

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: P551372

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-93-86-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: P551372
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-93-86-ED1D
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE
SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES AND 4000K, AND 80 CRI
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

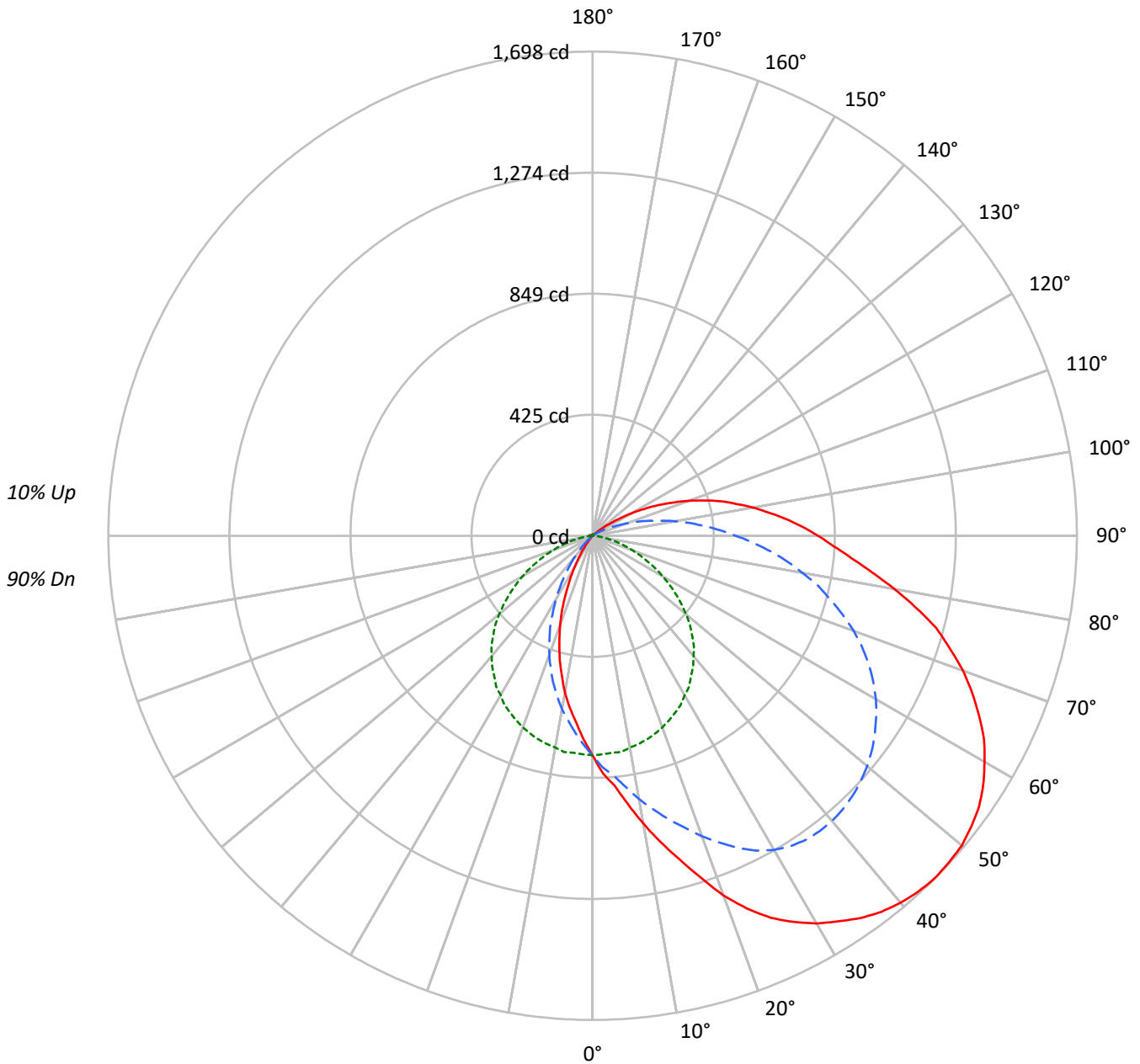
Lumens per Lamp: N/A
Luminaire Lumens: 3805.9 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')
CIE Type: Semi-Direct

