

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: NEO-RAY

Report Number: P1037480

Luminaire Tested: S123RDS-B1000DB27-4F0-XX-W2A-F

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1037480  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDS-B1000DB27-4F0-XX-W2A-F  
Description: Define 3 Regressed Direct Surface with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

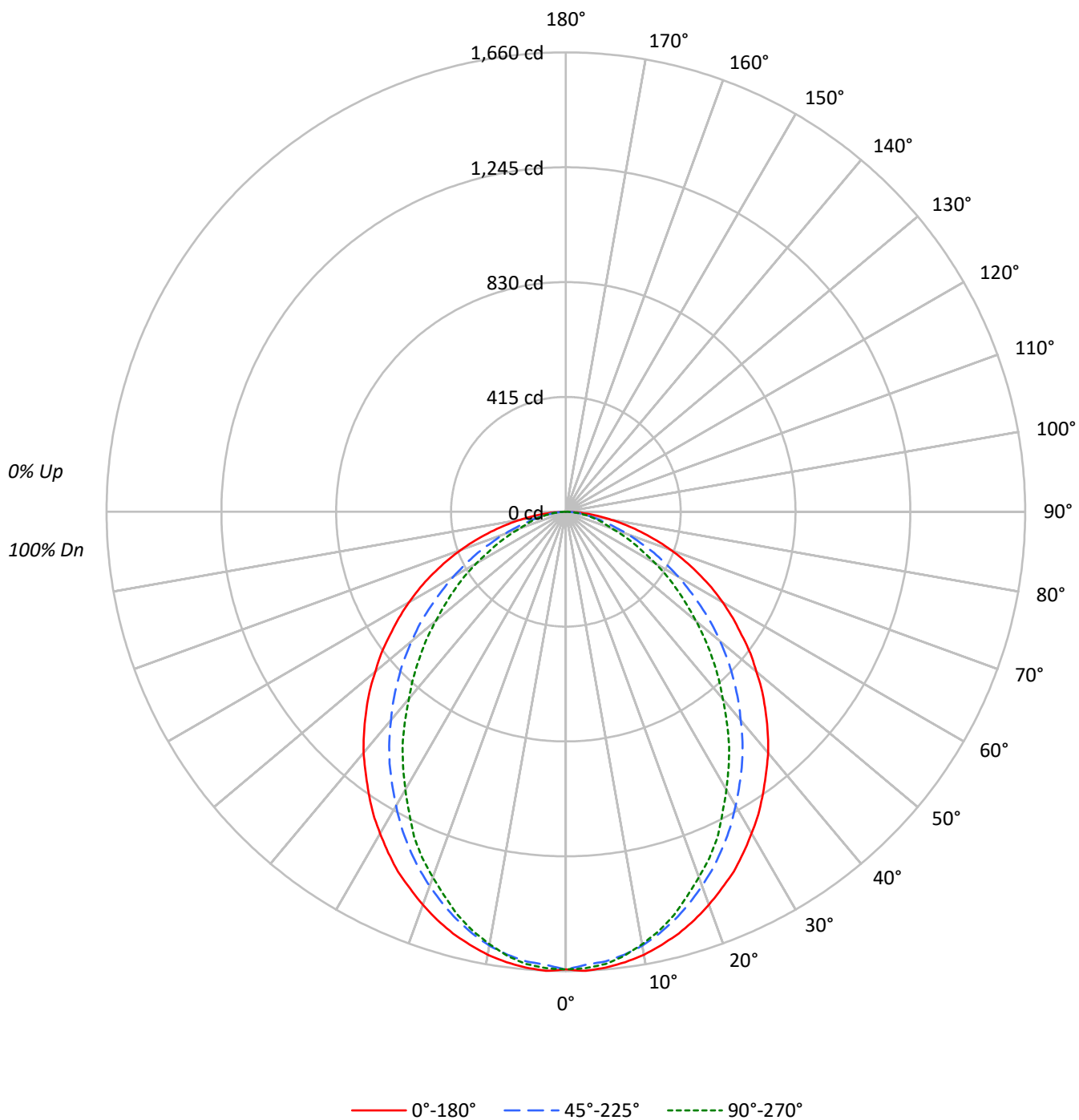
Lumens per Lamp: N/A  
Luminaire Lumens: 3736.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  |  | 95  | 93  | 90  |  | 91  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  |  | 84  | 80  | 77  |  | 81  |
| 3   | 92  | 82  | 75  | 68  | 90  | 81  | 74  | 68  | 78  | 72  | 67  |  | 75  | 70  | 66  |  | 73  |
| 4   | 85  | 73  | 65  | 59  | 83  | 72  | 64  | 58  | 70  | 63  | 58  |  | 67  | 62  | 57  |  | 65  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 50  |  | 61  | 55  | 50  |  | 59  |
| 6   | 73  | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 45  |  | 55  | 49  | 44  |  | 54  |
| 7   | 67  | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  |  | 51  | 44  | 39  |  | 49  |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  |  | 47  | 40  | 36  |  | 46  |
| 9   | 59  | 46  | 38  | 33  | 58  | 45  | 38  | 33  | 44  | 37  | 32  |  | 43  | 37  | 32  |  | 42  |
| 10  | 55  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 30  |  | 40  | 34  | 29  |  | 39  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 17800 | 17800 | 17800 |
| 5°  | 17868 | 17622 | 17723 |
| 10° | 17767 | 17401 | 17341 |
| 15° | 17577 | 16993 | 16814 |
| 20° | 17314 | 16484 | 16101 |
| 25° | 17044 | 15914 | 15403 |
| 30° | 16686 | 15253 | 14419 |
| 35° | 16320 | 14592 | 13517 |
| 40° | 15981 | 13814 | 12400 |
| 45° | 15538 | 13046 | 11393 |
| 50° | 15048 | 12172 | 10263 |
| 55° | 14548 | 11175 | 9212  |
| 60° | 14090 | 10105 | 8056  |
| 65° | 13494 | 8950  | 6900  |
| 70° | 12746 | 7512  | 5570  |
| 75° | 11657 | 5914  | 5244  |
| 80° | 10389 | 5238  | 4823  |
| 85° | 8781  | 4644  | 4310  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 15538 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 155.5  | 4.2       |
| 10°-20°   | 432.5  | 11.6      |
| 20°-30°   | 622.7  | 16.7      |
| 30°-40°   | 701.2  | 18.8      |
| 40°-50°   | 670.7  | 18.0      |
| 50°-60°   | 549.1  | 14.7      |
| 60°-70°   | 370.2  | 9.9       |
| 70°-80°   | 185.7  | 5.0       |
| 80°-90°   | 48.6   | 1.3       |
| 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°    | 1210.6 | 32.4      |
| 0°-40°    | 1911.8 | 51.2      |
| 0°-60°    | 3131.6 | 83.8      |
