

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: P1033978

Luminaire Tested: S124RDIW-B1195D1560UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033978  
REPORT IS A COMBINATION OF REPORTS P1000168 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-B1195D1560UB50-4F0-XX-W2A-F  
Description: Define 4 Regressed Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015}  
{m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

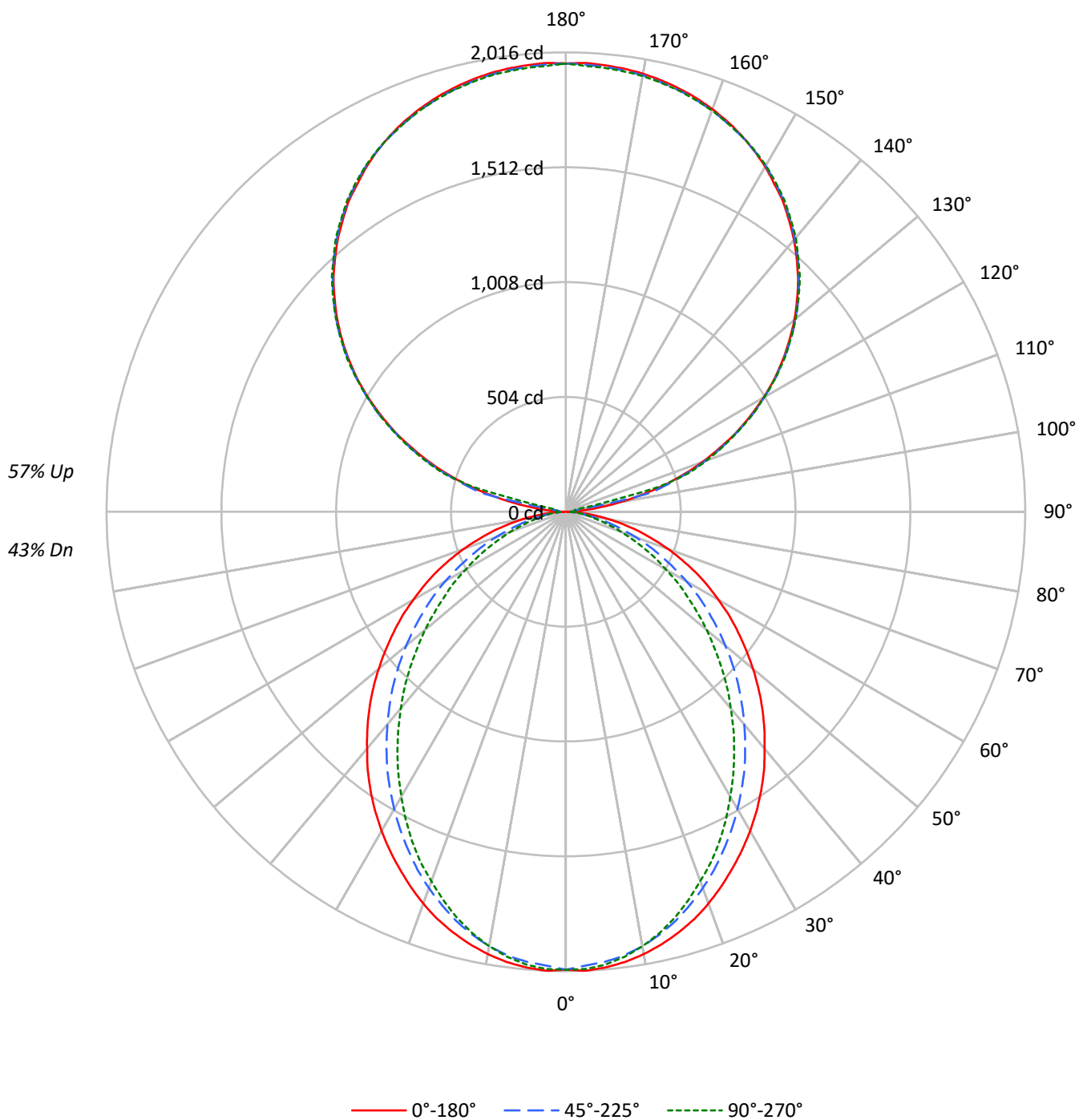
Lumens per Lamp: N/A  
Luminaire Lumens: 10735.0 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 113.5  
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   | 106 | 106 | 106 | 106 | 96 | 96 | 96 | 96 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 |
| 1   | 97  | 92  | 89  | 85  | 88 | 85 | 81 | 79 | 70 | 68 | 66 | 57 | 55 | 54 | 45 | 44 | 43 |
| 2   | 88  | 81  | 75  | 70  | 80 | 74 | 69 | 65 | 62 | 58 | 55 | 50 | 48 | 45 | 39 | 38 | 36 |
| 3   | 80  | 71  | 64  | 58  | 73 | 65 | 59 | 54 | 55 | 50 | 46 | 44 | 41 | 39 | 35 | 33 | 31 |
| 4   | 74  | 63  | 55  | 50  | 67 | 58 | 51 | 46 | 49 | 44 | 40 | 40 | 36 | 33 | 32 | 29 | 27 |
| 5   | 68  | 56  | 48  | 43  | 62 | 52 | 45 | 40 | 44 | 38 | 34 | 36 | 32 | 29 | 28 | 26 | 24 |
| 6   | 62  | 51  | 43  | 37  | 57 | 47 | 40 | 35 | 39 | 34 | 30 | 32 | 28 | 25 | 26 | 23 | 21 |
| 7   | 58  | 46  | 38  | 32  | 53 | 42 | 35 | 30 | 36 | 30 | 26 | 29 | 25 | 22 | 24 | 21 | 19 |
| 8   | 53  | 41  | 34  | 29  | 49 | 38 | 32 | 27 | 32 | 27 | 23 | 27 | 23 | 20 | 22 | 19 | 17 |
| 9   | 50  | 38  | 30  | 26  | 46 | 35 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 18 | 20 | 17 | 15 |
| 10  | 47  | 35  | 28  | 23  | 43 | 32 | 26 | 22 | 27 | 22 | 19 | 23 | 19 | 16 | 19 | 16 | 14 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16390 | 16390 | 16390 |
| 5°  | 16391 | 15903 | 15905 |
| 10° | 16252 | 15401 | 15218 |
| 15° | 16029 | 14776 | 14408 |
| 20° | 15735 | 14064 | 13484 |
| 25° | 15370 | 13295 | 12581 |
| 30° | 15013 | 12511 | 11568 |
| 35° | 14620 | 11716 | 10578 |
| 40° | 14151 | 10860 | 9561  |
| 45° | 13713 | 10012 | 8554  |
| 50° | 13213 | 9085  | 7530  |
| 55° | 12675 | 8135  | 6475  |
| 60° | 12077 | 7126  | 5432  |
| 65° | 11499 | 5969  | 4428  |
| 70° | 10677 | 4752  | 3384  |
| 75° | 9625  | 3457  | 2367  |
| 80° | 8037  | 2121  | 1701  |
| 85° | 6047  | 1222  | 935   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13713 cd/sqm