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°	8287	8287	8287
5°	9096	8166	6813
10°	10294	8066	5615
15°	11536	7963	4375
20°	13011	7833	3222
25°	14234	7682	2116
30°	15143	7481	1192
35°	15931	7264	525
40°	16629	6997	126
45°	17228	6661	0
50°	17731	6217	0
55°	18114	5653	0
60°	18306	4997	0
65°	18382	4254	0
70°	18320	3469	0
75°	18088	2558	15
80°	17355	1567	79
85°	16775	747	109



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	1.9
10°-20°	220.8	5.8
20°-30°	357.6	9.4
30°-40°	459.3	12.1
40°-50°	519.9	13.7
50°-60°	538.7	14.2
60°-70°	508.0	13.3
70°-80°	425.7	11.2
80°-90°	308.6	8.1
90°-100°	202.8	5.3
100°-110°	117.1	3.1
110°-120°	51.7	1.4
120°-130°	14.0	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°	652.1	17.1
0°-40°	1111.4	29.2
0°-60°	2170.0	57.0
0°-90°	3412.4	89.7
90°-120°	371.6	9.8
90°-150°	390.9	10.3
90°-180°	394.0	10.4
0°-180°	3805.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	770	770	770	770	770	
5°	879	844	764	693	658	89
15°	1174	1029	738	534	445	338
25°	1478	1208	684	351	220	683
35°	1637	1302	601	171	54	1027
45°	1698	1289	492	39	0	1311
55°	1654	1208	355	0	0	1477
65°	1496	1069	212	0	0	1480
75°	1246	863	90	1	1	1307
85°	912	625	15	4	6	779
90°	790	502	4	6	7	433
95°	679	392	2	7	9	532
105°	467	202	2	5	8	493
115°	254	67	3	3	5	254
125°	76	9	4	3	4	75
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°	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9	769.9
2.5°	834.6	833.6	830.7	825.8	818.9	807.1	797.3	788.5	776.7	766.9	748.3
5°	878.7	873.8	869.9	865.0	849.3	838.5	820.9	801.2	782.6	764.0	726.7
7.5°	949.3	941.5	935.6	921.9	900.3	875.8	848.3	829.7	816.9	765.0	701.2
10°	1024.8	1018.0	1006.2	981.7	955.2	919.9	880.7	836.6	797.3	754.2	678.7
12.5°	1099.4	1089.6	1072.9	1041.5	1004.3	960.1	906.2	854.2	798.3	747.3	652.2
15°	1173.9	1163.1	1145.5	1107.2	1058.2	1000.3	934.6	868.9	803.2	738.5	624.7
17.5°	1255.3	1240.6	1214.1	1171.0	1109.2	1037.6	960.1	880.7	801.2	727.7	595.3
20°	1342.6	1322.0	1293.6	1235.7	1163.1	1078.8	985.6	892.5	800.3	714.9	562.0
22.5°	1415.2	1394.6	1363.2	1303.4	1216.1	1113.1	1007.2	900.3	796.3	700.2	530.6
25°	1477.9	1461.3	1426.9	1358.3	1266.1	1149.4	1027.8	906.2	790.5	684.5	497.2
27.5°	1527.0	1511.3	1473.0	1402.4	1308.3	1181.8	1043.5	909.1	782.6	668.8	462.9
