

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: P551115

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-93-86-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: P551115
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-93-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

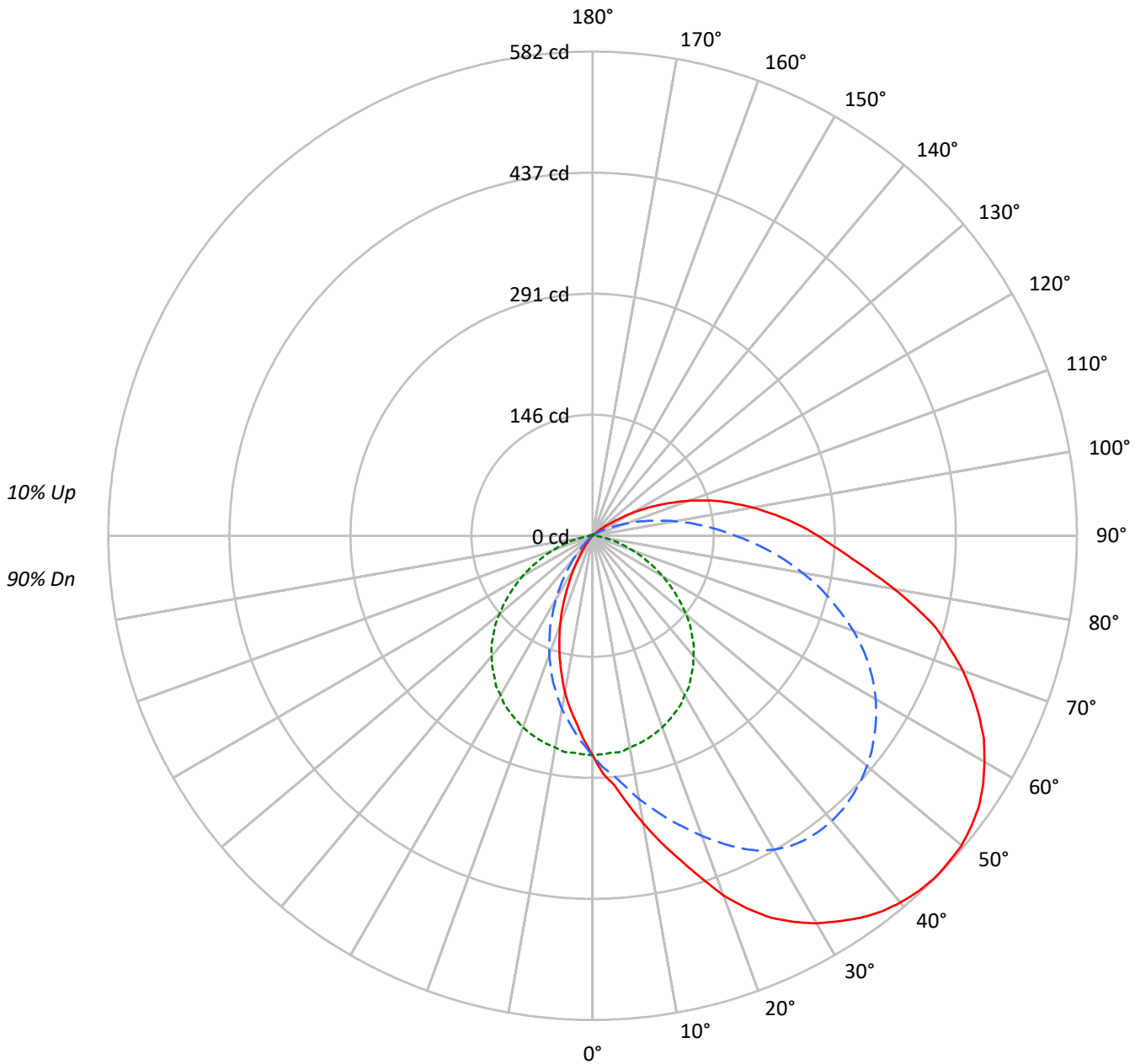
Lumens per Lamp: N/A
Luminaire Lumens: 1303.9 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): 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°	2840	2840	2840
5°	3117	2798	2334
10°	3527	2763	1924
15°	3952	2728	1499
20°	4458	2684	1104
25°	4877	2632	725
30°	5189	2563	408
35°	5458	2489	180
40°	5698	2397	44
45°	5902	2283	0
50°	6074	2131	0
55°	6206	1936	0
60°	6273	1713	0
65°	6298	1458	0
70°	6276	1188	0
75°	6198	876	4
80°	5946	537	27
85°	5747	254	37



