

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: P551351

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-82-84-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: P551351
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-40-UNV-82-84-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

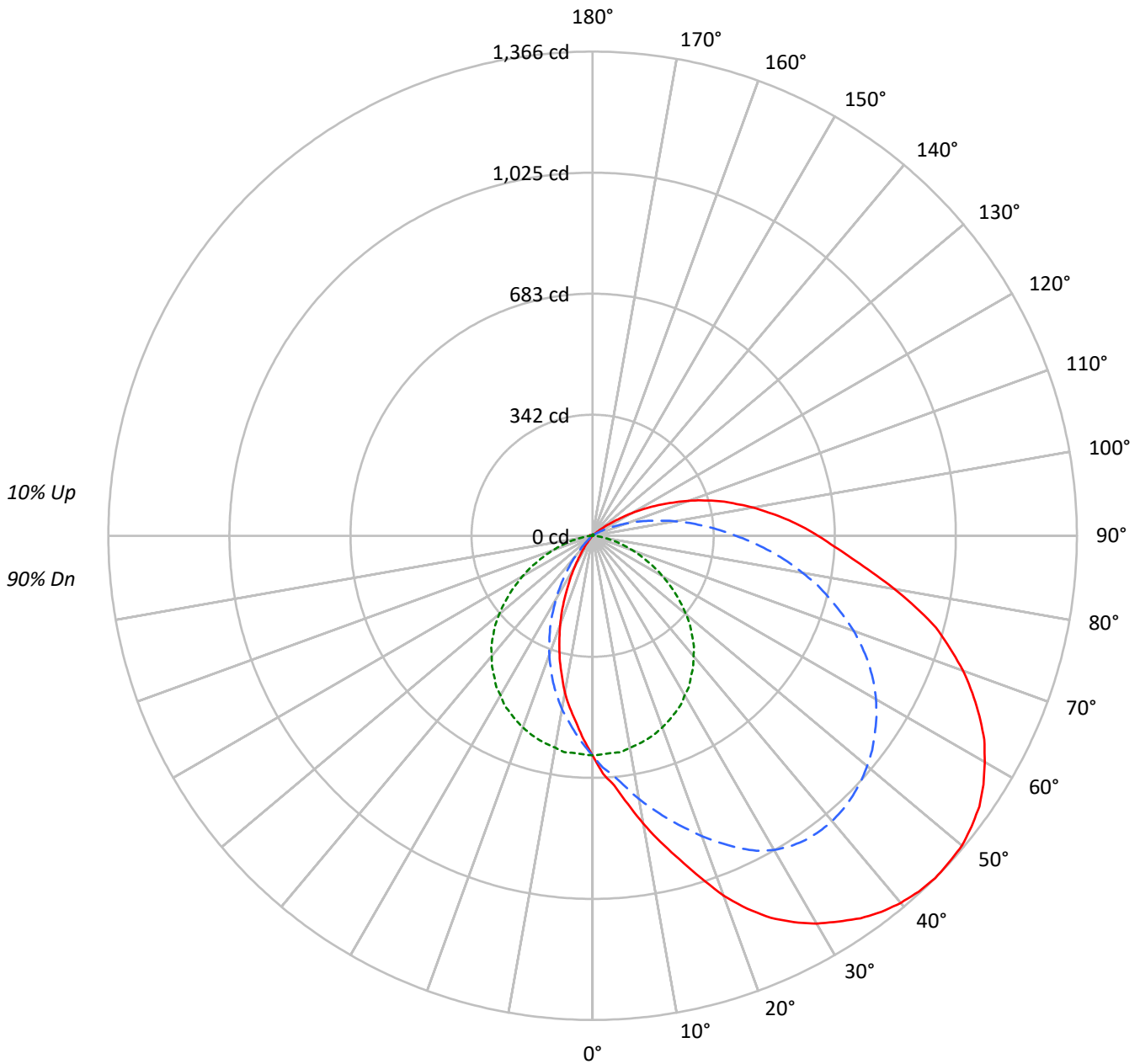
Lumens per Lamp: N/A
Luminaire Lumens: 3063.1 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	6669	6669	6669
5°	7321	6571	5483
10°	8285	6490	4519
15°	9284	6408	3521
20°	10471	6304	2593
25°	11455	6182	1703
30°	12187	6020	959
35°	12821	5846	422
40°	13383	5631	102
45°	13865	5361	0
50°	14270	5003	0
55°	14578	4549	0
60°	14732	4022	0
65°	14793	3425	0
70°	14744	2792	0
75°	14557	2059	12
80°	13966	1259	63
85°	13500	600	86



