

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: P551503

Luminaire Tested: **FCC-X-2-LD4-2LO-30-UNV-93-88-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: P551503
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-30-UNV-93-88-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

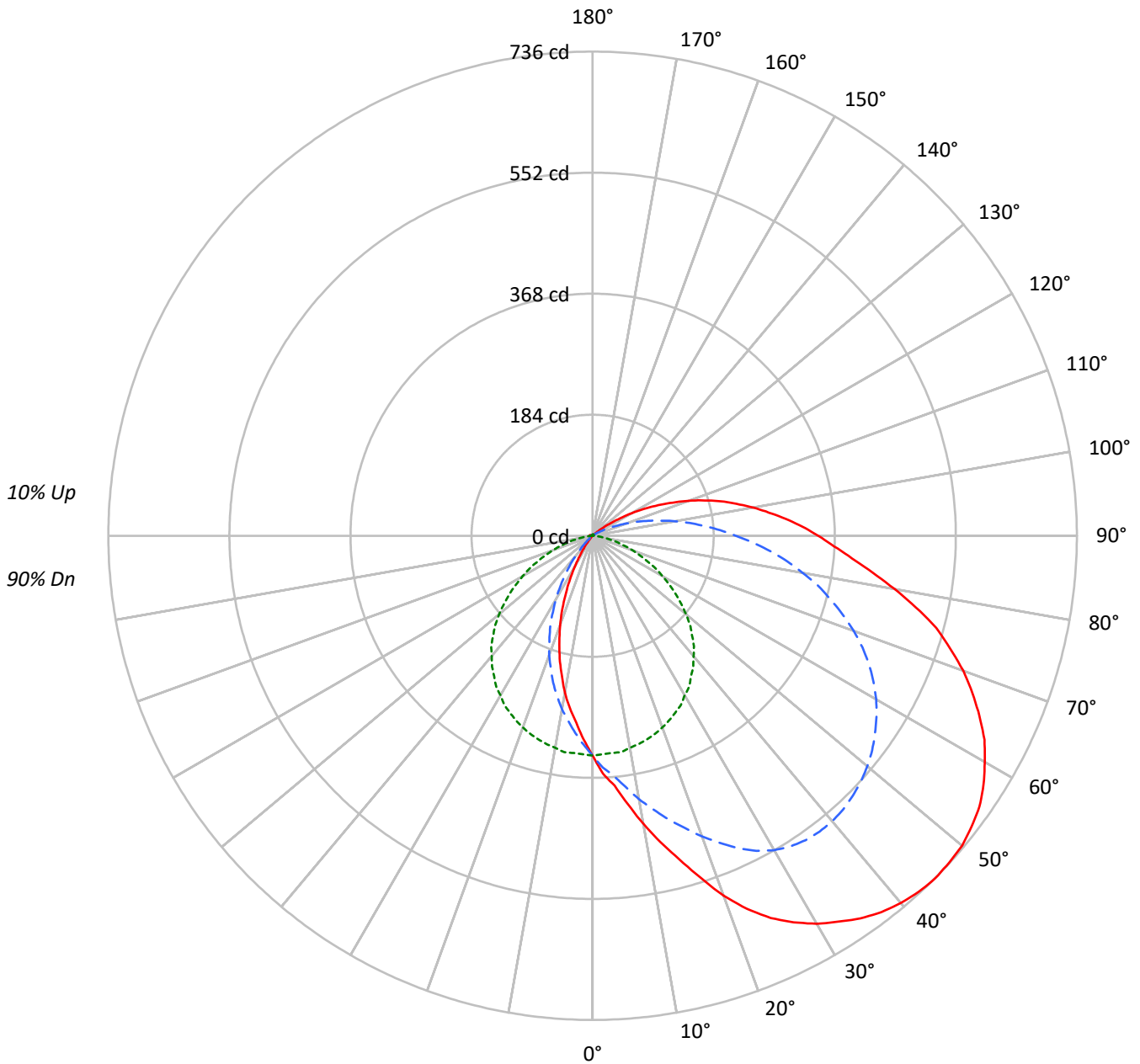
Lumens per Lamp: N/A
Luminaire Lumens: 1651.1 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

TEST NUMBER: P551503

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-88-ED1D-90

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°	3595	3595	3595
5°	3946	3542	2956
10°	4466	3499	2436
15°	5004	3454	1898
20°	5644	3398	1397
25°	6175	3332	918
30°	6569	3245	517
35°	6910	3151	228
40°	7214	3036	54
45°	7473	2890	0
50°	7691	2698	0
55°	7858	2452	0
60°	7941	2168	0
65°	7974	1846	0
70°	7947	1504	0
75°	7846	1109	6
80°	7528	678	34
85°	7276	325	48



