

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: P551445

Luminaire Tested: **FCC-X-2-LD4-2HI-50-UNV-93-97-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: P551445  
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-93-97-ED1D-90  
Description: FCC CORNER MOUNT LUMINAIRE WITH .156 CLEAR TEMPERED GLASS FIXTURE  
SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES AND 5000K,  
AND 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

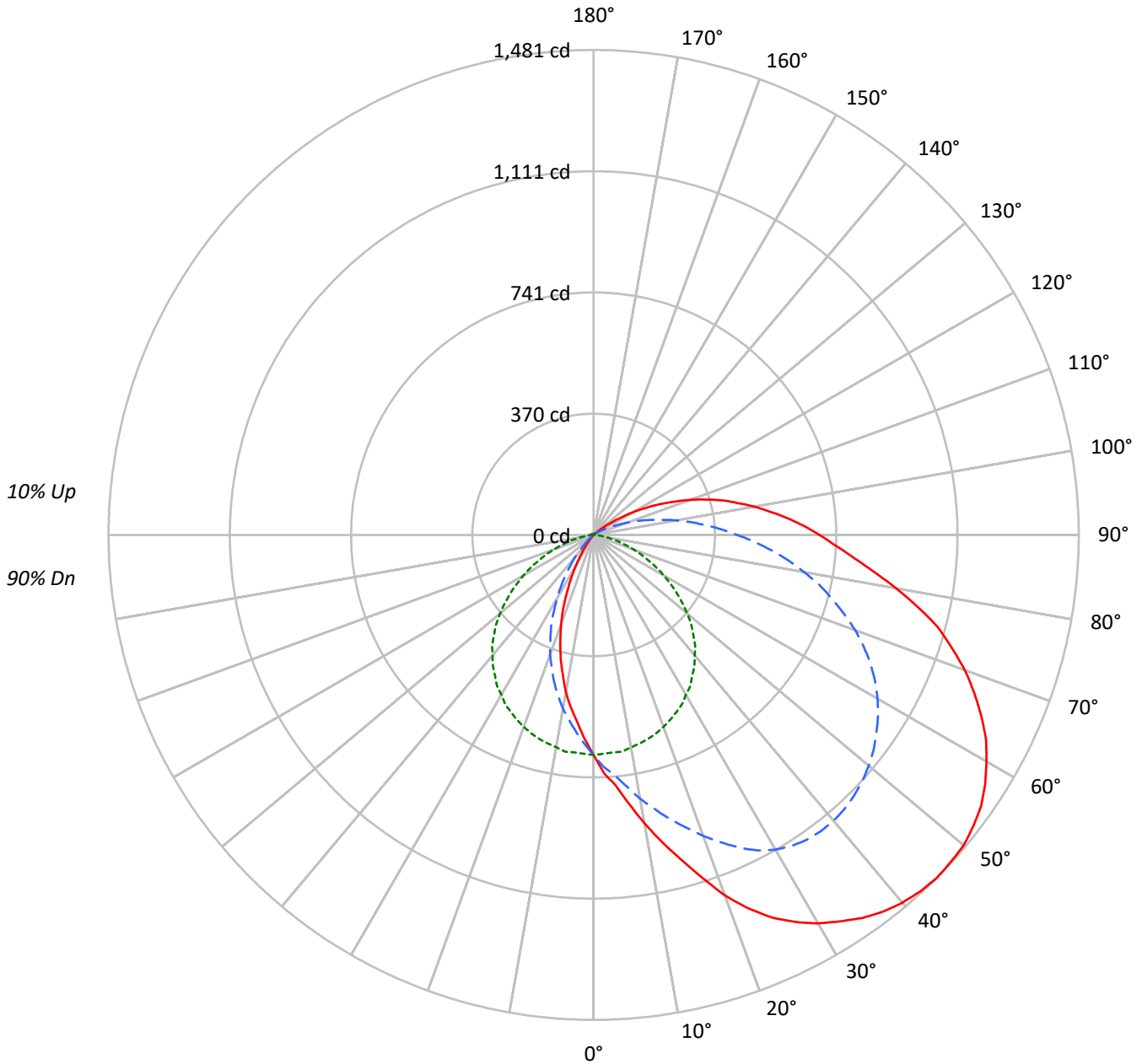
Lumens per Lamp: N/A  
Luminaire Lumens: 3321.0 lumens  
Efficiency: N/A  
Efficacy: 76.7 lumens/watt  
Spacing Criteria (0/90/45): 1.66 / 1.25 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.5' x H: 0.25')  
CIE Type: Semi-Direct

