

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: P1033492

Luminaire Tested: S124DIW-B350D470UB40-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033492  
REPORT IS A COMBINATION OF REPORTS P997531 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B350D470UB40-4F0-XX-W2A-F  
Description: Define 4 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

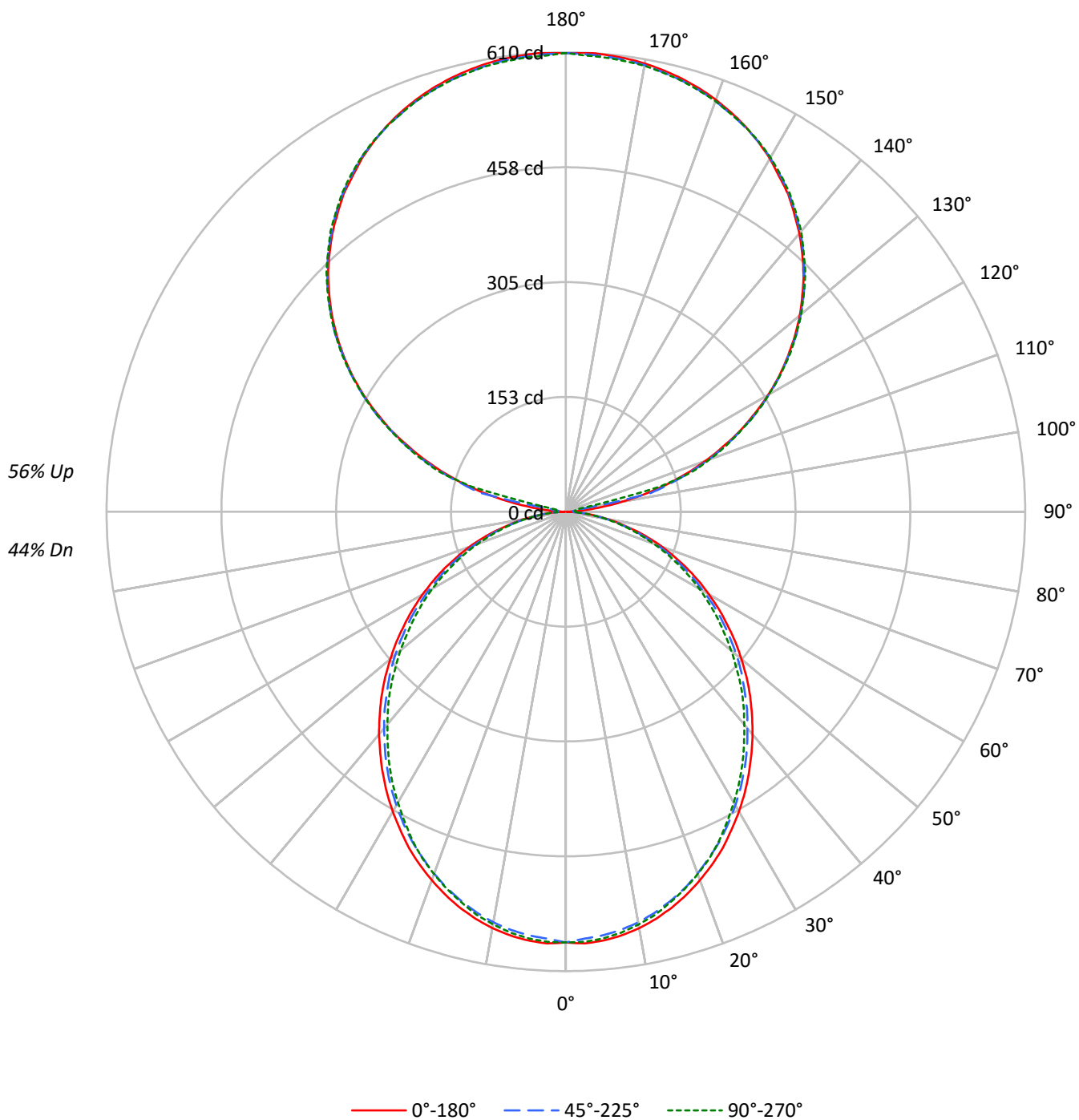
Lumens per Lamp: N/A  
Luminaire Lumens: 3354.0 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 26.2  
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 | 97 | 97 | 97 | 97 | 80 | 80 | 80 | 65 | 65 | 65 | 50 | 50 | 50 |
| 1   | 96  | 92  | 88  | 85  | 88 | 84 | 81 | 78 | 70 | 68 | 65 | 57 | 55 | 54 | 45 | 43 | 43 |
| 2   | 88  | 80  | 74  | 69  | 80 | 74 | 68 | 64 | 61 | 57 | 54 | 50 | 47 | 45 | 39 | 37 | 36 |
| 3   | 80  | 71  | 63  | 58  | 73 | 65 | 59 | 53 | 54 | 49 | 46 | 44 | 41 | 38 | 35 | 32 | 30 |
| 4   | 73  | 62  | 55  | 49  | 67 | 57 | 51 | 45 | 48 | 43 | 39 | 39 | 35 | 32 | 31 | 28 | 26 |
| 5   | 67  | 56  | 48  | 42  | 61 | 51 | 44 | 39 | 43 | 38 | 33 | 35 | 31 | 28 | 28 | 25 | 23 |
| 6   | 62  | 50  | 42  | 36  | 56 | 46 | 39 | 34 | 39 | 33 | 29 | 32 | 28 | 25 | 25 | 22 | 20 |
| 7   | 57  | 45  | 37  | 32  | 52 | 42 | 35 | 30 | 35 | 30 | 26 | 29 | 25 | 22 | 23 | 20 | 18 |
| 8   | 53  | 41  | 33  | 28  | 48 | 38 | 31 | 26 | 32 | 27 | 23 | 26 | 22 | 19 | 21 | 18 | 16 |
| 9   | 49  | 37  | 30  | 25  | 45 | 34 | 28 | 23 | 29 | 24 | 20 | 24 | 20 | 17 | 20 | 17 | 14 |
| 10  | 46  | 34  | 27  | 22  | 42 | 32 | 25 | 21 | 27 | 22 | 18 | 22 | 18 | 16 | 18 | 15 | 13 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4664 | 4664 | 4664 |
| 5°  | 4668 | 4530 | 4535 |
| 10° | 4628 | 4404 | 4373 |
| 15° | 4562 | 4255 | 4191 |
| 20° | 4477 | 4092 | 4001 |
| 25° | 4382 | 3922 | 3797 |
| 30° | 4267 | 3737 | 3573 |
| 35° | 4147 | 3548 | 3357 |
| 40° | 4023 | 3344 | 3127 |
| 45° | 3893 | 3141 | 2912 |
| 50° | 3749 | 2943 | 2674 |
| 55° | 3592 | 2711 | 2437 |
| 60° | 3431 | 2458 | 2191 |
