

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: P688402

Luminaire Tested: FLR-HA-24-L3C3 (MED)-40-CA125

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688402  
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-L3C3 (MED)-40-CA125  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 4000K Luminaire at Medium Lumen setting for High Abuse  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

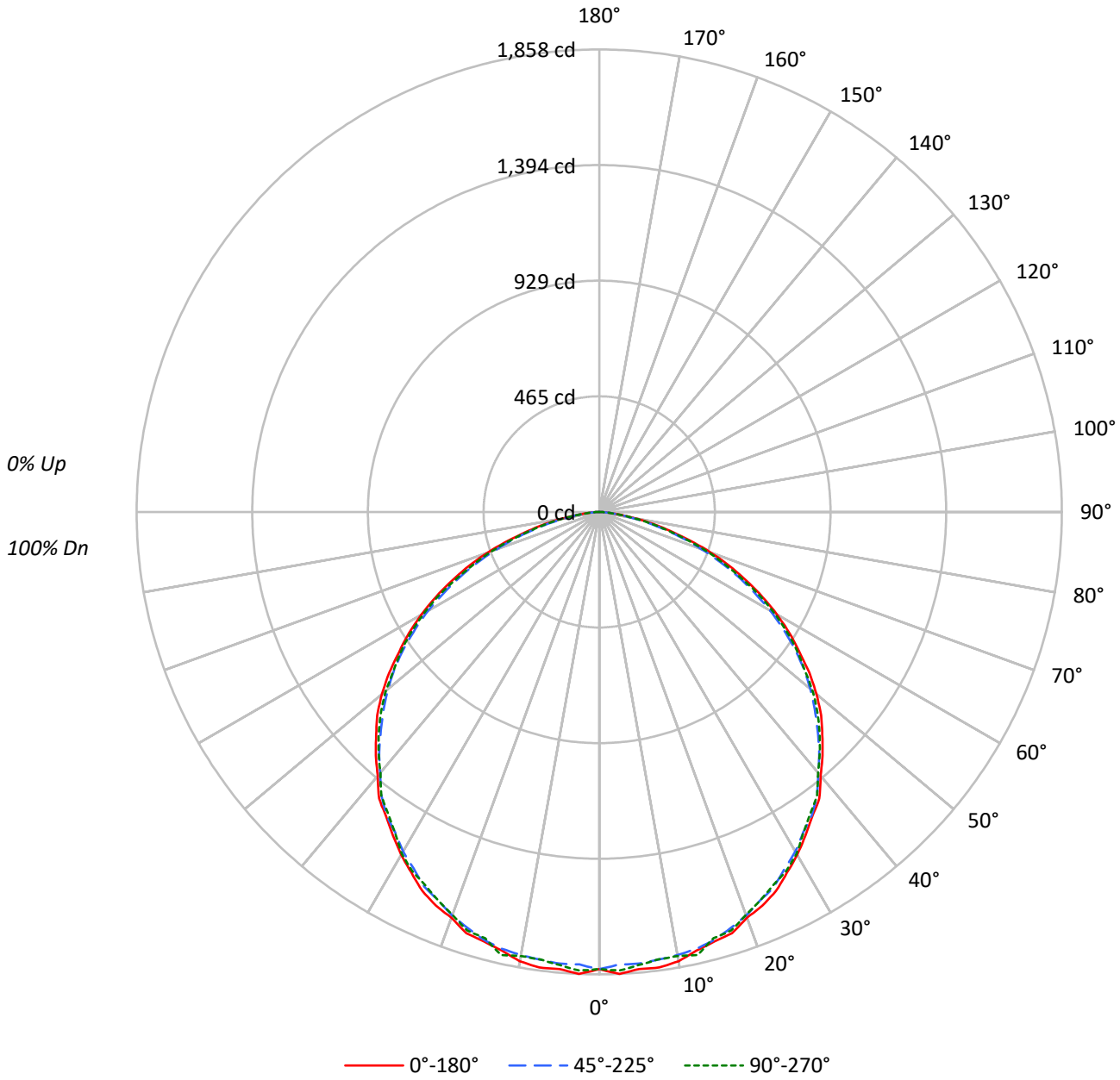
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5160.4 lumens  
Efficiency: N/A  
Efficacy: 134.0 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): 38.5  
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°	2471	2471	2471
5°	2489	2461	2468
10°	2504	2470	2475
15°	2489	2481	2469
20°	2484	2471	2467
25°	2494	2467	2456
30°	2471	2448	2464
35°	2451	2445	2428
40°	2431	2405	2401
45°	2411	2360	2381
50°	2385	2317	2342
55°	2301	2249	2275
60°	2218	2134	2181
65°	2073	1958	2005
70°	1873	1720	1796
75°	1531	1401	1449
80°	1098	983	1027
85°	601	514	530

