

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: P975021

Luminaire Tested: FLR2-24-100HE-L850-CP375

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P975021  
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: FLR2-24-100HE-L850-CP375  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

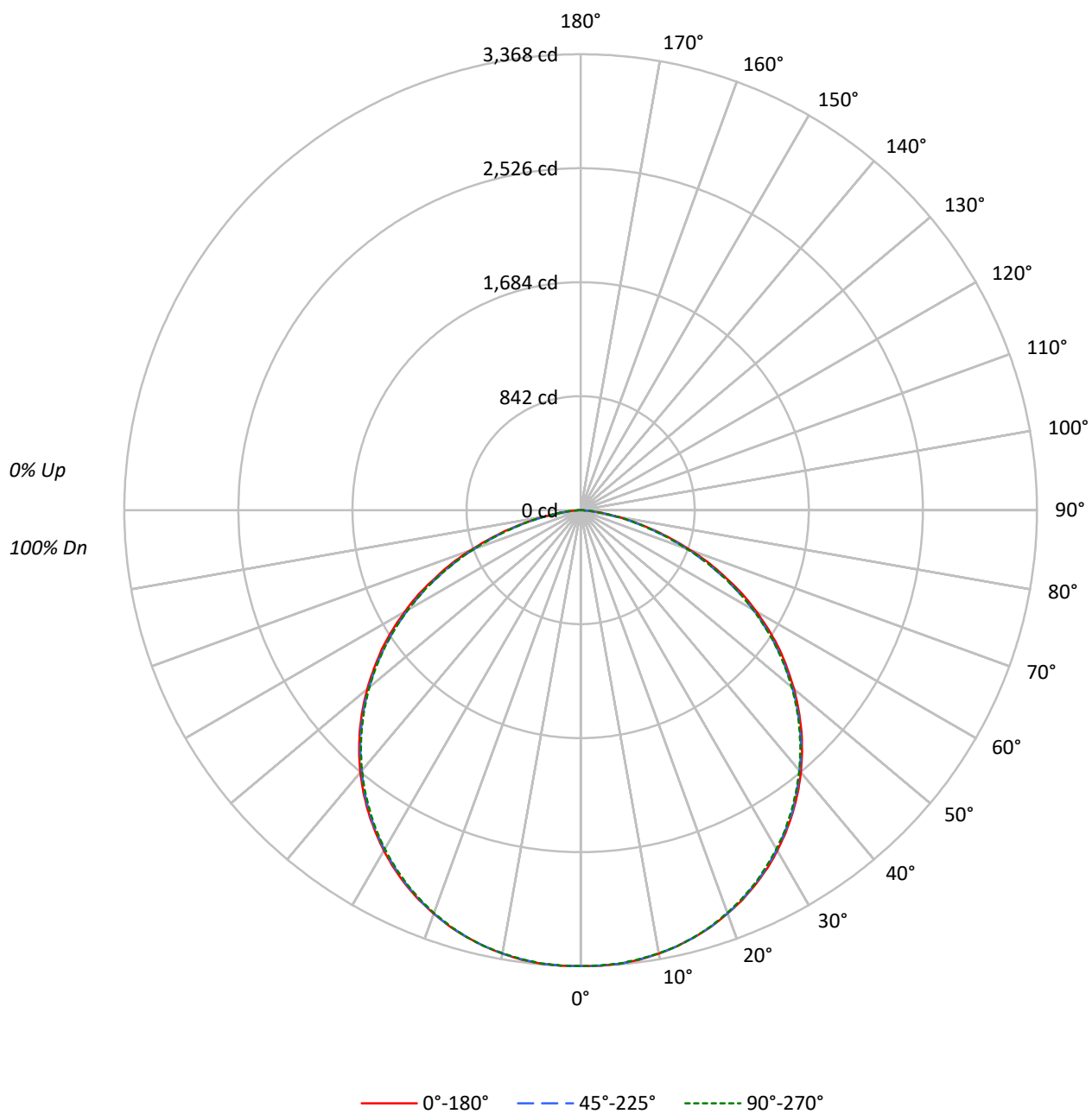
Lumens per Lamp: N/A  
Luminaire Lumens: 9520.3 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 82.6  
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  | 50  | 30 | 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°  | 4532 | 4532 | 4532 |
| 5°  | 4541 | 4541 | 4538 |
| 10° | 4544 | 4543 | 4541 |
| 15° | 4546 | 4544 | 4544 |
| 20° | 4541 | 4539 | 4532 |
| 25° | 4532 | 4524 | 4516 |
| 30° | 4512 | 4499 | 4490 |
| 35° | 4483 | 4471 | 4455 |
| 40° | 4443 | 4416 | 4409 |
| 45° | 4386 | 4360 | 4347 |
| 50° | 4303 | 4271 | 4258 |
| 55° | 4202 | 4142 | 4137 |
| 60° | 4027 | 3955 | 3955 |
| 65° | 3767 | 3679 | 3690 |
| 70° | 3390 | 3286 | 3276 |
| 75° | 2846 | 2733 | 2720 |
| 80° | 2079 | 1976 | 2060 |
| 85° | 1175 | 1082 | 1101 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4386 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 319.7  | 3.4       |
| 10°-20°   | 921.1  | 9.7       |
| 20°-30°   | 1404.4 | 14.8      |
| 30°-40°   | 1701.5 | 17.9      |
| 40°-50°   | 1767.4 | 18.6      |
| 50°-60°   | 1581.1 | 16.6      |
| 60°-70°   | 1152.3 | 12.1      |
| 70°-80°   | 570.7  | 6.0       |
| 80°-90°   | 102.0  | 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°    | 2645.2 | 27.8      |
| 0°-40°    | 4346.8 | 45.7      |
| 0°-60°    | 7695.3 | 80.8      |
| 0°-90°    | 9520.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 9520.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3368 | 3368  | 3368 | 3368  | 3368 |      |
| 5°  | 3362 | 3364  | 3362 | 3362  | 3360 | 320  |
| 15° | 3263 | 3262  | 3262 | 3264  | 3262 | 921  |
| 25° | 3053 | 3049  | 3047 | 3046  | 3042 | 1407 |
| 35° | 2729 | 2726  | 2722 | 2717  | 2712 | 1707 |
| 45° | 2305 | 2300  | 2292 | 2287  | 2284 | 1776 |
| 55° | 1791 | 1778  | 1766 | 1766  | 1763 | 1596 |
| 65° | 1183 | 1174  | 1156 | 1160  | 1159 | 1173 |
