

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: P973781

Luminaire Tested: FLR2-22-20HE-L930-CP250

Issue Date: 3/13/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P973781  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-281-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/13/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FLR2-22-20HE-L930-CP250  
Description: SHAPER SENSE CIRCLE  
  
Light Source:  
Ballast/Driver: -

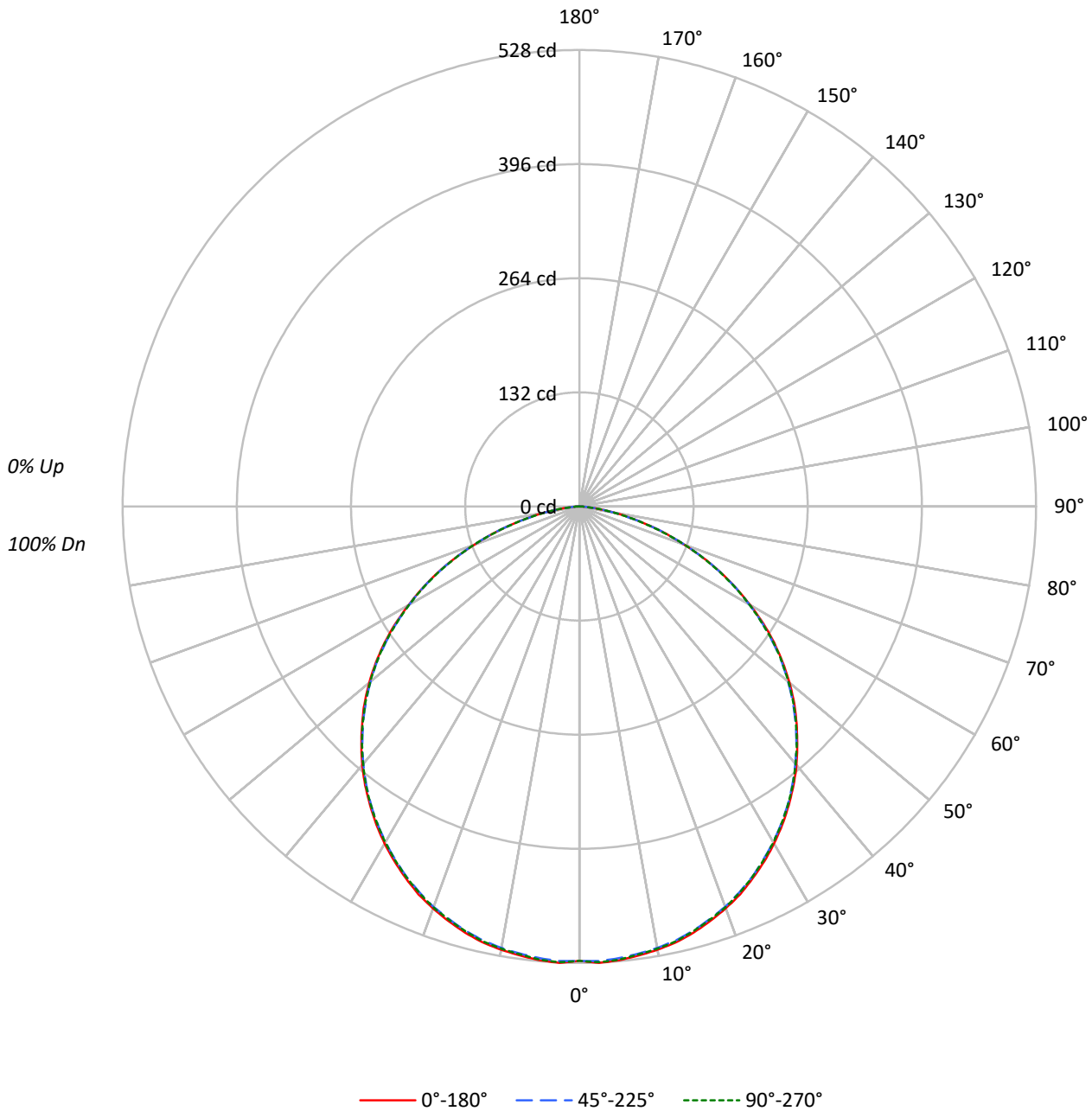
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1469.9 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.8  
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  |     |     |     | 10  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 109 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 90  | 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  | 63  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |
| 6   | 71  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 39  | 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  | 40  | 34  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1414 | 1414 | 1414 |
| 5°  | 1423 | 1417 | 1422 |
| 10° | 1423 | 1417 | 1419 |
| 15° | 1422 | 1416 | 1417 |
| 20° | 1417 | 1411 | 1413 |
| 25° | 1409 | 1404 | 1404 |
| 30° | 1399 | 1393 | 1394 |
| 35° | 1386 | 1381 | 1382 |
| 40° | 1372 | 1365 | 1366 |
| 45° | 1352 | 1345 | 1348 |
| 50° | 1328 | 1318 | 1321 |
| 55° | 1290 | 1279 | 1284 |
| 60° | 1227 | 1221 | 1221 |
| 65° | 1145 | 1143 | 1139 |
| 70° | 1014 | 1019 | 1017 |
| 75° | 854  | 847  | 840  |
| 80° | 614  | 604  | 598  |
| 85° | 321  | 321  | 312  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1352 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.8   | 3.4       |
| 10°-20°   | 143.1  | 9.7       |
| 20°-30°   | 217.5  | 14.8      |
| 30°-40°   | 262.9  | 17.9      |
| 40°-50°   | 272.9  | 18.6      |
| 50°-60°   | 244.0  | 16.6      |
| 60°-70°   | 177.4  | 12.1      |
| 70°-80°   | 87.2   | 5.9       |
| 80°-90°   | 15.1   | 1.0       |
| 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°    | 410.4  | 27.9      |
| 0°-40°    | 673.3  | 45.8      |
| 0°-60°    | 1190.2 | 81.0      |
| 0°-90°    | 1469.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1469.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 526 | 526   | 526 | 526   | 526 |      |
| 5°  | 527 | 521   | 525 | 523   | 526 | 50   |
