

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: P551583

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-80-88-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: P551583  
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-LD4-2LO-40-UNV-80-88-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

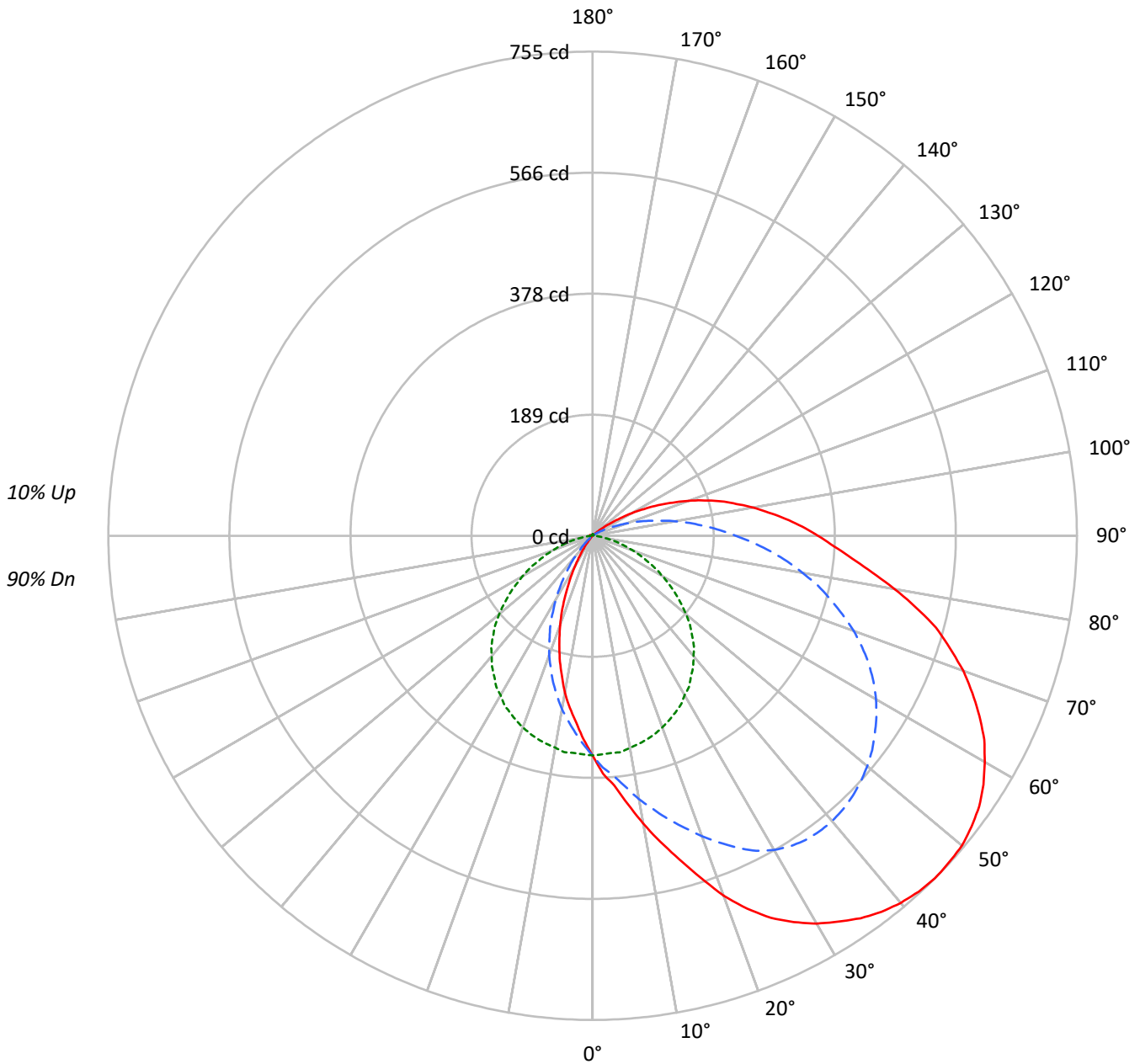
Lumens per Lamp: N/A  
Luminaire Lumens: 1692.9 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 23.5  
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°	3687	3687	3687
5°	4047	3632	3030
10°	4579	3588	2498
15°	5132	3542	1947
20°	5788	3484	1433
25°	6332	3417	941
30°	6736	3327	530
35°	7086	3231	234
40°	7397	3112	56
45°	7663	2963	0
50°	7888	2766	0
55°	8057	2514	0
60°	8143	2223	0
65°	8177	1892	0
70°	8150	1544	0
75°	8046	1137	6
80°	7720	696	36
85°	7462	331	48



