

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: P550849

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-82-94-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: P550849  
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-40-UNV-82-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

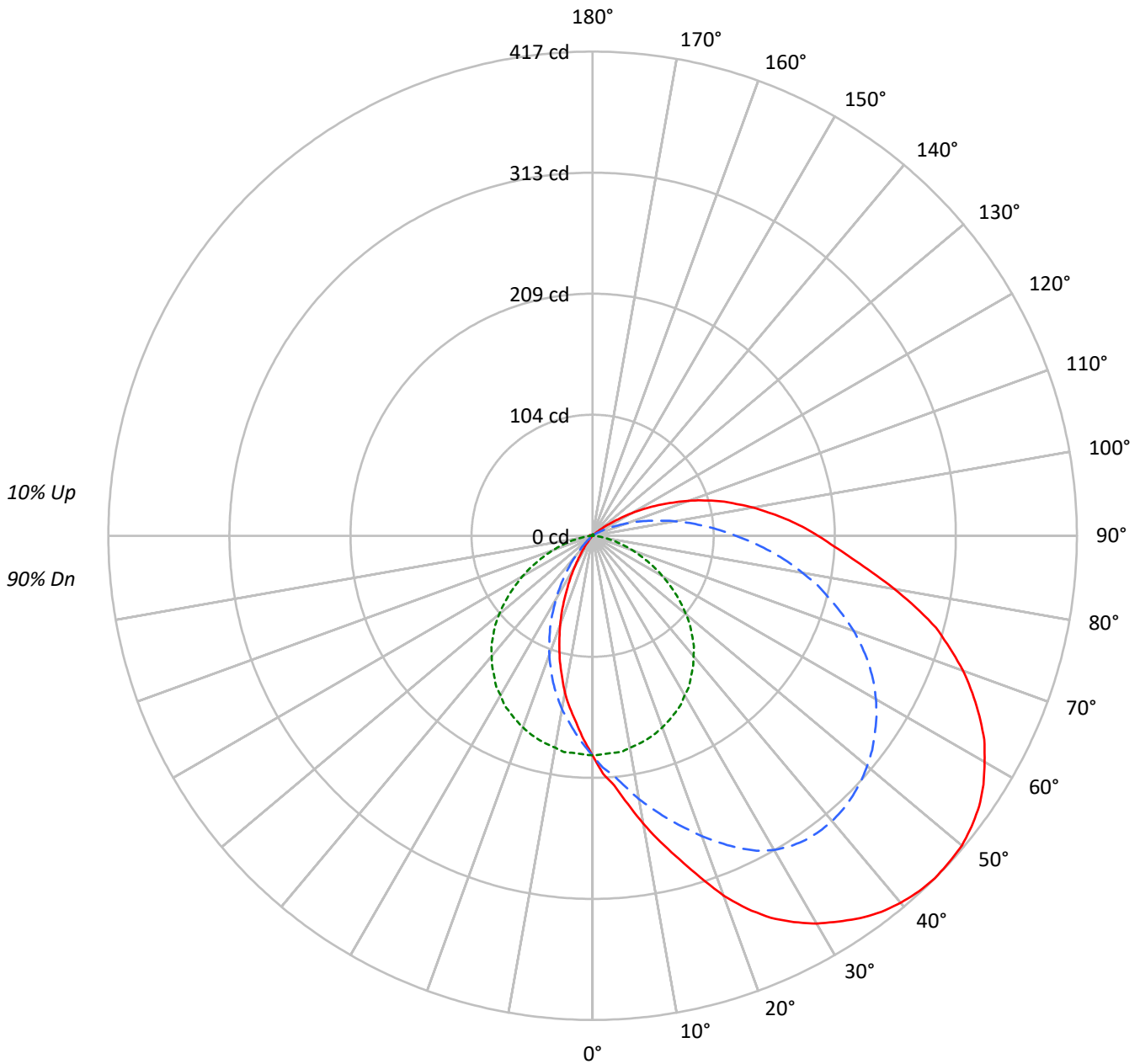
Lumens per Lamp: N/A  
Luminaire Lumens: 935.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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									
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°	2035	2035	2035
5°	2235	2006	1674
10°	2529	1982	1379
15°	2834	1956	1075
20°	3196	1924	792
25°	3497	1888	520
30°	3720	1837	293
35°	3914	1785	129
40°	4085	1719	31
45°	4232	1636	0
50°	4356	1527	0
55°	4449	1389	0
60°	4497	1228	0
65°	4516	1044	0
70°	4501	853	0
75°	4443	630	3
80°	4263	384	19
85°	4122	183	26



