

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: P551090

Luminaire Tested: **FCC-X-2-LD4-1STD-40-UNV-81-94-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: P551090
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-LD4-1STD-40-UNV-81-94-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

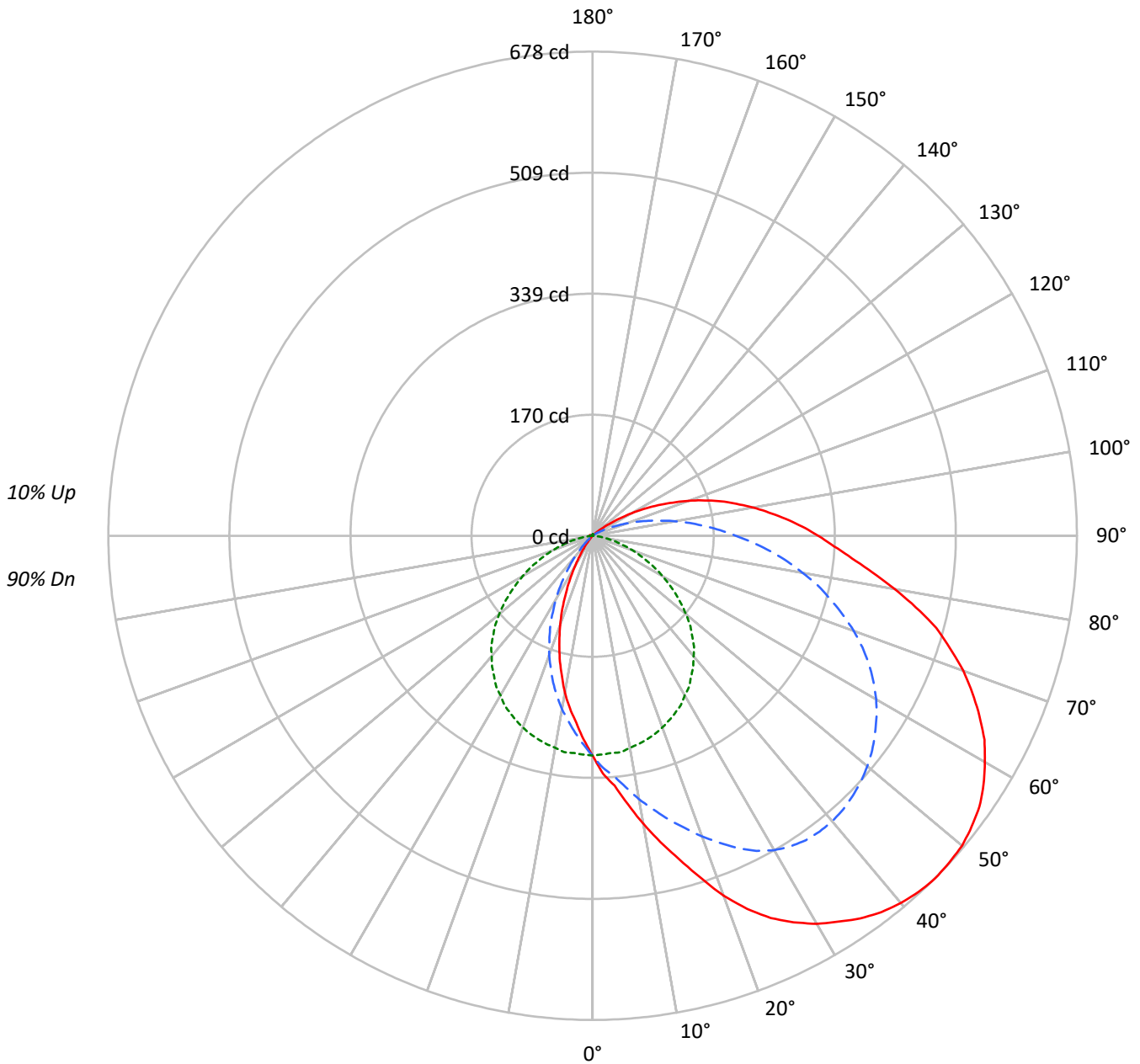
Lumens per Lamp: N/A
Luminaire Lumens: 1521.1 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 16.7
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: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

