

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: P551688

Luminaire Tested: **FCC-X-2-LD4-2LO-50-UNV-93-84-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: P551688
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-50-UNV-93-84-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

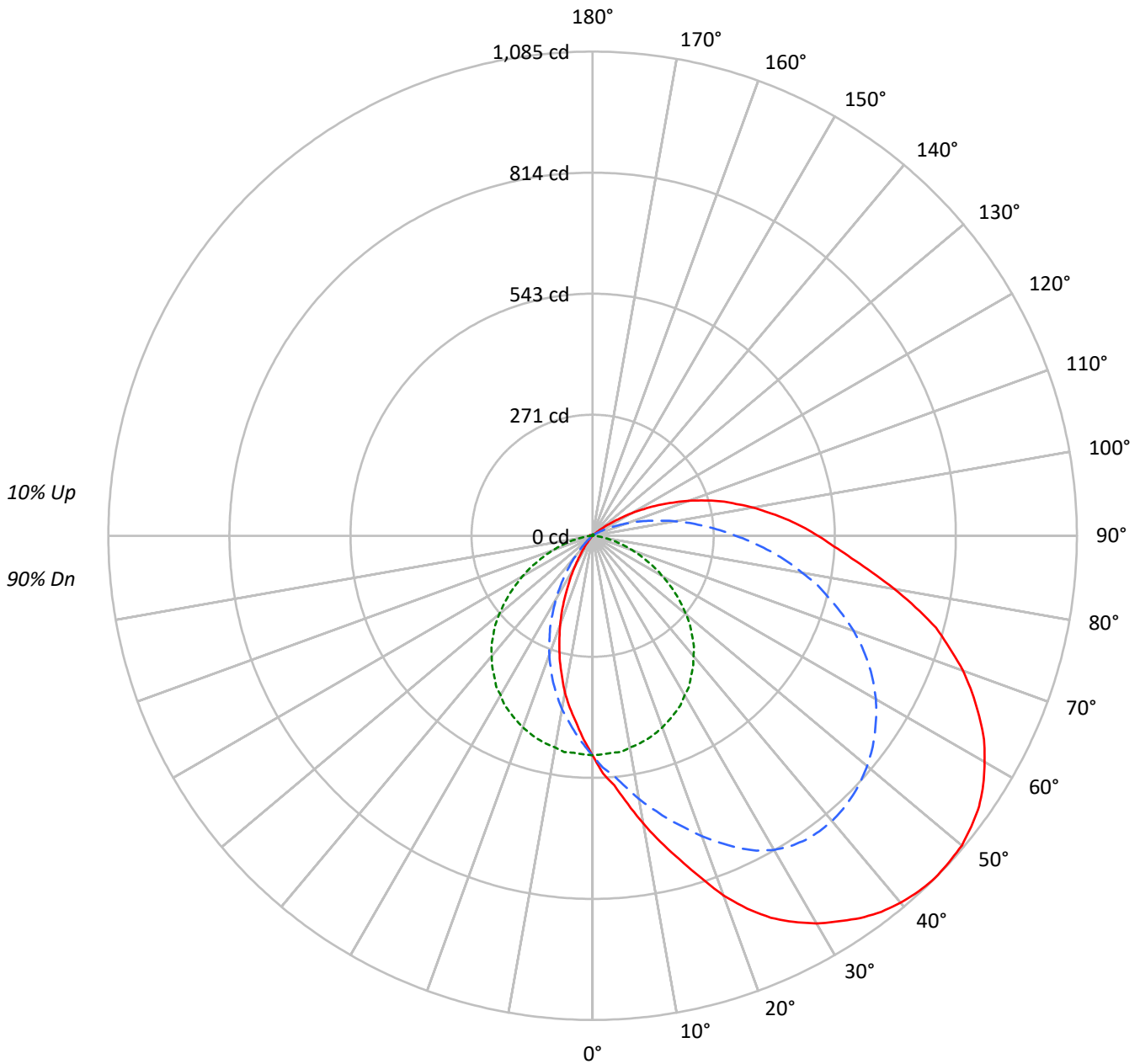
Lumens per Lamp: N/A
Luminaire Lumens: 2432.0 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551688

CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-93-84-ED1D

Luminous Intensity Polar Plot





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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°	5295	5295	5295
5°	5813	5218	4353
10°	6578	5154	3588
15°	7371	5088	2796
20°	8314	5005	2058
25°	9096	4909	1352
30°	9677	4780	762
35°	10180	4641	336
40°	10626	4471	80
45°	11009	4257	0
50°	11330	3973	0
55°	11575	3613	0
60°	11698	3194	0
65°	11746	2720	0
70°	11707	2216	0
75°	11558	1636	9
80°	11090	1001	50
85°	10719	478	70



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.1	1.9
10°-20°	141.1	5.8
20°-30°	228.5	9.4
30°-40°	293.5	12.1
40°-50°	332.2	13.7
50°-60°	344.2	14.2
60°-70°	324.6	13.3
70°-80°	272.0	11.2
80°-90°	197.2	8.1
90°-100°	129.6	5.3
100°-110°	74.9	3.1
110°-120°	33.0	1.4
120°-130°	9.0	0.4
130°-140°	2.1	0.1
140°-150°	1.3	0.1
150°-160°	1.0	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	416.7	17.1
0°-40°	710.2	29.2
0°-60°	1386.6	57.0
0°-90°	2180.5	89.7
90°-120°	237.5	9.8
90°-150°	249.8	10.3
90°-180°	252.0	10.4
0°-180°	2432.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	492	492	492	492	492	
5°	562	539	488	443	420	57
15°	750	658	472	341	284	216
25°	944	772	437	224	140	436
35°	1046	832	384	109	34	656
45°	1085	824	315	25	0	837
55°	1057	772	227	0	0	944
65°	956	683	135	0	0	946
75°	796	551	58	1	1	835
85°	583	400	9	2	4	498
90°	505	321	2	4	4	277
95°	434	250	1	4	6	340
105°	298	129	1	3	5	315
115°	162	43	2	2	3	163
125°	48	6	2	2	2	48
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°	491.9	491.9	491.9	491.9	491.9	491.9	491.9	491.9	491.9	491.9	491.9
2.5°	533.3	532.7	530.8	527.7	523.3	515.7	509.5	503.8	496.3	490.1	478.1
5°	561.5	558.4	555.9	552.7	542.7	535.8	524.5	512.0	500.1	488.2	464.4
7.5°	606.6	601.6	597.8	589.1	575.3	559.6	542.1	530.2	522.0	488.8	448.1
10°	654.9	650.5	643.0	627.3	610.4	587.8	562.7	534.5	509.5	481.9	433.7
12.5°	702.5	696.2	685.6	665.5	641.7	613.5	579.0	545.8	510.1	477.5	416.7
15°	750.1	743.2	731.9	707.5	676.2	639.2	597.2	555.2	513.2	471.9	399.2
17.5°	802.1	792.7	775.8	748.2	708.8	663.0	613.5	562.7	512.0	465.0	380.4
20°	857.9	844.7	826.6	789.6	743.2	689.3	629.8	570.3	511.4	456.8	359.1
22.5°	904.3	891.1	871.1	832.8	777.1	711.3	643.6	575.3	508.9	447.4	339.0
