

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: P1011847

Luminaire Tested: S123DIP-B560D585UB50-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011847  
REPORT IS A COMBINATION OF REPORTS P990153 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B560D585UB50-4F0-XX-W2A-D  
Description: Define 3 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

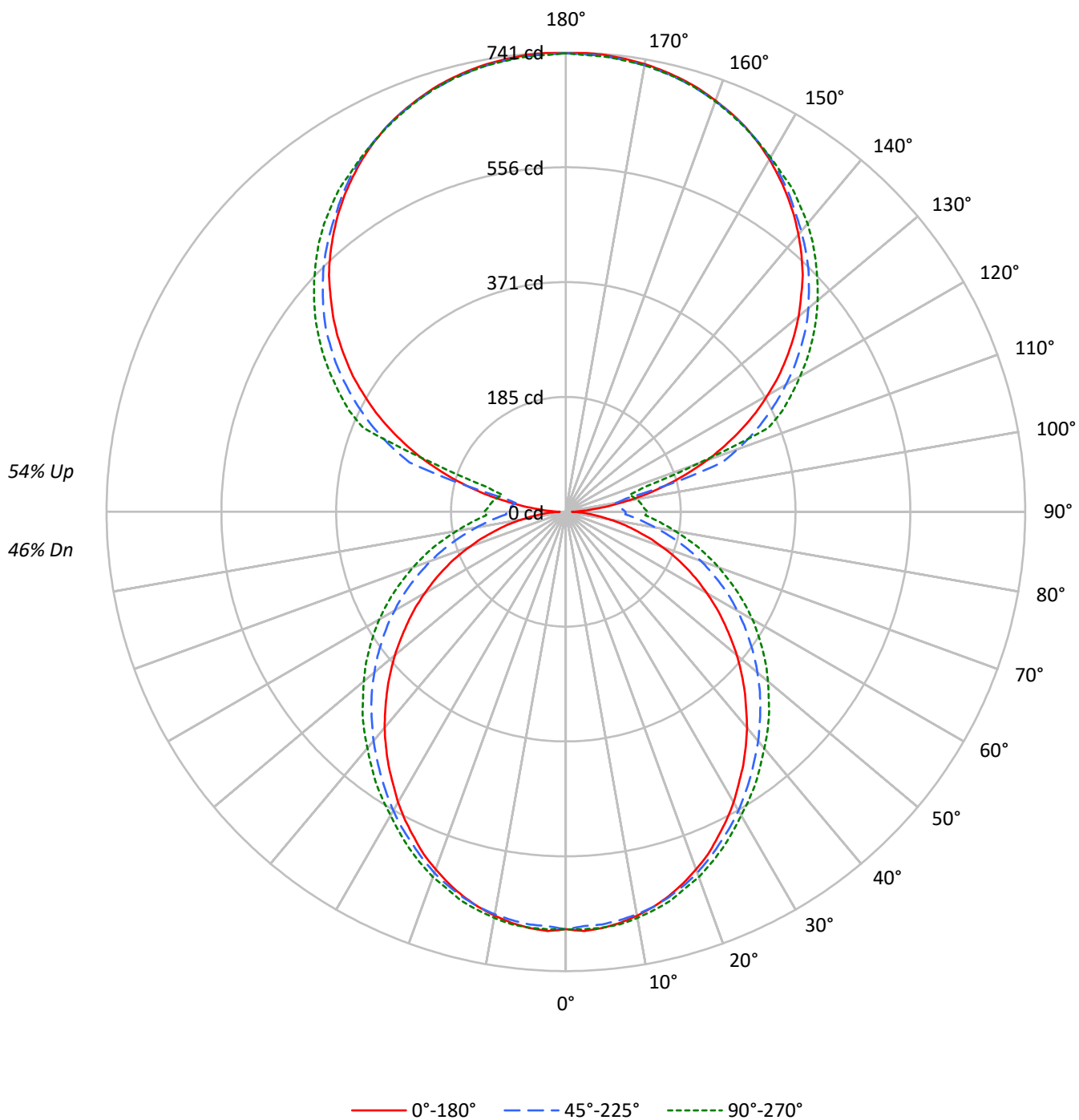
Lumens per Lamp: N/A  
Luminaire Lumens: 4519.0 lumens  
Efficiency: N/A  
Efficacy: 114.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 39.4  
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 | 81 | 81 | 81 | 66 | 66 | 66 | 52 | 52 | 52 |
| 1   | 96  | 91  | 87  | 83  | 88 | 84 | 80 | 77 | 70 | 67 | 65 | 57 | 55 | 53 | 45 | 43 | 42 |
| 2   | 87  | 79  | 73  | 67  | 79 | 73 | 67 | 62 | 60 | 56 | 53 | 49 | 46 | 44 | 39 | 37 | 35 |
| 3   | 79  | 69  | 62  | 55  | 72 | 64 | 57 | 51 | 53 | 48 | 44 | 43 | 39 | 36 | 34 | 31 | 29 |
| 4   | 72  | 61  | 53  | 47  | 66 | 56 | 49 | 43 | 47 | 41 | 37 | 38 | 34 | 31 | 30 | 27 | 25 |
| 5   | 66  | 54  | 46  | 40  | 60 | 50 | 43 | 37 | 42 | 36 | 32 | 34 | 30 | 27 | 27 | 24 | 22 |
| 6   | 61  | 48  | 40  | 34  | 55 | 45 | 37 | 32 | 38 | 32 | 28 | 31 | 26 | 23 | 25 | 21 | 19 |
| 7   | 56  | 44  | 36  | 30  | 51 | 40 | 33 | 28 | 34 | 28 | 24 | 28 | 24 | 20 | 22 | 19 | 17 |
| 8   | 52  | 40  | 32  | 26  | 48 | 37 | 30 | 25 | 31 | 25 | 21 | 26 | 21 | 18 | 21 | 17 | 15 |
| 9   | 48  | 36  | 28  | 23  | 44 | 33 | 27 | 22 | 28 | 23 | 19 | 23 | 19 | 16 | 19 | 16 | 13 |
| 10  | 45  | 33  | 26  | 21  | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 22 | 18 | 15 | 18 | 14 | 12 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7248 | 7248 | 7248 |
| 5°  | 7268 | 7035 | 7030 |
| 10° | 7200 | 6845 | 6793 |
| 15° | 7104 | 6634 | 6541 |
| 20° | 6969 | 6400 | 6270 |
| 25° | 6803 | 6136 | 5991 |
| 30° | 6632 | 5896 | 5710 |
| 35° | 6442 | 5646 | 5482 |
| 40° | 6259 | 5416 | 5239 |
| 45° | 6056 | 5195 | 5041 |
| 50° | 5856 | 4974 | 4824 |
| 55° | 5635 | 4748 | 4626 |