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	1.9
10°-20°	95.8	5.8
20°-30°	155.1	9.4
30°-40°	199.2	12.1
40°-50°	225.6	13.7
50°-60°	233.7	14.2
60°-70°	220.4	13.3
70°-80°	184.7	11.2
80°-90°	133.9	8.1
90°-100°	88.0	5.3
100°-110°	50.8	3.1
110°-120°	22.4	1.4
120°-130°	6.1	0.4
130°-140°	1.4	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	282.9	17.1
0°-40°	482.1	29.2
0°-60°	941.3	57.0
0°-90°	1480.3	89.7
90°-120°	161.2	9.8
90°-150°	169.6	10.3
90°-180°	171.0	10.4
0°-180°	1651.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	334	334	334	334	334	
5°	381	366	331	301	286	38
15°	509	446	320	231	193	147
25°	641	524	297	152	95	296
35°	710	565	261	74	23	445
45°	736	559	214	17	0	569
55°	718	524	154	0	0	641
65°	649	464	92	0	0	642
75°	541	374	39	0	0	567
85°	396	271	6	2	3	338
90°	343	218	2	3	3	188
95°	294	170	1	3	4	231
105°	202	88	1	2	3	214
115°	110	29	1	1	2	110
125°	33	4	2	1	2	33
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°	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0	334.0
2.5°	362.0	361.6	360.3	358.2	355.2	350.1	345.9	342.0	336.9	332.7	324.6
5°	381.2	379.1	377.4	375.2	368.4	363.7	356.1	347.6	339.5	331.4	315.2
7.5°	411.8	408.4	405.9	399.9	390.5	379.9	368.0	359.9	354.4	331.8	304.2
10°	444.6	441.6	436.5	425.8	414.4	399.0	382.0	362.9	345.9	327.2	294.4
12.5°	476.9	472.6	465.4	451.8	435.6	416.5	393.1	370.5	346.3	324.2	282.9
15°	509.2	504.6	496.9	480.3	459.0	433.9	405.4	376.9	348.4	320.3	271.0
17.5°	544.5	538.2	526.7	508.0	481.2	450.1	416.5	382.0	347.6	315.7	258.2
20°	582.4	573.5	561.1	536.0	504.6	468.0	427.6	387.1	347.1	310.1	243.8
22.5°	613.9	605.0	591.3	565.4	527.5	482.9	436.9	390.5	345.4	303.8	230.2
25°	641.1	633.9	619.0	589.2	549.2	498.6	445.8	393.1	342.9	296.9	215.7
27.5°	662.4	655.6	639.0	608.4	567.5	512.6	452.7	394.4	339.5	290.1	200.8
30°	681.1	674.3	654.3	622.8	579.9	523.7	459.5	394.8	335.2	279.9	184.6
32.5°	695.6	689.2	668.8	635.2	588.4	531.4	463.3	394.4	329.7	272.7	167.2
35°	710.0	703.7	679.8	644.1	594.7	534.8	466.3	392.2	322.9	260.8	150.6
37.5°	721.1	713.9	689.6	650.0	597.7	535.6	465.8	389.3	315.7	251.0	134.0
40°	728.8	721.1	695.1	653.5	598.6	534.3	462.4	384.2	307.2	238.7	116.6
42.5°	733.9	725.3	697.7	658.6	596.9	530.9	457.3	377.8	297.8	228.0	100.0
45°	736.4	727.5	698.1	654.3	593.9	524.5	449.7	369.7	287.6	213.6	83.4
47.5°	735.1	725.3	696.0	649.6	588.4	517.7	441.2	359.9	275.2	200.8	67.6
50°	733.0	722.8	691.3	643.7	580.7	509.2	431.8	348.0	262.5	185.1	53.6
52.5°	726.2	716.0	686.2	635.2	571.8	499.4	419.0	335.7	248.9	169.7	40.8
55°	717.7	708.3	677.3	627.5	560.3	487.5	407.1	322.5	235.7	154.0	29.4
57.5°	704.5	696.0	666.2	615.2	548.8	474.3	393.9	308.0	219.1	138.3	20.4
60°	688.3	679.8	650.9	601.1	535.6	459.5	379.5	293.1	204.2	122.5	12.8
62.5°	671.3	663.2	633.0	583.7	519.0	443.7	363.7	278.2	188.5	108.1	7.7
65°	648.8	641.1	613.9	562.8	500.7	426.7	346.3	260.4	172.3	91.9	4.3
67.5°	624.9	618.1	590.5	543.7	479.5	408.0	328.4	242.9	155.3	77.9	2.1
70°	599.4	590.9	565.4	517.7	457.8	386.7	308.9	225.0	139.1	64.2	0.0
72.5°	569.6	563.3	538.6	493.5	432.7	364.2	288.9	205.5	121.2	51.1	0.4
75°	540.7	532.6	510.1	467.5	408.0	340.3	266.7	187.2	103.8	39.1	0.4
77.5°	503.3	500.7	479.5	438.2	384.6	317.4	242.5	165.1	87.2	28.1	0.4
80°	465.8	463.3	446.7	408.8	357.4	290.1	219.9	144.2	71.0	18.7	0.4
82.5°	428.8	425.4	409.7	378.2	329.7	267.2	196.5	123.4	56.2	11.5	0.4
85°	395.6	391.4	374.4	345.4	301.2	241.2	172.3	103.0	41.7	6.4	0.9
87.5°	367.1	364.2	345.4	315.7	272.3	217.0	151.0	83.4	29.4	3.0	1.3
90°	342.9	336.5	319.9	288.4	245.0	190.2	128.5	66.8	19.6	1.7	1.7
92.5°	319.1	313.5	295.2	262.9	220.8	167.2	106.8	51.1	12.3	0.9	2.1
95°	294.4	288.4	270.6	240.8	196.1	143.8	87.6	37.4	6.8	0.9	2.1
97.5°	270.1	264.6	245.9	216.1	174.0	123.4	69.3	26.4	3.4	0.9	1.7
100°	247.6	241.2	224.2	194.4	151.9	103.0	53.6	17.0	2.1	0.9	1.7
102.5°	223.8	218.7	201.2	172.3	128.9	83.8	40.0	10.6	0.9	0.9	1.3
105°	202.5	196.1	179.1	149.3	109.8	65.9	28.1	6.4	0.9	0.9	1.3



