

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: P551378

Luminaire Tested: **FCC-X-2-LD4-2HI-40-UNV-93-94-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: P551378  
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-93-94-ED1D  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 4000K,  
AND 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

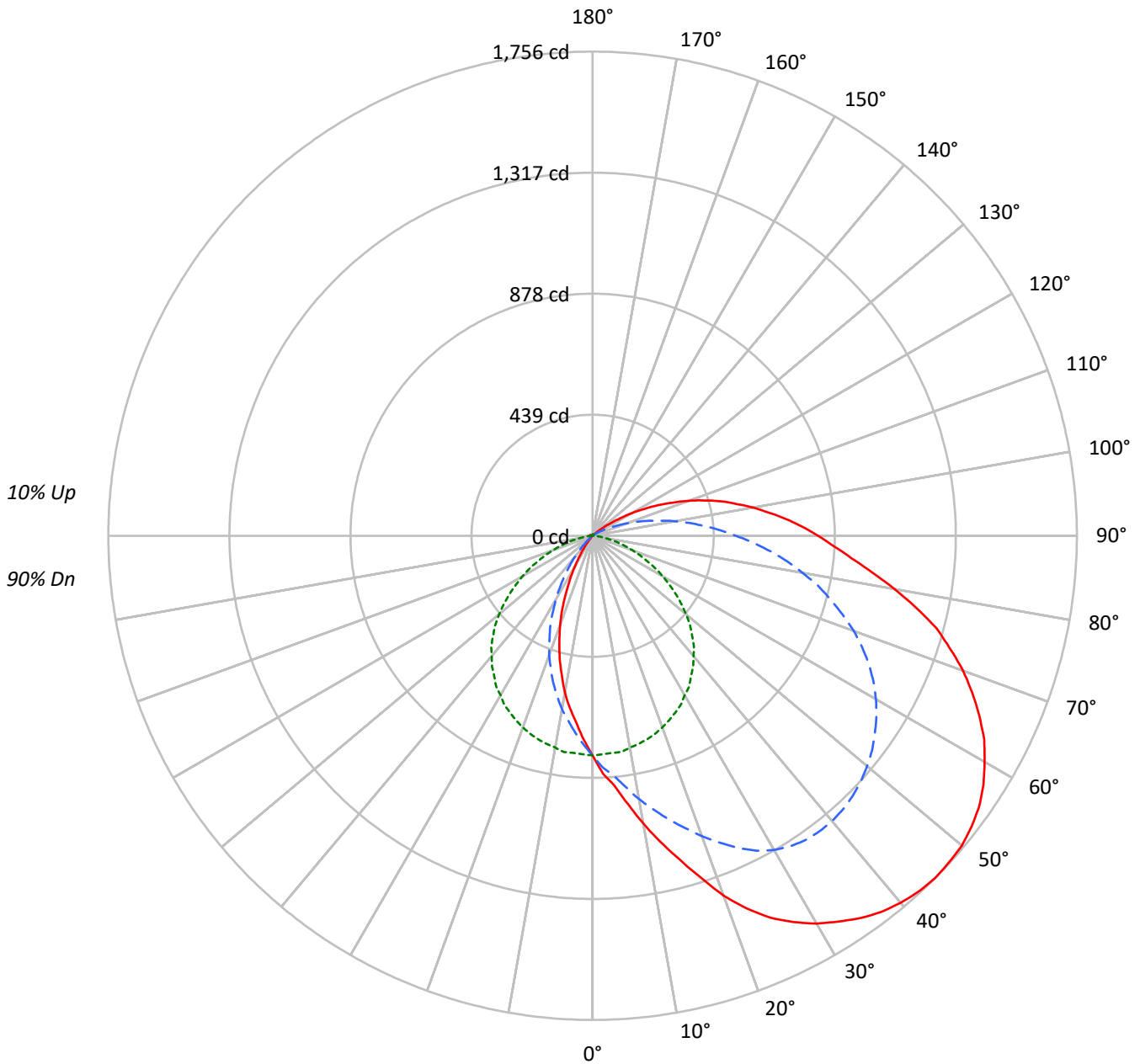
Lumens per Lamp: N/A  
Luminaire Lumens: 3937.0 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P551378

