

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: P974582

Luminaire Tested: FLR2-24-20HE-L930-CP080

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974582  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-24-20HE-L930-CP080  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

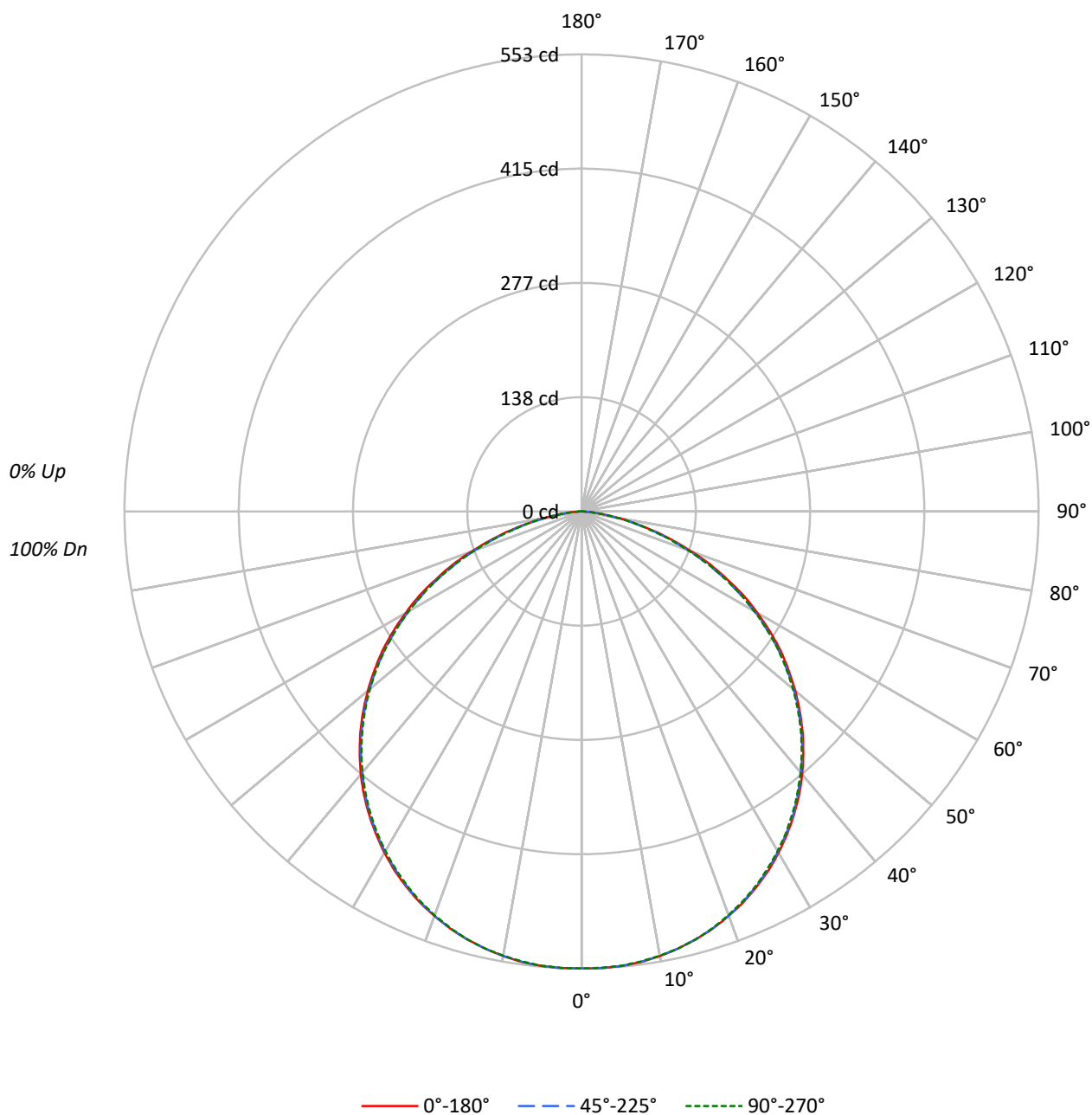
Lumens per Lamp: N/A  
Luminaire Lumens: 1563.3 lumens  
Efficiency: N/A  
Efficacy: 104.9 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.9  
Input Voltage (V):  
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

TEST NUMBER: P974582

CATALOG NUMBER: FLR2-24-20HE-L930-CP080

### Luminous Intensity Polar Plot



TEST NUMBER: P974582

CATALOG NUMBER: FLR2-24-20HE-L930-CP080

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 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 | 100 | 97  | 106 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 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  | 57  | 53  | 51  |    | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 44  |    | 44  |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 38  |    | 38  |
| 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  | 39  | 33  | 29  | 27  |    | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 26  | 37  | 31  | 26  | 25  |    | 25  |

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

|     | 0°  | 45° | 90° |
|-----|-----|-----|-----|
| 0°  | 744 | 744 | 744 |
| 5°  | 746 | 746 | 745 |
| 10° | 746 | 746 | 746 |
| 15° | 746 | 746 | 746 |
| 20° | 746 | 745 | 744 |
| 25° | 744 | 743 | 742 |
| 30° | 741 | 739 | 737 |
| 35° | 736 | 734 | 732 |
| 40° | 730 | 725 | 724 |
| 45° | 720 | 716 | 714 |
| 50° | 707 | 701 | 699 |
| 55° | 690 | 680 | 679 |
| 60° | 661 | 649 | 649 |
| 65° | 619 | 604 | 606 |
| 70° | 557 | 539 | 538 |
| 75° | 467 | 449 | 447 |
| 80° | 342 | 325 | 339 |
| 85° | 193 | 178 | 181 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 720 cd/sqm

