

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: P975119

Luminaire Tested: FLR2-24-90HE-L950-CA125

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P975119  
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: FLR2-24-90HE-L950-CA125  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

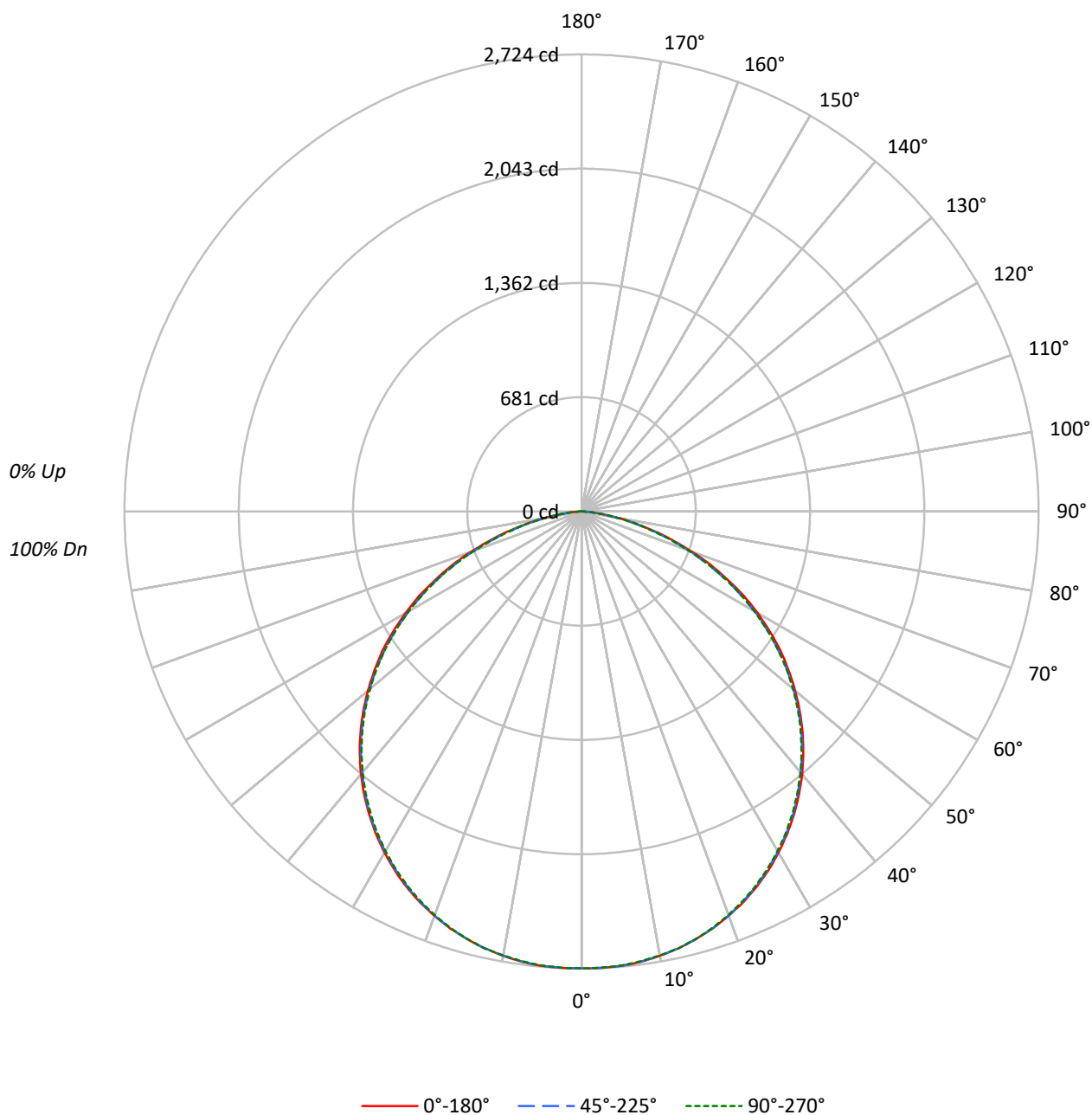
Lumens per Lamp: N/A  
Luminaire Lumens: 7697.6 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.3  
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