TEST NUMBER: P1033978

CATALOG NUMBER: S124RDIW-B1195D1560UB50-4F0-XX-W2A-F

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 189.0   | 1.8       |
| 10°-20°   | 527.0   | 4.9       |
| 20°-30°   | 760.8   | 7.1       |
| 30°-40°   | 862.2   | 8.0       |
| 40°-50°   | 832.5   | 7.8       |
| 50°-60°   | 692.1   | 6.4       |
| 60°-70°   | 477.7   | 4.5       |
| 70°-80°   | 241.4   | 2.2       |
| 80°-90°   | 65.3    | 0.6       |
| 90°-100°  | 65.3    | 0.6       |
| 100°-110° | 430.0   | 4.0       |
| 110°-120° | 821.2   | 7.6       |
| 120°-130° | 1042.4  | 9.7       |
| 130°-140° | 1115.2  | 10.4      |
| 140°-150° | 1042.8  | 9.7       |
| 150°-160° | 840.9   | 7.8       |
| 160°-170° | 542.3   | 5.1       |
| 170°-180° | 186.9   | 1.7       |
| 0°-30°    | 1476.7  | 13.8      |
| 0°-40°    | 2339.0  | 21.8      |
| 0°-60°    | 3863.6  | 36.0      |
| 0°-90°    | 4648.1  | 43.3      |
| 90°-120°  | 1316.5  | 12.3      |
| 90°-150°  | 4516.8  | 42.1      |
| 90°-180°  | 6087.0  | 56.7      |
| 0°-180°   | 10735.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2010 | 2010  | 2010 | 2010  | 2010 |      |
| 5°   | 2007 | 2001  | 1982 | 1998  | 1994 | 190  |
| 15°  | 1911 | 1898  | 1859 | 1856  | 1845 | 539  |
| 25°  | 1728 | 1700  | 1637 | 1611  | 1596 | 796  |
| 35°  | 1494 | 1445  | 1368 | 1316  | 1288 | 934  |
| 45°  | 1219 | 1162  | 1070 | 994   | 966  | 940  |
| 55°  | 923  | 862   | 762  | 682   | 652  | 826  |
| 65°  | 628  | 562   | 463  | 397   | 379  | 620  |
| 75°  | 334  | 277   | 205  | 169   | 160  | 352  |
| 85°  | 83   | 52    | 48   | 45    | 45   | 91   |
| 90°  | 4    | 21    | 32   | 41    | 44   | 9    |
| 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 |      |