Input Watts (W): 43.3  
Input Voltage (V): NR  
Input Current (A<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

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CATALOG NUMBER: FCC-X-2-LD4-2HI-50-UNV-93-97-ED1D-90

### 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°	7231	7231	7231
5°	7937	7125	5944
10°	8983	7038	4900
15°	10066	6948	3818
20°	11353	6835	2811
25°	12420	6703	1846
30°	13213	6528	1040
35°	13900	6339	458
40°	14510	6106	110
45°	15033	5813	0
50°	15471	5425	0
55°	15805	4933	0
60°	15974	4362	0
65°	16039	3712	0
70°	15985	3027	0
75°	15782	2232	13
80°	15143	1367	69
85°	14636	651	94



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.3	1.9
10°-20°	192.7	5.8
20°-30°	312.0	9.4
30°-40°	400.8	12.1
40°-50°	453.7	13.7
50°-60°	470.0	14.2
60°-70°	443.3	13.3
70°-80°	371.5	11.2
80°-90°	269.3	8.1
90°-100°	177.0	5.3
100°-110°	102.2	3.1
110°-120°	45.1	1.4
120°-130°	12.2	0.4
130°-140°	2.8	0.1
140°-150°	1.8	0.1
150°-160°	1.3	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
0°-30°	569.0	17.1
0°-40°	969.8	29.2
0°-60°	1893.5	57.0
0°-90°	2977.6	89.7
90°-120°	324.3	9.8
90°-150°	341.2	10.3
90°-180°	343.0	10.3
0°-180°	3321.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	672	672	672	672	672	
5°	767	736	667	605	574	77
15°	1024	898	644	466	388	295
25°	1290	1054	597	306	192	596
35°	1428	1136	525	149	47	896
45°	1481	1125	430	34	0	1144
55°	1444	1054	310	0	0	1289
65°	1305	933	185	0	0	1291
75°	1088	753	79	1	1	1141
85°	796	546	13	3	5	680
90°	690	438	3	5	6	378
95°	592	342	2	6	8	465
105°	407	177	2	4	7	430
115°	222	59	3	3	4	222
125°	66	8	3	3	3	66
135°	3	3	4	3	3	6
145°	1	3	3	3	3	1
155°	2	3	3	3	1	1
165°	2	3	3	3	0	0
175°	2	3	4	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°	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8	671.8
2.5°	728.2	727.4	724.8	720.5	714.5	704.3	695.7	688.0	677.7	669.2	652.9
5°	766.7	762.5	759.0	754.8	741.1	731.7	716.3	699.1	682.9	666.6	634.1
7.5°	828.4	821.5	816.4	804.4	785.6	764.2	740.2	724.0	712.8	667.5	611.9
10°	894.3	888.3	878.0	856.6	833.5	802.7	768.5	729.9	695.7	658.1	592.2
12.5°	959.3	950.7	936.2	908.8	876.3	837.8	790.7	745.4	696.6	652.1	569.1
15°	1024.3	1014.9	999.5	966.1	923.3	872.9	815.5	758.2	700.9	644.4	545.1
17.5°	1095.4	1082.5	1059.4	1021.8	967.8	905.4	837.8	768.5	699.1	635.0	519.4
20°	1171.5	1153.5	1128.7	1078.2	1014.9	941.3	860.0	778.7	698.3	623.8	490.3
22.5°	1234.8	1216.9	1189.5	1137.3	1061.1	971.3	878.8	785.6	694.9	611.0	463.0
25°	1289.6	1275.1	1245.1	1185.2	1104.8	1002.9	896.8	790.7	689.7	597.3	433.9
27.5°	1332.4	1318.7	1285.3	1223.7	1141.6	1031.2	910.5	793.3	682.9	583.6	403.9
30°	1370.0	1356.4	1316.1	1252.8	1166.4	1053.4	924.2	794.1	674.3	563.1	371.4
32.5°	1399.1	1386.3	1345.2	1277.6	1183.5	1068.8	931.9	793.3	663.2	548.5	336.3
35°	1428.2	1415.4	1367.5	1295.6	1196.3	1075.7	937.9	789.0	649.5	524.6	302.9
37.5°	1450.5	1435.9	1387.2	1307.6	1202.3	1077.4	937.0	783.0	635.0	504.9	269.6
40°	1465.9	1450.5	1398.3	1314.4	1204.0	1074.8	930.2	772.7	617.8	480.1	234.5
42.5°	1476.2	1459.0	1403.4	1324.7	1200.6	1068.0	919.9	759.9	599.0	458.7	201.1
45°	1481.3	1463.3	1404.3	1316.1	1194.6	1055.1	904.5	743.6	578.5	429.6	167.7
47.5°	1478.7	1459.0	1400.0	1306.7	1183.5	1041.4	887.4	724.0	553.7	403.9	136.1
50°	1474.4	1453.9	1390.6	1294.7	1168.1	1024.3	868.6	700.0	528.0	372.2	107.8
52.5°	1460.8	1440.2	1380.3	1277.6	1150.1	1004.6	842.9	675.2	500.6	341.4	82.2
55°	1443.6	1424.8	1362.3	1262.2	1127.0	980.7	818.9	648.7	474.1	309.8	59.0
57.5°	1417.1	1400.0	1340.1	1237.4	1103.9	954.2	792.4	619.6	440.7	278.1	41.1
60°	1384.6	1367.5	1309.3	1209.2	1077.4	924.2	763.3	589.6	410.8	246.5	25.7
62.5°	1350.4	1334.1	1273.3	1174.1	1044.0	892.5	731.7	559.7	379.1	217.4	15.4
65°	1305.0	1289.6	1234.8	1132.1	1007.2	858.3	696.6	523.7	346.6	184.8	8.6
67.5°	1257.1	1243.4	1187.8	1093.6	964.4	820.7	660.6	488.6	312.3	156.6	4.3
70°	1205.7	1188.6	1137.3	1041.4	920.8	777.9	621.3	452.7	279.8	129.2	0.0
72.5°	1145.8	1133.0	1083.4	992.7	870.3	732.5	581.0	413.3	243.9	102.7	0.9
75°	1087.6	1071.4	1026.0	940.5	820.7	684.6	536.6	376.5	208.8	78.7	0.9
77.5°	1012.3	1007.2	964.4	881.4	773.6	638.4	487.8	332.0	175.4	56.5	0.9
80°	937.0	931.9	898.5	822.4	718.8	583.6	442.4	290.1	142.9	37.7	0.9
82.5°	862.6	855.7	824.1	760.8	663.2	537.4	395.4	248.2	113.0	23.1	0.9
85°	795.8	787.3	753.1	694.9	605.9	485.2	346.6	207.1	83.9	12.8	1.7
87.5°	738.5	732.5	694.9	635.0	547.7	436.4	303.8	167.7	59.0	6.0	2.6
90°	689.7	676.9	643.5	580.2	492.9	382.5	258.4	134.4	39.4	3.4	3.4
92.5°	641.8	630.7	593.9	528.8	444.1	336.3	214.8	102.7	24.8	1.7	4.3
95°	592.2	580.2	544.3	484.4	394.5	289.2	176.3	75.3	13.7	1.7	4.3
97.5°	543.4	532.3	494.6	434.7	350.0	248.2	139.5	53.1	6.8	1.7	3.4
100°	498.0	485.2	451.0	391.1	305.5	207.1	107.8	34.2	4.3	1.7	3.4
102.5°	450.1	439.9	404.8	346.6	259.3	168.6	80.4	21.4	1.7	1.7	2.6
105°	407.3	394.5	360.3	300.4	220.8	132.6	56.5	12.8	1.7	1.7	2.6



