

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: P1030887

Luminaire Tested: S123DIW-B560D1320UB2750-4F0-XX-W2A-D\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1030887  
REPORT IS A COMBINATION OF REPORTS P991595 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B560D1320UB2750-4F0-XX-W2A-D\_3500K  
Description: Define 3 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

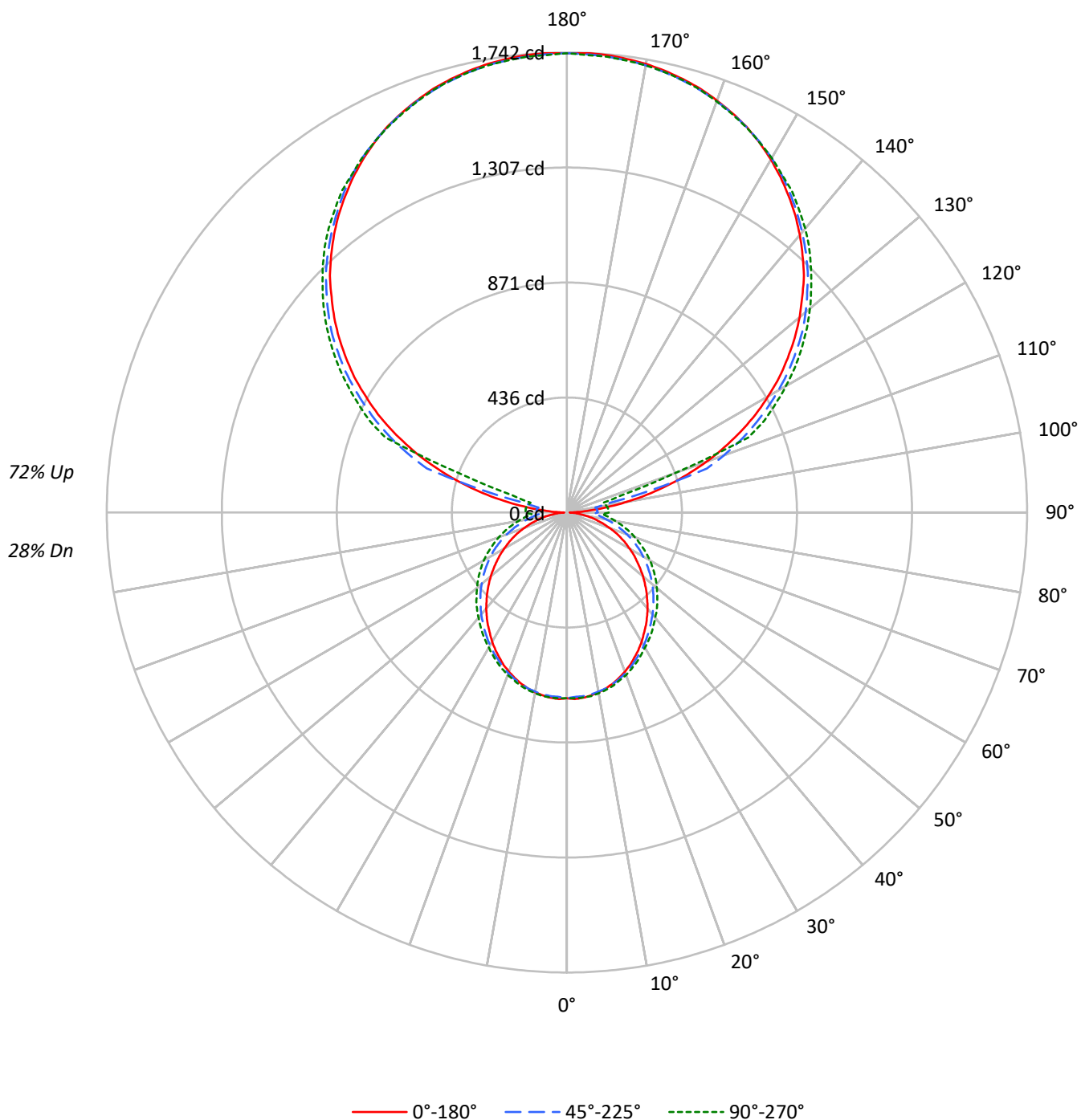
Lumens per Lamp: N/A  
Luminaire Lumens: 7669.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 66.1  
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



TEST NUMBER: P1030887

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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 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 102 | 102 | 102 | 102 | 91 | 91 | 91 | 91 | 71 | 71 | 71 | 53 | 53 | 53 | 36 | 36 | 36 |
| 1   | 92  | 88  | 84  | 80  | 82 | 79 | 75 | 72 | 61 | 59 | 57 | 46 | 44 | 43 | 31 | 30 | 29 |
| 2   | 84  | 76  | 70  | 65  | 75 | 68 | 63 | 59 | 53 | 50 | 47 | 40 | 37 | 35 | 27 | 25 | 24 |
| 3   | 76  | 67  | 60  | 54  | 68 | 60 | 54 | 49 | 47 | 43 | 39 | 35 | 32 | 29 | 24 | 22 | 20 |
| 4   | 70  | 59  | 51  | 45  | 62 | 53 | 46 | 41 | 41 | 37 | 33 | 31 | 28 | 25 | 21 | 19 | 17 |
| 5   | 64  | 52  | 44  | 38  | 57 | 47 | 40 | 35 | 37 | 32 | 28 | 28 | 24 | 21 | 19 | 17 | 15 |
| 6   | 59  | 47  | 39  | 33  | 52 | 42 | 35 | 30 | 33 | 28 | 24 | 25 | 21 | 19 | 17 | 15 | 13 |
| 7   | 54  | 42  | 34  | 29  | 48 | 38 | 31 | 26 | 30 | 25 | 21 | 22 | 19 | 16 | 15 | 13 | 12 |
| 8   | 50  | 38  | 30  | 25  | 44 | 34 | 28 | 23 | 27 | 22 | 19 | 20 | 17 | 14 | 14 | 12 | 10 |
| 9   | 46  | 34  | 27  | 22  | 41 | 31 | 25 | 20 | 25 | 20 | 17 | 19 | 15 | 13 | 13 | 11 | 9  |
| 10  | 43  | 31  | 24  | 20  | 39 | 28 | 22 | 18 | 23 | 18 | 15 | 17 | 14 | 12 | 12 | 10 | 8  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7571 | 7571 | 7571 |
| 5°  | 7592 | 7349 | 7343 |
| 10° | 7521 | 7150 | 7096 |
| 15° | 7422 | 6930 | 6833 |
| 20° | 7280 | 6686 | 6550 |
| 25° | 7106 | 6410 | 6259 |
| 30° | 6929 | 6160 | 5965 |
| 35° | 6728 | 5898 | 5726 |
