

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: P1033987

Luminaire Tested: S124RDIW-B1195D470UB30-4F0-XX-W2A-F1

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033987  
REPORT IS A COMBINATION OF REPORTS P1000195 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-B1195D470UB30-4F0-XX-W2A-F1  
Description: Define 4 Regressed Direct/Indirect Wall Mount with 3000K BioUP LEDs {m-DER=0.589}  
{m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

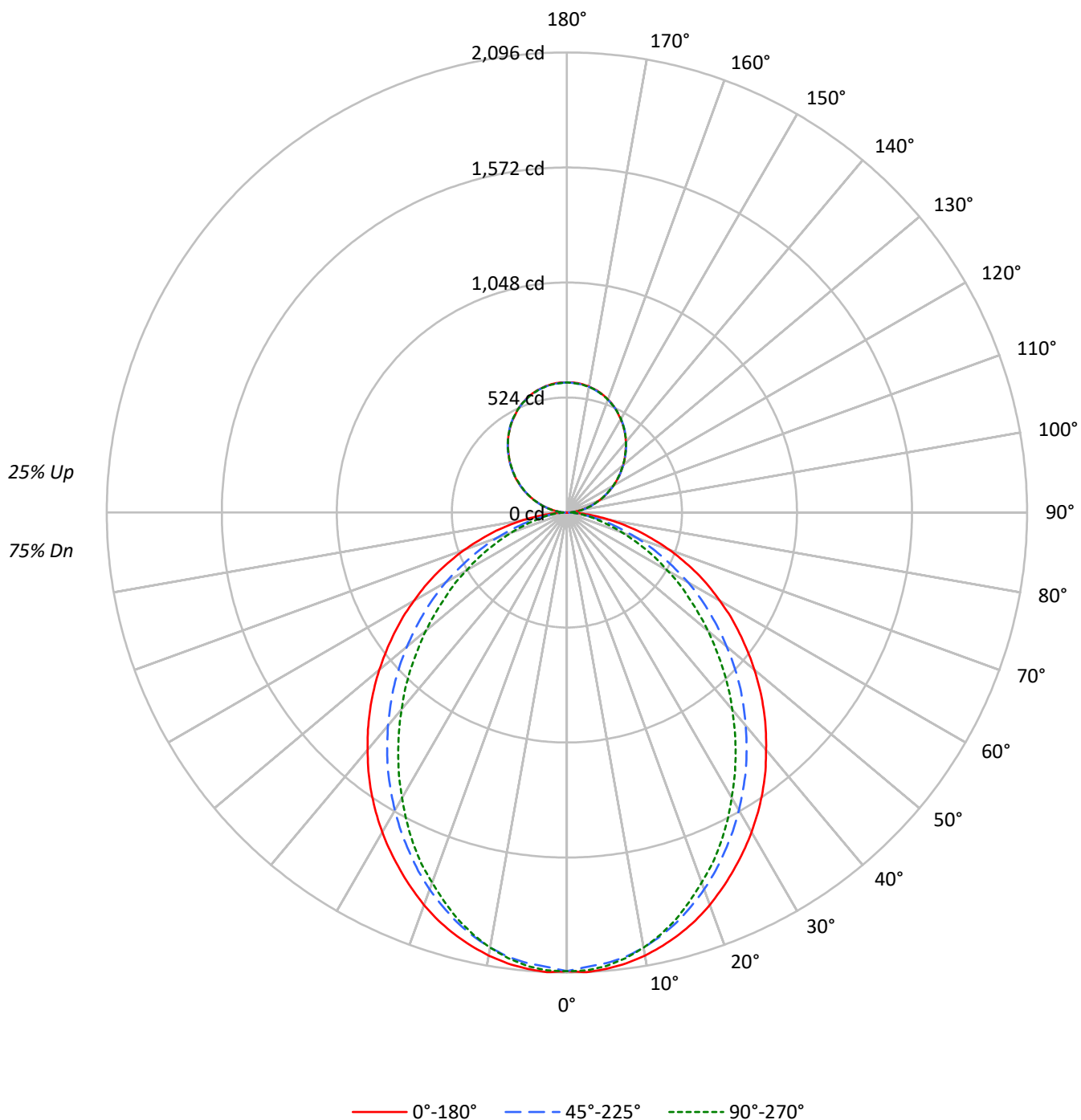
Lumens per Lamp: N/A  
Luminaire Lumens: 6474.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

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   | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | 87 | 87 | 87 | 79 | 79 | 79 |
| 1   | 104 | 99  | 96  | 92  | 98  | 95  | 91  | 88  | 86 | 83 | 81 | 78 | 76 | 74 | 70 | 69 | 67 |
| 2   | 95  | 87  | 81  | 76  | 90  | 83  | 78  | 73  | 76 | 71 | 68 | 69 | 65 | 62 | 62 | 60 | 57 |
| 3   | 87  | 77  | 70  | 64  | 82  | 74  | 67  | 62  | 67 | 62 | 57 | 61 | 57 | 53 | 56 | 52 | 49 |
| 4   | 80  | 69  | 61  | 54  | 75  | 66  | 58  | 53  | 60 | 54 | 49 | 55 | 50 | 46 | 50 | 46 | 43 |
| 5   | 73  | 61  | 53  | 47  | 70  | 59  | 51  | 46  | 54 | 48 | 43 | 49 | 44 | 40 | 45 | 41 | 38 |
| 6   | 68  | 55  | 47  | 41  | 64  | 53  | 46  | 40  | 49 | 42 | 38 | 45 | 40 | 35 | 41 | 37 | 33 |
| 7   | 63  | 50  | 42  | 36  | 60  | 48  | 41  | 35  | 45 | 38 | 33 | 41 | 36 | 32 | 38 | 33 | 30 |
| 8   | 59  | 46  | 38  | 33  | 56  | 44  | 37  | 32  | 41 | 34 | 30 | 38 | 32 | 28 | 35 | 30 | 27 |
| 9   | 55  | 42  | 34  | 29  | 52  | 41  | 33  | 29  | 38 | 31 | 27 | 35 | 29 | 26 | 32 | 28 | 24 |
| 10  | 51  | 39  | 31  | 26  | 49  | 37  | 31  | 26  | 35 | 29 | 25 | 32 | 27 | 23 | 30 | 25 | 22 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 17042 | 17042 | 17042 |
| 5°  | 17044 | 16536 | 16538 |
| 10° | 16899 | 16014 | 15824 |
| 15° | 16667 | 15365 | 14981 |
| 20° | 16362 | 14624 | 14021 |
| 25° | 15983 | 13825 | 13083 |
| 30° | 15611 | 13009 | 12029 |
| 35° | 15202 | 12183 | 11000 |
| 40° | 14716 | 11293 | 9942  |
| 45° | 14259 | 10411 | 8895  |
| 50° | 13741 | 9447  | 7830  |
