

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: P974910

Luminaire Tested: FLR2-24-90HE-L940-CP125

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974910  
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-L940-CP125  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

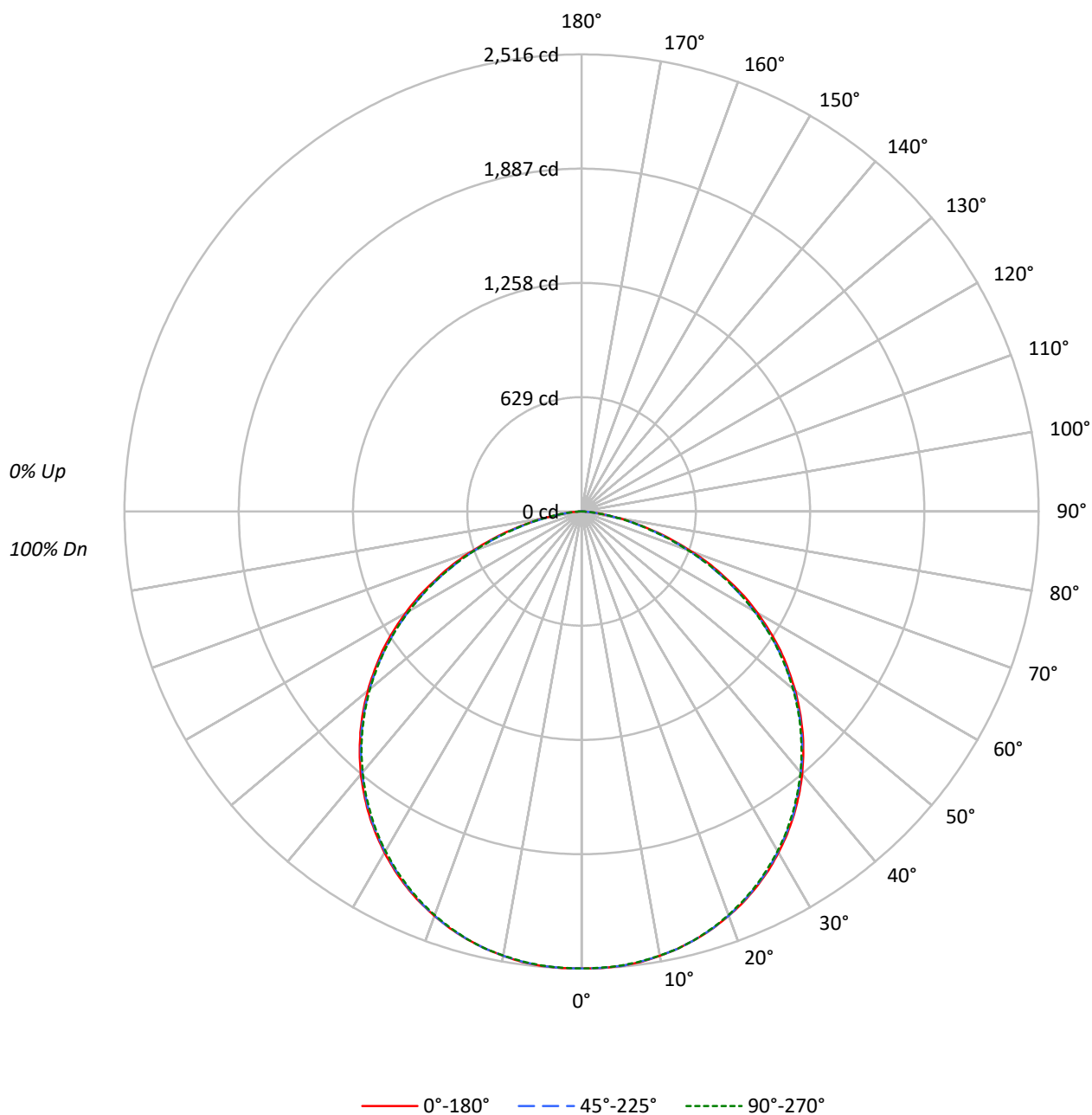
Lumens per Lamp: N/A  
Luminaire Lumens: 7111.3 lumens  
Efficiency: N/A  
Efficacy: 101.2 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°  | 3385 | 3385 | 3385 |
| 5°  | 3392 | 3392 | 3390 |
| 10° | 3394 | 3393 | 3392 |
| 15° | 3395 | 3394 | 3394 |
| 20° | 3392 | 3391 | 3385 |
| 25° | 3386 | 3379 | 3373 |
| 30° | 3370 | 3361 | 3354 |
| 35° | 3348 | 3339 | 3328 |
| 40° | 3319 | 3298 | 3293 |
| 45° | 3276 | 3257 | 3247 |
| 50° | 3215 | 3190 | 3180 |
| 55° | 3138 | 3094 | 3090 |
| 60° | 3008 | 2954 | 2954 |
| 65° | 2814 | 2748 | 2756 |
| 70° | 2532 | 2454 | 2447 |
| 75° | 2126 | 2041 | 2032 |
| 80° | 1553 | 1476 | 1539 |
| 85° | 878  | 809  | 823  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3276 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 238.8  | 3.4       |
| 10°-20°   | 688.0  | 9.7       |
| 20°-30°   | 1049.0 | 14.8      |
| 30°-40°   | 1271.0 | 17.9      |
| 40°-50°   | 1320.2 | 18.6      |
| 50°-60°   | 1181.0 | 16.6      |
| 60°-70°   | 860.7  | 12.1      |
| 70°-80°   | 426.3  | 6.0       |
| 80°-90°   | 76.2   | 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°    | 1975.9 | 27.8      |
| 0°-40°    | 3246.8 | 45.7      |
| 0°-60°    | 5748.1 | 80.8      |
| 0°-90°    | 7111.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7111.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2516 | 2516  | 2516 | 2516  | 2516 |      |
| 5°  | 2512 | 2512  | 2512 | 2512  | 2510 | 239  |
| 15° | 2438 | 2437  | 2437 | 2438  | 2437 | 688  |
| 25° | 2280 | 2278  | 2276 | 2275  | 2272 | 1051 |
| 35° | 2038 | 2036  | 2033 | 2030  | 2026 | 1275 |
| 45° | 1722 | 1718  | 1712 | 1708  | 1706 | 1327 |
| 55° | 1338 | 1328  | 1319 | 1319  | 1317 | 1192 |
| 65° | 884  | 877   | 863  | 867   | 866  | 876  |
| 75° | 409  | 403   | 393  | 400   | 391  | 436  |
