

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: P1031767

Luminaire Tested: S123DIW-B560D1535UB35-4F0-XX-W2A-D

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031767  
REPORT IS A COMBINATION OF REPORTS P991683 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B560D1535UB35-4F0-XX-W2A-D  
Description: Define 3 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

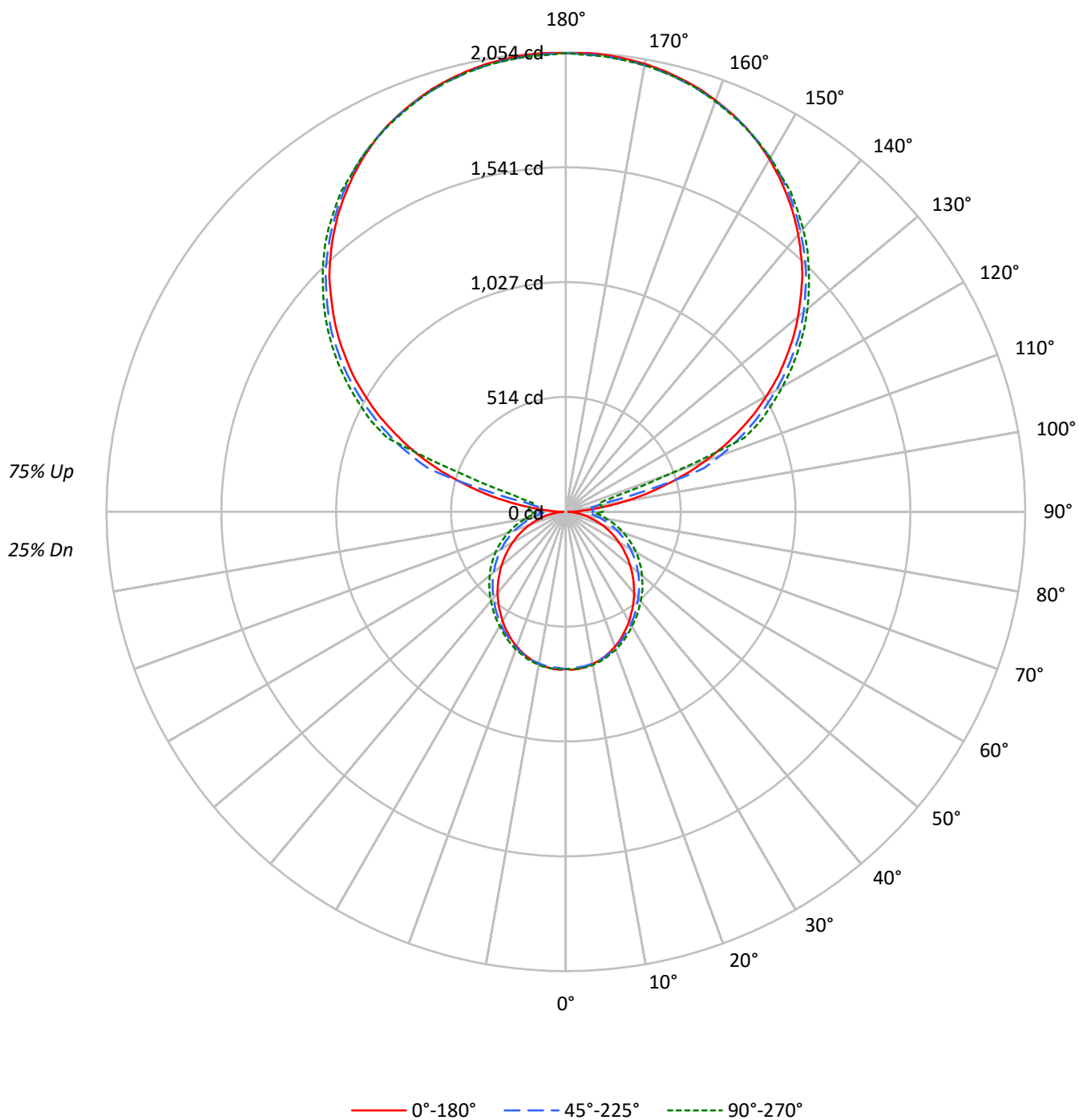
Lumens per Lamp: N/A  
Luminaire Lumens: 8619.0 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 76.2  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 70 | 70 | 70 | 51 | 51 | 51 | 33 | 33 | 33 |
| 1   | 92  | 87  | 83  | 80  | 81 | 78 | 74 | 72 | 60 | 58 | 56 | 44 | 42 | 41 | 29 | 28 | 27 |
| 2   | 83  | 76  | 70  | 65  | 74 | 68 | 63 | 58 | 52 | 49 | 46 | 38 | 36 | 34 | 25 | 23 | 22 |
| 3   | 76  | 66  | 59  | 54  | 67 | 59 | 53 | 48 | 46 | 42 | 38 | 33 | 31 | 28 | 22 | 20 | 19 |
| 4   | 69  | 59  | 51  | 45  | 61 | 52 | 46 | 41 | 41 | 36 | 32 | 30 | 26 | 24 | 19 | 18 | 16 |
| 5   | 63  | 52  | 44  | 38  | 56 | 46 | 40 | 35 | 36 | 31 | 27 | 26 | 23 | 21 | 17 | 15 | 14 |
| 6   | 58  | 46  | 38  | 33  | 51 | 42 | 35 | 30 | 32 | 27 | 24 | 24 | 20 | 18 | 16 | 14 | 12 |
| 7   | 54  | 42  | 34  | 29  | 47 | 37 | 31 | 26 | 29 | 24 | 21 | 21 | 18 | 16 | 14 | 12 | 11 |
| 8   | 50  | 38  | 30  | 25  | 44 | 34 | 27 | 23 | 26 | 22 | 18 | 20 | 16 | 14 | 13 | 11 | 9  |
| 9   | 46  | 34  | 27  | 22  | 41 | 31 | 24 | 20 | 24 | 19 | 16 | 18 | 15 | 12 | 12 | 10 | 8  |
