

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: P550781

Luminaire Tested: **FCC-X-2-LD4-1LO-35-UNV-82-87-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: P550781  
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-82-87-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

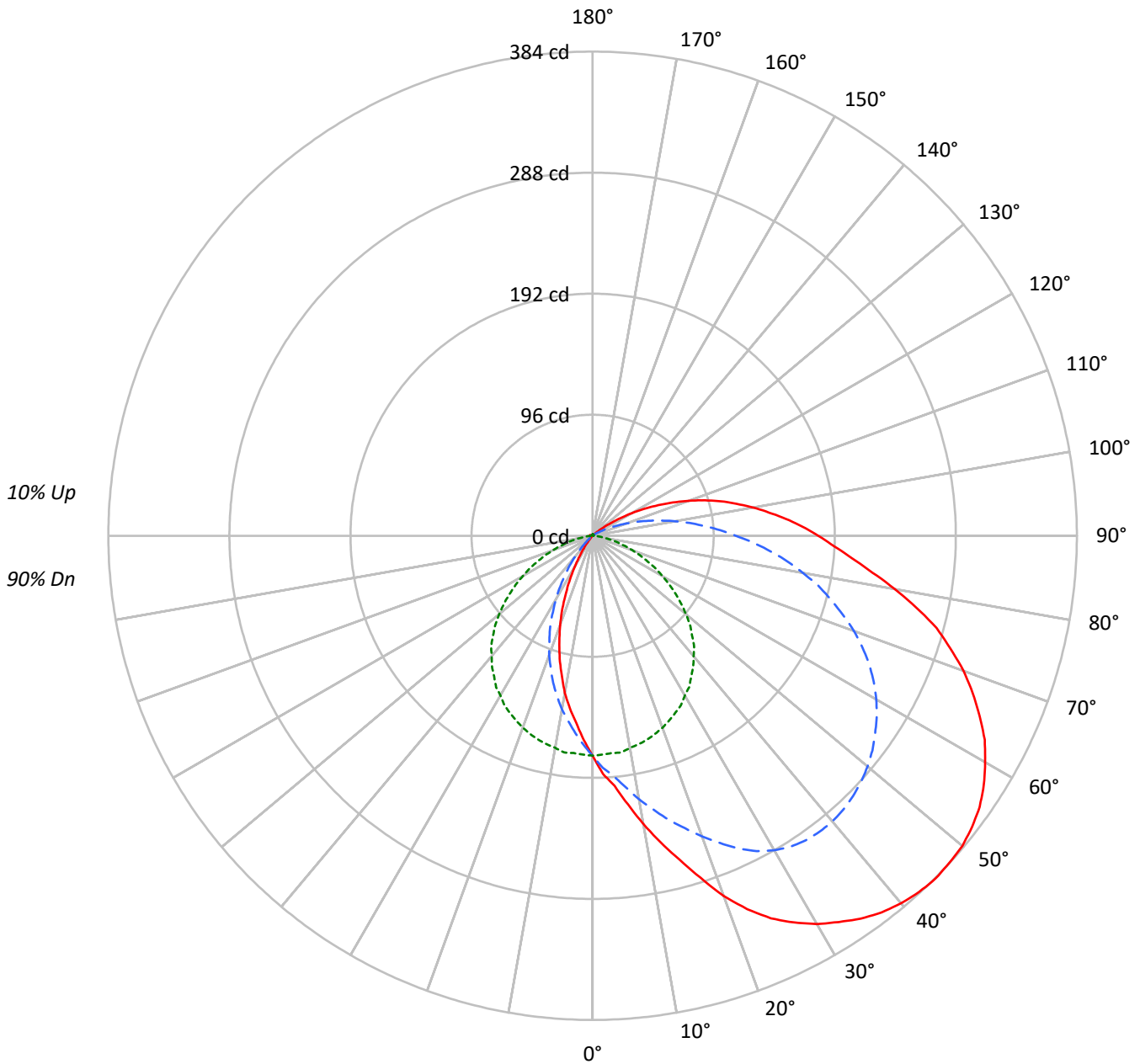
Lumens per Lamp: N/A  
Luminaire Lumens: 862.0 lumens  
Efficiency: N/A  
Efficacy: 73.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
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°	1877	1877	1877
5°	2060	1849	1542
10°	2331	1827	1272
15°	2613	1804	991
20°	2947	1774	730
25°	3224	1739	480
30°	3430	1695	270
35°	3608	1646	119
40°	3766	1585	29
45°	3902	1509	0
50°	4016	1408	0
55°	4102	1280	0
60°	4146	1133	0
65°	4163	964	0
70°	4150	785	0
75°	4096	579	3
80°	3930	355	18
85°	3800	168	24



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.7	1.9
10°-20°	50.0	5.8
20°-30°	81.0	9.4
30°-40°	104.0	12.1
40°-50°	117.8	13.7
50°-60°	122.0	14.2
60°-70°	115.1	13.3
70°-80°	96.4	11.2
80°-90°	69.9	8.1
90°-100°	45.9	5.3
100°-110°	26.5	3.1
110°-120°	11.7	1.4
120°-130°	3.2	0.4
130°-140°	0.7	0.1
140°-150°	0.5	0.1
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	147.7	17.1
0°-40°	251.7	29.2
0°-60°	491.5	57.0
0°-90°	772.8	89.7
90°-120°	84.2	9.8
90°-150°	88.6	10.3
90°-180°	89.0	10.3
0°-180°	862.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	174	174	174	174	174	
5°	199	191	173	157	149	20
15°	266	233	167	121	101	77
25°	335	274	155	80	50	155
35°	371	295	136	39	12	233
45°	384	292	112	9	0	297
55°	375	274	80	0	0	335
65°	339	242	48	0	0	335
75°	282	195	20	0	0	296
85°	207	142	3	1	1	176
90°	179	114	1	1	2	98
95°	154	89	0	2	2	121
105°	106	46	0	1	2	112
115°	58	15	1	1	1	58
125°	17	2	1	1	1	17
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°	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4
2.5°	189.0	188.8	188.1	187.0	185.5	182.8	180.6	178.6	175.9	173.7	169.5
