

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: P998598

Luminaire Tested: S124DW-B1020DB50-4F0-XX-W2A-F

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998598  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DW-B1020DB50-4F0-XX-W2A-F  
Description: Define 4 Direct Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

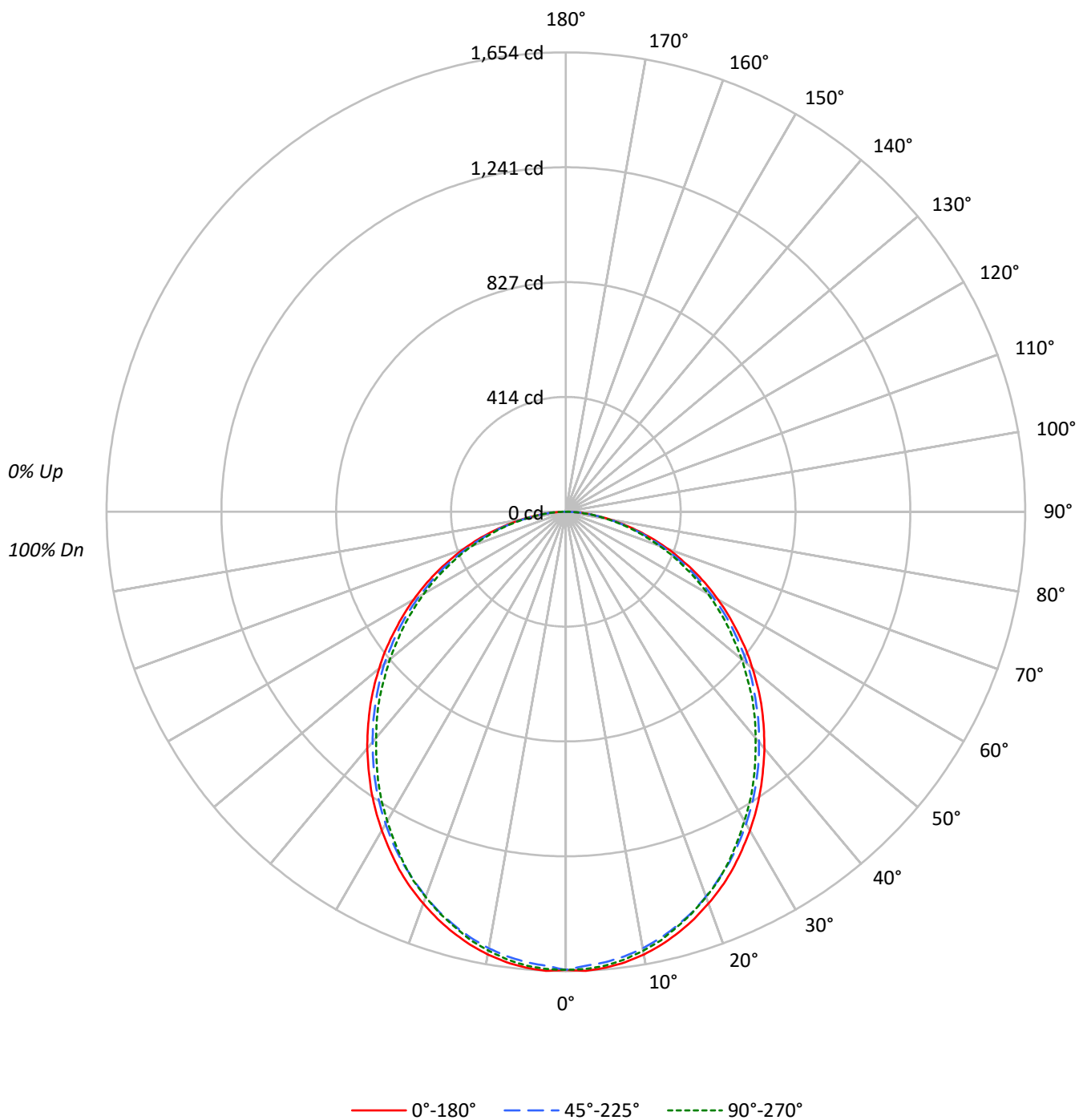
Lumens per Lamp: N/A  
Luminaire Lumens: 4233.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  |  | 73  | 67  | 63  |  | 70  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  |
| 5   | 77  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 48  |  | 59  | 52  | 47  |  | 57  |
| 6   | 71  | 58  | 49  | 42  | 69  | 57  | 48  | 42  | 55  | 47  | 42  |  | 53  | 47  | 41  |  | 52  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 37  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 47  |
| 8   | 61  | 48  | 39  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 43  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 28  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13448 | 13448 | 13448 |
| 5°  | 13489 | 13327 | 13424 |
| 10° | 13404 | 13218 | 13284 |
| 15° | 13242 | 13030 | 13063 |
| 20° | 13027 | 12798 | 12809 |
| 25° | 12782 | 12532 | 12497 |
| 30° | 12480 | 12219 | 12107 |
| 35° | 12169 | 11892 | 11735 |
| 40° | 11845 | 11521 | 11310 |
| 45° | 11506 | 11155 | 10942 |
| 50° | 11132 | 10830 | 10494 |
| 55° | 10728 | 10408 | 10070 |
| 60° | 10324 | 9935  | 9634  |
| 65° | 9868  | 9485  | 9103  |
| 70° | 9358  | 8886  | 8538  |
| 75° | 8576  | 8160  | 7952  |
| 80° | 7631  | 7321  | 7138  |
| 85° | 6680  | 6428  | 6306  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11506 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 155.4  | 3.7       |
| 10°-20°   | 437.9  | 10.3      |
| 20°-30°   | 644.5  | 15.2      |
| 30°-40°   | 749.2  | 17.7      |
| 40°-50°   | 749.1  | 17.7      |
| 50°-60°   | 655.2  | 15.5      |
| 60°-70°   | 486.5  | 11.5      |
| 70°-80°   | 276.0  | 6.5       |
| 80°-90°   | 79.0   | 1.9       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 1237.9 | 29.2      |
| 0°-40°    | 1987.1 | 46.9      |
| 0°-60°    | 3391.5 | 80.1      |
| 0°-90°    | 4233.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4233.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1649 | 1649  | 1649 | 1649  | 1649 |      |
| 5°  | 1648 | 1643  | 1628 | 1643  | 1640 | 156  |
