

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: P551405

Luminaire Tested: **FCC-X-2-LD4-2HI-50-UNV-81-87-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: P551405
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-81-87-ED1D-90
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 5000K, AND 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

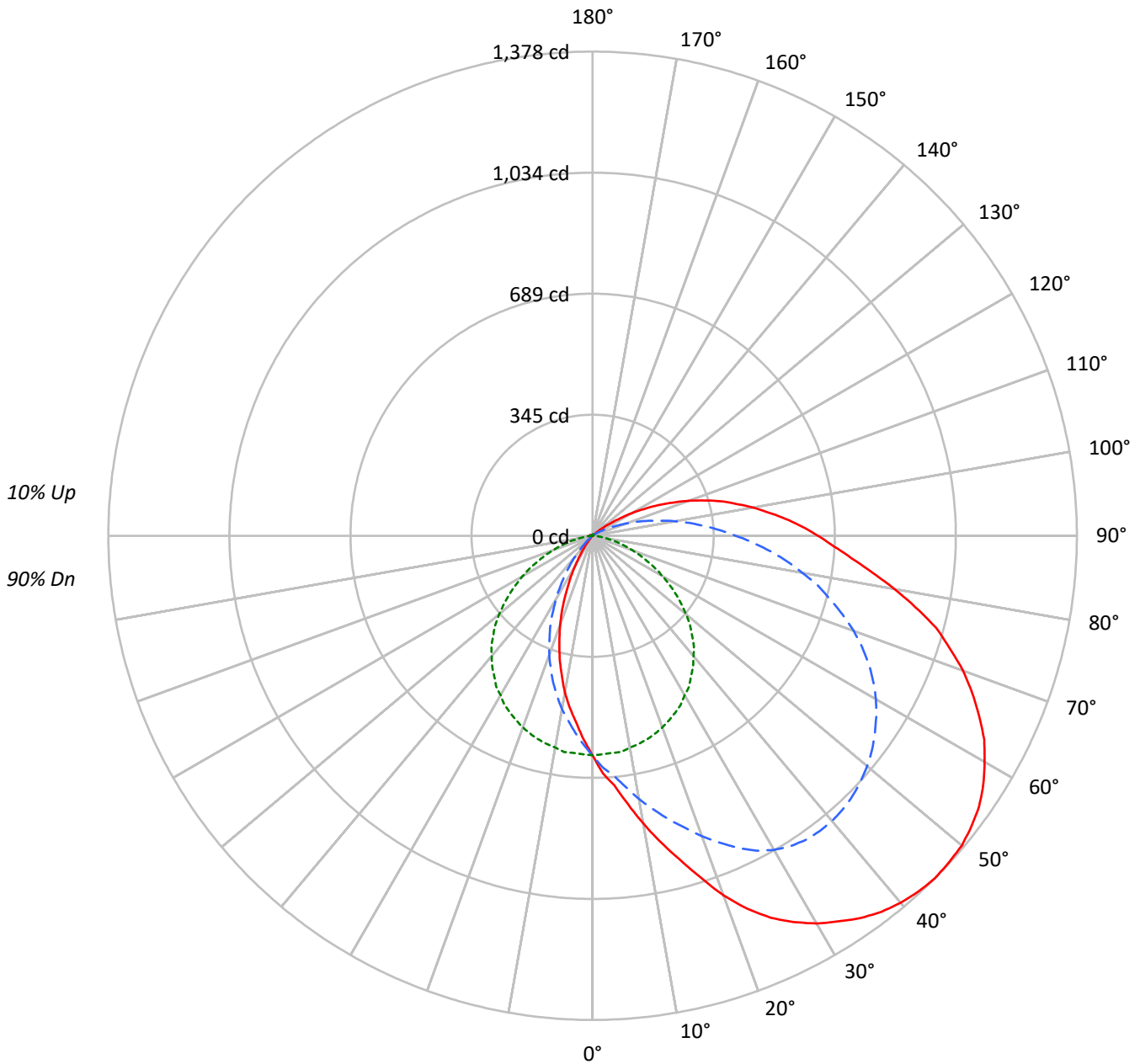
Lumens per Lamp: N/A
Luminaire Lumens: 3089.1 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	6725	6725	6725
5°	7383	6628	5529
10°	8355	6546	4557
15°	9363	6463	3551
20°	10560	6358	2615
25°	11553	6235	1717
30°	12290	6071	967
35°	12930	5895	426
40°	13496	5678	102
45°	13982	5407	0
50°	14390	5046	0
55°	14701	4588	0
60°	14858	4056	0
65°	14919	3453	0
70°	14869	2816	0
75°	14681	2076	12
80°	14086	1270	65
85°	13614	605	88



