

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: P1032591

Luminaire Tested: S124DIW-B1195D470UB2750-4F0-XX-W2A-D\_3000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1032591  
REPORT IS A COMBINATION OF REPORTS P997166 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B1195D470UB2750-4F0-XX-W2A-D\_3000K  
Description: Define 4 Direct/Indirect Wall Mount with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

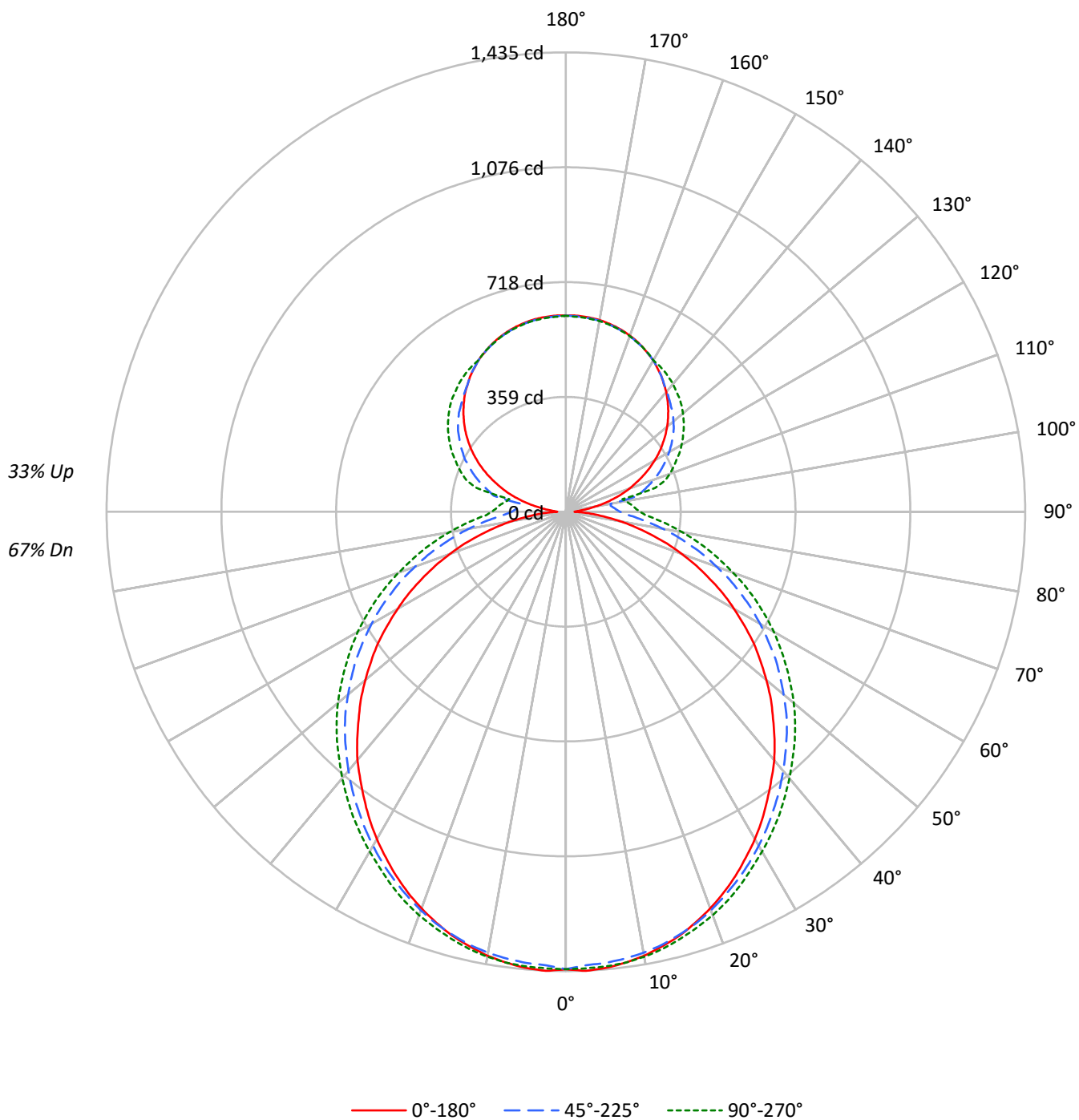
Lumens per Lamp: N/A  
Luminaire Lumens: 6769.0 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

