

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: P1033259

Luminaire Tested: S124DIW-B1195D1050UB40-4F0-XX-W2A-F1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033259  
REPORT IS A COMBINATION OF REPORTS P997004 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B1195D1050UB40-4F0-XX-W2A-F1  
Description: Define 4 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

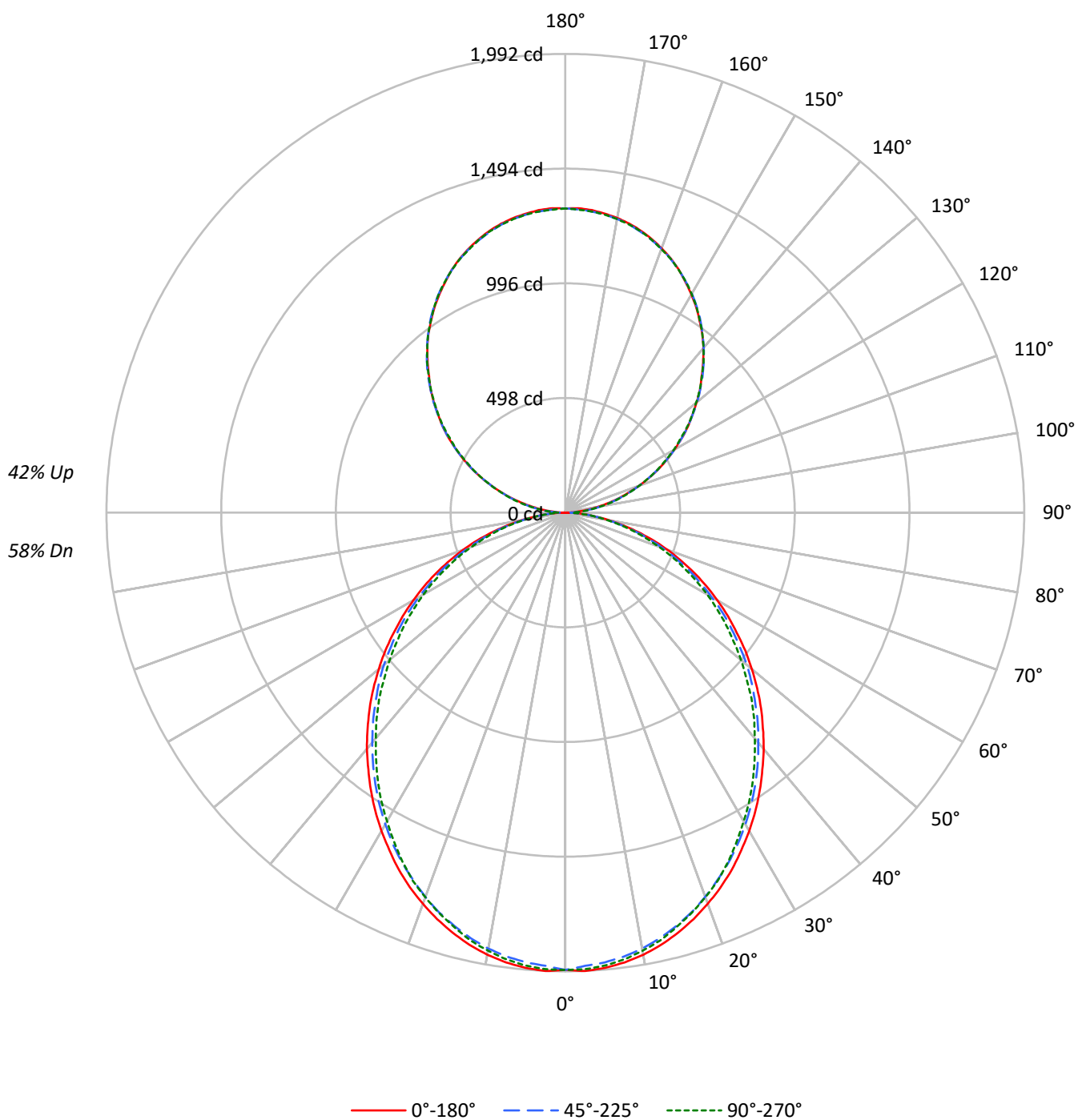
Lumens per Lamp: N/A  
Luminaire Lumens: 8765.0 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 92.8  
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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 |
| 1   | 100 | 95  | 91  | 88  | 93  | 89  | 85  | 82  | 77 | 75 | 72 | 66 | 64 | 63 | 56 | 55 | 54 |
| 2   | 91  | 83  | 77  | 72  | 84  | 78  | 72  | 68  | 68 | 63 | 60 | 58 | 55 | 52 | 49 | 47 | 45 |
| 3   | 83  | 73  | 66  | 60  | 77  | 68  | 62  | 56  | 60 | 54 | 50 | 51 | 48 | 44 | 44 | 41 | 38 |
| 4   | 76  | 65  | 57  | 51  | 70  | 61  | 53  | 48  | 53 | 47 | 43 | 46 | 41 | 38 | 39 | 36 | 33 |
| 5   | 70  | 58  | 49  | 43  | 65  | 54  | 47  | 41  | 47 | 42 | 37 | 41 | 37 | 33 | 35 | 32 | 29 |
| 6   | 64  | 52  | 44  | 38  | 60  | 49  | 41  | 36  | 43 | 37 | 32 | 37 | 32 | 29 | 32 | 28 | 25 |
| 7   | 59  | 47  | 39  | 33  | 55  | 44  | 37  | 32  | 39 | 33 | 29 | 34 | 29 | 26 | 29 | 26 | 23 |
| 8   | 55  | 43  | 35  | 29  | 51  | 40  | 33  | 28  | 35 | 30 | 25 | 31 | 26 | 23 | 27 | 23 | 20 |
| 9   | 51  | 39  | 31  | 26  | 48  | 37  | 30  | 25  | 33 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 18 |
| 10  | 48  | 36  | 28  | 24  | 45  | 34  | 27  | 23  | 30 | 24 | 21 | 26 | 22 | 19 | 23 | 19 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16193 | 16193 | 16193 |
| 5°  | 16206 | 15728 | 15747 |
| 10° | 16069 | 15291 | 15184 |
| 15° | 15839 | 14772 | 14549 |
| 20° | 15545 | 14210 | 13892 |
| 25° | 15213 | 13617 | 13184 |
| 30° | 14814 | 12976 | 12407 |
| 35° | 14400 | 12318 | 11656 |
| 40° | 13969 | 11612 | 10857 |
| 45° | 13517 | 10904 | 10111 |
| 50° | 13016 | 10216 | 9284  |
| 55° | 12472 | 9414  | 8463  |
| 60° | 11915 | 8534  | 7608  |
| 65° | 11277 | 7627  | 6644  |