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	1.9
10°-20°	177.7	5.8
20°-30°	287.8	9.4
30°-40°	369.7	12.1
40°-50°	418.4	13.7
50°-60°	433.5	14.2
60°-70°	408.8	13.3
70°-80°	342.6	11.2
80°-90°	248.4	8.1
90°-100°	163.2	5.3
100°-110°	94.3	3.1
110°-120°	41.6	1.4
120°-130°	11.3	0.4
130°-140°	2.6	0.1
140°-150°	1.7	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	524.8	17.1
0°-40°	894.5	29.2
0°-60°	1746.4	57.0
0°-90°	2746.3	89.7
90°-120°	299.1	9.8
90°-150°	314.7	10.3
90°-180°	317.0	10.3
0°-180°	3063.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	620	620	620	620	620	
5°	707	679	615	558	530	71
15°	945	828	594	429	358	272
25°	1189	972	551	283	177	550
35°	1317	1048	484	137	43	826
45°	1366	1038	396	32	0	1055
55°	1332	972	286	0	0	1189
65°	1204	860	170	0	0	1191
75°	1003	694	73	1	1	1052
85°	734	503	12	3	5	627
90°	636	404	3	5	6	349
95°	546	315	2	6	7	429
105°	376	163	2	4	6	396
115°	204	54	2	2	4	205
125°	61	8	3	2	3	61
135°	3	2	4	3	2	6
145°	1	3	3	2	2	1
155°	2	3	3	2	1	1
165°	2	2	3	2	0	0
175°	2	3	4	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°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	671.7	670.9	668.5	664.6	659.0	649.6	641.7	634.6	625.1	617.2	602.2
5°	707.2	703.2	700.1	696.1	683.5	674.8	660.6	644.8	629.8	614.8	584.8
7.5°	764.0	757.7	753.0	741.9	724.5	704.8	682.7	667.7	657.5	615.6	564.3
10°	824.8	819.3	809.8	790.1	768.7	740.3	708.8	673.2	641.7	606.9	546.2
12.5°	884.8	876.9	863.5	838.2	808.2	772.7	729.3	687.4	642.5	601.4	524.9
15°	944.7	936.1	921.9	891.1	851.6	805.0	752.2	699.3	646.4	594.3	502.8
17.5°	1010.3	998.4	977.1	942.4	892.7	835.0	772.7	708.8	644.8	585.6	479.1
20°	1080.5	1063.9	1041.0	994.5	936.1	868.2	793.2	718.2	644.0	575.4	452.2
22.5°	1138.9	1122.3	1097.1	1048.9	978.7	895.8	810.6	724.5	640.9	563.5	427.0
25°	1189.4	1176.0	1148.4	1093.1	1018.9	925.0	827.1	729.3	636.1	550.9	400.2
27.5°	1228.9	1216.3	1185.5	1128.6	1052.9	951.1	839.8	731.6	629.8	538.3	372.5
30°	1263.6	1251.0	1213.9	1155.5	1075.8	971.6	852.4	732.4	621.9	519.3	342.5
32.5°	1290.4	1278.6	1240.7	1178.4	1091.6	985.8	859.5	731.6	611.7	505.9	310.2
35°	1317.3	1305.4	1261.2	1194.9	1103.4	992.1	865.0	727.7	599.1	483.8	279.4
37.5°	1337.8	1324.4	1279.4	1206.0	1108.9	993.7	864.2	722.2	585.6	465.7	248.6
40°	1352.0	1337.8	1289.7	1212.3	1110.5	991.3	857.9	712.7	569.8	442.8	216.3
42.5°	1361.5	1345.7	1294.4	1221.8	1107.3	985.0	848.5	700.9	552.5	423.0	185.5
45°	1366.2	1349.6	1295.2	1213.9	1101.8	973.2	834.3	685.9	533.5	396.2	154.7