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.3	1.9
10°-20°	75.7	5.8
20°-30°	122.5	9.4
30°-40°	157.4	12.1
40°-50°	178.1	13.7
50°-60°	184.6	14.2
60°-70°	174.1	13.3
70°-80°	145.9	11.2
80°-90°	105.7	8.1
90°-100°	69.5	5.3
100°-110°	40.1	3.1
110°-120°	17.7	1.4
120°-130°	4.8	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°	223.4	17.1
0°-40°	380.8	29.2
0°-60°	743.5	57.0
0°-90°	1169.1	89.7
90°-120°	127.3	9.8
90°-150°	133.9	10.3
90°-180°	135.0	10.4
0°-180°	1303.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	264	264	264	264	264	
5°	301	289	262	238	226	30
15°	402	353	253	183	152	116
25°	506	414	234	120	75	234
35°	561	446	206	58	18	352
45°	582	442	169	13	0	449
55°	567	414	122	0	0	506
65°	512	366	73	0	0	507
75°	427	296	31	0	0	448
85°	312	214	5	1	2	267
90°	271	172	1	2	2	148
95°	232	134	1	2	3	182
105°	160	69	1	2	3	169
115°	87	23	1	1	2	87
125°	26	3	1	1	1	26
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°	263.8	263.8	263.8	263.8	263.8	263.8	263.8	263.8	263.8	263.8	263.8
2.5°	285.9	285.6	284.6	282.9	280.6	276.5	273.2	270.2	266.1	262.8	256.4
5°	301.1	299.4	298.0	296.4	291.0	287.3	281.2	274.5	268.1	261.8	249.0
7.5°	325.3	322.6	320.6	315.8	308.5	300.1	290.6	284.3	279.9	262.1	240.2
10°	351.1	348.8	344.7	336.3	327.3	315.2	301.7	286.6	273.2	258.4	232.5
12.5°	376.7	373.3	367.6	356.8	344.1	329.0	310.5	292.7	273.5	256.0	223.4
15°	402.2	398.5	392.5	379.4	362.6	342.7	320.2	297.7	275.2	253.0	214.0
17.5°	430.1	425.1	416.0	401.2	380.0	355.5	329.0	301.7	274.5	249.3	204.0
20°	460.0	452.9	443.2	423.4	398.5	369.6	337.7	305.8	274.2	245.0	192.5
22.5°	484.9	477.8	467.1	446.6	416.7	381.4	345.1	308.5	272.8	239.9	181.8
25°	506.4	500.7	488.9	465.4	433.8	393.8	352.1	310.5	270.8	234.5	170.4
27.5°	523.2	517.8	504.7	480.5	448.2	404.9	357.5	311.5	268.1	229.2	158.6
30°	538.0	532.6	516.8	491.9	458.0	413.6	362.9	311.8	264.8	221.1	145.8
32.5°	549.4	544.3	528.2	501.7	464.7	419.7	365.9	311.5	260.4	215.4	132.1
35°	560.8	555.8	536.9	508.7	469.7	422.4	368.3	309.8	255.0	206.0	118.9
37.5°	569.5	563.8	544.7	513.4	472.1	423.0	367.9	307.4	249.3	198.2	105.8
40°	575.6	569.5	549.0	516.1	472.8	422.0	365.2	303.4	242.6	188.5	92.1
42.5°	579.6	572.9	551.1	520.1	471.4	419.3	361.2	298.4	235.2	180.1	79.0
45°	581.6	574.6	551.4	516.8	469.1	414.3	355.2	292.0	227.1	168.7	65.9
47.5°	580.6	572.9	549.7	513.1	464.7	408.9	348.4	284.3	217.4	158.6	53.4
50°	578.9	570.9	546.0	508.4	458.7	402.2	341.1	274.9	207.3	146.2	42.3
52.5°	573.6	565.5	542.0	501.7	451.6	394.5	331.0	265.1	196.6	134.1	32.3
55°	566.8	559.5	534.9	495.6	442.5	385.1	321.6	254.7	186.1	121.6	23.2
57.5°	556.4	549.7	526.2	485.9	433.5	374.7	311.1	243.3	173.0	109.2	16.1
60°	543.7	536.9	514.1	474.8	423.0	362.9	299.7	231.5	161.3	96.8	10.1
62.5°	530.2	523.8	500.0	461.0	409.9	350.5	287.3	219.8	148.9	85.3	6.0
65°	512.4	506.4	484.9	444.5	395.5	337.0	273.5	205.6	136.1	72.6	3.4
67.5°	493.6	488.2	466.4	429.4	378.7	322.2	259.4	191.9	122.6	61.5	1.7
70°	473.4	466.7	446.6	408.9	361.5	305.4	243.9	177.7	109.9	50.7	0.0
72.5°	449.9	444.9	425.4	389.8	341.7	287.6	228.2	162.3	95.8	40.3	0.3
75°	427.1	420.7	402.9	369.3	322.2	268.8	210.7	147.8	82.0	30.9	0.3
77.5°	397.5	395.5	378.7	346.1	303.8	250.7	191.5	130.4	68.9	22.2	0.3
80°	367.9	365.9	352.8	322.9	282.2	229.2	173.7	113.9	56.1	14.8	0.3
82.5°	338.7	336.0	323.6	298.7	260.4	211.0	155.2	97.4	44.4	9.1	0.3
85°	312.5	309.1	295.7	272.8	237.9	190.5	136.1	81.3	32.9	5.0	0.7