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-94-ED1D

### 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°	8572	8572	8572
5°	9410	8447	7047
10°	10648	8343	5808
15°	11933	8237	4526
20°	13459	8103	3333
25°	14724	7947	2188
30°	15665	7738	1233
35°	16480	7514	543
40°	17201	7237	131
45°	17821	6891	0
50°	18341	6432	0
55°	18737	5847	0
60°	18936	5171	0
65°	19015	4401	0
70°	18951	3589	0
75°	18710	2646	15
80°	17951	1618	82
85°	17353	773	112



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.3	1.9
10°-20°	228.4	5.8
20°-30°	369.9	9.4
30°-40°	475.1	12.1
40°-50°	537.8	13.7
50°-60°	557.2	14.2
60°-70°	525.5	13.3
70°-80°	440.4	11.2
80°-90°	319.2	8.1
90°-100°	209.8	5.3
100°-110°	121.2	3.1
110°-120°	53.5	1.4
120°-130°	14.5	0.4
130°-140°	3.3	0.1
140°-150°	2.2	0.1
150°-160°	1.5	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	674.6	17.1
0°-40°	1149.7	29.2
0°-60°	2244.7	57.0
0°-90°	3529.9	89.7
90°-120°	384.4	9.8
90°-150°	404.4	10.3
90°-180°	407.0	10.3
0°-180°	3937.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	796	796	796	796	796	
5°	909	873	790	717	681	92
15°	1214	1065	764	552	461	350
25°	1529	1249	708	363	227	707
35°	1693	1347	622	176	56	1062
45°	1756	1334	509	41	0	1356
55°	1711	1249	367	0	0	1528
65°	1547	1106	219	0	0	1531
75°	1289	892	93	1	1	1352
85°	944	647	15	4	6	806
90°	818	519	4	6	7	448
95°	702	405	2	7	9	551
105°	483	209	2	5	8	510
115°	263	70	3	3	5	263
125°	78	10	4	3	4	78
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	



