

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: P551116

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-93-86-ED1D**

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: P551116
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
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

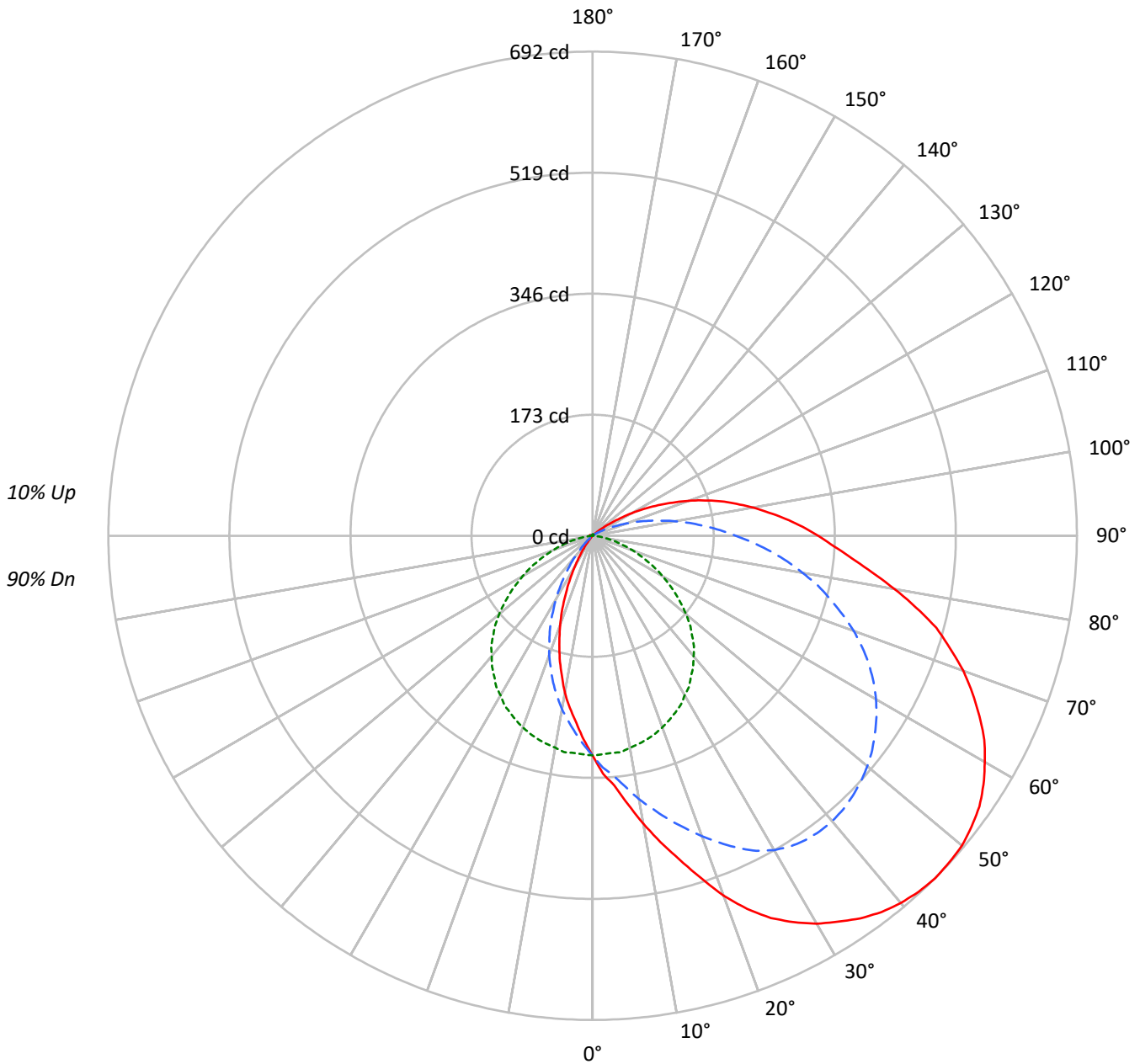
Lumens per Lamp: N/A
Luminaire Lumens: 1552.0 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 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°	3379	3379	3379
5°	3709	3329	2777
10°	4198	3288	2290
15°	4704	3247	1785
20°	5306	3194	1314
25°	5805	3132	863
30°	6176	3050	486
35°	6497	2961	214
40°	6781	2854	51
45°	7026	2717	0
50°	7231	2536	0
55°	7387	2306	0
60°	7465	2039	0
65°	7496	1735	0
70°	7471	1415	0
75°	7376	1044	6
80°	7077	638	32
85°	6840	305	44



