

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: P974585

Luminaire Tested: FLR2-24-40HE-L930-CP080

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P974585  
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: FLR2-24-40HE-L930-CP080  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

**Summary**

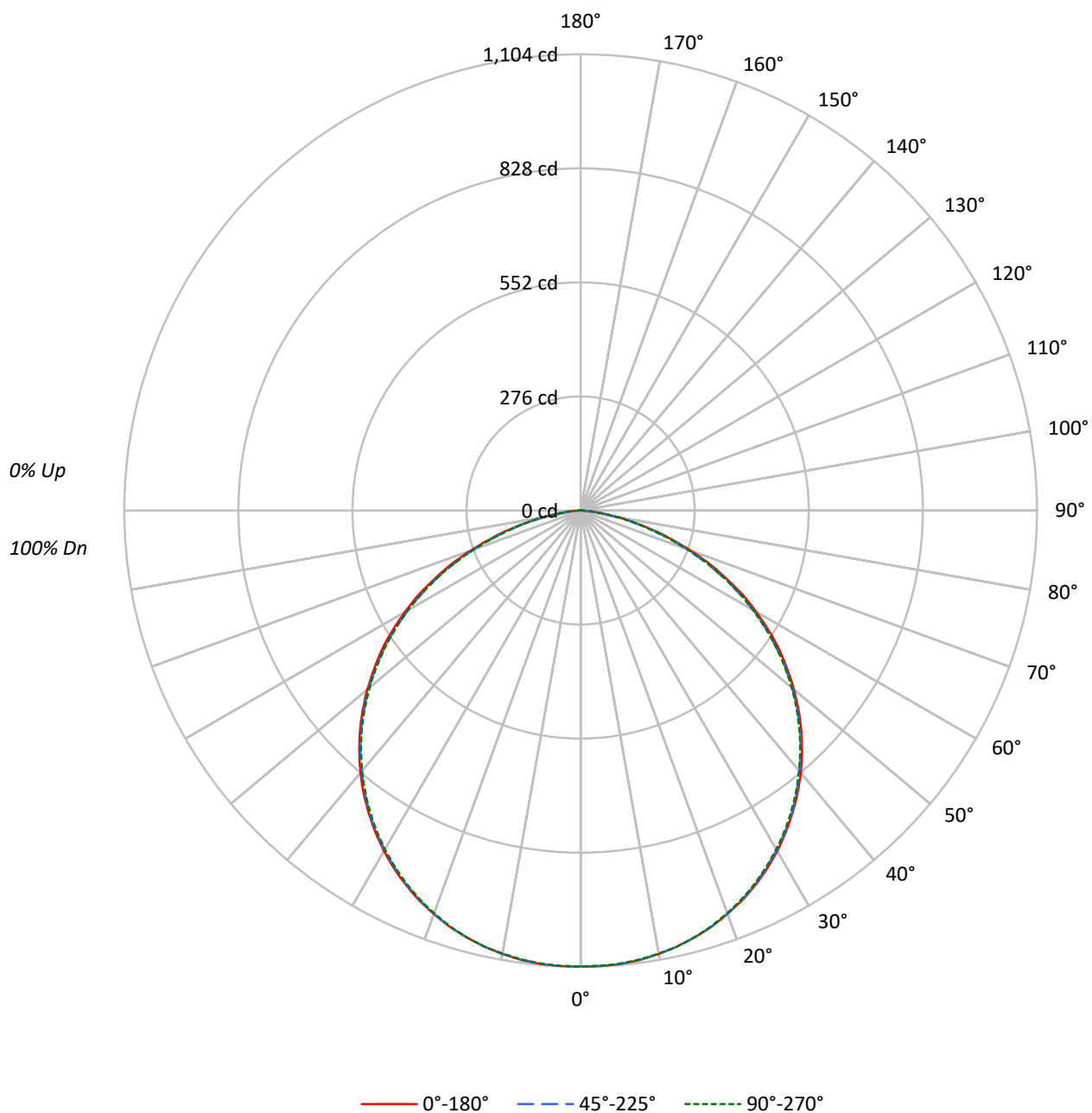
Lumens per Lamp: N/A  
Luminaire Lumens: 3118.8 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 29.9  
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°  | 1485 | 1485 | 1485 |
| 5°  | 1488 | 1488 | 1487 |
| 10° | 1489 | 1488 | 1488 |
| 15° | 1489 | 1489 | 1489 |
| 20° | 1488 | 1487 | 1485 |
| 25° | 1485 | 1482 | 1480 |
| 30° | 1478 | 1474 | 1471 |
| 35° | 1468 | 1465 | 1459 |
| 40° | 1456 | 1447 | 1444 |
| 45° | 1437 | 1428 | 1424 |
| 50° | 1410 | 1399 | 1395 |
| 55° | 1377 | 1357 | 1355 |
| 60° | 1319 | 1296 | 1296 |
| 65° | 1234 | 1205 | 1209 |
| 70° | 1111 | 1076 | 1073 |
| 75° | 933  | 895  | 891  |
| 80° | 681  | 647  | 675  |
| 85° | 384  | 355  | 361  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1437 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 104.7  | 3.4       |
| 10°-20°   | 301.7  | 9.7       |
| 20°-30°   | 460.1  | 14.8      |
| 30°-40°   | 557.4  | 17.9      |
| 40°-50°   | 579.0  | 18.6      |
| 50°-60°   | 518.0  | 16.6      |
| 60°-70°   | 377.5  | 12.1      |
| 70°-80°   | 186.9  | 6.0       |
| 80°-90°   | 33.4   | 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°    | 866.6  | 27.8      |
| 0°-40°    | 1424.0 | 45.7      |
| 0°-60°    | 2520.9 | 80.8      |
| 0°-90°    | 3118.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3118.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1104 | 1104  | 1104 | 1104  | 1104 |      |
| 5°  | 1102 | 1102  | 1102 | 1102  | 1101 | 105  |
| 15° | 1069 | 1069  | 1069 | 1069  | 1069 | 302  |
| 25° | 1000 | 999   | 998  | 998   | 997  | 461  |
| 35° | 894  | 893   | 892  | 890   | 888  | 559  |
| 45° | 755  | 754   | 751  | 749   | 748  | 582  |
| 55° | 587  | 582   | 578  | 578   | 578  | 523  |
| 65° | 388  | 384   | 378  | 380   | 380  | 384  |
