

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: P974306

Luminaire Tested: FLR2-24-30-L840-CP250

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974306  
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: FLR2-24-30-L840-CP250  
Description: SHAPER SENSE CIRCLE  
  
Light Source: FLR2-24-30-L840-CP250  
Ballast/Driver: -

**Summary**

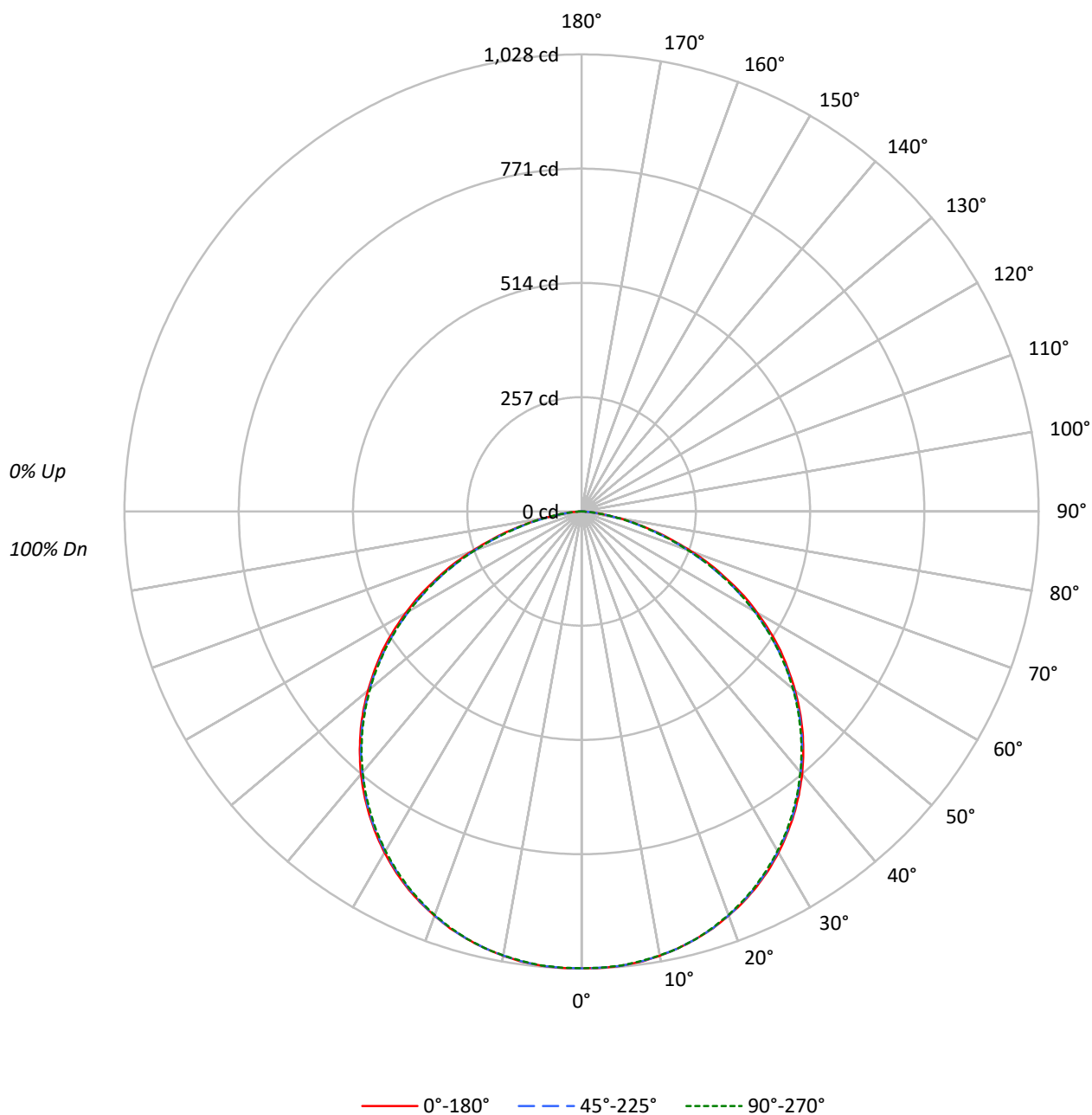
Lumens per Lamp: N/A  
Luminaire Lumens: 2904.6 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.7  
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  |     |     |     |    | 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°  | 1383 | 1383 | 1383 |
| 5°  | 1386 | 1386 | 1385 |
| 10° | 1386 | 1386 | 1386 |
| 15° | 1387 | 1386 | 1386 |
| 20° | 1385 | 1385 | 1383 |
| 25° | 1383 | 1380 | 1378 |
| 30° | 1377 | 1373 | 1370 |
| 35° | 1368 | 1364 | 1359 |
| 40° | 1356 | 1347 | 1345 |
| 45° | 1338 | 1330 | 1326 |
| 50° | 1313 | 1303 | 1299 |
| 55° | 1282 | 1264 | 1262 |
| 60° | 1228 | 1207 | 1207 |
| 65° | 1149 | 1122 | 1126 |
| 70° | 1034 | 1002 | 1000 |
| 75° | 868  | 834  | 830  |
| 80° | 635  | 603  | 628  |
| 85° | 358  | 330  | 337  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1338 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 97.5   | 3.4       |
| 10°-20°   | 281.0  | 9.7       |
| 20°-30°   | 428.5  | 14.8      |
| 30°-40°   | 519.1  | 17.9      |
| 40°-50°   | 539.2  | 18.6      |
| 50°-60°   | 482.4  | 16.6      |
| 60°-70°   | 351.6  | 12.1      |
| 70°-80°   | 174.1  | 6.0       |
| 80°-90°   | 31.1   | 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°    | 807.1  | 27.8      |
| 0°-40°    | 1326.2 | 45.7      |
| 0°-60°    | 2347.8 | 80.8      |
| 0°-90°    | 2904.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2904.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1028 | 1028  | 1028 | 1028  | 1028 |      |
| 5°  | 1026 | 1026  | 1026 | 1026  | 1025 | 98   |
| 15° | 996  | 995   | 995  | 996   | 995  | 281  |
| 25° | 932  | 930   | 930  | 929   | 928  | 429  |
| 35° | 833  | 832   | 830  | 829   | 828  | 521  |
| 45° | 703  | 702   | 699  | 698   | 697  | 542  |
| 55° | 546  | 542   | 539  | 539   | 538  | 487  |