5°	199.0	197.9	197.0	195.9	192.4	189.9	185.9	181.5	177.2	173.0	164.6
7.5°	215.0	213.2	211.9	208.8	203.9	198.4	192.1	187.9	185.0	173.3	158.8
10°	232.1	230.6	227.9	222.3	216.3	208.3	199.5	189.5	180.6	170.8	153.7
12.5°	249.0	246.8	243.0	235.9	227.4	217.5	205.2	193.5	180.8	169.3	147.7
15°	265.9	263.4	259.4	250.8	239.7	226.6	211.7	196.8	181.9	167.3	141.5
17.5°	284.3	281.0	275.0	265.2	251.2	235.0	217.5	199.5	181.5	164.8	134.8
20°	304.1	299.4	293.0	279.9	263.4	244.3	223.2	202.1	181.2	161.9	127.3
22.5°	320.5	315.9	308.7	295.2	275.4	252.1	228.1	203.9	180.4	158.6	120.2
25°	334.7	331.0	323.2	307.6	286.8	260.3	232.8	205.2	179.0	155.0	112.6
27.5°	345.8	342.3	333.6	317.6	296.3	267.7	236.3	205.9	177.2	151.5	104.8
30°	355.6	352.1	341.6	325.2	302.7	273.4	239.9	206.1	175.0	146.2	96.4
32.5°	363.2	359.8	349.2	331.6	307.2	277.4	241.9	205.9	172.1	142.4	87.3
35°	370.7	367.4	354.9	336.3	310.5	279.2	243.4	204.8	168.6	136.2	78.6
37.5°	376.5	372.7	360.1	339.4	312.1	279.6	243.2	203.2	164.8	131.0	70.0
40°	380.5	376.5	362.9	341.2	312.5	279.0	241.4	200.6	160.4	124.6	60.9
42.5°	383.2	378.7	364.3	343.8	311.6	277.2	238.8	197.2	155.5	119.1	52.2
45°	384.5	379.8	364.5	341.6	310.1	273.9	234.8	193.0	150.2	111.5	43.5
47.5°	383.8	378.7	363.4	339.2	307.2	270.3	230.3	187.9	143.7	104.8	35.3
50°	382.7	377.4	360.9	336.1	303.2	265.9	225.4	181.7	137.0	96.6	28.0
52.5°	379.2	373.8	358.3	331.6	298.5	260.8	218.8	175.3	129.9	88.6	21.3
55°	374.7	369.8	353.6	327.6	292.5	254.5	212.6	168.4	123.1	80.4	15.3
57.5°	367.8	363.4	347.8	321.2	286.5	247.7	205.7	160.8	114.4	72.2	10.7
60°	359.4	354.9	339.8	313.9	279.6	239.9	198.1	153.0	106.6	64.0	6.7
62.5°	350.5	346.3	330.5	304.7	271.0	231.7	189.9	145.3	98.4	56.4	4.0
65°	338.7	334.7	320.5	293.9	261.4	222.8	180.8	135.9	90.0	48.0	2.2
67.5°	326.3	322.7	308.3	283.9	250.3	213.0	171.5	126.8	81.1	40.6	1.1
70°	313.0	308.5	295.2	270.3	239.0	201.9	161.3	117.5	72.6	33.5	0.0
72.5°	297.4	294.1	281.2	257.7	225.9	190.1	150.8	107.3	63.3	26.7	0.2
