

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: P1011857

Luminaire Tested: S123DIP-B560D805UB27-4F0-XX-W2A-D1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011857  
REPORT IS A COMBINATION OF REPORTS P990163 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B560D805UB27-4F0-XX-W2A-D1  
Description: Define 3 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

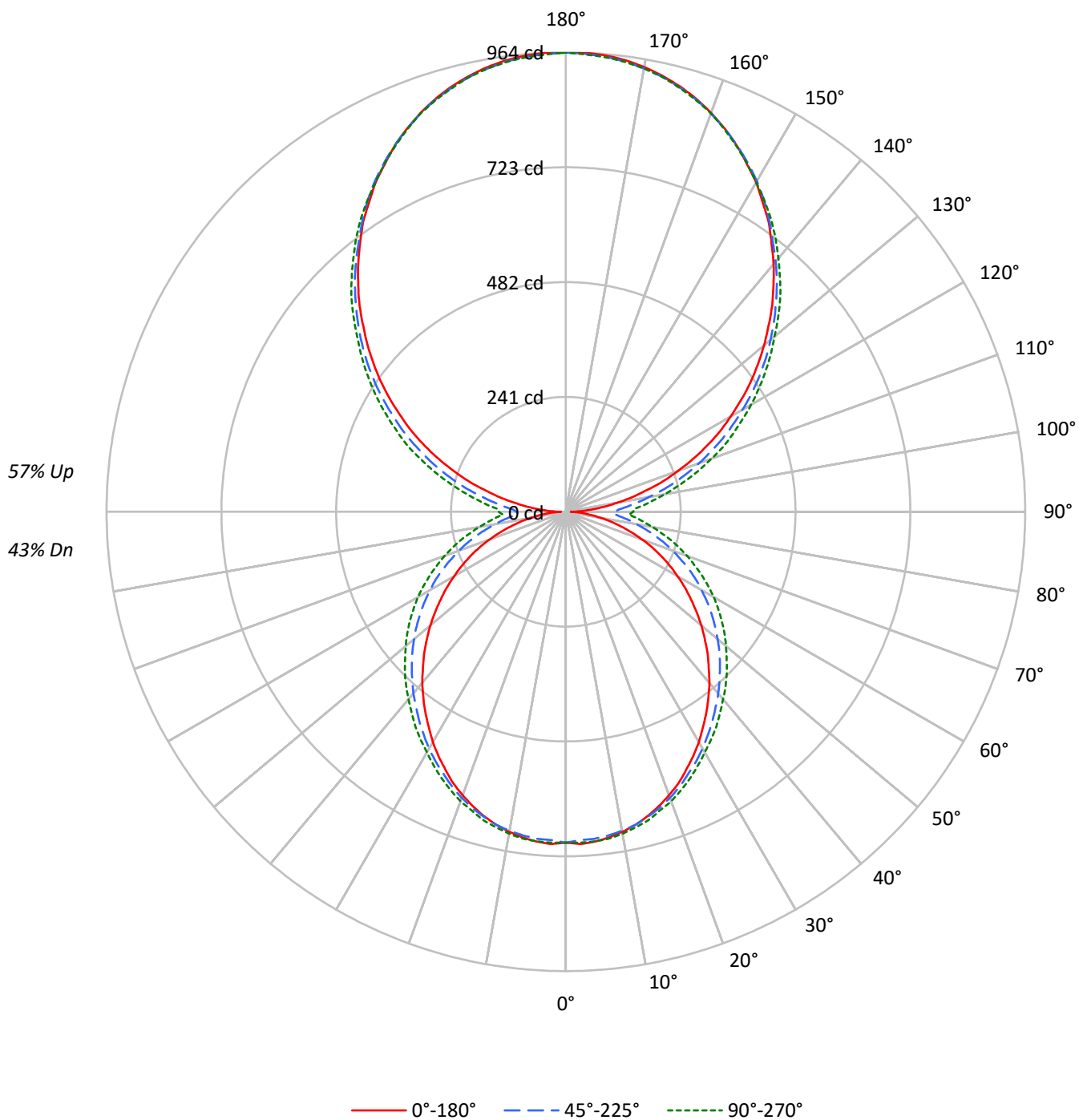
Lumens per Lamp: N/A  
Luminaire Lumens: 5005.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 45.1  
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   | 105 | 105 | 105 | 105 | 96 | 96 | 96 | 96 | 79 | 79 | 79 | 64 | 64 | 64 | 49 | 49 | 49 |
| 1   | 95  | 91  | 86  | 83  | 87 | 83 | 79 | 76 | 68 | 66 | 63 | 55 | 53 | 51 | 42 | 41 | 40 |
| 2   | 86  | 79  | 72  | 67  | 78 | 72 | 66 | 62 | 59 | 55 | 52 | 47 | 45 | 42 | 37 | 35 | 33 |
| 3   | 79  | 69  | 61  | 55  | 71 | 63 | 56 | 51 | 52 | 47 | 43 | 42 | 38 | 35 | 32 | 30 | 28 |
| 4   | 72  | 61  | 53  | 46  | 65 | 56 | 48 | 43 | 46 | 41 | 36 | 37 | 33 | 30 | 29 | 26 | 24 |
| 5   | 66  | 54  | 46  | 39  | 60 | 49 | 42 | 37 | 41 | 35 | 31 | 33 | 29 | 26 | 26 | 23 | 20 |
| 6   | 60  | 48  | 40  | 34  | 55 | 44 | 37 | 32 | 37 | 31 | 27 | 30 | 26 | 22 | 23 | 20 | 18 |
| 7   | 56  | 43  | 35  | 30  | 51 | 40 | 33 | 28 | 33 | 28 | 24 | 27 | 23 | 20 | 21 | 18 | 16 |
| 8   | 52  | 39  | 31  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 20 | 17 | 19 | 16 | 14 |
| 9   | 48  | 36  | 28  | 23  | 44 | 33 | 26 | 22 | 28 | 22 | 19 | 23 | 19 | 16 | 18 | 15 | 13 |
| 10  | 45  | 33  | 25  | 21  | 41 | 30 | 24 | 19 | 25 | 20 | 17 | 21 | 17 | 14 | 17 | 14 | 11 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7472 | 7472 | 7472 |
| 5°  | 7492 | 7253 | 7247 |
| 10° | 7423 | 7056 | 7003 |
| 15° | 7325 | 6840 | 6743 |
| 20° | 7184 | 6598 | 6464 |
| 25° | 7013 | 6325 | 6177 |
| 30° | 6838 | 6078 | 5887 |
| 35° | 6641 | 5820 | 5651 |
| 40° | 6452 | 5584 | 5402 |
| 45° | 6243 | 5355 | 5196 |
| 50° | 6038 | 5128 | 4974 |
| 55° | 5809 | 4895 | 4769 |