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.1	1.9
10°-20°	54.2	5.8
20°-30°	87.8	9.4
30°-40°	112.8	12.1
40°-50°	127.7	13.7
50°-60°	132.3	14.2
60°-70°	124.8	13.3
70°-80°	104.6	11.2
80°-90°	75.8	8.1
90°-100°	49.8	5.3
100°-110°	28.8	3.1
110°-120°	12.7	1.4
120°-130°	3.4	0.4
130°-140°	0.8	0.1
140°-150°	0.5	0.1
150°-160°	0.4	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	160.2	17.1
0°-40°	273.0	29.2
0°-60°	533.1	57.0
0°-90°	838.3	89.7
90°-120°	91.3	9.8
90°-150°	96.1	10.3
90°-180°	97.0	10.4
0°-180°	935.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	189	189	189	189	189	
5°	216	207	188	170	162	22
15°	288	253	181	131	109	83
25°	363	297	168	86	54	168
35°	402	320	148	42	13	252
45°	417	317	121	10	0	322
55°	406	297	87	0	0	363
65°	367	263	52	0	0	364
75°	306	212	22	0	0	321
85°	224	154	4	1	1	191
90°	194	123	1	1	2	106
95°	167	96	0	2	2	131
105°	115	50	0	1	2	121
115°	62	16	1	1	1	62
125°	19	2	1	1	1	19
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°	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1
2.5°	205.0	204.8	204.1	202.9	201.2	198.3	195.9	193.7	190.8	188.4	183.8
5°	215.9	214.7	213.7	212.5	208.6	206.0	201.7	196.8	192.3	187.7	178.5
7.5°	233.2	231.3	229.8	226.5	221.2	215.1	208.4	203.8	200.7	187.9	172.3
10°	251.8	250.1	247.2	241.2	234.7	226.0	216.4	205.5	195.9	185.3	166.7
12.5°	270.1	267.7	263.6	255.9	246.7	235.9	222.6	209.8	196.1	183.6	160.2
15°	288.4	285.7	281.4	272.0	260.0	245.7	229.6	213.5	197.3	181.4	153.5
17.5°	308.4	304.8	298.3	287.7	272.5	254.9	235.9	216.4	196.8	178.8	146.2
20°	329.8	324.8	317.8	303.6	285.7	265.0	242.1	219.2	196.6	175.6	138.1
22.5°	347.7	342.6	334.9	320.2	298.8	273.5	247.4	221.2	195.6	172.0	130.3
25°	363.1	359.0	350.5	333.7	311.0	282.4	252.5	222.6	194.2	168.2	122.2
27.5°	375.1	371.3	361.9	344.5	321.4	290.3	256.3	223.3	192.3	164.3	113.7
30°	385.7	381.9	370.5	352.7	328.4	296.6	260.2	223.6	189.9	158.5	104.6
32.5°	393.9	390.3	378.7	359.7	333.2	300.9	262.4	223.3	186.7	154.4	94.7
35°	402.1	398.5	385.0	364.8	336.8	302.8	264.1	222.1	182.9	147.7	85.3
37.5°	408.4	404.3	390.5	368.1	338.5	303.3	263.8	220.4	178.8	142.1	75.9
40°	412.7	408.4	393.7	370.1	339.0	302.6	261.9	217.6	173.9	135.2	66.0
42.5°	415.6	410.8	395.1	373.0	338.0	300.7	259.0	213.9	168.6	129.1	56.6
45°	417.0	412.0	395.4	370.5	336.3	297.1	254.7	209.4	162.9	120.9	47.2
47.5°	416.3	410.8	394.2	367.9	333.2	293.2	249.8	203.8	155.9	113.7	38.3
50°	415.1	409.3	391.5	364.5	328.9	288.4	244.5	197.1	148.7	104.8	30.4
52.5°	411.3	405.5	388.6	359.7	323.8	282.8	237.3	190.1	140.9	96.1	23.1
55°	406.4	401.1	383.6	355.4	317.3	276.1	230.6	182.6	133.5	87.2	16.6
57.5°	399.0	394.2	377.3	348.4	310.8	268.6	223.1	174.4	124.1	78.3	11.6
60°	389.8	385.0	368.6	340.4	303.3	260.2	214.9	166.0	115.6	69.4	7.2
62.5°	380.2	375.6	358.5	330.6	293.9	251.3	206.0	157.6	106.7	61.2	4.3
65°	367.4	363.1	347.7	318.7	283.6	241.7	196.1	147.4	97.6	52.0	2.4
67.5°	353.9	350.1	334.4	307.9	271.5	231.0	186.0	137.6	87.9	44.1	1.2
70°	339.5	334.6	320.2	293.2	259.2	219.0	174.9	127.5	78.8	36.4	0.0
72.5°	322.6	319.0	305.0	279.5	245.0	206.2	163.6	116.4	68.7	28.9	0.2
75°	306.2	301.6	288.9	264.8	231.0	192.7	151.1	106.0	58.8	22.2	0.2
77.5°	285.0	283.6	271.5	248.2	217.8	179.7	137.3	93.5	49.4	15.9	0.2
80°	263.8	262.4	253.0	231.5	202.4	164.3	124.6	81.7	40.2	10.6	0.2
82.5°	242.9	240.9	232.0	214.2	186.7	151.3	111.3	69.9	31.8	6.5	0.2
85°	224.1	221.7	212.0	195.6	170.6	136.6	97.6	58.3	23.6	3.6	0.5
87.5°	207.9	206.2	195.6	178.8	154.2	122.9	85.5	47.2	16.6	1.7	0.7
90°	194.2	190.6	181.2	163.3	138.8	107.7	72.8	37.8	11.1	1.0	1.0
92.5°	180.7	177.6	167.2	148.9	125.0	94.7	60.5	28.9	7.0	0.5	1.2
95°	166.7	163.3	153.2	136.4	111.1	81.4	49.6	21.2	3.9	0.5	1.2
97.5°	153.0	149.9	139.3	122.4	98.5	69.9	39.3	14.9	1.9	0.5	1.0
100°	140.2	136.6	127.0	110.1	86.0	58.3	30.4	9.6	1.2	0.5	1.0
102.5°	126.7	123.8	114.0	97.6	73.0	47.5	22.6	6.0	0.5	0.5	0.7
105°	114.7	111.1	101.4	84.6	62.2	37.3	15.9	3.6	0.5	0.5	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.7	71.8	63.4	49.1	31.6	14.7	4.3	0.7	0.7	0.7	0.7
115°	62.4	58.1	50.6	38.1	23.4	9.6	2.2	0.7	0.7	0.7	0.7
117.5°	49.9	46.3	41.0	28.9	15.4	6.3	1.2	0.7	0.7	0.7	0.7
120°	39.0	35.7	29.6	20.0	10.4	3.6	0.5	0.7	0.7	0.7	0.7
122.5°	27.9	25.3	20.0	13.0	6.3	1.7	0.7	0.7	1.0	1.0	0.7
125°	18.6	17.1	13.3	8.0	3.9	0.7	0.7	0.7	1.0	1.0	0.7
127.5°	12.0	10.8	7.7	4.6	1.7	0.7	0.7	1.0	1.0	1.0	0.7
130°	6.7	6.0	4.6	2.7	0.7	0.7	0.7	1.0	1.0	1.0	0.7
132.5°	3.9	3.6	2.4	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0
137.5°	0.2	0.2	0.5	0.5	0.7	0.7	1.0	1.2	1.2	1.2	1.0
140°	0.2	0.2	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.0
142.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
145°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.0	1.0
150°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
152.5°	0.2	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
157.5°	0.5	0.5	0.5	0.7	1.0	1.0	1.0	1.2	1.0	1.0	1.2
160°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.7	0.7	0.7	1.0	1.2	1.2	1.2	1.2
172.5°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
175°	0.5	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.2
177.5°	0.2	0.5	0.5	0.7	0.7	1.0	1.0	1.2	1.2	1.2	1.0
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°	189.1	189.1	189.1
2.5°	180.0	176.6	175.6
5°	170.3	164.8	161.7
7.5°	160.7	153.2	149.6
10°	151.8	141.2	137.3
12.5°	141.2	128.9	122.9
15°	131.1	115.2	109.4
17.5°	119.7	101.9	95.2
20°	109.1	88.7	81.7
22.5°	97.1	75.7	67.9
25°	86.3	62.6	54.0
27.5°	74.2	49.4	41.9
30°	62.9	37.8	30.4
32.5°	52.0	27.7	21.0
35°	41.9	18.8	13.3
37.5°	32.3	11.6	6.7
40°	23.4	6.0	3.1
42.5°	15.7	2.9	1.7
45°	9.6	1.4	0.0
47.5°	5.5	0.0	0.0
50°	2.9	0.0	0.0
52.5°	1.2	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	0.5	0.7
80°	0.5	1.0	1.2
82.5°	1.0	1.2	1.2
85°	1.0	1.2	1.4
87.5°	1.2	1.4	1.7
90°	1.4	1.7	1.7
92.5°	1.4	1.9	1.9
95°	1.7	1.9	2.2
97.5°	1.9	2.2	2.2
100°	1.7	2.2	2.4
102.5°	1.4	2.2	2.2
105°	1.2	1.7	1.9