| 10  | 43  | 31  | 24  | 20  | 38 | 28 | 22 | 18 | 22 | 18 | 14 | 16 | 13 | 11 | 11 | 9  | 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   | 0.8       |
| 10°-20°   | 190.2  | 2.2       |
| 20°-30°   | 284.5  | 3.3       |
| 30°-40°   | 339.6  | 3.9       |
| 40°-50°   | 355.4  | 4.1       |
| 50°-60°   | 333.5  | 3.9       |
| 60°-70°   | 278.5  | 3.2       |
| 70°-80°   | 199.2  | 2.3       |
| 80°-90°   | 122.6  | 1.4       |
| 90°-100°  | 146.8  | 1.7       |
| 100°-110° | 404.3  | 4.7       |
| 110°-120° | 893.2  | 10.4      |
| 120°-130° | 1108.4 | 12.9      |
| 130°-140° | 1171.1 | 13.6      |
| 140°-150° | 1088.3 | 12.6      |
| 150°-160° | 876.3  | 10.2      |
| 160°-170° | 565.5  | 6.6       |
| 170°-180° | 194.9  | 2.3       |
| 0°-30°    | 541.4  | 6.3       |
| 0°-40°    | 881.0  | 10.2      |
| 0°-60°    | 1569.9 | 18.2      |
| 0°-90°    | 2170.2 | 25.2      |
| 90°-120°  | 1444.3 | 16.8      |
| 90°-150°  | 4812.2 | 55.8      |
| 90°-180°  | 6449.0 | 74.8      |
| 0°-180°   | 8619.0 | 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°  | 12   | 64    | 123  | 155   | 166  | 12   |
| 95°  | 101  | 69    | 123  | 158   | 165  | 118  |
| 105° | 460  | 495   | 391  | 143   | 153  | 488  |
| 115° | 855  | 874   | 915  | 949   | 961  | 845  |
| 125° | 1203 | 1215  | 1243 | 1262  | 1271 | 1075 |
| 135° | 1496 | 1504  | 1519 | 1537  | 1536 | 1152 |
| 145° | 1725 | 1735  | 1738 | 1747  | 1750 | 1080 |
| 155° | 1900 | 1897  | 1898 | 1906  | 1897 | 875  |
| 165° | 2003 | 1999  | 1997 | 2009  | 1999 | 566  |
| 175° | 2050 | 2043  | 2044 | 2055  | 2043 | 195  |
| 180° | 2050 | 2050  | 2050 | 2050  | 2050 |      |