TEST NUMBER: P974582

CATALOG NUMBER: FLR2-24-20HE-L930-CP080

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 52.5   | 3.4       |
| 10°-20°   | 151.3  | 9.7       |
| 20°-30°   | 230.6  | 14.8      |
| 30°-40°   | 279.4  | 17.9      |
| 40°-50°   | 290.2  | 18.6      |
| 50°-60°   | 259.6  | 16.6      |
| 60°-70°   | 189.2  | 12.1      |
| 70°-80°   | 93.7   | 6.0       |
| 80°-90°   | 16.8   | 1.1       |
| 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°    | 434.4  | 27.8      |
| 0°-40°    | 713.8  | 45.7      |
| 0°-60°    | 1263.6 | 80.8      |
| 0°-90°    | 1563.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1563.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 553 | 553   | 553 | 553   | 553 |      |
| 5°  | 552 | 552   | 552 | 552   | 552 | 53   |
| 15° | 536 | 536   | 536 | 536   | 536 | 151  |
| 25° | 501 | 501   | 500 | 500   | 500 | 231  |
| 35° | 448 | 448   | 447 | 446   | 445 | 280  |
| 45° | 378 | 378   | 376 | 376   | 375 | 292  |
| 55° | 294 | 292   | 290 | 290   | 290 | 262  |
| 65° | 194 | 193   | 190 | 190   | 190 | 193  |
| 75° | 90  | 88    | 86  | 88    | 86  | 96   |
| 85° | 12  | 12    | 12  | 12    | 12  | 17   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

TEST NUMBER: P974582

CATALOG NUMBER: FLR2-24-20HE-L930-CP080

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 553.1 | 553.1 | 553.1 | 553.1 | 553.1 |
| 2.5°  | 553.1 | 552.9 | 552.9 | 553.1 | 552.7 |
| 5°    | 552.1 | 552.3 | 552.1 | 552.1 | 551.7 |
| 7.5°  | 550.0 | 549.8 | 549.6 | 549.8 | 549.2 |
| 10°   | 546.2 | 546.2 | 546.0 | 546.2 | 545.8 |
| 12.5° | 541.6 | 541.6 | 541.6 | 541.8 | 541.6 |
| 15°   | 535.9 | 535.7 | 535.7 | 536.1 | 535.7 |
| 17.5° | 529.1 | 528.9 | 528.9 | 528.7 | 528.3 |
| 20°   | 520.8 | 520.8 | 520.6 | 520.4 | 519.8 |
| 22.5° | 511.9 | 511.7 | 511.1 | 511.1 | 510.3 |
| 25°   | 501.3 | 500.7 | 500.3 | 500.1 | 499.5 |
| 27.5° | 489.8 | 489.0 | 488.4 | 488.0 | 487.4 |
| 30°   | 476.9 | 476.1 | 475.5 | 474.9 | 474.5 |
| 32.5° | 463.0 | 462.6 | 461.6 | 461.4 | 460.6 |
| 35°   | 448.1 | 447.6 | 447.0 | 446.2 | 445.4 |
| 37.5° | 432.3 | 431.7 | 430.3 | 429.9 | 429.3 |
| 40°   | 415.4 | 414.6 | 412.8 | 412.8 | 412.2 |
| 42.5° | 397.3 | 396.5 | 395.4 | 394.6 | 394.2 |
| 45°   | 378.5 | 377.7 | 376.3 | 375.5 | 375.1 |
| 47.5° | 358.4 | 357.8 | 356.3 | 355.7 | 355.1 |
| 50°   | 337.6 | 336.8 | 335.0 | 334.6 | 334.0 |
| 52.5° | 315.8 | 315.4 | 313.0 | 312.8 | 312.2 |
| 55°   | 294.1 | 291.9 | 290.0 | 290.0 | 289.6 |
| 57.5° | 270.3 | 268.7 | 266.1 | 266.1 | 265.8 |
| 60°   | 245.7 | 244.3 | 241.3 | 241.7 | 241.3 |
| 62.5° | 221.7 | 218.7 | 215.9 | 217.1 | 216.1 |
| 65°   | 194.3 | 192.7 | 189.7 | 190.5 | 190.3 |
| 67.5° | 169.3 | 166.3 | 163.5 | 165.1 | 164.3 |
| 70°   | 141.5 | 139.9 | 137.1 | 138.7 | 136.7 |
| 72.5° | 115.3 | 113.9 | 111.1 | 112.9 | 110.9 |
| 75°   | 89.9  | 88.5  | 86.3  | 87.9  | 85.9  |
| 77.5° | 65.9  | 64.9  | 62.9  | 64.5  | 64.9  |
| 80°   | 44.1  | 42.9  | 41.9  | 43.3  | 43.7  |
| 82.5° | 25.8  | 25.0  | 24.6  | 24.8  | 25.8  |
| 85°   | 12.5  | 11.5  | 11.5  | 11.7  | 11.7  |
| 87.5° | 3.4   | 3.0   | 3.4   | 3.6   | 3.8   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)