

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: P1031049

Luminaire Tested: S123RDIW-B1000D460UB2750-4F0-XX-W2A-F1\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031049  
REPORT IS A COMBINATION OF REPORTS P993864 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIW-B1000D460UB2750-4F0-XX-W2A-F1\_5000K  
Description: Define 3 Regressed Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015}  
{m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

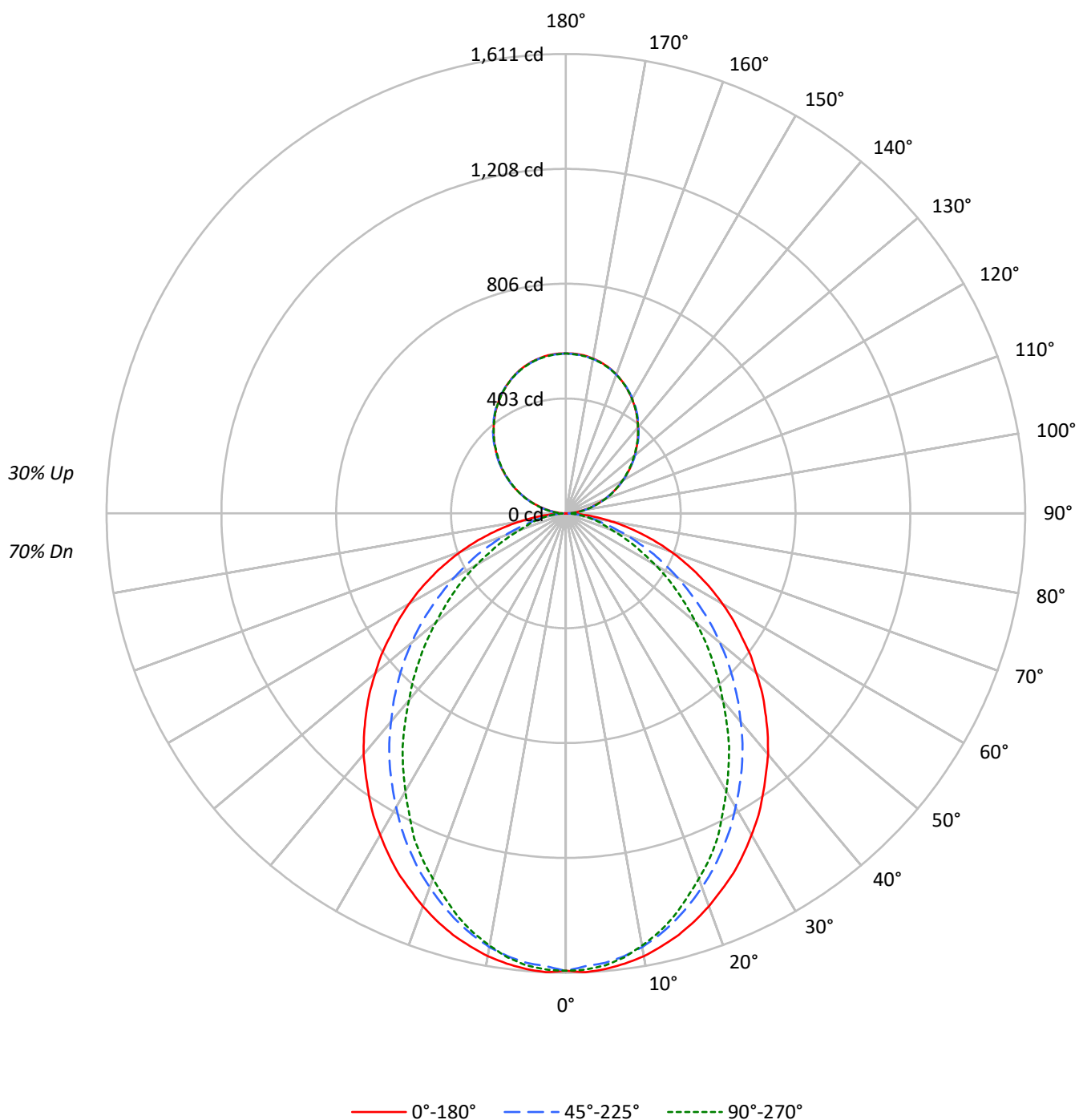
Lumens per Lamp: N/A  
Luminaire Lumens: 5179.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 60  
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   | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 94 | 94 | 94 | 84 | 84 | 84 | 74 | 74 | 74 | 74 | 74 | 74 |
| 1   | 103 | 98  | 95  | 91  | 97  | 93  | 90  | 87  | 84 | 81 | 79 | 75 | 73 | 71 | 67 | 65 | 64 | 64 | 64 | 60 |
| 2   | 94  | 87  | 80  | 75  | 89  | 82  | 77  | 72  | 74 | 70 | 66 | 66 | 63 | 60 | 59 | 57 | 55 | 55 | 55 | 51 |
| 3   | 86  | 77  | 69  | 63  | 81  | 73  | 66  | 61  | 66 | 60 | 56 | 59 | 55 | 51 | 53 | 50 | 47 | 47 | 47 | 44 |
| 4   | 79  | 68  | 60  | 54  | 74  | 65  | 58  | 52  | 59 | 53 | 48 | 53 | 48 | 44 | 48 | 44 | 41 | 41 | 41 | 38 |
| 5   | 73  | 61  | 53  | 47  | 69  | 58  | 51  | 45  | 53 | 47 | 42 | 48 | 43 | 39 | 43 | 39 | 36 | 36 | 36 | 33 |
| 6   | 67  | 55  | 47  | 41  | 63  | 52  | 45  | 40  | 48 | 42 | 37 | 43 | 38 | 34 | 39 | 35 | 32 | 32 | 32 | 29 |
| 7   | 62  | 50  | 42  | 36  | 59  | 48  | 40  | 35  | 44 | 37 | 33 | 40 | 34 | 31 | 36 | 32 | 28 | 28 | 28 | 26 |
| 8   | 58  | 46  | 38  | 32  | 55  | 44  | 36  | 31  | 40 | 34 | 29 | 36 | 31 | 27 | 33 | 29 | 26 | 26 | 26 | 23 |
| 9   | 54  | 42  | 34  | 29  | 51  | 40  | 33  | 28  | 37 | 31 | 26 | 34 | 28 | 25 | 31 | 26 | 23 | 23 | 23 | 21 |
| 10  | 51  | 38  | 31  | 26  | 48  | 37  | 30  | 26  | 34 | 28 | 24 | 31 | 26 | 23 | 28 | 24 | 21 | 21 | 21 | 19 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 17266 | 17266 | 17266 |
| 5°  | 17295 | 16656 | 16611 |
| 10° | 17159 | 16030 | 15714 |
| 15° | 16936 | 15255 | 14731 |
| 20° | 16643 | 14414 | 13633 |
| 25° | 16343 | 13539 | 12593 |