TEST NUMBER: P551503

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-88-ED1D-90

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	131.9	126.8	111.9	86.8	55.7	26.0	7.7	1.3	1.3	1.3	1.3
115°	110.2	102.5	89.3	67.2	41.3	17.0	3.8	1.3	1.3	1.3	1.3
117.5°	88.1	81.7	72.3	51.1	27.2	11.1	2.1	1.3	1.3	1.3	1.3
120°	68.9	63.0	52.3	35.3	18.3	6.4	0.9	1.3	1.3	1.3	1.3
122.5°	49.3	44.7	35.3	23.0	11.1	3.0	1.3	1.3	1.7	1.7	1.3
125°	32.8	30.2	23.4	14.0	6.8	1.3	1.3	1.3	1.7	1.7	1.3
127.5°	21.3	19.1	13.6	8.1	3.0	1.3	1.3	1.7	1.7	1.7	1.3
130°	11.9	10.6	8.1	4.7	1.3	1.3	1.3	1.7	1.7	1.7	1.3
132.5°	6.8	6.4	4.3	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	2.1	2.1	1.7
137.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.1	2.1	2.1	1.7
140°	0.4	0.4	0.9	1.3	1.3	1.3	1.7	2.1	2.1	2.1	1.7
142.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
145°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	1.7	1.7	1.7
147.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	1.7	1.7
150°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
152.5°	0.4	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	1.7
155°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
157.5°	0.9	0.9	0.9	1.3	1.7	1.7	1.7	2.1	1.7	1.7	2.1
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	2.1	2.1	2.1	2.1
172.5°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
175°	0.9	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	2.1
177.5°	0.4	0.9	0.9	1.3	1.3	1.7	1.7	2.1	2.1	2.1	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



TEST NUMBER: P551503

CATALOG NUMBER: FCC-X-2-LD4-2LO-30-UNV-93-88-ED1D-90

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	334.0	334.0	334.0
2.5°	317.8	311.8	310.1
5°	300.8	291.0	285.5
7.5°	283.8	270.6	264.2
10°	268.0	249.3	242.5
12.5°	249.3	227.6	217.0
15°	231.4	203.4	193.1
17.5°	211.4	180.0	168.0
20°	192.7	156.6	144.2
22.5°	171.4	133.6	120.0
25°	152.3	110.6	95.3
27.5°	131.0	87.2	74.0
30°	111.0	66.8	53.6
32.5°	91.9	48.9	37.0
35°	74.0	33.2	23.4
37.5°	57.0	20.4	11.9
40°	41.3	10.6	5.5
42.5°	27.7	5.1	3.0
45°	17.0	2.6	0.0
47.5°	9.8	0.0	0.0
50°	5.1	0.0	0.0
52.5°	2.1	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	2.1
82.5°	1.7	2.1	2.1
85°	1.7	2.1	2.6
87.5°	2.1	2.6	3.0
90°	2.6	3.0	3.0
92.5°	2.6	3.4	3.4
95°	3.0	3.4	3.8
97.5°	3.4	3.8	3.8
100°	3.0	3.8	4.3
102.5°	2.6	3.8	3.8
105°	2.1	3.0	3.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.7	2.1	2.1
115°	1.3	1.7	2.1
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°	178.7	173.6	156.6	128.5	89.8	50.2	18.7	3.4	0.9	1.3	1.3
110°	155.7	151.5	134.0	106.8	72.3	37.4	12.3	2.1	1.3	1.3	1.3





107.5°	1.7	2.6	3.0
110°	1.7	2.1	2.6



(END OF REPORT)