

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: P551608

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-82-84-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: P551608
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-82-84-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

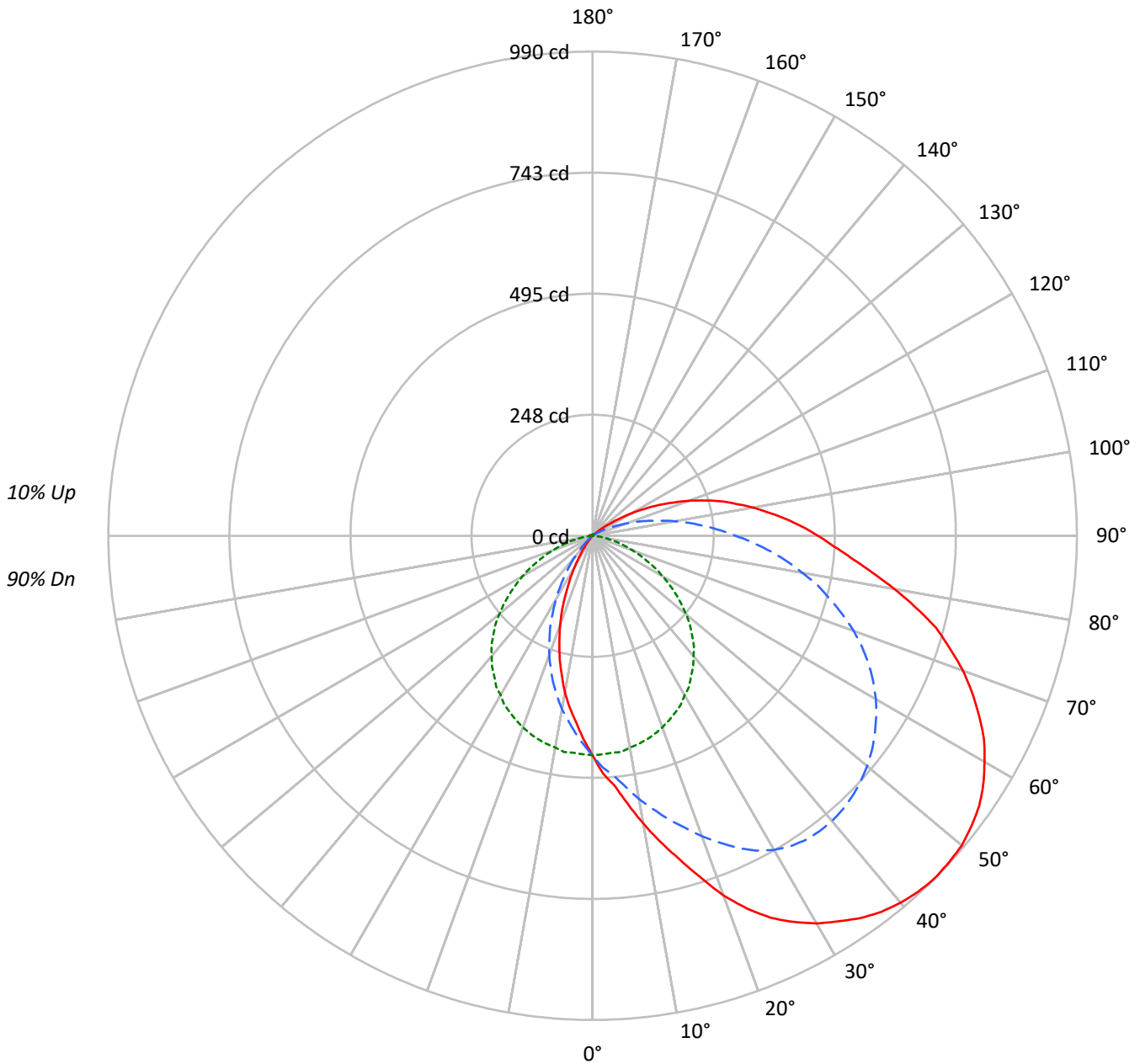
Lumens per Lamp: N/A
Luminaire Lumens: 2219.0 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551608

