

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: P1033994

Luminaire Tested: S124RDIW-B1195D470UB40-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033994  
REPORT IS A COMBINATION OF REPORTS P1000206 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-B1195D470UB40-4F0-XX-W2A-F  
Description: Define 4 Regressed Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

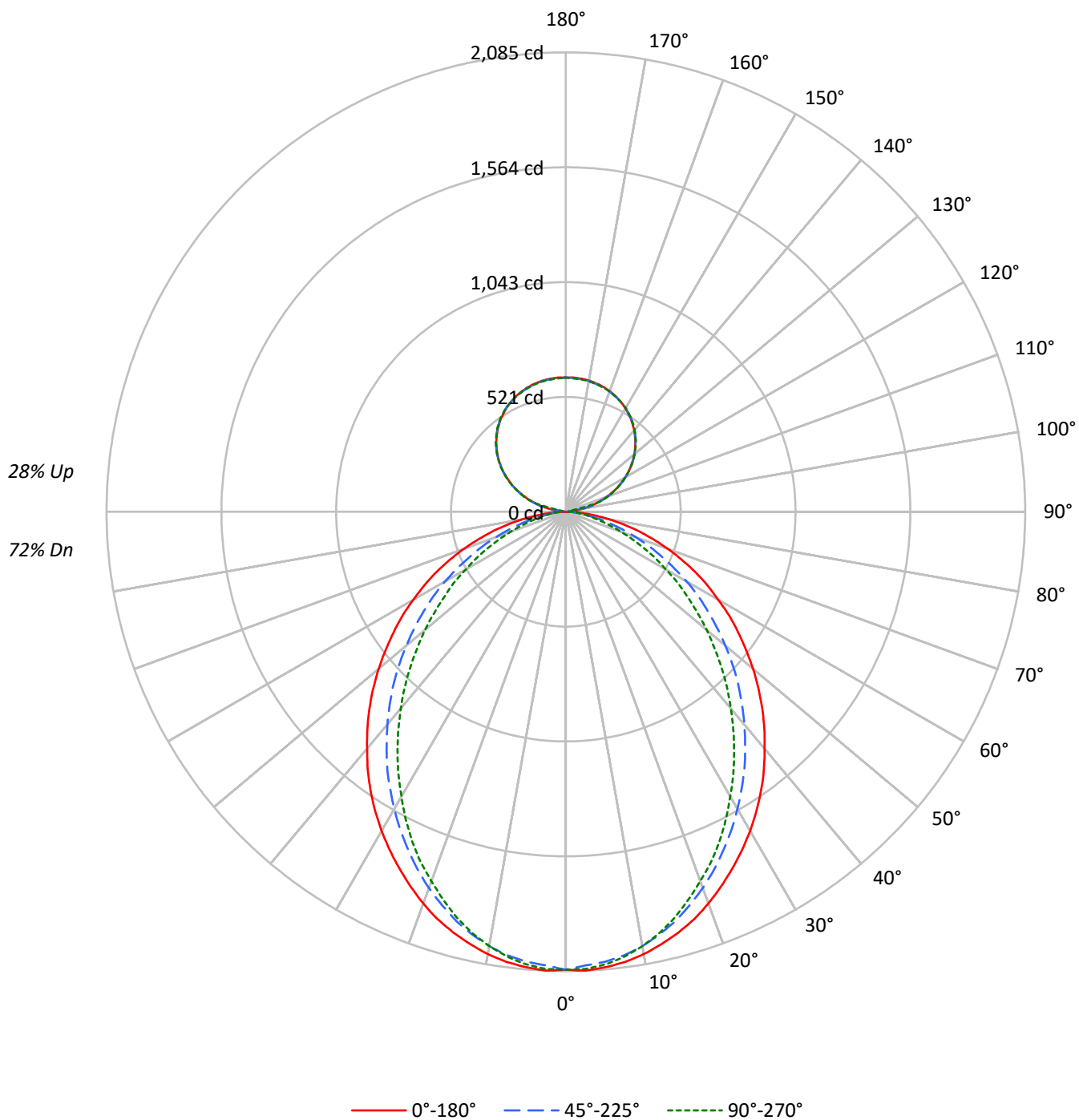
Lumens per Lamp: N/A  
Luminaire Lumens: 6688.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 74.5  
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 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 95 | 95 | 95 | 85 | 85 | 85 | 76 | 76 | 76 |
| 1   | 103 | 99  | 95  | 91  | 98  | 94  | 90  | 87  | 84 | 82 | 79 | 76 | 74 | 72 | 68 | 67 | 65 |
| 2   | 94  | 87  | 81  | 75  | 89  | 82  | 77  | 72  | 74 | 70 | 66 | 67 | 64 | 61 | 60 | 58 | 55 |
| 3   | 86  | 77  | 69  | 63  | 81  | 73  | 66  | 61  | 66 | 61 | 56 | 60 | 55 | 52 | 54 | 50 | 48 |
| 4   | 79  | 68  | 60  | 54  | 75  | 65  | 58  | 52  | 59 | 53 | 48 | 53 | 49 | 45 | 48 | 44 | 41 |
| 5   | 73  | 61  | 53  | 47  | 69  | 58  | 51  | 45  | 53 | 47 | 42 | 48 | 43 | 39 | 44 | 40 | 36 |
| 6   | 67  | 55  | 47  | 41  | 64  | 53  | 45  | 40  | 48 | 42 | 37 | 44 | 39 | 35 | 40 | 35 | 32 |
| 7   | 62  | 50  | 42  | 36  | 59  | 48  | 40  | 35  | 44 | 37 | 33 | 40 | 35 | 31 | 36 | 32 | 29 |
| 8   | 58  | 46  | 38  | 32  | 55  | 44  | 36  | 31  | 40 | 34 | 29 | 37 | 31 | 28 | 34 | 29 | 26 |
| 9   | 54  | 42  | 34  | 29  | 51  | 40  | 33  | 28  | 37 | 31 | 27 | 34 | 29 | 25 | 31 | 27 | 23 |
| 10  | 51  | 38  | 31  | 26  | 48  | 37  | 30  | 25  | 34 | 28 | 24 | 31 | 26 | 23 | 29 | 25 | 21 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16947 | 16947 | 16947 |
| 5°  | 16949 | 16444 | 16445 |
| 10° | 16805 | 15925 | 15736 |
| 15° | 16574 | 15279 | 14898 |
| 20° | 16271 | 14542 | 13943 |
| 25° | 15893 | 13747 | 13009 |
| 30° | 15524 | 12937 | 11962 |
| 35° | 15117 | 12115 | 10938 |
| 40° | 14633 | 11230 | 9886  |
| 45° | 14180 | 10353 | 8844  |
| 50° | 13663 | 9394  | 7786  |
| 55° | 13106 | 8412  | 6695  |