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
112.5°	265.3	255.0	225.1	174.6	112.1	52.2	15.4	2.6	2.6	2.6	2.6
115°	221.6	206.2	179.7	135.2	83.0	34.2	7.7	2.6	2.6	2.6	2.6
117.5°	177.1	164.3	145.5	102.7	54.8	22.2	4.3	2.6	2.6	2.6	2.6
120°	138.6	126.7	105.3	71.0	36.8	12.8	1.7	2.6	2.6	2.6	2.6
122.5°	99.3	89.9	71.0	46.2	22.2	6.0	2.6	2.6	3.4	3.4	2.6
125°	65.9	60.8	47.1	28.2	13.7	2.6	2.6	2.6	3.4	3.4	2.6
127.5°	42.8	38.5	27.4	16.3	6.0	2.6	2.6	3.4	3.4	3.4	2.6
130°	24.0	21.4	16.3	9.4	2.6	2.6	2.6	3.4	3.4	3.4	2.6
132.5°	13.7	12.8	8.6	1.7	2.6	2.6	2.6	3.4	3.4	3.4	3.4
135°	3.4	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	3.4
137.5°	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	4.3	4.3	3.4
140°	0.9	0.9	1.7	2.6	2.6	2.6	3.4	4.3	4.3	4.3	3.4
142.5°	0.9	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	3.4	3.4
145°	0.9	1.7	1.7	2.6	2.6	3.4	3.4	4.3	3.4	3.4	3.4
147.5°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	3.4	3.4
150°	0.9	1.7	1.7	2.6	3.4	3.4	3.4	4.3	3.4	3.4	3.4
152.5°	0.9	1.7	1.7	2.6	3.4	3.4	3.4	4.3	3.4	3.4	3.4
155°	1.7	1.7	1.7	2.6	3.4	3.4	3.4	4.3	3.4	3.4	4.3
157.5°	1.7	1.7	1.7	2.6	3.4	3.4	3.4	4.3	3.4	3.4	4.3
160°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	3.4	3.4	3.4	3.4
162.5°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	3.4	3.4	3.4	3.4
165°	1.7	1.7	1.7	1.7	2.6	2.6	3.4	3.4	3.4	3.4	3.4
167.5°	1.7	1.7	1.7	2.6	2.6	2.6	3.4	3.4	3.4	3.4	3.4
170°	1.7	1.7	1.7	2.6	2.6	2.6	3.4	4.3	4.3	4.3	4.3
172.5°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	4.3	4.3
175°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	4.3	4.3
177.5°	0.9	1.7	1.7	2.6	2.6	3.4	3.4	4.3	4.3	4.3	3.4
180°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	671.8	671.8	671.8
2.5°	639.2	627.3	623.8
5°	605.0	585.3	574.2
7.5°	570.8	544.3	531.4
10°	539.1	501.5	487.8
12.5°	501.5	457.8	436.4
15°	465.5	409.0	388.5
17.5°	425.3	362.0	338.0
20°	387.7	314.9	290.1
22.5°	344.9	268.7	241.3
25°	306.4	222.5	191.7
27.5°	263.6	175.4	148.9
30°	223.3	134.4	107.8
32.5°	184.8	98.4	74.4
35°	148.9	66.7	47.1
37.5°	114.7	41.1	24.0
40°	83.0	21.4	11.1
42.5°	55.6	10.3	6.0
45°	34.2	5.1	0.0
47.5°	19.7	0.0	0.0
50°	10.3	0.0	0.0
52.5°	4.3	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°	0.9	0.9	0.9
77.5°	0.9	1.7	2.6
80°	1.7	3.4	4.3
82.5°	3.4	4.3	4.3
85°	3.4	4.3	5.1
87.5°	4.3	5.1	6.0
90°	5.1	6.0	6.0
92.5°	5.1	6.8	6.8
95°	6.0	6.8	7.7
97.5°	6.8	7.7	7.7
100°	6.0	7.7	8.6
102.5°	5.1	7.7	7.7
105°	4.3	6.0	6.8





