

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: P974751

Luminaire Tested: FLR2-24-45HE-L935-CP125

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974751  
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: FLR2-24-45HE-L935-CP125  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

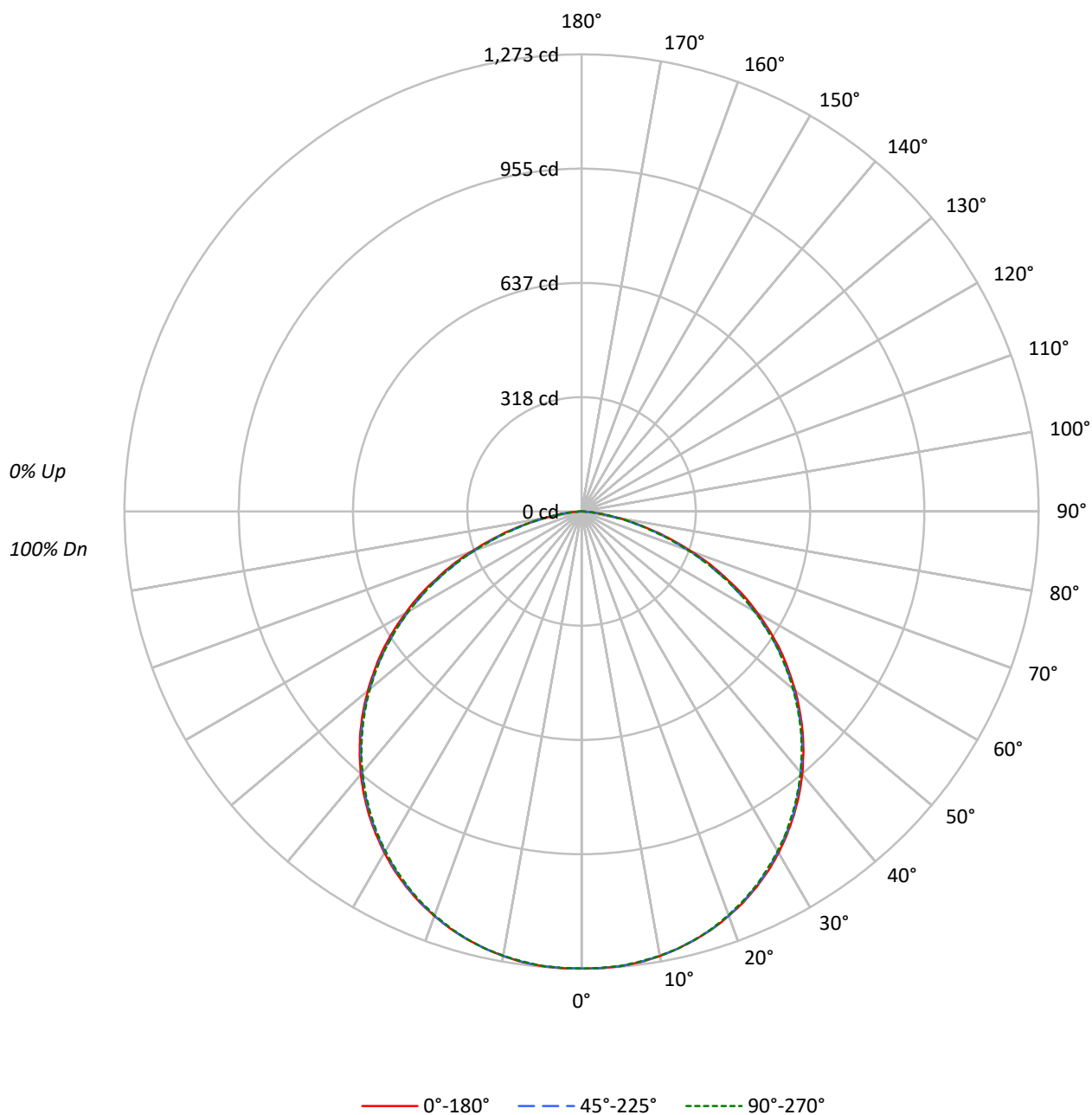
Lumens per Lamp: N/A  
Luminaire Lumens: 3598.9 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 34.7  
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°  | 1713 | 1713 | 1713 |
| 5°  | 1717 | 1717 | 1715 |
| 10° | 1718 | 1717 | 1717 |
| 15° | 1718 | 1718 | 1718 |
| 20° | 1717 | 1716 | 1713 |
| 25° | 1713 | 1710 | 1707 |
| 30° | 1706 | 1701 | 1697 |
| 35° | 1695 | 1690 | 1684 |
| 40° | 1680 | 1669 | 1667 |
| 45° | 1658 | 1648 | 1643 |
| 50° | 1627 | 1614 | 1609 |
| 55° | 1588 | 1566 | 1564 |
| 60° | 1522 | 1495 | 1495 |
| 65° | 1424 | 1391 | 1395 |
| 70° | 1282 | 1242 | 1238 |
| 75° | 1076 | 1033 | 1028 |
| 80° | 786  | 747  | 779  |
| 85° | 445  | 409  | 417  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1658 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 120.9  | 3.4       |
| 10°-20°   | 348.2  | 9.7       |
| 20°-30°   | 530.9  | 14.8      |
| 30°-40°   | 643.2  | 17.9      |
| 40°-50°   | 668.1  | 18.6      |
| 50°-60°   | 597.7  | 16.6      |
| 60°-70°   | 435.6  | 12.1      |
| 70°-80°   | 215.7  | 6.0       |
| 80°-90°   | 38.6   | 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°    | 1000.0 | 27.8      |
| 0°-40°    | 1643.2 | 45.7      |
| 0°-60°    | 2909.0 | 80.8      |
| 0°-90°    | 3598.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3598.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1273 | 1273  | 1273 | 1273  | 1273 |      |
| 5°  | 1271 | 1272  | 1271 | 1271  | 1270 | 121  |
| 15° | 1234 | 1233  | 1233 | 1234  | 1233 | 348  |
| 25° | 1154 | 1153  | 1152 | 1151  | 1150 | 532  |
| 35° | 1032 | 1030  | 1029 | 1027  | 1025 | 645  |
| 45° | 871  | 870   | 866  | 864   | 864  | 671  |
| 55° | 677  | 672   | 668  | 668   | 667  | 603  |
| 65° | 447  | 444   | 437  | 439   | 438  | 443  |
| 75° | 207  | 204   | 199  | 202   | 198  | 221  |