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2411 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.2	3.4
10°-20°	501.9	9.7
20°-30°	763.9	14.8
30°-40°	926.2	17.9
40°-50°	963.0	18.7
50°-60°	860.6	16.7
60°-70°	620.5	12.0
70°-80°	299.0	5.8
80°-90°	51.2	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°	1439.9	27.9
0°-40°	2366.2	45.9
0°-60°	4189.8	81.2
0°-90°	5160.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5160.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1837	1837	1837	1837	1837	
5°	1843	1828	1822	1831	1828	176
15°	1787	1774	1781	1770	1773	506
25°	1680	1654	1662	1653	1654	772
35°	1492	1476	1488	1479	1478	936
45°	1267	1250	1240	1246	1251	978
55°	981	968	959	956	970	879
65°	651	635	615	620	630	645
75°	294	286	270	272	279	317
85°	39	36	33	34	34	54
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1836.8	1836.8	1836.8	1836.8	1836.8
2.5°	1858.1	1843.2	1820.1	1831.2	1844.2
5°	1843.2	1827.5	1821.9	1831.2	1827.5
7.5°	1846.0	1821.9	1814.5	1824.7	1813.6
10°	1833.1	1811.7	1808.0	1812.7	1811.7
12.5°	1805.3	1800.6	1797.9	1790.4	1822.9
15°	1786.7	1773.8	1781.2	1770.1	1772.8
17.5°	1774.7	1744.1	1753.4	1751.5	1763.6
20°	1734.9	1727.5	1725.6	1720.0	1722.8
22.5°	1712.6	1695.0	1689.5	1687.6	1689.5
25°	1680.2	1654.3	1661.7	1653.4	1654.3
27.5°	1633.9	1605.2	1614.5	1613.5	1626.5
30°	1590.4	1569.1	1575.6	1570.0	1585.7
32.5°	1541.3	1522.8	1525.5	1524.6	1526.5
35°	1492.2	1475.5	1488.5	1479.2	1478.3
37.5°	1452.4	1419.0	1436.6	1426.4	1437.5
40°	1383.8	1370.9	1369.0	1362.5	1367.1
42.5°	1327.3	1310.6	1307.9	1311.6	1311.6
45°	1267.1	1250.4	1240.3	1245.8	1251.4
47.5°	1208.8	1187.5	1174.5	1177.3	1188.4
50°	1139.3	1111.5	1106.9	1110.6	1118.9
52.5°	1064.3	1042.0	1035.5	1034.6	1038.3
55°	980.9	967.9	958.7	955.9	969.8
57.5°	905.9	886.4	875.3	879.9	892.9
60°	824.4	803.1	792.9	796.6	810.5
62.5°	739.1	717.8	702.1	709.5	725.3
65°	651.2	635.4	615.0	619.7	629.9
67.5°	565.9	548.3	527.0	529.8	540.9
70°	476.1	457.6	437.2	441.8	456.6
72.5°	381.6	369.6	351.0	352.9	365.9
75°	294.5	286.2	269.5	272.3	278.8
77.5°	218.6	207.5	194.5	197.3	205.6
80°	141.7	138.0	126.9	128.7	132.5
82.5°	80.6	80.6	76.0	74.1	78.7
85°	38.9	36.1	33.3	34.3	34.3
87.5°	9.3	10.2	9.3	8.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)