

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: P551063

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-80-84-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: P551063  
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-LD4-1STD-40-UNV-80-84-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

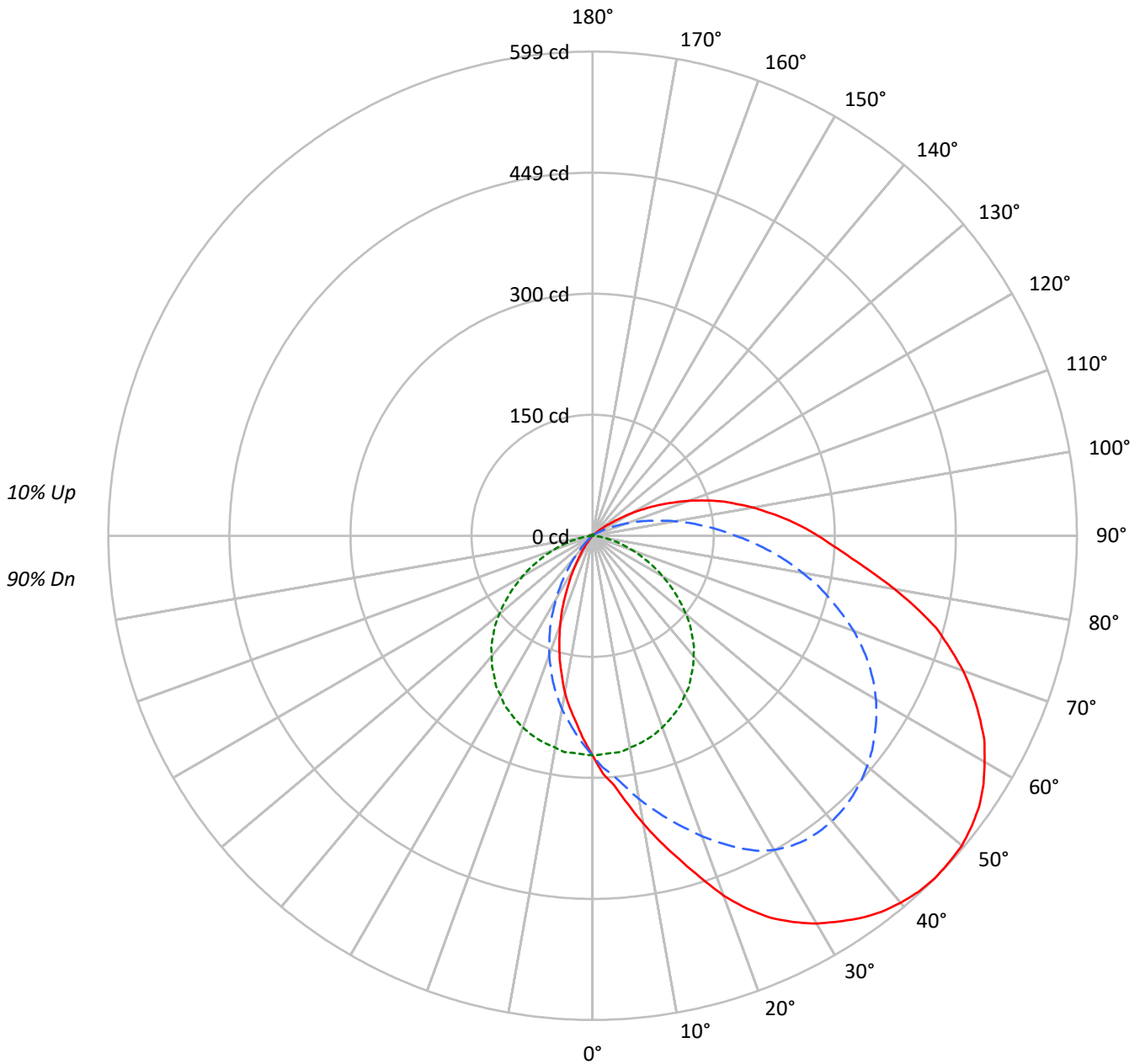
Lumens per Lamp: N/A  
Luminaire Lumens: 1342.9 lumens  
Efficiency: N/A  
Efficacy: 80.4 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 16.7  
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°	2925	2925	2925
5°	3210	2882	2404
10°	3632	2846	1982
15°	4070	2810	1544
20°	4592	2764	1137
25°	5023	2710	746
30°	5343	2640	421
35°	5622	2563	185
40°	5868	2468	45
45°	6079	2350	0
50°	6257	2193	0
55°	6392	1995	0
60°	6459	1764	0
65°	6486	1500	0
70°	6465	1225	0
75°	6382	902	4
80°	6123	551	27
85°	5919	264	39



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.0	1.9
10°-20°	77.9	5.8
20°-30°	126.2	9.4
30°-40°	162.1	12.1
40°-50°	183.5	13.7
50°-60°	190.1	14.2
60°-70°	179.3	13.3
70°-80°	150.2	11.2
80°-90°	108.9	8.1
90°-100°	71.6	5.3
100°-110°	41.3	3.1
110°-120°	18.2	1.4
120°-130°	4.9	0.4
130°-140°	1.1	0.1
140°-150°	0.7	0.1
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	230.1	17.1
0°-40°	392.2	29.2
0°-60°	765.7	57.0
0°-90°	1204.1	89.7
90°-120°	131.1	9.8
90°-150°	137.9	10.3
90°-180°	139.0	10.4
0°-180°	1342.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	272	272	272	272	272	
5°	310	298	270	245	232	31
15°	414	363	261	188	157	119
25°	522	426	242	124	78	241
35°	578	459	212	60	19	362
45°	599	455	174	14	0	462
55°	584	426	125	0	0	521
65°	528	377	75	0	0	522
75°	440	304	32	0	0	461
85°	322	221	5	1	2	275
90°	279	177	1	2	2	153
95°	240	138	1	2	3	188
105°	165	71	1	2	3	174
115°	90	24	1	1	2	90
125°	27	3	1	1	1	27
135°	1	1	2	1	1	2
145°	0	1	1	1	1	0
155°	1	1	1	1	0	0
165°	1	1	1	1	0	0
175°	1	1	2	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°	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7	271.7
