

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: P550741

Luminaire Tested: **FCC-X-2-LD4-1LO-30-UNV-93-97-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: P550741  
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-30-UNV-93-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 3000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

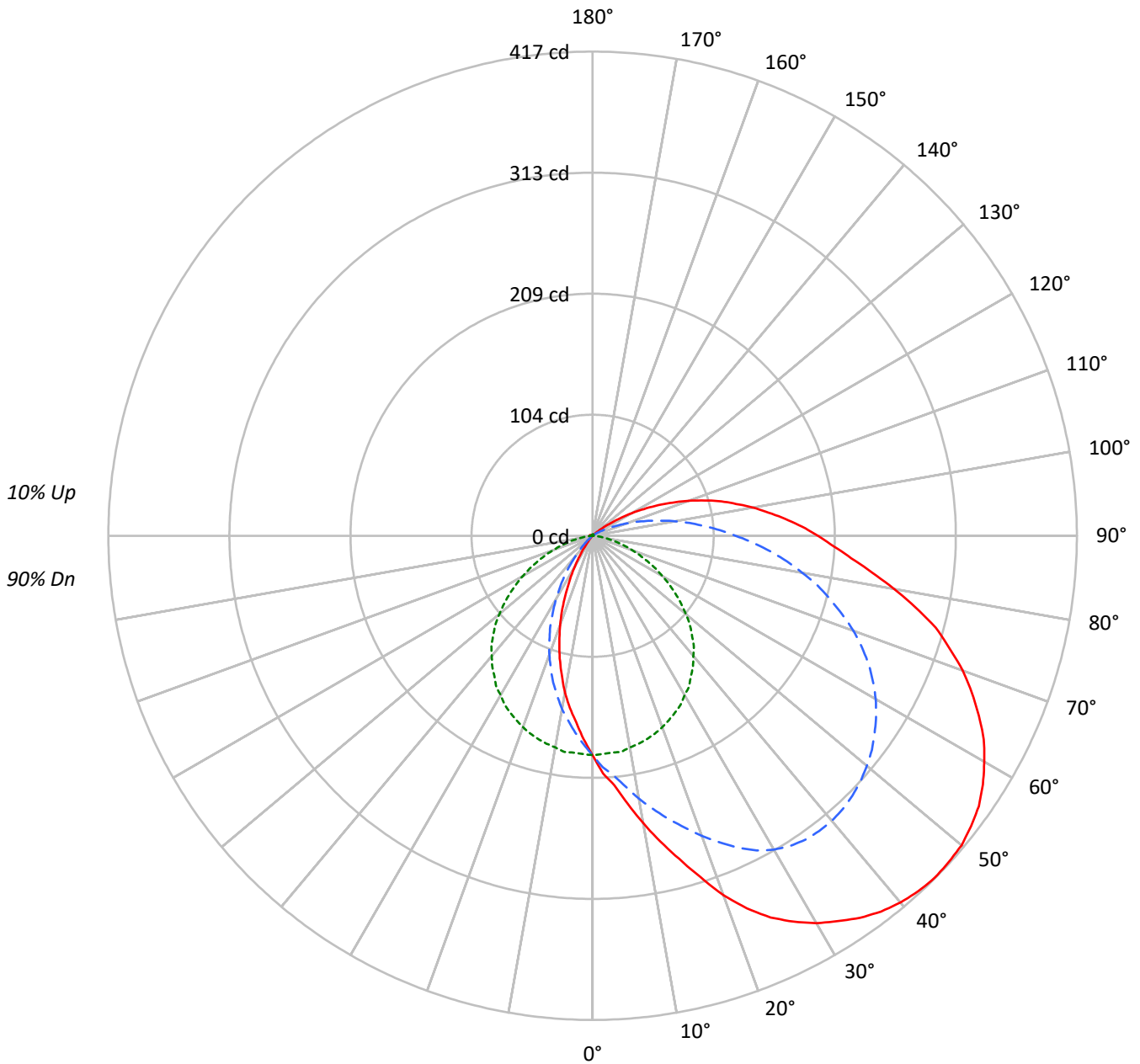
Lumens per Lamp: N/A  
Luminaire Lumens: 934.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