| 75° | 179  | 177   | 172  | 175   | 171  | 191  |
| 85° | 25   | 23    | 23   | 23    | 23   | 35   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1103.5 | 1103.5 | 1103.5 | 1103.5 | 1103.5 |
| 2.5°  | 1103.5 | 1103.1 | 1103.1 | 1103.5 | 1102.7 |
| 5°    | 1101.5 | 1101.9 | 1101.5 | 1101.5 | 1100.7 |
| 7.5°  | 1097.1 | 1096.8 | 1096.4 | 1096.8 | 1095.6 |
| 10°   | 1089.6 | 1089.6 | 1089.2 | 1089.6 | 1088.8 |
| 12.5° | 1080.5 | 1080.5 | 1080.5 | 1080.9 | 1080.5 |
| 15°   | 1069.0 | 1068.6 | 1068.6 | 1069.4 | 1068.6 |
| 17.5° | 1055.6 | 1055.2 | 1055.2 | 1054.8 | 1054.0 |
| 20°   | 1038.9 | 1038.9 | 1038.5 | 1038.2 | 1037.0 |
| 22.5° | 1021.1 | 1020.7 | 1019.5 | 1019.5 | 1018.0 |
| 25°   | 1000.1 | 999.0  | 998.2  | 997.8  | 996.6  |
| 27.5° | 977.2  | 975.6  | 974.4  | 973.6  | 972.4  |
| 30°   | 951.4  | 949.9  | 948.7  | 947.5  | 946.7  |
| 32.5° | 923.7  | 922.9  | 921.0  | 920.6  | 919.0  |
| 35°   | 894.0  | 892.8  | 891.7  | 890.1  | 888.5  |
| 37.5° | 862.4  | 861.2  | 858.4  | 857.6  | 856.4  |
| 40°   | 828.7  | 827.1  | 823.6  | 823.6  | 822.4  |
| 42.5° | 792.7  | 791.1  | 788.7  | 787.1  | 786.3  |
| 45°   | 755.1  | 753.5  | 750.7  | 749.1  | 748.3  |
| 47.5° | 715.1  | 713.9  | 710.7  | 709.5  | 708.3  |
| 50°   | 673.5  | 671.9  | 668.3  | 667.6  | 666.4  |
| 52.5° | 629.9  | 629.1  | 624.4  | 624.0  | 622.8  |
| 55°   | 586.8  | 582.4  | 578.5  | 578.5  | 577.7  |
| 57.5° | 539.3  | 536.1  | 531.0  | 531.0  | 530.2  |
| 60°   | 490.2  | 487.4  | 481.5  | 482.3  | 481.5  |
| 62.5° | 442.3  | 436.3  | 430.8  | 433.2  | 431.2  |
| 65°   | 387.6  | 384.5  | 378.5  | 380.1  | 379.7  |
| 67.5° | 337.7  | 331.8  | 326.3  | 329.4  | 327.8  |
| 70°   | 282.3  | 279.1  | 273.6  | 276.8  | 272.8  |
| 72.5° | 230.0  | 227.3  | 221.7  | 225.3  | 221.3  |
| 75°   | 179.4  | 176.6  | 172.2  | 175.4  | 171.4  |
| 77.5° | 131.5  | 129.5  | 125.5  | 128.7  | 129.5  |
| 80°   | 87.9   | 85.5   | 83.5   | 86.3   | 87.1   |
| 82.5° | 51.5   | 49.9   | 49.1   | 49.5   | 51.5   |
| 85°   | 24.9   | 23.0   | 23.0   | 23.4   | 23.4   |
| 87.5° | 6.7    | 5.9    | 6.7    | 7.1    | 7.5    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)