| 60° | 5419 | 4518 | 4422 |
| 65° | 5195 | 4272 | 4183 |
| 70° | 4859 | 3996 | 3937 |
| 75° | 4435 | 3681 | 3684 |
| 80° | 3941 | 3363 | 3395 |
| 85° | 3448 | 3105 | 3187 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6056 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 63.9   | 1.4       |
| 10°-20°   | 182.1  | 4.0       |
| 20°-30°   | 272.3  | 6.0       |
| 30°-40°   | 325.1  | 7.2       |
| 40°-50°   | 340.2  | 7.5       |
| 50°-60°   | 319.2  | 7.1       |
| 60°-70°   | 266.6  | 5.9       |
| 70°-80°   | 190.7  | 4.2       |
| 80°-90°   | 114.9  | 2.5       |
| 90°-100°  | 97.4   | 2.2       |
| 100°-110° | 178.5  | 3.9       |
| 110°-120° | 344.0  | 7.6       |
| 120°-130° | 412.2  | 9.1       |
| 130°-140° | 428.0  | 9.5       |
| 140°-150° | 393.7  | 8.7       |
| 150°-160° | 316.1  | 7.0       |
| 160°-170° | 204.0  | 4.5       |
| 170°-180° | 70.3   | 1.6       |
| 0°-30°    | 518.3  | 11.5      |
| 0°-40°    | 843.4  | 18.7      |
| 0°-60°    | 1502.8 | 33.3      |
| 0°-90°    | 2075.0 | 45.9      |
| 90°-120°  | 619.8  | 13.7      |
| 90°-150°  | 1853.7 | 41.0      |
| 90°-180°  | 2444.0 | 54.1      |
| 0°-180°   | 4519.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 673 | 673   | 673 | 673   | 673 |      |
| 5°   | 674 | 673   | 668 | 674   | 673 | 64   |
| 15°  | 642 | 644   | 643 | 651   | 650 | 181  |
| 25°  | 580 | 587   | 589 | 598   | 598 | 267  |
| 35°  | 499 | 510   | 520 | 531   | 534 | 312  |
| 45°  | 408 | 425   | 444 | 458   | 464 | 314  |
| 55°  | 311 | 335   | 362 | 381   | 387 | 278  |
| 65°  | 215 | 244   | 276 | 298   | 305 | 212  |
| 75°  | 117 | 151   | 188 | 212   | 221 | 125  |
| 85°  | 36  | 73    | 112 | 136   | 144 | 37   |
| 90°  | 10  | 52    | 96  | 123   | 132 | 9    |
| 95°  | 42  | 48    | 90  | 116   | 124 | 46   |
| 105° | 170 | 193   | 175 | 99    | 106 | 180  |
| 115° | 311 | 323   | 354 | 377   | 385 | 307  |
| 125° | 435 | 440   | 463 | 480   | 486 | 389  |
| 135° | 540 | 543   | 553 | 568   | 570 | 416  |