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 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 81 | 81 | 81 | 71 | 71 | 71 |    |    | 67 |
| 1   | 100 | 95  | 91  | 87  | 94  | 90  | 86  | 82  | 79 | 76 | 73 | 70 | 67 | 65 | 61 | 59 | 58 |    |    | 53 |
| 2   | 91  | 82  | 75  | 70  | 85  | 78  | 71  | 66  | 69 | 64 | 60 | 60 | 57 | 53 | 53 | 50 | 47 |    |    | 44 |
| 3   | 82  | 72  | 64  | 57  | 77  | 68  | 61  | 55  | 60 | 54 | 50 | 53 | 48 | 45 | 46 | 43 | 40 |    |    | 36 |
| 4   | 75  | 63  | 55  | 48  | 70  | 60  | 52  | 46  | 53 | 47 | 42 | 47 | 42 | 38 | 41 | 37 | 34 |    |    | 31 |
| 5   | 69  | 56  | 48  | 41  | 64  | 53  | 45  | 39  | 47 | 41 | 36 | 42 | 37 | 33 | 37 | 33 | 29 |    |    | 26 |
| 6   | 63  | 51  | 42  | 36  | 59  | 48  | 40  | 34  | 43 | 36 | 31 | 38 | 33 | 28 | 33 | 29 | 26 |    |    | 23 |
| 7   | 59  | 46  | 37  | 31  | 55  | 43  | 35  | 30  | 39 | 32 | 27 | 34 | 29 | 25 | 30 | 26 | 23 |    |    | 20 |
| 8   | 54  | 41  | 33  | 28  | 51  | 39  | 32  | 26  | 35 | 29 | 24 | 31 | 26 | 22 | 28 | 24 | 20 |    |    | 18 |
| 9   | 51  | 38  | 30  | 25  | 48  | 36  | 29  | 24  | 32 | 26 | 22 | 29 | 24 | 20 | 26 | 21 | 18 |    |    | 16 |
| 10  | 47  | 35  | 27  | 22  | 45  | 33  | 26  | 21  | 30 | 24 | 20 | 27 | 22 | 18 | 24 | 20 | 17 |    |    | 15 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11653 | 11653 | 11653 |
| 5°  | 11685 | 11349 | 11370 |
| 10° | 11609 | 11126 | 11094 |
| 15° | 11501 | 10875 | 10783 |
| 20° | 11339 | 10603 | 10481 |
| 25° | 11158 | 10303 | 10156 |
| 30° | 10962 | 10006 | 9823  |
| 35° | 10739 | 9702  | 9528  |
| 40° | 10561 | 9411  | 9221  |
| 45° | 10298 | 9137  | 8950  |
| 50° | 10073 | 8827  | 8665  |
| 55° | 9841  | 8527  | 8336  |
| 60° | 9481  | 8155  | 8027  |
| 65° | 9085  | 7753  | 7654  |
| 70° | 8605  | 7294  | 7225  |
| 75° | 7931  | 6784  | 6815  |
| 80° | 7173  | 6263  | 6384  |
| 85° | 6171  | 5740  | 6037  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 10298 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.4  | 2.0       |
| 10°-20°   | 387.9  | 5.7       |
| 20°-30°   | 586.6  | 8.7       |
| 30°-40°   | 709.6  | 10.5      |
| 40°-50°   | 750.2  | 11.1      |
| 50°-60°   | 706.0  | 10.4      |
| 60°-70°   | 585.9  | 8.7       |
| 70°-80°   | 411.1  | 6.1       |
| 80°-90°   | 233.0  | 3.4       |
| 90°-100°  | 158.3  | 2.3       |
| 100°-110° | 236.1  | 3.5       |
| 110°-120° | 324.3  | 4.8       |
| 120°-130° | 363.3  | 5.4       |
| 130°-140° | 364.0  | 5.4       |
| 140°-150° | 328.1  | 4.8       |
| 150°-160° | 261.9  | 3.9       |
| 160°-170° | 168.9  | 2.5       |
| 170°-180° | 58.2   | 0.9       |
| 0°-30°    | 1109.9 | 16.4      |
| 0°-40°    | 1819.6 | 26.9      |
| 0°-60°    | 3275.8 | 48.4      |
| 0°-90°    | 4505.9 | 66.6      |
| 90°-120°  | 718.7  | 10.6      |
| 90°-150°  | 1774.1 | 26.2      |
| 90°-180°  | 2263.0 | 33.4      |
| 0°-180°   | 6769.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1429 | 1429  | 1429 | 1429  | 1429 |      |
| 5°   | 1431 | 1426  | 1415 | 1427  | 1426 | 136  |
| 15°  | 1371 | 1373  | 1368 | 1383  | 1381 | 386  |
| 25°  | 1255 | 1264  | 1269 | 1287  | 1288 | 578  |
| 35°  | 1098 | 1117  | 1133 | 1155  | 1160 | 687  |
| 45°  | 915  | 946   | 976  | 1003  | 1011 | 707  |
| 55°  | 717  | 750   | 798  | 830   | 840  | 639  |
| 65°  | 496  | 547   | 602  | 642   | 654  | 492  |
| 75°  | 275  | 334   | 402  | 446   | 461  | 292  |
| 85°  | 85   | 152   | 224  | 272   | 288  | 88   |
| 90°  | 27   | 96    | 168  | 218   | 231  | 19   |
| 95°  | 46   | 83    | 149  | 195   | 210  | 48   |
| 105° | 152  | 187   | 249  | 293   | 289  | 161  |
| 115° | 267  | 283   | 334  | 370   | 381  | 264  |
| 125° | 368  | 369   | 408  | 440   | 450  | 329  |
| 135° | 452  | 452   | 465  | 491   | 502  | 349  |
| 145° | 519  | 519   | 519  | 529   | 536  | 325  |
| 155° | 568  | 568   | 567  | 569   | 567  | 262  |
| 165° | 599  | 597   | 597  | 600   | 596  | 169  |
| 175° | 613  | 610   | 610  | 614   | 609  | 58   |
| 180° | 613  | 613   | 613  | 613   | 613  |      |