| 55° | 13180 | 8459  | 6733  |
| 60° | 12557 | 7410  | 5648  |
| 65° | 11957 | 6207  | 4604  |
| 70° | 11104 | 4941  | 3518  |
| 75° | 10008 | 3594  | 2460  |
| 80° | 8357  | 2207  | 1769  |
| 85° | 6287  | 1271  | 973   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14259 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 196.5  | 3.0       |
| 10°-20°   | 547.9  | 8.5       |
| 20°-30°   | 791.1  | 12.2      |
| 30°-40°   | 896.6  | 13.8      |
| 40°-50°   | 865.7  | 13.4      |
| 50°-60°   | 719.7  | 11.1      |
| 60°-70°   | 496.8  | 7.7       |
| 70°-80°   | 251.0  | 3.9       |
| 80°-90°   | 65.0   | 1.0       |
| 90°-100°  | 38.6   | 0.6       |
| 100°-110° | 115.7  | 1.8       |
| 110°-120° | 196.5  | 3.0       |
| 120°-130° | 259.1  | 4.0       |
| 130°-140° | 291.1  | 4.5       |
| 140°-150° | 286.1  | 4.4       |
| 150°-160° | 240.6  | 3.7       |
| 160°-170° | 160.1  | 2.5       |
| 170°-180° | 56.1   | 0.9       |
| 0°-30°    | 1535.6 | 23.7      |
| 0°-40°    | 2432.1 | 37.6      |
| 0°-60°    | 4017.5 | 62.1      |
| 0°-90°    | 4830.2 | 74.6      |
| 90°-120°  | 350.7  | 5.4       |
| 90°-150°  | 1187.0 | 18.3      |
| 90°-180°  | 1644.0 | 25.4      |
| 0°-180°   | 6474.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2090 | 2090  | 2090 | 2090  | 2090 |      |
| 5°   | 2087 | 2080  | 2061 | 2077  | 2074 | 198  |
| 15°  | 1988 | 1973  | 1933 | 1930  | 1919 | 560  |
| 25°  | 1797 | 1768  | 1703 | 1676  | 1660 | 828  |
| 35°  | 1554 | 1503  | 1423 | 1368  | 1339 | 971  |
| 45°  | 1267 | 1208  | 1112 | 1034  | 1005 | 977  |
| 55°  | 960  | 896   | 792  | 709   | 678  | 859  |
| 65°  | 653  | 584   | 482  | 413   | 394  | 645  |
| 75°  | 347  | 288   | 213  | 176   | 166  | 366  |
| 85°  | 86   | 54    | 50   | 46    | 46   | 95   |
| 90°  | 1    | 6     | 10   | 13    | 14   | 7    |
| 95°  | 28   | 32    | 35   | 36    | 36   | 30   |
| 105° | 107  | 107   | 109  | 110   | 112  | 113  |
| 115° | 200  | 200   | 199  | 198   | 198  | 197  |
| 125° | 291  | 291   | 290  | 290   | 289  | 259  |
| 135° | 375  | 378   | 378  | 377   | 376  | 290  |