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.2	1.2
115°	0.7	1.0	1.2
117.5°	0.7	1.0	1.0
120°	0.7	0.7	1.0
122.5°	0.7	0.7	1.0
125°	0.7	0.7	1.0
127.5°	1.0	0.7	0.7
130°	0.7	0.7	0.7
132.5°	1.0	0.7	0.7
135°	1.0	0.7	0.7
137.5°	1.0	0.7	0.7
140°	1.0	0.7	0.7
142.5°	1.0	0.7	0.7
145°	0.7	0.7	0.7
147.5°	0.7	0.7	0.7
150°	0.7	0.7	0.5
152.5°	0.7	0.5	0.5
155°	0.7	0.5	0.2
157.5°	1.0	0.5	0.2
160°	0.7	0.5	0.2
162.5°	0.7	0.5	0.2
165°	0.7	0.5	0.0
167.5°	0.7	0.5	0.2
170°	0.7	0.5	0.2
172.5°	0.7	0.5	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°	101.2	98.3	88.7	72.8	50.8	28.4	10.6	1.9	0.5	0.7	0.7
110°	88.2	85.8	75.9	60.5	41.0	21.2	7.0	1.2	0.7	0.7	0.7







107.5°	1.0	1.4	1.7
110°	1.0	1.2	1.4



(END OF REPORT)