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	1.9
10°-20°	90.0	5.8
20°-30°	145.8	9.4
30°-40°	187.3	12.1
40°-50°	212.0	13.7
50°-60°	219.7	14.2
60°-70°	207.2	13.3
70°-80°	173.6	11.2
80°-90°	125.8	8.1
90°-100°	82.7	5.3
100°-110°	47.8	3.1
110°-120°	21.1	1.4
120°-130°	5.7	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	265.9	17.1
0°-40°	453.2	29.2
0°-60°	884.9	57.0
0°-90°	1391.5	89.7
90°-120°	151.6	9.8
90°-150°	159.4	10.3
90°-180°	161.0	10.4
0°-180°	1552.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	314	314	314	314	314	
5°	358	344	312	283	268	36
15°	479	420	301	218	182	138
25°	603	492	279	143	90	279
35°	668	531	245	70	22	419
45°	692	526	201	16	0	534
55°	675	492	145	0	0	602
65°	610	436	86	0	0	603
75°	508	352	37	0	0	533
85°	372	255	6	2	2	318
90°	322	205	2	2	3	177
95°	277	160	1	3	4	217
105°	190	83	1	2	3	201
115°	104	27	1	1	2	104
125°	31	4	2	1	2	31
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	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°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9
2.5°	340.3	339.9	338.7	336.7	333.9	329.1	325.1	321.5	316.7	312.7	305.1
5°	358.3	356.3	354.7	352.7	346.3	341.9	334.7	326.7	319.1	311.5	296.3
7.5°	387.1	383.9	381.5	375.9	367.1	357.1	345.9	338.3	333.1	311.9	285.9
10°	417.9	415.1	410.3	400.3	389.5	375.1	359.1	341.1	325.1	307.5	276.7
12.5°	448.3	444.3	437.5	424.7	409.5	391.5	369.5	348.3	325.5	304.7	265.9
15°	478.7	474.3	467.1	451.5	431.5	407.9	381.1	354.3	327.5	301.1	254.7
17.5°	511.9	505.9	495.1	477.5	452.3	423.1	391.5	359.1	326.7	296.7	242.7
20°	547.5	539.1	527.5	503.9	474.3	439.9	401.9	363.9	326.3	291.5	229.2
22.5°	577.1	568.7	555.9	531.5	495.9	453.9	410.7	367.1	324.7	285.5	216.4
25°	602.7	595.9	581.9	553.9	516.3	468.7	419.1	369.5	322.3	279.1	202.8
27.5°	622.7	616.3	600.7	571.9	533.5	481.9	425.5	370.7	319.1	272.7	188.8
30°	640.3	633.9	615.1	585.5	545.1	492.3	431.9	371.1	315.1	263.1	173.6
32.5°	653.9	647.9	628.7	597.1	553.1	499.5	435.5	370.7	309.9	256.3	157.2
35°	667.5	661.5	639.1	605.5	559.1	502.7	438.3	368.7	303.5	245.1	141.6
37.5°	677.9	671.1	648.3	611.1	561.9	503.5	437.9	365.9	296.7	235.9	126.0
40°	685.1	677.9	653.5	614.3	562.7	502.3	434.7	361.1	288.7	224.4	109.6
42.5°	689.9	681.9	655.9	619.1	561.1	499.1	429.9	355.1	279.9	214.4	94.0
45°	692.3	683.9	656.3	615.1	558.3	493.1	422.7	347.5	270.3	200.8	78.4
47.5°	691.1	681.9	654.3	610.7	553.1	486.7	414.7	338.3	258.7	188.8	63.6
50°	689.1	679.5	649.9	605.1	545.9	478.7	405.9	327.1	246.7	174.0	50.4
52.5°	682.7	673.1	645.1	597.1	537.5	469.5	393.9	315.5	233.9	159.6	38.4
55°	674.7	665.9	636.7	589.9	526.7	458.3	382.7	303.1	221.6	144.8	27.6
57.5°	662.3	654.3	626.3	578.3	515.9	445.9	370.3	289.5	206.0	130.0	19.2
60°	647.1	639.1	611.9	565.1	503.5	431.9	356.7	275.5	192.0	115.2	12.0
