

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: P1033615

Luminaire Tested: S124DIW-B575D1560UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033615  
REPORT IS A COMBINATION OF REPORTS P997804 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B575D1560UB50-4F0-XX-W2A-F  
Description: Define 4 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

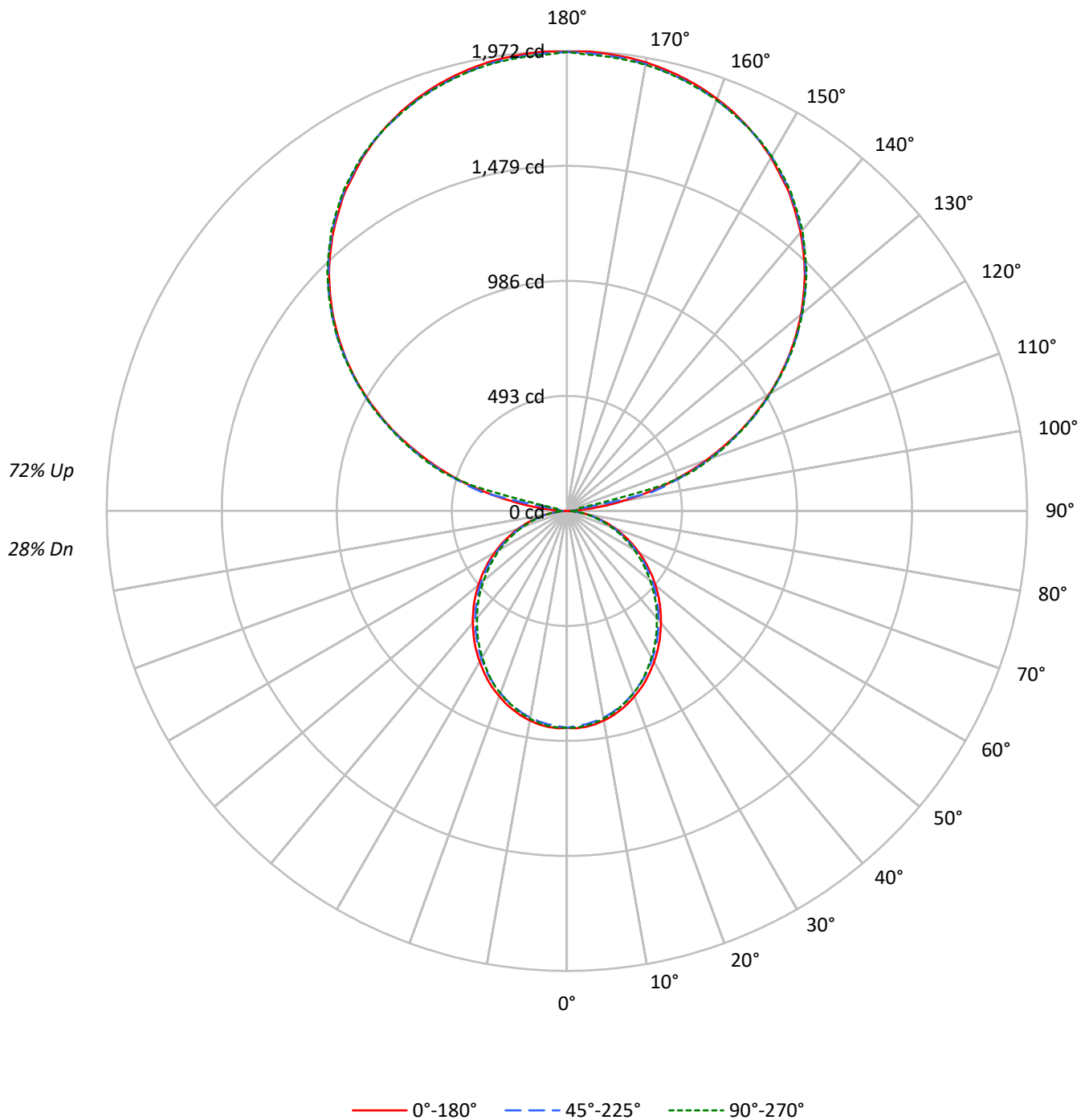
Lumens per Lamp: N/A  
Luminaire Lumens: 8478.0 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 76.2  
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 |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 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 | 28 |    |    |
| 1   | 93  | 89  | 85  | 82  | 83 | 79 | 76 | 73 | 62 | 60 | 58 | 46 | 45 | 44 | 32 | 31 | 30 | 24 |    |    |
| 2   | 85  | 77  | 71  | 66  | 75 | 69 | 64 | 60 | 54 | 51 | 48 | 41 | 39 | 37 | 28 | 27 | 26 | 20 |    |    |
| 3   | 77  | 68  | 61  | 55  | 69 | 61 | 55 | 50 | 48 | 44 | 40 | 36 | 33 | 31 | 25 | 23 | 22 | 17 |    |    |
| 4   | 70  | 60  | 52  | 47  | 63 | 54 | 47 | 42 | 43 | 38 | 34 | 32 | 29 | 26 | 22 | 20 | 19 | 14 |    |    |
| 5   | 65  | 53  | 46  | 40  | 57 | 48 | 41 | 36 | 38 | 33 | 29 | 29 | 25 | 23 | 20 | 18 | 16 | 13 |    |    |
| 6   | 59  | 48  | 40  | 34  | 53 | 43 | 36 | 31 | 34 | 29 | 26 | 26 | 22 | 20 | 18 | 16 | 14 | 11 |    |    |
| 7   | 55  | 43  | 35  | 30  | 49 | 39 | 32 | 27 | 31 | 26 | 22 | 23 | 20 | 17 | 16 | 14 | 13 | 10 |    |    |
| 8   | 51  | 39  | 31  | 26  | 45 | 35 | 29 | 24 | 28 | 23 | 20 | 21 | 18 | 15 | 15 | 13 | 11 | 9  |    |    |
| 9   | 47  | 35  | 28  | 23  | 42 | 32 | 26 | 21 | 26 | 21 | 18 | 20 | 16 | 14 | 14 | 12 | 10 | 8  |    |    |
| 10  | 44  | 32  | 25  | 21  | 39 | 29 | 23 | 19 | 23 | 19 | 16 | 18 | 15 | 12 | 13 | 11 | 9  | 7  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7584 | 7584 | 7584 |
| 5°  | 7589 | 7366 | 7375 |
| 10° | 7526 | 7161 | 7111 |
| 15° | 7417 | 6918 | 6813 |
| 20° | 7280 | 6655 | 6506 |
| 25° | 7125 | 6377 | 6174 |
| 30° | 6937 | 6077 | 5811 |
| 35° | 6744 | 5769 | 5459 |
| 40° | 6541 | 5438 | 5085 |
