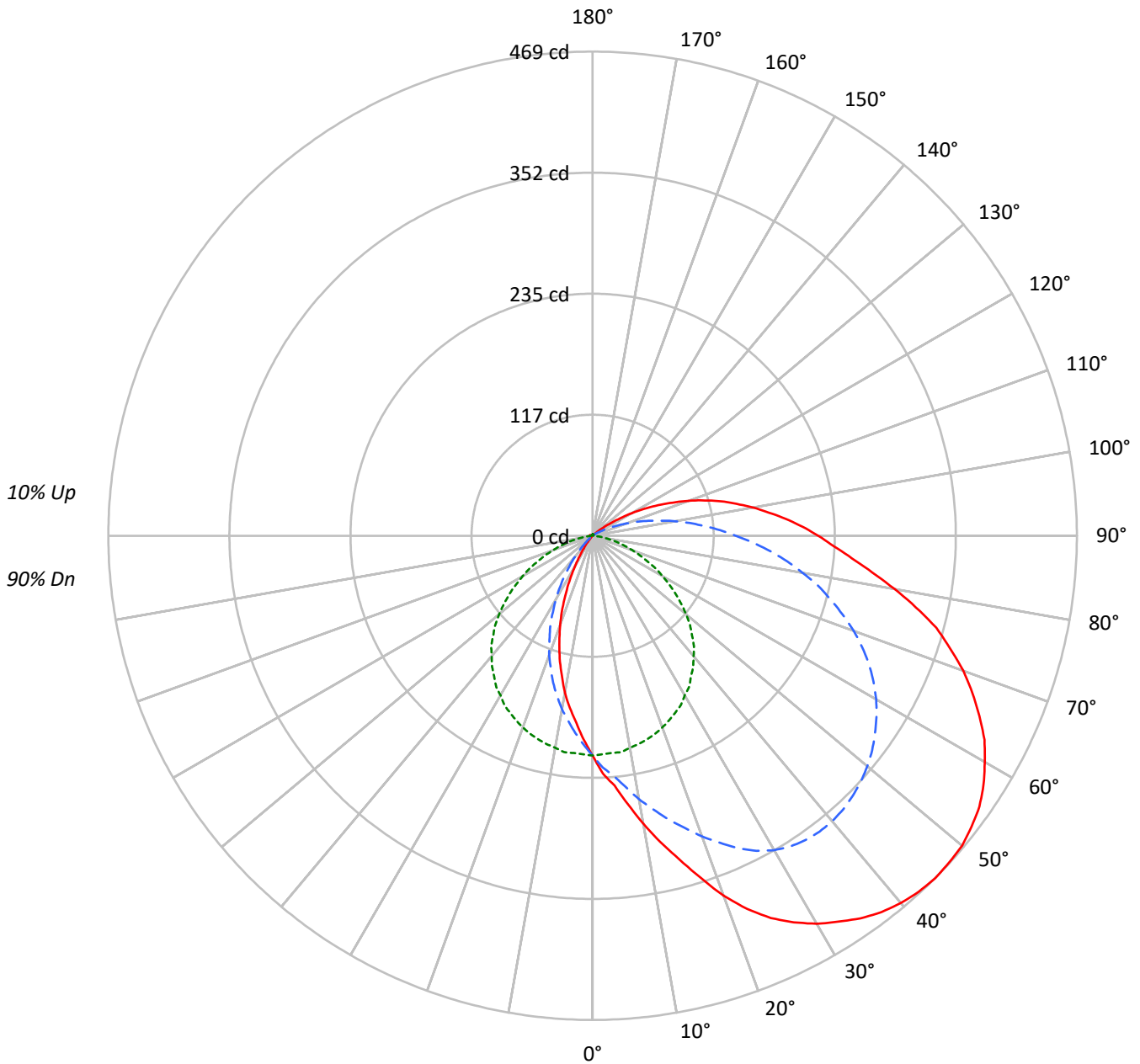
Lumens per Lamp: N/A  
Luminaire Lumens: 1052.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	70	70	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	56	56	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	46	46	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	38	38	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	33	33	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	28	28	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	25	25	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	22	22	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	20	20	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	18	18	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	2291	2291	2291
5°	2515	2257	1883
10°	2846	2230	1552
15°	3189	2201	1210
20°	3596	2165	891
25°	3934	2123	585
30°	4186	2068	330
35°	4403	2008	145
40°	4597	1934	35
45°	4762	1842	0
50°	4901	1718	0
55°	5007	1562	0
60°	5060	1382	0
65°	5081	1177	0
70°	5063	958	0
75°	4999	706	4
80°	4797	432	23
85°	4637	208	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	20.4	1.9
10°-20°	61.0	5.8
20°-30°	98.8	9.4
30°-40°	127.0	12.1
40°-50°	143.7	13.7
50°-60°	148.9	14.2
60°-70°	140.4	13.3
70°-80°	117.7	11.2
80°-90°	85.3	8.1
90°-100°	56.1	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°	180.2	17.1
0°-40°	307.2	29.2
0°-60°	599.8	57.0
0°-90°	943.2	89.7
90°-120°	102.7	9.8
90°-150°	108.1	10.3
90°-180°	109.0	10.4
0°-180°	1052.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	213	213	213	213	213	
5°	243	233	211	192	182	24
15°	324	284	204	148	123	94
25°	408	334	189	97	61	189
35°	452	360	166	47	15	284
45°	469	356	136	11	0	362
55°	457	334	98	0	0	408
65°	413	296	59	0	0	409
75°	344	238	25	0	0	361
85°	252	173	4	1	2	215
90°	218	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°	212.8	212.8	212.8	212.8	212.8	212.8	212.8	212.8	212.8	212.8	212.8