62.5°	631.1	623.5	595.1	548.7	487.9	417.1	341.9	261.5	177.2	101.6	7.2
65°	609.9	602.7	577.1	529.1	470.7	401.1	325.5	244.7	162.0	86.4	4.0
67.5°	587.5	581.1	555.1	511.1	450.7	383.5	308.7	228.4	146.0	73.2	2.0
70°	563.5	555.5	531.5	486.7	430.3	363.5	290.3	211.6	130.8	60.4	0.0
72.5°	535.5	529.5	506.3	463.9	406.7	342.3	271.5	193.2	114.0	48.0	0.4
75°	508.3	500.7	479.5	439.5	383.5	319.9	250.7	176.0	97.6	36.8	0.4
77.5°	473.1	470.7	450.7	411.9	361.5	298.3	228.0	155.2	82.0	26.4	0.4
80°	437.9	435.5	419.9	384.3	335.9	272.7	206.8	135.6	66.8	17.6	0.4
82.5°	403.1	399.9	385.1	355.5	309.9	251.1	184.8	116.0	52.8	10.8	0.4
85°	371.9	367.9	351.9	324.7	283.1	226.8	162.0	96.8	39.2	6.0	0.8
87.5°	345.1	342.3	324.7	296.7	255.9	204.0	142.0	78.4	27.6	2.8	1.2
90°	322.3	316.3	300.7	271.1	230.4	178.8	120.8	62.8	18.4	1.6	1.6
92.5°	299.9	294.7	277.5	247.1	207.6	157.2	100.4	48.0	11.6	0.8	2.0
95°	276.7	271.1	254.3	226.4	184.4	135.2	82.4	35.2	6.4	0.8	2.0
97.5°	253.9	248.7	231.2	203.2	163.6	116.0	65.2	24.8	3.2	0.8	1.6
100°	232.7	226.8	210.8	182.8	142.8	96.8	50.4	16.0	2.0	0.8	1.6
102.5°	210.4	205.6	189.2	162.0	121.2	78.8	37.6	10.0	0.8	0.8	1.2
105°	190.4	184.4	168.4	140.4	103.2	62.0	26.4	6.0	0.8	0.8	1.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	124.0	119.2	105.2	81.6	52.4	24.4	7.2	1.2	1.2	1.2	1.2
115°	103.6	96.4	84.0	63.2	38.8	16.0	3.6	1.2	1.2	1.2	1.2
117.5°	82.8	76.8	68.0	48.0	25.6	10.4	2.0	1.2	1.2	1.2	1.2
120°	64.8	59.2	49.2	33.2	17.2	6.0	0.8	1.2	1.2	1.2	1.2
122.5°	46.4	42.0	33.2	21.6	10.4	2.8	1.2	1.2	1.6	1.6	1.2
125°	30.8	28.4	22.0	13.2	6.4	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	20.0	18.0	12.8	7.6	2.8	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.2	10.0	7.6	4.4	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.4	6.0	4.0	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	313.9	313.9	313.9
2.5°	298.7	293.1	291.5
5°	282.7	273.5	268.3
7.5°	266.7	254.3	248.3
10°	251.9	234.3	228.0
12.5°	234.3	214.0	204.0
15°	217.6	191.2	181.6
17.5°	198.8	169.2	158.0
20°	181.2	147.2	135.6
22.5°	161.2	125.6	112.8
25°	143.2	104.0	89.6
27.5°	123.2	82.0	69.6
30°	104.4	62.8	50.4
32.5°	86.4	46.0	34.8
35°	69.6	31.2	22.0
37.5°	53.6	19.2	11.2
40°	38.8	10.0	5.2
42.5°	26.0	4.8	2.8
45°	16.0	2.4	0.0
47.5°	9.2	0.0	0.0
50°	4.8	0.0	0.0
52.5°	2.0	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	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.8
90°	2.4	2.8	2.8
92.5°	2.4	3.2	3.2
95°	2.8	3.2	3.6
97.5°	3.2	3.6	3.6
100°	2.8	3.6	4.0
102.5°	2.4	3.6	3.6
105°	2.0	2.8	3.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	168.0	163.2	147.2	120.8	84.4	47.2	17.6	3.2	0.8	1.2	1.2
110°	146.4	142.4	126.0	100.4	68.0	35.2	11.6	2.0	1.2	1.2	1.2





107.5°	1.6	2.4	2.8
110°	1.6	2.0	2.4



(END OF REPORT)