| 30° | 15956 | 12608 | 11363 |
| 35° | 15558 | 11694 | 10244 |
| 40° | 15183 | 10701 | 9006  |
| 45° | 14704 | 9730  | 7894  |
| 50° | 14175 | 8694  | 6743  |
| 55° | 13626 | 7584  | 5687  |
| 60° | 13101 | 6446  | 4616  |
| 65° | 12423 | 5280  | 3603  |
| 70° | 11570 | 3992  | 2574  |
| 75° | 10343 | 2703  | 2040  |
| 80° | 8827  | 1880  | 1432  |
| 85° | 6628  | 1014  | 749   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14704 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 150.8  | 2.9       |
| 10°-20°   | 419.5  | 8.1       |
| 20°-30°   | 604.0  | 11.7      |
| 30°-40°   | 680.2  | 13.1      |
| 40°-50°   | 650.6  | 12.6      |
| 50°-60°   | 532.6  | 10.3      |
| 60°-70°   | 359.1  | 6.9       |
| 70°-80°   | 180.1  | 3.5       |
| 80°-90°   | 48.3   | 0.9       |
| 90°-100°  | 36.1   | 0.7       |
| 100°-110° | 109.3  | 2.1       |
| 110°-120° | 186.0  | 3.6       |
| 120°-130° | 244.7  | 4.7       |
| 130°-140° | 275.0  | 5.3       |
| 140°-150° | 270.4  | 5.2       |
| 150°-160° | 227.7  | 4.4       |
| 160°-170° | 151.6  | 2.9       |
| 170°-180° | 53.1   | 1.0       |
| 0°-30°    | 1174.3 | 22.7      |
| 0°-40°    | 1854.5 | 35.8      |
| 0°-60°    | 3037.7 | 58.7      |
| 0°-90°    | 3625.2 | 70.0      |
| 90°-120°  | 331.4  | 6.4       |
| 90°-150°  | 1121.5 | 21.7      |
| 90°-180°  | 1554.0 | 30.0      |
| 0°-180°   | 5179.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1604 | 1604  | 1604 | 1604  | 1604 |      |
| 5°   | 1604 | 1598  | 1582 | 1594  | 1591 | 152  |
| 15°  | 1530 | 1516  | 1479 | 1473  | 1464 | 431  |
| 25°  | 1392 | 1360  | 1300 | 1272  | 1258 | 640  |
| 35°  | 1205 | 1158  | 1077 | 1021  | 998  | 754  |
| 45°  | 990  | 932   | 831  | 757   | 726  | 764  |
| 55°  | 752  | 688   | 578  | 502   | 476  | 674  |
| 65°  | 514  | 442   | 341  | 277   | 263  | 509  |
| 75°  | 272  | 210   | 138  | 125   | 122  | 290  |
| 85°  | 69   | 40    | 36   | 34    | 34   | 76   |
| 90°  | 0    | 5     | 11   | 12    | 13   | 6    |
| 95°  | 26   | 29    | 33   | 34    | 34   | 29   |
| 105° | 99   | 100   | 104  | 104   | 105  | 106  |
| 115° | 187  | 188   | 188  | 188   | 188  | 185  |
| 125° | 274  | 275   | 274  | 273   | 271  | 244  |