TEST NUMBER: P1033978

CATALOG NUMBER: S124RDIW-B1195D1560UB50-4F0-XX-W2A-F

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2009.9 | 2009.9 | 2009.9 | 2009.9 | 2009.9 |
| 2.5°   | 2016.0 | 2009.9 | 1992.9 | 2009.9 | 2008.3 |
| 5°     | 2006.8 | 2000.6 | 1982.2 | 1997.6 | 1994.5 |
| 7.5°   | 1992.9 | 1986.8 | 1963.7 | 1974.5 | 1969.8 |
| 10°    | 1971.4 | 1963.7 | 1936.0 | 1942.1 | 1936.0 |
| 12.5°  | 1943.7 | 1934.5 | 1900.6 | 1903.7 | 1894.4 |
| 15°    | 1911.4 | 1897.5 | 1859.0 | 1856.0 | 1845.2 |
| 17.5°  | 1874.4 | 1854.4 | 1809.8 | 1802.1 | 1786.7 |
| 20°    | 1829.8 | 1809.8 | 1757.5 | 1745.2 | 1725.2 |
| 22.5°  | 1780.6 | 1757.5 | 1700.5 | 1680.5 | 1665.1 |
| 25°    | 1728.2 | 1700.5 | 1637.4 | 1611.3 | 1595.9 |
| 27.5°  | 1674.4 | 1640.5 | 1574.3 | 1543.6 | 1522.0 |
| 30°    | 1617.4 | 1579.0 | 1506.6 | 1468.2 | 1443.5 |
| 32.5°  | 1557.4 | 1512.8 | 1437.4 | 1391.2 | 1368.1 |
| 35°    | 1494.3 | 1445.1 | 1368.1 | 1315.8 | 1288.1 |
| 37.5°  | 1428.1 | 1377.4 | 1292.7 | 1235.8 | 1208.1 |
| 40°    | 1357.3 | 1306.6 | 1218.8 | 1154.2 | 1126.5 |
| 42.5°  | 1289.6 | 1235.8 | 1143.4 | 1077.3 | 1048.0 |
| 45°    | 1218.8 | 1161.9 | 1069.6 | 994.2  | 966.5  |
| 47.5°  | 1146.5 | 1088.0 | 992.6  | 914.1  | 883.4  |
| 50°    | 1072.6 | 1012.6 | 914.1  | 837.2  | 807.9  |
| 52.5°  | 997.2  | 938.8  | 837.2  | 758.7  | 727.9  |
| 55°    | 923.4  | 861.8  | 761.8  | 681.8  | 652.5  |
| 57.5°  | 851.0  | 786.4  | 687.9  | 606.3  | 584.8  |
| 60°    | 772.6  | 711.0  | 612.5  | 532.5  | 507.9  |
| 62.5°  | 701.8  | 637.1  | 535.6  | 463.2  | 444.8  |
| 65°    | 627.9  | 561.7  | 463.2  | 397.0  | 378.6  |
| 67.5°  | 550.9  | 487.8  | 395.5  | 337.0  | 315.5  |
| 70°    | 478.6  | 414.0  | 326.3  | 275.5  | 260.1  |
| 72.5°  | 401.7  | 344.7  | 263.2  | 221.6  | 207.8  |
| 75°    | 334.0  | 277.0  | 204.7  | 169.3  | 160.1  |
| 77.5°  | 263.2  | 213.9  | 152.4  | 127.7  | 124.7  |
| 80°    | 195.4  | 150.8  | 104.6  | 100.0  | 98.5   |
| 82.5°  | 137.0  | 97.0   | 75.4   | 72.3   | 70.8   |
| 85°    | 83.1   | 52.3   | 47.7   | 44.6   | 44.6   |
| 87.5°  | 35.4   | 23.1   | 21.5   | 20.0   | 21.5   |
| 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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CATALOG NUMBER: S124RDIW-B1195D1560UB50-4F0-XX-W2A-F

**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)