

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: P551304

Luminaire Tested: **FCC-X-2-LD4-2HI-35-UNV-93-84-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: P551304
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-35-UNV-93-84-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 3500K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

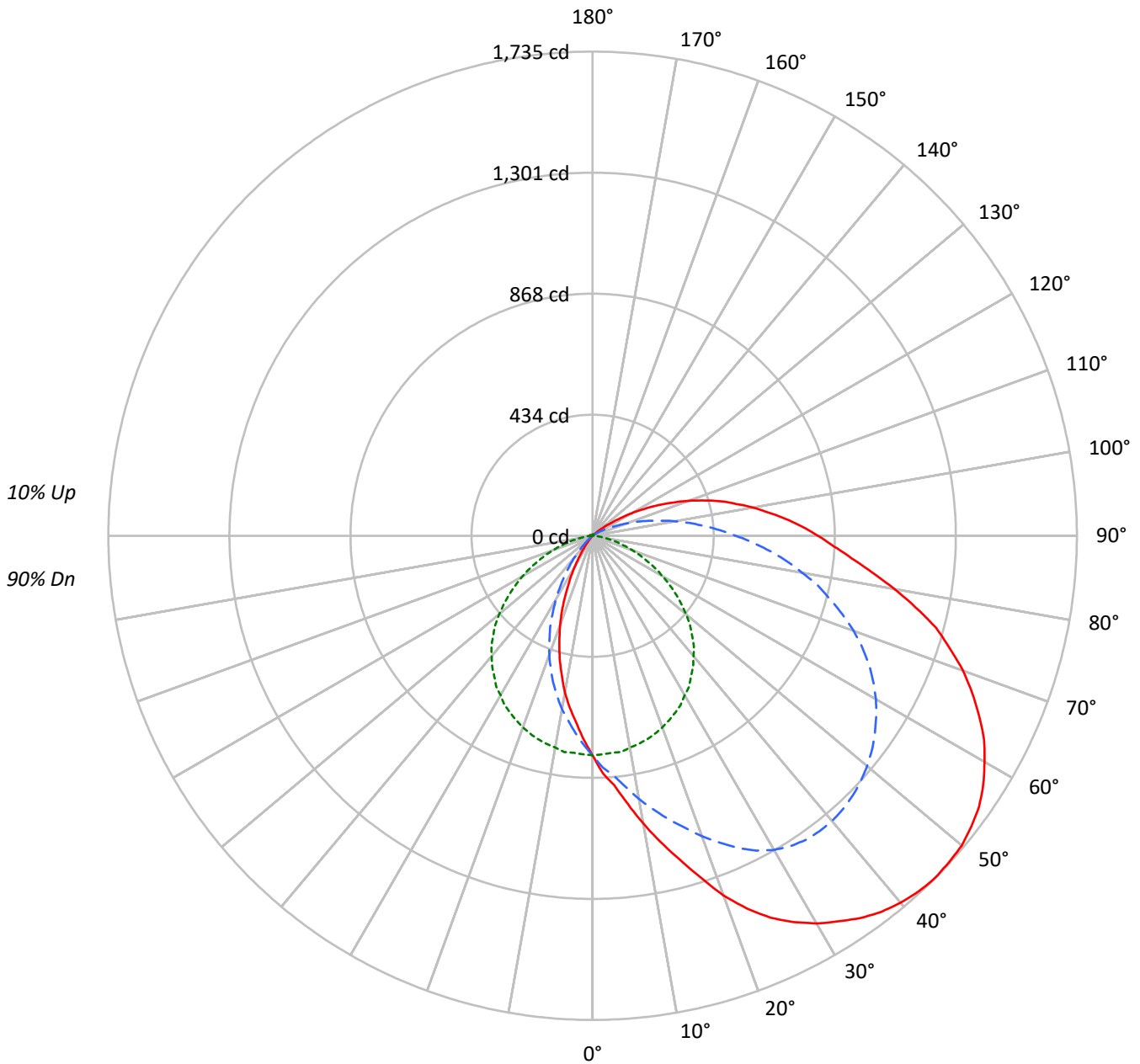
Lumens per Lamp: N/A
Luminaire Lumens: 3888.9 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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				20				20
RC	80				70				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	93	93	93	90
1	103	96	91	86	99	93	88	83	87	83	79	81	78	74	76	73	70	76	73	70	67
2	92	82	74	67	88	79	72	65	74	67	62	69	64	59	64	60	56	64	60	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	55	50	46	43
4	75	62	52	44	72	60	51	44	56	48	42	52	45	40	49	43	38	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	35	46	39	34	43	38	33	43	38	33	30
6	63	49	39	32	61	47	38	32	44	36	31	42	35	29	39	33	28	39	33	28	26
7	58	44	35	28	56	43	34	28	40	32	27	38	31	26	36	29	25	36	29	25	23
8	54	40	31	25	52	39	30	24	37	29	24	34	28	23	32	26	22	32	26	22	20
9	51	36	28	22	49	35	27	22	33	26	21	32	25	20	30	24	20	30	24	20	18
10	47	33	25	20	45	33	25	19	31	24	19	29	23	18	28	22	18	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8468	8468	8468
5°	9295	8343	6961
10°	10519	8241	5737
15°	11788	8136	4471
20°	13295	8004	3292
25°	14545	7850	2162
30°	15474	7644	1218
35°	16278	7422	536
40°	16992	7150	129
45°	17603	6807	0
50°	18117	6353	0
55°	18508	5777	0
60°	18706	5107	0
65°	18783	4348	0
70°	18721	3544	0
75°	18483	2615	15
80°	17733	1600	81
85°	17141	763	110



