

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: P551636

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-96-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: P551636
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-93-96-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,
AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

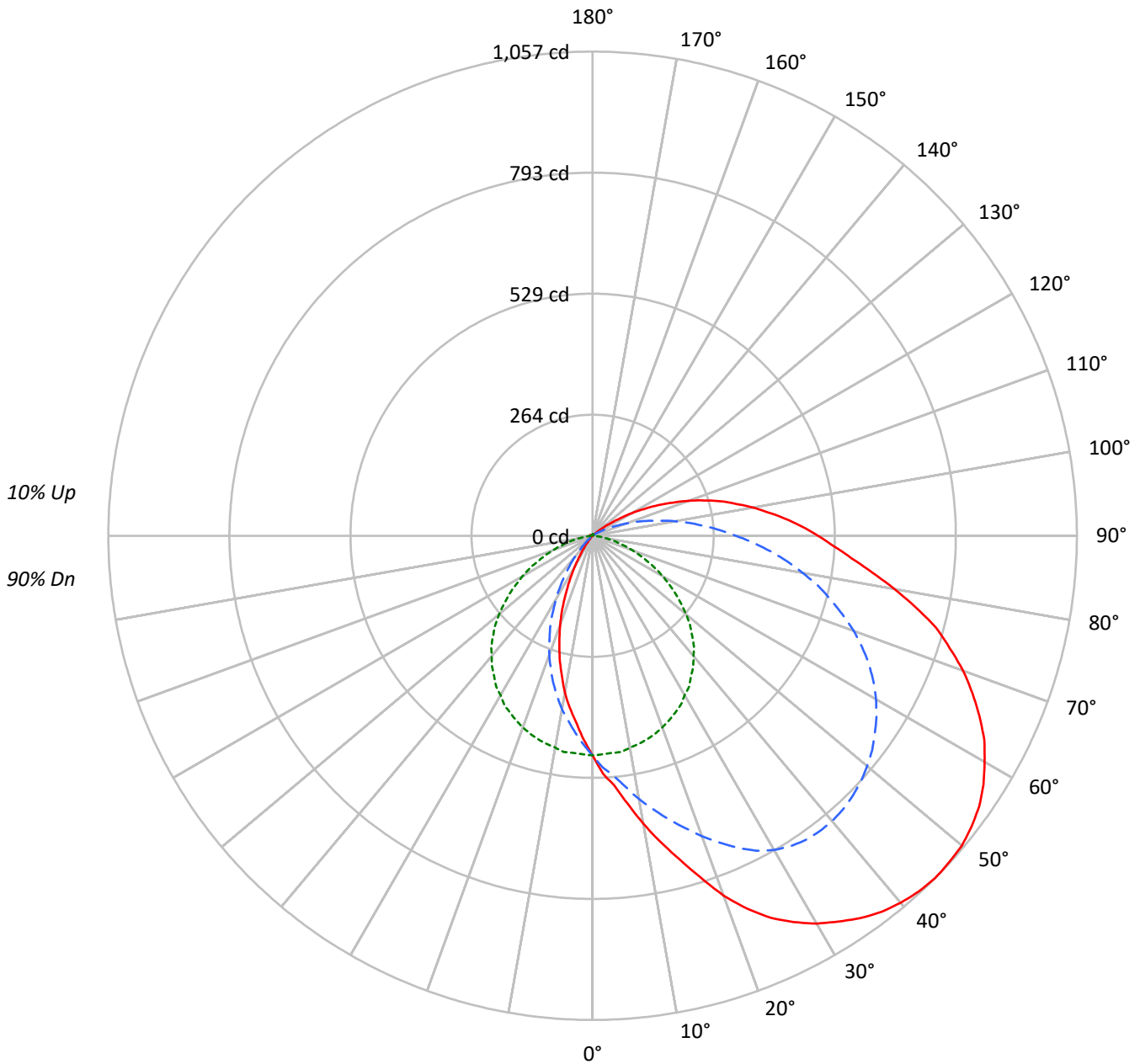
Lumens per Lamp: N/A
Luminaire Lumens: 2369.9 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551636

