

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P688133

Luminaire Tested: FLR-HA-24-L3C3 (MED)-50-CP250

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688133  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-HA-24-L3C3 (MED)-50-CP250  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 5000K Luminaire at Medium Lumen setting for High Abuse  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

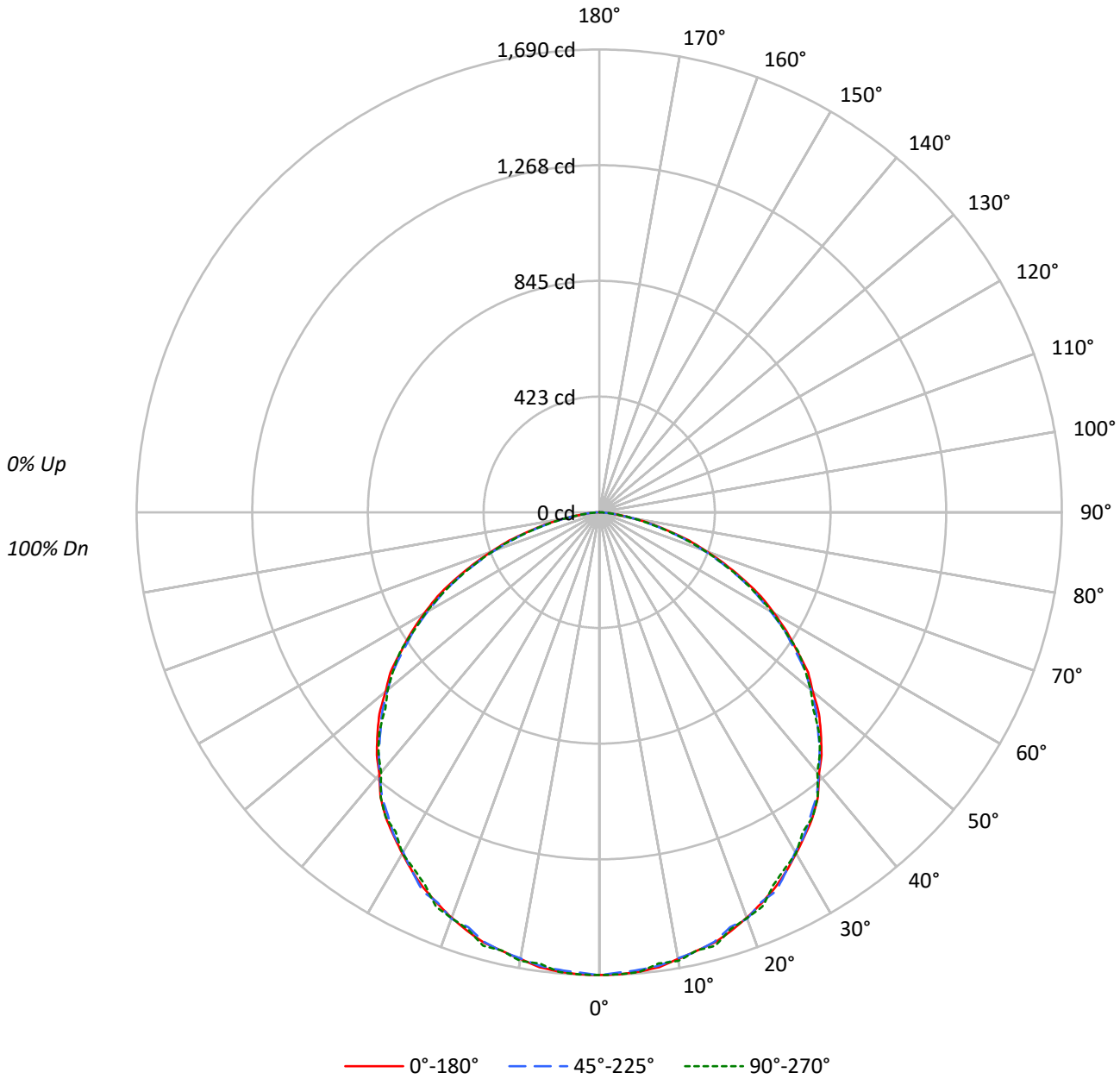
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4684.0 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.26 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.7  
Input Voltage (V): 120  
Input Current (Ain): 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: 24 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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2274	2274	2274
5°	2274	2266	2276
10°	2263	2261	2273
15°	2266	2263	2283
20°	2256	2262	2258
25°	2250	2266	2232
30°	2235	2227	2234
35°	2233	2214	2233
40°	2194	2192	2177
45°	2179	2151	2161
50°	2130	2113	2111
55°	2069	2039	2081
60°	1984	1940	1962
65°	1850	1810	1812
70°	1639	1593	1611
75°	1349	1298	1316
80°	946	925	939
85°	485	457	457