| 60° | 12487 | 7368  | 5616  |
| 65° | 11891 | 6172  | 4579  |
| 70° | 11041 | 4913  | 3498  |
| 75° | 9951  | 3573  | 2447  |
| 80° | 8312  | 2194  | 1758  |
| 85° | 6251  | 1263  | 966   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14180 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 195.4  | 2.9       |
| 10°-20°   | 544.9  | 8.1       |
| 20°-30°   | 786.7  | 11.8      |
| 30°-40°   | 891.6  | 13.3      |
| 40°-50°   | 860.8  | 12.9      |
| 50°-60°   | 715.7  | 10.7      |
| 60°-70°   | 494.0  | 7.4       |
| 70°-80°   | 249.6  | 3.7       |
| 80°-90°   | 64.6   | 1.0       |
| 90°-100°  | 20.2   | 0.3       |
| 100°-110° | 133.1  | 2.0       |
| 110°-120° | 254.3  | 3.8       |
| 120°-130° | 322.8  | 4.8       |
| 130°-140° | 345.3  | 5.2       |
| 140°-150° | 322.9  | 4.8       |
| 150°-160° | 260.4  | 3.9       |
| 160°-170° | 167.9  | 2.5       |
| 170°-180° | 57.9   | 0.9       |
| 0°-30°    | 1527.0 | 22.8      |
| 0°-40°    | 2418.5 | 36.2      |
| 0°-60°    | 3995.0 | 59.7      |
| 0°-90°    | 4803.2 | 71.8      |
| 90°-120°  | 407.6  | 6.1       |
| 90°-150°  | 1398.6 | 20.9      |
| 90°-180°  | 1885.0 | 28.2      |
| 0°-180°   | 6688.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2078 | 2078  | 2078 | 2078  | 2078 |      |
| 5°   | 2075 | 2069  | 2050 | 2066  | 2062 | 197  |
| 15°  | 1976 | 1962  | 1922 | 1919  | 1908 | 557  |
| 25°  | 1787 | 1758  | 1693 | 1666  | 1650 | 823  |
| 35°  | 1545 | 1494  | 1415 | 1361  | 1332 | 966  |
| 45°  | 1260 | 1201  | 1106 | 1028  | 999  | 972  |
| 55°  | 955  | 891   | 788  | 705   | 675  | 854  |
| 65°  | 649  | 581   | 479  | 411   | 392  | 641  |
| 75°  | 345  | 286   | 212  | 175   | 166  | 364  |
| 85°  | 86   | 54    | 49   | 46    | 46   | 94   |
| 90°  | 1    | 6     | 10   | 13    | 14   | 6    |
| 95°  | 25   | 10    | 10   | 13    | 13   | 31   |
| 105° | 137  | 140   | 142  | 146   | 130  | 143  |
| 115° | 256  | 257   | 257  | 258   | 258  | 252  |
| 125° | 360  | 362   | 361  | 362   | 363  | 321  |
| 135° | 446  | 446   | 448  | 449   | 450  | 344  |
| 145° | 515  | 516   | 516  | 517   | 518  | 322  |