| 65° | 361  | 358   | 352  | 354   | 354  | 358  |
| 75° | 167  | 164   | 160  | 163   | 160  | 178  |
| 85° | 23   | 21    | 21   | 22    | 22   | 32   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1027.7 | 1027.7 | 1027.7 | 1027.7 | 1027.7 |
| 2.5°  | 1027.7 | 1027.3 | 1027.3 | 1027.7 | 1027.0 |
| 5°    | 1025.9 | 1026.2 | 1025.9 | 1025.9 | 1025.1 |
| 7.5°  | 1021.8 | 1021.4 | 1021.1 | 1021.4 | 1020.3 |
| 10°   | 1014.8 | 1014.8 | 1014.4 | 1014.8 | 1014.1 |
| 12.5° | 1006.3 | 1006.3 | 1006.3 | 1006.7 | 1006.3 |
| 15°   | 995.6  | 995.3  | 995.3  | 996.0  | 995.3  |
| 17.5° | 983.1  | 982.7  | 982.7  | 982.4  | 981.6  |
| 20°   | 967.6  | 967.6  | 967.2  | 966.9  | 965.8  |
| 22.5° | 951.0  | 950.6  | 949.5  | 949.5  | 948.1  |
| 25°   | 931.5  | 930.4  | 929.6  | 929.3  | 928.2  |
| 27.5° | 910.1  | 908.6  | 907.5  | 906.8  | 905.7  |
| 30°   | 886.1  | 884.6  | 883.5  | 882.4  | 881.7  |
| 32.5° | 860.3  | 859.6  | 857.7  | 857.4  | 855.9  |
| 35°   | 832.6  | 831.5  | 830.4  | 829.0  | 827.5  |
| 37.5° | 803.1  | 802.0  | 799.5  | 798.7  | 797.6  |
| 40°   | 771.8  | 770.3  | 767.0  | 767.0  | 765.9  |
| 42.5° | 738.2  | 736.8  | 734.6  | 733.1  | 732.3  |
| 45°   | 703.2  | 701.7  | 699.2  | 697.7  | 696.9  |
| 47.5° | 666.0  | 664.9  | 661.9  | 660.8  | 659.7  |
| 50°   | 627.2  | 625.8  | 622.5  | 621.7  | 620.6  |
| 52.5° | 586.7  | 585.9  | 581.5  | 581.2  | 580.0  |
| 55°   | 546.5  | 542.4  | 538.7  | 538.7  | 538.0  |
| 57.5° | 502.2  | 499.3  | 494.5  | 494.5  | 493.8  |
| 60°   | 456.5  | 453.9  | 448.4  | 449.1  | 448.4  |
| 62.5° | 411.9  | 406.4  | 401.2  | 403.4  | 401.6  |
| 65°   | 361.0  | 358.1  | 352.5  | 354.0  | 353.6  |
| 67.5° | 314.5  | 309.0  | 303.9  | 306.8  | 305.3  |
| 70°   | 262.9  | 260.0  | 254.8  | 257.8  | 254.1  |
| 72.5° | 214.2  | 211.7  | 206.5  | 209.8  | 206.1  |
| 75°   | 167.0  | 164.5  | 160.4  | 163.4  | 159.7  |
| 77.5° | 122.4  | 120.6  | 116.9  | 119.8  | 120.6  |
| 80°   | 81.9   | 79.7   | 77.8   | 80.4   | 81.1   |
| 82.5° | 47.9   | 46.5   | 45.7   | 46.1   | 47.9   |
| 85°   | 23.2   | 21.4   | 21.4   | 21.8   | 21.8   |
| 87.5° | 6.3    | 5.5    | 6.3    | 6.6    | 7.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)