25°	944.4	933.7	911.8	867.9	809.0	734.5	656.7	579.0	505.1	437.4	317.7
27.5°	975.7	965.7	941.3	896.1	836.0	755.1	666.8	580.9	500.1	427.4	295.8
30°	1003.3	993.3	963.8	917.4	854.1	771.4	676.8	581.5	493.8	412.3	272.0
32.5°	1024.6	1015.2	985.1	935.6	866.7	782.7	682.4	580.9	485.7	401.7	246.3
35°	1045.9	1036.5	1001.4	948.8	876.1	787.7	686.8	577.8	475.6	384.1	221.8
37.5°	1062.2	1051.6	1015.8	957.6	880.5	789.0	686.2	573.4	465.0	369.7	197.4
40°	1073.5	1062.2	1024.0	962.6	881.7	787.1	681.2	565.9	452.5	351.6	171.7
42.5°	1081.0	1068.5	1027.7	970.1	879.2	782.1	673.7	556.5	438.7	335.9	147.3
45°	1084.8	1071.6	1028.4	963.8	874.8	772.7	662.4	544.6	423.6	314.6	122.8
47.5°	1082.9	1068.5	1025.2	956.9	866.7	762.7	649.9	530.2	405.5	295.8	99.6
50°	1079.8	1064.7	1018.3	948.2	855.4	750.1	636.1	512.6	386.7	272.6	79.0
52.5°	1069.7	1054.7	1010.8	935.6	842.2	735.7	617.3	494.4	366.6	250.0	60.2
55°	1057.2	1043.4	997.7	924.3	825.3	718.2	599.7	475.0	347.2	226.9	43.2
57.5°	1037.8	1025.2	981.4	906.2	808.4	698.7	580.3	453.7	322.7	203.7	30.1
60°	1014.0	1001.4	958.8	885.5	789.0	676.8	559.0	431.8	300.8	180.5	18.8
62.5°	988.9	977.0	932.5	859.8	764.5	653.6	535.8	409.8	277.6	159.2	11.3
65°	955.7	944.4	904.3	829.1	737.6	628.5	510.1	383.5	253.8	135.4	6.3
67.5°	920.6	910.6	869.8	800.9	706.3	601.0	483.8	357.8	228.7	114.7	3.1
70°	883.0	870.4	832.8	762.7	674.3	569.6	455.0	331.5	204.9	94.6	0.0
72.5°	839.1	829.7	793.4	726.9	637.3	536.4	425.5	302.7	178.6	75.2	0.6
75°	796.5	784.6	751.4	688.7	601.0	501.3	392.9	275.7	152.9	57.7	0.6
77.5°	741.3	737.6	706.3	645.5	566.5	467.5	357.2	243.1	128.5	41.4	0.6
80°	686.2	682.4	658.0	602.2	526.4	427.4	324.0	212.4	104.7	27.6	0.6
82.5°	631.7	626.7	603.5	557.1	485.7	393.5	289.5	181.7	82.7	16.9	0.6
85°	582.8	576.5	551.5	508.9	443.7	355.3	253.8	151.7	61.4	9.4	1.3
87.5°	540.8	536.4	508.9	465.0	401.1	319.6	222.5	122.8	43.2	4.4	1.9
90°	505.1	495.7	471.3	424.9	361.0	280.1	189.3	98.4	28.8	2.5	2.5
92.5°	470.0	461.9	434.9	387.3	325.2	246.3	157.3	75.2	18.2	1.3	3.1
95°	433.7	424.9	398.6	354.7	288.9	211.8	129.1	55.1	10.0	1.3	3.1
97.5°	397.9	389.8	362.2	318.3	256.3	181.7	102.1	38.9	5.0	1.3	2.5
100°	364.7	355.3	330.3	286.4	223.7	151.7	79.0	25.1	3.1	1.3	2.5
102.5°	329.6	322.1	296.4	253.8	189.9	123.5	58.9	15.7	1.3	1.3	1.9
105°	298.3	288.9	263.8	220.0	161.7	97.1	41.4	9.4	1.3	1.3	1.9



