

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: P551637

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-97-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: P551637
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-93-97-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,
AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

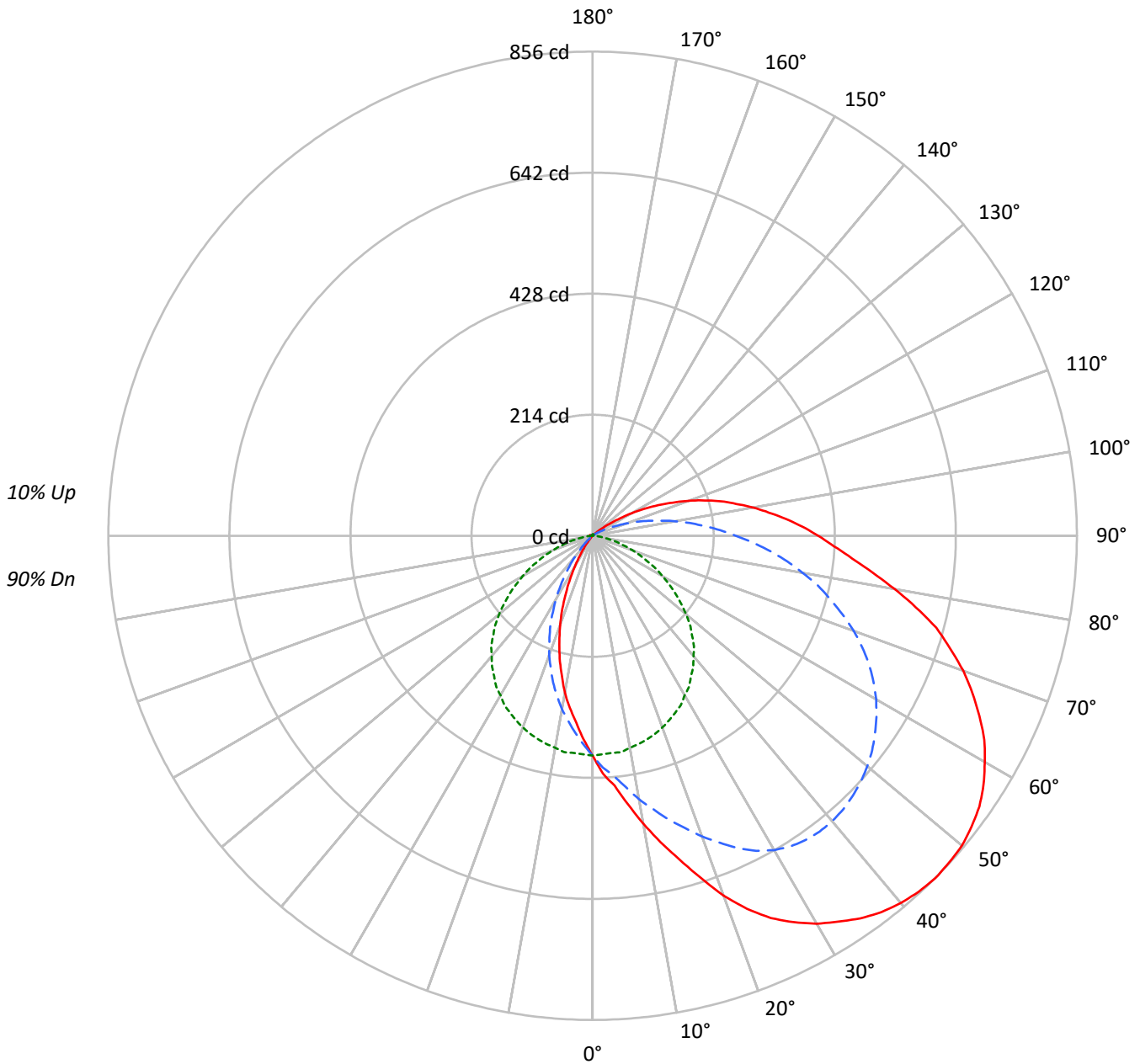
Lumens per Lamp: N/A
Luminaire Lumens: 1920.1 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (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°	4181	4181	4181
5°	4589	4119	3437
10°	5193	4069	2833
15°	5820	4016	2207
20°	6564	3952	1625
25°	7181	3875	1067
30°	7640	3773	601
35°	8036	3665	265
40°	8389	3529	63
45°	8691	3361	0
50°	8944	3136	0
55°	9138	2852	0
60°	9235	2522	0
65°	9273	2147	0
70°	9242	1750	0
75°	9124	1290	7
80°	8754	791	40
85°	8462	376	55



