

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: P551638

Luminaire Tested: **FCC-X-2-LD4-2LO-40-UNV-93-97-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: P551638
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-93-97-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,
AND 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

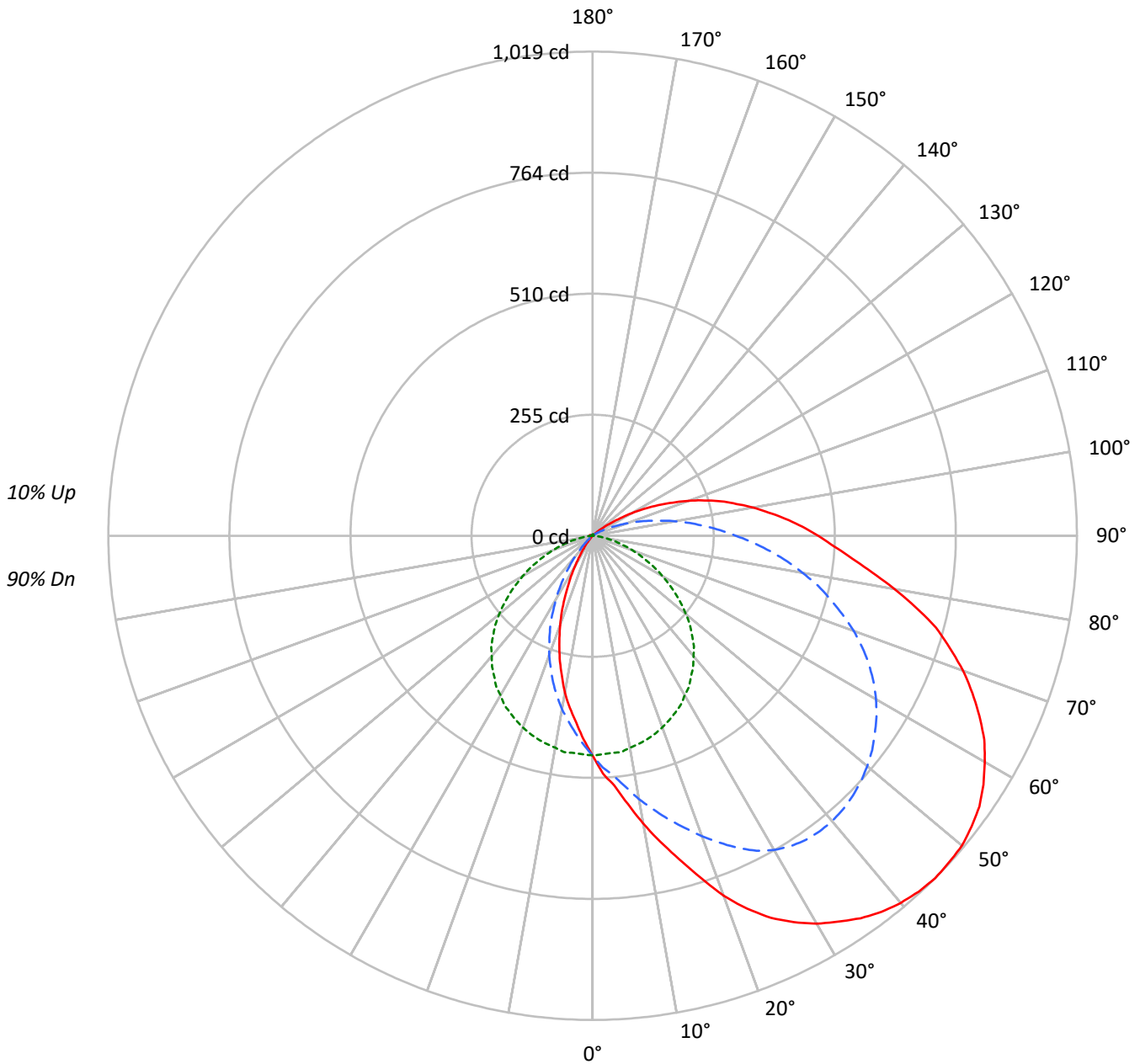
Lumens per Lamp: N/A
Luminaire Lumens: 2285.1 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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: P551638

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D

Luminous Intensity Polar Plot





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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°	4975	4975	4975
5°	5462	4903	4090
10°	6180	4842	3371
15°	6926	4781	2627
20°	7812	4702	1934
25°	8546	4612	1270
30°	9092	4491	716
35°	9564	4361	315
40°	9984	4201	76
45°	10343	4000	0
50°	10645	3733	0
55°	10875	3393	0
60°	10991	3001	0
65°	11036	2555	0
70°	10999	2083	0
75°	10860	1537	9
80°	10419	939	47
85°	10071	447	64