TEST NUMBER: P551688

CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-93-84-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	194.3	186.7	164.8	127.8	82.1	38.2	11.3	1.9	1.9	1.9	1.9
115°	162.3	151.0	131.6	99.0	60.8	25.1	5.6	1.9	1.9	1.9	1.9
117.5°	129.7	120.3	106.5	75.2	40.1	16.3	3.1	1.9	1.9	1.9	1.9
120°	101.5	92.7	77.1	52.0	26.9	9.4	1.3	1.9	1.9	1.9	1.9
122.5°	72.7	65.8	52.0	33.8	16.3	4.4	1.9	1.9	2.5	2.5	1.9
125°	48.3	44.5	34.5	20.7	10.0	1.9	1.9	1.9	2.5	2.5	1.9
127.5°	31.3	28.2	20.1	11.9	4.4	1.9	1.9	2.5	2.5	2.5	1.9
130°	17.5	15.7	11.9	6.9	1.9	1.9	1.9	2.5	2.5	2.5	1.9
132.5°	10.0	9.4	6.3	1.3	1.9	1.9	1.9	2.5	2.5	2.5	2.5
135°	2.5	1.3	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	2.5
137.5°	0.6	0.6	1.3	1.3	1.9	1.9	2.5	3.1	3.1	3.1	2.5
140°	0.6	0.6	1.3	1.9	1.9	1.9	2.5	3.1	3.1	3.1	2.5
142.5°	0.6	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	2.5	2.5
145°	0.6	1.3	1.3	1.9	1.9	2.5	2.5	3.1	2.5	2.5	2.5
147.5°	1.3	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	2.5	2.5
150°	0.6	1.3	1.3	1.9	2.5	2.5	2.5	3.1	2.5	2.5	2.5
152.5°	0.6	1.3	1.3	1.9	2.5	2.5	2.5	3.1	2.5	2.5	2.5
155°	1.3	1.3	1.3	1.9	2.5	2.5	2.5	3.1	2.5	2.5	3.1
157.5°	1.3	1.3	1.3	1.9	2.5	2.5	2.5	3.1	2.5	2.5	3.1
160°	1.3	1.3	1.3	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
162.5°	1.3	1.3	1.3	1.9	1.9	2.5	2.5	2.5	2.5	2.5	2.5
165°	1.3	1.3	1.3	1.3	1.9	1.9	2.5	2.5	2.5	2.5	2.5
167.5°	1.3	1.3	1.3	1.9	1.9	1.9	2.5	2.5	2.5	2.5	2.5
170°	1.3	1.3	1.3	1.9	1.9	1.9	2.5	3.1	3.1	3.1	3.1
172.5°	1.3	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	3.1	3.1
175°	1.3	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	3.1	3.1
177.5°	0.6	1.3	1.3	1.9	1.9	2.5	2.5	3.1	3.1	3.1	2.5
180°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9



TEST NUMBER: P551688

CATALOG NUMBER: FCC-X-2-LD4-2LO-50-UNV-93-84-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	491.9	491.9	491.9
2.5°	468.1	459.3	456.8
5°	443.1	428.6	420.5
7.5°	418.0	398.6	389.2
10°	394.8	367.2	357.2
12.5°	367.2	335.3	319.6
15°	340.9	299.5	284.5
17.5°	311.5	265.1	247.5
20°	283.9	230.6	212.4
22.5°	252.5	196.8	176.7
25°	224.3	162.9	140.4
27.5°	193.0	128.5	109.0
30°	163.6	98.4	79.0
32.5°	135.4	72.1	54.5
35°	109.0	48.9	34.5
37.5°	84.0	30.1	17.5
40°	60.8	15.7	8.1
42.5°	40.7	7.5	4.4
45°	25.1	3.8	0.0
47.5°	14.4	0.0	0.0
50°	7.5	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	1.3	1.9
80°	1.3	2.5	3.1
82.5°	2.5	3.1	3.1
85°	2.5	3.1	3.8
87.5°	3.1	3.8	4.4
90°	3.8	4.4	4.4
92.5°	3.8	5.0	5.0
95°	4.4	5.0	5.6
97.5°	5.0	5.6	5.6
100°	4.4	5.6	6.3
102.5°	3.8	5.6	5.6
105°	3.1	4.4	5.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.5	3.1	3.1
115°	1.9	2.5	3.1
117.5°	1.9	2.5	2.5
120°	1.9	1.9	2.5
122.5°	1.9	1.9	2.5
125°	1.9	1.9	2.5
127.5°	2.5	1.9	1.9
130°	1.9	1.9	1.9
132.5°	2.5	1.9	1.9
135°	2.5	1.9	1.9
137.5°	2.5	1.9	1.9
140°	2.5	1.9	1.9
142.5°	2.5	1.9	1.9
145°	1.9	1.9	1.9
147.5°	1.9	1.9	1.9
150°	1.9	1.9	1.3
152.5°	1.9	1.3	1.3
155°	1.9	1.3	0.6
157.5°	2.5	1.3	0.6
160°	1.9	1.3	0.6
162.5°	1.9	1.3	0.6
165°	1.9	1.3	0.0
167.5°	1.9	1.3	0.6
170°	1.9	1.3	0.6
172.5°	1.9	1.3	0.6
175°	1.9	0.6	0.6
177.5°	1.9	0.6	0.6
180°	1.9	1.9	1.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	263.2	255.7	230.6	189.3	132.2	73.9	27.6	5.0	1.3	1.9	1.9
110°	229.4	223.1	197.4	157.3	106.5	55.1	18.2	3.1	1.9	1.9	1.9





107.5°	2.5	3.8	4.4
110°	2.5	3.1	3.8



(END OF REPORT)