30°	1570.1	1554.4	1508.3	1435.8	1336.7	1207.3	1059.2	910.1	772.8	645.3	425.6
32.5°	1603.5	1588.8	1541.7	1464.2	1356.3	1224.9	1068.0	909.1	760.1	628.6	385.4
35°	1636.8	1622.1	1567.2	1484.8	1371.0	1232.8	1074.9	904.2	744.4	601.2	347.2
37.5°	1662.3	1645.6	1589.7	1498.5	1377.9	1234.7	1073.9	897.4	727.7	578.6	308.9
40°	1680.0	1662.3	1602.5	1506.4	1379.9	1231.8	1066.0	885.6	708.1	550.2	268.7
42.5°	1691.7	1672.1	1608.4	1518.1	1375.9	1223.9	1054.3	870.9	686.5	525.7	230.5
45°	1697.6	1677.0	1609.4	1508.3	1369.1	1209.2	1036.6	852.2	663.0	492.3	192.2
47.5°	1694.7	1672.1	1604.5	1497.6	1356.3	1193.5	1017.0	829.7	634.5	462.9	155.9
50°	1689.8	1666.2	1593.7	1483.8	1338.7	1173.9	995.4	802.2	605.1	426.6	123.6
52.5°	1674.1	1650.5	1581.9	1464.2	1318.1	1151.4	966.0	773.8	573.7	391.3	94.1
55°	1654.5	1632.9	1561.3	1446.6	1291.6	1123.9	938.5	743.4	543.3	355.0	67.7
57.5°	1624.1	1604.5	1535.8	1418.1	1265.1	1093.5	908.1	710.0	505.1	318.7	47.1
60°	1586.8	1567.2	1500.5	1385.8	1234.7	1059.2	874.8	675.7	470.7	282.4	29.4
62.5°	1547.6	1528.9	1459.3	1345.5	1196.5	1022.9	838.5	641.4	434.5	249.1	17.7
65°	1495.6	1477.9	1415.2	1297.5	1154.3	983.7	798.3	600.2	397.2	211.8	9.8
67.5°	1440.7	1425.0	1361.2	1253.4	1105.3	940.5	757.1	560.0	358.0	179.5	4.9
70°	1381.8	1362.2	1303.4	1193.5	1055.3	891.5	712.0	518.8	320.7	148.1	0.0
72.5°	1313.2	1298.5	1241.6	1137.6	997.4	839.5	665.9	473.7	279.5	117.7	1.0
75°	1246.5	1227.9	1175.9	1077.8	940.5	784.6	614.9	431.5	239.3	90.2	1.0
77.5°	1160.2	1154.3	1105.3	1010.1	886.6	731.6	559.0	380.5	201.0	64.7	1.0
80°	1073.9	1068.0	1029.8	942.5	823.8	668.8	507.0	332.5	163.8	43.2	1.0
82.5°	988.6	980.7	944.4	871.9	760.1	615.9	453.1	284.4	129.5	26.5	1.0
85°	912.1	902.3	863.0	796.3	694.3	556.1	397.2	237.3	96.1	14.7	2.0
87.5°	846.4	839.5	796.3	727.7	627.7	500.2	348.2	192.2	67.7	6.9	2.9
90°	790.5	775.7	737.5	664.9	564.9	438.4	296.2	154.0	45.1	3.9	3.9
92.5°	735.5	722.8	680.6	606.1	509.0	385.4	246.2	117.7	28.4	2.0	4.9
95°	678.7	664.9	623.7	555.1	452.1	331.5	202.0	86.3	15.7	2.0	4.9
97.5°	622.8	610.0	566.9	498.2	401.1	284.4	159.9	60.8	7.8	2.0	3.9
100°	570.8	556.1	516.8	448.2	350.1	237.3	123.6	39.2	4.9	2.0	3.9
102.5°	515.9	504.1	463.9	397.2	297.2	193.2	92.2	24.5	2.0	2.0	2.9
105°	466.8	452.1	412.9	344.2	253.0	152.0	64.7	14.7	2.0	2.0	2.9