2.5°	294.5	294.2	293.1	291.4	289.0	284.8	281.3	278.2	274.1	270.6	264.0
5°	310.1	308.3	307.0	305.2	299.7	295.9	289.7	282.7	276.2	269.6	256.4
7.5°	335.0	332.2	330.1	325.3	317.7	309.0	299.3	292.8	288.3	269.9	247.4
10°	361.6	359.2	355.1	346.4	337.1	324.6	310.8	295.2	281.3	266.1	239.5
12.5°	387.9	384.5	378.6	367.5	354.4	338.8	319.8	301.4	281.7	263.7	230.1
15°	414.2	410.4	404.2	390.7	373.4	353.0	329.8	306.6	283.4	260.6	220.4
17.5°	443.0	437.8	428.4	413.2	391.4	366.1	338.8	310.8	282.7	256.8	210.1
20°	473.8	466.5	456.5	436.0	410.4	380.7	347.8	314.9	282.4	252.3	198.3
22.5°	499.4	492.1	481.0	459.9	429.1	392.8	355.4	317.7	281.0	247.1	187.2
25°	521.5	515.6	503.5	479.3	446.8	405.6	362.7	319.8	278.9	241.5	175.5
27.5°	538.8	533.3	519.8	494.9	461.6	417.0	368.2	320.8	276.2	236.0	163.3
30°	554.0	548.5	532.2	506.6	471.7	426.0	373.7	321.1	272.7	227.7	150.2
32.5°	565.8	560.6	544.0	516.7	478.6	432.2	376.9	320.8	268.2	221.8	136.0
35°	577.6	572.4	553.0	523.9	483.8	435.0	379.3	319.1	262.7	212.1	122.5
37.5°	586.6	580.7	561.0	528.8	486.2	435.7	378.9	316.6	256.8	204.2	109.0
40°	592.8	586.6	565.5	531.5	486.9	434.7	376.2	312.5	249.9	194.1	94.8
42.5°	597.0	590.0	567.5	535.7	485.5	431.9	372.0	307.3	242.2	185.5	81.3
45°	599.0	591.8	567.9	532.2	483.1	426.7	365.8	300.7	233.9	173.7	67.8
47.5°	598.0	590.0	566.2	528.4	478.6	421.2	358.9	292.8	223.9	163.3	55.0
50°	596.3	588.0	562.3	523.6	472.4	414.2	351.3	283.1	213.5	150.5	43.6
52.5°	590.7	582.4	558.2	516.7	465.1	406.3	340.9	273.0	202.4	138.1	33.2
55°	583.8	576.2	550.9	510.4	455.8	396.6	331.2	262.3	191.7	125.3	23.9
57.5°	573.1	566.2	541.9	500.4	446.4	385.9	320.5	250.5	178.2	112.5	16.6
60°	559.9	553.0	529.5	489.0	435.7	373.7	308.7	238.4	166.1	99.7	10.4
62.5°	546.1	539.5	514.9	474.8	422.2	360.9	295.9	226.3	153.3	87.9	6.2
65°	527.7	521.5	499.4	457.8	407.3	347.1	281.7	211.8	140.2	74.7	3.5
67.5°	508.4	502.8	480.3	442.3	390.0	331.9	267.2	197.6	126.3	63.3	1.7
70°	487.6	480.7	459.9	421.2	372.4	314.6	251.2	183.1	113.2	52.3	0.0
