

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: P551435

Luminaire Tested: **FCC-X-2-LD4-2HI-50-UNV-93-86-ED1D-90**

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: P551435
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-93-86-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

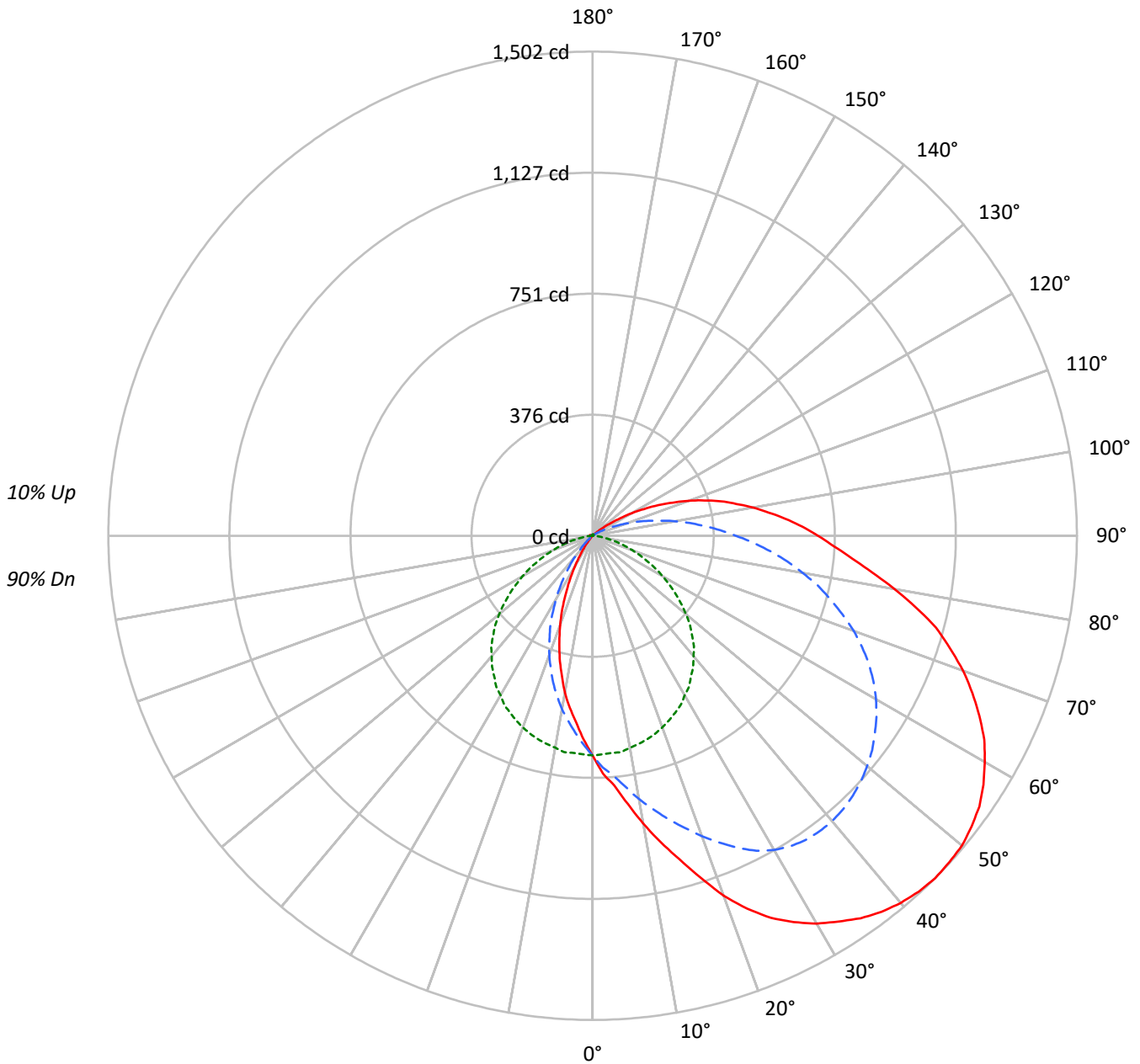
Lumens per Lamp: N/A
Luminaire Lumens: 3368.0 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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