| 45° | 6330 | 5106 | 4735 |
| 50° | 6095 | 4785 | 4348 |
| 55° | 5841 | 4408 | 3963 |
| 60° | 5579 | 3997 | 3563 |
| 65° | 5282 | 3572 | 3111 |
| 70° | 4937 | 3059 | 2627 |
| 75° | 4424 | 2467 | 2104 |
| 80° | 3771 | 1783 | 1480 |
| 85° | 2925 | 992  | 797  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6330 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.7   | 1.0       |
| 10°-20°   | 247.0  | 2.9       |
| 20°-30°   | 363.4  | 4.3       |
| 30°-40°   | 422.5  | 5.0       |
| 40°-50°   | 422.5  | 5.0       |
| 50°-60°   | 369.5  | 4.4       |
| 60°-70°   | 274.3  | 3.2       |
| 70°-80°   | 155.6  | 1.8       |
| 80°-90°   | 48.6   | 0.6       |
| 90°-100°  | 65.3   | 0.8       |
| 100°-110° | 430.0  | 5.1       |
| 110°-120° | 821.2  | 9.7       |
| 120°-130° | 1042.4 | 12.3      |
| 130°-140° | 1115.2 | 13.2      |
| 140°-150° | 1042.8 | 12.3      |
| 150°-160° | 840.9  | 9.9       |
| 160°-170° | 542.3  | 6.4       |
| 170°-180° | 186.9  | 2.2       |
| 0°-30°    | 698.1  | 8.2       |
| 0°-40°    | 1120.5 | 13.2      |
| 0°-60°    | 1912.5 | 22.6      |
| 0°-90°    | 2391.1 | 28.2      |
| 90°-120°  | 1316.5 | 15.5      |
| 90°-150°  | 4516.8 | 53.3      |
| 90°-180°  | 6087.0 | 71.8      |
| 0°-180°   | 8478.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 930  | 930   | 930  | 930   | 930  |      |
| 5°   | 929  | 926   | 918  | 926   | 925  | 88   |
| 15°  | 884  | 882   | 870  | 875   | 873  | 249  |
| 25°  | 801  | 796   | 785  | 786   | 783  | 369  |
| 35°  | 689  | 684   | 674  | 668   | 665  | 431  |
| 45°  | 563  | 557   | 546  | 537   | 535  | 434  |
| 55°  | 426  | 423   | 413  | 404   | 399  | 381  |
| 65°  | 288  | 285   | 277  | 270   | 266  | 285  |
| 75°  | 154  | 150   | 146  | 143   | 142  | 163  |
| 85°  | 40   | 40    | 39   | 39    | 38   | 43   |
| 90°  | 4    | 21    | 32   | 41    | 44   | 7    |
| 95°  | 81   | 31    | 32   | 41    | 43   | 100  |
| 105° | 443  | 452   | 459  | 472   | 419  | 463  |
| 115° | 827  | 831   | 830  | 833   | 833  | 814  |
| 125° | 1162 | 1168  | 1165 | 1170  | 1171 | 1038 |
| 135° | 1442 | 1440  | 1446 | 1449  | 1452 | 1111 |