72.5°	463.4	458.2	438.1	401.4	351.9	296.2	235.0	167.1	98.6	41.5	0.3
75°	439.8	433.3	414.9	380.3	331.9	276.8	217.0	152.3	84.4	31.8	0.3
77.5°	409.4	407.3	390.0	356.4	312.8	258.2	197.3	134.3	70.9	22.8	0.3
80°	378.9	376.9	363.4	332.6	290.7	236.0	178.9	117.3	57.8	15.2	0.3
82.5°	348.8	346.1	333.3	307.6	268.2	217.3	159.9	100.4	45.7	9.3	0.3
85°	321.8	318.4	304.5	281.0	245.0	196.2	140.2	83.7	33.9	5.2	0.7
87.5°	298.6	296.2	281.0	256.8	221.5	176.5	122.9	67.8	23.9	2.4	1.0
90°	278.9	273.7	260.2	234.6	199.3	154.7	104.5	54.3	15.9	1.4	1.4
92.5°	259.5	255.0	240.2	213.9	179.6	136.0	86.9	41.5	10.0	0.7	1.7
95°	239.5	234.6	220.1	195.9	159.5	117.0	71.3	30.5	5.5	0.7	1.7
97.5°	219.7	215.2	200.0	175.8	141.5	100.4	56.4	21.5	2.8	0.7	1.4
100°	201.4	196.2	182.4	158.1	123.5	83.7	43.6	13.8	1.7	0.7	1.4
102.5°	182.0	177.9	163.7	140.2	104.9	68.2	32.5	8.7	0.7	0.7	1.0
105°	164.7	159.5	145.7	121.5	89.3	53.6	22.8	5.2	0.7	0.7	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	107.3	103.1	91.0	70.6	45.3	21.1	6.2	1.0	1.0	1.0	1.0
115°	89.6	83.4	72.7	54.7	33.6	13.8	3.1	1.0	1.0	1.0	1.0
117.5°	71.6	66.4	58.8	41.5	22.1	9.0	1.7	1.0	1.0	1.0	1.0
120°	56.1	51.2	42.6	28.7	14.9	5.2	0.7	1.0	1.0	1.0	1.0
122.5°	40.1	36.3	28.7	18.7	9.0	2.4	1.0	1.0	1.4	1.4	1.0
125°	26.6	24.6	19.0	11.4	5.5	1.0	1.0	1.0	1.4	1.4	1.0
127.5°	17.3	15.6	11.1	6.6	2.4	1.0	1.0	1.4	1.4	1.4	1.0
130°	9.7	8.7	6.6	3.8	1.0	1.0	1.0	1.4	1.4	1.4	1.0
132.5°	5.5	5.2	3.5	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4
135°	1.4	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.4	1.7	1.7	1.7	1.4
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.4
142.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
145°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.4	1.4	1.4
147.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.4	1.4
150°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
152.5°	0.3	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4
155°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
157.5°	0.7	0.7	0.7	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.7