| 75° | 548  | 539   | 526  | 535   | 523  | 584  |
| 85° | 76   | 70    | 70   | 71    | 71   | 105  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3368.5 | 3368.5 | 3368.5 | 3368.5 | 3368.5 |
| 2.5°  | 3368.5 | 3367.3 | 3367.3 | 3368.5 | 3366.1 |
| 5°    | 3362.4 | 3363.6 | 3362.4 | 3362.4 | 3360.0 |
| 7.5°  | 3349.1 | 3347.9 | 3346.7 | 3347.9 | 3344.3 |
| 10°   | 3326.2 | 3326.2 | 3325.0 | 3326.2 | 3323.8 |
| 12.5° | 3298.4 | 3298.4 | 3298.4 | 3299.6 | 3298.4 |
| 15°   | 3263.3 | 3262.1 | 3262.1 | 3264.5 | 3262.1 |
| 17.5° | 3222.2 | 3221.0 | 3221.0 | 3219.8 | 3217.4 |
| 20°   | 3171.5 | 3171.5 | 3170.3 | 3169.0 | 3165.4 |
| 22.5° | 3117.1 | 3115.9 | 3112.2 | 3112.2 | 3107.4 |
| 25°   | 3053.0 | 3049.4 | 3047.0 | 3045.8 | 3042.1 |
| 27.5° | 2982.9 | 2978.1 | 2974.5 | 2972.0 | 2968.4 |
| 30°   | 2904.4 | 2899.5 | 2895.9 | 2892.3 | 2889.9 |
| 32.5° | 2819.8 | 2817.3 | 2811.3 | 2810.1 | 2805.2 |
| 35°   | 2729.1 | 2725.5 | 2721.9 | 2717.0 | 2712.2 |
| 37.5° | 2632.4 | 2628.8 | 2620.3 | 2617.9 | 2614.3 |
| 40°   | 2529.7 | 2524.8 | 2514.0 | 2514.0 | 2510.3 |
| 42.5° | 2419.7 | 2414.9 | 2407.6 | 2402.8 | 2400.4 |
| 45°   | 2304.9 | 2300.0 | 2291.6 | 2286.7 | 2284.3 |
| 47.5° | 2182.8 | 2179.2 | 2169.5 | 2165.9 | 2162.3 |
| 50°   | 2055.9 | 2051.1 | 2040.2 | 2037.8 | 2034.1 |
| 52.5° | 1922.9 | 1920.5 | 1906.0 | 1904.8 | 1901.2 |
| 55°   | 1791.2 | 1777.9 | 1765.8 | 1765.8 | 1763.4 |
| 57.5° | 1646.2 | 1636.5 | 1620.8 | 1620.8 | 1618.4 |
| 60°   | 1496.3 | 1487.8 | 1469.7 | 1472.1 | 1469.7 |
| 62.5° | 1350.0 | 1331.9 | 1315.0 | 1322.2 | 1316.2 |
| 65°   | 1183.3 | 1173.6 | 1155.5 | 1160.3 | 1159.1 |
| 67.5° | 1031.0 | 1012.8 | 995.9  | 1005.6 | 1000.8 |
| 70°   | 861.8  | 852.1  | 835.2  | 844.8  | 832.8  |
| 72.5° | 702.2  | 693.8  | 676.8  | 687.7  | 675.6  |
| 75°   | 547.5  | 539.1  | 525.8  | 535.4  | 523.3  |
| 77.5° | 401.3  | 395.2  | 383.1  | 392.8  | 395.2  |
| 80°   | 268.3  | 261.1  | 255.0  | 263.5  | 265.9  |
| 82.5° | 157.1  | 152.3  | 149.9  | 151.1  | 157.1  |
| 85°   | 76.1   | 70.1   | 70.1   | 71.3   | 71.3   |
| 87.5° | 20.5   | 18.1   | 20.5   | 21.8   | 23.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)