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.3	1.9
10°-20°	225.6	5.8
20°-30°	365.4	9.4
30°-40°	469.3	12.1
40°-50°	531.3	13.7
50°-60°	550.4	14.2
60°-70°	519.1	13.3
70°-80°	435.0	11.2
80°-90°	315.3	8.1
90°-100°	207.2	5.3
100°-110°	119.7	3.1
110°-120°	52.8	1.4
120°-130°	14.3	0.4
130°-140°	3.3	0.1
140°-150°	2.1	0.1
150°-160°	1.5	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	666.3	17.1
0°-40°	1135.7	29.2
0°-60°	2217.4	57.0
0°-90°	3486.8	89.7
90°-120°	379.7	9.8
90°-150°	399.5	10.3
90°-180°	402.0	10.3
0°-180°	3888.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	787	787	787	787	787	
5°	898	862	781	708	672	91
15°	1200	1052	755	545	455	346
25°	1510	1234	700	359	224	698
35°	1672	1330	614	174	55	1049
45°	1735	1317	503	40	0	1339
55°	1690	1234	363	0	0	1510
65°	1528	1092	216	0	0	1512
75°	1274	881	92	1	1	1336
85°	932	639	15	4	6	796
90°	808	513	4	6	7	443
95°	694	400	2	7	9	544
105°	477	207	2	5	8	503
115°	260	69	3	3	5	260
125°	77	10	4	3	4	77
135°	4	3	5	4	3	7
145°	1	4	4	3	3	1
155°	2	4	4	3	1	1
165°	2	3	4	3	0	1
175°	2	4	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°	786.7	786.7	786.7	786.7	786.7	786.7	786.7	786.7	786.7	786.7	786.7
2.5°	852.8	851.8	848.8	843.8	836.8	824.7	814.7	805.7	793.7	783.6	764.6
5°	897.9	892.9	888.9	883.9	867.8	856.8	838.8	818.7	799.7	780.6	742.6
7.5°	970.0	962.0	956.0	942.0	919.9	894.9	866.8	847.8	834.8	781.6	716.5
10°	1047.2	1040.2	1028.2	1003.1	976.0	940.0	899.9	854.8	814.7	770.6	693.5
12.5°	1123.4	1113.3	1096.3	1064.2	1026.2	981.1	925.9	872.8	815.7	763.6	666.4
15°	1199.5	1188.5	1170.5	1131.4	1081.3	1022.1	955.0	887.9	820.7	754.6	638.3
17.5°	1282.7	1267.7	1240.6	1196.5	1133.4	1060.2	981.1	899.9	818.7	743.6	608.3
20°	1371.9	1350.8	1321.8	1262.7	1188.5	1102.3	1007.1	911.9	817.7	730.5	574.2
22.5°	1446.0	1425.0	1392.9	1331.8	1242.6	1137.4	1029.2	919.9	813.7	715.5	542.1
25°	1510.2	1493.1	1458.1	1387.9	1293.7	1174.5	1050.2	925.9	807.7	699.5	508.1
27.5°	1560.3	1544.2	1505.2	1433.0	1336.8	1207.5	1066.2	929.0	799.7	683.4	473.0
30°	1604.4	1588.3	1541.2	1467.1	1365.9	1233.6	1082.3	930.0	789.7	659.4	434.9
32.5°	1638.4	1623.4	1575.3	1496.1	1385.9	1251.6	1091.3	929.0	776.6	642.3	393.8