160°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.4
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.4	1.4	1.4
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.4
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.4	1.7	1.7	1.7	1.7
172.5°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
175°	0.7	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.7
177.5°	0.3	0.7	0.7	1.0	1.0	1.4	1.4	1.7	1.7	1.7	1.4
180°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	271.7	271.7	271.7
2.5°	258.5	253.7	252.3
5°	244.7	236.7	232.2
7.5°	230.8	220.1	214.9
10°	218.0	202.8	197.3
12.5°	202.8	185.1	176.5
15°	188.3	165.4	157.1
17.5°	172.0	146.4	136.7
20°	156.8	127.3	117.3
22.5°	139.5	108.7	97.6
25°	123.9	90.0	77.5
27.5°	106.6	70.9	60.2
30°	90.3	54.3	43.6
32.5°	74.7	39.8	30.1
35°	60.2	27.0	19.0
37.5°	46.4	16.6	9.7
40°	33.6	8.7	4.5
42.5°	22.5	4.2	2.4
45°	13.8	2.1	0.0
47.5°	8.0	0.0	0.0
50°	4.2	0.0	0.0
52.5°	1.7	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	0.7	1.0
80°	0.7	1.4	1.7
82.5°	1.4	1.7	1.7
85°	1.4	1.7	2.1
87.5°	1.7	2.1	2.4
90°	2.1	2.4	2.4
92.5°	2.1	2.8	2.8
95°	2.4	2.8	3.1
97.5°	2.8	3.1	3.1
100°	2.4	3.1	3.5
102.5°	2.1	3.1	3.1
105°	1.7	2.4	2.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.4	1.7	1.7
115°	1.0	1.4	1.7
117.5°	1.0	1.4	1.4
120°	1.0	1.0	1.4
122.5°	1.0	1.0	1.4
125°	1.0	1.0	1.4
127.5°	1.4	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.4	1.0	1.0
135°	1.4	1.0	1.0
137.5°	1.4	1.0	1.0
140°	1.4	1.0	1.0
142.5°	1.4	1.0	1.0
145°	1.0	1.0	1.0
147.5°	1.0	1.0	1.0
150°	1.0	1.0	0.7
152.5°	1.0	0.7	0.7
155°	1.0	0.7	0.3
157.5°	1.4	0.7	0.3
160°	1.0	0.7	0.3
162.5°	1.0	0.7	0.3
165°	1.0	0.7	0.0
167.5°	1.0	0.7	0.3
170°	1.0	0.7	0.3
172.5°	1.0	0.7	0.3
175°	1.0	0.3	0.3
177.5°	1.0	0.3	0.3
180°	1.0	1.0	1.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	145.3	141.2	127.3	104.5	73.0	40.8	15.2	2.8	0.7	1.0	1.0
110°	126.7	123.2	109.0	86.9	58.8	30.5	10.0	1.7	1.0	1.0	1.0







107.5°	1.4	2.1	2.4
110°	1.4	1.7	2.1



(END OF REPORT)