

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: P551438

Luminaire Tested: **FCC-X-2-LD4-2HI-50-UNV-93-87-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: P551438
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-LD4-2HI-50-UNV-93-87-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

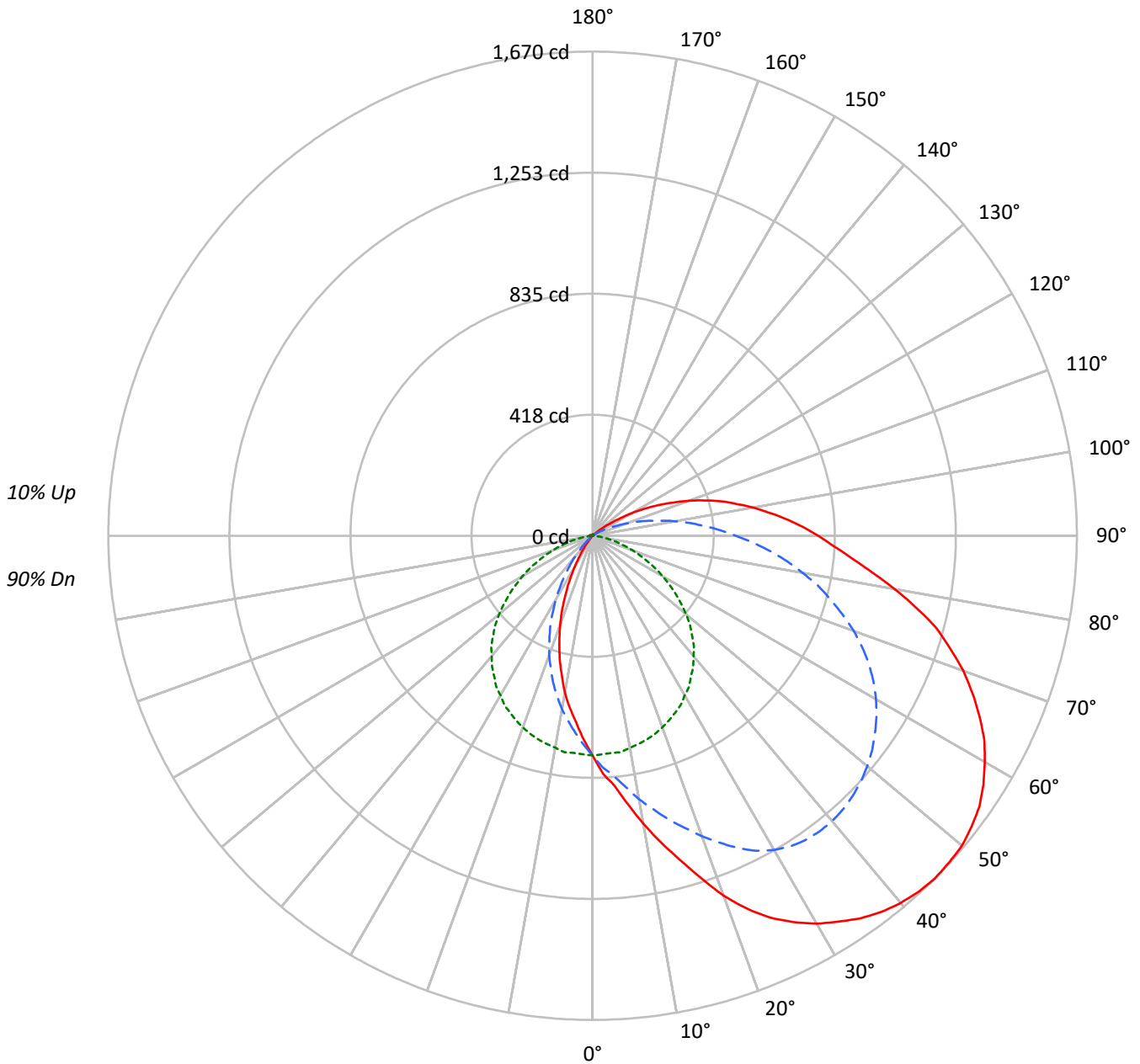
Lumens per Lamp: N/A
Luminaire Lumens: 3745.0 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 43.3
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: P551438