| 65° | 3249 | 2197 | 1913 |
| 70° | 3036 | 1881 | 1616 |
| 75° | 2720 | 1517 | 1294 |
| 80° | 2320 | 1097 | 910  |
| 85° | 1797 | 610  | 490  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 3893 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 53.9   | 1.6       |
| 10°-20°   | 151.9  | 4.5       |
| 20°-30°   | 223.5  | 6.7       |
| 30°-40°   | 259.8  | 7.7       |
| 40°-50°   | 259.8  | 7.7       |
| 50°-60°   | 227.2  | 6.8       |
| 60°-70°   | 168.7  | 5.0       |
| 70°-80°   | 95.7   | 2.9       |
| 80°-90°   | 28.7   | 0.9       |
| 90°-100°  | 20.2   | 0.6       |
| 100°-110° | 133.1  | 4.0       |
| 110°-120° | 254.3  | 7.6       |
| 120°-130° | 322.8  | 9.6       |
| 130°-140° | 345.3  | 10.3      |
| 140°-150° | 322.9  | 9.6       |
| 150°-160° | 260.4  | 7.8       |
| 160°-170° | 167.9  | 5.0       |
| 170°-180° | 57.9   | 1.7       |
| 0°-30°    | 429.3  | 12.8      |
| 0°-40°    | 689.1  | 20.5      |
| 0°-60°    | 1176.2 | 35.1      |
| 0°-90°    | 1469.3 | 43.8      |
| 90°-120°  | 407.6  | 12.2      |
| 90°-150°  | 1398.6 | 41.7      |
| 90°-180°  | 1885.0 | 56.2      |
| 0°-180°   | 3354.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 572 | 572   | 572 | 572   | 572 |      |
| 5°   | 572 | 570   | 565 | 570   | 569 | 54   |
| 15°  | 544 | 542   | 535 | 538   | 537 | 153  |
| 25°  | 493 | 490   | 483 | 484   | 482 | 227  |
| 35°  | 424 | 421   | 414 | 411   | 409 | 265  |
| 45°  | 346 | 343   | 336 | 330   | 329 | 267  |
| 55°  | 262 | 260   | 254 | 248   | 246 | 234  |
| 65°  | 177 | 175   | 170 | 166   | 164 | 176  |
| 75°  | 94  | 92    | 90  | 88    | 88  | 100  |
| 85°  | 25  | 25    | 24  | 24    | 23  | 27   |
| 90°  | 1   | 6     | 10  | 13    | 14  | 3    |
| 95°  | 25  | 10    | 10  | 13    | 13  | 31   |
| 105° | 137 | 140   | 142 | 146   | 130 | 143  |
| 115° | 256 | 257   | 257 | 258   | 258 | 252  |
| 125° | 360 | 362   | 361 | 362   | 363 | 321  |
| 135° | 446 | 446   | 448 | 449   | 450 | 344  |
| 145° | 515 | 516   | 516 | 517   | 518 | 322  |