| 60° | 5586 | 4657 | 4558 |
| 65° | 5357 | 4403 | 4313 |
| 70° | 5009 | 4120 | 4059 |
| 75° | 4572 | 3795 | 3797 |
| 80° | 4066 | 3466 | 3499 |
| 85° | 3564 | 3200 | 3285 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6243 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 65.9   | 1.3       |
| 10°-20°   | 187.7  | 3.8       |
| 20°-30°   | 280.7  | 5.6       |
| 30°-40°   | 335.2  | 6.7       |
| 40°-50°   | 350.7  | 7.0       |
| 50°-60°   | 329.1  | 6.6       |
| 60°-70°   | 274.9  | 5.5       |
| 70°-80°   | 196.5  | 3.9       |
| 80°-90°   | 119.0  | 2.4       |
| 90°-100°  | 135.5  | 2.7       |
| 100°-110° | 241.8  | 4.8       |
| 110°-120° | 355.7  | 7.1       |
| 120°-130° | 441.1  | 8.8       |
| 130°-140° | 481.9  | 9.6       |
| 140°-150° | 466.6  | 9.3       |
| 150°-160° | 391.2  | 7.8       |
| 160°-170° | 260.4  | 5.2       |
| 170°-180° | 91.2   | 1.8       |
| 0°-30°    | 534.3  | 10.7      |
| 0°-40°    | 869.5  | 17.4      |
| 0°-60°    | 1549.3 | 31.0      |
| 0°-90°    | 2139.7 | 42.8      |
| 90°-120°  | 733.0  | 14.6      |
| 90°-150°  | 2122.5 | 42.4      |
| 90°-180°  | 2865.0 | 57.2      |
| 0°-180°   | 5005.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 694 | 694   | 694 | 694   | 694 |      |
| 5°   | 695 | 693   | 689 | 695   | 694 | 66   |
| 15°  | 662 | 664   | 663 | 671   | 670 | 186  |
| 25°  | 597 | 605   | 607 | 617   | 617 | 275  |
| 35°  | 514 | 526   | 536 | 548   | 550 | 322  |
| 45°  | 420 | 439   | 458 | 472   | 478 | 324  |
| 55°  | 321 | 346   | 373 | 393   | 399 | 287  |
| 65°  | 222 | 251   | 284 | 307   | 315 | 219  |
| 75°  | 120 | 156   | 194 | 218   | 228 | 128  |
| 85°  | 37  | 75    | 115 | 141   | 148 | 38   |
| 90°  | 11  | 55    | 104 | 132   | 141 | 10   |
| 95°  | 53  | 88    | 131 | 157   | 165 | 56   |
| 105° | 176 | 196   | 235 | 256   | 265 | 188  |
| 115° | 326 | 337   | 363 | 381   | 387 | 322  |
| 125° | 473 | 475   | 496 | 509   | 511 | 422  |
| 135° | 612 | 616   | 624 | 634   | 637 | 472  |
