

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: P550817

Luminaire Tested: **FCC-X-2-LD4-1LO-40-UNV-80-94-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: P550817  
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-80-94-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .125 PRISMATIC ACRYLIC 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**

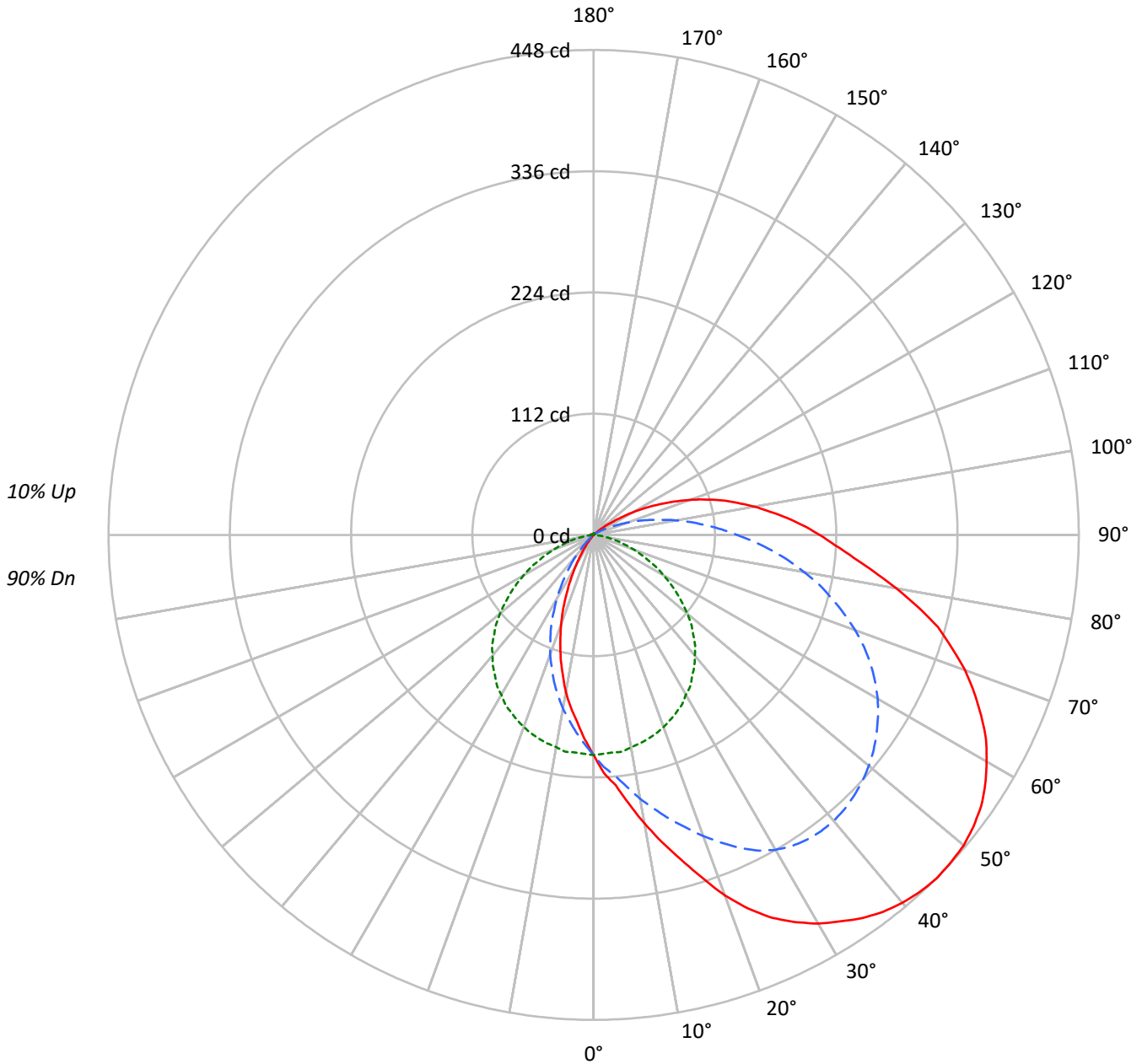
Lumens per Lamp: N/A  
Luminaire Lumens: 1005.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (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°	2188	2188	2188
5°	2402	2156	1799
10°	2718	2129	1483
15°	3046	2103	1156
20°	3435	2069	851
25°	3759	2029	559
30°	3999	1975	314
35°	4207	1918	138
40°	4391	1848	34
45°	4549	1759	0
50°	4682	1641	0
55°	4783	1492	0
60°	4834	1320	0
65°	4854	1123	0
70°	4838	916	0
75°	4776	675	4
80°	4583	414	21
85°	4429	198	29