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.8	1.9
10°-20°	98.2	5.8
20°-30°	159.1	9.4
30°-40°	204.3	12.1
40°-50°	231.3	13.7
50°-60°	239.6	14.2
60°-70°	226.0	13.3
70°-80°	189.4	11.2
80°-90°	137.3	8.1
90°-100°	90.2	5.3
100°-110°	52.1	3.1
110°-120°	23.0	1.4
120°-130°	6.2	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.7	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	290.1	17.1
0°-40°	494.4	29.2
0°-60°	965.3	57.0
0°-90°	1517.9	89.7
90°-120°	165.3	9.8
90°-150°	173.9	10.3
90°-180°	175.0	10.3
0°-180°	1692.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	342	342	342	342	342	
5°	391	375	340	308	293	39
15°	522	458	328	237	198	151
25°	657	537	304	156	98	304
35°	728	579	267	76	24	457
45°	755	573	219	17	0	583
55°	736	537	158	0	0	657
65°	665	476	94	0	0	658
75°	554	384	40	0	0	582
85°	406	278	6	2	3	346
90°	352	223	2	3	3	193
95°	302	174	1	3	4	237
105°	208	90	1	2	4	219
115°	113	30	1	1	2	113
125°	34	4	2	1	2	34
135°	2	1	2	2	1	3
145°	0	2	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	2	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°	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5
2.5°	371.2	370.8	369.5	367.3	364.3	359.0	354.7	350.7	345.5	341.1	332.9
5°	390.9	388.7	387.0	384.8	377.8	373.0	365.1	356.4	348.1	339.8	323.3
7.5°	422.3	418.8	416.2	410.1	400.5	389.6	377.4	369.1	363.4	340.3	311.9
10°	455.9	452.8	447.6	436.7	424.9	409.2	391.7	372.1	354.7	335.5	301.9
12.5°	489.0	484.7	477.3	463.3	446.7	427.1	403.1	380.0	355.1	332.4	290.1
15°	522.2	517.4	509.5	492.5	470.7	445.0	415.7	386.5	357.3	328.5	277.9
17.5°	558.4	551.9	540.1	520.9	493.4	461.5	427.1	391.7	356.4	323.7	264.8
20°	597.2	588.1	575.4	549.7	517.4	479.9	438.4	397.0	356.0	318.0	250.0
22.5°	629.5	620.3	606.4	579.8	540.9	495.1	448.0	400.5	354.2	311.5	236.0
25°	657.4	650.0	634.7	604.2	563.2	511.3	457.2	403.1	351.6	304.5	221.2
27.5°	679.2	672.3	655.2	623.8	582.0	525.7	464.2	404.4	348.1	297.5	205.9
30°	698.4	691.5	670.9	638.7	594.6	537.0	471.1	404.8	343.8	287.0	189.3
32.5°	713.3	706.7	685.8	651.3	603.3	544.9	475.1	404.4	338.1	279.6	171.4
35°	728.1	721.6	697.1	660.5	609.9	548.4	478.1	402.2	331.1	267.4	154.4
37.5°	739.4	732.0	707.2	666.6	612.9	549.2	477.7	399.2	323.7	257.4	137.4
40°	747.3	739.4	712.8	670.1	613.8	547.9	474.2	393.9	315.0	244.7	119.5
42.5°	752.5	743.8	715.4	675.3	612.1	544.4	469.0	387.4	305.4	233.8	102.5
45°	755.1	746.0	715.9	670.9	609.0	537.9	461.1	379.1	294.9	219.0	85.5
47.5°	753.8	743.8	713.7	666.1	603.3	530.9	452.4	369.1	282.3	205.9	69.4
50°	751.7	741.2	708.9	660.0	595.5	522.2	442.8	356.8	269.2	189.8	55.0
52.5°	744.7	734.2	703.7	651.3	586.3	512.2	429.7	344.2	255.2	174.1	41.9
55°	735.9	726.3	694.5	643.5	574.5	499.9	417.5	330.7	241.7	157.9	30.1
57.5°	722.4	713.7	683.2	630.8	562.8	486.4	404.0	315.8	224.7	141.8	20.9
60°	705.8	697.1	667.5	616.4	549.2	471.1	389.1	300.6	209.4	125.6	13.1
62.5°	688.4	680.1	649.1	598.5	532.2	455.0	373.0	285.3	193.3	110.8	7.9
65°	665.3	657.4	629.5	577.2	513.5	437.6	355.1	267.0	176.7	94.2	4.4
67.5°	640.8	633.9	605.5	557.5	491.6	418.4	336.8	249.1	159.2	79.8	2.2
70°	614.7	605.9	579.8	530.9	469.4	396.5	316.7	230.8	142.7	65.9	0.0
72.5°	584.1	577.6	552.3	506.0	443.7	373.4	296.2	210.7	124.3	52.3	0.4
75°	554.5	546.2	523.1	479.4	418.4	349.0	273.5	191.9	106.4	40.1	0.4
77.5°	516.1	513.5	491.6	449.3	394.4	325.4	248.7	169.3	89.4	28.8	0.4
80°	477.7	475.1	458.1	419.2	366.4	297.5	225.5	147.9	72.9	19.2	0.4
82.5°	439.7	436.2	420.1	387.8	338.1	274.0	201.5	126.5	57.6	11.8	0.4
85°	405.7	401.3	383.9	354.2	308.9	247.4	176.7	105.6	42.8	6.5	0.9
87.5°	376.5	373.4	354.2	323.7	279.2	222.5	154.9	85.5	30.1	3.1	1.3
90°	351.6	345.1	328.1	295.8	251.3	195.0	131.7	68.5	20.1	1.7	1.7
92.5°	327.2	321.5	302.8	269.6	226.4	171.4	109.5	52.3	12.7	0.9	2.2
95°	301.9	295.8	277.5	246.9	201.1	147.5	89.9	38.4	7.0	0.9	2.2
97.5°	277.0	271.3	252.2	221.6	178.4	126.5	71.1	27.0	3.5	0.9	1.7
100°	253.9	247.4	229.9	199.4	155.7	105.6	55.0	17.4	2.2	0.9	1.7
102.5°	229.5	224.2	206.3	176.7	132.2	85.9	41.0	10.9	0.9	0.9	1.3
105°	207.7	201.1	183.7	153.1	112.6	67.6	28.8	6.5	0.9	0.9	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	135.2	130.0	114.7	89.0	57.1	26.6	7.9	1.3	1.3	1.3	1.3
115°	113.0	105.1	91.6	68.9	42.3	17.4	3.9	1.3	1.3	1.3	1.3
117.5°	90.3	83.8	74.2	52.3	27.9	11.3	2.2	1.3	1.3	1.3	1.3
120°	70.7	64.6	53.7	36.2	18.8	6.5	0.9	1.3	1.3	1.3	1.3
122.5°	50.6	45.8	36.2	23.6	11.3	3.1	1.3	1.3	1.7	1.7	1.3
125°	33.6	31.0	24.0	14.4	7.0	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.8	19.6	14.0	8.3	3.1	1.3	1.3	1.7	1.7	1.7	1.3
130°	12.2	10.9	8.3	4.8	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	7.0	6.5	4.4	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7
135°	1.7	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.2	2.2	2.2	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.2	1.7	1.7	2.2
160°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7	1.7
165°	0.9	0.9	0.9	0.9	1.3	1.3	1.7	1.7	1.7	1.7	1.7
167.5°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	1.7	1.7	1.7	1.7
170°	0.9	0.9	0.9	1.3	1.3	1.3	1.7	2.2	2.2	2.2	2.2
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	2.2
177.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.2	2.2	2.2	1.7
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	342.5	342.5	342.5
2.5°	325.9	319.8	318.0
5°	308.4	298.4	292.7
7.5°	291.0	277.5	270.9
10°	274.8	255.6	248.7
12.5°	255.6	233.4	222.5
15°	237.3	208.5	198.1
17.5°	216.8	184.5	172.3
20°	197.6	160.5	147.9
22.5°	175.8	137.0	123.0
25°	156.2	113.4	97.7
27.5°	134.4	89.4	75.9
30°	113.9	68.5	55.0
32.5°	94.2	50.2	38.0
35°	75.9	34.0	24.0
37.5°	58.5	20.9	12.2
40°	42.3	10.9	5.7
42.5°	28.4	5.2	3.1
45°	17.4	2.6	0.0
47.5°	10.0	0.0	0.0
50°	5.2	0.0	0.0
52.5°	2.2	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°	0.4	0.4	0.4
77.5°	0.4	0.9	1.3
80°	0.9	1.7	2.2
82.5°	1.7	2.2	2.2
85°	1.7	2.2	2.6
87.5°	2.2	2.6	3.1
90°	2.6	3.1	3.1
92.5°	2.6	3.5	3.5
95°	3.1	3.5	3.9
97.5°	3.5	3.9	3.9
100°	3.1	3.9	4.4
102.5°	2.6	3.9	3.9
105°	2.2	3.1	3.5