75°	282.3	278.1	266.3	244.1	213.0	177.7	139.3	97.7	54.2	20.4	0.2
77.5°	262.8	261.4	250.3	228.8	200.8	165.7	126.6	86.2	45.5	14.7	0.2
80°	243.2	241.9	233.2	213.5	186.6	151.5	114.8	75.3	37.1	9.8	0.2
82.5°	223.9	222.1	213.9	197.5	172.1	139.5	102.6	64.4	29.3	6.0	0.2
85°	206.6	204.3	195.5	180.4	157.3	125.9	90.0	53.8	21.8	3.3	0.4
87.5°	191.7	190.1	180.4	164.8	142.2	113.3	78.9	43.5	15.3	1.6	0.7
90°	179.0	175.7	167.0	150.6	127.9	99.3	67.1	34.9	10.2	0.9	0.9
92.5°	166.6	163.7	154.1	137.3	115.3	87.3	55.8	26.7	6.4	0.4	1.1
95°	153.7	150.6	141.3	125.7	102.4	75.1	45.8	19.5	3.6	0.4	1.1
97.5°	141.0	138.2	128.4	112.8	90.8	64.4	36.2	13.8	1.8	0.4	0.9
100°	129.3	125.9	117.1	101.5	79.3	53.8	28.0	8.9	1.1	0.4	0.9
102.5°	116.8	114.2	105.1	90.0	67.3	43.8	20.9	5.6	0.4	0.4	0.7
105°	105.7	102.4	93.5	78.0	57.3	34.4	14.7	3.3	0.4	0.4	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	68.9	66.2	58.4	45.3	29.1	13.5	4.0	0.7	0.7	0.7	0.7
115°	57.5	53.5	46.6	35.1	21.5	8.9	2.0	0.7	0.7	0.7	0.7
117.5°	46.0	42.6	37.8	26.7	14.2	5.8	1.1	0.7	0.7	0.7	0.7
120°	36.0	32.9	27.3	18.4	9.6	3.3	0.4	0.7	0.7	0.7	0.7
122.5°	25.8	23.3	18.4	12.0	5.8	1.6	0.7	0.7	0.9	0.9	0.7
125°	17.1	15.8	12.2	7.3	3.6	0.7	0.7	0.7	0.9	0.9	0.7
127.5°	11.1	10.0	7.1	4.2	1.6	0.7	0.7	0.9	0.9	0.9	0.7
130°	6.2	5.6	4.2	2.4	0.7	0.7	0.7	0.9	0.9	0.9	0.7
132.5°	3.6	3.3	2.2	0.4	0.7	0.7	0.7	0.9	0.9	0.9	0.9
135°	0.9	0.4	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	0.9
137.5°	0.2	0.2	0.4	0.4	0.7	0.7	0.9	1.1	1.1	1.1	0.9
140°	0.2	0.2	0.4	0.7	0.7	0.7	0.9	1.1	1.1	1.1	0.9
142.5°	0.2	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	0.9	0.9
145°	0.2	0.4	0.4	0.7	0.7	0.9	0.9	1.1	0.9	0.9	0.9
147.5°	0.4	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	0.9	0.9
150°	0.2	0.4	0.4	0.7	0.9	0.9	0.9	1.1	0.9	0.9	0.9
152.5°	0.2	0.4	0.4	0.7	0.9	0.9	0.9	1.1	0.9	0.9	0.9
155°	0.4	0.4	0.4	0.7	0.9	0.9	0.9	1.1	0.9	0.9	1.1
157.5°	0.4	0.4	0.4	0.7	0.9	0.9	0.9	1.1	0.9	0.9	1.1
160°	0.4	0.4	0.4	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9