TEST NUMBER: P551378

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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	796.4	796.4	796.4	796.4	796.4	796.4	796.4	796.4	796.4	796.4	796.4
2.5°	863.3	862.3	859.3	854.2	847.1	834.9	824.8	815.6	803.5	793.3	774.0
5°	909.0	903.9	899.8	894.8	878.5	867.4	849.1	828.8	809.5	790.3	751.7
7.5°	982.0	973.9	967.8	953.6	931.3	905.9	877.5	858.2	845.1	791.3	725.3
10°	1060.1	1053.0	1040.8	1015.5	988.1	951.6	911.0	865.3	824.8	780.1	702.0
12.5°	1137.2	1127.1	1109.8	1077.4	1038.8	993.2	937.4	883.6	825.8	773.0	674.6
15°	1214.3	1203.2	1184.9	1145.3	1094.6	1034.8	966.8	898.8	830.9	763.9	646.2
17.5°	1298.5	1283.3	1255.9	1211.3	1147.4	1073.3	993.2	911.0	828.8	752.7	615.8
20°	1388.8	1367.5	1338.1	1278.2	1203.2	1115.9	1019.5	923.2	827.8	739.6	581.3
22.5°	1463.9	1442.6	1410.1	1348.2	1257.9	1151.4	1041.9	931.3	823.8	724.3	548.8
25°	1528.8	1511.6	1476.1	1405.0	1309.7	1189.0	1063.2	937.4	817.7	708.1	514.3
27.5°	1579.5	1563.3	1523.7	1450.7	1353.3	1222.4	1079.4	940.4	809.5	691.9	478.8
30°	1624.2	1607.9	1560.3	1485.2	1382.7	1248.8	1095.6	941.4	799.4	667.5	440.3
32.5°	1658.7	1643.4	1594.8	1514.6	1403.0	1267.1	1104.8	940.4	786.2	650.3	398.7
35°	1693.2	1677.9	1621.1	1535.9	1418.2	1275.2	1111.9	935.3	770.0	621.9	359.1
37.5°	1719.5	1702.3	1644.5	1550.1	1425.3	1277.2	1110.8	928.2	752.7	598.5	319.6
40°	1737.8	1719.5	1657.6	1558.2	1427.4	1274.2	1102.7	916.1	732.4	569.1	278.0
42.5°	1750.0	1729.7	1663.7	1570.4	1423.3	1266.1	1090.6	900.9	710.1	543.8	238.4
45°	1756.1	1734.7	1664.7	1560.3	1416.2	1250.8	1072.3	881.6	685.8	509.3	198.8
47.5°	1753.0	1729.7	1659.7	1549.1	1403.0	1234.6	1052.0	858.2	656.4	478.8	161.3
50°	1747.9	1723.6	1648.5	1534.9	1384.8	1214.3	1029.7	829.8	625.9	441.3	127.8
52.5°	1731.7	1707.4	1636.3	1514.6	1363.5	1191.0	999.3	800.4	593.5	404.8	97.4
55°	1711.4	1689.1	1615.0	1496.3	1336.1	1162.6	970.8	769.0	562.0	367.2	70.0
57.5°	1680.0	1659.7	1588.7	1466.9	1308.7	1131.1	939.4	734.5	522.5	329.7	48.7
60°	1641.4	1621.1	1552.1	1433.4	1277.2	1095.6	904.9	699.0	486.9	292.2	30.4
62.5°	1600.8	1581.6	1509.5	1391.9	1237.7	1058.1	867.4	663.5	449.4	257.7	18.3
65°	1547.1	1528.8	1463.9	1342.1	1194.0	1017.5	825.8	620.9	410.9	219.1	10.1
67.5°	1490.3	1474.0	1408.1	1296.5	1143.3	972.9	783.2	579.3	370.3	185.6	5.1
70°	1429.4	1409.1	1348.2	1234.6	1091.6	922.2	736.5	536.7	331.7	153.2	0.0
72.5°	1358.4	1343.2	1284.3	1176.8	1031.7	868.4	688.8	490.0	289.1	121.7	1.0
75°	1289.4	1270.1	1216.4	1114.9	972.9	811.6	636.1	446.4	247.5	93.3	1.0
77.5°	1200.1	1194.0	1143.3	1044.9	917.1	756.8	578.2	393.6	208.0	67.0	1.0
80°	1110.8	1104.8	1065.2	974.9	852.2	691.9	524.5	343.9	169.4	44.6	1.0
82.5°	1022.6	1014.5	976.9	901.9	786.2	637.1	468.7	294.2	133.9	27.4	1.0
85°	943.5	933.3	892.7	823.8	718.2	575.2	410.9	245.5	99.4	15.2	2.0
87.5°	875.5	868.4	823.8	752.7	649.3	517.4	360.1	198.8	70.0	7.1	3.0
90°	817.7	802.4	762.9	687.8	584.3	453.5	306.4	159.3	46.7	4.1	4.1
92.5°	760.9	747.7	704.0	626.9	526.5	398.7	254.6	121.7	29.4	2.0	5.1
95°	702.0	687.8	645.2	574.2	467.7	342.9	209.0	89.3	16.2	2.0	5.1
97.5°	644.2	631.0	586.4	515.4	414.9	294.2	165.4	62.9	8.1	2.0	4.1
100°	590.4	575.2	534.6	463.6	362.2	245.5	127.8	40.6	5.1	2.0	4.1
102.5°	533.6	521.4	479.8	410.9	307.4	199.9	95.4	25.4	2.0	2.0	3.0
105°	482.9	467.7	427.1	356.1	261.7	157.2	67.0	15.2	2.0	2.0	3.0