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°	2033	2033	2033
5°	2232	2004	1672
10°	2526	1980	1378
15°	2831	1954	1074
20°	3193	1922	791
25°	3493	1885	519
30°	3716	1836	292
35°	3910	1782	128
40°	4081	1717	31
45°	4228	1635	0
50°	4351	1526	0
55°	4445	1387	0
60°	4492	1226	0
65°	4511	1044	0
70°	4496	850	0
75°	4439	627	3
80°	4258	384	19
85°	4116	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°	87.7	9.4
30°-40°	112.7	12.1
40°-50°	127.6	13.7
50°-60°	132.2	14.2
60°-70°	124.7	13.3
70°-80°	104.5	11.2
80°-90°	75.7	8.1
90°-100°	49.8	5.3
100°-110°	28.7	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°	160.0	17.1
0°-40°	272.7	29.2
0°-60°	532.5	57.0
0°-90°	837.4	89.7
90°-120°	91.2	9.8
90°-150°	95.9	10.3
90°-180°	97.0	10.4
0°-180°	934.0	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	296	168	86	54	168
35°	402	320	148	42	13	252
45°	417	316	121	10	0	322
55°	406	296	87	0	0	363
65°	367	262	52	0	0	363
75°	306	212	22	0	0	321
85°	224	153	4	1	1	191
90°	194	123	1	1	2	106
95°	166	96	0	2	2	131
105°	115	50	0	1	2	121
115°	62	16	1	1	1	62
125°	18	2	1	1	1	18
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°	188.9	188.9	188.9	188.9	188.9	188.9	188.9	188.9	188.9	188.9	188.9
2.5°	204.8	204.6	203.8	202.6	201.0	198.1	195.7	193.5	190.6	188.2	183.6
5°	215.6	214.4	213.5	212.3	208.4	205.8	201.4	196.6	192.1	187.5	178.3
7.5°	233.0	231.0	229.6	226.2	220.9	214.9	208.2	203.6	200.5	187.7	172.1
10°	251.5	249.8	246.9	240.9	234.4	225.7	216.1	205.3	195.7	185.1	166.5
12.5°	269.8	267.4	263.3	255.6	246.4	235.6	222.4	209.6	195.9	183.4	160.0
15°	288.1	285.4	281.1	271.7	259.7	245.5	229.4	213.2	197.1	181.2	153.3
17.5°	308.1	304.4	297.9	287.4	272.2	254.6	235.6	216.1	196.6	178.6	146.1
20°	329.5	324.4	317.4	303.2	285.4	264.7	241.9	219.0	196.4	175.4	137.9
22.5°	347.3	342.2	334.5	319.9	298.4	273.2	247.2	220.9	195.4	171.8	130.2
25°	362.7	358.6	350.2	333.3	310.7	282.1	252.2	222.4	194.0	168.0	122.0
27.5°	374.7	370.9	361.5	344.2	321.1	290.0	256.1	223.1	192.1	164.1	113.6
30°	385.3	381.5	370.2	352.3	328.0	296.3	259.9	223.3	189.6	158.4	104.5
32.5°	393.5	389.9	378.3	359.3	332.8	300.6	262.1	223.1	186.5	154.3	94.6
35°	401.7	398.1	384.6	364.4	336.5	302.5	263.8	221.9	182.7	147.5	85.2
37.5°	407.9	403.8	390.1	367.7	338.1	303.0	263.5	220.2	178.6	142.0	75.8
40°	412.3	407.9	393.3	369.7	338.6	302.3	261.6	217.3	173.8	135.0	65.9
42.5°	415.2	410.3	394.7	372.6	337.7	300.4	258.7	213.7	168.5	129.0	56.6
45°	416.6	411.5	394.9	370.2	336.0	296.7	254.4	209.1	162.7	120.8	47.2
47.5°	415.9	410.3	393.7	367.5	332.8	292.9	249.6	203.6	155.7	113.6	38.3
50°	414.7	408.9	391.1	364.1	328.5	288.1	244.3	196.9	148.5	104.7	30.3
52.5°	410.8	405.0	388.2	359.3	323.5	282.5	237.1	189.9	140.8	96.0	23.1
55°	406.0	400.7	383.1	355.0	317.0	275.8	230.3	182.4	133.3	87.1	16.6
57.5°	398.5	393.7	376.9	348.0	310.5	268.3	222.9	174.2	123.9	78.2	11.6
60°	389.4	384.6	368.2	340.1	303.0	259.9	214.7	165.8	115.5	69.3	7.2
62.5°	379.8	375.2	358.1	330.2	293.6	251.0	205.8	157.4	106.6	61.1	4.3
65°	367.0	362.7	347.3	318.4	283.3	241.4	195.9	147.3	97.5	52.0	2.4
67.5°	353.5	349.7	334.0	307.6	271.2	230.8	185.8	137.4	87.8	44.0	1.2
70°	339.1	334.3	319.9	292.9	259.0	218.8	174.7	127.3	78.7	36.3	0.0
72.5°	322.3	318.6	304.7	279.2	244.8	206.0	163.4	116.2	68.6	28.9	0.2
75°	305.9	301.3	288.6	264.5	230.8	192.5	150.9	105.9	58.7	22.1	0.2
77.5°	284.7	283.3	271.2	247.9	217.6	179.5	137.2	93.4	49.3	15.9	0.2
80°	263.5	262.1	252.7	231.3	202.2	164.1	124.4	81.6	40.2	10.6	0.2
82.5°	242.6	240.7	231.8	214.0	186.5	151.1	111.2	69.8	31.8	6.5	0.2
85°	223.8	221.4	211.8	195.4	170.4	136.5	97.5	58.2	23.6	3.6	0.5
87.5°	207.7	206.0	195.4	178.6	154.0	122.7	85.4	47.2	16.6	1.7	0.7
90°	194.0	190.4	181.0	163.2	138.6	107.6	72.7	37.8	11.1	1.0	1.0
92.5°	180.5	177.4	167.0	148.7	124.9	94.6	60.4	28.9	7.0	0.5	1.2
95°	166.5	163.2	153.1	136.2	110.9	81.3	49.6	21.2	3.9	0.5	1.2
97.5°	152.8	149.7	139.1	122.3	98.4	69.8	39.2	14.9	1.9	0.5	1.0
100°	140.1	136.5	126.8	110.0	85.9	58.2	30.3	9.6	1.2	0.5	1.0
102.5°	126.6	123.7	113.8	97.5	72.9	47.4	22.6	6.0	0.5	0.5	0.7
105°	114.6	110.9	101.3	84.5	62.1	37.3	15.9	3.6	0.5	0.5	0.7