| 145° | 742 | 743   | 745 | 750   | 750 | 463  |
| 155° | 848 | 848   | 849 | 852   | 847 | 391  |
| 165° | 924 | 922   | 922 | 926   | 921 | 261  |
| 175° | 961 | 958   | 958 | 963   | 958 | 91   |
| 180° | 964 | 964   | 964 | 964   | 964 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 694.2 | 694.2 | 694.2 | 694.2 | 694.2 |
| 2.5°   | 698.0 | 695.7 | 689.6 | 695.7 | 694.9 |
| 5°     | 694.9 | 693.4 | 688.9 | 694.9 | 694.2 |
| 7.5°   | 689.6 | 689.6 | 685.1 | 692.7 | 691.9 |
| 10°    | 682.1 | 683.6 | 679.8 | 687.4 | 685.9 |
| 12.5°  | 673.0 | 675.3 | 673.0 | 679.8 | 678.3 |
| 15°    | 661.7 | 663.9 | 663.2 | 670.7 | 670.0 |
| 17.5°  | 648.1 | 652.6 | 651.8 | 658.6 | 657.1 |
| 20°    | 632.9 | 637.5 | 639.0 | 645.8 | 646.5 |
| 22.5°  | 617.1 | 621.6 | 623.9 | 632.9 | 632.2 |
| 25°    | 597.4 | 605.0 | 607.2 | 617.1 | 617.1 |
| 27.5°  | 578.5 | 586.8 | 591.3 | 599.7 | 600.4 |
| 30°    | 558.1 | 567.9 | 573.9 | 583.0 | 583.0 |
| 32.5°  | 535.4 | 546.7 | 555.0 | 564.9 | 567.1 |
| 35°    | 514.2 | 526.3 | 536.1 | 547.5 | 550.5 |
| 37.5°  | 491.5 | 505.1 | 516.5 | 529.3 | 531.6 |
| 40°    | 468.8 | 482.4 | 497.6 | 510.4 | 513.5 |
| 42.5°  | 443.9 | 461.3 | 477.2 | 491.5 | 496.1 |
| 45°    | 420.4 | 438.6 | 457.5 | 471.9 | 477.9 |
| 47.5°  | 395.5 | 415.9 | 437.1 | 453.0 | 457.5 |
| 50°    | 371.3 | 392.5 | 415.9 | 433.3 | 438.6 |
| 52.5°  | 345.6 | 368.3 | 394.7 | 412.9 | 419.7 |
| 55°    | 320.6 | 345.6 | 372.8 | 393.2 | 399.3 |
| 57.5°  | 296.4 | 322.1 | 351.6 | 372.0 | 378.9 |
| 60°    | 270.7 | 297.9 | 328.9 | 350.1 | 358.4 |
| 62.5°  | 246.5 | 274.5 | 307.8 | 328.9 | 336.5 |
| 65°    | 221.6 | 251.1 | 284.3 | 307.0 | 314.6 |
| 67.5°  | 196.6 | 227.6 | 260.9 | 285.8 | 291.9 |
| 70°    | 170.1 | 202.7 | 239.0 | 263.2 | 270.7 |
| 72.5°  | 145.9 | 178.5 | 216.3 | 241.2 | 248.8 |
| 75°    | 120.2 | 155.8 | 193.6 | 218.5 | 227.6 |
| 77.5°  | 98.3  | 133.8 | 171.7 | 198.1 | 204.9 |
| 80°    | 74.9  | 111.9 | 151.2 | 176.9 | 184.5 |
| 82.5°  | 54.4  | 92.3  | 132.3 | 158.0 | 165.6 |
| 85°    | 37.1  | 74.9  | 114.9 | 140.7 | 148.2 |
