

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: P551628

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-86-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: P551628
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-93-86-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

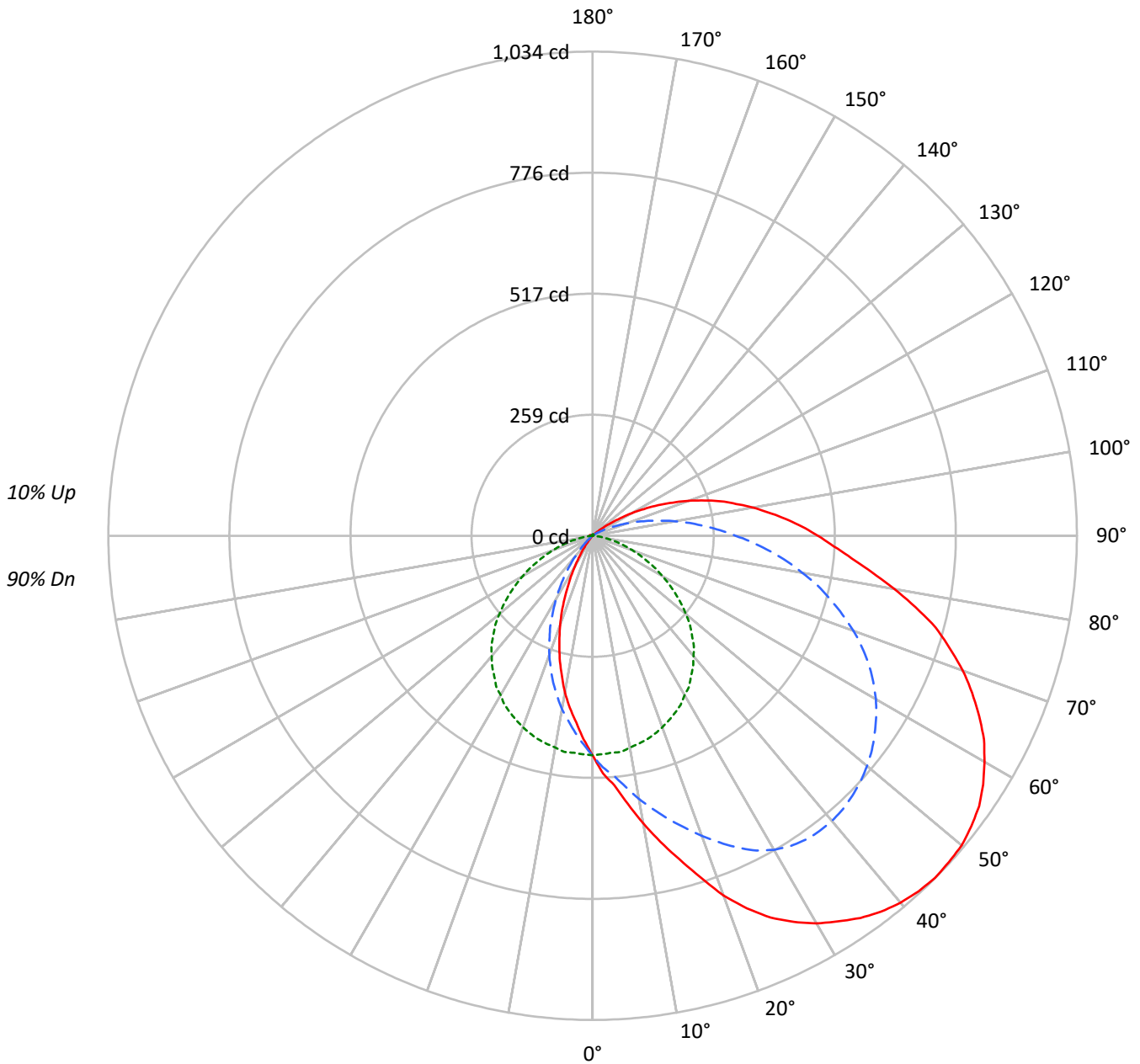
Lumens per Lamp: N/A
Luminaire Lumens: 2317.1 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551628

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-86-ED1D

Luminous Intensity Polar Plot





TEST NUMBER: P551628

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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°	5045	5045	5045
5°	5537	4971	4147
10°	6267	4910	3418
15°	7023	4848	2664
20°	7921	4768	1961
25°	8665	4676	1288
30°	9220	4554	725
35°	9699	4422	319
40°	10123	4259	77
45°	10488	4055	0
50°	10794	3785	0
55°	11027	3441	0
60°	11144	3042	0
65°	11191	2591	0
70°	11153	2113	0
75°	11011	1557	9
80°	10566	954	48
85°	10211	458	66