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	304.0	292.3	257.9	200.1	128.5	59.8	17.7	2.9	2.9	2.9	2.9
115°	254.0	236.4	206.0	155.0	95.1	39.2	8.8	2.9	2.9	2.9	2.9
117.5°	203.0	188.3	166.7	117.7	62.8	25.5	4.9	2.9	2.9	2.9	2.9
120°	158.9	145.1	120.6	81.4	42.2	14.7	2.0	2.9	2.9	2.9	2.9
122.5°	113.8	103.0	81.4	53.0	25.5	6.9	2.9	2.9	3.9	3.9	2.9
125°	75.5	69.6	53.9	32.4	15.7	2.9	2.9	2.9	3.9	3.9	2.9
127.5°	49.0	44.1	31.4	18.6	6.9	2.9	2.9	3.9	3.9	3.9	2.9
130°	27.5	24.5	18.6	10.8	2.9	2.9	2.9	3.9	3.9	3.9	2.9
132.5°	15.7	14.7	9.8	2.0	2.9	2.9	2.9	3.9	3.9	3.9	3.9
135°	3.9	2.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	3.9
137.5°	1.0	1.0	2.0	2.0	2.9	2.9	3.9	4.9	4.9	4.9	3.9
140°	1.0	1.0	2.0	2.9	2.9	2.9	3.9	4.9	4.9	4.9	3.9
142.5°	1.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	3.9	3.9
145°	1.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	3.9	3.9	3.9
147.5°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	3.9	3.9
150°	1.0	2.0	2.0	2.9	3.9	3.9	3.9	4.9	3.9	3.9	3.9
152.5°	1.0	2.0	2.0	2.9	3.9	3.9	3.9	4.9	3.9	3.9	3.9
155°	2.0	2.0	2.0	2.9	3.9	3.9	3.9	4.9	3.9	3.9	4.9
157.5°	2.0	2.0	2.0	2.9	3.9	3.9	3.9	4.9	3.9	3.9	4.9
160°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
162.5°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9
165°	2.0	2.0	2.0	2.0	2.9	2.9	3.9	3.9	3.9	3.9	3.9
167.5°	2.0	2.0	2.0	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9
170°	2.0	2.0	2.0	2.9	2.9	2.9	3.9	4.9	4.9	4.9	4.9
172.5°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	4.9	4.9
175°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	4.9	4.9
177.5°	1.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	4.9	4.9	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



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	769.9	769.9	769.9
2.5°	732.6	718.9	714.9
5°	693.4	670.8	658.1
7.5°	654.1	623.7	609.0
10°	617.9	574.7	559.0
12.5°	574.7	524.7	500.2
15°	533.5	468.8	445.2
17.5°	487.4	414.8	387.4
20°	444.3	360.9	332.5
22.5°	395.2	307.9	276.6
25°	351.1	255.0	219.7
27.5°	302.1	201.0	170.6
30°	256.0	154.0	123.6
32.5°	211.8	112.8	85.3
35°	170.6	76.5	53.9
37.5°	131.4	47.1	27.5
40°	95.1	24.5	12.7
42.5°	63.7	11.8	6.9
45°	39.2	5.9	0.0
47.5°	22.6	0.0	0.0
50°	11.8	0.0	0.0
52.5°	4.9	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°	1.0	1.0	1.0
77.5°	1.0	2.0	2.9
80°	2.0	3.9	4.9
82.5°	3.9	4.9	4.9
85°	3.9	4.9	5.9
87.5°	4.9	5.9	6.9
90°	5.9	6.9	6.9
92.5°	5.9	7.8	7.8
95°	6.9	7.8	8.8
97.5°	7.8	8.8	8.8
100°	6.9	8.8	9.8
102.5°	5.9	8.8	8.8
105°	4.9	6.9	7.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
112.5°	3.9	4.9	4.9
115°	2.9	3.9	4.9
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	2.0
152.5°	2.9	2.0	2.0
155°	2.9	2.0	1.0
157.5°	3.9	2.0	1.0
160°	2.9	2.0	1.0
162.5°	2.9	2.0	1.0
165°	2.9	2.0	0.0
167.5°	2.9	2.0	1.0
170°	2.9	2.0	1.0
172.5°	2.9	2.0	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°	411.9	400.1	360.9	296.2	206.9	115.7	43.2	7.8	2.0	2.9	2.9
110°	358.9	349.1	308.9	246.2	166.7	86.3	28.4	4.9	2.9	2.9	2.9





107.5°	3.9	5.9	6.9
110°	3.9	4.9	5.9



(END OF REPORT)