| 145° | 623 | 626   | 627 | 634   | 637 | 390  |
| 155° | 685 | 684   | 685 | 687   | 684 | 316  |
| 165° | 722 | 721   | 720 | 725   | 721 | 204  |
| 175° | 740 | 737   | 737 | 741   | 737 | 70   |
| 180° | 740 | 740   | 740 | 740   | 740 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 673.4 | 673.4 | 673.4 | 673.4 | 673.4 |
| 2.5°   | 677.0 | 674.8 | 669.0 | 674.8 | 674.1 |
| 5°     | 674.1 | 672.6 | 668.2 | 674.1 | 673.4 |
| 7.5°   | 669.0 | 669.0 | 664.6 | 671.9 | 671.2 |
| 10°    | 661.6 | 663.1 | 659.4 | 666.8 | 665.3 |
| 12.5°  | 652.8 | 655.0 | 652.8 | 659.4 | 658.0 |
| 15°    | 641.8 | 644.0 | 643.3 | 650.6 | 649.9 |
| 17.5°  | 628.6 | 633.0 | 632.3 | 638.9 | 637.4 |
| 20°    | 613.9 | 618.3 | 619.8 | 626.4 | 627.1 |
| 22.5°  | 598.5 | 602.9 | 605.1 | 613.9 | 613.2 |
| 25°    | 579.5 | 586.8 | 589.0 | 598.5 | 598.5 |
| 27.5°  | 561.1 | 569.2 | 573.6 | 581.7 | 582.4 |
| 30°    | 541.3 | 550.9 | 556.7 | 565.5 | 565.5 |
| 32.5°  | 519.3 | 530.3 | 538.4 | 547.9 | 550.1 |
| 35°    | 498.8 | 510.5 | 520.1 | 531.1 | 534.0 |
| 37.5°  | 476.8 | 490.0 | 501.0 | 513.5 | 515.7 |
| 40°    | 454.8 | 468.0 | 482.6 | 495.1 | 498.0 |
| 42.5°  | 430.6 | 447.4 | 462.8 | 476.8 | 481.2 |
| 45°    | 407.8 | 425.4 | 443.8 | 457.7 | 463.6 |
| 47.5°  | 383.6 | 403.4 | 424.0 | 439.4 | 443.8 |
| 50°    | 360.1 | 380.7 | 403.4 | 420.3 | 425.4 |
| 52.5°  | 335.2 | 357.2 | 382.9 | 400.5 | 407.1 |
| 55°    | 311.0 | 335.2 | 361.6 | 381.4 | 387.3 |
| 57.5°  | 287.5 | 312.5 | 341.1 | 360.9 | 367.5 |
| 60°    | 262.6 | 289.0 | 319.1 | 339.6 | 347.7 |
| 62.5°  | 239.1 | 266.3 | 298.5 | 319.1 | 326.4 |
| 65°    | 214.9 | 243.5 | 275.8 | 297.8 | 305.1 |
| 67.5°  | 190.7 | 220.8 | 253.1 | 277.3 | 283.1 |
| 70°    | 165.0 | 196.6 | 231.8 | 255.3 | 262.6 |
| 72.5°  | 141.6 | 173.1 | 209.8 | 234.0 | 241.3 |
| 75°    | 116.6 | 151.1 | 187.8 | 212.0 | 220.8 |
| 77.5°  | 95.4  | 129.8 | 166.5 | 192.2 | 198.8 |
| 80°    | 72.6  | 108.6 | 146.7 | 171.6 | 179.0 |
| 82.5°  | 52.8  | 89.5  | 128.4 | 153.3 | 160.6 |