| 0°-90°    | 3736.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3736.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1654 | 1654  | 1654 | 1654  | 1654 |      |
| 5°  | 1654 | 1647  | 1631 | 1643  | 1640 | 157  |
| 15° | 1577 | 1562  | 1525 | 1518  | 1509 | 444  |
| 25° | 1435 | 1402  | 1340 | 1312  | 1297 | 660  |
| 35° | 1242 | 1194  | 1110 | 1053  | 1029 | 777  |
| 45° | 1021 | 960   | 857  | 781   | 748  | 788  |
| 55° | 775  | 710   | 596  | 518   | 491  | 695  |
| 65° | 530  | 456   | 351  | 286   | 271  | 524  |
| 75° | 280  | 216   | 142  | 129   | 126  | 299  |
| 85° | 71   | 42    | 38   | 35    | 35   | 82   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1653.7 | 1653.7 | 1653.7 | 1653.7 | 1653.7 |
| 2.5°  | 1660.4 | 1655.0 | 1638.9 | 1653.7 | 1651.0 |
| 5°    | 1653.7 | 1647.0 | 1630.9 | 1643.0 | 1640.3 |
| 7.5°  | 1641.6 | 1634.9 | 1614.8 | 1622.9 | 1618.8 |
| 10°   | 1625.5 | 1616.1 | 1592.0 | 1593.3 | 1586.6 |
| 12.5° | 1602.7 | 1592.0 | 1561.2 | 1559.8 | 1551.8 |
| 15°   | 1577.3 | 1562.5 | 1524.9 | 1518.2 | 1508.8 |
| 17.5° | 1546.4 | 1530.3 | 1483.4 | 1470.0 | 1456.5 |
| 20°   | 1511.5 | 1490.1 | 1439.1 | 1421.7 | 1405.6 |
| 22.5° | 1472.6 | 1447.2 | 1392.2 | 1369.4 | 1354.6 |
| 25°   | 1435.1 | 1401.6 | 1339.9 | 1311.7 | 1296.9 |
| 27.5° | 1389.5 | 1353.3 | 1286.2 | 1248.7 | 1225.9 |
| 30°   | 1342.5 | 1302.3 | 1227.2 | 1181.6 | 1160.1 |
| 32.5° | 1295.6 | 1248.7 | 1168.2 | 1117.2 | 1094.4 |
| 35°   | 1242.0 | 1193.7 | 1110.5 | 1052.8 | 1028.7 |
| 37.5° | 1188.3 | 1136.0 | 1048.8 | 984.4  | 954.9  |
| 40°   | 1137.3 | 1078.3 | 983.1  | 913.4  | 882.5  |
| 42.5° | 1079.7 | 1020.7 | 921.4  | 843.6  | 816.8  |
| 45°   | 1020.7 | 960.3  | 857.0  | 780.6  | 748.4  |
| 47.5° | 963.0  | 895.9  | 794.0  | 710.8  | 682.7  |
| 50°   | 898.6  | 835.6  | 726.9  | 643.8  | 612.9  |
| 52.5° | 840.9  | 771.2  | 663.9  | 576.7  | 549.9  |
| 55°   | 775.2  | 709.5  | 595.5  | 517.7  | 490.9  |
| 57.5° | 716.2  | 645.1  | 529.8  | 456.0  | 433.2  |
| 60°   | 654.5  | 580.7  | 469.4  | 397.0  | 374.2  |
| 62.5° | 592.8  | 519.0  | 407.7  | 340.7  | 316.5  |
| 65°   | 529.8  | 456.0  | 351.4  | 285.7  | 270.9  |
| 67.5° | 466.7  | 391.6  | 289.7  | 240.1  | 224.0  |
| 70°   | 405.0  | 332.6  | 238.7  | 191.8  | 177.0  |
| 72.5° | 343.3  | 272.3  | 189.1  | 152.9  | 148.9  |
| 75°   | 280.3  | 215.9  | 142.2  | 128.8  | 126.1  |
| 77.5° | 222.6  | 163.6  | 111.3  | 103.3  | 100.6  |
| 80°   | 167.6  | 112.7  | 84.5   | 80.5   | 77.8   |
| 82.5° | 115.3  | 69.7   | 60.4   | 56.3   | 56.3   |
| 85°   | 71.1   | 41.6   | 37.6   | 34.9   | 34.9   |
| 87.5° | 32.2   | 17.4   | 17.4   | 16.1   | 14.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)