| 145° | 1663 | 1667  | 1667 | 1668  | 1671 | 1039 |
| 155° | 1823 | 1824  | 1820 | 1826  | 1822 | 841  |
| 165° | 1923 | 1916  | 1916 | 1927  | 1914 | 543  |
| 175° | 1967 | 1958  | 1960 | 1973  | 1955 | 187  |
| 180° | 1967 | 1967  | 1967 | 1967  | 1967 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 930.0 | 930.0 | 930.0 | 930.0 | 930.0 |
| 2.5°   | 933.0 | 930.7 | 922.5 | 930.0 | 929.2 |
| 5°     | 929.2 | 926.3 | 918.1 | 926.3 | 924.8 |
| 7.5°   | 922.5 | 919.6 | 910.6 | 917.3 | 916.6 |
| 10°    | 912.9 | 909.9 | 900.2 | 906.1 | 904.7 |
| 12.5°  | 900.2 | 897.2 | 886.8 | 893.5 | 891.2 |
| 15°    | 884.5 | 881.6 | 870.4 | 874.8 | 872.6 |
| 17.5°  | 866.6 | 862.9 | 852.5 | 855.5 | 854.0 |
| 20°    | 846.5 | 842.8 | 831.6 | 833.9 | 832.4 |
| 22.5°  | 824.9 | 819.7 | 808.5 | 813.0 | 810.0 |
| 25°    | 801.1 | 795.9 | 785.4 | 786.2 | 783.2 |
| 27.5°  | 774.2 | 769.0 | 759.3 | 757.9 | 754.1 |
| 30°    | 747.4 | 741.5 | 731.8 | 728.8 | 725.1 |
| 32.5°  | 719.1 | 713.9 | 703.5 | 699.7 | 696.0 |
| 35°    | 689.3 | 684.1 | 673.6 | 668.4 | 664.7 |
| 37.5°  | 658.0 | 653.5 | 642.3 | 637.1 | 631.9 |
| 40°    | 627.4 | 621.5 | 610.3 | 602.9 | 599.1 |
| 42.5°  | 594.7 | 591.7 | 579.0 | 570.1 | 567.8 |
| 45°    | 562.6 | 557.4 | 545.5 | 537.3 | 535.0 |
| 47.5°  | 529.1 | 525.4 | 514.2 | 505.2 | 499.3 |
| 50°    | 494.8 | 491.8 | 481.4 | 471.0 | 466.5 |
| 52.5°  | 461.3 | 457.5 | 446.4 | 437.4 | 431.5 |
| 55°    | 425.5 | 423.3 | 412.8 | 403.9 | 399.4 |
| 57.5°  | 392.0 | 389.7 | 379.3 | 370.4 | 365.9 |
| 60°    | 356.9 | 353.2 | 343.5 | 336.8 | 333.1 |
| 62.5°  | 322.7 | 319.7 | 309.3 | 303.3 | 299.6 |
| 65°    | 288.4 | 284.7 | 277.2 | 269.8 | 266.0 |
| 67.5°  | 253.4 | 250.4 | 242.9 | 235.5 | 234.7 |
| 70°    | 221.3 | 216.1 | 210.1 | 204.2 | 201.9 |
| 72.5°  | 187.0 | 181.8 | 177.4 | 172.9 | 170.6 |
| 75°    | 153.5 | 149.8 | 146.1 | 143.1 | 142.3 |
| 77.5°  | 120.7 | 119.2 | 115.5 | 114.8 | 112.5 |
| 80°    | 91.7  | 89.4  | 87.9  | 86.4  | 85.7  |
| 82.5°  | 63.3  | 62.6  | 62.6  | 61.9  | 61.1  |
| 85°    | 40.2  | 40.2  | 38.7  | 38.7  | 38.0  |