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	1.9
10°-20°	132.6	5.8
20°-30°	214.7	9.4
30°-40°	275.8	12.1
40°-50°	312.2	13.7
50°-60°	323.4	14.2
60°-70°	305.0	13.3
70°-80°	255.6	11.2
80°-90°	185.3	8.1
90°-100°	121.8	5.3
100°-110°	70.3	3.1
110°-120°	31.0	1.4
120°-130°	8.4	0.4
130°-140°	1.9	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°	391.5	17.1
0°-40°	667.3	29.2
0°-60°	1302.8	57.0
0°-90°	2048.7	89.7
90°-120°	223.1	9.8
90°-150°	234.8	10.3
90°-180°	236.0	10.3
0°-180°	2285.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	462	462	462	462	462	
5°	528	507	459	416	395	53
15°	705	618	443	320	267	203
25°	887	725	411	211	132	410
35°	983	782	361	102	32	616
45°	1019	774	296	24	0	787
55°	993	725	213	0	0	887
65°	898	642	127	0	0	888
75°	748	518	54	1	1	785
85°	548	375	9	2	4	468
90°	475	301	2	4	4	260
95°	407	235	1	4	5	320
105°	280	122	1	3	5	296
115°	152	40	2	2	3	153
125°	45	6	2	2	2	45
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: P551638

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2	462.2
2.5°	501.1	500.5	498.7	495.8	491.6	484.6	478.7	473.4	466.3	460.4	449.2
5°	527.6	524.6	522.3	519.3	509.9	503.4	492.8	481.0	469.9	458.7	436.3
7.5°	569.9	565.2	561.7	553.5	540.5	525.8	509.3	498.1	490.5	459.3	421.0
10°	615.3	611.2	604.1	589.4	573.5	552.3	528.7	502.2	478.7	452.8	407.4
12.5°	660.0	654.1	644.1	625.3	602.9	576.4	544.0	512.8	479.3	448.7	391.5
15°	704.8	698.3	687.7	664.7	635.3	600.6	561.1	521.7	482.2	443.4	375.1
17.5°	753.7	744.8	728.9	703.0	665.9	622.9	576.4	528.7	481.0	436.9	357.4
20°	806.1	793.7	776.6	741.9	698.3	647.7	591.7	535.8	480.5	429.2	337.4
22.5°	849.6	837.3	818.4	782.5	730.1	668.3	604.7	540.5	478.1	420.4	318.5
25°	887.3	877.3	856.7	815.5	760.1	690.1	617.1	544.0	474.6	411.0	298.5
27.5°	916.7	907.3	884.4	842.0	785.4	709.5	626.5	545.8	469.9	401.6	277.9
30°	942.7	933.2	905.6	862.0	802.5	724.8	635.9	546.4	464.0	387.4	255.5
32.5°	962.7	953.8	925.6	879.1	814.3	735.4	641.2	545.8	456.3	377.4	231.4
35°	982.7	973.9	940.9	891.4	823.1	740.1	645.3	542.9	446.9	360.9	208.4
37.5°	998.0	988.0	954.4	899.7	827.3	741.3	644.7	538.7	436.9	347.4	185.5
40°	1008.6	998.0	962.1	904.4	828.4	739.5	640.0	531.7	425.1	330.3	161.3
42.5°	1015.7	1003.9	965.6	911.4	826.1	734.8	632.9	522.8	412.2	315.6	138.4
45°	1019.2	1006.8	966.2	905.6	822.0	726.0	622.4	511.7	398.0	295.6	115.4
47.5°	1017.4	1003.9	963.3	899.1	814.3	716.6	610.6	498.1	380.9	277.9	93.6
50°	1014.5	1000.4	956.8	890.8	803.7	704.8	597.6	481.6	363.3	256.1	74.2
52.5°	1005.1	990.9	949.7	879.1	791.3	691.2	580.0	464.6	344.4	234.9	56.5
55°	993.3	980.3	937.4	868.5	775.4	674.8	563.5	446.3	326.2	213.1	40.6
57.5°	975.0	963.3	922.0	851.4	759.5	656.5	545.2	426.3	303.2	191.4	28.3
60°	952.7	940.9	900.8	832.0	741.3	635.9	525.2	405.7	282.6	169.6	17.7
62.5°	929.1	917.9	876.1	807.8	718.3	614.1	503.4	385.1	260.8	149.6	10.6
65°	897.9	887.3	849.6	779.0	693.0	590.6	479.3	360.3	238.5	127.2	5.9
67.5°	864.9	855.5	817.2	752.5	663.6	564.7	454.5	336.2	214.9	107.7	2.9
70°	829.6	817.8	782.5	716.6	633.5	535.2	427.5	311.5	192.5	88.9	0.0
72.5°	788.4	779.6	745.4	683.0	598.8	504.0	399.8	284.4	167.8	70.7	0.6
75°	748.4	737.2	706.0	647.1	564.7	471.0	369.2	259.1	143.7	54.2	0.6
77.5°	696.5	693.0	663.6	606.5	532.3	439.2	335.6	228.5	120.7	38.9	0.6
80°	644.7	641.2	618.2	565.8	494.6	401.6	304.4	199.6	98.3	25.9	0.6
82.5°	593.5	588.8	567.0	523.4	456.3	369.8	272.0	170.7	77.7	15.9	0.6
85°	547.6	541.7	518.1	478.1	416.9	333.8	238.5	142.5	57.7	8.8	1.2
87.5°	508.1	504.0	478.1	436.9	376.8	300.3	209.0	115.4	40.6	4.1	1.8
90°	474.6	465.7	442.8	399.2	339.1	263.2	177.8	92.4	27.1	2.4	2.4
92.5°	441.6	433.9	408.6	363.9	305.6	231.4	147.8	70.7	17.1	1.2	2.9
95°	407.4	399.2	374.5	333.3	271.4	199.0	121.3	51.8	9.4	1.2	2.9
97.5°	373.9	366.2	340.3	299.1	240.8	170.7	96.0	36.5	4.7	1.2	2.4
100°	342.7	333.8	310.3	269.1	210.2	142.5	74.2	23.6	2.9	1.2	2.4
102.5°	309.7	302.6	278.5	238.5	178.4	116.0	55.3	14.7	1.2	1.2	1.8
105°	280.3	271.4	247.9	206.7	151.9	91.3	38.9	8.8	1.2	1.2	1.8