| 70° | 10544 | 6534  | 5610  |
| 75° | 9446  | 5267  | 4493  |
| 80° | 8049  | 3809  | 3161  |
| 85° | 6251  | 2119  | 1702  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13517 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 187.2  | 2.1       |
| 10°-20°   | 527.3  | 6.0       |
| 20°-30°   | 776.1  | 8.9       |
| 30°-40°   | 902.1  | 10.3      |
| 40°-50°   | 902.1  | 10.3      |
| 50°-60°   | 789.0  | 9.0       |
| 60°-70°   | 585.7  | 6.7       |
| 70°-80°   | 332.3  | 3.8       |
| 80°-90°   | 98.0   | 1.1       |
| 90°-100°  | 86.1   | 1.0       |
| 100°-110° | 257.9  | 2.9       |
| 110°-120° | 438.1  | 5.0       |
| 120°-130° | 577.8  | 6.6       |
| 130°-140° | 649.0  | 7.4       |
| 140°-150° | 637.9  | 7.3       |
| 150°-160° | 536.5  | 6.1       |
| 160°-170° | 356.9  | 4.1       |
| 170°-180° | 125.0  | 1.4       |
| 0°-30°    | 1490.6 | 17.0      |
| 0°-40°    | 2392.7 | 27.3      |
| 0°-60°    | 4083.7 | 46.6      |
| 0°-90°    | 5099.8 | 58.2      |
| 90°-120°  | 782.1  | 8.9       |
| 90°-150°  | 2646.7 | 30.2      |
| 90°-180°  | 3665.0 | 41.8      |
| 0°-180°   | 8765.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1986 | 1986  | 1986 | 1986  | 1986 |      |
| 5°   | 1984 | 1978  | 1960 | 1978  | 1975 | 188  |
| 15°  | 1889 | 1882  | 1858 | 1868  | 1863 | 532  |
| 25°  | 1710 | 1699  | 1677 | 1679  | 1672 | 787  |
| 35°  | 1472 | 1461  | 1438 | 1427  | 1419 | 920  |
| 45°  | 1201 | 1190  | 1165 | 1147  | 1142 | 926  |
| 55°  | 909  | 904   | 882  | 862   | 853  | 814  |
| 65°  | 616  | 608   | 592  | 576   | 568  | 609  |
| 75°  | 328  | 320   | 312  | 306   | 304  | 348  |
| 85°  | 86   | 86    | 83   | 83    | 81   | 92   |
| 90°  | 3    | 14    | 22   | 29    | 31   | 10   |
| 95°  | 61   | 70    | 78   | 81    | 81   | 66   |
| 105° | 238  | 239   | 243  | 246   | 249  | 252  |
| 115° | 445  | 445   | 443  | 442   | 441  | 439  |
| 125° | 649  | 649   | 648  | 646   | 644  | 578  |
| 135° | 837  | 843   | 843  | 841   | 838  | 647  |
| 145° | 1016 | 1021  | 1022 | 1021  | 1018 | 636  |
| 155° | 1165 | 1165  | 1164 | 1168  | 1164 | 536  |
| 165° | 1268 | 1265  | 1263 | 1269  | 1265 | 357  |