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2179 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.8	3.4
10°-20°	458.4	9.8
20°-30°	696.9	14.9
30°-40°	842.9	18.0
40°-50°	873.4	18.6
50°-60°	779.7	16.6
60°-70°	559.9	12.0
70°-80°	268.5	5.7
80°-90°	44.6	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1315.1	28.1
0°-40°	2158.0	46.1
0°-60°	3811.1	81.4
0°-90°	4684.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4684.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1690	1690	1690	1690	1690	
5°	1684	1689	1677	1678	1685	160
15°	1627	1629	1624	1624	1639	459
25°	1516	1512	1526	1508	1503	698
35°	1360	1349	1348	1342	1360	848
45°	1145	1137	1130	1130	1136	882
55°	882	872	869	867	887	790
65°	581	564	568	560	569	575
75°	260	242	250	250	253	280
85°	31	30	30	30	30	46
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1689.9	1689.9	1689.9	1689.9	1689.9
2.5°	1689.0	1690.8	1682.7	1680.9	1689.0
5°	1683.6	1689.0	1677.4	1678.2	1685.4
7.5°	1675.6	1672.0	1670.2	1676.5	1662.1
10°	1656.7	1664.8	1654.9	1650.4	1663.9
12.5°	1640.5	1641.4	1642.3	1644.1	1639.6
15°	1627.1	1628.9	1624.4	1624.4	1638.7
17.5°	1602.8	1606.4	1589.4	1600.1	1596.5
20°	1575.9	1572.3	1579.5	1576.8	1576.8
22.5°	1546.3	1546.3	1542.7	1544.5	1558.8
25°	1515.7	1512.1	1526.5	1507.6	1503.2
27.5°	1478.9	1475.3	1478.9	1469.0	1467.2
30°	1438.5	1429.5	1433.1	1434.0	1437.6
32.5°	1399.0	1390.0	1396.3	1390.0	1383.7
35°	1359.5	1348.7	1347.8	1342.4	1359.5
37.5°	1311.9	1300.2	1304.7	1287.6	1311.0
40°	1249.0	1241.9	1248.1	1242.7	1239.2
42.5°	1202.3	1194.3	1191.6	1188.0	1193.4
45°	1144.9	1136.8	1130.5	1129.6	1135.9
47.5°	1089.2	1068.5	1073.9	1065.9	1058.7
50°	1017.4	1012.0	1009.3	1001.2	1008.4
52.5°	961.7	941.9	946.4	939.2	947.3
55°	881.8	871.9	869.2	867.4	887.2
57.5°	812.6	800.1	801.9	797.4	800.1
60°	737.2	725.5	721.0	720.1	729.1
62.5°	666.3	642.0	645.6	644.7	649.2
65°	581.0	563.9	568.4	560.3	569.3
67.5°	499.3	482.2	484.0	482.2	486.7
70°	416.6	397.8	405.0	401.4	409.5
72.5°	344.8	322.4	328.6	322.4	329.5
75°	259.5	242.4	249.6	249.6	253.2
77.5°	191.3	176.0	181.4	179.6	183.2
80°	122.1	115.8	119.4	116.7	121.2
82.5°	70.0	65.5	65.5	67.3	68.2
85°	31.4	29.6	29.6	29.6	29.6
87.5°	8.1	8.1	8.1	8.1	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)