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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°    | 11.5  | 64.3  | 123.2 | 155.3 | 166.0 |
| 92.5°  | 44.2  | 68.0  | 120.1 | 156.0 | 164.4 |
| 95°    | 101.3 | 68.8  | 123.1 | 157.5 | 165.2 |
| 97.5°  | 176.8 | 161.6 | 120.0 | 155.1 | 164.4 |
| 100°   | 264.3 | 319.3 | 117.0 | 151.4 | 160.5 |
| 102.5° | 364.1 | 405.4 | 174.8 | 146.0 | 156.7 |
| 105°   | 460.1 | 495.2 | 391.1 | 142.9 | 152.8 |
| 107.5° | 561.4 | 591.2 | 645.5 | 431.6 | 238.9 |
| 110°   | 662.7 | 688.7 | 736.0 | 705.8 | 494.0 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 760.2  | 781.5  | 827.4  | 860.3  | 864.2  |
| 115°   | 855.4  | 873.7  | 915.0  | 948.6  | 960.8  |
| 117.5° | 949.8  | 966.7  | 1000.3 | 1030.9 | 1038.5 |
| 120°   | 1035.9 | 1053.4 | 1083.3 | 1113.1 | 1118.5 |
| 122.5° | 1124.3 | 1136.4 | 1166.3 | 1190.8 | 1197.7 |
| 125°   | 1202.7 | 1214.9 | 1243.2 | 1262.3 | 1270.8 |
| 127.5° | 1281.9 | 1293.3 | 1320.1 | 1340.0 | 1342.3 |
| 130°   | 1355.0 | 1366.4 | 1387.9 | 1408.5 | 1410.1 |
| 132.5° | 1424.3 | 1436.5 | 1452.6 | 1472.5 | 1473.3 |
| 135°   | 1495.9 | 1504.3 | 1518.8 | 1537.2 | 1536.4 |
| 137.5° | 1556.8 | 1568.3 | 1576.7 | 1596.6 | 1597.3 |
| 140°   | 1617.1 | 1626.2 | 1633.1 | 1650.7 | 1651.4 |
| 142.5° | 1673.4 | 1681.8 | 1686.3 | 1700.9 | 1700.1 |
| 145°   | 1725.2 | 1735.1 | 1738.1 | 1747.3 | 1750.4 |
| 147.5° | 1774.7 | 1782.3 | 1785.4 | 1790.7 | 1786.2 |
| 150°   | 1820.4 | 1825.0 | 1828.0 | 1831.1 | 1828.0 |
| 152.5° | 1861.5 | 1863.1 | 1864.6 | 1870.7 | 1863.1 |
| 155°   | 1899.6 | 1896.6 | 1898.1 | 1905.7 | 1896.6 |
| 157.5° | 1930.1 | 1930.1 | 1928.6 | 1937.7 | 1925.5 |
| 160°   | 1957.5 | 1956.0 | 1954.5 | 1963.6 | 1952.9 |
| 162.5° | 1983.4 | 1978.8 | 1977.3 | 1988.0 | 1978.8 |
| 165°   | 2003.2 | 1998.6 | 1997.1 | 2009.3 | 1998.6 |
| 167.5° | 2020.0 | 2013.9 | 2013.9 | 2026.1 | 2013.9 |
| 170°   | 2033.7 | 2027.6 | 2027.6 | 2039.8 | 2027.6 |
| 172.5° | 2042.8 | 2035.2 | 2036.7 | 2048.9 | 2035.2 |
| 175°   | 2050.4 | 2042.8 | 2044.3 | 2055.0 | 2042.8 |
| 177.5° | 2053.5 | 2045.9 | 2047.4 | 2059.6 | 2044.3 |
| 180°   | 2050.4 | 2050.4 | 2050.4 | 2050.4 | 2050.4 |

(END OF REPORT)