TEST NUMBER: P551628

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-86-ED1D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	1.9
10°-20°	134.4	5.8
20°-30°	217.7	9.4
30°-40°	279.6	12.1
40°-50°	316.5	13.7
50°-60°	327.9	14.2
60°-70°	309.3	13.3
70°-80°	259.2	11.2
80°-90°	187.9	8.1
90°-100°	123.5	5.3
100°-110°	71.3	3.1
110°-120°	31.5	1.4
120°-130°	8.5	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°	397.0	17.1
0°-40°	676.6	29.2
0°-60°	1321.1	57.0
0°-90°	2077.4	89.7
90°-120°	226.3	9.8
90°-150°	238.1	10.3
90°-180°	240.0	10.4
0°-180°	2317.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	469	469	469	469	469	
5°	535	514	465	422	401	54
15°	715	627	450	325	271	206
25°	900	735	417	214	134	416
35°	996	793	366	104	33	625
45°	1034	785	300	24	0	798
55°	1007	735	216	0	0	899
65°	910	651	129	0	0	901
75°	759	525	55	1	1	796
85°	555	381	9	2	4	474
90°	481	305	2	4	4	264
95°	413	238	1	4	5	324
105°	284	123	1	3	5	300
115°	155	41	2	2	3	155
125°	46	6	2	2	2	46
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°	468.7	468.7	468.7	468.7	468.7	468.7	468.7	468.7	468.7	468.7	468.7
2.5°	508.1	507.5	505.7	502.7	498.5	491.4	485.4	480.0	472.9	466.9	455.5
5°	534.9	532.0	529.6	526.6	517.0	510.5	499.7	487.8	476.4	465.1	442.4
7.5°	577.9	573.2	569.6	561.2	548.1	533.2	516.4	505.1	497.3	465.7	426.9
10°	623.9	619.7	612.6	597.6	581.5	560.0	536.1	509.3	485.4	459.1	413.1
12.5°	669.3	663.3	653.2	634.1	611.4	584.5	551.7	520.0	486.0	454.9	397.0
15°	714.7	708.1	697.3	674.1	644.2	609.0	569.0	529.0	489.0	449.6	380.3
17.5°	764.2	755.3	739.1	712.9	675.2	631.7	584.5	536.1	487.8	443.0	362.4
20°	817.3	804.8	787.5	752.3	708.1	656.7	600.0	543.3	487.2	435.2	342.1
22.5°	861.5	849.0	829.9	793.5	740.3	677.6	613.2	548.1	484.8	426.3	323.0
25°	899.7	889.6	868.7	826.9	770.8	699.7	625.7	551.7	481.2	416.7	302.7
27.5°	929.6	920.0	896.7	853.8	796.4	719.4	635.2	553.5	476.4	407.2	281.8
30°	955.9	946.3	918.2	874.1	813.8	735.0	644.8	554.0	470.5	392.8	259.1
32.5°	976.2	967.2	938.5	891.4	825.7	745.7	650.2	553.5	462.7	382.7	234.6
35°	996.5	987.5	954.1	903.9	834.7	750.5	654.4	550.5	453.2	366.0	211.4
37.5°	1012.0	1001.8	967.8	912.3	838.8	751.7	653.8	546.3	443.0	352.3	188.1
40°	1022.7	1012.0	975.6	917.0	840.0	749.9	649.0	539.1	431.1	334.9	163.6
42.5°	1029.9	1017.9	979.1	924.2	837.6	745.1	641.8	530.2	417.9	320.0	140.3
45°	1033.5	1020.9	979.7	918.2	833.5	736.1	631.1	518.8	403.6	299.7	117.0
47.5°	1031.7	1017.9	976.8	911.7	825.7	726.6	619.1	505.1	386.3	281.8	94.9
50°	1028.7	1014.4	970.2	903.3	815.0	714.7	606.0	488.4	368.4	259.7	75.2
52.5°	1019.1	1004.8	963.0	891.4	802.4	700.9	588.1	471.1	349.3	238.2	57.3
55°	1007.2	994.1	950.5	880.6	786.3	684.2	571.4	452.6	330.8	216.1	41.2
57.5°	988.7	976.8	935.0	863.3	770.2	665.7	552.9	432.3	307.5	194.0	28.7
60°	966.0	954.1	913.5	843.6	751.7	644.8	532.6	411.4	286.6	171.9	17.9
62.5°	942.1	930.8	888.4	819.1	728.4	622.7	510.5	390.5	264.5	151.6	10.7
65°	910.5	899.7	861.5	789.9	702.7	598.8	486.0	365.4	241.8	129.0	6.0
67.5°	877.0	867.5	828.7	763.0	672.9	572.6	460.9	340.9	217.9	109.3	3.0
70°	841.2	829.3	793.5	726.6	642.4	542.7	433.4	315.8	195.2	90.2	0.0
72.5°	799.4	790.5	755.8	692.6	607.2	511.1	405.4	288.4	170.2	71.6	0.6
75°	758.8	747.5	715.8	656.1	572.6	477.6	374.3	262.7	145.7	54.9	0.6
77.5°	706.3	702.7	672.9	614.9	539.7	445.4	340.3	231.7	122.4	39.4	0.6
80°	653.8	650.2	626.9	573.8	501.5	407.2	308.7	202.4	99.7	26.3	0.6
82.5°	601.8	597.0	574.9	530.8	462.7	374.9	275.8	173.1	78.8	16.1	0.6
85°	555.2	549.3	525.4	484.8	422.7	338.5	241.8	144.5	58.5	9.0	1.2
87.5°	515.2	511.1	484.8	443.0	382.1	304.5	211.9	117.0	41.2	4.2	1.8
90°	481.2	472.3	449.0	404.8	343.9	266.9	180.3	93.7	27.5	2.4	2.4
92.5°	447.8	440.0	414.3	369.0	309.9	234.6	149.9	71.6	17.3	1.2	3.0
95°	413.1	404.8	379.7	337.9	275.2	201.8	123.0	52.5	9.6	1.2	3.0
97.5°	379.1	371.4	345.1	303.3	244.2	173.1	97.3	37.0	4.8	1.2	2.4
100°	347.5	338.5	314.6	272.8	213.1	144.5	75.2	23.9	3.0	1.2	2.4
102.5°	314.0	306.9	282.4	241.8	180.9	117.6	56.1	14.9	1.2	1.2	1.8
105°	284.2	275.2	251.4	209.6	154.0	92.5	39.4	9.0	1.2	1.2	1.8