| 155° | 564 | 565   | 564 | 565   | 564 | 260  |
| 165° | 595 | 593   | 593 | 597   | 593 | 168  |
| 175° | 609 | 606   | 607 | 611   | 605 | 58   |
| 180° | 609 | 609   | 609 | 609   | 609 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 571.9 | 571.9 | 571.9 | 571.9 | 571.9 |
| 2.5°   | 573.8 | 572.4 | 567.4 | 571.9 | 571.5 |
| 5°     | 571.5 | 569.7 | 564.6 | 569.7 | 568.7 |
| 7.5°   | 567.4 | 565.5 | 560.0 | 564.2 | 563.7 |
| 10°    | 561.4 | 559.6 | 553.6 | 557.3 | 556.4 |
| 12.5°  | 553.6 | 551.8 | 545.4 | 549.5 | 548.1 |
| 15°    | 544.0 | 542.2 | 535.3 | 538.0 | 536.7 |
| 17.5°  | 533.0 | 530.7 | 524.3 | 526.1 | 525.2 |
| 20°    | 520.6 | 518.3 | 511.4 | 512.8 | 511.9 |
| 22.5°  | 507.3 | 504.1 | 497.2 | 500.0 | 498.2 |
| 25°    | 492.7 | 489.5 | 483.0 | 483.5 | 481.7 |
| 27.5°  | 476.2 | 473.0 | 467.0 | 466.1 | 463.8 |
| 30°    | 459.7 | 456.0 | 450.0 | 448.2 | 445.9 |
| 32.5°  | 442.2 | 439.0 | 432.6 | 430.3 | 428.0 |
| 35°    | 423.9 | 420.7 | 414.3 | 411.1 | 408.8 |
| 37.5°  | 404.7 | 401.9 | 395.0 | 391.8 | 388.6 |
| 40°    | 385.9 | 382.2 | 375.3 | 370.8 | 368.5 |
| 42.5°  | 365.7 | 363.9 | 356.1 | 350.6 | 349.2 |
| 45°    | 346.0 | 342.8 | 335.5 | 330.4 | 329.0 |
| 47.5°  | 325.4 | 323.1 | 316.2 | 310.7 | 307.1 |
| 50°    | 304.3 | 302.5 | 296.1 | 289.6 | 286.9 |
| 52.5°  | 283.7 | 281.4 | 274.5 | 269.0 | 265.3 |
| 55°    | 261.7 | 260.3 | 253.9 | 248.4 | 245.6 |
| 57.5°  | 241.1 | 239.7 | 233.3 | 227.8 | 225.0 |
| 60°    | 219.5 | 217.2 | 211.3 | 207.1 | 204.9 |
| 62.5°  | 198.4 | 196.6 | 190.2 | 186.5 | 184.2 |
| 65°    | 177.4 | 175.1 | 170.5 | 165.9 | 163.6 |
| 67.5°  | 155.8 | 154.0 | 149.4 | 144.8 | 144.4 |
| 70°    | 136.1 | 132.9 | 129.2 | 125.6 | 124.2 |
| 72.5°  | 115.0 | 111.8 | 109.1 | 106.3 | 104.9 |
| 75°    | 94.4  | 92.1  | 89.8  | 88.0  | 87.5  |
| 77.5°  | 74.2  | 73.3  | 71.0  | 70.6  | 69.2  |
| 80°    | 56.4  | 55.0  | 54.1  | 53.2  | 52.7  |
| 82.5°  | 39.0  | 38.5  | 38.5  | 38.0  | 37.6  |
| 85°    | 24.7  | 24.7  | 23.8  | 23.8  | 23.4  |