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
112.5°	3.4	4.3	4.3
115°	2.6	3.4	4.3
117.5°	2.6	3.4	3.4
120°	2.6	2.6	3.4
122.5°	2.6	2.6	3.4
125°	2.6	2.6	3.4
127.5°	3.4	2.6	2.6
130°	2.6	2.6	2.6
132.5°	3.4	2.6	2.6
135°	3.4	2.6	2.6
137.5°	3.4	2.6	2.6
140°	3.4	2.6	2.6
142.5°	3.4	2.6	2.6
145°	2.6	2.6	2.6
147.5°	2.6	2.6	2.6
150°	2.6	2.6	1.7
152.5°	2.6	1.7	1.7
155°	2.6	1.7	0.9
157.5°	3.4	1.7	0.9
160°	2.6	1.7	0.9
162.5°	2.6	1.7	0.9
165°	2.6	1.7	0.0
167.5°	2.6	1.7	0.9
170°	2.6	1.7	0.9
172.5°	2.6	1.7	0.9
175°	2.6	0.9	0.9
177.5°	2.6	0.9	0.9
180°	2.6	2.6	2.6



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







107.5°	359.4	349.1	314.9	258.4	180.6	101.0	37.7	6.8	1.7	2.6	2.6
110°	313.2	304.6	269.6	214.8	145.5	75.3	24.8	4.3	2.6	2.6	2.6







107.5°	3.4	5.1	6.0
110°	3.4	4.3	5.1



(END OF REPORT)