

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: P973473

Luminaire Tested: FLR2-14-20-L850-CA125

Issue Date: 3/13/2025

**Test Information**

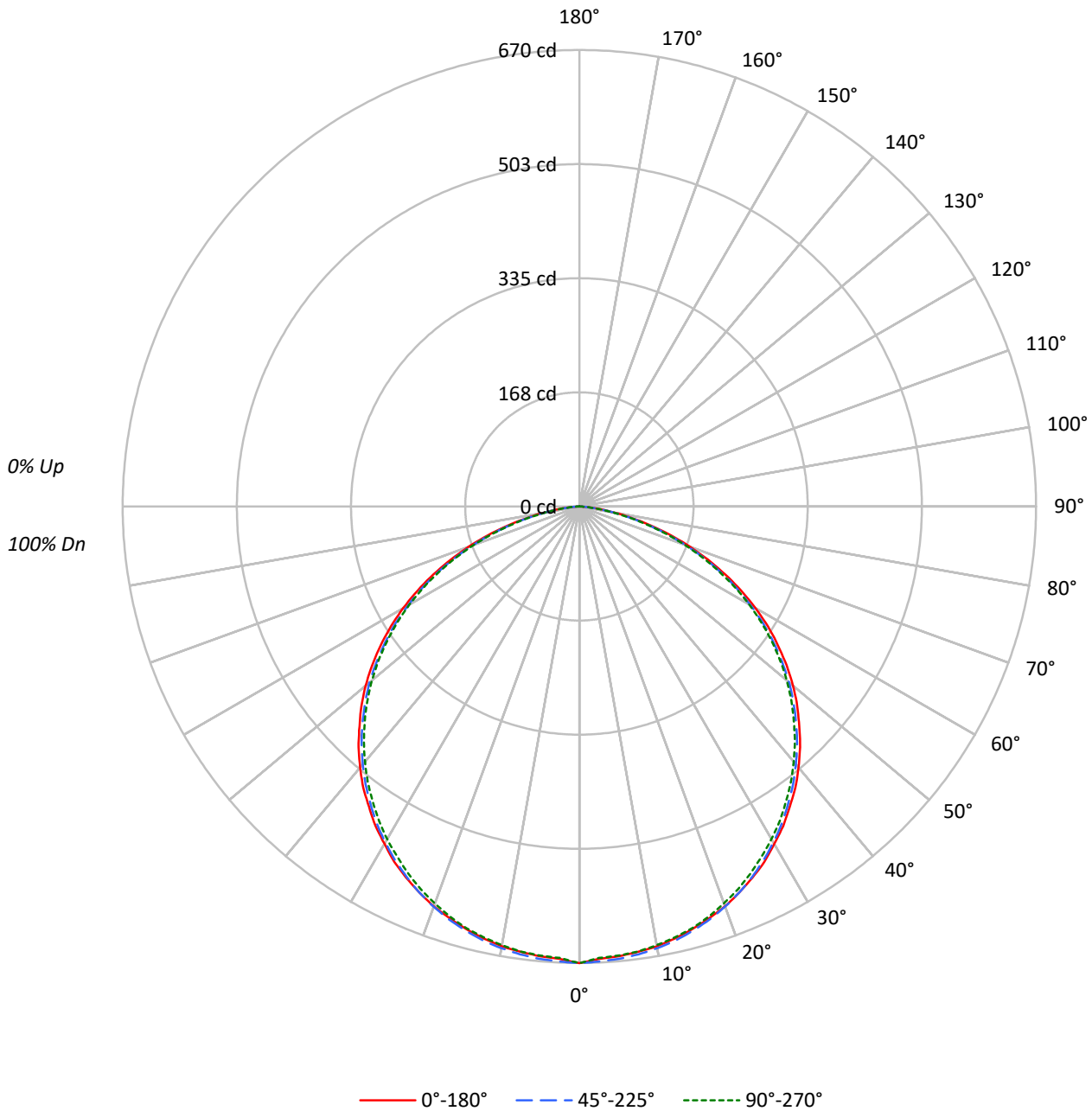
Test Method: LM-79-2019  
Report Number: P973473  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-14-20-L850-CA125  
Description: 1\*4 FLR-2.0 2000 LUMEN at 5000 CCT & 80CRI with Clear Acrylic (0.125" thickness)  
  