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.2	1.9
10°-20°	111.4	5.8
20°-30°	180.4	9.4
30°-40°	231.7	12.1
40°-50°	262.3	13.7
50°-60°	271.7	14.2
60°-70°	256.3	13.3
70°-80°	214.8	11.2
80°-90°	155.7	8.1
90°-100°	102.3	5.3
100°-110°	59.1	3.1
110°-120°	26.1	1.4
120°-130°	7.1	0.4
130°-140°	1.6	0.1
140°-150°	1.1	0.1
150°-160°	0.8	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	329.0	17.1
0°-40°	560.7	29.2
0°-60°	1094.7	57.0
0°-90°	1721.5	89.7
90°-120°	187.5	9.8
90°-150°	197.3	10.3
90°-180°	199.0	10.4
0°-180°	1920.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	388	388	388	388	388	
5°	443	426	385	350	332	45
15°	592	519	372	269	225	171
25°	746	609	345	177	111	345
35°	826	657	303	86	27	518
45°	856	650	248	20	0	661
55°	835	609	179	0	0	745
65°	754	539	107	0	0	746
75°	629	435	46	0	0	660
85°	460	315	7	2	3	393
90°	399	253	2	3	4	219
95°	342	198	1	4	4	269
105°	236	102	1	2	4	248
115°	128	34	2	2	2	128
125°	38	5	2	2	2	38
135°	2	2	2	2	2	4
145°	0	2	2	2	2	0
155°	1	2	2	2	0	0
165°	1	2	2	2	0	0
175°	1	2	2	2	0	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	388.4	388.4	388.4	388.4	388.4	388.4	388.4	388.4	388.4	388.4	388.4
2.5°	421.0	420.5	419.0	416.6	413.1	407.2	402.2	397.8	391.8	386.9	377.5
5°	443.3	440.8	438.8	436.4	428.4	423.0	414.1	404.2	394.8	385.4	366.6
7.5°	478.9	474.9	472.0	465.1	454.2	441.8	427.9	418.5	412.1	385.9	353.7
10°	517.0	513.5	507.6	495.2	481.9	464.1	444.3	422.0	402.2	380.5	342.4
12.5°	554.6	549.7	541.2	525.4	506.6	484.3	457.1	430.9	402.7	377.0	329.0
15°	592.2	586.8	577.9	558.6	533.8	504.6	471.5	438.3	405.2	372.5	315.1
17.5°	633.3	625.8	612.5	590.7	559.5	523.4	484.3	444.3	404.2	367.1	300.3
20°	677.3	666.9	652.6	623.4	586.8	544.2	497.2	450.2	403.7	360.7	283.5
22.5°	713.9	703.5	687.7	657.5	613.5	561.5	508.1	454.2	401.7	353.2	267.7
25°	745.6	737.2	719.8	685.2	638.7	579.8	518.5	457.1	398.8	345.3	250.8
27.5°	770.3	762.4	743.1	707.5	660.0	596.2	526.4	458.6	394.8	337.4	233.5
30°	792.1	784.2	760.9	724.3	674.3	609.0	534.3	459.1	389.9	325.5	214.7
32.5°	808.9	801.5	777.7	738.6	684.2	617.9	538.8	458.6	383.4	317.1	194.4
35°	825.7	818.3	790.6	749.0	691.6	621.9	542.2	456.1	375.5	303.3	175.1
37.5°	838.6	830.2	802.0	756.0	695.1	622.9	541.7	452.7	367.1	291.9	155.8
40°	847.5	838.6	808.4	759.9	696.1	621.4	537.8	446.7	357.2	277.5	135.6
42.5°	853.4	843.5	811.4	765.9	694.1	617.4	531.8	439.3	346.3	265.2	116.3
45°	856.4	846.0	811.9	760.9	690.7	610.0	522.9	429.9	334.4	248.4	97.0
47.5°	854.9	843.5	809.4	755.5	684.2	602.1	513.0	418.5	320.1	233.5	78.7
50°	852.4	840.6	804.0	748.5	675.3	592.2	502.2	404.7	305.3	215.2	62.3
52.5°	844.5	832.6	798.0	738.6	664.9	580.8	487.3	390.3	289.4	197.4	47.5
55°	834.6	823.7	787.6	729.7	651.6	567.0	473.5	375.0	274.1	179.1	34.1
57.5°	819.3	809.4	774.8	715.4	638.2	551.6	458.1	358.2	254.8	160.8	23.7
60°	800.5	790.6	757.0	699.1	622.9	534.3	441.3	340.9	237.5	142.5	14.8
62.5°	780.7	771.3	736.2	678.8	603.6	516.0	423.0	323.6	219.2	125.7	8.9
65°	754.5	745.6	713.9	654.5	582.3	496.2	402.7	302.8	200.4	106.9	4.9
67.5°	726.8	718.9	686.7	632.3	557.6	474.5	381.9	282.5	180.6	90.5	2.5
70°	697.1	687.2	657.5	602.1	532.3	449.7	359.2	261.7	161.8	74.7	0.0
72.5°	662.5	655.0	626.3	573.9	503.1	423.5	335.9	239.0	141.0	59.4	0.5
75°	628.8	619.4	593.2	543.7	474.5	395.8	310.2	217.7	120.7	45.5	0.5
77.5°	585.3	582.3	557.6	509.6	447.2	369.1	282.0	192.0	101.4	32.7	0.5
80°	541.7	538.8	519.5	475.4	415.6	337.4	255.8	167.7	82.6	21.8	0.5
82.5°	498.7	494.7	476.4	439.8	383.4	310.7	228.6	143.5	65.3	13.4	0.5
85°	460.1	455.2	435.4	401.7	350.3	280.5	200.4	119.7	48.5	7.4	1.0
87.5°	427.0	423.5	401.7	367.1	316.6	252.3	175.6	97.0	34.1	3.5	1.5
90°	398.8	391.3	372.0	335.4	285.0	221.1	149.4	77.7	22.8	2.0	2.0
92.5°	371.1	364.6	343.3	305.7	256.8	194.4	124.2	59.4	14.3	1.0	2.5
95°	342.4	335.4	314.7	280.0	228.1	167.2	101.9	43.5	7.9	1.0	2.5
97.5°	314.2	307.7	286.0	251.3	202.3	143.5	80.6	30.7	4.0	1.0	2.0
100°	287.9	280.5	260.7	226.1	176.6	119.7	62.3	19.8	2.5	1.0	2.0
102.5°	260.2	254.3	234.0	200.4	149.9	97.5	46.5	12.4	1.0	1.0	1.5
105°	235.5	228.1	208.3	173.7	127.6	76.7	32.7	7.4	1.0	1.0	1.5