TEST NUMBER: P1032591

CATALOG NUMBER: S124DIW-B1195D470UB2750-4F0-XX-W2A-D\_3000K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1429.0 | 1429.0 | 1429.0 | 1429.0 | 1429.0 |
| 2.5°   | 1435.4 | 1430.6 | 1417.8 | 1429.0 | 1427.4 |
| 5°     | 1430.6 | 1425.8 | 1414.6 | 1427.4 | 1425.8 |
| 7.5°   | 1421.0 | 1417.8 | 1408.2 | 1422.6 | 1421.0 |
| 10°    | 1408.2 | 1406.6 | 1398.6 | 1413.0 | 1411.4 |
| 12.5°  | 1390.6 | 1390.6 | 1385.8 | 1398.6 | 1398.6 |
| 15°    | 1371.4 | 1373.0 | 1368.2 | 1382.6 | 1381.0 |
| 17.5°  | 1345.8 | 1350.6 | 1349.0 | 1363.4 | 1361.8 |
| 20°    | 1318.6 | 1323.4 | 1325.0 | 1341.0 | 1341.0 |
| 22.5°  | 1288.2 | 1294.6 | 1297.8 | 1313.8 | 1317.0 |
| 25°    | 1254.6 | 1264.2 | 1269.0 | 1286.6 | 1288.2 |
| 27.5°  | 1217.8 | 1232.2 | 1238.6 | 1254.6 | 1256.2 |
| 30°    | 1181.0 | 1193.8 | 1205.0 | 1222.6 | 1225.8 |
| 32.5°  | 1140.9 | 1157.0 | 1169.8 | 1190.6 | 1193.8 |
| 35°    | 1097.7 | 1116.9 | 1132.9 | 1155.4 | 1160.2 |
| 37.5°  | 1054.5 | 1076.9 | 1096.1 | 1118.5 | 1123.3 |
| 40°    | 1012.9 | 1033.7 | 1056.1 | 1080.1 | 1086.5 |
| 42.5°  | 964.9  | 988.9  | 1016.1 | 1043.3 | 1048.1 |
| 45°    | 915.3  | 945.7  | 976.1  | 1003.3 | 1011.3 |
| 47.5°  | 868.9  | 899.3  | 934.5  | 961.7  | 971.3  |
| 50°    | 817.7  | 852.9  | 888.1  | 920.1  | 929.7  |
| 52.5°  | 766.5  | 801.7  | 843.3  | 875.3  | 884.9  |
| 55°    | 716.9  | 750.5  | 798.5  | 830.5  | 840.1  |
| 57.5°  | 660.9  | 702.5  | 748.9  | 787.3  | 795.3  |
| 60°    | 606.5  | 648.1  | 700.9  | 737.7  | 750.5  |
| 62.5°  | 553.7  | 600.1  | 652.9  | 689.7  | 702.5  |
| 65°    | 496.1  | 547.3  | 601.7  | 641.7  | 654.5  |
| 67.5°  | 441.7  | 496.1  | 553.7  | 593.7  | 606.5  |
| 70°    | 385.7  | 440.1  | 500.9  | 544.1  | 555.3  |
| 72.5°  | 331.2  | 387.3  | 452.9  | 494.5  | 507.3  |
| 75°    | 275.2  | 334.4  | 401.7  | 446.5  | 460.9  |
| 77.5°  | 222.4  | 284.8  | 355.2  | 400.1  | 416.1  |
| 80°    | 174.4  | 238.4  | 308.8  | 356.8  | 369.6  |
| 82.5°  | 126.4  | 193.6  | 264.0  | 313.6  | 328.0  |
| 85°    | 84.8   | 152.0  | 224.0  | 272.0  | 288.0  |
| 87.5°  | 52.8   | 118.4  | 188.8  | 235.2  | 249.6  |
| 90°    | 27.0   | 96.0   | 168.5  | 217.6  | 231.3  |
| 92.5°  | 30.9   | 86.0   | 158.4  | 206.0  | 218.8  |
| 95°    | 46.0   | 83.2   | 149.3  | 195.2  | 210.1  |
| 97.5°  | 67.3   | 123.8  | 141.3  | 185.2  | 200.0  |
| 100°   | 92.7   | 142.6  | 141.8  | 177.2  | 188.8  |
| 102.5° | 123.0  | 163.7  | 230.0  | 168.5  | 181.3  |
| 105°   | 152.3  | 187.1  | 248.6  | 292.7  | 289.0  |
| 107.5° | 182.1  | 210.7  | 269.9  | 312.2  | 325.2  |
| 110°   | 210.8  | 234.5  | 293.3  | 331.0  | 345.2  |