35°	1672.5	1657.5	1601.4	1517.2	1400.9	1259.6	1098.3	923.9	760.6	614.3	354.7
37.5°	1698.6	1681.5	1624.4	1531.2	1408.0	1261.6	1097.3	916.9	743.6	591.2	315.7
40°	1716.6	1698.6	1637.4	1539.2	1410.0	1258.6	1089.3	904.9	723.5	562.2	274.6
42.5°	1728.6	1708.6	1643.4	1551.3	1406.0	1250.6	1077.3	889.9	701.5	537.1	235.5
45°	1734.6	1713.6	1644.5	1541.2	1398.9	1235.6	1059.2	870.8	677.4	503.1	196.4
47.5°	1731.6	1708.6	1639.4	1530.2	1385.9	1219.6	1039.2	847.8	648.4	473.0	159.3
50°	1726.6	1702.6	1628.4	1516.2	1367.9	1199.5	1017.1	819.7	618.3	435.9	126.3
52.5°	1710.6	1686.5	1616.4	1496.1	1346.8	1176.5	987.1	790.7	586.2	399.8	96.2
55°	1690.5	1668.5	1595.3	1478.1	1319.8	1148.4	959.0	759.6	555.2	362.8	69.1
57.5°	1659.5	1639.4	1569.3	1449.0	1292.7	1117.3	927.9	725.5	516.1	325.7	48.1
60°	1621.4	1601.4	1533.2	1416.0	1261.6	1082.3	893.9	690.4	481.0	288.6	30.1
62.5°	1581.3	1562.3	1491.1	1374.9	1222.6	1045.2	856.8	655.4	443.9	254.5	18.0
65°	1528.2	1510.2	1446.0	1325.8	1179.5	1005.1	815.7	613.3	405.9	216.5	10.0
67.5°	1472.1	1456.1	1390.9	1280.7	1129.4	961.0	773.6	572.2	365.8	183.4	5.0
70°	1412.0	1391.9	1331.8	1219.6	1078.3	910.9	727.5	530.1	327.7	151.3	0.0
72.5°	1341.8	1326.8	1268.7	1162.4	1019.1	857.8	680.4	484.0	285.6	120.3	1.0
75°	1273.7	1254.6	1201.5	1101.3	961.0	801.7	628.3	440.9	244.5	92.2	1.0
77.5°	1185.5	1179.5	1129.4	1032.2	905.9	747.6	571.2	388.8	205.4	66.1	1.0
80°	1097.3	1091.3	1052.2	963.0	841.8	683.4	518.1	339.7	167.4	44.1	1.0
82.5°	1010.1	1002.1	965.0	890.9	776.6	629.3	463.0	290.6	132.3	27.1	1.0
85°	932.0	921.9	881.9	813.7	709.5	568.2	405.9	242.5	98.2	15.0	2.0
87.5°	864.8	857.8	813.7	743.6	641.3	511.1	355.7	196.4	69.1	7.0	3.0
90°	807.7	792.7	753.6	679.4	577.2	447.9	302.6	157.3	46.1	4.0	4.0
92.5°	751.6	738.6	695.5	619.3	520.1	393.8	251.5	120.3	29.1	2.0	5.0
95°	693.5	679.4	637.3	567.2	462.0	338.7	206.4	88.2	16.0	2.0	5.0
97.5°	636.3	623.3	579.2	509.1	409.9	290.6	163.3	62.1	8.0	2.0	4.0
100°	583.2	568.2	528.1	458.0	357.8	242.5	126.3	40.1	5.0	2.0	4.0
102.5°	527.1	515.1	474.0	405.9	303.6	197.4	94.2	25.1	2.0	2.0	3.0
105°	477.0	462.0	421.9	351.7	258.5	155.3	66.1	15.0	2.0	2.0	3.0