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	153.4	147.4	130.1	100.9	64.8	30.2	8.9	1.5	1.5	1.5	1.5
115°	128.1	119.2	103.9	78.2	48.0	19.8	4.5	1.5	1.5	1.5	1.5
117.5°	102.4	95.0	84.1	59.4	31.7	12.9	2.5	1.5	1.5	1.5	1.5
120°	80.1	73.2	60.9	41.1	21.3	7.4	1.0	1.5	1.5	1.5	1.5
122.5°	57.4	51.9	41.1	26.7	12.9	3.5	1.5	1.5	2.0	2.0	1.5
125°	38.1	35.1	27.2	16.3	7.9	1.5	1.5	1.5	2.0	2.0	1.5
127.5°	24.7	22.3	15.8	9.4	3.5	1.5	1.5	2.0	2.0	2.0	1.5
130°	13.9	12.4	9.4	5.4	1.5	1.5	1.5	2.0	2.0	2.0	1.5
132.5°	7.9	7.4	4.9	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
135°	2.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0
137.5°	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.5	2.5	2.5	2.0
140°	0.5	0.5	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.0
142.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
145°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.0	2.0	2.0
147.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.0	2.0
150°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
152.5°	0.5	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.0
155°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
157.5°	1.0	1.0	1.0	1.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5
160°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
162.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0
165°	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.0	2.0	2.0
167.5°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
170°	1.0	1.0	1.0	1.5	1.5	1.5	2.0	2.5	2.5	2.5	2.5
172.5°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
175°	1.0	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.5
177.5°	0.5	1.0	1.0	1.5	1.5	2.0	2.0	2.5	2.5	2.5	2.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	388.4	388.4	388.4
2.5°	369.6	362.6	360.7
5°	349.8	338.4	332.0
7.5°	330.0	314.7	307.2
10°	311.7	289.9	282.0
12.5°	289.9	264.7	252.3
15°	269.1	236.5	224.6
17.5°	245.9	209.3	195.4
20°	224.1	182.1	167.7
22.5°	199.4	155.3	139.5
25°	177.1	128.6	110.8
27.5°	152.4	101.4	86.1
30°	129.1	77.7	62.3
32.5°	106.9	56.9	43.0
35°	86.1	38.6	27.2
37.5°	66.3	23.7	13.9
40°	48.0	12.4	6.4
42.5°	32.2	5.9	3.5
45°	19.8	3.0	0.0
47.5°	11.4	0.0	0.0
50°	5.9	0.0	0.0
52.5°	2.5	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°	0.5	0.5	0.5
77.5°	0.5	1.0	1.5
80°	1.0	2.0	2.5
82.5°	2.0	2.5	2.5
85°	2.0	2.5	3.0
87.5°	2.5	3.0	3.5
90°	3.0	3.5	3.5
92.5°	3.0	4.0	4.0
95°	3.5	4.0	4.5
97.5°	4.0	4.5	4.5
100°	3.5	4.5	4.9
102.5°	3.0	4.5	4.5
105°	2.5	3.5	4.0