CATALOG NUMBER: FCC-X-2-LD4-2HI-50-UNV-93-87-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°	8154	8154	8154
5°	8950	8034	6703
10°	10129	7936	5524
15°	11351	7835	4305
20°	12803	7708	3170
25°	14007	7559	2082
30°	14901	7361	1173
35°	15676	7147	517
40°	16362	6885	124
45°	16952	6554	0
50°	17447	6118	0
55°	17824	5562	0
60°	18013	4918	0
65°	18087	4186	0
70°	18027	3413	0
75°	17798	2518	15
80°	17077	1542	78
85°	16505	737	107



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	1.9
10°-20°	217.3	5.8
20°-30°	351.8	9.4
30°-40°	452.0	12.1
40°-50°	511.6	13.7
50°-60°	530.0	14.2
60°-70°	499.9	13.3
70°-80°	418.9	11.2
80°-90°	303.7	8.1
90°-100°	199.6	5.3
100°-110°	115.3	3.1
110°-120°	50.9	1.4
120°-130°	13.8	0.4
130°-140°	3.2	0.1
140°-150°	2.1	0.1
150°-160°	1.5	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	641.7	17.1
0°-40°	1093.6	29.2
0°-60°	2135.3	57.0
0°-90°	3357.7	89.7
90°-120°	365.7	9.8
90°-150°	384.7	10.3
90°-180°	387.0	10.3
0°-180°	3745.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	758	758	758	758	758	
5°	865	830	752	682	648	87
15°	1155	1013	727	525	438	333
25°	1454	1188	674	346	216	672
35°	1611	1281	592	168	53	1010
45°	1670	1268	484	39	0	1290
55°	1628	1188	349	0	0	1454
65°	1472	1052	208	0	0	1456
75°	1226	849	89	1	1	1286
85°	897	615	14	4	6	766
90°	778	494	4	6	7	426
95°	668	386	2	7	9	524
105°	459	199	2	5	8	485
115°	250	66	3	3	5	250
125°	74	9	4	3	4	74
135°	4	3	5	4	3	7
145°	1	3	4	3	3	1
155°	2	4	4	3	1	1
165°	2	3	4	3	0	1
175°	2	3	5	3	1	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	757.5	757.5	757.5	757.5	757.5	757.5	757.5	757.5	757.5	757.5	757.5
2.5°	821.2	820.2	817.4	812.5	805.8	794.2	784.5	775.9	764.3	754.6	736.3
5°	864.6	859.8	856.0	851.1	835.7	825.1	807.7	788.4	770.1	751.7	715.1
7.5°	934.1	926.4	920.6	907.1	885.9	861.7	834.7	816.4	803.8	752.7	690.0
10°	1008.4	1001.7	990.1	966.0	939.9	905.2	866.6	823.1	784.5	742.1	667.8
12.5°	1081.8	1072.1	1055.7	1024.8	988.2	944.7	891.7	840.5	785.5	735.3	641.7
15°	1155.1	1144.5	1127.1	1089.5	1041.2	984.3	919.6	855.0	790.3	726.6	614.7
17.5°	1235.2	1220.7	1194.7	1152.2	1091.4	1021.0	944.7	866.6	788.4	716.0	585.8
20°	1321.1	1300.8	1272.8	1215.9	1144.5	1061.5	969.8	878.1	787.4	703.5	552.9
22.5°	1392.5	1372.2	1341.3	1282.5	1196.6	1095.3	991.1	885.9	783.6	689.0	522.1
25°	1454.3	1437.8	1404.1	1336.5	1245.8	1131.0	1011.3	891.7	777.8	673.6	489.3
27.5°	1502.5	1487.1	1449.4	1379.9	1287.3	1162.8	1026.8	894.6	770.1	658.1	455.5
30°	1545.0	1529.5	1484.2	1412.8	1315.3	1187.9	1042.2	895.5	760.4	635.0	418.8
32.5°	1577.8	1563.3	1517.0	1440.7	1334.6	1205.3	1050.9	894.6	747.9	618.6	379.2
35°	1610.6	1596.1	1542.1	1461.0	1349.1	1213.0	1057.6	889.7	732.4	591.5	341.6
37.5°	1635.7	1619.3	1564.3	1474.5	1355.8	1214.9	1056.7	883.0	716.0	569.3	304.0
40°	1653.0	1635.7	1576.8	1482.2	1357.8	1212.0	1049.0	871.4	696.7	541.4	264.4
42.5°	1664.6	1645.3	1582.6	1493.8	1353.9	1204.3	1037.4	856.9	675.5	517.2	226.8
45°	1670.4	1650.1	1583.6	1484.2	1347.1	1189.8	1020.0	838.6	652.3	484.4	189.1
47.5°	1667.5	1645.3	1578.7	1473.6	1334.6	1174.4	1000.7	816.4	624.4	455.5	153.4
50°	1662.7	1639.5	1568.1	1460.0	1317.2	1155.1	979.5	789.4	595.4	419.8	121.6
52.5°	1647.3	1624.1	1556.5	1440.7	1297.0	1132.9	950.5	761.4	564.5	385.0	92.6