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-96-ED1D

Luminous Intensity Polar Plot





TEST NUMBER: P551636

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5160	5160	5160
5°	5665	5084	4242
10°	6410	5022	3496
15°	7184	4959	2725
20°	8102	4878	2006
25°	8864	4784	1318
30°	9430	4658	742
35°	9920	4524	327
40°	10355	4357	78
45°	10728	4149	0
50°	11041	3872	0
55°	11279	3521	0
60°	11399	3113	0
65°	11446	2649	0
70°	11409	2160	0
75°	11263	1594	9
80°	10807	976	50
85°	10445	468	68



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	1.9
10°-20°	137.5	5.8
20°-30°	222.7	9.4
30°-40°	286.0	12.1
40°-50°	323.8	13.7
50°-60°	335.4	14.2
60°-70°	316.3	13.3
70°-80°	265.1	11.2
80°-90°	192.2	8.1
90°-100°	126.3	5.3
100°-110°	72.9	3.1
110°-120°	32.2	1.4
120°-130°	8.7	0.4
130°-140°	2.0	0.1
140°-150°	1.3	0.1
150°-160°	0.9	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	406.1	17.1
0°-40°	692.1	29.2
0°-60°	1351.3	57.0
0°-90°	2124.9	89.7
90°-120°	231.4	9.8
90°-150°	243.4	10.3
90°-180°	245.0	10.3
0°-180°	2369.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	479	479	479	479	479	
5°	547	526	476	432	410	55
15°	731	641	460	332	277	211
25°	920	752	426	219	137	425
35°	1019	811	374	106	34	639
45°	1057	803	307	24	0	816
55°	1030	752	221	0	0	920
65°	931	666	132	0	0	921
75°	776	537	56	1	1	814
85°	568	389	9	2	4	485
90°	492	312	2	4	4	270
95°	423	244	1	4	6	332
105°	291	126	1	3	5	307
115°	158	42	2	2	3	158
125°	47	6	2	2	2	47
135°	2	2	3	2	2	4
145°	1	2	2	2	2	0
155°	1	2	2	2	1	0
165°	1	2	2	2	0	0
175°	1	2	3	2	1	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°	479.4	479.4	479.4	479.4	479.4	479.4	479.4	479.4	479.4	479.4	479.4
2.5°	519.7	519.1	517.3	514.2	509.9	502.6	496.5	491.0	483.7	477.6	466.0
5°	547.2	544.1	541.7	538.6	528.9	522.1	511.2	498.9	487.3	475.7	452.5
7.5°	591.2	586.3	582.6	574.1	560.6	545.3	528.2	516.6	508.7	476.3	436.6
10°	638.2	633.9	626.6	611.3	594.8	572.8	548.4	520.9	496.5	469.6	422.6
12.5°	684.6	678.5	668.1	648.6	625.3	597.9	564.3	531.9	497.1	465.3	406.1
15°	731.0	724.3	713.3	689.5	658.9	622.9	582.0	541.1	500.2	459.9	389.0
17.5°	781.7	772.5	756.0	729.2	690.7	646.1	597.9	548.4	498.9	453.1	370.7
20°	836.0	823.2	805.5	769.5	724.3	671.8	613.7	555.7	498.3	445.2	349.9
22.5°	881.2	868.4	848.9	811.6	757.3	693.1	627.2	560.6	495.9	436.0	330.4
25°	920.3	909.9	888.6	845.8	788.4	715.7	640.0	564.3	492.2	426.3	309.6
27.5°	950.8	941.1	917.3	873.3	814.7	735.9	649.8	566.1	487.3	416.5	288.2
30°	977.7	967.9	939.2	894.1	832.4	751.8	659.5	566.7	481.2	401.8	265.0
32.5°	998.5	989.3	960.0	911.8	844.6	762.8	665.0	566.1	473.3	391.5	240.0
35°	1019.2	1010.1	975.9	924.6	853.7	767.6	669.3	563.1	463.5	374.4	216.2
37.5°	1035.1	1024.7	989.9	933.1	858.0	768.9	668.7	558.8	453.1	360.3	192.4
40°	1046.1	1035.1	997.9	938.0	859.2	767.0	663.8	551.5	440.9	342.6	167.3
42.5°	1053.4	1041.2	1001.5	945.4	856.8	762.1	656.5	542.3	427.5	327.3	143.5
45°	1057.1	1044.3	1002.1	939.2	852.5	753.0	645.5	530.7	412.8	306.6	119.7
47.5°	1055.3	1041.2	999.1	932.5	844.6	743.2	633.3	516.6	395.1	288.2	97.1
50°	1052.2	1037.6	992.4	924.0	833.6	731.0	619.9	499.5	376.8	265.7	76.9
52.5°	1042.5	1027.8	985.0	911.8	820.8	717.0	601.5	481.8	357.3	243.7	58.6
55°	1030.2	1016.8	972.2	900.8	804.3	699.9	584.4	462.9	338.3	221.1	42.1
57.5°	1011.3	999.1	956.3	883.1	787.8	680.9	565.5	442.1	314.5	198.5	29.3
60°	988.1	975.9	934.4	862.9	768.9	659.5	544.7	420.8	293.1	175.9	18.3
62.5°	963.7	952.1	908.7	837.9	745.0	637.0	522.1	399.4	270.5	155.1	11.0
65°	931.3	920.3	881.2	807.9	718.8	612.5	497.1	373.7	247.3	131.9	6.1
67.5°	897.1	887.3	847.6	780.5	688.3	585.7	471.5	348.7	222.9	111.8	3.1
70°	860.5	848.3	811.6	743.2	657.1	555.1	443.4	323.1	199.7	92.2	0.0
72.5°	817.7	808.6	773.1	708.4	621.1	522.8	414.7	295.0	174.0	73.3	0.6
75°	776.2	764.6	732.2	671.2	585.7	488.6	382.9	268.7	149.0	56.2	0.6
77.5°	722.4	718.8	688.3	629.0	552.1	455.6	348.1	236.9	125.2	40.3	0.6
80°	668.7	665.0	641.2	586.9	513.0	416.5	315.7	207.0	102.0	26.9	0.6
82.5°	615.6	610.7	588.1	542.9	473.3	383.5	282.1	177.1	80.6	16.5	0.6
85°	567.9	561.8	537.4	495.9	432.4	346.3	247.3	147.8	59.8	9.2	1.2
87.5°	527.0	522.8	495.9	453.1	390.8	311.5	216.8	119.7	42.1	4.3	1.8
90°	492.2	483.1	459.2	414.0	351.8	273.0	184.4	95.9	28.1	2.4	2.4
92.5°	458.0	450.1	423.8	377.4	316.9	240.0	153.3	73.3	17.7	1.2	3.1
95°	422.6	414.0	388.4	345.7	281.5	206.4	125.8	53.7	9.8	1.2	3.1
97.5°	387.8	379.9	353.0	310.2	249.8	177.1	99.5	37.9	4.9	1.2	2.4
100°	355.4	346.3	321.8	279.1	218.0	147.8	76.9	24.4	3.1	1.2	2.4
102.5°	321.2	313.9	288.9	247.3	185.0	120.3	57.4	15.3	1.2	1.2	1.8
105°	290.7	281.5	257.1	214.4	157.6	94.7	40.3	9.2	1.2	1.2	1.8