| 87.5°  | 11.9  | 11.5  | 11.0  | 11.0  | 11.0  |
| 90°    | 1.4   | 6.4   | 10.0  | 12.8  | 13.7  |
| 92.5°  | 6.8   | 5.9   | 9.6   | 12.3  | 12.3  |
| 95°    | 25.1  | 9.6   | 10.0  | 12.8  | 13.2  |
| 97.5°  | 47.8  | 57.9  | 10.0  | 12.3  | 12.8  |
| 100°   | 74.7  | 82.9  | 20.0  | 12.3  | 12.8  |
| 102.5° | 104.8 | 110.2 | 115.7 | 13.2  | 13.2  |
| 105°   | 137.1 | 139.9 | 142.1 | 146.2 | 129.8 |
| 107.5° | 166.7 | 168.1 | 171.3 | 173.6 | 175.4 |
| 110°   | 196.8 | 198.2 | 200.9 | 201.8 | 203.2 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 226.0 | 228.7 | 229.6 | 229.1 | 231.0 |
| 115°   | 256.0 | 257.4 | 256.9 | 257.9 | 257.9 |
| 117.5° | 282.9 | 284.7 | 286.1 | 285.6 | 285.6 |
| 120°   | 310.2 | 312.1 | 311.6 | 312.5 | 311.6 |
| 122.5° | 335.8 | 336.7 | 337.6 | 338.0 | 337.1 |
| 125°   | 359.9 | 361.7 | 360.8 | 362.2 | 362.6 |
| 127.5° | 383.1 | 383.6 | 385.9 | 385.4 | 385.0 |
| 130°   | 405.5 | 405.9 | 407.3 | 407.7 | 407.7 |
| 132.5° | 426.0 | 426.9 | 428.7 | 429.1 | 428.7 |
| 135°   | 446.5 | 446.0 | 447.8 | 448.7 | 449.6 |
| 137.5° | 464.7 | 464.7 | 467.0 | 467.9 | 467.4 |
| 140°   | 482.4 | 483.4 | 484.3 | 485.6 | 486.1 |
| 142.5° | 498.4 | 500.2 | 500.7 | 501.6 | 501.6 |
| 145°   | 514.8 | 516.2 | 516.2 | 516.6 | 517.5 |
| 147.5° | 527.5 | 530.3 | 529.8 | 530.3 | 530.7 |
| 150°   | 541.7 | 543.5 | 543.0 | 543.0 | 543.5 |
| 152.5° | 553.5 | 554.9 | 554.0 | 554.9 | 554.4 |
| 155°   | 564.4 | 564.9 | 563.5 | 565.4 | 564.0 |
| 157.5° | 574.0 | 574.0 | 572.2 | 574.5 | 572.2 |
| 160°   | 582.2 | 580.8 | 580.4 | 583.1 | 580.4 |
| 162.5° | 589.5 | 587.7 | 587.2 | 590.0 | 586.8 |
| 165°   | 595.4 | 593.1 | 593.1 | 596.8 | 592.7 |
| 167.5° | 600.4 | 598.2 | 597.7 | 601.8 | 597.2 |
| 170°   | 604.5 | 601.8 | 602.3 | 605.9 | 601.3 |
| 172.5° | 607.3 | 604.5 | 605.0 | 608.6 | 603.6 |
| 175°   | 609.1 | 606.4 | 606.8 | 610.9 | 605.4 |
| 177.5° | 610.5 | 607.3 | 608.2 | 611.8 | 606.4 |
| 180°   | 609.1 | 609.1 | 609.1 | 609.1 | 609.1 |

(END OF REPORT)