47.5°	1363.8	1345.7	1291.2	1205.2	1091.6	960.5	818.5	667.7	510.7	372.5	125.5
50°	1359.9	1341.0	1282.6	1194.2	1077.3	944.7	801.1	645.6	487.0	343.3	99.4
52.5°	1347.3	1328.3	1273.1	1178.4	1060.8	926.6	777.4	622.7	461.7	314.9	75.8
55°	1331.5	1314.1	1256.5	1164.2	1039.5	904.5	755.3	598.3	437.3	285.7	54.5
57.5°	1307.0	1291.2	1236.0	1141.3	1018.1	880.0	730.9	571.4	406.5	256.5	37.9
60°	1277.0	1261.2	1207.6	1115.2	993.7	852.4	704.0	543.8	378.8	227.3	23.7
62.5°	1245.5	1230.5	1174.4	1082.9	962.9	823.2	674.8	516.2	349.6	200.5	14.2
65°	1203.6	1189.4	1138.9	1044.2	929.0	791.6	642.5	483.0	319.7	170.5	7.9
67.5°	1159.4	1146.8	1095.5	1008.7	889.5	756.9	609.3	450.7	288.1	144.4	3.9
70°	1112.1	1096.3	1048.9	960.5	849.2	717.4	573.0	417.5	258.1	119.2	0.0
72.5°	1056.8	1045.0	999.2	915.5	802.7	675.6	535.9	381.2	224.9	94.7	0.8
75°	1003.2	988.2	946.3	867.4	756.9	631.4	494.9	347.3	192.6	72.6	0.8
77.5°	933.7	929.0	889.5	812.9	713.5	588.8	449.9	306.2	161.8	52.1	0.8
80°	864.2	859.5	828.7	758.5	663.0	538.3	408.0	267.6	131.8	34.7	0.8
82.5°	795.6	789.3	760.1	701.7	611.7	495.7	364.6	228.9	104.2	21.3	0.8
85°	734.0	726.1	694.6	640.9	558.8	447.5	319.7	191.0	77.3	11.8	1.6
87.5°	681.1	675.6	640.9	585.6	505.1	402.5	280.2	154.7	54.5	5.5	2.4
90°	636.1	624.3	593.5	535.1	454.6	352.8	238.4	123.9	36.3	3.2	3.2
92.5°	591.9	581.7	547.7	487.8	409.6	310.2	198.1	94.7	22.9	1.6	3.9
95°	546.2	535.1	502.0	446.7	363.9	266.8	162.6	69.5	12.6	1.6	3.9
97.5°	501.2	490.9	456.2	400.9	322.8	228.9	128.6	48.9	6.3	1.6	3.2
100°	459.4	447.5	415.9	360.7	281.8	191.0	99.4	31.6	3.9	1.6	3.2
102.5°	415.2	405.7	373.3	319.7	239.1	155.5	74.2	19.7	1.6	1.6	2.4
105°	375.7	363.9	332.3	277.0	203.6	122.3	52.1	11.8	1.6	1.6	2.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	244.7	235.2	207.6	161.0	103.4	48.1	14.2	2.4	2.4	2.4	2.4
115°	204.4	190.2	165.7	124.7	76.6	31.6	7.1	2.4	2.4	2.4	2.4
117.5°	163.4	151.5	134.2	94.7	50.5	20.5	3.9	2.4	2.4	2.4	2.4
120°	127.9	116.8	97.1	65.5	33.9	11.8	1.6	2.4	2.4	2.4	2.4
122.5°	91.6	82.9	65.5	42.6	20.5	5.5	2.4	2.4	3.2	3.2	2.4
125°	60.8	56.0	43.4	26.0	12.6	2.4	2.4	2.4	3.2	3.2	2.4
127.5°	39.5	35.5	25.3	15.0	5.5	2.4	2.4	3.2	3.2	3.2	2.4
130°	22.1	19.7	15.0	8.7	2.4	2.4	2.4	3.2	3.2	3.2	2.4
132.5°	12.6	11.8	7.9	1.6	2.4	2.4	2.4	3.2	3.2	3.2	3.2
135°	3.2	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.2
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.2	3.9	3.9	3.9	3.2
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.2	3.9	3.9	3.9	3.2
142.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.2	3.2
