

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: P688394

Luminaire Tested: FLR-HA-24-55-50-CA125

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688394  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2303-938-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-HA-24-55-50-CA125  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 5000K Luminaire for High Abuse  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

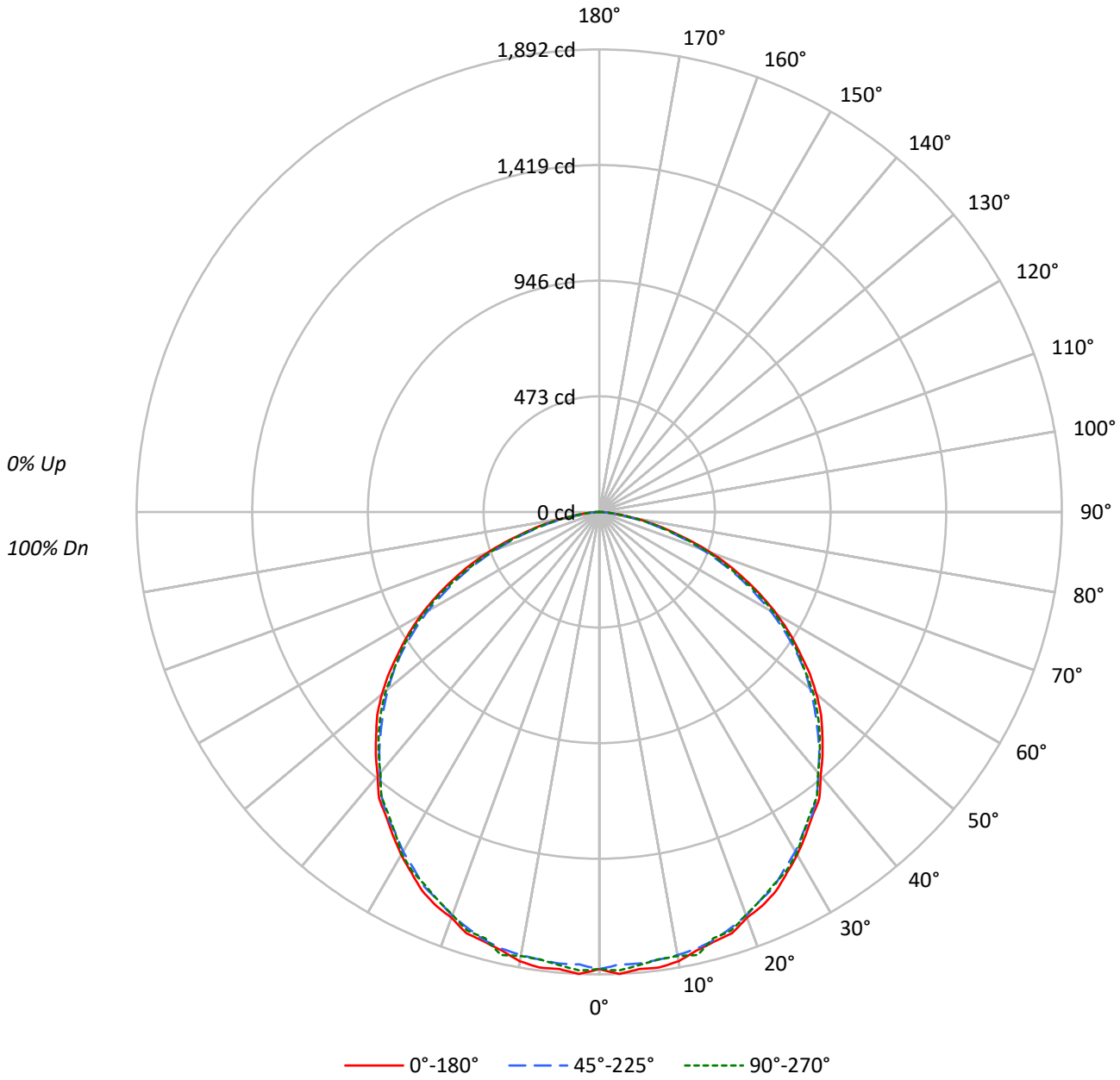
Lumens per Lamp: N/A  
Luminaire Lumens: 5254.9 lumens  
Efficiency: N/A  
Efficacy: 112.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