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	1.7	2.2	2.2
115°	1.3	1.7	2.2
117.5°	1.3	1.7	1.7
120°	1.3	1.3	1.7
122.5°	1.3	1.3	1.7
125°	1.3	1.3	1.7
127.5°	1.7	1.3	1.3
130°	1.3	1.3	1.3
132.5°	1.7	1.3	1.3
135°	1.7	1.3	1.3
137.5°	1.7	1.3	1.3
140°	1.7	1.3	1.3
142.5°	1.7	1.3	1.3
145°	1.3	1.3	1.3
147.5°	1.3	1.3	1.3
150°	1.3	1.3	0.9
152.5°	1.3	0.9	0.9
155°	1.3	0.9	0.4
157.5°	1.7	0.9	0.4
160°	1.3	0.9	0.4
162.5°	1.3	0.9	0.4
165°	1.3	0.9	0.0
167.5°	1.3	0.9	0.4
170°	1.3	0.9	0.4
172.5°	1.3	0.9	0.4
175°	1.3	0.4	0.4
177.5°	1.3	0.4	0.4
180°	1.3	1.3	1.3



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	183.2	178.0	160.5	131.7	92.0	51.5	19.2	3.5	0.9	1.3	1.3
110°	159.7	155.3	137.4	109.5	74.2	38.4	12.7	2.2	1.3	1.3	1.3







107.5°	1.7	2.6	3.1
110°	1.7	2.2	2.6



(END OF REPORT)