

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: P688430

Luminaire Tested: FLR-MC-24-L3C3 (LOW)-50-CA125

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688430  
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-MC-24-L3C3 (LOW)-50-CA125  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 5000K Luminaire at Low Lumen setting for Medical/Cleanroom  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

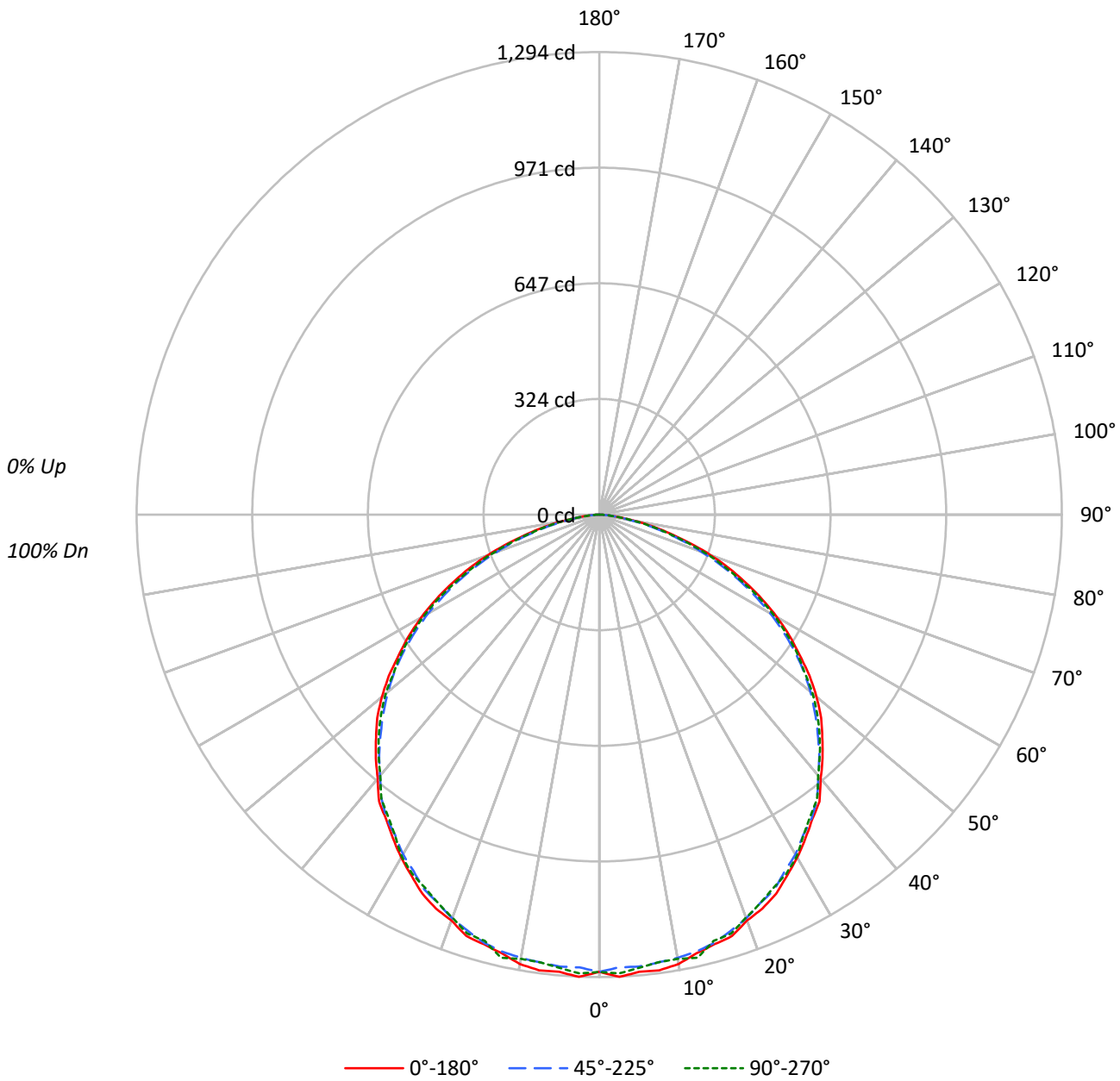
Lumens per Lamp: N/A  
Luminaire Lumens: 3594.9 lumens  
Efficiency: N/A  
Efficacy: 129.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 27.8  
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  | 50  | 30 | 10 |
| 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°  | 1722 | 1722 | 1722 |
| 5°  | 1734 | 1714 | 1719 |
| 10° | 1745 | 1721 | 1724 |
| 15° | 1734 | 1728 | 1720 |
| 20° | 1730 | 1721 | 1718 |
| 25° | 1738 | 1719 | 1711 |
| 30° | 1721 | 1705 | 1716 |
| 35° | 1707 | 1703 | 1691 |
| 40° | 1693 | 1675 | 1673 |
| 45° | 1680 | 1644 | 1659 |
| 50° | 1661 | 1614 | 1632 |
| 55° | 1603 | 1567 | 1585 |
| 60° | 1545 | 1486 | 1519 |
| 65° | 1444 | 1364 | 1397 |
| 70° | 1305 | 1198 | 1251 |
| 75° | 1067 | 976  | 1010 |
| 80° | 765  | 685  | 715  |
| 85° | 418  | 358  | 369  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1680 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 121.3  | 3.4       |
| 10°-20°   | 349.7  | 9.7       |
| 20°-30°   | 532.1  | 14.8      |
| 30°-40°   | 645.2  | 17.9      |
| 40°-50°   | 670.8  | 18.7      |
| 50°-60°   | 599.5  | 16.7      |
| 60°-70°   | 432.2  | 12.0      |
| 70°-80°   | 208.3  | 5.8       |
| 80°-90°   | 35.6   | 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°    | 1003.1 | 27.9      |
| 0°-40°    | 1648.3 | 45.9      |
| 0°-60°    | 2918.7 | 81.2      |
| 0°-90°    | 3594.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3594.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1280 | 1280  | 1280 | 1280  | 1280 |      |
| 5°  | 1284 | 1273  | 1269 | 1276  | 1273 | 123  |
| 15° | 1245 | 1236  | 1241 | 1233  | 1235 | 352  |
| 25° | 1170 | 1152  | 1158 | 1152  | 1152 | 538  |
| 35° | 1040 | 1028  | 1037 | 1030  | 1030 | 652  |
| 45° | 883  | 871   | 864  | 868   | 872  | 681  |