| 40° | 6539 | 5658 | 5474 |
| 45° | 6327 | 5426 | 5266 |
| 50° | 6117 | 5196 | 5039 |
| 55° | 5887 | 4961 | 4832 |
| 60° | 5660 | 4719 | 4619 |
| 65° | 5427 | 4462 | 4371 |
| 70° | 5077 | 4173 | 4113 |
| 75° | 4633 | 3846 | 3847 |
| 80° | 4121 | 3512 | 3546 |
| 85° | 3602 | 3244 | 3329 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6327 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.7   | 0.9       |
| 10°-20°   | 190.2  | 2.5       |
| 20°-30°   | 284.5  | 3.7       |
| 30°-40°   | 339.6  | 4.4       |
| 40°-50°   | 355.4  | 4.6       |
| 50°-60°   | 333.5  | 4.3       |
| 60°-70°   | 278.5  | 3.6       |
| 70°-80°   | 199.2  | 2.6       |
| 80°-90°   | 122.0  | 1.6       |
| 90°-100°  | 135.8  | 1.8       |
| 100°-110° | 351.2  | 4.6       |
| 110°-120° | 763.1  | 10.0      |
| 120°-130° | 943.2  | 12.3      |
| 130°-140° | 994.7  | 13.0      |
| 140°-150° | 923.3  | 12.0      |
| 150°-160° | 743.2  | 9.7       |
| 160°-170° | 479.6  | 6.3       |
| 170°-180° | 165.3  | 2.2       |
| 0°-30°    | 541.4  | 7.1       |
| 0°-40°    | 881.0  | 11.5      |
| 0°-60°    | 1569.9 | 20.5      |
| 0°-90°    | 2169.6 | 28.3      |
| 90°-120°  | 1250.1 | 16.3      |
| 90°-150°  | 4111.4 | 53.6      |
| 90°-180°  | 5499.0 | 71.7      |
| 0°-180°   | 7669.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 703  | 703   | 703  | 703   | 703  |      |
| 5°   | 704  | 703   | 698  | 704   | 703  | 67   |
| 15°  | 670  | 673   | 672  | 680   | 679  | 189  |
| 25°  | 605  | 613   | 615  | 625   | 625  | 279  |
| 35°  | 521  | 533   | 543  | 555   | 558  | 326  |
| 45°  | 426  | 444   | 464  | 478   | 484  | 329  |
| 55°  | 325  | 350   | 378  | 398   | 405  | 291  |
| 65°  | 224  | 254   | 288  | 311   | 319  | 222  |
| 75°  | 122  | 158   | 196  | 221   | 231  | 130  |
| 85°  | 38   | 76    | 116  | 142   | 150  | 39   |
| 90°  | 11   | 62    | 118  | 149   | 159  | 12   |
| 95°  | 87   | 64    | 116  | 149   | 156  | 101  |
| 105° | 391  | 424   | 340  | 133   | 143  | 414  |
| 115° | 726  | 743   | 782  | 814   | 825  | 717  |
| 125° | 1020 | 1031  | 1058 | 1077  | 1085 | 912  |
