

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: P974545

Luminaire Tested: FLR2-24-72HE-L830-CP250

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974545  
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: FLR2-24-72HE-L830-CP250  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

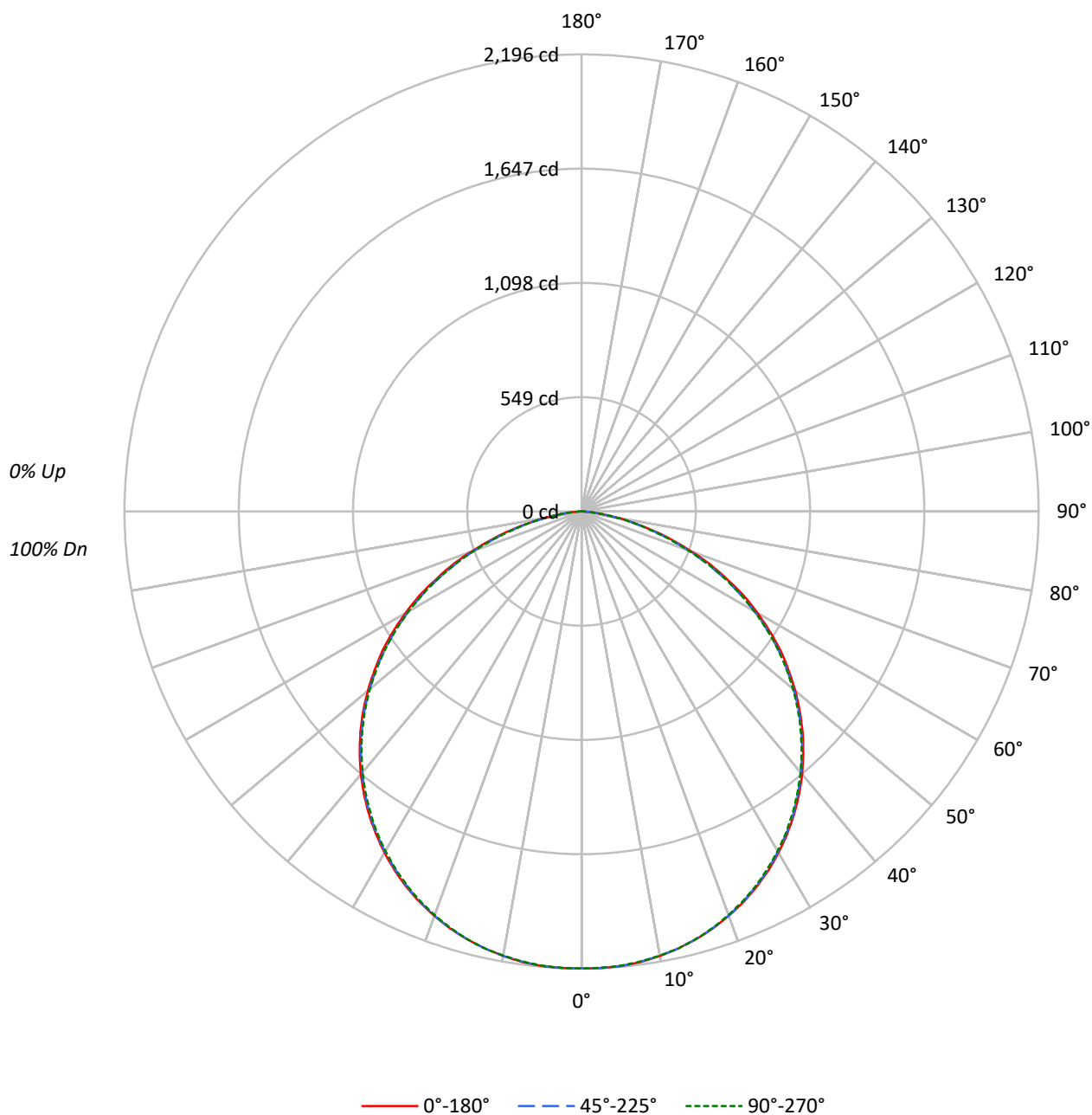
Lumens per Lamp: N/A  
Luminaire Lumens: 6207.0 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 53.6  
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  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 99  | 95  |  | 98  | 95  | 92  |  | 94  | 92  | 89  |  | 91  | 89  | 87  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  |  | 86  | 81  | 76  |  | 83  | 78  | 75  |  | 80  | 76  | 73  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  |  | 76  | 69  | 64  |  | 73  | 68  | 63  |  | 70  | 66  | 62  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  |  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  | 57  | 53  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  |  | 60  | 53  | 47  |  | 58  | 52  | 47  |  | 56  | 51  | 46  |
| 6   | 70  | 57  | 48  | 42  | 69  | 56  | 48  | 42  |  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 51  | 45  | 41  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  |  | 49  | 42  | 37  |  | 48  | 41  | 36  |  | 47  | 41  | 36  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  |  | 45  | 38  | 33  |  | 44  | 37  | 32  |  | 43  | 37  | 32  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  |  | 42  | 34  | 29  |  | 41  | 34  | 29  |  | 39  | 33  | 29  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  |  | 38  | 31  | 27  |  | 38  | 31  | 26  |  | 37  | 31  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2955 | 2955 | 2955 |
| 5°  | 2961 | 2961 | 2959 |
| 10° | 2963 | 2962 | 2961 |
| 15° | 2964 | 2963 | 2963 |
| 20° | 2961 | 2959 | 2955 |
| 25° | 2955 | 2949 | 2945 |
| 30° | 2942 | 2933 | 2927 |
| 35° | 2923 | 2915 | 2905 |
| 40° | 2897 | 2879 | 2875 |
| 45° | 2859 | 2843 | 2834 |
| 50° | 2806 | 2784 | 2776 |
| 55° | 2739 | 2701 | 2697 |
| 60° | 2625 | 2578 | 2578 |
| 65° | 2456 | 2398 | 2406 |
| 70° | 2210 | 2142 | 2136 |
| 75° | 1856 | 1782 | 1774 |
| 80° | 1355 | 1289 | 1344 |
| 85° | 766  | 706  | 718  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2859 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 208.5  | 3.4       |
| 10°-20°   | 600.5  | 9.7       |
| 20°-30°   | 915.6  | 14.8      |
| 30°-40°   | 1109.3 | 17.9      |
| 40°-50°   | 1152.3 | 18.6      |
| 50°-60°   | 1030.8 | 16.6      |
| 60°-70°   | 751.3  | 12.1      |
| 70°-80°   | 372.1  | 6.0       |
| 80°-90°   | 66.5   | 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°    | 1724.6 | 27.8      |