145°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.2	3.2	3.2
147.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.2	3.2
150°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	3.9	3.2	3.2	3.2
152.5°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	3.9	3.2	3.2	3.2
155°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	3.9	3.2	3.2	3.9
157.5°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	3.9	3.2	3.2	3.9
160°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2	3.2
162.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2	3.2
165°	1.6	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.2	3.2	3.2
167.5°	1.6	1.6	1.6	2.4	2.4	2.4	3.2	3.2	3.2	3.2	3.2
170°	1.6	1.6	1.6	2.4	2.4	2.4	3.2	3.9	3.9	3.9	3.9
172.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.9	3.9
175°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.9	3.9
177.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	3.9	3.9	3.9	3.2
180°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	619.6	619.6	619.6
2.5°	589.6	578.5	575.4
5°	558.0	539.9	529.6
7.5°	526.4	502.0	490.1
10°	497.2	462.5	449.9
12.5°	462.5	422.3	402.5
15°	429.4	377.3	358.3
17.5°	392.3	333.9	311.8
20°	357.5	290.4	267.6
22.5°	318.1	247.8	222.6
25°	282.6	205.2	176.8
27.5°	243.1	161.8	137.3
30°	206.0	123.9	99.4
32.5°	170.5	90.8	68.7
35°	137.3	61.6	43.4
37.5°	105.8	37.9	22.1
40°	76.6	19.7	10.3
42.5°	51.3	9.5	5.5
45°	31.6	4.7	0.0
47.5°	18.2	0.0	0.0
50°	9.5	0.0	0.0
52.5°	3.9	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°	0.8	0.8	0.8
77.5°	0.8	1.6	2.4
80°	1.6	3.2	3.9
82.5°	3.2	3.9	3.9
85°	3.2	3.9	4.7
87.5°	3.9	4.7	5.5
90°	4.7	5.5	5.5
92.5°	4.7	6.3	6.3
95°	5.5	6.3	7.1
97.5°	6.3	7.1	7.1
100°	5.5	7.1	7.9
102.5°	4.7	7.1	7.1
105°	3.9	5.5	6.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.2	3.9	3.9
115°	2.4	3.2	3.9
117.5°	2.4	3.2	3.2
120°	2.4	2.4	3.2
122.5°	2.4	2.4	3.2
125°	2.4	2.4	3.2
127.5°	3.2	2.4	2.4
130°	2.4	2.4	2.4
132.5°	3.2	2.4	2.4
135°	3.2	2.4	2.4
137.5°	3.2	2.4	2.4
140°	3.2	2.4	2.4
142.5°	3.2	2.4	2.4
145°	2.4	2.4	2.4
147.5°	2.4	2.4	2.4
150°	2.4	2.4	1.6
152.5°	2.4	1.6	1.6
155°	2.4	1.6	0.8
157.5°	3.2	1.6	0.8
160°	2.4	1.6	0.8
162.5°	2.4	1.6	0.8
165°	2.4	1.6	0.0
167.5°	2.4	1.6	0.8
170°	2.4	1.6	0.8
172.5°	2.4	1.6	0.8
175°	2.4	0.8	0.8
177.5°	2.4	0.8	0.8
180°	2.4	2.4	2.4



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	331.5	322.0	290.4	238.4	166.5	93.1	34.7	6.3	1.6	2.4	2.4
110°	288.9	281.0	248.6	198.1	134.2	69.5	22.9	3.9	2.4	2.4	2.4





107.5°	3.2	4.7	5.5
110°	3.2	3.9	4.7



(END OF REPORT)