2.5°	230.7	230.4	229.6	228.2	226.3	223.1	220.4	217.9	214.7	212.0	206.8
5°	242.9	241.5	240.4	239.1	234.8	231.8	226.9	221.5	216.3	211.2	200.9
7.5°	262.4	260.2	258.6	254.8	248.8	242.1	234.5	229.3	225.8	211.4	193.8
10°	283.3	281.4	278.1	271.3	264.0	254.3	243.4	231.2	220.4	208.5	187.6
12.5°	303.9	301.2	296.6	287.9	277.6	265.4	250.5	236.1	220.7	206.6	180.3
15°	324.5	321.5	316.6	306.0	292.5	276.5	258.3	240.2	222.0	204.1	172.7
17.5°	347.0	342.9	335.6	323.7	306.6	286.8	265.4	243.4	221.5	201.1	164.5
20°	371.1	365.4	357.5	341.6	321.5	298.2	272.4	246.7	221.2	197.6	155.3
22.5°	391.2	385.5	376.8	360.3	336.1	307.7	278.4	248.8	220.1	193.5	146.7
25°	408.5	403.9	394.4	375.4	350.0	317.7	284.1	250.5	218.5	189.2	137.4
27.5°	422.1	417.7	407.2	387.6	361.6	326.6	288.4	251.3	216.3	184.9	127.9
30°	434.0	429.7	416.9	396.9	369.5	333.7	292.8	251.6	213.6	178.4	117.6
32.5°	443.2	439.1	426.1	404.7	374.9	338.6	295.2	251.3	210.1	173.8	106.5
35°	452.4	448.4	433.2	410.4	379.0	340.7	297.1	249.9	205.7	166.2	96.0
37.5°	459.5	454.9	439.4	414.2	380.9	341.3	296.8	248.0	201.1	159.9	85.4
40°	464.4	459.5	442.9	416.4	381.4	340.5	294.7	244.8	195.7	152.1	74.3
42.5°	467.6	462.2	444.6	419.6	380.3	338.3	291.4	240.7	189.8	145.3	63.7
45°	469.2	463.5	444.8	416.9	378.4	334.2	286.5	235.6	183.2	136.1	53.1
47.5°	468.4	462.2	443.5	413.9	374.9	329.9	281.1	229.3	175.4	127.9	43.1
50°	467.1	460.6	440.5	410.1	370.0	324.5	275.1	221.7	167.3	117.9	34.2
52.5°	462.7	456.2	437.2	404.7	364.3	318.2	267.0	213.9	158.6	108.2	26.0
55°	457.3	451.3	431.6	399.8	357.0	310.7	259.4	205.5	150.2	98.1	18.7
57.5°	448.9	443.5	424.5	392.0	349.7	302.2	251.0	196.3	139.6	88.1	13.0
60°	438.6	433.2	414.7	383.0	341.3	292.8	241.8	186.8	130.1	78.1	8.1
62.5°	427.8	422.6	403.4	371.9	330.7	282.7	231.8	177.3	120.1	68.9	4.9
65°	413.4	408.5	391.2	358.6	319.1	271.9	220.7	165.9	109.8	58.6	2.7
67.5°	398.2	393.9	376.3	346.4	305.5	260.0	209.3	154.8	98.9	49.6	1.4