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-84-ED1D

Luminous Intensity Polar Plot





TEST NUMBER: P551608

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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°	4832	4832	4832
5°	5303	4760	3972
10°	6002	4702	3273
15°	6726	4643	2551
20°	7586	4567	1878
25°	8299	4479	1234
30°	8829	4361	694
35°	9288	4235	306
40°	9695	4080	73
45°	10045	3883	0
50°	10338	3625	0
55°	10561	3296	0
60°	10673	2915	0
65°	10718	2481	0
70°	10681	2022	0
75°	10545	1492	9
80°	10118	914	47
85°	9781	437	63



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	1.9
10°-20°	128.7	5.8
20°-30°	208.5	9.4
30°-40°	267.8	12.1
40°-50°	303.1	13.7
50°-60°	314.1	14.2
60°-70°	296.2	13.3
70°-80°	248.2	11.2
80°-90°	179.9	8.1
90°-100°	118.3	5.3
100°-110°	68.3	3.1
110°-120°	30.1	1.4
120°-130°	8.2	0.4
130°-140°	1.9	0.1
140°-150°	1.2	0.1
150°-160°	0.9	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	380.2	17.1
0°-40°	648.0	29.2
0°-60°	1265.2	57.0
0°-90°	1989.5	89.7
90°-120°	216.7	9.8
90°-150°	227.9	10.3
90°-180°	229.0	10.3
0°-180°	2219.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	449	449	449	449	449	
5°	512	492	445	404	384	52
15°	684	600	431	311	260	197
25°	862	704	399	205	128	398
35°	954	759	350	100	31	599
45°	990	752	287	23	0	764
55°	965	704	207	0	0	861
65°	872	623	124	0	0	863
75°	727	503	53	1	1	762
85°	532	364	9	2	3	454
90°	461	292	2	3	4	253
95°	396	228	1	4	5	310
105°	272	118	1	3	5	287
115°	148	39	2	2	3	148
125°	44	5	2	2	2	44
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	