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	1.9
10°-20°	179.2	5.8
20°-30°	290.2	9.4
30°-40°	372.8	12.1
40°-50°	422.0	13.7
50°-60°	437.2	14.2
60°-70°	412.3	13.3
70°-80°	345.5	11.2
80°-90°	250.5	8.1
90°-100°	164.6	5.3
100°-110°	95.1	3.1
110°-120°	42.0	1.4
120°-130°	11.4	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°	0.3	0.0
0°-30°	529.3	17.1
0°-40°	902.1	29.2
0°-60°	1761.2	57.0
0°-90°	2769.6	89.7
90°-120°	301.7	9.8
90°-150°	317.4	10.3
90°-180°	320.0	10.4
0°-180°	3089.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	625	625	625	625	625	
5°	713	685	620	563	534	72
15°	953	835	599	433	361	275
25°	1200	980	556	285	178	554
35°	1328	1057	488	138	44	833
45°	1378	1046	400	32	0	1064
55°	1343	980	288	0	0	1199
65°	1214	868	172	0	0	1201
75°	1012	700	73	1	1	1061
85°	740	507	12	3	5	632
90°	642	407	3	5	6	352
95°	551	318	2	6	7	432
105°	379	164	2	4	6	400
115°	206	54	2	2	4	206
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°	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8	624.8
2.5°	677.4	676.6	674.2	670.2	664.6	655.1	647.1	640.0	630.4	622.4	607.3
5°	713.2	709.2	706.0	702.0	689.3	680.5	666.2	650.3	635.2	620.1	589.8
7.5°	770.5	764.1	759.3	748.2	730.7	710.8	688.5	673.4	663.0	620.9	569.1
10°	831.8	826.2	816.7	796.8	775.3	746.6	714.8	679.0	647.1	612.1	550.8
12.5°	892.3	884.3	870.8	845.3	815.1	779.2	735.5	693.3	647.9	606.5	529.3
15°	952.8	944.0	929.7	898.6	858.8	811.9	758.6	705.2	651.9	599.4	507.0
17.5°	1018.8	1006.9	985.4	950.4	900.2	842.1	779.2	714.8	650.3	590.6	483.1
20°	1089.7	1073.0	1049.9	1002.9	944.0	875.6	799.9	724.3	649.5	580.3	456.1
22.5°	1148.6	1131.9	1106.4	1057.8	987.0	903.4	817.5	730.7	646.3	568.3	430.6
25°	1199.5	1186.0	1158.1	1102.4	1027.6	932.9	834.2	735.5	641.5	555.6	403.6
27.5°	1239.3	1226.6	1195.5	1138.2	1061.8	959.1	846.9	737.9	635.2	542.8	375.7
30°	1274.3	1261.6	1224.2	1165.3	1084.9	979.8	859.6	738.7	627.2	523.7	345.4
32.5°	1301.4	1289.5	1251.3	1188.4	1100.8	994.2	866.8	737.9	616.9	510.2	312.8
35°	1328.5	1316.5	1271.9	1205.1	1112.8	1000.5	872.4	733.9	604.1	487.9	281.8
37.5°	1349.2	1335.6	1290.3	1216.2	1118.3	1002.1	871.6	728.3	590.6	469.6	250.7
40°	1363.5	1349.2	1300.6	1222.6	1119.9	999.7	865.2	718.8	574.7	446.5	218.1
42.5°	1373.0	1357.1	1305.4	1232.1	1116.7	993.4	855.7	706.8	557.2	426.6	187.1
45°	1377.8	1361.1	1306.2	1224.2	1111.2	981.4	841.3	691.7	538.1	399.6	156.0
47.5°	1375.4	1357.1	1302.2	1215.4	1100.8	968.7	825.4	673.4	515.0	375.7	126.6
50°	1371.4	1352.3	1293.4	1204.3	1086.5	952.8	807.9	651.1	491.1	346.2	100.3
52.5°	1358.7	1339.6	1283.9	1188.4	1069.8	934.5	784.0	628.0	465.6	317.6	76.4
55°	1342.8	1325.3	1267.2	1174.0	1048.3	912.2	761.7	603.3	441.0	288.1	54.9
57.5°	1318.1	1302.2	1246.5	1151.0	1026.8	887.5	737.1	576.3	409.9	258.7	38.2
60°	1287.9	1271.9	1217.8	1124.7	1002.1	859.6	710.0	548.4	382.1	229.2	23.9
62.5°	1256.0	1240.9	1184.4	1092.1	971.1	830.2	680.5	520.6	352.6	202.2	14.3
65°	1213.8	1199.5	1148.6	1053.1	936.8	798.4	647.9	487.1	322.4	171.9	8.0
67.5°	1169.3	1156.5	1104.8	1017.2	897.0	763.3	614.5	454.5	290.5	145.7	4.0
70°	1121.5	1105.6	1057.8	968.7	856.5	723.5	577.9	421.1	260.3	120.2	0.0
72.5°	1065.8	1053.9	1007.7	923.3	809.5	681.3	540.5	384.4	226.8	95.5	0.8
75°	1011.7	996.5	954.4	874.8	763.3	636.8	499.1	350.2	194.2	73.2	0.8
77.5°	941.6	936.8	897.0	819.8	719.6	593.8	453.7	308.8	163.2	52.5	0.8