162.5°	0.4	0.4	0.4	0.7	0.7	0.9	0.9	0.9	0.9	0.9	0.9
165°	0.4	0.4	0.4	0.4	0.7	0.7	0.9	0.9	0.9	0.9	0.9
167.5°	0.4	0.4	0.4	0.7	0.7	0.7	0.9	0.9	0.9	0.9	0.9
170°	0.4	0.4	0.4	0.7	0.7	0.7	0.9	1.1	1.1	1.1	1.1
172.5°	0.4	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	1.1	1.1
175°	0.4	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	1.1	1.1
177.5°	0.2	0.4	0.4	0.7	0.7	0.9	0.9	1.1	1.1	1.1	0.9
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	174.4	174.4	174.4
2.5°	165.9	162.8	161.9
5°	157.0	151.9	149.0
7.5°	148.2	141.3	137.9
10°	139.9	130.2	126.6
12.5°	130.2	118.8	113.3
15°	120.8	106.2	100.8
17.5°	110.4	94.0	87.7
20°	100.6	81.7	75.3
22.5°	89.5	69.7	62.6
25°	79.5	57.8	49.8
27.5°	68.4	45.5	38.6
30°	58.0	34.9	28.0
32.5°	48.0	25.5	19.3
35°	38.6	17.3	12.2
37.5°	29.8	10.7	6.2
40°	21.5	5.6	2.9
42.5°	14.4	2.7	1.6
45°	8.9	1.3	0.0
47.5°	5.1	0.0	0.0
50°	2.7	0.0	0.0
52.5°	1.1	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°	0.2	0.2	0.2
77.5°	0.2	0.4	0.7
80°	0.4	0.9	1.1
82.5°	0.9	1.1	1.1
85°	0.9	1.1	1.3
87.5°	1.1	1.3	1.6
90°	1.3	1.6	1.6
92.5°	1.3	1.8	1.8
95°	1.6	1.8	2.0
97.5°	1.8	2.0	2.0
100°	1.6	2.0	2.2
102.5°	1.3	2.0	2.0
105°	1.1	1.6	1.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	0.9	1.1	1.1
115°	0.7	0.9	1.1
117.5°	0.7	0.9	0.9
120°	0.7	0.7	0.9
122.5°	0.7	0.7	0.9
125°	0.7	0.7	0.9
127.5°	0.9	0.7	0.7
130°	0.7	0.7	0.7
132.5°	0.9	0.7	0.7
135°	0.9	0.7	0.7
137.5°	0.9	0.7	0.7
140°	0.9	0.7	0.7
142.5°	0.9	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.4
152.5°	0.7	0.4	0.4
155°	0.7	0.4	0.2
157.5°	0.9	0.4	0.2
160°	0.7	0.4	0.2
162.5°	0.7	0.4	0.2
165°	0.7	0.4	0.0
167.5°	0.7	0.4	0.2
170°	0.7	0.4	0.2
172.5°	0.7	0.4	0.2
175°	0.7	0.2	0.2
177.5°	0.7	0.2	0.2
180°	0.7	0.7	0.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	93.3	90.6	81.7	67.1	46.9	26.2	9.8	1.8	0.4	0.7	0.7
110°	81.3	79.1	70.0	55.8	37.8	19.5	6.4	1.1	0.7	0.7	0.7







107.5°	0.9	1.3	1.6
110°	0.9	1.1	1.3



(END OF REPORT)