| 145° | 456  | 458   | 458  | 458   | 456  | 285  |
| 155° | 522  | 522   | 522  | 524   | 522  | 240  |
| 165° | 569  | 567   | 566  | 569   | 567  | 160  |
| 175° | 592  | 589   | 589  | 592   | 589  | 56   |
| 180° | 592  | 592   | 592  | 592   | 592  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2089.9 | 2089.9 | 2089.9 | 2089.9 | 2089.9 |
| 2.5°   | 2096.3 | 2089.9 | 2072.3 | 2089.9 | 2088.3 |
| 5°     | 2086.7 | 2080.3 | 2061.1 | 2077.1 | 2073.9 |
| 7.5°   | 2072.3 | 2065.9 | 2041.9 | 2053.1 | 2048.3 |
| 10°    | 2049.9 | 2041.9 | 2013.1 | 2019.5 | 2013.1 |
| 12.5°  | 2021.1 | 2011.5 | 1976.3 | 1979.5 | 1969.9 |
| 15°    | 1987.5 | 1973.1 | 1933.1 | 1929.9 | 1918.7 |
| 17.5°  | 1949.1 | 1928.3 | 1881.9 | 1873.9 | 1857.9 |
| 20°    | 1902.7 | 1881.9 | 1827.5 | 1814.7 | 1793.9 |
| 22.5°  | 1851.5 | 1827.5 | 1768.3 | 1747.5 | 1731.5 |
| 25°    | 1797.1 | 1768.3 | 1702.7 | 1675.5 | 1659.5 |
| 27.5°  | 1741.1 | 1705.9 | 1637.1 | 1605.1 | 1582.6 |
| 30°    | 1681.9 | 1641.9 | 1566.6 | 1526.6 | 1501.0 |
| 32.5°  | 1619.5 | 1573.0 | 1494.6 | 1446.6 | 1422.6 |
| 35°    | 1553.8 | 1502.6 | 1422.6 | 1368.2 | 1339.4 |
| 37.5°  | 1485.0 | 1432.2 | 1344.2 | 1285.0 | 1256.2 |
| 40°    | 1411.4 | 1358.6 | 1267.4 | 1200.2 | 1171.4 |
| 42.5°  | 1341.0 | 1285.0 | 1189.0 | 1120.2 | 1089.8 |
| 45°    | 1267.4 | 1208.2 | 1112.2 | 1033.8 | 1005.0 |
| 47.5°  | 1192.2 | 1131.4 | 1032.2 | 950.5  | 918.5  |
| 50°    | 1115.4 | 1053.0 | 950.5  | 870.5  | 840.1  |
| 52.5°  | 1037.0 | 976.2  | 870.5  | 788.9  | 756.9  |
| 55°    | 960.2  | 896.1  | 792.1  | 708.9  | 678.5  |
| 57.5°  | 884.9  | 817.7  | 715.3  | 630.5  | 608.1  |
| 60°    | 803.3  | 739.3  | 636.9  | 553.7  | 528.1  |
| 62.5°  | 729.7  | 662.5  | 556.9  | 481.7  | 462.5  |
| 65°    | 652.9  | 584.1  | 481.7  | 412.9  | 393.7  |
| 67.5°  | 572.9  | 507.3  | 411.3  | 350.5  | 328.1  |
| 70°    | 497.7  | 430.5  | 339.3  | 286.4  | 270.4  |
| 72.5°  | 417.7  | 358.5  | 273.6  | 230.4  | 216.0  |
| 75°    | 347.3  | 288.0  | 212.8  | 176.0  | 166.4  |
| 77.5°  | 273.6  | 222.4  | 158.4  | 132.8  | 129.6  |
| 80°    | 203.2  | 156.8  | 108.8  | 104.0  | 102.4  |