Luminous Intensity Polar Plot





TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

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°	3312	3312	3312
5°	3636	3263	2723
10°	4114	3223	2244
15°	4610	3182	1748
20°	5199	3130	1288
25°	5688	3070	846
30°	6052	2990	476
35°	6366	2903	210
40°	6646	2797	50
45°	6885	2662	0
50°	7086	2485	0
55°	7239	2260	0
60°	7315	1998	0
65°	7346	1701	0
70°	7321	1387	0
75°	7228	1024	6
80°	6936	624	32
85°	6704	300	44



TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	1.9
10°-20°	88.2	5.8
20°-30°	142.9	9.4
30°-40°	183.6	12.1
40°-50°	207.8	13.7
50°-60°	215.3	14.2
60°-70°	203.0	13.3
70°-80°	170.1	11.2
80°-90°	123.3	8.1
90°-100°	81.1	5.3
100°-110°	46.8	3.1
110°-120°	20.7	1.4
120°-130°	5.6	0.4
130°-140°	1.3	0.1
140°-150°	0.9	0.1
150°-160°	0.6	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	260.6	17.1
0°-40°	444.2	29.2
0°-60°	867.2	57.0
0°-90°	1363.7	89.7
90°-120°	148.5	9.8
90°-150°	156.3	10.3
90°-180°	157.0	10.3
0°-180°	1521.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	308	308	308	308	308	
5°	351	337	305	277	263	35
15°	469	411	295	213	178	135
25°	591	483	274	140	88	273
35°	654	520	240	68	22	410
45°	678	515	197	16	0	524
55°	661	483	142	0	0	590
65°	598	427	85	0	0	591
75°	498	345	36	0	0	522
85°	364	250	6	2	2	311
90°	316	200	2	2	3	173
95°	271	157	1	3	4	213
105°	187	81	1	2	3	197
115°	102	27	1	1	2	102
125°	30	4	2	1	2	30
135°	2	1	2	2	1	3
145°	0	1	2	1	1	0
155°	1	2	2	1	0	0
165°	1	1	2	1	0	0
175°	1	1	2	1	0	0
180°	1	1	1	1	1	



TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	307.7	307.7	307.7	307.7	307.7	307.7	307.7	307.7	307.7	307.7	307.7
2.5°	333.5	333.1	332.0	330.0	327.3	322.6	318.6	315.1	310.4	306.5	299.0
5°	351.2	349.2	347.6	345.7	339.4	335.1	328.0	320.2	312.8	305.3	290.4
7.5°	379.4	376.2	373.9	368.4	359.8	350.0	339.0	331.6	326.5	305.7	280.2
10°	409.6	406.8	402.1	392.3	381.7	367.6	351.9	334.3	318.6	301.4	271.2
12.5°	439.3	435.4	428.8	416.2	401.3	383.7	362.1	341.4	319.0	298.6	260.6
15°	469.1	464.8	457.8	442.5	422.9	399.8	373.5	347.2	321.0	295.1	249.7
17.5°	501.7	495.8	485.2	468.0	443.3	414.7	383.7	351.9	320.2	290.8	237.9
20°	536.5	528.3	517.0	493.8	464.8	431.1	393.9	356.7	319.8	285.7	224.6
22.5°	565.5	557.3	544.8	520.9	486.0	444.8	402.5	359.8	318.2	279.8	212.0
25°	590.6	584.0	570.3	542.8	506.0	459.3	410.7	362.1	315.9	273.6	198.7
27.5°	610.2	604.0	588.7	560.5	522.8	472.3	417.0	363.3	312.8	267.3	185.0
30°	627.5	621.2	602.8	573.8	534.2	482.5	423.3	363.7	308.8	257.9	170.1
32.5°	640.8	634.9	616.1	585.1	542.0	489.5	426.8	363.3	303.7	251.2	154.0
35°	654.1	648.2	626.3	593.4	547.9	492.7	429.6	361.4	297.5	240.3	138.7
37.5°	664.3	657.7	635.3	598.9	550.7	493.4	429.2	358.6	290.8	231.2	123.5
40°	671.4	664.3	640.4	602.0	551.4	492.3	426.0	353.9	283.0	219.9	107.4
42.5°	676.1	668.2	642.8	606.7	549.9	489.1	421.3	348.0	274.3	210.1	92.1
45°	678.4	670.2	643.2	602.8	547.1	483.2	414.3	340.6	264.9	196.7	76.8
47.5°	677.2	668.2	641.2	598.5	542.0	477.0	406.4	331.6	253.6	185.0	62.3
50°	675.3	665.9	636.9	593.0	535.0	469.1	397.8	320.6	241.8	170.5	49.4
52.5°	669.0	659.6	632.2	585.1	526.7	460.1	386.0	309.2	229.3	156.4	37.6
55°	661.2	652.6	623.9	578.1	516.2	449.1	375.1	297.1	217.1	141.9	27.0
57.5°	649.0	641.2	613.8	566.7	505.6	437.0	362.9	283.8	201.8	127.4	18.8
60°	634.1	626.3	599.6	553.8	493.4	423.3	349.6	270.0	188.1	112.9	11.8
62.5°	618.5	611.0	583.2	537.7	478.1	408.8	335.1	256.3	173.6	99.5	7.1
65°	597.7	590.6	565.5	518.5	461.3	393.1	319.0	239.9	158.7	84.7	3.9
67.5°	575.7	569.5	544.0	500.9	441.7	375.9	302.6	223.8	143.1	71.7	2.0
70°	552.2	544.4	520.9	477.0	421.7	356.3	284.5	207.3	128.2	59.2	0.0
72.5°	524.8	518.9	496.2	454.6	398.6	335.5	266.1	189.3	111.7	47.0	0.4
75°	498.1	490.7	469.9	430.7	375.9	313.5	245.7	172.4	95.6	36.1	0.4
77.5°	463.6	461.3	441.7	403.7	354.3	292.4	223.4	152.1	80.3	25.9	0.4
80°	429.2	426.8	411.5	376.6	329.2	267.3	202.6	132.9	65.5	17.2	0.4
82.5°	395.1	391.9	377.4	348.4	303.7	246.1	181.1	113.7	51.7	10.6	0.4
85°	364.5	360.6	344.9	318.2	277.5	222.2	158.7	94.8	38.4	5.9	0.8
87.5°	338.2	335.5	318.2	290.8	250.8	199.9	139.1	76.8	27.0	2.7	1.2
90°	315.9	310.0	294.7	265.7	225.7	175.2	118.4	61.5	18.0	1.6	1.6
92.5°	293.9	288.8	272.0	242.2	203.4	154.0	98.4	47.0	11.4	0.8	2.0
95°	271.2	265.7	249.3	221.8	180.7	132.5	80.7	34.5	6.3	0.8	2.0
97.5°	248.9	243.8	226.5	199.1	160.3	113.7	63.9	24.3	3.1	0.8	1.6
100°	228.1	222.2	206.5	179.1	139.9	94.8	49.4	15.7	2.0	0.8	1.6
102.5°	206.2	201.4	185.4	158.7	118.8	77.2	36.8	9.8	0.8	0.8	1.2
105°	186.6	180.7	165.0	137.6	101.1	60.7	25.9	5.9	0.8	0.8	1.2



TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	121.5	116.8	103.1	80.0	51.3	23.9	7.1	1.2	1.2	1.2	1.2
115°	101.5	94.5	82.3	61.9	38.0	15.7	3.5	1.2	1.2	1.2	1.2
117.5°	81.1	75.2	66.6	47.0	25.1	10.2	2.0	1.2	1.2	1.2	1.2
120°	63.5	58.0	48.2	32.5	16.9	5.9	0.8	1.2	1.2	1.2	1.2
122.5°	45.5	41.2	32.5	21.2	10.2	2.7	1.2	1.2	1.6	1.6	1.2
125°	30.2	27.8	21.6	12.9	6.3	1.2	1.2	1.2	1.6	1.6	1.2
127.5°	19.6	17.6	12.5	7.4	2.7	1.2	1.2	1.6	1.6	1.6	1.2
130°	11.0	9.8	7.4	4.3	1.2	1.2	1.2	1.6	1.6	1.6	1.2
132.5°	6.3	5.9	3.9	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6
135°	1.6	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6
137.5°	0.4	0.4	0.8	0.8	1.2	1.2	1.6	2.0	2.0	2.0	1.6
140°	0.4	0.4	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	1.6
142.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
145°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	1.6	1.6	1.6
147.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	1.6	1.6
150°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
152.5°	0.4	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	1.6
155°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
157.5°	0.8	0.8	0.8	1.2	1.6	1.6	1.6	2.0	1.6	1.6	2.0
160°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6
165°	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6	1.6	1.6	1.6
167.5°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.6
170°	0.8	0.8	0.8	1.2	1.2	1.2	1.6	2.0	2.0	2.0	2.0
172.5°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
175°	0.8	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	2.0
177.5°	0.4	0.8	0.8	1.2	1.2	1.6	1.6	2.0	2.0	2.0	1.6
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	307.7	307.7	307.7
2.5°	292.8	287.3	285.7
5°	277.1	268.1	263.0
7.5°	261.4	249.3	243.4
10°	246.9	229.7	223.4
12.5°	229.7	209.7	199.9
15°	213.2	187.3	177.9
17.5°	194.8	165.8	154.8
20°	177.5	144.2	132.9
22.5°	157.9	123.1	110.5
25°	140.3	101.9	87.8
27.5°	120.7	80.3	68.2
30°	102.3	61.5	49.4
32.5°	84.7	45.1	34.1
35°	68.2	30.6	21.6
37.5°	52.5	18.8	11.0
40°	38.0	9.8	5.1
42.5°	25.5	4.7	2.7
45°	15.7	2.4	0.0
47.5°	9.0	0.0	0.0
50°	4.7	0.0	0.0
52.5°	2.0	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	0.8	1.2
80°	0.8	1.6	2.0
82.5°	1.6	2.0	2.0
85°	1.6	2.0	2.4
87.5°	2.0	2.4	2.7
90°	2.4	2.7	2.7
92.5°	2.4	3.1	3.1
95°	2.7	3.1	3.5
97.5°	3.1	3.5	3.5
100°	2.7	3.5	3.9
102.5°	2.4	3.5	3.5
105°	2.0	2.7	3.1



TEST NUMBER: P551090

CATALOG NUMBER: FCC-X-2-LD4-1STD-40-UNV-81-94-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	1.6	2.0	2.0
115°	1.2	1.6	2.0
117.5°	1.2	1.6	1.6
120°	1.2	1.2	1.6
122.5°	1.2	1.2	1.6
125°	1.2	1.2	1.6
127.5°	1.6	1.2	1.2
130°	1.2	1.2	1.2
132.5°	1.6	1.2	1.2
135°	1.6	1.2	1.2
137.5°	1.6	1.2	1.2
140°	1.6	1.2	1.2
142.5°	1.6	1.2	1.2
145°	1.2	1.2	1.2
147.5°	1.2	1.2	1.2
150°	1.2	1.2	0.8
152.5°	1.2	0.8	0.8
155°	1.2	0.8	0.4
157.5°	1.6	0.8	0.4
160°	1.2	0.8	0.4
162.5°	1.2	0.8	0.4
165°	1.2	0.8	0.0
167.5°	1.2	0.8	0.4
170°	1.2	0.8	0.4
172.5°	1.2	0.8	0.4
175°	1.2	0.4	0.4
177.5°	1.2	0.4	0.4
180°	1.2	1.2	1.2



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	164.6	159.9	144.2	118.4	82.7	46.2	17.2	3.1	0.8	1.2	1.2
110°	143.4	139.5	123.5	98.4	66.6	34.5	11.4	2.0	1.2	1.2	1.2





107.5°	1.6	2.4	2.7
110°	1.6	2.0	2.4



(END OF REPORT)