55°	1628.0	1606.7	1536.3	1423.4	1270.9	1105.9	923.5	731.5	534.6	349.3	66.6
57.5°	1598.0	1578.7	1511.2	1395.4	1244.8	1076.0	893.6	698.7	497.0	313.6	46.3
60°	1561.4	1542.1	1476.4	1363.5	1214.9	1042.2	860.8	664.9	463.2	277.9	28.9
62.5°	1522.8	1504.4	1435.9	1324.0	1177.3	1006.5	825.1	631.1	427.5	245.1	17.4
65°	1471.6	1454.3	1392.5	1276.7	1135.8	967.9	785.5	590.6	390.8	208.4	9.6
67.5°	1417.6	1402.1	1339.4	1233.3	1087.6	925.4	745.0	551.0	352.2	176.6	4.8
70°	1359.7	1340.4	1282.5	1174.4	1038.3	877.2	700.6	510.5	315.6	145.7	0.0
72.5°	1292.1	1277.7	1221.7	1119.4	981.4	826.0	655.2	466.1	275.0	115.8	1.0
75°	1226.5	1208.2	1157.0	1060.5	925.4	772.0	605.1	424.6	235.5	88.8	1.0
77.5°	1141.6	1135.8	1087.6	993.9	872.4	719.9	550.0	374.4	197.8	63.7	1.0
80°	1056.7	1050.9	1013.2	927.4	810.6	658.1	498.9	327.1	161.2	42.5	1.0
82.5°	972.7	965.0	929.3	857.9	747.9	606.0	445.8	279.8	127.4	26.1	1.0
85°	897.4	887.8	849.2	783.6	683.2	547.2	390.8	233.5	94.6	14.5	1.9
87.5°	832.8	826.0	783.6	716.0	617.6	492.1	342.6	189.1	66.6	6.8	2.9
90°	777.8	763.3	725.7	654.3	555.8	431.4	291.4	151.5	44.4	3.9	3.9
92.5°	723.7	711.2	669.7	596.4	500.8	379.2	242.2	115.8	28.0	1.9	4.8
95°	667.8	654.3	613.7	546.2	444.9	326.2	198.8	84.9	15.4	1.9	4.8
97.5°	612.8	600.2	557.8	490.2	394.7	279.8	157.3	59.8	7.7	1.9	3.9
100°	561.6	547.2	508.6	441.0	344.5	233.5	121.6	38.6	4.8	1.9	3.9
102.5°	507.6	496.0	456.4	390.8	292.4	190.1	90.7	24.1	1.9	1.9	2.9
105°	459.3	444.9	406.3	338.7	249.0	149.6	63.7	14.5	1.9	1.9	2.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	299.1	287.6	253.8	196.9	126.4	58.9	17.4	2.9	2.9	2.9	2.9
115°	249.9	232.6	202.6	152.5	93.6	38.6	8.7	2.9	2.9	2.9	2.9
117.5°	199.8	185.3	164.0	115.8	61.8	25.1	4.8	2.9	2.9	2.9	2.9
120°	156.3	142.8	118.7	80.1	41.5	14.5	1.9	2.9	2.9	2.9	2.9
122.5°	111.9	101.3	80.1	52.1	25.1	6.8	2.9	2.9	3.9	3.9	2.9
125°	74.3	68.5	53.1	31.8	15.4	2.9	2.9	2.9	3.9	3.9	2.9
127.5°	48.2	43.4	30.9	18.3	6.8	2.9	2.9	3.9	3.9	3.9	2.9
130°	27.0	24.1	18.3	10.6	2.9	2.9	2.9	3.9	3.9	3.9	2.9
132.5°	15.4	14.5	9.6	1.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9
135°	3.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9
137.5°	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8	4.8	3.9
140°	1.0	1.0	1.9	2.9	2.9	2.9	3.9	4.8	4.8	4.8	3.9
142.5°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9	3.9
145°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	3.9	3.9	3.9
147.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	3.9	3.9
150°	1.0	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	3.9
152.5°	1.0	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	3.9
155°	1.9	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	4.8
157.5°	1.9	1.9	1.9	2.9	3.9	3.9	3.9	4.8	3.9	3.9	4.8
160°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
162.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
165°	1.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9
167.5°	1.9	1.9	1.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9
170°	1.9	1.9	1.9	2.9	2.9	2.9	3.9	4.8	4.8	4.8	4.8
172.5°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	4.8
175°	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	4.8
177.5°	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	4.8	4.8	3.9
180°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9