| 82.5°  | 142.4  | 100.8  | 78.4   | 75.2   | 73.6   |
| 85°    | 86.4   | 54.4   | 49.6   | 46.4   | 46.4   |
| 87.5°  | 36.8   | 24.0   | 22.4   | 20.8   | 22.4   |
| 90°    | 1.4    | 6.4    | 10.1   | 12.8   | 13.7   |
| 92.5°  | 11.9   | 17.9   | 20.2   | 21.5   | 22.0   |
| 95°    | 27.5   | 31.6   | 34.8   | 36.2   | 36.2   |
| 97.5°  | 44.0   | 47.6   | 51.3   | 53.1   | 53.1   |
| 100°   | 64.1   | 66.0   | 70.1   | 71.0   | 71.0   |
| 102.5° | 85.2   | 85.7   | 89.3   | 90.7   | 91.2   |
| 105°   | 106.8  | 107.2  | 109.0  | 110.4  | 111.8  |
| 107.5° | 129.2  | 129.7  | 130.1  | 132.0  | 131.5  |
| 110°   | 152.1  | 153.0  | 152.6  | 151.7  | 153.0  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 175.9 | 175.9 | 175.0 | 175.0 | 175.0 |
| 115°   | 199.8 | 199.8 | 198.8 | 198.4 | 197.9 |
| 117.5° | 222.2 | 222.2 | 221.8 | 220.4 | 219.0 |
| 120°   | 244.7 | 246.5 | 245.1 | 242.8 | 243.7 |
| 122.5° | 268.0 | 268.5 | 268.0 | 266.7 | 264.4 |
| 125°   | 290.9 | 290.9 | 290.5 | 289.6 | 288.6 |
| 127.5° | 311.6 | 312.9 | 312.0 | 311.1 | 310.6 |
| 130°   | 333.5 | 334.9 | 334.9 | 334.0 | 332.2 |
| 132.5° | 356.0 | 356.9 | 356.5 | 355.5 | 355.1 |
| 135°   | 375.2 | 378.0 | 378.0 | 377.1 | 375.7 |
| 137.5° | 396.8 | 398.2 | 399.1 | 397.7 | 398.2 |
| 140°   | 418.3 | 419.2 | 419.2 | 418.8 | 418.3 |
| 142.5° | 438.0 | 438.9 | 438.5 | 438.5 | 438.5 |
| 145°   | 455.9 | 457.7 | 458.2 | 457.7 | 456.3 |
| 147.5° | 474.2 | 476.5 | 476.0 | 475.6 | 475.1 |
| 150°   | 490.7 | 492.5 | 492.5 | 492.5 | 492.1 |
| 152.5° | 506.3 | 507.2 | 507.7 | 509.0 | 507.7 |
| 155°   | 522.3 | 522.3 | 521.9 | 523.7 | 521.9 |
| 157.5° | 536.1 | 535.1 | 535.1 | 536.5 | 535.1 |
| 160°   | 548.0 | 547.5 | 547.1 | 548.4 | 546.1 |
| 162.5° | 559.0 | 557.6 | 557.1 | 559.9 | 557.6 |
| 165°   | 568.6 | 567.2 | 566.3 | 569.0 | 567.2 |
| 167.5° | 576.4 | 574.5 | 574.5 | 577.3 | 574.5 |
| 170°   | 582.8 | 580.5 | 581.0 | 583.7 | 580.5 |
| 172.5° | 587.4 | 585.5 | 585.5 | 588.7 | 585.5 |
| 175°   | 591.5 | 589.2 | 588.7 | 592.0 | 588.7 |
| 177.5° | 593.3 | 591.0 | 591.0 | 594.2 | 590.6 |
| 180°   | 592.4 | 592.4 | 592.4 | 592.4 | 592.4 |

(END OF REPORT)