

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: P688311

Luminaire Tested: FLR-HA-24-L3C3 (MED)-35-CP125

Issue Date: 5/22/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P688311  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2207-724-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/22/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR-HA-24-L3C3 (MED)-35-CP125  
Description: Fail-Safe - FLR Fully Luminous Recessed 2X4 3500K Luminaire at Medium Lumen setting for High Abuse  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

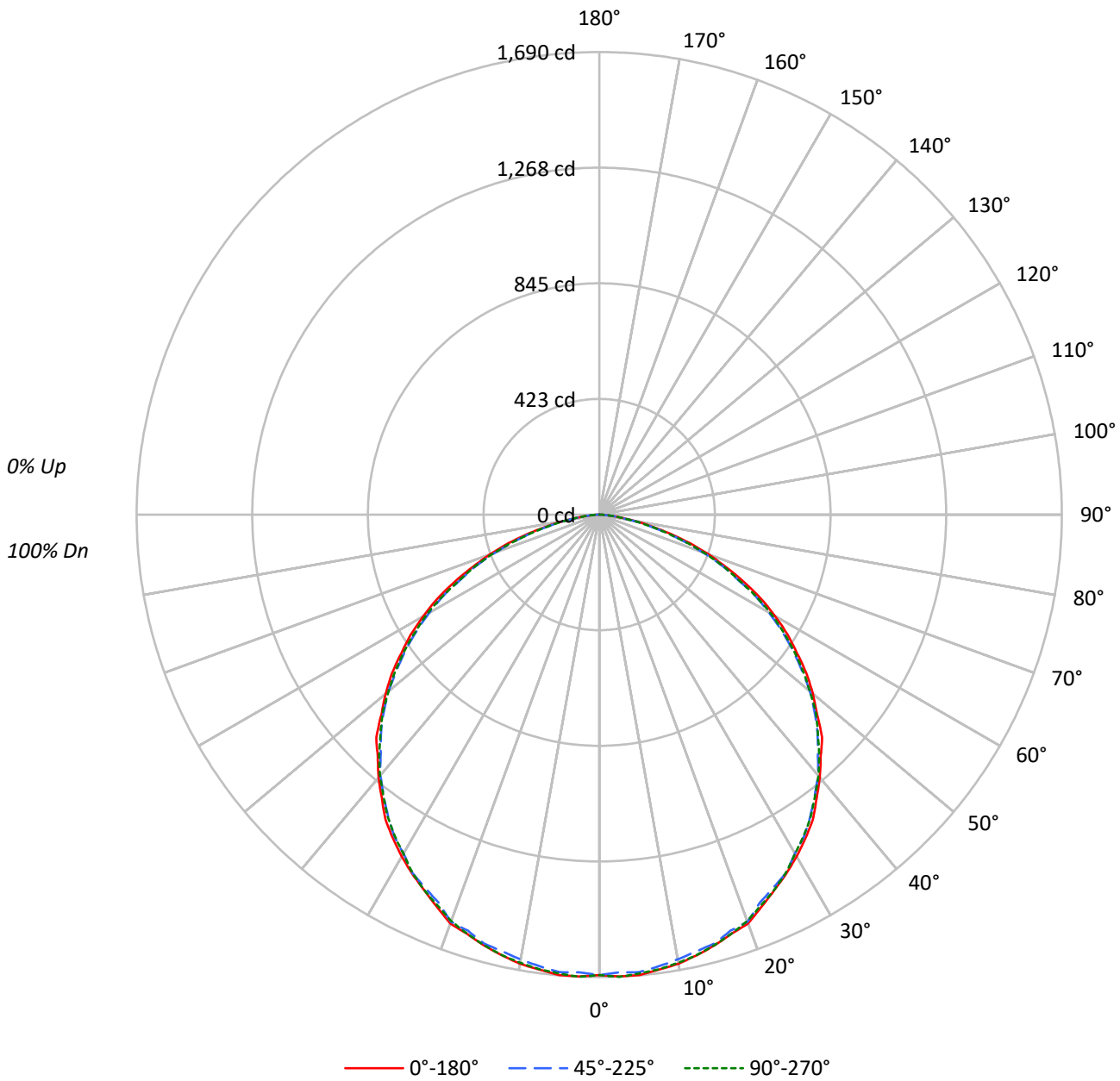
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4667.6 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.27 / 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  | 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 | 103 | 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  | 54  | 51  |    |    |
| 5   | 77  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 48  | 59  | 52  | 47  | 57  | 51  | 47  | 44  |    |    |
| 6   | 71  | 57  | 49  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 46  | 41  | 39  |    |    |
| 7   | 66  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 34  |    |    |
| 8   | 61  | 48  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |
| 9   | 57  | 44  | 35  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 29  | 40  | 34  | 29  | 28  |    |    |
| 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°  | 2264 | 2264 | 2264 |
| 5°  | 2281 | 2266 | 2274 |
| 10° | 2277 | 2255 | 2272 |
| 15° | 2270 | 2261 | 2268 |
| 20° | 2277 | 2267 | 2263 |
| 25° | 2248 | 2233 | 2246 |
| 30° | 2241 | 2221 | 2223 |
| 35° | 2235 | 2209 | 2213 |
| 40° | 2201 | 2184 | 2188 |
| 45° | 2191 | 2146 | 2149 |
| 50° | 2132 | 2102 | 2102 |
| 55° | 2069 | 2023 | 2036 |
| 60° | 1997 | 1928 | 1954 |
| 65° | 1860 | 1764 | 1781 |
| 70° | 1667 | 1573 | 1597 |
| 75° | 1373 | 1290 | 1286 |
| 80° | 962  | 907  | 907  |
| 85° | 520  | 465  | 465  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2191 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 159.6  | 3.4       |
| 10°-20°   | 457.9  | 9.8       |
| 20°-30°   | 695.9  | 14.9      |
| 30°-40°   | 841.7  | 18.0      |
| 40°-50°   | 871.3  | 18.7      |
| 50°-60°   | 774.2  | 16.6      |
| 60°-70°   | 556.2  | 11.9      |
| 70°-80°   | 266.0  | 5.7       |
| 80°-90°   | 44.8   | 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°    | 1313.4 | 28.1      |
| 0°-40°    | 2155.1 | 46.2      |
| 0°-60°    | 3800.6 | 81.4      |