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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°	7333	7333	7333
5°	8050	7226	6028
10°	9109	7137	4969
15°	10208	7046	3872
20°	11514	6932	2851
25°	12597	6799	1872
30°	13401	6619	1054
35°	14097	6428	464
40°	14715	6192	112
45°	15246	5895	0
50°	15690	5502	0
55°	16030	5003	0
60°	16200	4422	0
65°	16267	3766	0
70°	16212	3069	0
75°	16006	2263	13
80°	15358	1386	69
85°	14844	661	96



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	1.9
10°-20°	195.4	5.8
20°-30°	316.4	9.4
30°-40°	406.5	12.1
40°-50°	460.1	13.7
50°-60°	476.7	14.2
60°-70°	449.6	13.3
70°-80°	376.7	11.2
80°-90°	273.1	8.1
90°-100°	179.5	5.3
100°-110°	103.7	3.1
110°-120°	45.7	1.4
120°-130°	12.4	0.4
130°-140°	2.8	0.1
140°-150°	1.9	0.1
150°-160°	1.3	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
0°-30°	577.1	17.1
0°-40°	983.5	29.2
0°-60°	1920.3	57.0
0°-90°	3019.7	89.7
90°-120°	328.9	9.8
90°-150°	346.0	10.3
90°-180°	348.0	10.3
0°-180°	3368.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	681	681	681	681	681	
5°	778	747	676	614	582	78
15°	1039	911	654	472	394	300
25°	1308	1069	606	311	194	604
35°	1448	1152	532	151	48	908
45°	1502	1141	436	35	0	1160
55°	1464	1069	314	0	0	1307
65°	1324	946	188	0	0	1309
75°	1103	763	80	1	1	1157
85°	807	553	13	4	5	689
90°	700	444	4	5	6	384
95°	601	347	2	6	8	471
105°	413	179	2	4	7	436
115°	225	59	3	3	4	225
125°	67	8	4	3	4	67
135°	4	3	4	4	3	6
145°	1	3	4	3	3	1
155°	2	4	4	3	1	1
165°	2	3	4	3	0	0
175°	2	3	4	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°	681.3	681.3	681.3	681.3	681.3	681.3	681.3	681.3	681.3	681.3	681.3
2.5°	738.5	737.7	735.1	730.7	724.7	714.2	705.6	697.8	687.3	678.7	662.2
5°	777.6	773.3	769.8	765.4	751.6	742.0	726.4	709.0	692.5	676.1	643.1
7.5°	840.1	833.1	827.9	815.8	796.7	775.0	750.7	734.2	722.9	676.9	620.5
10°	906.9	900.8	890.4	868.7	845.3	814.0	779.3	740.3	705.6	667.4	600.6
12.5°	972.9	964.2	949.4	921.7	888.7	849.6	801.9	755.9	706.4	661.3	577.1
15°	1038.8	1029.3	1013.7	979.8	936.4	885.2	827.1	768.9	710.8	653.5	552.8
17.5°	1110.9	1097.8	1074.4	1036.2	981.5	918.2	849.6	779.3	709.0	643.9	526.8
20°	1188.1	1169.9	1144.7	1093.5	1029.3	954.6	872.2	789.7	708.2	632.7	497.3
22.5°	1252.3	1234.1	1206.3	1153.4	1076.1	985.0	891.3	796.7	704.7	619.6	469.5
25°	1307.9	1293.1	1262.7	1202.0	1120.4	1017.1	909.5	801.9	699.5	605.8	440.0
27.5°	1351.2	1337.4	1303.5	1241.0	1157.7	1045.8	923.4	804.5	692.5	591.9	409.6
30°	1389.4	1375.5	1334.8	1270.5	1182.9	1068.3	937.3	805.4	683.9	571.0	376.6
32.5°	1418.9	1405.9	1364.3	1295.7	1200.2	1083.9	945.1	804.5	672.6	556.3	341.1
35°	1448.4	1435.4	1386.8	1313.9	1213.3	1090.9	951.2	800.2	658.7	532.0	307.2
37.5°	1471.0	1456.3	1406.8	1326.1	1219.3	1092.6	950.3	794.1	643.9	512.0	273.4
40°	1486.6	1471.0	1418.1	1333.0	1221.1	1090.0	943.4	783.7	626.6	486.9	237.8
42.5°	1497.0	1479.7	1423.3	1343.4	1217.6	1083.1	932.9	770.7	607.5	465.2	203.9
45°	1502.3	1484.0	1424.1	1334.8	1211.5	1070.1	917.3	754.2	586.7	435.7	170.1
47.5°	1499.7	1479.7	1419.8	1325.2	1200.2	1056.2	900.0	734.2	561.5	409.6	138.0
50°	1495.3	1474.5	1410.3	1313.1	1184.6	1038.8	880.9	709.9	535.5	377.5	109.3
52.5°	1481.4	1460.6	1399.8	1295.7	1166.4	1018.9	854.8	684.7	507.7	346.3	83.3
55°	1464.1	1445.0	1381.6	1280.1	1143.0	994.6	830.5	657.8	480.8	314.2	59.9
57.5°	1437.2	1419.8	1359.1	1254.9	1119.5	967.7	803.6	628.3	446.9	282.1	41.7
60°	1404.2	1386.8	1327.8	1226.3	1092.6	937.3	774.1	598.0	416.6	249.9	26.0
62.5°	1369.5	1353.0	1291.4	1190.7	1058.8	905.2	742.0	567.6	384.5	220.4	15.6
65°	1323.5	1307.9	1252.3	1148.2	1021.5	870.5	706.4	531.1	351.5	187.5	8.7
67.5°	1274.9	1261.0	1204.6	1109.1	978.1	832.3	670.0	495.5	316.8	158.8	4.3
70°	1222.8	1205.4	1153.4	1056.2	933.8	788.9	630.1	459.1	283.8	131.0	0.0
72.5°	1162.1	1149.0	1098.7	1006.7	882.6	742.9	589.3	419.2	247.3	104.1	0.9
75°	1103.0	1086.6	1040.6	953.8	832.3	694.3	544.1	381.9	211.8	79.8	0.9
77.5°	1026.7	1021.5	978.1	893.9	784.5	647.4	494.7	336.7	177.9	57.3	0.9
80°	950.3	945.1	911.2	834.0	729.0	591.9	448.7	294.2	144.9	38.2	0.9
82.5°	874.8	867.9	835.7	771.5	672.6	545.0	400.9	251.7	114.6	23.4	0.9
85°	807.1	798.4	763.7	704.7	614.4	492.1	351.5	210.0	85.0	13.0	1.7
87.5°	749.0	742.9	704.7	643.9	555.4	442.6	308.1	170.1	59.9	6.1	2.6
90°	699.5	686.5	652.6	588.4	499.9	387.9	262.1	136.3	39.9	3.5	3.5
92.5°	650.9	639.6	602.3	536.3	450.4	341.1	217.8	104.1	25.2	1.7	4.3
95°	600.6	588.4	552.0	491.2	400.1	293.3	178.8	76.4	13.9	1.7	4.3
97.5°	551.1	539.8	501.6	440.9	355.0	251.7	141.5	53.8	6.9	1.7	3.5
100°	505.1	492.1	457.4	396.6	309.8	210.0	109.3	34.7	4.3	1.7	3.5
102.5°	456.5	446.1	410.5	351.5	263.0	171.0	81.6	21.7	1.7	1.7	2.6
105°	413.1	400.1	365.4	304.6	223.9	134.5	57.3	13.0	1.7	1.7	2.6