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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  |     |     |     |    | 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°  | 3664 | 3664 | 3664 |
| 5°  | 3672 | 3672 | 3669 |
| 10° | 3674 | 3673 | 3672 |
| 15° | 3675 | 3674 | 3674 |
| 20° | 3672 | 3670 | 3665 |
| 25° | 3665 | 3657 | 3652 |
| 30° | 3648 | 3638 | 3630 |
| 35° | 3624 | 3615 | 3602 |
| 40° | 3592 | 3570 | 3565 |
| 45° | 3546 | 3526 | 3514 |
| 50° | 3480 | 3453 | 3443 |
| 55° | 3397 | 3349 | 3345 |
| 60° | 3256 | 3198 | 3198 |
| 65° | 3046 | 2974 | 2984 |
| 70° | 2741 | 2657 | 2649 |
| 75° | 2301 | 2210 | 2200 |
| 80° | 1681 | 1598 | 1666 |
| 85° | 951  | 875  | 891  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3546 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 258.5  | 3.4       |
| 10°-20°   | 744.8  | 9.7       |
| 20°-30°   | 1135.5 | 14.8      |
| 30°-40°   | 1375.7 | 17.9      |
| 40°-50°   | 1429.0 | 18.6      |
| 50°-60°   | 1278.4 | 16.6      |
| 60°-70°   | 931.7  | 12.1      |
| 70°-80°   | 461.4  | 6.0       |
| 80°-90°   | 82.5   | 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°    | 2138.8 | 27.8      |
| 0°-40°    | 3514.5 | 45.7      |
| 0°-60°    | 6222.0 | 80.8      |
| 0°-90°    | 7697.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7697.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2724 | 2724  | 2724 | 2724  | 2724 |      |
| 5°  | 2719 | 2720  | 2719 | 2719  | 2717 | 259  |
| 15° | 2638 | 2638  | 2638 | 2640  | 2638 | 745  |
| 25° | 2468 | 2466  | 2464 | 2463  | 2460 | 1138 |
| 35° | 2207 | 2204  | 2201 | 2197  | 2193 | 1380 |
| 45° | 1864 | 1860  | 1853 | 1849  | 1847 | 1436 |
| 55° | 1448 | 1438  | 1428 | 1428  | 1426 | 1290 |
| 65° | 957  | 949   | 934  | 938   | 937  | 948  |
| 75° | 443  | 436   | 425  | 433   | 423  | 472  |
| 85° | 62   | 57    | 57   | 58    | 58   | 85   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2723.5 | 2723.5 | 2723.5 | 2723.5 | 2723.5 |
| 2.5°  | 2723.5 | 2722.6 | 2722.6 | 2723.5 | 2721.6 |
| 5°    | 2718.7 | 2719.6 | 2718.7 | 2718.7 | 2716.7 |
| 7.5°  | 2707.9 | 2706.9 | 2705.9 | 2706.9 | 2704.0 |
| 10°   | 2689.3 | 2689.3 | 2688.4 | 2689.3 | 2687.4 |
| 12.5° | 2666.9 | 2666.9 | 2666.9 | 2667.8 | 2666.9 |
| 15°   | 2638.5 | 2637.5 | 2637.5 | 2639.5 | 2637.5 |
| 17.5° | 2605.3 | 2604.3 | 2604.3 | 2603.3 | 2601.4 |
| 20°   | 2564.3 | 2564.3 | 2563.3 | 2562.3 | 2559.4 |
| 22.5° | 2520.3 | 2519.3 | 2516.4 | 2516.4 | 2512.5 |
| 25°   | 2468.5 | 2465.6 | 2463.6 | 2462.6 | 2459.7 |
| 27.5° | 2411.8 | 2407.9 | 2405.0 | 2403.0 | 2400.1 |
| 30°   | 2348.3 | 2344.4 | 2341.4 | 2338.5 | 2336.6 |
| 32.5° | 2279.9 | 2277.9 | 2273.0 | 2272.1 | 2268.2 |
| 35°   | 2206.6 | 2203.7 | 2200.7 | 2196.8 | 2192.9 |
| 37.5° | 2128.4 | 2125.5 | 2118.6 | 2116.7 | 2113.7 |
| 40°   | 2045.3 | 2041.4 | 2032.6 | 2032.6 | 2029.7 |
| 42.5° | 1956.4 | 1952.5 | 1946.6 | 1942.7 | 1940.8 |
| 45°   | 1863.6 | 1859.7 | 1852.8 | 1848.9 | 1847.0 |
| 47.5° | 1764.9 | 1761.9 | 1754.1 | 1751.2 | 1748.3 |
| 50°   | 1662.3 | 1658.4 | 1649.6 | 1647.6 | 1644.7 |
| 52.5° | 1554.8 | 1552.8 | 1541.1 | 1540.1 | 1537.2 |
| 55°   | 1448.3 | 1437.5 | 1427.7 | 1427.7 | 1425.8 |
| 57.5° | 1331.0 | 1323.2 | 1310.5 | 1310.5 | 1308.5 |
| 60°   | 1209.8 | 1203.0 | 1188.3 | 1190.3 | 1188.3 |
| 62.5° | 1091.6 | 1076.9 | 1063.2 | 1069.1 | 1064.2 |
| 65°   | 956.7  | 948.9  | 934.2  | 938.1  | 937.2  |
| 67.5° | 833.6  | 818.9  | 805.2  | 813.1  | 809.1  |
| 70°   | 696.8  | 688.9  | 675.3  | 683.1  | 673.3  |
| 72.5° | 567.8  | 560.9  | 547.2  | 556.0  | 546.3  |
| 75°   | 442.7  | 435.8  | 425.1  | 432.9  | 423.1  |
| 77.5° | 324.4  | 319.6  | 309.8  | 317.6  | 319.6  |
| 80°   | 216.9  | 211.1  | 206.2  | 213.0  | 215.0  |
| 82.5° | 127.0  | 123.1  | 121.2  | 122.2  | 127.0  |
| 85°   | 61.6   | 56.7   | 56.7   | 57.7   | 57.7   |
| 87.5° | 16.6   | 14.7   | 16.6   | 17.6   | 18.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)