| 155° | 564  | 565   | 564  | 565   | 564  | 260  |
| 165° | 595  | 593   | 593  | 597   | 593  | 168  |
| 175° | 609  | 606   | 607  | 611   | 605  | 58   |
| 180° | 609  | 609   | 609  | 609   | 609  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2078.2 | 2078.2 | 2078.2 | 2078.2 | 2078.2 |
| 2.5°   | 2084.6 | 2078.2 | 2060.7 | 2078.2 | 2076.7 |
| 5°     | 2075.1 | 2068.7 | 2049.6 | 2065.5 | 2062.3 |
| 7.5°   | 2060.7 | 2054.4 | 2030.5 | 2041.6 | 2036.9 |
| 10°    | 2038.5 | 2030.5 | 2001.9 | 2008.2 | 2001.9 |
| 12.5°  | 2009.8 | 2000.3 | 1965.3 | 1968.4 | 1958.9 |
| 15°    | 1976.4 | 1962.1 | 1922.3 | 1919.1 | 1908.0 |
| 17.5°  | 1938.2 | 1917.5 | 1871.4 | 1863.4 | 1847.5 |
| 20°    | 1892.1 | 1871.4 | 1817.3 | 1804.5 | 1783.9 |
| 22.5°  | 1841.1 | 1817.3 | 1758.4 | 1737.7 | 1721.8 |
| 25°    | 1787.0 | 1758.4 | 1693.1 | 1666.1 | 1650.2 |
| 27.5°  | 1731.3 | 1696.3 | 1627.9 | 1596.1 | 1573.8 |
| 30°    | 1672.5 | 1632.7 | 1557.9 | 1518.1 | 1492.6 |
| 32.5°  | 1610.4 | 1564.3 | 1486.3 | 1438.5 | 1414.7 |
| 35°    | 1545.2 | 1494.2 | 1414.7 | 1360.6 | 1331.9 |
| 37.5°  | 1476.7 | 1424.2 | 1336.7 | 1277.8 | 1249.2 |
| 40°    | 1403.5 | 1351.0 | 1260.3 | 1193.5 | 1164.8 |
| 42.5°  | 1333.5 | 1277.8 | 1182.3 | 1113.9 | 1083.7 |
| 45°    | 1260.3 | 1201.4 | 1106.0 | 1028.0 | 999.3  |
| 47.5°  | 1185.5 | 1125.1 | 1026.4 | 945.2  | 913.4  |
| 50°    | 1109.1 | 1047.1 | 945.2  | 865.7  | 835.4  |
| 52.5°  | 1031.2 | 970.7  | 865.7  | 784.5  | 752.7  |
| 55°    | 954.8  | 891.1  | 787.7  | 704.9  | 674.7  |
| 57.5°  | 880.0  | 813.2  | 711.3  | 627.0  | 604.7  |
| 60°    | 798.8  | 735.2  | 633.3  | 550.6  | 525.1  |
| 62.5°  | 725.6  | 658.8  | 553.8  | 479.0  | 459.9  |
| 65°    | 649.3  | 580.8  | 479.0  | 410.6  | 391.5  |
| 67.5°  | 569.7  | 504.4  | 409.0  | 348.5  | 326.2  |
| 70°    | 494.9  | 428.1  | 337.4  | 284.8  | 268.9  |
| 72.5°  | 415.3  | 356.5  | 272.1  | 229.1  | 214.8  |
| 75°    | 345.3  | 286.4  | 211.6  | 175.0  | 165.5  |
| 77.5°  | 272.1  | 221.2  | 157.5  | 132.1  | 128.9  |
| 80°    | 202.1  | 155.9  | 108.2  | 103.4  | 101.8  |
| 82.5°  | 141.6  | 100.3  | 78.0   | 74.8   | 73.2   |