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	269.0	258.6	228.2	177.0	113.7	52.9	15.6	2.6	2.6	2.6	2.6
115°	224.8	209.2	182.2	137.1	84.2	34.7	7.8	2.6	2.6	2.6	2.6
117.5°	179.6	166.6	147.5	104.1	55.5	22.6	4.3	2.6	2.6	2.6	2.6
120°	140.6	128.4	106.7	72.0	37.3	13.0	1.7	2.6	2.6	2.6	2.6
122.5°	100.7	91.1	72.0	46.9	22.6	6.1	2.6	2.6	3.5	3.5	2.6
125°	66.8	61.6	47.7	28.6	13.9	2.6	2.6	2.6	3.5	3.5	2.6
127.5°	43.4	39.1	27.8	16.5	6.1	2.6	2.6	3.5	3.5	3.5	2.6
130°	24.3	21.7	16.5	9.5	2.6	2.6	2.6	3.5	3.5	3.5	2.6
132.5°	13.9	13.0	8.7	1.7	2.6	2.6	2.6	3.5	3.5	3.5	3.5
135°	3.5	1.7	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	3.5
137.5°	0.9	0.9	1.7	1.7	2.6	2.6	3.5	4.3	4.3	4.3	3.5
140°	0.9	0.9	1.7	2.6	2.6	2.6	3.5	4.3	4.3	4.3	3.5
142.5°	0.9	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	3.5	3.5
145°	0.9	1.7	1.7	2.6	2.6	3.5	3.5	4.3	3.5	3.5	3.5
147.5°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	3.5	3.5
150°	0.9	1.7	1.7	2.6	3.5	3.5	3.5	4.3	3.5	3.5	3.5
152.5°	0.9	1.7	1.7	2.6	3.5	3.5	3.5	4.3	3.5	3.5	3.5
155°	1.7	1.7	1.7	2.6	3.5	3.5	3.5	4.3	3.5	3.5	4.3
157.5°	1.7	1.7	1.7	2.6	3.5	3.5	3.5	4.3	3.5	3.5	4.3
160°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	3.5	3.5	3.5	3.5
162.5°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	3.5	3.5	3.5	3.5
165°	1.7	1.7	1.7	1.7	2.6	2.6	3.5	3.5	3.5	3.5	3.5
167.5°	1.7	1.7	1.7	2.6	2.6	2.6	3.5	3.5	3.5	3.5	3.5
170°	1.7	1.7	1.7	2.6	2.6	2.6	3.5	4.3	4.3	4.3	4.3
172.5°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	4.3	4.3
175°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	4.3	4.3
177.5°	0.9	1.7	1.7	2.6	2.6	3.5	3.5	4.3	4.3	4.3	3.5
180°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	681.3	681.3	681.3
2.5°	648.3	636.1	632.7
5°	613.6	593.6	582.3
7.5°	578.9	552.0	538.9
10°	546.7	508.6	494.7
12.5°	508.6	464.3	442.6
15°	472.1	414.8	394.0
17.5°	431.3	367.1	342.8
20°	393.1	319.4	294.2
22.5°	349.7	272.5	244.7
25°	310.7	225.6	194.4
27.5°	267.3	177.9	151.0
30°	226.5	136.3	109.3
32.5°	187.5	99.8	75.5
35°	151.0	67.7	47.7
37.5°	116.3	41.7	24.3
40°	84.2	21.7	11.3
42.5°	56.4	10.4	6.1
45°	34.7	5.2	0.0
47.5°	20.0	0.0	0.0
50°	10.4	0.0	0.0
52.5°	4.3	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°	0.9	0.9	0.9
77.5°	0.9	1.7	2.6
80°	1.7	3.5	4.3
82.5°	3.5	4.3	4.3
85°	3.5	4.3	5.2
87.5°	4.3	5.2	6.1
90°	5.2	6.1	6.1
92.5°	5.2	6.9	6.9
95°	6.1	6.9	7.8
97.5°	6.9	7.8	7.8
100°	6.1	7.8	8.7
102.5°	5.2	7.8	7.8
105°	4.3	6.1	6.9