| 135° | 1269 | 1276  | 1290 | 1307  | 1307 | 977  |
| 145° | 1463 | 1472  | 1474 | 1483  | 1486 | 916  |
| 155° | 1611 | 1608  | 1610 | 1616  | 1608 | 742  |
| 165° | 1699 | 1695  | 1694 | 1704  | 1695 | 480  |
| 175° | 1739 | 1733  | 1734 | 1743  | 1733 | 166  |
| 180° | 1739 | 1739  | 1739 | 1739  | 1739 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 703.4 | 703.4 | 703.4 | 703.4 | 703.4 |
| 2.5°   | 707.2 | 704.9 | 698.8 | 704.9 | 704.2 |
| 5°     | 704.2 | 702.6 | 698.0 | 704.2 | 703.4 |
| 7.5°   | 698.8 | 698.8 | 694.2 | 701.9 | 701.1 |
| 10°    | 691.1 | 692.7 | 688.8 | 696.5 | 695.0 |
| 12.5°  | 682.0 | 684.3 | 682.0 | 688.8 | 687.3 |
| 15°    | 670.5 | 672.8 | 672.0 | 679.7 | 678.9 |
| 17.5°  | 656.7 | 661.3 | 660.5 | 667.4 | 665.9 |
| 20°    | 641.3 | 645.9 | 647.5 | 654.4 | 655.1 |
| 22.5°  | 625.3 | 629.8 | 632.1 | 641.3 | 640.6 |
| 25°    | 605.3 | 613.0 | 615.3 | 625.3 | 625.3 |
| 27.5°  | 586.2 | 594.6 | 599.2 | 607.6 | 608.4 |
| 30°    | 565.5 | 575.4 | 581.6 | 590.8 | 590.8 |
| 32.5°  | 542.5 | 554.0 | 562.4 | 572.4 | 574.7 |
| 35°    | 521.0 | 533.3 | 543.3 | 554.8 | 557.8 |
| 37.5°  | 498.1 | 511.8 | 523.3 | 536.4 | 538.7 |
| 40°    | 475.1 | 488.9 | 504.2 | 517.2 | 520.3 |
| 42.5°  | 449.8 | 467.4 | 483.5 | 498.1 | 502.7 |
| 45°    | 426.0 | 444.4 | 463.6 | 478.1 | 484.3 |
| 47.5°  | 400.7 | 421.4 | 442.9 | 459.0 | 463.6 |
| 50°    | 376.2 | 397.7 | 421.4 | 439.1 | 444.4 |
| 52.5°  | 350.2 | 373.2 | 400.0 | 418.4 | 425.3 |
| 55°    | 324.9 | 350.2 | 377.8 | 398.4 | 404.6 |
| 57.5°  | 300.4 | 326.4 | 356.3 | 377.0 | 383.9 |
| 60°    | 274.3 | 301.9 | 333.3 | 354.8 | 363.2 |
| 62.5°  | 249.8 | 278.1 | 311.9 | 333.3 | 341.0 |
| 65°    | 224.5 | 254.4 | 288.1 | 311.1 | 318.8 |
| 67.5°  | 199.2 | 230.6 | 264.4 | 289.6 | 295.8 |
| 70°    | 172.4 | 205.4 | 242.1 | 266.7 | 274.3 |
| 72.5°  | 147.9 | 180.8 | 219.1 | 244.4 | 252.1 |
| 75°    | 121.8 | 157.8 | 196.2 | 221.4 | 230.6 |
| 77.5°  | 99.6  | 135.6 | 173.9 | 200.8 | 207.7 |
| 80°    | 75.9  | 113.4 | 153.2 | 179.3 | 187.0 |
| 82.5°  | 55.2  | 93.5  | 134.1 | 160.1 | 167.8 |
| 85°    | 37.5  | 75.9  | 116.5 | 142.5 | 150.2 |