| 87.5°  | 19.4  | 18.6  | 17.9  | 17.9  | 17.9  |
| 90°    | 4.4   | 20.6  | 32.4  | 41.2  | 44.1  |
| 92.5°  | 22.1  | 19.1  | 30.9  | 39.7  | 39.7  |
| 95°    | 80.9  | 30.9  | 32.4  | 41.2  | 42.7  |
| 97.5°  | 154.5 | 186.9 | 32.4  | 39.7  | 41.2  |
| 100°   | 241.3 | 267.8 | 64.7  | 39.7  | 41.2  |
| 102.5° | 338.4 | 356.1 | 373.7 | 42.7  | 42.7  |
| 105°   | 442.9 | 451.7 | 459.0 | 472.3 | 419.3 |
| 107.5° | 538.5 | 542.9 | 553.2 | 560.6 | 566.4 |
| 110°   | 635.6 | 640.0 | 648.8 | 651.8 | 656.2 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 729.8  | 738.6  | 741.5  | 740.1  | 745.9  |
| 115°   | 826.9  | 831.3  | 829.8  | 832.7  | 832.7  |
| 117.5° | 913.7  | 919.6  | 924.0  | 922.5  | 922.5  |
| 120°   | 1001.9 | 1007.8 | 1006.4 | 1009.3 | 1006.4 |
| 122.5° | 1084.3 | 1087.3 | 1090.2 | 1091.7 | 1088.8 |
| 125°   | 1162.3 | 1168.2 | 1165.3 | 1169.7 | 1171.1 |
| 127.5° | 1237.4 | 1238.8 | 1246.2 | 1244.7 | 1243.2 |
| 130°   | 1309.4 | 1310.9 | 1315.3 | 1316.8 | 1316.8 |
| 132.5° | 1375.7 | 1378.6 | 1384.5 | 1386.0 | 1384.5 |
| 135°   | 1441.9 | 1440.4 | 1446.3 | 1449.2 | 1452.2 |
| 137.5° | 1500.7 | 1500.7 | 1508.1 | 1511.0 | 1509.5 |
| 140°   | 1558.1 | 1561.0 | 1564.0 | 1568.4 | 1569.9 |
| 142.5° | 1609.6 | 1615.5 | 1616.9 | 1619.9 | 1619.9 |
| 145°   | 1662.6 | 1667.0 | 1667.0 | 1668.4 | 1671.4 |
| 147.5° | 1703.8 | 1712.6 | 1711.1 | 1712.6 | 1714.1 |
| 150°   | 1749.4 | 1755.2 | 1753.8 | 1753.8 | 1755.2 |
| 152.5° | 1787.6 | 1792.0 | 1789.1 | 1792.0 | 1790.6 |
| 155°   | 1822.9 | 1824.4 | 1820.0 | 1825.9 | 1821.5 |
| 157.5° | 1853.8 | 1853.8 | 1847.9 | 1855.3 | 1847.9 |
| 160°   | 1880.3 | 1875.9 | 1874.4 | 1883.2 | 1874.4 |
| 162.5° | 1903.8 | 1898.0 | 1896.5 | 1905.3 | 1895.0 |
| 165°   | 1923.0 | 1915.6 | 1915.6 | 1927.4 | 1914.1 |
| 167.5° | 1939.2 | 1931.8 | 1930.3 | 1943.6 | 1928.9 |
| 170°   | 1952.4 | 1943.6 | 1945.0 | 1956.8 | 1942.1 |
| 172.5° | 1961.2 | 1952.4 | 1953.9 | 1965.6 | 1949.5 |
| 175°   | 1967.1 | 1958.3 | 1959.8 | 1973.0 | 1955.3 |
| 177.5° | 1971.5 | 1961.2 | 1964.2 | 1975.9 | 1958.3 |
| 180°   | 1967.1 | 1967.1 | 1967.1 | 1967.1 | 1967.1 |

(END OF REPORT)