TEST NUMBER: P551608

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	448.9	448.9	448.9	448.9	448.9	448.9	448.9	448.9	448.9	448.9	448.9
2.5°	486.6	486.0	484.3	481.4	477.4	470.6	464.9	459.7	452.9	447.1	436.3
5°	512.3	509.5	507.2	504.3	495.2	488.9	478.6	467.1	456.3	445.4	423.7
7.5°	553.5	548.9	545.5	537.5	524.9	510.6	494.6	483.7	476.3	446.0	408.8
10°	597.5	593.5	586.7	572.4	556.9	536.3	513.5	487.7	464.9	439.7	395.7
12.5°	641.0	635.3	625.5	607.2	585.5	559.8	528.3	498.0	465.4	435.7	380.2
15°	684.4	678.1	667.8	645.5	617.0	583.2	544.9	506.6	468.3	430.6	364.2
17.5°	731.9	723.3	707.9	682.7	646.7	604.9	559.8	513.5	467.1	424.3	347.1
20°	782.8	770.8	754.2	720.4	678.1	629.0	574.6	520.3	466.6	416.8	327.6
22.5°	825.1	813.1	794.8	759.9	709.0	649.0	587.2	524.9	464.3	408.3	309.3
25°	861.7	852.0	831.9	791.9	738.2	670.1	599.2	528.3	460.9	399.1	289.9
27.5°	890.3	881.1	858.8	817.7	762.8	689.0	608.4	530.0	456.3	390.0	269.9
30°	915.4	906.3	879.4	837.1	779.3	703.9	617.5	530.6	450.6	376.2	248.2
32.5°	934.9	926.3	898.8	853.7	790.8	714.2	622.7	530.0	443.1	366.5	224.7
35°	954.3	945.7	913.7	865.7	799.4	718.7	626.7	527.2	434.0	350.5	202.4
37.5°	969.2	959.5	926.9	873.7	803.4	719.9	626.1	523.2	424.3	337.4	180.1
40°	979.5	969.2	934.3	878.3	804.5	718.2	621.5	516.3	412.8	320.8	156.7
42.5°	986.3	974.9	937.7	885.1	802.2	713.6	614.7	507.7	400.2	306.5	134.4
45°	989.8	977.8	938.3	879.4	798.2	705.0	604.4	496.9	386.5	287.0	112.1
47.5°	988.0	974.9	935.4	873.1	790.8	695.9	592.9	483.7	369.9	269.9	90.9
50°	985.2	971.5	929.1	865.1	780.5	684.4	580.4	467.7	352.8	248.7	72.0
52.5°	976.0	962.3	922.3	853.7	768.5	671.3	563.2	451.1	334.5	228.1	54.9
55°	964.6	952.0	910.3	843.4	753.0	655.3	547.2	433.4	316.8	207.0	39.5
57.5°	946.9	935.4	895.4	826.8	737.6	637.5	529.5	414.0	294.5	185.8	27.4
60°	925.1	913.7	874.8	807.9	719.9	617.5	510.0	394.0	274.5	164.7	17.2
62.5°	902.3	891.4	850.8	784.5	697.6	596.4	488.9	373.9	253.3	145.2	10.3
65°	872.0	861.7	825.1	756.5	673.0	573.5	465.4	349.9	231.6	123.5	5.7
67.5°	840.0	830.8	793.6	730.7	644.4	548.3	441.4	326.5	208.7	104.6	2.9
70°	805.6	794.2	759.9	695.9	615.2	519.8	415.1	302.5	187.0	86.3	0.0
72.5°	765.6	757.0	723.9	663.3	581.5	489.4	388.2	276.2	163.0	68.6	0.6
75°	726.7	715.9	685.6	628.4	548.3	457.4	358.5	251.6	139.5	52.6	0.6
77.5°	676.4	673.0	644.4	588.9	516.9	426.6	325.9	221.9	117.2	37.7	0.6
80°	626.1	622.7	600.4	549.5	480.3	390.0	295.6	193.8	95.5	25.2	0.6
82.5°	576.4	571.8	550.6	508.3	443.1	359.1	264.2	165.8	75.5	15.4	0.6
85°	531.8	526.0	503.2	464.3	404.8	324.2	231.6	138.4	56.0	8.6	1.1
87.5°	493.4	489.4	464.3	424.3	365.9	291.6	203.0	112.1	39.5	4.0	1.7
90°	460.9	452.3	430.0	387.7	329.3	255.6	172.7	89.8	26.3	2.3	2.3
92.5°	428.8	421.4	396.8	353.4	296.8	224.7	143.5	68.6	16.6	1.1	2.9
95°	395.7	387.7	363.7	323.6	263.6	193.3	117.8	50.3	9.1	1.1	2.9
97.5°	363.1	355.6	330.5	290.5	233.9	165.8	93.2	35.5	4.6	1.1	2.3
100°	332.8	324.2	301.3	261.3	204.1	138.4	72.0	22.9	2.9	1.1	2.3
102.5°	300.8	293.9	270.5	231.6	173.3	112.6	53.7	14.3	1.1	1.1	1.7
105°	272.2	263.6	240.7	200.7	147.5	88.6	37.7	8.6	1.1	1.1	1.7