| 85°    | 35.9  | 72.6  | 111.5 | 136.4 | 143.8 |
| 87.5°  | 22.0  | 58.7  | 96.1  | 121.0 | 128.4 |
| 90°    | 10.0  | 51.5  | 96.1  | 123.2 | 131.7 |
| 92.5°  | 21.4  | 49.6  | 91.3  | 119.3 | 126.5 |
| 95°    | 41.6  | 47.7  | 89.6  | 116.3 | 123.6 |
| 97.5°  | 68.3  | 79.3  | 85.8  | 112.2 | 120.1 |
| 100°   | 99.5  | 133.9 | 81.9  | 107.6 | 115.5 |
| 102.5° | 135.0 | 162.7 | 100.1 | 102.5 | 110.9 |
| 105°   | 169.6 | 193.3 | 175.3 | 98.7  | 106.4 |
| 107.5° | 205.6 | 226.0 | 264.3 | 199.5 | 134.1 |
| 110°   | 241.8 | 259.3 | 294.7 | 295.7 | 223.0 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 276.9 | 291.1 | 324.9 | 348.3 | 353.8 |
| 115°   | 310.8 | 322.9 | 354.3 | 377.4 | 385.4 |
| 117.5° | 344.9 | 354.5 | 382.3 | 404.3 | 410.6 |
| 120°   | 375.4 | 384.1 | 409.9 | 431.2 | 436.3 |
| 122.5° | 407.3 | 412.6 | 437.5 | 456.5 | 462.1 |
| 125°   | 435.1 | 439.5 | 463.0 | 479.5 | 485.7 |
| 127.5° | 463.7 | 467.4 | 488.5 | 504.8 | 508.8 |
| 130°   | 490.1 | 493.8 | 510.6 | 526.8 | 530.1 |
| 132.5° | 514.7 | 519.1 | 531.7 | 547.1 | 550.6 |
| 135°   | 540.5 | 543.0 | 553.3 | 568.1 | 570.2 |
| 137.5° | 562.5 | 566.1 | 572.4 | 586.8 | 589.4 |
| 140°   | 583.6 | 586.9 | 590.8 | 604.0 | 606.6 |
| 142.5° | 604.0 | 606.6 | 608.2 | 619.4 | 621.4 |
| 145°   | 622.7 | 625.8 | 626.9 | 633.9 | 636.8 |
| 147.5° | 640.1 | 642.8 | 643.9 | 647.2 | 647.4 |
| 150°   | 656.6 | 658.2 | 659.3 | 660.4 | 660.3 |
| 152.5° | 671.4 | 672.0 | 672.5 | 674.7 | 672.0 |
| 155°   | 685.1 | 684.0 | 684.6 | 687.3 | 684.0 |
| 157.5° | 696.1 | 696.1 | 695.6 | 698.9 | 694.5 |
| 160°   | 706.0 | 705.5 | 704.9 | 708.2 | 704.4 |
| 162.5° | 715.4 | 713.7 | 713.2 | 717.0 | 713.7 |
| 165°   | 722.5 | 720.9 | 720.3 | 724.7 | 720.9 |
| 167.5° | 728.5 | 726.3 | 726.3 | 730.7 | 726.3 |
| 170°   | 733.5 | 731.3 | 731.3 | 735.7 | 731.3 |
| 172.5° | 736.8 | 734.0 | 734.6 | 739.0 | 734.0 |
| 175°   | 739.5 | 736.8 | 737.3 | 741.2 | 736.8 |
| 177.5° | 740.6 | 737.9 | 738.4 | 742.8 | 737.3 |
| 180°   | 739.5 | 739.5 | 739.5 | 739.5 | 739.5 |

(END OF REPORT)