| 15° | 1569 | 1563  | 1544 | 1551  | 1547 | 442  |
| 25° | 1421 | 1411  | 1393 | 1394  | 1389 | 654  |
| 35° | 1222 | 1213  | 1195 | 1185  | 1179 | 764  |
| 45° | 998  | 988   | 967  | 953   | 949  | 769  |
| 55° | 755  | 751   | 732  | 716   | 708  | 676  |
| 65° | 511  | 505   | 492  | 478   | 472  | 506  |
| 75° | 272  | 266   | 259  | 254   | 252  | 289  |
| 85° | 71   | 71    | 69   | 69    | 67   | 81   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1649.2 | 1649.2 | 1649.2 | 1649.2 | 1649.2 |
| 2.5°  | 1654.5 | 1650.5 | 1636.0 | 1649.2 | 1647.9 |
| 5°    | 1647.9 | 1642.6 | 1628.1 | 1642.6 | 1640.0 |
| 7.5°  | 1636.0 | 1630.7 | 1614.8 | 1626.7 | 1625.4 |
| 10°   | 1618.8 | 1613.5 | 1596.3 | 1606.9 | 1604.3 |
| 12.5° | 1596.3 | 1591.1 | 1572.6 | 1584.5 | 1580.5 |
| 15°   | 1568.6 | 1563.3 | 1543.5 | 1551.4 | 1547.4 |
| 17.5° | 1536.9 | 1530.3 | 1511.8 | 1517.1 | 1514.4 |
| 20°   | 1501.2 | 1494.6 | 1474.8 | 1478.7 | 1476.1 |
| 22.5° | 1462.9 | 1453.6 | 1433.8 | 1441.7 | 1436.4 |
| 25°   | 1420.6 | 1411.3 | 1392.8 | 1394.2 | 1388.9 |
| 27.5° | 1373.0 | 1363.8 | 1346.6 | 1343.9 | 1337.3 |
| 30°   | 1325.4 | 1314.9 | 1297.7 | 1292.4 | 1285.8 |
| 32.5° | 1275.2 | 1266.0 | 1247.5 | 1240.9 | 1234.3 |
| 35°   | 1222.4 | 1213.1 | 1194.6 | 1185.4 | 1178.8 |
| 37.5° | 1166.9 | 1158.9 | 1139.1 | 1129.9 | 1120.6 |
| 40°   | 1112.7 | 1102.1 | 1082.3 | 1069.1 | 1062.5 |
| 42.5° | 1054.5 | 1049.3 | 1026.8 | 1010.9 | 1007.0 |
| 45°   | 997.7  | 988.5  | 967.3  | 952.8  | 948.8  |
| 47.5° | 938.2  | 931.6  | 911.8  | 896.0  | 885.4  |
| 50°   | 877.5  | 872.2  | 853.7  | 835.2  | 827.2  |
| 52.5° | 818.0  | 811.4  | 791.6  | 775.7  | 765.1  |
| 55°   | 754.6  | 750.6  | 732.1  | 716.2  | 708.3  |
| 57.5° | 695.1  | 691.1  | 672.6  | 656.8  | 648.8  |
| 60°   | 633.0  | 626.4  | 609.2  | 597.3  | 590.7  |
| 62.5° | 572.2  | 566.9  | 548.4  | 537.8  | 531.2  |
| 65°   | 511.4  | 504.8  | 491.6  | 478.4  | 471.8  |
| 67.5° | 449.3  | 444.0  | 430.8  | 417.6  | 416.3  |
| 70°   | 392.5  | 383.2  | 372.7  | 362.1  | 358.1  |
| 72.5° | 331.7  | 322.4  | 314.5  | 306.6  | 302.6  |
| 75°   | 272.2  | 265.6  | 259.0  | 253.7  | 252.4  |
| 77.5° | 214.1  | 211.4  | 204.8  | 203.5  | 199.5  |
| 80°   | 162.5  | 158.6  | 155.9  | 153.3  | 152.0  |
| 82.5° | 112.3  | 111.0  | 111.0  | 109.7  | 108.4  |
| 85°   | 71.4   | 71.4   | 68.7   | 68.7   | 67.4   |
| 87.5° | 34.4   | 33.0   | 31.7   | 31.7   | 31.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)