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.5	4.3	4.3
115°	2.6	3.5	4.3
117.5°	2.6	3.5	3.5
120°	2.6	2.6	3.5
122.5°	2.6	2.6	3.5
125°	2.6	2.6	3.5
127.5°	3.5	2.6	2.6
130°	2.6	2.6	2.6
132.5°	3.5	2.6	2.6
135°	3.5	2.6	2.6
137.5°	3.5	2.6	2.6
140°	3.5	2.6	2.6
142.5°	3.5	2.6	2.6
145°	2.6	2.6	2.6
147.5°	2.6	2.6	2.6
150°	2.6	2.6	1.7
152.5°	2.6	1.7	1.7
155°	2.6	1.7	0.9
157.5°	3.5	1.7	0.9
160°	2.6	1.7	0.9
162.5°	2.6	1.7	0.9
165°	2.6	1.7	0.0
167.5°	2.6	1.7	0.9
170°	2.6	1.7	0.9
172.5°	2.6	1.7	0.9
175°	2.6	0.9	0.9
177.5°	2.6	0.9	0.9
180°	2.6	2.6	2.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	364.5	354.1	319.4	262.1	183.1	102.4	38.2	6.9	1.7	2.6	2.6
110°	317.6	309.0	273.4	217.8	147.5	76.4	25.2	4.3	2.6	2.6	2.6





107.5°	3.5	5.2	6.1
110°	3.5	4.3	5.2



(END OF REPORT)