| 55° | 683  | 674   | 668  | 666   | 676  | 613  |
| 65° | 454  | 443   | 428  | 432   | 439  | 449  |
| 75° | 205  | 199   | 188  | 190   | 194  | 221  |
| 85° | 27   | 25    | 23   | 24    | 24   | 38   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1279.5 | 1279.5 | 1279.5 | 1279.5 | 1279.5 |
| 2.5°  | 1294.4 | 1284.0 | 1267.9 | 1275.7 | 1284.7 |
| 5°    | 1284.0 | 1273.1 | 1269.2 | 1275.7 | 1273.1 |
| 7.5°  | 1286.0 | 1269.2 | 1264.0 | 1271.1 | 1263.4 |
| 10°   | 1276.9 | 1262.1 | 1259.5 | 1262.8 | 1262.1 |
| 12.5° | 1257.6 | 1254.4 | 1252.4 | 1247.3 | 1269.8 |
| 15°   | 1244.7 | 1235.7 | 1240.8 | 1233.1 | 1235.0 |
| 17.5° | 1236.3 | 1215.0 | 1221.5 | 1220.2 | 1228.6 |
| 20°   | 1208.5 | 1203.4 | 1202.1 | 1198.2 | 1200.2 |
| 22.5° | 1193.1 | 1180.8 | 1176.9 | 1175.6 | 1176.9 |
| 25°   | 1170.5 | 1152.4 | 1157.6 | 1151.8 | 1152.4 |
| 27.5° | 1138.2 | 1118.2 | 1124.7 | 1124.0 | 1133.1 |
| 30°   | 1107.9 | 1093.1 | 1097.6 | 1093.7 | 1104.7 |
| 32.5° | 1073.7 | 1060.8 | 1062.7 | 1062.1 | 1063.4 |
| 35°   | 1039.5 | 1027.9 | 1036.9 | 1030.5 | 1029.8 |
| 37.5° | 1011.7 | 988.5  | 1000.8 | 993.7  | 1001.4 |
| 40°   | 964.0  | 955.0  | 953.7  | 949.2  | 952.4  |
| 42.5° | 924.6  | 913.0  | 911.1  | 913.7  | 913.7  |
| 45°   | 882.7  | 871.1  | 864.0  | 867.9  | 871.7  |
| 47.5° | 842.0  | 827.2  | 818.2  | 820.1  | 827.9  |
| 50°   | 793.7  | 774.3  | 771.1  | 773.7  | 779.5  |
| 52.5° | 741.4  | 725.9  | 721.4  | 720.7  | 723.3  |
| 55°   | 683.3  | 674.3  | 667.8  | 665.9  | 675.6  |
| 57.5° | 631.1  | 617.5  | 609.8  | 613.0  | 622.0  |
| 60°   | 574.3  | 559.4  | 552.3  | 554.9  | 564.6  |
| 62.5° | 514.9  | 500.1  | 489.1  | 494.3  | 505.2  |
| 65°   | 453.6  | 442.6  | 428.4  | 431.7  | 438.8  |
| 67.5° | 394.2  | 382.0  | 367.1  | 369.1  | 376.8  |
| 70°   | 331.7  | 318.8  | 304.6  | 307.8  | 318.1  |
| 72.5° | 265.8  | 257.5  | 244.5  | 245.8  | 254.9  |
| 75°   | 205.2  | 199.4  | 187.8  | 189.7  | 194.2  |
| 77.5° | 152.3  | 144.5  | 135.5  | 137.4  | 143.2  |
| 80°   | 98.7   | 96.1   | 88.4   | 89.7   | 92.3   |
| 82.5° | 56.1   | 56.1   | 52.9   | 51.6   | 54.8   |
| 85°   | 27.1   | 25.2   | 23.2   | 23.9   | 23.9   |
| 87.5° | 6.5    | 7.1    | 6.5    | 5.8    | 6.5    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)