

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: P974602

Luminaire Tested: FLR2-24-90HE-L930-CP125

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974602  
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-L930-CP125  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

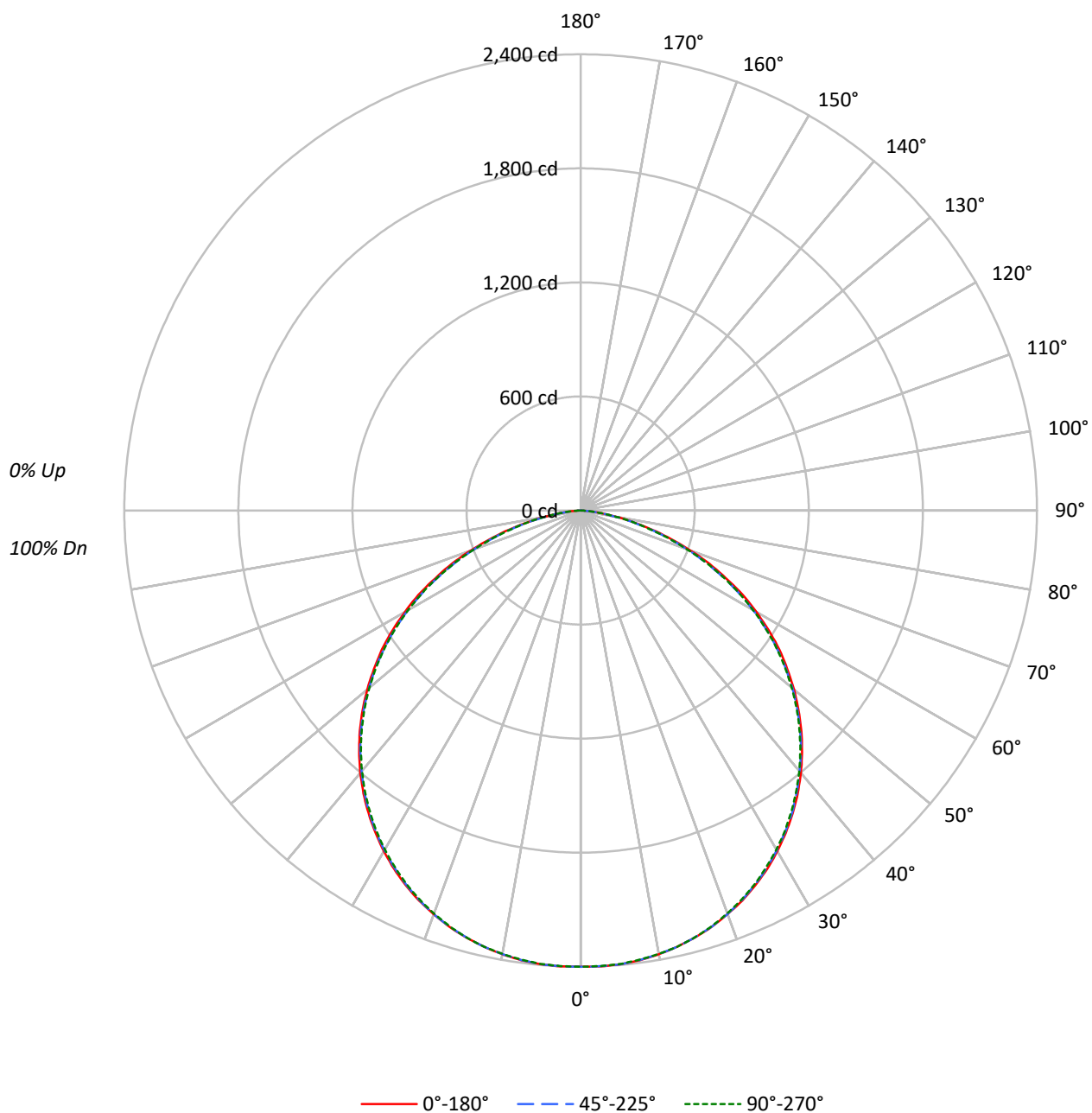
Lumens per Lamp: N/A  
Luminaire Lumens: 6784.3 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°  | 3230 | 3230 | 3230 |
| 5°  | 3236 | 3236 | 3234 |
| 10° | 3238 | 3237 | 3236 |
| 15° | 3239 | 3238 | 3238 |
| 20° | 3236 | 3235 | 3230 |
| 25° | 3230 | 3223 | 3218 |
| 30° | 3216 | 3206 | 3199 |
| 35° | 3194 | 3186 | 3175 |
| 40° | 3166 | 3147 | 3142 |
| 45° | 3125 | 3107 | 3097 |
| 50° | 3067 | 3043 | 3034 |
| 55° | 2994 | 2952 | 2948 |
| 60° | 2869 | 2818 | 2818 |
| 65° | 2684 | 2621 | 2630 |
| 70° | 2416 | 2341 | 2334 |
| 75° | 2028 | 1948 | 1939 |
| 80° | 1481 | 1408 | 1468 |
| 85° | 838  | 772  | 784  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3125 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 227.8  | 3.4       |
| 10°-20°   | 656.4  | 9.7       |
| 20°-30°   | 1000.8 | 14.8      |
| 30°-40°   | 1212.5 | 17.9      |
| 40°-50°   | 1259.5 | 18.6      |
| 50°-60°   | 1126.7 | 16.6      |
| 60°-70°   | 821.2  | 12.1      |
| 70°-80°   | 406.7  | 6.0       |
| 80°-90°   | 72.7   | 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°    | 1885.0 | 27.8      |
| 0°-40°    | 3097.6 | 45.7      |
| 0°-60°    | 5483.8 | 80.8      |
| 0°-90°    | 6784.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6784.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2400 | 2400  | 2400 | 2400  | 2400 |      |
| 5°  | 2396 | 2397  | 2396 | 2396  | 2394 | 228  |
| 15° | 2326 | 2325  | 2325 | 2326  | 2325 | 657  |
| 25° | 2176 | 2173  | 2171 | 2170  | 2168 | 1003 |
| 35° | 1945 | 1942  | 1940 | 1936  | 1933 | 1216 |
| 45° | 1642 | 1639  | 1633 | 1630  | 1628 | 1266 |
| 55° | 1276 | 1267  | 1258 | 1258  | 1257 | 1137 |
| 65° | 843  | 836   | 823  | 827   | 826  | 836  |
| 75° | 390  | 384   | 375  | 382   | 373  | 416  |
