

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: P973437

Luminaire Tested: FLR2-14-20-L940-CP125

Issue Date: 3/13/2025

**Test Information**

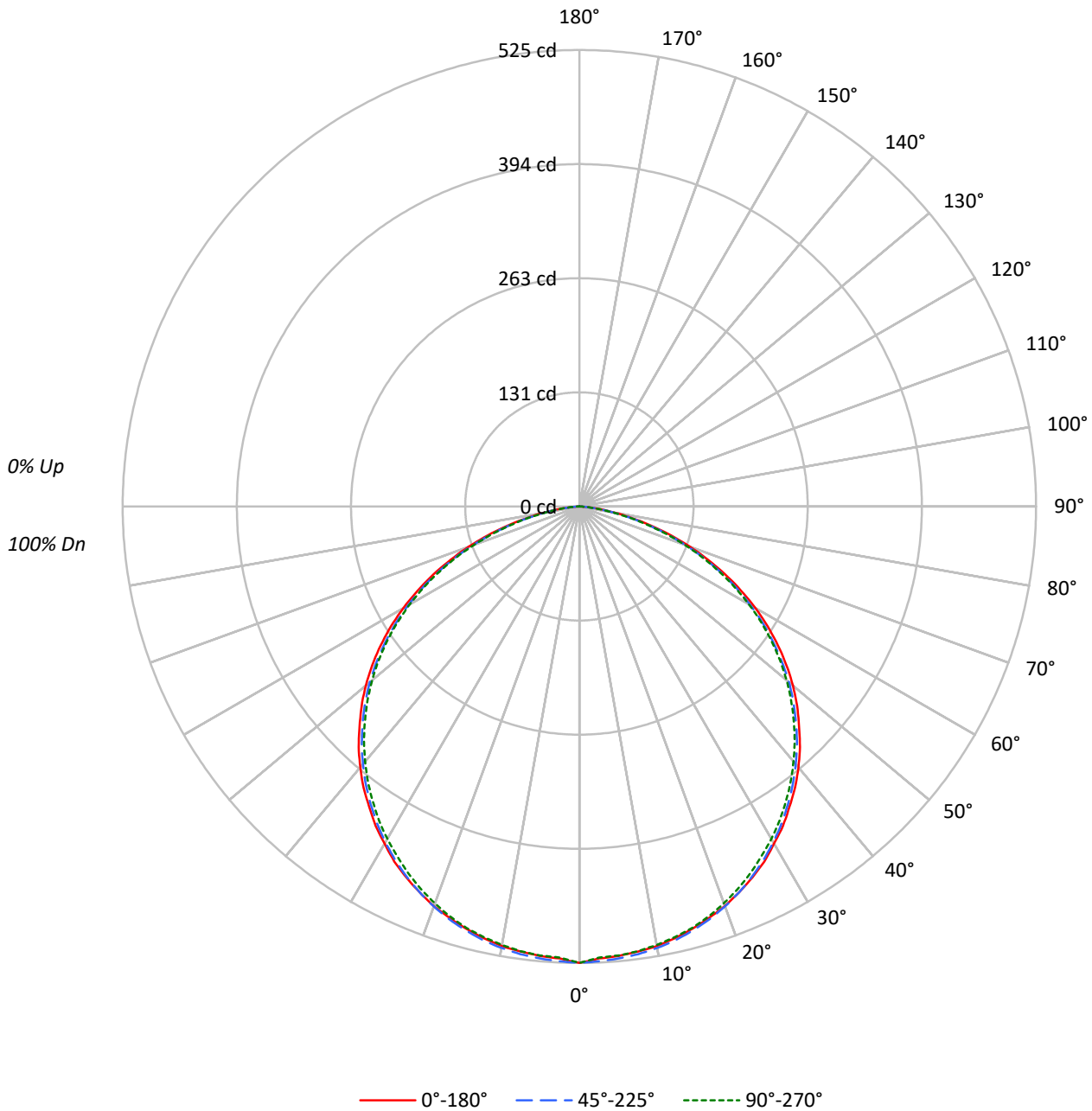
Test Method: LM-79-2019  
Report Number: P973437  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-14-20-L940-CP125  
Description: 1\*4 FLR-2.0 2000 LUMEN at 4000 CCT & 90 CRI with Clear Polycarbonate (0.125" thickness)  
  