| 15° | 510 | 504   | 508 | 507   | 509 | 144  |
| 25° | 475 | 469   | 473 | 472   | 473 | 219  |
| 35° | 422 | 419   | 420 | 421   | 421 | 264  |
| 45° | 355 | 354   | 354 | 354   | 354 | 274  |
| 55° | 275 | 273   | 273 | 273   | 274 | 245  |
| 65° | 180 | 180   | 180 | 180   | 179 | 177  |
| 75° | 82  | 83    | 82  | 82    | 81  | 87   |
| 85° | 10  | 11    | 10  | 10    | 10  | 15   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P973781  
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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 525.6 | 525.6 | 525.6 | 525.6 | 525.6 |
| 2.5°  | 528.5 | 522.4 | 526.3 | 524.0 | 527.6 |
| 5°    | 526.9 | 520.7 | 524.6 | 522.7 | 526.3 |
| 7.5°  | 524.0 | 517.8 | 521.7 | 519.8 | 522.7 |
| 10°   | 520.7 | 514.2 | 518.5 | 516.5 | 519.4 |
| 12.5° | 516.5 | 510.3 | 514.2 | 512.6 | 515.2 |
| 15°   | 510.3 | 504.5 | 508.1 | 506.8 | 508.7 |
| 17.5° | 502.9 | 497.0 | 500.6 | 499.6 | 501.3 |
| 20°   | 494.8 | 489.2 | 492.8 | 491.8 | 493.5 |
| 22.5° | 485.7 | 479.8 | 483.1 | 482.4 | 483.7 |
| 25°   | 474.6 | 469.4 | 472.7 | 471.7 | 473.0 |
| 27.5° | 462.9 | 458.1 | 460.7 | 460.7 | 461.3 |
| 30°   | 450.3 | 445.7 | 448.3 | 448.3 | 448.7 |
| 32.5° | 436.7 | 433.1 | 434.7 | 435.0 | 435.0 |
| 35°   | 422.0 | 419.1 | 420.4 | 420.7 | 420.7 |
| 37.5° | 406.8 | 403.9 | 404.8 | 405.5 | 405.5 |
| 40°   | 390.6 | 388.0 | 388.6 | 389.3 | 388.9 |
| 42.5° | 373.0 | 371.1 | 371.4 | 372.0 | 372.0 |
| 45°   | 355.2 | 353.5 | 353.5 | 354.2 | 354.2 |
| 47.5° | 337.0 | 335.4 | 334.7 | 335.4 | 335.4 |
| 50°   | 317.2 | 315.6 | 314.9 | 315.6 | 315.6 |
| 52.5° | 296.4 | 294.8 | 294.8 | 294.8 | 295.1 |
| 55°   | 275.0 | 273.4 | 272.7 | 273.4 | 273.7 |
| 57.5° | 252.3 | 251.6 | 250.6 | 251.0 | 250.0 |
| 60°   | 227.9 | 227.9 | 226.9 | 227.6 | 226.9 |
| 62.5° | 204.2 | 204.9 | 203.9 | 203.9 | 203.2 |
| 65°   | 179.9 | 180.5 | 179.5 | 179.5 | 178.9 |
| 67.5° | 154.9 | 155.8 | 154.5 | 154.5 | 153.9 |
| 70°   | 128.9 | 130.8 | 129.5 | 129.9 | 129.2 |
| 72.5° | 105.5 | 106.5 | 105.2 | 105.2 | 104.5 |
| 75°   | 82.1  | 82.8  | 81.5  | 81.8  | 80.8  |
| 77.5° | 59.1  | 60.1  | 58.8  | 59.1  | 58.8  |
| 80°   | 39.6  | 39.9  | 39.0  | 39.3  | 38.6  |
| 82.5° | 23.1  | 23.4  | 23.1  | 22.7  | 22.4  |
| 85°   | 10.4  | 10.7  | 10.4  | 10.4  | 10.1  |
| 87.5° | 2.6   | 2.6   | 2.6   | 2.6   | 2.6   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)