| 85°    | 85.9   | 54.1   | 49.3   | 46.1   | 46.1   |
| 87.5°  | 36.6   | 23.9   | 22.3   | 20.7   | 22.3   |
| 90°    | 1.4    | 6.4    | 10.0   | 12.8   | 13.7   |
| 92.5°  | 6.8    | 5.9    | 9.6    | 12.3   | 12.3   |
| 95°    | 25.1   | 9.6    | 10.0   | 12.8   | 13.2   |
| 97.5°  | 47.8   | 57.9   | 10.0   | 12.3   | 12.8   |
| 100°   | 74.7   | 82.9   | 20.0   | 12.3   | 12.8   |
| 102.5° | 104.8  | 110.2  | 115.7  | 13.2   | 13.2   |
| 105°   | 137.1  | 139.9  | 142.1  | 146.2  | 129.8  |
| 107.5° | 166.7  | 168.1  | 171.3  | 173.6  | 175.4  |
| 110°   | 196.8  | 198.2  | 200.9  | 201.8  | 203.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 226.0 | 228.7 | 229.6 | 229.1 | 231.0 |
| 115°   | 256.0 | 257.4 | 256.9 | 257.9 | 257.9 |
| 117.5° | 282.9 | 284.7 | 286.1 | 285.6 | 285.6 |
| 120°   | 310.2 | 312.1 | 311.6 | 312.5 | 311.6 |
| 122.5° | 335.8 | 336.7 | 337.6 | 338.0 | 337.1 |
| 125°   | 359.9 | 361.7 | 360.8 | 362.2 | 362.6 |
| 127.5° | 383.1 | 383.6 | 385.9 | 385.4 | 385.0 |
| 130°   | 405.5 | 405.9 | 407.3 | 407.7 | 407.7 |
| 132.5° | 426.0 | 426.9 | 428.7 | 429.1 | 428.7 |
| 135°   | 446.5 | 446.0 | 447.8 | 448.7 | 449.6 |
| 137.5° | 464.7 | 464.7 | 467.0 | 467.9 | 467.4 |
| 140°   | 482.4 | 483.4 | 484.3 | 485.6 | 486.1 |
| 142.5° | 498.4 | 500.2 | 500.7 | 501.6 | 501.6 |
| 145°   | 514.8 | 516.2 | 516.2 | 516.6 | 517.5 |
| 147.5° | 527.5 | 530.3 | 529.8 | 530.3 | 530.7 |
| 150°   | 541.7 | 543.5 | 543.0 | 543.0 | 543.5 |
| 152.5° | 553.5 | 554.9 | 554.0 | 554.9 | 554.4 |
| 155°   | 564.4 | 564.9 | 563.5 | 565.4 | 564.0 |
| 157.5° | 574.0 | 574.0 | 572.2 | 574.5 | 572.2 |
| 160°   | 582.2 | 580.8 | 580.4 | 583.1 | 580.4 |
| 162.5° | 589.5 | 587.7 | 587.2 | 590.0 | 586.8 |
| 165°   | 595.4 | 593.1 | 593.1 | 596.8 | 592.7 |
| 167.5° | 600.4 | 598.2 | 597.7 | 601.8 | 597.2 |
| 170°   | 604.5 | 601.8 | 602.3 | 605.9 | 601.3 |
| 172.5° | 607.3 | 604.5 | 605.0 | 608.6 | 603.6 |
| 175°   | 609.1 | 606.4 | 606.8 | 610.9 | 605.4 |
| 177.5° | 610.5 | 607.3 | 608.2 | 611.8 | 606.4 |
| 180°   | 609.1 | 609.1 | 609.1 | 609.1 | 609.1 |

(END OF REPORT)