80°	871.6	866.8	835.8	764.9	668.6	542.8	411.5	269.8	132.9	35.0	0.8
82.5°	802.3	796.0	766.5	707.6	616.9	499.9	367.7	230.8	105.1	21.5	0.8
85°	740.2	732.3	700.4	646.3	563.5	451.3	322.4	192.6	78.0	11.9	1.6
87.5°	686.9	681.3	646.3	590.6	509.4	405.9	282.6	156.0	54.9	5.6	2.4
90°	641.5	629.6	598.6	539.7	458.5	355.8	240.4	125.0	36.6	3.2	3.2
92.5°	597.0	586.6	552.4	491.9	413.1	312.8	199.8	95.5	23.1	1.6	4.0
95°	550.8	539.7	506.2	450.5	366.9	269.0	164.0	70.0	12.7	1.6	4.0
97.5°	505.4	495.1	460.1	404.3	325.5	230.8	129.7	49.3	6.4	1.6	3.2
100°	463.3	451.3	419.5	363.8	284.2	192.6	100.3	31.8	4.0	1.6	3.2
102.5°	418.7	409.1	376.5	322.4	241.2	156.8	74.8	19.9	1.6	1.6	2.4
105°	378.9	366.9	335.1	279.4	205.4	123.4	52.5	11.9	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°	246.7	237.2	209.3	162.4	104.3	48.6	14.3	2.4	2.4	2.4	2.4
115°	206.2	191.8	167.2	125.8	77.2	31.8	7.2	2.4	2.4	2.4	2.4
117.5°	164.8	152.8	135.3	95.5	50.9	20.7	4.0	2.4	2.4	2.4	2.4
120°	128.9	117.8	97.9	66.1	34.2	11.9	1.6	2.4	2.4	2.4	2.4
122.5°	92.3	83.6	66.1	43.0	20.7	5.6	2.4	2.4	3.2	3.2	2.4
125°	61.3	56.5	43.8	26.3	12.7	2.4	2.4	2.4	3.2	3.2	2.4
127.5°	39.8	35.8	25.5	15.1	5.6	2.4	2.4	3.2	3.2	3.2	2.4
130°	22.3	19.9	15.1	8.8	2.4	2.4	2.4	3.2	3.2	3.2	2.4
132.5°	12.7	11.9	8.0	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	4.0	4.0	3.2
137.5°	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0	4.0	3.2
140°	0.8	0.8	1.6	2.4	2.4	2.4	3.2	4.0	4.0	4.0	3.2
142.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	3.2	3.2
145°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.0	3.2	3.2	3.2
147.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	3.2	3.2
150°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	4.0	3.2	3.2	3.2
152.5°	0.8	1.6	1.6	2.4	3.2	3.2	3.2	4.0	3.2	3.2	3.2
155°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	4.0	3.2	3.2	4.0
157.5°	1.6	1.6	1.6	2.4	3.2	3.2	3.2	4.0	3.2	3.2	4.0
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	4.0	4.0	4.0	4.0
172.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	4.0	4.0
175°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	4.0	4.0
177.5°	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.0	4.0	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°	624.8	624.8	624.8
2.5°	594.6	583.4	580.3
5°	562.7	544.4	534.1
7.5°	530.9	506.2	494.3
10°	501.5	466.4	453.7
12.5°	466.4	425.8	405.9
15°	433.0	380.5	361.4
17.5°	395.6	336.7	314.4
20°	360.6	292.9	269.8
22.5°	320.8	249.9	224.5
25°	285.0	207.0	178.3
27.5°	245.2	163.2	138.5
30°	207.7	125.0	100.3
32.5°	171.9	91.5	69.2
35°	138.5	62.1	43.8
37.5°	106.7	38.2	22.3
40°	77.2	19.9	10.3
42.5°	51.7	9.6	5.6
45°	31.8	4.8	0.0
47.5°	18.3	0.0	0.0
50°	9.6	0.0	0.0
52.5°	4.0	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°	0.8	0.8	0.8
77.5°	0.8	1.6	2.4
80°	1.6	3.2	4.0
82.5°	3.2	4.0	4.0
85°	3.2	4.0	4.8
87.5°	4.0	4.8	5.6
90°	4.8	5.6	5.6
92.5°	4.8	6.4	6.4
95°	5.6	6.4	7.2
97.5°	6.4	7.2	7.2
100°	5.6	7.2	8.0
102.5°	4.8	7.2	7.2
105°	4.0	5.6	6.4



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.2	4.0	4.0
115°	2.4	3.2	4.0
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°	334.3	324.8	292.9	240.4	167.9	93.9	35.0	6.4	1.6	2.4	2.4
110°	291.3	283.4	250.7	199.8	135.3	70.0	23.1	4.0	2.4	2.4	2.4





107.5°	3.2	4.8	5.6
110°	3.2	4.0	4.8



(END OF REPORT)