| 175° | 1319 | 1314  | 1313 | 1320  | 1313 | 125  |
| 180° | 1321 | 1321  | 1321 | 1321  | 1321 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1985.8 | 1985.8 | 1985.8 | 1985.8 | 1985.8 |
| 2.5°   | 1992.2 | 1987.4 | 1969.9 | 1985.8 | 1984.2 |
| 5°     | 1984.2 | 1977.9 | 1960.4 | 1977.9 | 1974.7 |
| 7.5°   | 1969.9 | 1963.5 | 1944.5 | 1958.8 | 1957.2 |
| 10°    | 1949.2 | 1942.9 | 1922.2 | 1934.9 | 1931.7 |
| 12.5°  | 1922.2 | 1915.8 | 1893.5 | 1907.9 | 1903.1 |
| 15°    | 1888.8 | 1882.4 | 1858.5 | 1868.1 | 1863.3 |
| 17.5°  | 1850.6 | 1842.6 | 1820.3 | 1826.7 | 1823.5 |
| 20°    | 1807.6 | 1799.7 | 1775.8 | 1780.6 | 1777.4 |
| 22.5°  | 1761.5 | 1750.3 | 1726.5 | 1736.0 | 1729.6 |
| 25°    | 1710.5 | 1699.4 | 1677.1 | 1678.7 | 1672.4 |
| 27.5°  | 1653.3 | 1642.1 | 1621.4 | 1618.3 | 1610.3 |
| 30°    | 1596.0 | 1583.2 | 1562.6 | 1556.2 | 1548.2 |
| 32.5°  | 1535.5 | 1524.4 | 1502.1 | 1494.1 | 1486.2 |
| 35°    | 1471.9 | 1460.7 | 1438.4 | 1427.3 | 1419.4 |
| 37.5°  | 1405.0 | 1395.5 | 1371.6 | 1360.5 | 1349.3 |
| 40°    | 1339.8 | 1327.1 | 1303.2 | 1287.3 | 1279.3 |
| 42.5°  | 1269.8 | 1263.4 | 1236.4 | 1217.3 | 1212.5 |
| 45°    | 1201.4 | 1190.2 | 1164.8 | 1147.3 | 1142.5 |
| 47.5°  | 1129.8 | 1121.8 | 1097.9 | 1078.8 | 1066.1 |
| 50°    | 1056.6 | 1050.2 | 1027.9 | 1005.6 | 996.1  |
| 52.5°  | 985.0  | 977.0  | 953.1  | 934.0  | 921.3  |
| 55°    | 908.6  | 903.8  | 881.5  | 862.4  | 852.9  |
| 57.5°  | 837.0  | 832.2  | 809.9  | 790.8  | 781.3  |
| 60°    | 762.2  | 754.2  | 733.5  | 719.2  | 711.3  |
| 62.5°  | 689.0  | 682.6  | 660.3  | 647.6  | 639.7  |
| 65°    | 615.8  | 607.8  | 591.9  | 576.0  | 568.1  |
| 67.5°  | 541.0  | 534.6  | 518.7  | 502.8  | 501.2  |
| 70°    | 472.6  | 461.4  | 448.7  | 436.0  | 431.2  |
| 72.5°  | 399.4  | 388.3  | 378.7  | 369.2  | 364.4  |
| 75°    | 327.8  | 319.8  | 311.9  | 305.5  | 303.9  |
| 77.5°  | 257.8  | 254.6  | 246.6  | 245.0  | 240.3  |
| 80°    | 195.7  | 190.9  | 187.8  | 184.6  | 183.0  |
| 82.5°  | 135.3  | 133.7  | 133.7  | 132.1  | 130.5  |
| 85°    | 85.9   | 85.9   | 82.7   | 82.7   | 81.2   |
| 87.5°  | 41.4   | 39.8   | 38.2   | 38.2   | 38.2   |