87.5°	290.0	287.6	272.8	249.3	215.0	171.4	119.3	65.9	23.2	2.4	1.0
90°	270.8	265.8	252.7	227.8	193.5	150.2	101.5	52.8	15.5	1.3	1.3
92.5°	252.0	247.6	233.2	207.7	174.4	132.1	84.3	40.3	9.7	0.7	1.7
95°	232.5	227.8	213.7	190.2	154.9	113.6	69.2	29.6	5.4	0.7	1.7
97.5°	213.4	209.0	194.2	170.7	137.4	97.4	54.8	20.8	2.7	0.7	1.3
100°	195.6	190.5	177.1	153.6	120.0	81.3	42.3	13.4	1.7	0.7	1.3
102.5°	176.7	172.7	158.9	136.1	101.8	66.2	31.6	8.4	0.7	0.7	1.0
105°	159.9	154.9	141.5	117.9	86.7	52.1	22.2	5.0	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°	104.2	100.1	88.4	68.5	44.0	20.5	6.0	1.0	1.0	1.0	1.0
115°	87.0	81.0	70.6	53.1	32.6	13.4	3.0	1.0	1.0	1.0	1.0
117.5°	69.6	64.5	57.1	40.3	21.5	8.7	1.7	1.0	1.0	1.0	1.0
120°	54.4	49.7	41.3	27.9	14.4	5.0	0.7	1.0	1.0	1.0	1.0
122.5°	39.0	35.3	27.9	18.1	8.7	2.4	1.0	1.0	1.3	1.3	1.0
125°	25.9	23.9	18.5	11.1	5.4	1.0	1.0	1.0	1.3	1.3	1.0
127.5°	16.8	15.1	10.8	6.4	2.4	1.0	1.0	1.3	1.3	1.3	1.0
130°	9.4	8.4	6.4	3.7	1.0	1.0	1.0	1.3	1.3	1.3	1.0
132.5°	5.4	5.0	3.4	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3
135°	1.3	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3
137.5°	0.3	0.3	0.7	0.7	1.0	1.0	1.3	1.7	1.7	1.7	1.3
140°	0.3	0.3	0.7	1.0	1.0	1.0	1.3	1.7	1.7	1.7	1.3
142.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3	1.3
145°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.3	1.3	1.3
147.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.3	1.3
150°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.3
152.5°	0.3	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.3
155°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.7
157.5°	0.7	0.7	0.7	1.0	1.3	1.3	1.3	1.7	1.3	1.3	1.7
160°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3
165°	0.7	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.3	1.3	1.3
167.5°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
170°	0.7	0.7	0.7	1.0	1.0	1.0	1.3	1.7	1.7	1.7	1.7
172.5°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.7
175°	0.7	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.7
177.5°	0.3	0.7	0.7	1.0	1.0	1.3	1.3	1.7	1.7	1.7	1.3
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°	263.8	263.8	263.8
2.5°	251.0	246.3	245.0
5°	237.6	229.8	225.5
7.5°	224.1	213.7	208.7
10°	211.7	196.9	191.5
12.5°	196.9	179.8	171.4
15°	182.8	160.6	152.5
17.5°	167.0	142.1	132.7
20°	152.2	123.7	113.9
22.5°	135.4	105.5	94.8
25°	120.3	87.4	75.3
27.5°	103.5	68.9	58.5
30°	87.7	52.8	42.3
32.5°	72.6	38.6	29.2
35°	58.5	26.2	18.5
37.5°	45.0	16.1	9.4
40°	32.6	8.4	4.4
42.5°	21.8	4.0	2.4
45°	13.4	2.0	0.0
47.5°	7.7	0.0	0.0
50°	4.0	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	1.3	1.7
82.5°	1.3	1.7	1.7
85°	1.3	1.7	2.0
87.5°	1.7	2.0	2.4
90°	2.0	2.4	2.4
92.5°	2.0	2.7	2.7
95°	2.4	2.7	3.0
97.5°	2.7	3.0	3.0
100°	2.4	3.0	3.4
102.5°	2.0	3.0	3.0
105°	1.7	2.4	2.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.3	1.7	1.7
115°	1.0	1.3	1.7
117.5°	1.0	1.3	1.3
120°	1.0	1.0	1.3
122.5°	1.0	1.0	1.3
125°	1.0	1.0	1.3
127.5°	1.3	1.0	1.0
130°	1.0	1.0	1.0
132.5°	1.3	1.0	1.0
135°	1.3	1.0	1.0
137.5°	1.3	1.0	1.0
140°	1.3	1.0	1.0
142.5°	1.3	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°	1.3	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°	141.1	137.1	123.7	101.5	70.9	39.6	14.8	2.7	0.7	1.0	1.0
110°	123.0	119.6	105.8	84.3	57.1	29.6	9.7	1.7	1.0	1.0	1.0





107.5°	1.3	2.0	2.4
110°	1.3	1.7	2.0



(END OF REPORT)