| 0°-40°    | 2834.0 | 45.7      |
| 0°-60°    | 5017.1 | 80.8      |
| 0°-90°    | 6207.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6207.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2196 | 2196  | 2196 | 2196  | 2196 |      |
| 5°  | 2192 | 2193  | 2192 | 2192  | 2191 | 209  |
| 15° | 2128 | 2127  | 2127 | 2128  | 2127 | 601  |
| 25° | 1990 | 1988  | 1987 | 1986  | 1983 | 917  |
| 35° | 1779 | 1777  | 1775 | 1771  | 1768 | 1113 |
| 45° | 1503 | 1500  | 1494 | 1491  | 1489 | 1158 |
| 55° | 1168 | 1159  | 1151 | 1151  | 1150 | 1040 |
| 65° | 772  | 765   | 753  | 756   | 756  | 765  |
| 75° | 357  | 351   | 343  | 349   | 341  | 381  |
| 85° | 50   | 46    | 46   | 46    | 46   | 69   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2196.2 | 2196.2 | 2196.2 | 2196.2 | 2196.2 |
| 2.5°  | 2196.2 | 2195.4 | 2195.4 | 2196.2 | 2194.6 |
| 5°    | 2192.2 | 2193.0 | 2192.2 | 2192.2 | 2190.6 |
| 7.5°  | 2183.6 | 2182.8 | 2182.0 | 2182.8 | 2180.4 |
| 10°   | 2168.6 | 2168.6 | 2167.8 | 2168.6 | 2167.0 |
| 12.5° | 2150.5 | 2150.5 | 2150.5 | 2151.2 | 2150.5 |
| 15°   | 2127.6 | 2126.8 | 2126.8 | 2128.4 | 2126.8 |
| 17.5° | 2100.8 | 2100.0 | 2100.0 | 2099.2 | 2097.7 |
| 20°   | 2067.7 | 2067.7 | 2066.9 | 2066.1 | 2063.8 |
| 22.5° | 2032.3 | 2031.5 | 2029.1 | 2029.1 | 2026.0 |
| 25°   | 1990.5 | 1988.1 | 1986.6 | 1985.8 | 1983.4 |
| 27.5° | 1944.8 | 1941.6 | 1939.3 | 1937.7 | 1935.3 |
| 30°   | 1893.6 | 1890.4 | 1888.1 | 1885.7 | 1884.1 |
| 32.5° | 1838.4 | 1836.8 | 1832.9 | 1832.1 | 1829.0 |
| 35°   | 1779.3 | 1776.9 | 1774.6 | 1771.4 | 1768.3 |
| 37.5° | 1716.3 | 1713.9 | 1708.4 | 1706.8 | 1704.4 |
| 40°   | 1649.3 | 1646.1 | 1639.0 | 1639.0 | 1636.7 |
| 42.5° | 1577.6 | 1574.4 | 1569.7 | 1566.5 | 1565.0 |
| 45°   | 1502.7 | 1499.6 | 1494.1 | 1490.9 | 1489.3 |
| 47.5° | 1423.1 | 1420.8 | 1414.5 | 1412.1 | 1409.7 |
| 50°   | 1340.4 | 1337.2 | 1330.1 | 1328.6 | 1326.2 |
| 52.5° | 1253.7 | 1252.1 | 1242.7 | 1241.9 | 1239.5 |
| 55°   | 1167.8 | 1159.1 | 1151.3 | 1151.3 | 1149.7 |
| 57.5° | 1073.3 | 1067.0 | 1056.7 | 1056.7 | 1055.1 |
| 60°   | 975.5  | 970.0  | 958.2  | 959.8  | 958.2  |
| 62.5° | 880.2  | 868.4  | 857.3  | 862.1  | 858.1  |
| 65°   | 771.5  | 765.1  | 753.3  | 756.5  | 755.7  |
| 67.5° | 672.2  | 660.3  | 649.3  | 655.6  | 652.5  |
| 70°   | 561.8  | 555.5  | 544.5  | 550.8  | 542.9  |
| 72.5° | 457.8  | 452.3  | 441.3  | 448.4  | 440.5  |
| 75°   | 357.0  | 351.4  | 342.8  | 349.1  | 341.2  |
| 77.5° | 261.6  | 257.7  | 249.8  | 256.1  | 257.7  |
| 80°   | 174.9  | 170.2  | 166.3  | 171.8  | 173.4  |
| 82.5° | 102.4  | 99.3   | 97.7   | 98.5   | 102.4  |
| 85°   | 49.6   | 45.7   | 45.7   | 46.5   | 46.5   |
| 87.5° | 13.4   | 11.8   | 13.4   | 14.2   | 15.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)