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	310.7	298.6	263.6	204.4	131.3	61.1	18.0	3.0	3.0	3.0	3.0
115°	259.5	241.5	210.4	158.3	97.2	40.1	9.0	3.0	3.0	3.0	3.0
117.5°	207.4	192.4	170.4	120.3	64.1	26.1	5.0	3.0	3.0	3.0	3.0
120°	162.3	148.3	123.3	83.2	43.1	15.0	2.0	3.0	3.0	3.0	3.0
122.5°	116.2	105.2	83.2	54.1	26.1	7.0	3.0	3.0	4.0	4.0	3.0
125°	77.2	71.1	55.1	33.1	16.0	3.0	3.0	3.0	4.0	4.0	3.0
127.5°	50.1	45.1	32.1	19.0	7.0	3.0	3.0	4.0	4.0	4.0	3.0
130°	28.1	25.1	19.0	11.0	3.0	3.0	3.0	4.0	4.0	4.0	3.0
132.5°	16.0	15.0	10.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
135°	4.0	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0
137.5°	1.0	1.0	2.0	2.0	3.0	3.0	4.0	5.0	5.0	5.0	4.0
140°	1.0	1.0	2.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	4.0
142.5°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0	4.0
145°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	4.0	4.0	4.0
147.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	4.0	4.0
150°	1.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
152.5°	1.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	4.0
155°	2.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0
157.5°	2.0	2.0	2.0	3.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0
160°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
162.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0
165°	2.0	2.0	2.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0
167.5°	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0
170°	2.0	2.0	2.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	5.0
172.5°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	5.0
175°	2.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	5.0
177.5°	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	4.0
180°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	786.7	786.7	786.7
2.5°	748.6	734.5	730.5
5°	708.5	685.4	672.4
7.5°	668.4	637.3	622.3
10°	631.3	587.2	571.2
12.5°	587.2	536.1	511.1
15°	545.1	479.0	455.0
17.5°	498.0	423.9	395.8
20°	454.0	368.8	339.7
22.5°	403.8	314.7	282.6
25°	358.8	260.5	224.5
27.5°	308.6	205.4	174.4
30°	261.5	157.3	126.3
32.5°	216.5	115.2	87.2
35°	174.4	78.2	55.1
37.5°	134.3	48.1	28.1
40°	97.2	25.1	13.0
42.5°	65.1	12.0	7.0
45°	40.1	6.0	0.0
47.5°	23.0	0.0	0.0
50°	12.0	0.0	0.0
52.5°	5.0	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°	1.0	1.0	1.0
77.5°	1.0	2.0	3.0
80°	2.0	4.0	5.0
82.5°	4.0	5.0	5.0
85°	4.0	5.0	6.0
87.5°	5.0	6.0	7.0
90°	6.0	7.0	7.0
92.5°	6.0	8.0	8.0
95°	7.0	8.0	9.0
97.5°	8.0	9.0	9.0
100°	7.0	9.0	10.0
102.5°	6.0	9.0	9.0
105°	5.0	7.0	8.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	4.0	5.0	5.0
115°	3.0	4.0	5.0
117.5°	3.0	4.0	4.0
120°	3.0	3.0	4.0
122.5°	3.0	3.0	4.0
125°	3.0	3.0	4.0
127.5°	4.0	3.0	3.0
130°	3.0	3.0	3.0
132.5°	4.0	3.0	3.0
135°	4.0	3.0	3.0
137.5°	4.0	3.0	3.0
140°	4.0	3.0	3.0
142.5°	4.0	3.0	3.0
145°	3.0	3.0	3.0
147.5°	3.0	3.0	3.0
150°	3.0	3.0	2.0
152.5°	3.0	2.0	2.0
155°	3.0	2.0	1.0
157.5°	4.0	2.0	1.0
160°	3.0	2.0	1.0
162.5°	3.0	2.0	1.0
165°	3.0	2.0	0.0
167.5°	3.0	2.0	1.0
170°	3.0	2.0	1.0
172.5°	3.0	2.0	1.0
175°	3.0	1.0	1.0
177.5°	3.0	1.0	1.0
180°	3.0	3.0	3.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	420.9	408.9	368.8	302.6	211.4	118.2	44.1	8.0	2.0	3.0	3.0
110°	366.8	356.7	315.7	251.5	170.4	88.2	29.1	5.0	3.0	3.0	3.0





107.5°	4.0	6.0	7.0
110°	4.0	5.0	6.0



(END OF REPORT)