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CATALOG NUMBER: S124DIW-B1195D470UB2750-4F0-XX-W2A-D\_3000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 238.5 | 260.4 | 314.1 | 348.9 | 363.5 |
| 115°   | 267.1 | 282.9 | 333.6 | 369.8 | 381.0 |
| 117.5° | 294.2 | 305.6 | 355.0 | 388.1 | 400.9 |
| 120°   | 320.0 | 326.7 | 372.6 | 405.5 | 417.4 |
| 122.5° | 345.7 | 346.6 | 390.7 | 423.2 | 433.5 |
| 125°   | 368.4 | 368.6 | 407.7 | 439.5 | 449.5 |
| 127.5° | 391.8 | 390.6 | 424.9 | 453.3 | 464.0 |
| 130°   | 412.6 | 411.5 | 438.5 | 467.7 | 477.3 |
| 132.5° | 433.2 | 432.6 | 453.6 | 481.2 | 490.4 |
| 135°   | 452.3 | 451.8 | 464.8 | 491.3 | 501.9 |
| 137.5° | 470.6 | 469.0 | 477.7 | 502.6 | 510.1 |
| 140°   | 488.5 | 487.8 | 490.3 | 512.5 | 520.9 |
| 142.5° | 502.9 | 504.7 | 503.6 | 522.1 | 528.5 |
| 145°   | 519.4 | 519.2 | 519.2 | 529.2 | 536.5 |
| 147.5° | 532.2 | 533.4 | 532.9 | 535.0 | 541.8 |
| 150°   | 546.4 | 546.7 | 546.2 | 546.2 | 546.7 |
| 152.5° | 556.7 | 558.1 | 557.2 | 558.1 | 557.7 |
| 155°   | 567.7 | 568.2 | 566.8 | 568.7 | 567.3 |
| 157.5° | 577.4 | 577.4 | 575.5 | 577.8 | 575.5 |
| 160°   | 585.6 | 584.2 | 583.8 | 586.5 | 583.8 |
| 162.5° | 592.9 | 591.1 | 590.6 | 593.4 | 590.2 |
| 165°   | 598.9 | 596.6 | 596.6 | 600.3 | 596.1 |
| 167.5° | 603.9 | 601.6 | 601.2 | 605.3 | 600.7 |
| 170°   | 608.1 | 605.3 | 605.8 | 609.4 | 604.9 |
| 172.5° | 610.8 | 608.1 | 608.5 | 612.2 | 607.1 |
| 175°   | 612.6 | 609.9 | 610.4 | 614.5 | 609.0 |
| 177.5° | 614.0 | 610.8 | 611.7 | 615.4 | 609.9 |
| 180°   | 612.6 | 612.6 | 612.6 | 612.6 | 612.6 |

(END OF REPORT)