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CATALOG NUMBER: FCC-X-2-LD4-1LO-30-UNV-93-97-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	74.6	71.7	63.3	49.1	31.5	14.7	4.3	0.7	0.7	0.7	0.7
115°	62.3	58.0	50.5	38.0	23.3	9.6	2.2	0.7	0.7	0.7	0.7
117.5°	49.8	46.2	40.9	28.9	15.4	6.3	1.2	0.7	0.7	0.7	0.7
120°	39.0	35.6	29.6	20.0	10.3	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°	18.5	17.1	13.2	7.9	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	2.6	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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CATALOG NUMBER: FCC-X-2-LD4-1LO-30-UNV-93-97-ED1D-90

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	188.9	188.9	188.9
2.5°	179.8	176.4	175.4
5°	170.2	164.6	161.5
7.5°	160.5	153.1	149.5
10°	151.6	141.0	137.2
12.5°	141.0	128.8	122.7
15°	130.9	115.0	109.3
17.5°	119.6	101.8	95.1
20°	109.0	88.6	81.6
22.5°	97.0	75.6	67.9
25°	86.2	62.6	53.9
27.5°	74.1	49.3	41.9
30°	62.8	37.8	30.3
32.5°	52.0	27.7	20.9
35°	41.9	18.8	13.2
37.5°	32.2	11.6	6.7
40°	23.3	6.0	3.1
42.5°	15.6	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°	101.1	98.2	88.6	72.7	50.8	28.4	10.6	1.9	0.5	0.7	0.7
110°	88.1	85.7	75.8	60.4	40.9	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)