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.5	1.9
10°-20°	58.3	5.8
20°-30°	94.4	9.4
30°-40°	121.3	12.1
40°-50°	137.3	13.7
50°-60°	142.2	14.2
60°-70°	134.1	13.3
70°-80°	112.4	11.2
80°-90°	81.5	8.1
90°-100°	53.6	5.3
100°-110°	30.9	3.1
110°-120°	13.7	1.4
120°-130°	3.7	0.4
130°-140°	0.8	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°	172.2	17.1
0°-40°	293.5	29.2
0°-60°	573.0	57.0
0°-90°	901.1	89.7
90°-120°	98.1	9.8
90°-150°	103.2	10.3
90°-180°	104.0	10.3
0°-180°	1005.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	203	203	203	203	203	
5°	232	223	202	183	174	23
15°	310	272	195	141	118	89
25°	390	319	181	93	58	180
35°	432	344	159	45	14	271
45°	448	340	130	10	0	346
55°	437	319	94	0	0	390
65°	395	282	56	0	0	391
75°	329	228	24	0	0	345
85°	241	165	4	1	2	206
90°	209	132	1	2	2	114
95°	179	103	0	2	2	141
105°	123	53	0	1	2	130
115°	67	18	1	1	1	67
125°	20	2	1	1	1	20
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°	203.3	203.3	203.3	203.3	203.3	203.3	203.3	203.3	203.3	203.3	203.3
2.5°	220.4	220.1	219.3	218.0	216.2	213.1	210.5	208.2	205.1	202.5	197.6
5°	232.0	230.7	229.7	228.4	224.3	221.4	216.8	211.6	206.7	201.7	191.9
7.5°	250.7	248.6	247.1	243.4	237.7	231.3	224.0	219.1	215.7	202.0	185.2
10°	270.6	268.8	265.7	259.2	252.2	242.9	232.6	220.9	210.5	199.1	179.2
12.5°	290.3	287.7	283.3	275.0	265.2	253.5	239.3	225.6	210.8	197.3	172.2
15°	310.0	307.1	302.5	292.4	279.4	264.1	246.8	229.4	212.1	195.0	165.0
17.5°	331.5	327.6	320.6	309.2	292.9	274.0	253.5	232.6	211.6	192.2	157.2
20°	354.5	349.1	341.6	326.3	307.1	284.9	260.3	235.7	211.3	188.8	148.4
22.5°	373.7	368.2	360.0	344.2	321.1	293.9	266.0	237.7	210.3	184.9	140.1
25°	390.3	385.9	376.8	358.7	334.3	303.5	271.4	239.3	208.7	180.8	131.3
27.5°	403.2	399.1	389.0	370.3	345.5	312.1	275.5	240.1	206.7	176.6	122.2
30°	414.6	410.5	398.3	379.1	353.0	318.8	279.7	240.3	204.1	170.4	112.4
32.5°	423.4	419.5	407.1	386.6	358.1	323.4	282.0	240.1	200.7	166.0	101.8
35°	432.2	428.3	413.8	392.1	362.0	325.5	283.8	238.8	196.6	158.7	91.7
37.5°	438.9	434.5	419.8	395.7	363.8	326.0	283.6	237.0	192.2	152.8	81.6
40°	443.6	438.9	423.1	397.8	364.4	325.3	281.5	233.8	187.0	145.3	71.0
42.5°	446.7	441.5	424.7	400.9	363.3	323.2	278.4	230.0	181.3	138.8	60.9
45°	448.3	442.8	425.0	398.3	361.5	319.3	273.7	225.0	175.1	130.0	50.8
47.5°	447.5	441.5	423.7	395.4	358.1	315.2	268.5	219.1	167.6	122.2	41.2
50°	446.2	440.0	420.8	391.8	353.5	310.0	262.8	211.8	159.8	112.6	32.6
52.5°	442.1	435.8	417.7	386.6	348.0	304.0	255.1	204.3	151.5	103.3	24.9
55°	436.9	431.2	412.3	382.0	341.1	296.8	247.8	196.3	143.5	93.7	17.9
57.5°	428.8	423.7	405.5	374.5	334.1	288.7	239.8	187.5	133.4	84.2	12.4
60°	419.0	413.8	396.2	365.9	326.0	279.7	231.0	178.4	124.3	74.6	7.8
62.5°	408.6	403.7	385.3	355.3	315.9	270.1	221.4	169.4	114.7	65.8	4.7
65°	394.9	390.3	373.7	342.6	304.8	259.7	210.8	158.5	104.9	55.9	2.6
67.5°	380.4	376.3	359.4	331.0	291.9	248.3	199.9	147.9	94.5	47.4	1.3
70°	364.9	359.7	344.2	315.2	278.6	235.4	188.0	137.0	84.7	39.1	0.0
72.5°	346.8	342.9	327.8	300.4	263.4	221.7	175.8	125.1	73.8	31.1	0.3
75°	329.1	324.2	310.5	284.6	248.3	207.2	162.4	113.9	63.2	23.8	0.3
77.5°	306.4	304.8	291.9	266.7	234.1	193.2	147.6	100.5	53.1	17.1	0.3
80°	283.6	282.0	271.9	248.9	217.5	176.6	133.9	87.8	43.2	11.4	0.3
82.5°	261.0	259.0	249.4	230.2	200.7	162.6	119.6	75.1	34.2	7.0	0.3
85°	240.8	238.2	227.9	210.3	183.3	146.8	104.9	62.7	25.4	3.9	0.5