| 135° | 356  | 358   | 358  | 356   | 355  | 274  |
| 145° | 431  | 432   | 434  | 433   | 431  | 269  |
| 155° | 494  | 494   | 494  | 496   | 493  | 227  |
| 165° | 538  | 536   | 536  | 539   | 536  | 152  |
| 175° | 560  | 558   | 558  | 560   | 557  | 53   |
| 180° | 561  | 561   | 561  | 561   | 561  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1604.1 | 1604.1 | 1604.1 | 1604.1 | 1604.1 |
| 2.5°   | 1610.6 | 1605.4 | 1589.8 | 1604.1 | 1601.5 |
| 5°     | 1604.1 | 1597.6 | 1582.0 | 1593.7 | 1591.1 |
| 7.5°   | 1592.4 | 1585.9 | 1566.4 | 1574.2 | 1570.3 |
| 10°    | 1576.8 | 1567.7 | 1544.3 | 1545.6 | 1539.1 |
| 12.5°  | 1554.7 | 1544.3 | 1514.4 | 1513.1 | 1505.2 |
| 15°    | 1530.0 | 1515.7 | 1479.2 | 1472.7 | 1463.6 |
| 17.5°  | 1500.0 | 1484.4 | 1438.9 | 1425.9 | 1412.9 |
| 20°    | 1466.2 | 1445.4 | 1396.0 | 1379.1 | 1363.4 |
| 22.5°  | 1428.5 | 1403.8 | 1350.4 | 1328.3 | 1314.0 |
| 25°    | 1392.1 | 1359.5 | 1299.7 | 1272.4 | 1258.1 |
| 27.5°  | 1347.8 | 1312.7 | 1247.7 | 1211.2 | 1189.1 |
| 30°    | 1302.3 | 1263.3 | 1190.4 | 1146.2 | 1125.4 |
| 32.5°  | 1256.8 | 1211.2 | 1133.2 | 1083.7 | 1061.6 |
| 35°    | 1204.7 | 1157.9 | 1077.2 | 1021.3 | 997.9  |
| 37.5°  | 1152.7 | 1101.9 | 1017.4 | 954.9  | 926.3  |
| 40°    | 1103.2 | 1046.0 | 953.6  | 886.0  | 856.1  |
| 42.5°  | 1047.3 | 990.1  | 893.8  | 818.3  | 792.3  |
| 45°    | 990.1  | 931.5  | 831.3  | 757.2  | 726.0  |
| 47.5°  | 934.1  | 869.1  | 770.2  | 689.5  | 662.2  |
| 50°    | 871.7  | 810.5  | 705.1  | 624.5  | 594.6  |
| 52.5°  | 815.7  | 748.1  | 644.0  | 559.4  | 533.4  |
| 55°    | 752.0  | 688.2  | 577.6  | 502.2  | 476.2  |
| 57.5°  | 694.7  | 625.8  | 513.9  | 442.3  | 420.2  |
| 60°    | 634.9  | 563.3  | 455.3  | 385.1  | 363.0  |
| 62.5°  | 575.0  | 503.5  | 395.5  | 330.5  | 307.0  |
| 65°    | 513.9  | 442.3  | 340.9  | 277.1  | 262.8  |
| 67.5°  | 452.7  | 379.9  | 281.0  | 232.9  | 217.3  |
| 70°    | 392.9  | 322.6  | 231.6  | 186.0  | 171.7  |
| 72.5°  | 333.1  | 264.1  | 183.4  | 148.3  | 144.4  |
| 75°    | 271.9  | 209.5  | 137.9  | 124.9  | 122.3  |
| 77.5°  | 216.0  | 158.7  | 108.0  | 100.2  | 97.6   |