| 90°    | 3.1    | 14.3   | 22.5   | 28.6   | 30.6   |
| 92.5°  | 26.6   | 39.8   | 45.0   | 48.0   | 49.0   |
| 95°    | 61.3   | 70.5   | 77.6   | 80.7   | 80.7   |
| 97.5°  | 98.1   | 106.2  | 114.4  | 118.5  | 118.5  |
| 100°   | 143.0  | 147.1  | 156.3  | 158.4  | 158.4  |
| 102.5° | 190.0  | 191.0  | 199.2  | 202.3  | 203.3  |
| 105°   | 238.0  | 239.1  | 243.1  | 246.2  | 249.3  |
| 107.5° | 288.1  | 289.1  | 290.1  | 294.2  | 293.2  |
| 110°   | 339.2  | 341.2  | 340.2  | 338.2  | 341.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 392.3  | 392.3  | 390.3  | 390.3  | 390.3  |
| 115°   | 445.4  | 445.4  | 443.4  | 442.4  | 441.3  |
| 117.5° | 495.5  | 495.5  | 494.5  | 491.4  | 488.3  |
| 120°   | 545.5  | 549.6  | 546.6  | 541.5  | 543.5  |
| 122.5° | 597.6  | 598.7  | 597.6  | 594.6  | 589.5  |
| 125°   | 648.7  | 648.7  | 647.7  | 645.7  | 643.6  |
| 127.5° | 694.7  | 697.8  | 695.7  | 693.7  | 692.7  |
| 130°   | 743.7  | 746.8  | 746.8  | 744.8  | 740.7  |
| 132.5° | 793.8  | 795.8  | 794.8  | 792.8  | 791.8  |
| 135°   | 836.7  | 842.8  | 842.8  | 840.8  | 837.7  |
| 137.5° | 884.7  | 887.8  | 889.8  | 886.8  | 887.8  |
| 140°   | 932.7  | 934.8  | 934.8  | 933.8  | 932.7  |
| 142.5° | 976.7  | 978.7  | 977.7  | 977.7  | 977.7  |
| 145°   | 1016.5 | 1020.6 | 1021.6 | 1020.6 | 1017.5 |
| 147.5° | 1057.4 | 1062.5 | 1061.5 | 1060.4 | 1059.4 |
| 150°   | 1094.2 | 1098.2 | 1098.2 | 1098.2 | 1097.2 |
| 152.5° | 1128.9 | 1130.9 | 1132.0 | 1135.0 | 1132.0 |
| 155°   | 1164.7 | 1164.7 | 1163.6 | 1167.7 | 1163.6 |
| 157.5° | 1195.3 | 1193.3 | 1193.3 | 1196.3 | 1193.3 |
| 160°   | 1221.9 | 1220.8 | 1219.8 | 1222.9 | 1217.8 |
| 162.5° | 1246.4 | 1243.3 | 1242.3 | 1248.4 | 1243.3 |
| 165°   | 1267.8 | 1264.8 | 1262.7 | 1268.9 | 1264.8 |
| 167.5° | 1285.2 | 1281.1 | 1281.1 | 1287.2 | 1281.1 |
| 170°   | 1299.5 | 1294.4 | 1295.4 | 1301.5 | 1294.4 |
| 172.5° | 1309.7 | 1305.6 | 1305.6 | 1312.8 | 1305.6 |
| 175°   | 1318.9 | 1313.8 | 1312.8 | 1319.9 | 1312.8 |
| 177.5° | 1323.0 | 1317.9 | 1317.9 | 1325.0 | 1316.9 |
| 180°   | 1321.0 | 1321.0 | 1321.0 | 1321.0 | 1321.0 |

(END OF REPORT)