87.5°	223.5	221.7	210.3	192.2	165.7	132.1	91.9	50.8	17.9	1.8	0.8
90°	208.7	204.8	194.7	175.6	149.2	115.8	78.2	40.7	11.9	1.0	1.0
92.5°	194.2	190.9	179.7	160.0	134.4	101.8	65.0	31.1	7.5	0.5	1.3
95°	179.2	175.6	164.7	146.6	119.4	87.5	53.3	22.8	4.1	0.5	1.3
97.5°	164.4	161.1	149.7	131.6	105.9	75.1	42.2	16.1	2.1	0.5	1.0
100°	150.7	146.8	136.5	118.3	92.5	62.7	32.6	10.4	1.3	0.5	1.0
102.5°	136.2	133.1	122.5	104.9	78.5	51.0	24.3	6.5	0.5	0.5	0.8
105°	123.3	119.4	109.0	90.9	66.8	40.1	17.1	3.9	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°	80.3	77.2	68.1	52.8	33.9	15.8	4.7	0.8	0.8	0.8	0.8
115°	67.1	62.4	54.4	40.9	25.1	10.4	2.3	0.8	0.8	0.8	0.8
117.5°	53.6	49.7	44.0	31.1	16.6	6.7	1.3	0.8	0.8	0.8	0.8
120°	42.0	38.3	31.9	21.5	11.1	3.9	0.5	0.8	0.8	0.8	0.8
122.5°	30.0	27.2	21.5	14.0	6.7	1.8	0.8	0.8	1.0	1.0	0.8
125°	19.9	18.4	14.2	8.5	4.1	0.8	0.8	0.8	1.0	1.0	0.8
127.5°	12.9	11.7	8.3	4.9	1.8	0.8	0.8	1.0	1.0	1.0	0.8
130°	7.3	6.5	4.9	2.8	0.8	0.8	0.8	1.0	1.0	1.0	0.8
132.5°	4.1	3.9	2.6	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0
135°	1.0	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0
137.5°	0.3	0.3	0.5	0.5	0.8	0.8	1.0	1.3	1.3	1.3	1.0
140°	0.3	0.3	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.0
142.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
145°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.0	1.0	1.0
147.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.0	1.0
150°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
152.5°	0.3	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.0
155°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
157.5°	0.5	0.5	0.5	0.8	1.0	1.0	1.0	1.3	1.0	1.0	1.3
160°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0
165°	0.5	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.0	1.0	1.0
167.5°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
170°	0.5	0.5	0.5	0.8	0.8	0.8	1.0	1.3	1.3	1.3	1.3
172.5°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
175°	0.5	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.3
177.5°	0.3	0.5	0.5	0.8	0.8	1.0	1.0	1.3	1.3	1.3	1.0
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°	203.3	203.3	203.3
2.5°	193.4	189.8	188.8
5°	183.1	177.1	173.8
7.5°	172.7	164.7	160.8
10°	163.1	151.8	147.6
12.5°	151.8	138.5	132.1
15°	140.9	123.8	117.6
17.5°	128.7	109.5	102.3
20°	117.3	95.3	87.8
22.5°	104.4	81.3	73.0
25°	92.7	67.3	58.0
27.5°	79.8	53.1	45.1
30°	67.6	40.7	32.6
32.5°	55.9	29.8	22.5
35°	45.1	20.2	14.2
37.5°	34.7	12.4	7.3
40°	25.1	6.5	3.4
42.5°	16.8	3.1	1.8
45°	10.4	1.6	0.0
47.5°	6.0	0.0	0.0
50°	3.1	0.0	0.0
52.5°	1.3	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	1.0	1.3
82.5°	1.0	1.3	1.3
85°	1.0	1.3	1.6
87.5°	1.3	1.6	1.8
90°	1.6	1.8	1.8
92.5°	1.6	2.1	2.1
95°	1.8	2.1	2.3
97.5°	2.1	2.3	2.3
100°	1.8	2.3	2.6
102.5°	1.6	2.3	2.3
105°	1.3	1.8	2.1





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.0	1.3	1.3
115°	0.8	1.0	1.3
117.5°	0.8	1.0	1.0
120°	0.8	0.8	1.0
122.5°	0.8	0.8	1.0
125°	0.8	0.8	1.0
127.5°	1.0	0.8	0.8
130°	0.8	0.8	0.8
132.5°	1.0	0.8	0.8
135°	1.0	0.8	0.8
137.5°	1.0	0.8	0.8
140°	1.0	0.8	0.8
142.5°	1.0	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°	1.0	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°	108.8	105.7	95.3	78.2	54.6	30.6	11.4	2.1	0.5	0.8	0.8
110°	94.8	92.2	81.6	65.0	44.0	22.8	7.5	1.3	0.8	0.8	0.8







107.5°	1.0	1.6	1.8
110°	1.0	1.3	1.6



(END OF REPORT)