Light Source:  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1469.4 lumens  
Efficiency: N/A  
Efficacy: 89.6 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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 50 | 30 | 10 | 0   |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |     |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    |    | 100 |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 109 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |    |    |    | 85  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 99  | 91  | 85  | 79  | 97  | 90  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |    |    |    |    |    | 71  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |    |    |    |    |    | 60  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |    |    |    | 51  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |    |    |    |    |    | 44  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |    |    |    |    |    | 39  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |    |    |    |    |    | 34  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |    |    |    |    |    | 30  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |    |    |    |    |    | 27  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |    |    |    |    |    | 25  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1413 | 1413 | 1413 |
| 5°  | 1402 | 1410 | 1400 |
| 10° | 1403 | 1409 | 1399 |
| 15° | 1401 | 1406 | 1398 |
| 20° | 1401 | 1402 | 1391 |
| 25° | 1398 | 1395 | 1382 |
| 30° | 1391 | 1386 | 1372 |
| 35° | 1384 | 1373 | 1360 |
| 40° | 1376 | 1359 | 1346 |
| 45° | 1359 | 1340 | 1326 |
| 50° | 1342 | 1317 | 1302 |
| 55° | 1308 | 1278 | 1265 |
| 60° | 1257 | 1222 | 1211 |
| 65° | 1177 | 1143 | 1130 |
| 70° | 1061 | 1019 | 1010 |
| 75° | 890  | 845  | 836  |
| 80° | 646  | 603  | 586  |
| 85° | 343  | 303  | 275  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1359 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.7   | 3.4       |
| 10°-20°   | 142.8  | 9.7       |
| 20°-30°   | 217.0  | 14.8      |
| 30°-40°   | 262.4  | 17.9      |
| 40°-50°   | 272.8  | 18.6      |
| 50°-60°   | 244.2  | 16.6      |
| 60°-70°   | 178.1  | 12.1      |
| 70°-80°   | 87.7   | 6.0       |
| 80°-90°   | 14.7   | 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°    | 409.5  | 27.9      |
| 0°-40°    | 671.9  | 45.7      |
| 0°-60°    | 1188.9 | 80.9      |
| 0°-90°    | 1469.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1469.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 525 | 525   | 525 | 525   | 525 |      |
| 5°  | 519 | 525   | 522 | 527   | 518 | 49   |
| 15° | 503 | 507   | 505 | 509   | 502 | 142  |
| 25° | 471 | 473   | 470 | 472   | 465 | 217  |
| 35° | 421 | 422   | 418 | 420   | 414 | 264  |
| 45° | 357 | 357   | 352 | 353   | 348 | 276  |
| 55° | 279 | 276   | 272 | 272   | 270 | 249  |
| 65° | 185 | 183   | 180 | 178   | 178 | 183  |
| 75° | 86  | 84    | 81  | 80    | 80  | 91   |
| 85° | 11  | 11    | 10  | 9     | 9   | 16   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 525.0 | 525.0 | 525.0 | 525.0 | 525.0 |
| 2.5°  | 520.4 | 526.3 | 523.5 | 528.7 | 519.3 |
| 5°    | 518.9 | 524.6 | 521.9 | 526.9 | 518.3 |
| 7.5°  | 516.3 | 522.2 | 519.3 | 524.1 | 515.9 |
| 10°   | 513.5 | 518.7 | 515.6 | 520.4 | 512.0 |
| 12.5° | 508.5 | 513.7 | 510.9 | 515.2 | 507.4 |
| 15°   | 502.8 | 507.4 | 504.8 | 509.1 | 501.7 |
| 17.5° | 496.3 | 500.7 | 497.8 | 501.7 | 494.4 |
| 20°   | 489.1 | 492.6 | 489.6 | 492.8 | 485.7 |
| 22.5° | 480.2 | 483.5 | 480.2 | 482.4 | 476.1 |
| 25°   | 470.7 | 473.1 | 469.8 | 472.0 | 465.4 |
| 27.5° | 460.5 | 461.8 | 458.5 | 460.2 | 453.5 |
| 30°   | 447.8 | 449.4 | 445.9 | 448.1 | 441.5 |
| 32.5° | 435.7 | 436.5 | 432.6 | 434.4 | 428.5 |
| 35°   | 421.3 | 422.2 | 418.1 | 419.8 | 414.0 |
| 37.5° | 407.6 | 407.4 | 403.1 | 404.2 | 399.2 |
| 40°   | 391.8 | 391.6 | 387.0 | 387.9 | 383.1 |
| 42.5° | 375.5 | 374.6 | 370.3 | 370.7 | 366.4 |
| 45°   | 357.2 | 356.8 | 352.2 | 352.9 | 348.5 |
| 47.5° | 339.6 | 338.3 | 333.8 | 334.0 | 330.3 |
| 50°   | 320.5 | 318.6 | 314.6 | 314.2 | 311.0 |
| 52.5° | 300.1 | 297.9 | 293.6 | 293.1 | 290.7 |
| 55°   | 278.8 | 276.4 | 272.3 | 271.6 | 269.7 |
| 57.5° | 256.8 | 253.8 | 250.5 | 249.2 | 247.7 |
| 60°   | 233.6 | 230.8 | 227.1 | 225.8 | 225.1 |
| 62.5° | 209.5 | 206.6 | 203.8 | 202.5 | 201.7 |
| 65°   | 184.9 | 182.7 | 179.5 | 178.2 | 177.5 |
| 67.5° | 159.9 | 158.0 | 154.9 | 153.4 | 153.2 |
| 70°   | 134.9 | 133.0 | 129.5 | 128.6 | 128.4 |
| 72.5° | 110.0 | 108.2 | 105.0 | 104.1 | 104.1 |
| 75°   | 85.6  | 84.1  | 81.3  | 80.4  | 80.4  |
| 77.5° | 62.6  | 61.3  | 59.1  | 58.0  | 58.0  |
| 80°   | 41.7  | 40.9  | 38.9  | 38.0  | 37.8  |
| 82.5° | 24.1  | 23.7  | 21.9  | 21.1  | 21.5  |
| 85°   | 11.1  | 10.6  | 9.8   | 8.7   | 8.9   |
| 87.5° | 2.8   | 2.6   | 2.0   | 1.5   | 2.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)