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

	0°	45°	90°
0°	2517	2517	2517
5°	2535	2506	2514
10°	2550	2516	2521
15°	2534	2527	2515
20°	2529	2516	2512
25°	2540	2512	2501
30°	2516	2493	2509
35°	2496	2490	2473
40°	2475	2449	2445
45°	2455	2403	2425
50°	2429	2359	2385
55°	2343	2290	2316
60°	2259	2173	2221
65°	2111	1994	2042
70°	1907	1751	1829
75°	1559	1427	1476
80°	1118	1001	1045
85°	611	525	539

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2455 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.3	3.4
10°-20°	511.1	9.7
20°-30°	777.8	14.8
30°-40°	943.2	17.9
40°-50°	980.6	18.7
50°-60°	876.4	16.7
60°-70°	631.8	12.0
70°-80°	304.4	5.8
80°-90°	52.1	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°	1466.3	27.9
0°-40°	2409.5	45.9
0°-60°	4266.5	81.2
0°-90°	5254.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5254.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1870	1870	1870	1870	1870	
5°	1877	1861	1855	1865	1861	179
15°	1820	1806	1814	1802	1805	515
25°	1711	1685	1692	1684	1685	786
35°	1520	1502	1516	1506	1505	953
45°	1290	1273	1263	1269	1274	996
55°	999	986	976	973	988	896
65°	663	647	626	631	641	656
75°	300	292	274	277	284	323
85°	40	37	34	35	35	55
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1870.4	1870.4	1870.4	1870.4	1870.4
2.5°	1892.1	1877.0	1853.4	1864.7	1877.9
5°	1877.0	1861.0	1855.3	1864.7	1861.0
7.5°	1879.8	1855.3	1847.8	1858.1	1846.8
10°	1866.6	1844.9	1841.2	1845.9	1844.9
12.5°	1838.3	1833.6	1830.8	1823.2	1856.3
15°	1819.5	1806.3	1813.8	1802.5	1805.3
17.5°	1807.2	1776.1	1785.5	1783.6	1795.9
20°	1766.6	1759.1	1757.2	1751.6	1754.4
22.5°	1744.0	1726.1	1720.4	1718.5	1720.4
25°	1711.0	1684.6	1692.1	1683.6	1684.6
27.5°	1663.8	1634.6	1644.0	1643.1	1656.3
30°	1619.5	1597.8	1604.4	1598.8	1614.8
32.5°	1569.5	1550.7	1553.5	1552.5	1554.4
35°	1519.5	1502.5	1515.8	1506.3	1505.4
37.5°	1479.0	1445.0	1462.9	1452.6	1463.9
40°	1409.2	1396.0	1394.1	1387.5	1392.2
42.5°	1351.6	1334.7	1331.8	1335.6	1335.6
45°	1290.3	1273.3	1263.0	1268.6	1274.3
47.5°	1230.9	1209.2	1196.0	1198.8	1210.1
50°	1160.2	1131.9	1127.1	1130.9	1139.4
52.5°	1083.8	1061.1	1054.5	1053.6	1057.3
55°	998.9	985.7	976.2	973.4	987.5
57.5°	922.5	902.7	891.3	896.1	909.3
60°	839.5	817.8	807.4	811.2	825.3
62.5°	752.7	731.0	715.0	722.5	738.5
65°	663.1	647.0	626.3	631.0	641.4
67.5°	576.3	558.4	536.7	539.5	550.8
70°	484.8	465.9	445.2	449.9	465.0
72.5°	388.6	376.3	357.5	359.4	372.6
75°	299.9	291.5	274.5	277.3	283.9
77.5°	222.6	211.3	198.1	200.9	209.4
80°	144.3	140.5	129.2	131.1	134.9
82.5°	82.1	82.1	77.3	75.5	80.2
85°	39.6	36.8	34.0	34.9	34.9
87.5°	9.4	10.4	9.4	8.5	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)