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-96-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	189.3	182.0	160.6	124.6	80.0	37.3	11.0	1.8	1.8	1.8	1.8
115°	158.2	147.2	128.2	96.5	59.2	24.4	5.5	1.8	1.8	1.8	1.8
117.5°	126.4	117.3	103.8	73.3	39.1	15.9	3.1	1.8	1.8	1.8	1.8
120°	98.9	90.4	75.1	50.7	26.3	9.2	1.2	1.8	1.8	1.8	1.8
122.5°	70.8	64.1	50.7	33.0	15.9	4.3	1.8	1.8	2.4	2.4	1.8
125°	47.0	43.4	33.6	20.2	9.8	1.8	1.8	1.8	2.4	2.4	1.8
127.5°	30.5	27.5	19.5	11.6	4.3	1.8	1.8	2.4	2.4	2.4	1.8
130°	17.1	15.3	11.6	6.7	1.8	1.8	1.8	2.4	2.4	2.4	1.8
132.5°	9.8	9.2	6.1	1.2	1.8	1.8	1.8	2.4	2.4	2.4	2.4
135°	2.4	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	2.4
137.5°	0.6	0.6	1.2	1.2	1.8	1.8	2.4	3.1	3.1	3.1	2.4
140°	0.6	0.6	1.2	1.8	1.8	1.8	2.4	3.1	3.1	3.1	2.4
142.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	2.4	2.4
145°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.1	2.4	2.4	2.4
147.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	2.4	2.4
150°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	3.1	2.4	2.4	2.4
152.5°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	3.1	2.4	2.4	2.4
155°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	3.1	2.4	2.4	3.1
157.5°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	3.1	2.4	2.4	3.1
160°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.4	2.4	2.4	2.4
162.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.4	2.4	2.4	2.4
165°	1.2	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.4	2.4	2.4
167.5°	1.2	1.2	1.2	1.8	1.8	1.8	2.4	2.4	2.4	2.4	2.4
170°	1.2	1.2	1.2	1.8	1.8	1.8	2.4	3.1	3.1	3.1	3.1
172.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	3.1	3.1
175°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	3.1	3.1
177.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.1	3.1	3.1	2.4
180°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8