Light Source:  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1876.4 lumens  
Efficiency: N/A  
Efficacy: 114.4 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.25 / 1.38  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor:  
Total Harmonic Distortion (THDi):  
Frequency (hertz): 60  
Stabilization Time: HR  
Operation Time: HR  
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  | 89  | 91  | 89  | 87  | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 90  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1804 | 1804 | 1804 |
| 5°  | 1790 | 1800 | 1788 |
| 10° | 1792 | 1799 | 1787 |
| 15° | 1789 | 1796 | 1785 |
| 20° | 1789 | 1790 | 1776 |
| 25° | 1785 | 1781 | 1765 |
| 30° | 1777 | 1769 | 1752 |
| 35° | 1768 | 1754 | 1736 |
| 40° | 1757 | 1736 | 1718 |
| 45° | 1736 | 1712 | 1694 |
| 50° | 1714 | 1682 | 1662 |
| 55° | 1670 | 1631 | 1616 |
| 60° | 1605 | 1561 | 1547 |
| 65° | 1503 | 1459 | 1443 |
| 70° | 1356 | 1301 | 1290 |
| 75° | 1136 | 1079 | 1068 |
| 80° | 826  | 770  | 748  |
| 85° | 438  | 386  | 352  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1736 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 63.5   | 3.4       |
| 10°-20°   | 182.4  | 9.7       |
| 20°-30°   | 277.1  | 14.8      |
| 30°-40°   | 335.1  | 17.9      |
| 40°-50°   | 348.3  | 18.6      |
| 50°-60°   | 311.9  | 16.6      |
| 60°-70°   | 227.5  | 12.1      |
| 70°-80°   | 112.0  | 6.0       |
| 80°-90°   | 18.7   | 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°    | 522.9  | 27.9      |
| 0°-40°    | 858.1  | 45.7      |
| 0°-60°    | 1518.2 | 80.9      |
| 0°-90°    | 1876.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1876.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 670 | 670   | 670 | 670   | 670 |      |
| 5°  | 663 | 670   | 666 | 673   | 662 | 63   |
| 15° | 642 | 648   | 645 | 650   | 641 | 181  |
| 25° | 601 | 604   | 600 | 603   | 594 | 277  |
| 35° | 538 | 539   | 534 | 536   | 529 | 337  |
| 45° | 456 | 456   | 450 | 451   | 445 | 352  |
| 55° | 356 | 353   | 348 | 347   | 344 | 318  |
| 65° | 236 | 233   | 229 | 228   | 227 | 233  |
| 75° | 109 | 107   | 104 | 103   | 103 | 117  |
| 85° | 14  | 14    | 12  | 11    | 11  | 20   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 670.4 | 670.4 | 670.4 | 670.4 | 670.4 |
| 2.5°  | 664.6 | 672.1 | 668.5 | 675.2 | 663.2 |
| 5°    | 662.7 | 669.9 | 666.5 | 672.9 | 661.8 |
| 7.5°  | 659.3 | 666.8 | 663.2 | 669.3 | 658.8 |
| 10°   | 655.7 | 662.4 | 658.5 | 664.6 | 653.8 |
| 12.5° | 649.3 | 656.0 | 652.4 | 657.9 | 648.0 |
| 15°   | 642.1 | 648.0 | 644.6 | 650.2 | 640.7 |
| 17.5° | 633.8 | 639.4 | 635.7 | 640.7 | 631.3 |
| 20°   | 624.6 | 629.1 | 625.2 | 629.4 | 620.2 |
| 22.5° | 613.3 | 617.4 | 613.3 | 616.0 | 608.0 |
| 25°   | 601.1 | 604.1 | 599.9 | 602.7 | 594.4 |
| 27.5° | 588.0 | 589.7 | 585.5 | 587.7 | 579.1 |
| 30°   | 571.9 | 573.9 | 569.4 | 572.2 | 563.9 |
| 32.5° | 556.4 | 557.5 | 552.5 | 554.7 | 547.2 |
| 35°   | 538.1 | 539.2 | 533.9 | 536.1 | 528.6 |
| 37.5° | 520.6 | 520.3 | 514.8 | 516.1 | 509.8 |
| 40°   | 500.3 | 500.0 | 494.2 | 495.3 | 489.2 |
| 42.5° | 479.5 | 478.4 | 472.9 | 473.4 | 467.9 |
| 45°   | 456.2 | 455.7 | 449.8 | 450.7 | 445.1 |
| 47.5° | 433.7 | 432.1 | 426.2 | 426.5 | 421.8 |
| 50°   | 409.3 | 406.8 | 401.8 | 401.3 | 397.1 |
| 52.5° | 383.2 | 380.4 | 374.9 | 374.3 | 371.3 |
| 55°   | 356.0 | 353.0 | 347.7 | 346.9 | 344.4 |
| 57.5° | 328.0 | 324.1 | 320.0 | 318.3 | 316.3 |
| 60°   | 298.3 | 294.7 | 290.0 | 288.3 | 287.5 |
| 62.5° | 267.5 | 263.9 | 260.3 | 258.6 | 257.5 |
| 65°   | 236.1 | 233.4 | 229.2 | 227.5 | 226.7 |
| 67.5° | 204.2 | 201.7 | 197.9 | 195.9 | 195.6 |
| 70°   | 172.3 | 169.8 | 165.4 | 164.3 | 164.0 |
| 72.5° | 140.4 | 138.2 | 134.0 | 132.9 | 132.9 |
| 75°   | 109.3 | 107.4 | 103.8 | 102.7 | 102.7 |
| 77.5° | 79.9  | 78.3  | 75.5  | 74.1  | 74.1  |
| 80°   | 53.3  | 52.2  | 49.7  | 48.6  | 48.3  |
| 82.5° | 30.8  | 30.2  | 28.0  | 26.9  | 27.5  |
| 85°   | 14.2  | 13.6  | 12.5  | 11.1  | 11.4  |
| 87.5° | 3.6   | 3.3   | 2.5   | 1.9   | 2.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)