70°	381.9	376.5	360.3	329.9	291.7	246.4	196.8	143.4	88.6	40.9	0.0
72.5°	363.0	358.9	343.2	314.4	275.7	232.0	184.1	130.9	77.3	32.5	0.3
75°	344.5	339.4	325.0	297.9	260.0	216.9	170.0	119.3	66.1	24.9	0.3
77.5°	320.7	319.1	305.5	279.2	245.1	202.2	154.5	105.2	55.6	17.9	0.3
80°	296.8	295.2	284.6	260.5	227.7	184.9	140.1	91.9	45.3	11.9	0.3
82.5°	273.2	271.1	261.0	241.0	210.1	170.2	125.2	78.6	35.8	7.3	0.3
85°	252.1	249.4	238.5	220.1	191.9	153.7	109.8	65.6	26.6	4.1	0.5
87.5°	233.9	232.0	220.1	201.1	173.5	138.2	96.2	53.1	18.7	1.9	0.8
90°	218.5	214.4	203.8	183.8	156.1	121.2	81.9	42.6	12.5	1.1	1.1
92.5°	203.3	199.8	188.1	167.5	140.7	106.5	68.0	32.5	7.9	0.5	1.4
95°	187.6	183.8	172.4	153.4	125.0	91.6	55.8	23.9	4.3	0.5	1.4
97.5°	172.1	168.6	156.7	137.7	110.9	78.6	44.2	16.8	2.2	0.5	1.1
100°	157.8	153.7	142.9	123.9	96.8	65.6	34.2	10.8	1.4	0.5	1.1
102.5°	142.6	139.3	128.2	109.8	82.1	53.4	25.5	6.8	0.5	0.5	0.8
105°	129.0	125.0	114.1	95.1	69.9	42.0	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°	84.0	80.8	71.3	55.3	35.5	16.5	4.9	0.8	0.8	0.8	0.8
115°	70.2	65.3	56.9	42.8	26.3	10.8	2.4	0.8	0.8	0.8	0.8
117.5°	56.1	52.0	46.1	32.5	17.3	7.0	1.4	0.8	0.8	0.8	0.8
120°	43.9	40.1	33.3	22.5	11.7	4.1	0.5	0.8	0.8	0.8	0.8
122.5°	31.4	28.5	22.5	14.6	7.0	1.9	0.8	0.8	1.1	1.1	0.8
125°	20.9	19.2	14.9	8.9	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°	212.8	212.8	212.8
2.5°	202.5	198.7	197.6
5°	191.7	185.4	181.9
7.5°	180.8	172.4	168.3
10°	170.8	158.9	154.5
12.5°	158.9	145.0	138.2
15°	147.5	129.6	123.1
17.5°	134.7	114.7	107.1
20°	122.8	99.8	91.9
22.5°	109.2	85.1	76.4
25°	97.0	70.5	60.7
27.5°	83.5	55.6	47.2
30°	70.8	42.6	34.2
32.5°	58.6	31.2	23.6
35°	47.2	21.1	14.9
37.5°	36.3	13.0	7.6
40°	26.3	6.8	3.5
42.5°	17.6	3.3	1.9
45°	10.8	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°	113.9	110.6	99.8	81.9	57.2	32.0	11.9	2.2	0.5	0.8	0.8
110°	99.2	96.5	85.4	68.0	46.1	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)