TEST NUMBER: P551636

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-96-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	479.4	479.4	479.4
2.5°	456.2	447.6	445.2
5°	431.8	417.7	409.8
7.5°	407.3	388.4	379.2
10°	384.7	357.9	348.1
12.5°	357.9	326.7	311.5
15°	332.2	291.9	277.3
17.5°	303.5	258.3	241.2
20°	276.6	224.7	207.0
22.5°	246.1	191.8	172.2
25°	218.6	158.8	136.8
27.5°	188.1	125.2	106.3
30°	159.4	95.9	76.9
32.5°	131.9	70.2	53.1
35°	106.3	47.6	33.6
37.5°	81.8	29.3	17.1
40°	59.2	15.3	7.9
42.5°	39.7	7.3	4.3
45°	24.4	3.7	0.0
47.5°	14.0	0.0	0.0
50°	7.3	0.0	0.0
52.5°	3.1	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°	0.6	0.6	0.6
77.5°	0.6	1.2	1.8
80°	1.2	2.4	3.1
82.5°	2.4	3.1	3.1
85°	2.4	3.1	3.7
87.5°	3.1	3.7	4.3
90°	3.7	4.3	4.3
92.5°	3.7	4.9	4.9
95°	4.3	4.9	5.5
97.5°	4.9	5.5	5.5
100°	4.3	5.5	6.1
102.5°	3.7	5.5	5.5
105°	3.1	4.3	4.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.4	3.1	3.1
115°	1.8	2.4	3.1
117.5°	1.8	2.4	2.4
120°	1.8	1.8	2.4
122.5°	1.8	1.8	2.4
125°	1.8	1.8	2.4
127.5°	2.4	1.8	1.8
130°	1.8	1.8	1.8
132.5°	2.4	1.8	1.8
135°	2.4	1.8	1.8
137.5°	2.4	1.8	1.8
140°	2.4	1.8	1.8
142.5°	2.4	1.8	1.8
145°	1.8	1.8	1.8
147.5°	1.8	1.8	1.8
150°	1.8	1.8	1.2
152.5°	1.8	1.2	1.2
155°	1.8	1.2	0.6
157.5°	2.4	1.2	0.6
160°	1.8	1.2	0.6
162.5°	1.8	1.2	0.6
165°	1.8	1.2	0.0
167.5°	1.8	1.2	0.6
170°	1.8	1.2	0.6
172.5°	1.8	1.2	0.6
175°	1.8	0.6	0.6
177.5°	1.8	0.6	0.6
180°	1.8	1.8	1.8



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	256.5	249.2	224.7	184.4	128.9	72.1	26.9	4.9	1.2	1.8	1.8
110°	223.5	217.4	192.4	153.3	103.8	53.7	17.7	3.1	1.8	1.8	1.8





107.5°	2.4	3.7	4.3
110°	2.4	3.1	3.7



(END OF REPORT)