| 0°-90°    | 4667.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4667.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1682 | 1682  | 1682 | 1682  | 1682 |      |
| 5°  | 1689 | 1677  | 1678 | 1680  | 1683 | 160  |
| 15° | 1629 | 1619  | 1623 | 1620  | 1628 | 460  |
| 25° | 1514 | 1506  | 1504 | 1510  | 1513 | 699  |
| 35° | 1361 | 1352  | 1345 | 1343  | 1347 | 848  |
| 45° | 1152 | 1135  | 1128 | 1124  | 1129 | 881  |
| 55° | 882  | 873   | 862  | 857   | 868  | 790  |
| 65° | 584  | 578   | 554  | 540   | 559  | 577  |
| 75° | 264  | 260   | 248  | 227   | 247  | 284  |
| 85° | 34   | 32    | 30   | 28    | 30   | 48   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1682.5 | 1682.5 | 1682.5 | 1682.5 | 1682.5 |
| 2.5°  | 1689.6 | 1677.2 | 1674.5 | 1690.5 | 1690.5 |
| 5°    | 1688.7 | 1677.2 | 1678.0 | 1679.8 | 1683.4 |
| 7.5°  | 1677.2 | 1671.0 | 1664.8 | 1671.0 | 1675.4 |
| 10°   | 1666.5 | 1652.3 | 1650.6 | 1653.2 | 1663.0 |
| 12.5° | 1648.8 | 1632.8 | 1634.6 | 1639.0 | 1647.9 |
| 15°   | 1629.3 | 1618.7 | 1623.1 | 1619.5 | 1628.4 |
| 17.5° | 1606.2 | 1606.2 | 1594.7 | 1592.1 | 1605.4 |
| 20°   | 1590.3 | 1568.1 | 1583.2 | 1569.9 | 1580.5 |
| 22.5° | 1550.4 | 1538.0 | 1534.4 | 1545.1 | 1545.1 |
| 25°   | 1514.1 | 1506.1 | 1504.3 | 1510.5 | 1513.2 |
| 27.5° | 1479.5 | 1475.1 | 1476.8 | 1475.9 | 1475.9 |
| 30°   | 1442.3 | 1430.7 | 1429.8 | 1429.8 | 1430.7 |
| 32.5° | 1402.4 | 1394.4 | 1393.5 | 1388.2 | 1390.8 |
| 35°   | 1360.7 | 1351.8 | 1344.7 | 1343.0 | 1347.4 |
| 37.5° | 1304.9 | 1294.2 | 1293.3 | 1295.1 | 1295.1 |
| 40°   | 1253.4 | 1241.9 | 1243.7 | 1237.5 | 1245.5 |
| 42.5° | 1197.6 | 1187.8 | 1181.6 | 1179.9 | 1189.6 |
| 45°   | 1151.5 | 1134.7 | 1127.6 | 1124.0 | 1129.3 |
| 47.5° | 1078.8 | 1074.4 | 1067.3 | 1061.1 | 1073.5 |
| 50°   | 1018.5 | 1021.2 | 1004.3 | 998.1  | 1004.3 |
| 52.5° | 954.7  | 943.2  | 931.7  | 921.0  | 938.7  |
| 55°   | 882.0  | 873.2  | 862.5  | 857.2  | 867.8  |
| 57.5° | 815.5  | 805.8  | 789.8  | 777.4  | 796.0  |
| 60°   | 742.0  | 733.1  | 716.3  | 703.0  | 726.0  |
| 62.5° | 666.6  | 656.9  | 640.9  | 619.6  | 643.6  |
| 65°   | 584.2  | 578.0  | 554.0  | 539.8  | 559.3  |
| 67.5° | 500.8  | 497.3  | 483.1  | 459.2  | 487.5  |
| 70°   | 423.7  | 416.6  | 399.8  | 378.5  | 406.0  |
| 72.5° | 347.5  | 335.1  | 322.7  | 302.3  | 325.3  |
| 75°   | 264.2  | 259.7  | 248.2  | 226.9  | 247.3  |
| 77.5° | 191.5  | 187.0  | 179.1  | 163.1  | 179.1  |
| 80°   | 124.1  | 123.2  | 117.0  | 105.5  | 117.0  |
| 82.5° | 70.9   | 70.9   | 66.5   | 62.1   | 66.5   |
| 85°   | 33.7   | 31.9   | 30.1   | 28.4   | 30.1   |
| 87.5° | 8.9    | 8.9    | 8.9    | 8.9    | 9.8    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)