| 85° | 57   | 52    | 52   | 53    | 53   | 79   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2516.1 | 2516.1 | 2516.1 | 2516.1 | 2516.1 |
| 2.5°  | 2516.1 | 2515.2 | 2515.2 | 2516.1 | 2514.3 |
| 5°    | 2511.6 | 2512.5 | 2511.6 | 2511.6 | 2509.8 |
| 7.5°  | 2501.7 | 2500.8 | 2499.9 | 2500.8 | 2498.0 |
| 10°   | 2484.5 | 2484.5 | 2483.6 | 2484.5 | 2482.7 |
| 12.5° | 2463.7 | 2463.7 | 2463.7 | 2464.6 | 2463.7 |
| 15°   | 2437.6 | 2436.7 | 2436.7 | 2438.5 | 2436.7 |
| 17.5° | 2406.9 | 2406.0 | 2406.0 | 2405.1 | 2403.3 |
| 20°   | 2368.9 | 2368.9 | 2368.0 | 2367.1 | 2364.4 |
| 22.5° | 2328.3 | 2327.4 | 2324.7 | 2324.7 | 2321.1 |
| 25°   | 2280.5 | 2277.8 | 2276.0 | 2275.1 | 2272.3 |
| 27.5° | 2228.1 | 2224.5 | 2221.8 | 2220.0 | 2217.3 |
| 30°   | 2169.4 | 2165.8 | 2163.1 | 2160.4 | 2158.6 |
| 32.5° | 2106.2 | 2104.4 | 2099.9 | 2099.0 | 2095.4 |
| 35°   | 2038.5 | 2035.8 | 2033.1 | 2029.5 | 2025.9 |
| 37.5° | 1966.3 | 1963.6 | 1957.3 | 1955.5 | 1952.8 |
| 40°   | 1889.6 | 1885.9 | 1877.8 | 1877.8 | 1875.1 |
| 42.5° | 1807.4 | 1803.8 | 1798.4 | 1794.8 | 1793.0 |
| 45°   | 1721.6 | 1718.0 | 1711.7 | 1708.1 | 1706.3 |
| 47.5° | 1630.5 | 1627.7 | 1620.5 | 1617.8 | 1615.1 |
| 50°   | 1535.7 | 1532.1 | 1523.9 | 1522.1 | 1519.4 |
| 52.5° | 1436.4 | 1434.5 | 1423.7 | 1422.8 | 1420.1 |
| 55°   | 1337.9 | 1328.0 | 1319.0 | 1319.0 | 1317.2 |
| 57.5° | 1229.6 | 1222.4 | 1210.7 | 1210.7 | 1208.8 |
| 60°   | 1117.7 | 1111.3 | 1097.8 | 1099.6 | 1097.8 |
| 62.5° | 1008.4 | 994.9  | 982.2  | 987.7  | 983.1  |
| 65°   | 883.8  | 876.6  | 863.1  | 866.7  | 865.8  |
| 67.5° | 770.1  | 756.5  | 743.9  | 751.1  | 747.5  |
| 70°   | 643.7  | 636.5  | 623.8  | 631.1  | 622.0  |
| 72.5° | 524.5  | 518.2  | 505.6  | 513.7  | 504.7  |
| 75°   | 409.0  | 402.6  | 392.7  | 399.9  | 390.9  |
| 77.5° | 299.7  | 295.2  | 286.2  | 293.4  | 295.2  |
| 80°   | 200.4  | 195.0  | 190.5  | 196.8  | 198.6  |
| 82.5° | 117.4  | 113.8  | 111.9  | 112.8  | 117.4  |
| 85°   | 56.9   | 52.4   | 52.4   | 53.3   | 53.3   |
| 87.5° | 15.3   | 13.5   | 15.3   | 16.3   | 17.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)