| 85° | 29   | 26    | 26   | 27    | 27   | 40   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1273.3 | 1273.3 | 1273.3 | 1273.3 | 1273.3 |
| 2.5°  | 1273.3 | 1272.9 | 1272.9 | 1273.3 | 1272.4 |
| 5°    | 1271.1 | 1271.5 | 1271.1 | 1271.1 | 1270.1 |
| 7.5°  | 1266.0 | 1265.6 | 1265.1 | 1265.6 | 1264.2 |
| 10°   | 1257.4 | 1257.4 | 1256.9 | 1257.4 | 1256.4 |
| 12.5° | 1246.8 | 1246.8 | 1246.8 | 1247.3 | 1246.8 |
| 15°   | 1233.6 | 1233.1 | 1233.1 | 1234.1 | 1233.1 |
| 17.5° | 1218.1 | 1217.6 | 1217.6 | 1217.2 | 1216.2 |
| 20°   | 1198.9 | 1198.9 | 1198.4 | 1198.0 | 1196.6 |
| 22.5° | 1178.3 | 1177.9 | 1176.5 | 1176.5 | 1174.7 |
| 25°   | 1154.1 | 1152.7 | 1151.8 | 1151.4 | 1150.0 |
| 27.5° | 1127.6 | 1125.8 | 1124.4 | 1123.5 | 1122.1 |
| 30°   | 1097.9 | 1096.1 | 1094.7 | 1093.3 | 1092.4 |
| 32.5° | 1065.9 | 1065.0 | 1062.7 | 1062.3 | 1060.4 |
| 35°   | 1031.7 | 1030.3 | 1028.9 | 1027.1 | 1025.3 |
| 37.5° | 995.1  | 993.7  | 990.5  | 989.6  | 988.2  |
| 40°   | 956.3  | 954.4  | 950.3  | 950.3  | 949.0  |
| 42.5° | 914.7  | 912.9  | 910.1  | 908.3  | 907.4  |
| 45°   | 871.3  | 869.5  | 866.3  | 864.4  | 863.5  |
| 47.5° | 825.1  | 823.8  | 820.1  | 818.7  | 817.4  |
| 50°   | 777.2  | 775.3  | 771.2  | 770.3  | 768.9  |
| 52.5° | 726.9  | 726.0  | 720.5  | 720.1  | 718.7  |
| 55°   | 677.1  | 672.1  | 667.5  | 667.5  | 666.6  |
| 57.5° | 622.3  | 618.6  | 612.7  | 612.7  | 611.8  |
| 60°   | 565.6  | 562.4  | 555.6  | 556.5  | 555.6  |
| 62.5° | 510.3  | 503.5  | 497.1  | 499.8  | 497.6  |
| 65°   | 447.3  | 443.6  | 436.8  | 438.6  | 438.2  |
| 67.5° | 389.7  | 382.9  | 376.5  | 380.1  | 378.3  |
| 70°   | 325.8  | 322.1  | 315.7  | 319.4  | 314.8  |
| 72.5° | 265.5  | 262.3  | 255.9  | 260.0  | 255.4  |
| 75°   | 207.0  | 203.8  | 198.7  | 202.4  | 197.8  |
| 77.5° | 151.7  | 149.4  | 144.8  | 148.5  | 149.4  |
| 80°   | 101.4  | 98.7   | 96.4   | 99.6   | 100.5  |
| 82.5° | 59.4   | 57.6   | 56.7   | 57.1   | 59.4   |
| 85°   | 28.8   | 26.5   | 26.5   | 27.0   | 27.0   |
| 87.5° | 7.8    | 6.9    | 7.8    | 8.2    | 8.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)