TEST NUMBER: P551438

CATALOG NUMBER: FCC-X-2-LD4-2HI-50-UNV-93-87-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	757.5	757.5	757.5
2.5°	720.9	707.3	703.5
5°	682.3	660.1	647.5
7.5°	643.7	613.7	599.3
10°	607.9	565.5	550.0
12.5°	565.5	516.3	492.1
15°	525.0	461.3	438.1
17.5°	479.6	408.2	381.2
20°	437.1	355.1	327.1
22.5°	388.9	303.0	272.1
25°	345.5	250.9	216.2
27.5°	297.2	197.8	167.9
30°	251.9	151.5	121.6
32.5°	208.4	111.0	84.0
35°	167.9	75.3	53.1
37.5°	129.3	46.3	27.0
40°	93.6	24.1	12.5
42.5°	62.7	11.6	6.8
45°	38.6	5.8	0.0
47.5°	22.2	0.0	0.0
50°	11.6	0.0	0.0
52.5°	4.8	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°	1.0	1.0	1.0
77.5°	1.0	1.9	2.9
80°	1.9	3.9	4.8
82.5°	3.9	4.8	4.8
85°	3.9	4.8	5.8
87.5°	4.8	5.8	6.8
90°	5.8	6.8	6.8
92.5°	5.8	7.7	7.7
95°	6.8	7.7	8.7
97.5°	7.7	8.7	8.7
100°	6.8	8.7	9.6
102.5°	5.8	8.7	8.7
105°	4.8	6.8	7.7



TEST NUMBER: P551438

CATALOG NUMBER: FCC-X-2-LD4-2HI-50-UNV-93-87-ED1D

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.9	4.8	4.8
115°	2.9	3.9	4.8
117.5°	2.9	3.9	3.9
120°	2.9	2.9	3.9
122.5°	2.9	2.9	3.9
125°	2.9	2.9	3.9
127.5°	3.9	2.9	2.9
130°	2.9	2.9	2.9
132.5°	3.9	2.9	2.9
135°	3.9	2.9	2.9
137.5°	3.9	2.9	2.9
140°	3.9	2.9	2.9
142.5°	3.9	2.9	2.9
145°	2.9	2.9	2.9
147.5°	2.9	2.9	2.9
150°	2.9	2.9	1.9
152.5°	2.9	1.9	1.9
155°	2.9	1.9	1.0
157.5°	3.9	1.9	1.0
160°	2.9	1.9	1.0
162.5°	2.9	1.9	1.0
165°	2.9	1.9	0.0
167.5°	2.9	1.9	1.0
170°	2.9	1.9	1.0
172.5°	2.9	1.9	1.0
175°	2.9	1.0	1.0
177.5°	2.9	1.0	1.0
180°	2.9	2.9	2.9



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	405.3	393.7	355.1	291.4	203.6	113.9	42.5	7.7	1.9	2.9	2.9
110°	353.2	343.5	304.0	242.2	164.0	84.9	28.0	4.8	2.9	2.9	2.9





107.5°	3.9	5.8	6.8
110°	3.9	4.8	5.8



(END OF REPORT)