| 87.5°  | 23.0  | 61.3  | 100.4 | 126.4 | 134.1 |
| 90°    | 11.3  | 61.7  | 117.6 | 148.8 | 159.1 |
| 92.5°  | 38.9  | 64.1  | 114.1 | 148.3 | 156.5 |
| 95°    | 87.2  | 64.1  | 116.0 | 148.7 | 156.4 |
| 97.5°  | 151.1 | 142.4 | 112.6 | 145.9 | 154.9 |
| 100°   | 225.2 | 275.6 | 109.3 | 141.9 | 150.8 |
| 102.5° | 309.7 | 348.0 | 157.7 | 136.5 | 146.8 |
| 105°   | 391.1 | 423.7 | 340.4 | 133.2 | 142.6 |
| 107.5° | 477.0 | 504.7 | 555.5 | 377.2 | 214.9 |
| 110°   | 562.7 | 586.9 | 631.7 | 609.0 | 430.4 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 645.4  | 665.2  | 708.5  | 739.3  | 743.6  |
| 115°   | 726.0  | 743.0  | 782.2  | 813.5  | 824.8  |
| 117.5° | 806.1  | 821.4  | 853.8  | 882.6  | 890.0  |
| 120°   | 879.1  | 894.5  | 923.7  | 951.6  | 957.0  |
| 122.5° | 954.0  | 964.5  | 993.5  | 1016.8 | 1023.5 |
| 125°   | 1020.4 | 1030.7 | 1058.1 | 1076.8 | 1084.8 |
| 127.5° | 1087.6 | 1097.1 | 1122.8 | 1141.9 | 1144.8 |
| 130°   | 1149.6 | 1159.1 | 1179.7 | 1199.4 | 1201.4 |
| 132.5° | 1208.2 | 1218.6 | 1233.9 | 1252.9 | 1254.4 |
| 135°   | 1268.9 | 1276.0 | 1289.6 | 1307.2 | 1307.2 |
| 137.5° | 1320.6 | 1330.3 | 1338.1 | 1356.9 | 1358.1 |
| 140°   | 1371.6 | 1379.3 | 1385.5 | 1402.2 | 1403.4 |
| 142.5° | 1419.4 | 1426.4 | 1430.2 | 1444.1 | 1444.0 |
| 145°   | 1463.3 | 1471.6 | 1474.2 | 1482.8 | 1485.9 |
| 147.5° | 1505.2 | 1511.6 | 1514.2 | 1519.1 | 1515.7 |
| 150°   | 1543.9 | 1547.8 | 1550.4 | 1553.0 | 1550.6 |
| 152.5° | 1578.8 | 1580.1 | 1581.4 | 1586.6 | 1580.1 |
| 155°   | 1611.1 | 1608.5 | 1609.8 | 1616.3 | 1608.5 |
| 157.5° | 1636.9 | 1636.9 | 1635.7 | 1643.4 | 1633.1 |
| 160°   | 1660.2 | 1658.9 | 1657.6 | 1665.4 | 1656.3 |
| 162.5° | 1682.2 | 1678.3 | 1677.0 | 1686.0 | 1678.3 |
| 165°   | 1699.0 | 1695.1 | 1693.8 | 1704.1 | 1695.1 |
| 167.5° | 1713.2 | 1708.0 | 1708.0 | 1718.3 | 1708.0 |
| 170°   | 1724.8 | 1719.6 | 1719.6 | 1730.0 | 1719.6 |
| 172.5° | 1732.6 | 1726.1 | 1727.4 | 1737.7 | 1726.1 |
| 175°   | 1739.0 | 1732.6 | 1733.8 | 1742.9 | 1732.6 |
| 177.5° | 1741.6 | 1735.1 | 1736.4 | 1746.8 | 1733.8 |
| 180°   | 1739.0 | 1739.0 | 1739.0 | 1739.0 | 1739.0 |

(END OF REPORT)