TEST NUMBER: P551628

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-86-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	185.1	177.9	157.0	121.8	78.2	36.4	10.7	1.8	1.8	1.8	1.8
115°	154.6	143.9	125.4	94.3	57.9	23.9	5.4	1.8	1.8	1.8	1.8
117.5°	123.6	114.6	101.5	71.6	38.2	15.5	3.0	1.8	1.8	1.8	1.8
120°	96.7	88.4	73.4	49.6	25.7	9.0	1.2	1.8	1.8	1.8	1.8
122.5°	69.3	62.7	49.6	32.2	15.5	4.2	1.8	1.8	2.4	2.4	1.8
125°	46.0	42.4	32.8	19.7	9.6	1.8	1.8	1.8	2.4	2.4	1.8
127.5°	29.9	26.9	19.1	11.3	4.2	1.8	1.8	2.4	2.4	2.4	1.8
130°	16.7	14.9	11.3	6.6	1.8	1.8	1.8	2.4	2.4	2.4	1.8
132.5°	9.6	9.0	6.0	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	3.0	3.0	2.4
137.5°	0.6	0.6	1.2	1.2	1.8	1.8	2.4	3.0	3.0	3.0	2.4
140°	0.6	0.6	1.2	1.8	1.8	1.8	2.4	3.0	3.0	3.0	2.4
142.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.0	3.0	2.4	2.4
145°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.0	2.4	2.4	2.4
147.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.0	3.0	2.4	2.4
150°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	3.0	2.4	2.4	2.4
152.5°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	3.0	2.4	2.4	2.4
155°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	3.0	2.4	2.4	3.0
157.5°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	3.0	2.4	2.4	3.0
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	3.0	3.0	3.0	3.0
172.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.0	3.0	3.0	3.0
175°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	3.0	3.0	3.0	3.0
177.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	3.0	3.0	3.0	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: P551628

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-86-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	468.7	468.7	468.7
2.5°	446.0	437.6	435.2
5°	422.1	408.4	400.6
7.5°	398.2	379.7	370.8
10°	376.1	349.9	340.3
12.5°	349.9	319.4	304.5
15°	324.8	285.4	271.1
17.5°	296.7	252.5	235.8
20°	270.5	219.7	202.4
22.5°	240.6	187.5	168.4
25°	213.7	155.2	133.7
27.5°	183.9	122.4	103.9
30°	155.8	93.7	75.2
32.5°	129.0	68.7	51.9
35°	103.9	46.6	32.8
37.5°	80.0	28.7	16.7
40°	57.9	14.9	7.8
42.5°	38.8	7.2	4.2
45°	23.9	3.6	0.0
47.5°	13.7	0.0	0.0
50°	7.2	0.0	0.0
52.5°	3.0	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°	0.6	0.6	0.6
77.5°	0.6	1.2	1.8
80°	1.2	2.4	3.0
82.5°	2.4	3.0	3.0
85°	2.4	3.0	3.6
87.5°	3.0	3.6	4.2
90°	3.6	4.2	4.2
92.5°	3.6	4.8	4.8
95°	4.2	4.8	5.4
97.5°	4.8	5.4	5.4
100°	4.2	5.4	6.0
102.5°	3.6	5.4	5.4
105°	3.0	4.2	4.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.4	3.0	3.0
115°	1.8	2.4	3.0
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°	250.8	243.6	219.7	180.3	126.0	70.5	26.3	4.8	1.2	1.8	1.8
110°	218.5	212.5	188.1	149.9	101.5	52.5	17.3	3.0	1.8	1.8	1.8





107.5°	2.4	3.6	4.2
110°	2.4	3.0	3.6



(END OF REPORT)