

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: P974501

Luminaire Tested: FLR2-24-45-L950-CA125

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974501  
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: FLR2-24-45-L950-CA125  
Description: SHAPER SENSE CIRCLE  
  
Light Source: FLR2-24-45-L950-CA125  
Ballast/Driver: -

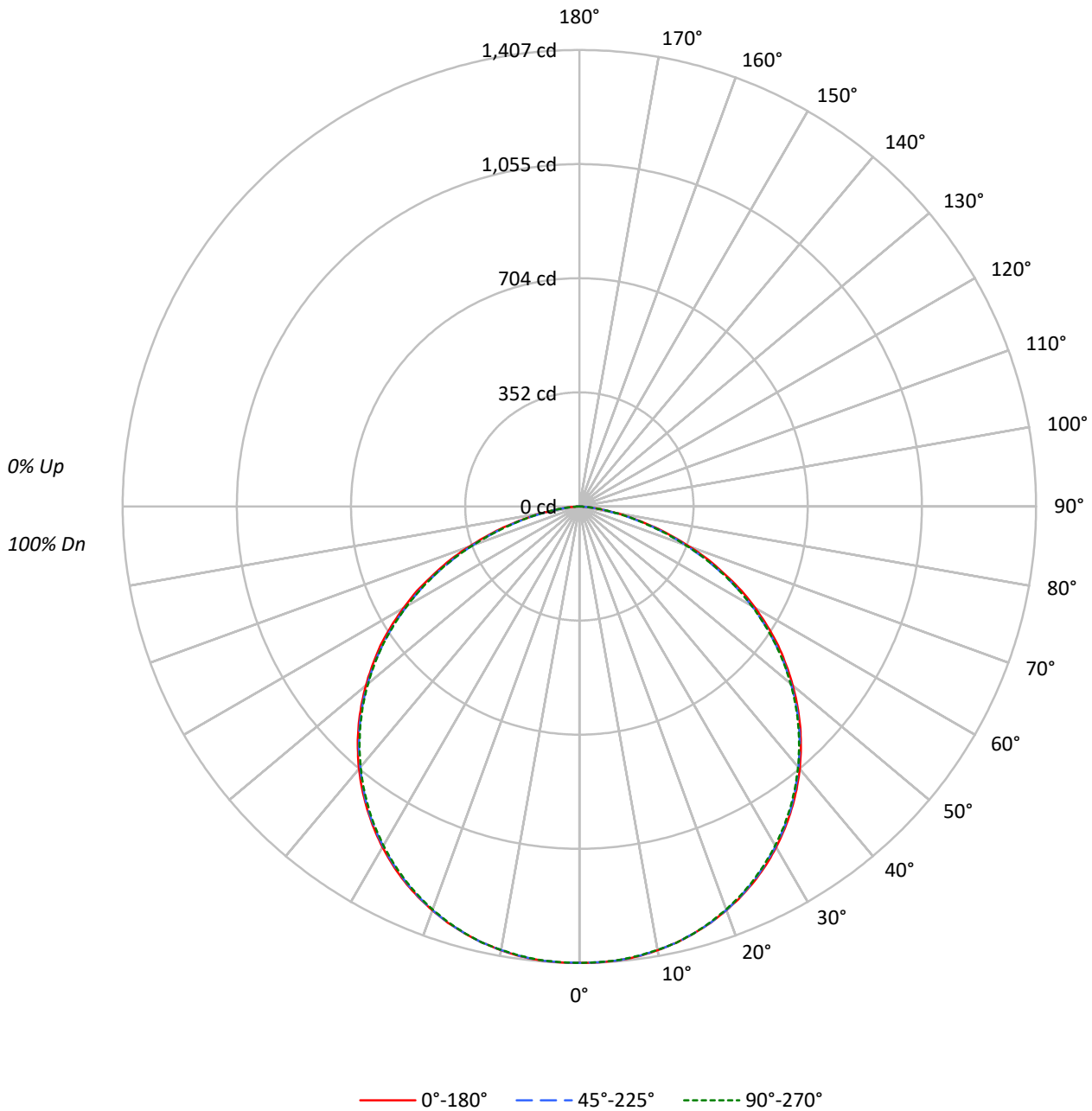
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3975.9 lumens  
Efficiency: N/A  
Efficacy: 111.7 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): 35.6  
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 | 100 | 97  | 106 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 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  | 57  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 38  |
| 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  | 39  | 33  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 26  | 37  | 31  | 26  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1893 | 1893 | 1893 |
| 5°  | 1897 | 1897 | 1895 |
| 10° | 1898 | 1897 | 1896 |
| 15° | 1898 | 1898 | 1898 |
| 20° | 1896 | 1896 | 1893 |
| 25° | 1893 | 1889 | 1886 |
| 30° | 1884 | 1879 | 1875 |
| 35° | 1872 | 1867 | 1861 |
| 40° | 1855 | 1844 | 1841 |
| 45° | 1832 | 1821 | 1815 |
| 50° | 1797 | 1783 | 1778 |
| 55° | 1755 | 1730 | 1727 |
| 60° | 1682 | 1652 | 1652 |
| 65° | 1573 | 1536 | 1541 |
| 70° | 1416 | 1372 | 1368 |
| 75° | 1189 | 1142 | 1136 |
| 80° | 869  | 825  | 860  |
| 85° | 491  | 452  | 460  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1832 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 133.5  | 3.4       |
| 10°-20°   | 384.7  | 9.7       |
| 20°-30°   | 586.5  | 14.8      |
| 30°-40°   | 710.6  | 17.9      |
| 40°-50°   | 738.1  | 18.6      |
| 50°-60°   | 660.3  | 16.6      |
| 60°-70°   | 481.2  | 12.1      |
| 70°-80°   | 238.3  | 6.0       |
| 80°-90°   | 42.6   | 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°    | 1104.7 | 27.8      |
| 0°-40°    | 1815.3 | 45.7      |
| 0°-60°    | 3213.7 | 80.8      |
| 0°-90°    | 3975.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3975.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1407 | 1407  | 1407 | 1407  | 1407 |      |
| 5°  | 1404 | 1405  | 1404 | 1404  | 1403 | 134  |
| 15° | 1363 | 1362  | 1362 | 1363  | 1362 | 385  |
| 25° | 1275 | 1274  | 1272 | 1272  | 1270 | 588  |