| 85° | 54   | 50    | 50   | 51    | 51   | 75   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2400.4 | 2400.4 | 2400.4 | 2400.4 | 2400.4 |
| 2.5°  | 2400.4 | 2399.6 | 2399.6 | 2400.4 | 2398.7 |
| 5°    | 2396.1 | 2397.0 | 2396.1 | 2396.1 | 2394.4 |
| 7.5°  | 2386.6 | 2385.8 | 2384.9 | 2385.8 | 2383.2 |
| 10°   | 2370.3 | 2370.3 | 2369.4 | 2370.3 | 2368.6 |
| 12.5° | 2350.5 | 2350.5 | 2350.5 | 2351.3 | 2350.5 |
| 15°   | 2325.5 | 2324.6 | 2324.6 | 2326.3 | 2324.6 |
| 17.5° | 2296.2 | 2295.3 | 2295.3 | 2294.5 | 2292.8 |
| 20°   | 2260.0 | 2260.0 | 2259.2 | 2258.3 | 2255.7 |
| 22.5° | 2221.3 | 2220.4 | 2217.8 | 2217.8 | 2214.4 |
| 25°   | 2175.6 | 2173.0 | 2171.3 | 2170.5 | 2167.9 |
| 27.5° | 2125.7 | 2122.2 | 2119.6 | 2117.9 | 2115.3 |
| 30°   | 2069.7 | 2066.2 | 2063.7 | 2061.1 | 2059.3 |
| 32.5° | 2009.4 | 2007.7 | 2003.4 | 2002.5 | 1999.1 |
| 35°   | 1944.8 | 1942.2 | 1939.6 | 1936.2 | 1932.7 |
| 37.5° | 1875.9 | 1873.3 | 1867.3 | 1865.6 | 1863.0 |
| 40°   | 1802.7 | 1799.2 | 1791.5 | 1791.5 | 1788.9 |
| 42.5° | 1724.3 | 1720.9 | 1715.7 | 1712.2 | 1710.5 |
| 45°   | 1642.5 | 1639.0 | 1633.0 | 1629.6 | 1627.8 |
| 47.5° | 1555.5 | 1552.9 | 1546.0 | 1543.4 | 1540.9 |
| 50°   | 1465.1 | 1461.6 | 1453.9 | 1452.1 | 1449.6 |
| 52.5° | 1370.3 | 1368.6 | 1358.3 | 1357.4 | 1354.8 |
| 55°   | 1276.4 | 1267.0 | 1258.3 | 1258.3 | 1256.6 |
| 57.5° | 1173.1 | 1166.2 | 1155.0 | 1155.0 | 1153.3 |
| 60°   | 1066.3 | 1060.2 | 1047.3 | 1049.1 | 1047.3 |
| 62.5° | 962.1  | 949.1  | 937.1  | 942.3  | 937.9  |
| 65°   | 843.2  | 836.3  | 823.4  | 826.8  | 826.0  |
| 67.5° | 734.7  | 721.8  | 709.7  | 716.6  | 713.1  |
| 70°   | 614.1  | 607.2  | 595.2  | 602.0  | 593.4  |
| 72.5° | 500.4  | 494.4  | 482.3  | 490.1  | 481.5  |
| 75°   | 390.2  | 384.1  | 374.7  | 381.6  | 372.9  |
| 77.5° | 285.9  | 281.6  | 273.0  | 279.9  | 281.6  |
| 80°   | 191.2  | 186.0  | 181.7  | 187.8  | 189.5  |
| 82.5° | 112.0  | 108.5  | 106.8  | 107.7  | 112.0  |
| 85°   | 54.3   | 50.0   | 50.0   | 50.8   | 50.8   |
| 87.5° | 14.6   | 12.9   | 14.6   | 15.5   | 16.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)