TEST NUMBER: P551378

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-94-ED1D

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	314.5	302.3	266.8	207.0	132.9	61.9	18.3	3.0	3.0	3.0	3.0
115°	262.7	244.5	213.0	160.3	98.4	40.6	9.1	3.0	3.0	3.0	3.0
117.5°	210.0	194.8	172.5	121.7	64.9	26.4	5.1	3.0	3.0	3.0	3.0
120°	164.3	150.1	124.8	84.2	43.6	15.2	2.0	3.0	3.0	3.0	3.0
122.5°	117.7	106.5	84.2	54.8	26.4	7.1	3.0	3.0	4.1	4.1	3.0
125°	78.1	72.0	55.8	33.5	16.2	3.0	3.0	3.0	4.1	4.1	3.0
127.5°	50.7	45.7	32.5	19.3	7.1	3.0	3.0	4.1	4.1	4.1	3.0
130°	28.4	25.4	19.3	11.2	3.0	3.0	3.0	4.1	4.1	4.1	3.0
132.5°	16.2	15.2	10.1	2.0	3.0	3.0	3.0	4.1	4.1	4.1	4.1
135°	4.1	2.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	4.1
137.5°	1.0	1.0	2.0	2.0	3.0	3.0	4.1	5.1	5.1	5.1	4.1
140°	1.0	1.0	2.0	3.0	3.0	3.0	4.1	5.1	5.1	5.1	4.1
142.5°	1.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	4.1	4.1
145°	1.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	4.1	4.1	4.1
147.5°	2.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	4.1	4.1
150°	1.0	2.0	2.0	3.0	4.1	4.1	4.1	5.1	4.1	4.1	4.1
152.5°	1.0	2.0	2.0	3.0	4.1	4.1	4.1	5.1	4.1	4.1	4.1
155°	2.0	2.0	2.0	3.0	4.1	4.1	4.1	5.1	4.1	4.1	5.1
157.5°	2.0	2.0	2.0	3.0	4.1	4.1	4.1	5.1	4.1	4.1	5.1
160°	2.0	2.0	2.0	3.0	3.0	4.1	4.1	4.1	4.1	4.1	4.1
162.5°	2.0	2.0	2.0	3.0	3.0	4.1	4.1	4.1	4.1	4.1	4.1
165°	2.0	2.0	2.0	2.0	3.0	3.0	4.1	4.1	4.1	4.1	4.1
167.5°	2.0	2.0	2.0	3.0	3.0	3.0	4.1	4.1	4.1	4.1	4.1
170°	2.0	2.0	2.0	3.0	3.0	3.0	4.1	5.1	5.1	5.1	5.1
172.5°	2.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	5.1	5.1
175°	2.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	5.1	5.1
177.5°	1.0	2.0	2.0	3.0	3.0	4.1	4.1	5.1	5.1	5.1	4.1
180°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0



TEST NUMBER: P551378

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-94-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	796.4	796.4	796.4
2.5°	757.8	743.6	739.6
5°	717.2	693.9	680.7
7.5°	676.7	645.2	630.0
10°	639.1	594.5	578.2
12.5°	594.5	542.7	517.4
15°	551.9	484.9	460.6
17.5°	504.2	429.1	400.7
20°	459.6	373.3	343.9
22.5°	408.8	318.5	286.1
25°	363.2	263.8	227.2
27.5°	312.5	208.0	176.5
30°	264.8	159.3	127.8
32.5°	219.1	116.7	88.3
35°	176.5	79.1	55.8
37.5°	135.9	48.7	28.4
40°	98.4	25.4	13.2
42.5°	65.9	12.2	7.1
45°	40.6	6.1	0.0
47.5°	23.3	0.0	0.0
50°	12.2	0.0	0.0
52.5°	5.1	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	4.1	5.1
82.5°	4.1	5.1	5.1
85°	4.1	5.1	6.1
87.5°	5.1	6.1	7.1
90°	6.1	7.1	7.1
92.5°	6.1	8.1	8.1
95°	7.1	8.1	9.1
97.5°	8.1	9.1	9.1
100°	7.1	9.1	10.1
102.5°	6.1	9.1	9.1
105°	5.1	7.1	8.1





TEST NUMBER: P551378

CATALOG NUMBER: FCC-X-2-LD4-2HI-40-UNV-93-94-ED1D

**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	4.1	5.1	5.1
115°	3.0	4.1	5.1
117.5°	3.0	4.1	4.1
120°	3.0	3.0	4.1
122.5°	3.0	3.0	4.1
125°	3.0	3.0	4.1
127.5°	4.1	3.0	3.0
130°	3.0	3.0	3.0
132.5°	4.1	3.0	3.0
135°	4.1	3.0	3.0
137.5°	4.1	3.0	3.0
140°	4.1	3.0	3.0
142.5°	4.1	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°	4.1	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°	426.1	413.9	373.3	306.4	214.1	119.7	44.6	8.1	2.0	3.0	3.0
110°	371.3	361.2	319.6	254.6	172.5	89.3	29.4	5.1	3.0	3.0	3.0







107.5°	4.1	6.1	7.1
110°	4.1	5.1	6.1



(END OF REPORT)