| 35° | 1140 | 1138  | 1137 | 1135  | 1133 | 713  |
| 45° | 963  | 960   | 957  | 955   | 954  | 742  |
| 55° | 748  | 742   | 737  | 737   | 736  | 666  |
| 65° | 494  | 490   | 482  | 485   | 484  | 490  |
| 75° | 229  | 225   | 220  | 224   | 219  | 244  |
| 85° | 32   | 29    | 29   | 30    | 30   | 44   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1406.7 | 1406.7 | 1406.7 | 1406.7 | 1406.7 |
| 2.5°  | 1406.7 | 1406.2 | 1406.2 | 1406.7 | 1405.7 |
| 5°    | 1404.2 | 1404.7 | 1404.2 | 1404.2 | 1403.2 |
| 7.5°  | 1398.7 | 1398.1 | 1397.6 | 1398.1 | 1396.6 |
| 10°   | 1389.1 | 1389.1 | 1388.6 | 1389.1 | 1388.1 |
| 12.5° | 1377.5 | 1377.5 | 1377.5 | 1378.0 | 1377.5 |
| 15°   | 1362.8 | 1362.3 | 1362.3 | 1363.3 | 1362.3 |
| 17.5° | 1345.7 | 1345.1 | 1345.1 | 1344.6 | 1343.6 |
| 20°   | 1324.5 | 1324.5 | 1323.9 | 1323.4 | 1321.9 |
| 22.5° | 1301.7 | 1301.2 | 1299.7 | 1299.7 | 1297.7 |
| 25°   | 1275.0 | 1273.5 | 1272.5 | 1272.0 | 1270.4 |
| 27.5° | 1245.7 | 1243.7 | 1242.2 | 1241.2 | 1239.7 |
| 30°   | 1212.9 | 1210.9 | 1209.4 | 1207.9 | 1206.8 |
| 32.5° | 1177.6 | 1176.6 | 1174.0 | 1173.5 | 1171.5 |
| 35°   | 1139.7 | 1138.2 | 1136.7 | 1134.7 | 1132.7 |
| 37.5° | 1099.3 | 1097.8 | 1094.3 | 1093.3 | 1091.8 |
| 40°   | 1056.4 | 1054.4 | 1049.9 | 1049.9 | 1048.4 |
| 42.5° | 1010.5 | 1008.5 | 1005.5 | 1003.4 | 1002.4 |
| 45°   | 962.6  | 960.5  | 957.0  | 955.0  | 954.0  |
| 47.5° | 911.6  | 910.1  | 906.0  | 904.5  | 903.0  |
| 50°   | 858.6  | 856.6  | 852.0  | 851.0  | 849.5  |
| 52.5° | 803.1  | 802.0  | 796.0  | 795.5  | 794.0  |
| 55°   | 748.0  | 742.5  | 737.4  | 737.4  | 736.4  |
| 57.5° | 687.5  | 683.4  | 676.9  | 676.9  | 675.9  |
| 60°   | 624.9  | 621.3  | 613.8  | 614.8  | 613.8  |
| 62.5° | 563.8  | 556.2  | 549.2  | 552.2  | 549.7  |
| 65°   | 494.1  | 490.1  | 482.5  | 484.6  | 484.1  |
| 67.5° | 430.5  | 423.0  | 415.9  | 419.9  | 417.9  |
| 70°   | 359.9  | 355.8  | 348.8  | 352.8  | 347.8  |
| 72.5° | 293.3  | 289.7  | 282.7  | 287.2  | 282.2  |
| 75°   | 228.7  | 225.1  | 219.6  | 223.6  | 218.6  |
| 77.5° | 167.6  | 165.1  | 160.0  | 164.0  | 165.1  |
| 80°   | 112.1  | 109.0  | 106.5  | 110.0  | 111.0  |
| 82.5° | 65.6   | 63.6   | 62.6   | 63.1   | 65.6   |
| 85°   | 31.8   | 29.3   | 29.3   | 29.8   | 29.8   |
| 87.5° | 8.6    | 7.6    | 8.6    | 9.1    | 9.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)