TEST NUMBER: P551608

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-84-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	177.3	170.4	150.4	116.6	74.9	34.9	10.3	1.7	1.7	1.7	1.7
115°	148.1	137.8	120.1	90.3	55.5	22.9	5.1	1.7	1.7	1.7	1.7
117.5°	118.4	109.8	97.2	68.6	36.6	14.9	2.9	1.7	1.7	1.7	1.7
120°	92.6	84.6	70.3	47.5	24.6	8.6	1.1	1.7	1.7	1.7	1.7
122.5°	66.3	60.0	47.5	30.9	14.9	4.0	1.7	1.7	2.3	2.3	1.7
125°	44.0	40.6	31.4	18.9	9.1	1.7	1.7	1.7	2.3	2.3	1.7
127.5°	28.6	25.7	18.3	10.9	4.0	1.7	1.7	2.3	2.3	2.3	1.7
130°	16.0	14.3	10.9	6.3	1.7	1.7	1.7	2.3	2.3	2.3	1.7
132.5°	9.1	8.6	5.7	1.1	1.7	1.7	1.7	2.3	2.3	2.3	2.3
135°	2.3	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.3
137.5°	0.6	0.6	1.1	1.1	1.7	1.7	2.3	2.9	2.9	2.9	2.3
140°	0.6	0.6	1.1	1.7	1.7	1.7	2.3	2.9	2.9	2.9	2.3
142.5°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.3	2.3
145°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.3	2.3	2.3
147.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.3	2.3
150°	0.6	1.1	1.1	1.7	2.3	2.3	2.3	2.9	2.3	2.3	2.3
152.5°	0.6	1.1	1.1	1.7	2.3	2.3	2.3	2.9	2.3	2.3	2.3
155°	1.1	1.1	1.1	1.7	2.3	2.3	2.3	2.9	2.3	2.3	2.9
157.5°	1.1	1.1	1.1	1.7	2.3	2.3	2.3	2.9	2.3	2.3	2.9
160°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3	2.3
162.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3	2.3
165°	1.1	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.3	2.3	2.3
167.5°	1.1	1.1	1.1	1.7	1.7	1.7	2.3	2.3	2.3	2.3	2.3
170°	1.1	1.1	1.1	1.7	1.7	1.7	2.3	2.9	2.9	2.9	2.9
172.5°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.9	2.9
175°	1.1	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.9	2.9
177.5°	0.6	1.1	1.1	1.7	1.7	2.3	2.3	2.9	2.9	2.9	2.3
180°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



TEST NUMBER: P551608

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-84-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	448.9	448.9	448.9
2.5°	427.1	419.1	416.8
5°	404.3	391.1	383.7
7.5°	381.4	363.7	355.1
10°	360.2	335.1	325.9
12.5°	335.1	305.9	291.6
15°	311.1	273.3	259.6
17.5°	284.2	241.9	225.9
20°	259.0	210.4	193.8
22.5°	230.4	179.5	161.2
25°	204.7	148.7	128.1
27.5°	176.1	117.2	99.5
30°	149.2	89.8	72.0
32.5°	123.5	65.8	49.7
35°	99.5	44.6	31.4
37.5°	76.6	27.4	16.0
40°	55.5	14.3	7.4
42.5°	37.2	6.9	4.0
45°	22.9	3.4	0.0
47.5°	13.2	0.0	0.0
50°	6.9	0.0	0.0
52.5°	2.9	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	1.1	1.7
80°	1.1	2.3	2.9
82.5°	2.3	2.9	2.9
85°	2.3	2.9	3.4
87.5°	2.9	3.4	4.0
90°	3.4	4.0	4.0
92.5°	3.4	4.6	4.6
95°	4.0	4.6	5.1
97.5°	4.6	5.1	5.1
100°	4.0	5.1	5.7
102.5°	3.4	5.1	5.1
105°	2.9	4.0	4.6



TEST NUMBER: P551608

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-82-84-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.3	2.9	2.9
115°	1.7	2.3	2.9
117.5°	1.7	2.3	2.3
120°	1.7	1.7	2.3
122.5°	1.7	1.7	2.3
125°	1.7	1.7	2.3
127.5°	2.3	1.7	1.7
130°	1.7	1.7	1.7
132.5°	2.3	1.7	1.7
135°	2.3	1.7	1.7
137.5°	2.3	1.7	1.7
140°	2.3	1.7	1.7
142.5°	2.3	1.7	1.7
145°	1.7	1.7	1.7
147.5°	1.7	1.7	1.7
150°	1.7	1.7	1.1
152.5°	1.7	1.1	1.1
155°	1.7	1.1	0.6
157.5°	2.3	1.1	0.6
160°	1.7	1.1	0.6
162.5°	1.7	1.1	0.6
165°	1.7	1.1	0.0
167.5°	1.7	1.1	0.6
170°	1.7	1.1	0.6
172.5°	1.7	1.1	0.6
175°	1.7	0.6	0.6
177.5°	1.7	0.6	0.6
180°	1.7	1.7	1.7



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	240.1	233.3	210.4	172.7	120.6	67.5	25.2	4.6	1.1	1.7	1.7
110°	209.3	203.6	180.1	143.5	97.2	50.3	16.6	2.9	1.7	1.7	1.7





107.5°	2.3	3.4	4.0
110°	2.3	2.9	3.4



(END OF REPORT)