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.0	2.5	2.5
115°	1.5	2.0	2.5
117.5°	1.5	2.0	2.0
120°	1.5	1.5	2.0
122.5°	1.5	1.5	2.0
125°	1.5	1.5	2.0
127.5°	2.0	1.5	1.5
130°	1.5	1.5	1.5
132.5°	2.0	1.5	1.5
135°	2.0	1.5	1.5
137.5°	2.0	1.5	1.5
140°	2.0	1.5	1.5
142.5°	2.0	1.5	1.5
145°	1.5	1.5	1.5
147.5°	1.5	1.5	1.5
150°	1.5	1.5	1.0
152.5°	1.5	1.0	1.0
155°	1.5	1.0	0.5
157.5°	2.0	1.0	0.5
160°	1.5	1.0	0.5
162.5°	1.5	1.0	0.5
165°	1.5	1.0	0.0
167.5°	1.5	1.0	0.5
170°	1.5	1.0	0.5
172.5°	1.5	1.0	0.5
175°	1.5	0.5	0.5
177.5°	1.5	0.5	0.5
180°	1.5	1.5	1.5



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	207.8	201.9	182.1	149.4	104.4	58.4	21.8	4.0	1.0	1.5	1.5
110°	181.1	176.1	155.8	124.2	84.1	43.5	14.3	2.5	1.5	1.5	1.5





107.5°	2.0	3.0	3.5
110°	2.0	2.5	3.0



(END OF REPORT)