| 80°    | 162.6  | 109.3  | 82.0   | 78.1   | 75.5   |
| 82.5°  | 111.9  | 67.7   | 58.5   | 54.6   | 54.6   |
| 85°    | 69.0   | 40.3   | 36.4   | 33.8   | 33.8   |
| 87.5°  | 31.2   | 16.9   | 16.9   | 15.6   | 14.3   |
| 90°    | 0.4    | 4.8    | 10.6   | 12.3   | 13.2   |
| 92.5°  | 13.2   | 15.9   | 18.5   | 19.8   | 18.9   |
| 95°    | 26.0   | 29.1   | 32.6   | 34.4   | 34.4   |
| 97.5°  | 42.7   | 44.9   | 47.6   | 49.8   | 49.3   |
| 100°   | 59.9   | 62.6   | 64.8   | 66.1   | 67.0   |
| 102.5° | 79.7   | 81.1   | 84.1   | 85.5   | 85.0   |
| 105°   | 99.1   | 100.0  | 104.0  | 104.0  | 104.8  |
| 107.5° | 122.0  | 122.5  | 124.2  | 125.5  | 125.1  |
| 110°   | 143.2  | 144.0  | 144.9  | 146.7  | 145.8  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 165.2 | 165.6 | 165.6 | 167.8 | 167.8 |
| 115°   | 187.2 | 188.5 | 187.7 | 188.1 | 187.7 |
| 117.5° | 209.7 | 210.1 | 209.2 | 209.2 | 207.9 |
| 120°   | 230.4 | 233.0 | 230.8 | 230.4 | 229.5 |
| 122.5° | 252.0 | 253.7 | 252.9 | 251.5 | 250.2 |
| 125°   | 274.0 | 275.3 | 274.4 | 272.7 | 270.9 |
| 127.5° | 294.3 | 296.9 | 296.0 | 293.4 | 291.6 |
| 130°   | 314.5 | 318.1 | 316.7 | 315.0 | 311.9 |
| 132.5° | 334.8 | 338.3 | 337.4 | 335.2 | 333.0 |
| 135°   | 355.5 | 358.1 | 357.7 | 355.9 | 355.1 |
| 137.5° | 374.4 | 376.6 | 378.0 | 375.8 | 374.4 |
| 140°   | 394.3 | 396.5 | 396.9 | 396.5 | 393.4 |
| 142.5° | 412.3 | 414.5 | 415.4 | 415.0 | 412.8 |
| 145°   | 431.3 | 432.1 | 433.5 | 433.0 | 431.3 |
| 147.5° | 447.6 | 449.3 | 450.6 | 450.6 | 448.0 |
| 150°   | 464.7 | 465.6 | 466.5 | 466.5 | 463.9 |
| 152.5° | 478.8 | 480.2 | 480.6 | 481.5 | 479.3 |
| 155°   | 493.8 | 493.8 | 494.3 | 496.0 | 492.9 |
| 157.5° | 506.6 | 506.2 | 506.6 | 508.4 | 505.7 |
| 160°   | 518.5 | 517.6 | 517.6 | 519.8 | 518.0 |
| 162.5° | 529.1 | 527.7 | 528.2 | 530.4 | 527.3 |
| 165°   | 537.9 | 536.5 | 536.5 | 539.2 | 536.1 |
| 167.5° | 545.4 | 543.6 | 544.0 | 546.7 | 544.0 |
| 170°   | 551.5 | 549.8 | 549.8 | 552.8 | 549.8 |
| 172.5° | 556.4 | 554.6 | 554.6 | 557.3 | 554.2 |
| 175°   | 559.5 | 557.7 | 557.7 | 560.3 | 557.3 |
| 177.5° | 561.2 | 559.5 | 559.5 | 562.1 | 559.0 |
| 180°   | 560.8 | 560.8 | 560.8 | 560.8 | 560.8 |

(END OF REPORT)