TEST NUMBER: P551638

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	182.5	175.5	154.9	120.1	77.1	35.9	10.6	1.8	1.8	1.8	1.8
115°	152.5	141.9	123.6	93.0	57.1	23.6	5.3	1.8	1.8	1.8	1.8
117.5°	121.9	113.0	100.1	70.7	37.7	15.3	2.9	1.8	1.8	1.8	1.8
120°	95.4	87.1	72.4	48.9	25.3	8.8	1.2	1.8	1.8	1.8	1.8
122.5°	68.3	61.8	48.9	31.8	15.3	4.1	1.8	1.8	2.4	2.4	1.8
125°	45.3	41.8	32.4	19.4	9.4	1.8	1.8	1.8	2.4	2.4	1.8
127.5°	29.4	26.5	18.8	11.2	4.1	1.8	1.8	2.4	2.4	2.4	1.8
130°	16.5	14.7	11.2	6.5	1.8	1.8	1.8	2.4	2.4	2.4	1.8
132.5°	9.4	8.8	5.9	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	2.9	2.9	2.4
137.5°	0.6	0.6	1.2	1.2	1.8	1.8	2.4	2.9	2.9	2.9	2.4
140°	0.6	0.6	1.2	1.8	1.8	1.8	2.4	2.9	2.9	2.9	2.4
142.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.9	2.4	2.4
145°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.4	2.4	2.4
147.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.9	2.4	2.4
150°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	2.9	2.4	2.4	2.4
152.5°	0.6	1.2	1.2	1.8	2.4	2.4	2.4	2.9	2.4	2.4	2.4
155°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	2.9	2.4	2.4	2.9
157.5°	1.2	1.2	1.2	1.8	2.4	2.4	2.4	2.9	2.4	2.4	2.9
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	2.9	2.9	2.9	2.9
172.5°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.9	2.9	2.9
175°	1.2	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.9	2.9	2.9
177.5°	0.6	1.2	1.2	1.8	1.8	2.4	2.4	2.9	2.9	2.9	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



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CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	462.2	462.2	462.2
2.5°	439.8	431.6	429.2
5°	416.3	402.7	395.1
7.5°	392.7	374.5	365.6
10°	370.9	345.0	335.6
12.5°	345.0	315.0	300.3
15°	320.3	281.4	267.3
17.5°	292.6	249.1	232.6
20°	266.7	216.7	199.6
22.5°	237.3	184.9	166.0
25°	210.8	153.1	131.9
27.5°	181.3	120.7	102.4
30°	153.7	92.4	74.2
32.5°	127.2	67.7	51.2
35°	102.4	45.9	32.4
37.5°	78.9	28.3	16.5
40°	57.1	14.7	7.7
42.5°	38.3	7.1	4.1
45°	23.6	3.5	0.0
47.5°	13.5	0.0	0.0
50°	7.1	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	1.2	1.8
80°	1.2	2.4	2.9
82.5°	2.4	2.9	2.9
85°	2.4	2.9	3.5
87.5°	2.9	3.5	4.1
90°	3.5	4.1	4.1
92.5°	3.5	4.7	4.7
95°	4.1	4.7	5.3
97.5°	4.7	5.3	5.3
100°	4.1	5.3	5.9
102.5°	3.5	5.3	5.3
105°	2.9	4.1	4.7



TEST NUMBER: P551638

CATALOG NUMBER: FCC-X-2-LD4-2LO-40-UNV-93-97-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	2.4	2.9	2.9
115°	1.8	2.4	2.9
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°	247.3	240.2	216.7	177.8	124.2	69.5	25.9	4.7	1.2	1.8	1.8
110°	215.5	209.6	185.5	147.8	100.1	51.8	17.1	2.9	1.8	1.8	1.8





107.5°	2.4	3.5	4.1
110°	2.4	2.9	3.5



(END OF REPORT)