| 87.5°  | 22.7  | 60.5  | 99.1  | 124.8 | 132.3 |
| 90°    | 10.6  | 55.2  | 103.6 | 132.4 | 141.4 |
| 92.5°  | 31.8  | 68.9  | 111.2 | 138.5 | 143.7 |
| 95°    | 53.0  | 87.8  | 130.9 | 157.3 | 164.9 |
| 97.5°  | 81.0  | 112.0 | 152.1 | 178.5 | 185.4 |
| 100°   | 109.7 | 138.5 | 177.1 | 201.2 | 210.4 |
| 102.5° | 143.0 | 166.5 | 205.9 | 229.2 | 236.1 |
| 105°   | 176.3 | 196.0 | 235.3 | 256.5 | 264.9 |
| 107.5° | 215.0 | 231.6 | 265.7 | 288.3 | 294.4 |
| 110°   | 250.5 | 265.6 | 297.4 | 320.2 | 324.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 288.4 | 299.7 | 328.5 | 351.2 | 358.0 |
| 115°   | 325.5 | 336.9 | 362.6 | 381.4 | 386.8 |
| 117.5° | 364.1 | 370.9 | 395.1 | 413.3 | 417.0 |
| 120°   | 398.9 | 407.2 | 428.4 | 445.1 | 448.8 |
| 122.5° | 436.0 | 440.5 | 462.5 | 476.8 | 479.8 |
| 125°   | 473.1 | 475.4 | 495.8 | 508.7 | 510.9 |
| 127.5° | 507.9 | 511.7 | 529.1 | 539.6 | 541.9 |
| 130°   | 542.8 | 548.0 | 560.8 | 572.2 | 571.4 |
| 132.5° | 576.8 | 582.8 | 592.7 | 602.5 | 604.1 |
| 135°   | 612.4 | 616.2 | 623.7 | 634.3 | 636.6 |
| 137.5° | 644.9 | 648.0 | 655.5 | 663.8 | 665.3 |
| 140°   | 678.3 | 682.1 | 685.0 | 695.7 | 694.1 |
| 142.5° | 709.3 | 712.3 | 713.8 | 722.8 | 722.9 |
| 145°   | 741.9 | 742.6 | 744.8 | 750.1 | 750.2 |
| 147.5° | 769.1 | 772.1 | 774.4 | 776.7 | 775.1 |
| 150°   | 798.6 | 800.1 | 801.6 | 801.6 | 798.6 |
| 152.5° | 822.8 | 825.1 | 825.8 | 827.3 | 823.6 |
| 155°   | 848.5 | 848.5 | 849.3 | 852.3 | 847.0 |
| 157.5° | 870.5 | 869.7 | 870.5 | 873.5 | 869.0 |
| 160°   | 890.9 | 889.4 | 889.4 | 893.2 | 890.2 |
| 162.5° | 909.1 | 906.8 | 907.6 | 911.4 | 906.1 |
| 165°   | 924.2 | 922.0 | 922.0 | 926.5 | 921.2 |
| 167.5° | 937.1 | 934.1 | 934.8 | 939.4 | 934.8 |
| 170°   | 947.7 | 944.7 | 944.7 | 950.0 | 944.7 |
| 172.5° | 956.0 | 953.0 | 953.0 | 957.5 | 952.2 |
| 175°   | 961.3 | 958.3 | 958.3 | 962.8 | 957.5 |
| 177.5° | 964.4 | 961.3 | 961.3 | 965.9 | 960.6 |
| 180°   | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 |

(END OF REPORT)