

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: P1033621

Luminaire Tested: S124DIW-B575D470UB27-4F0-XX-W2A-F

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033621  
REPORT IS A COMBINATION OF REPORTS P997813 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B575D470UB27-4F0-XX-W2A-F  
Description: Define 4 Direct/Indirect Wall Mount with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

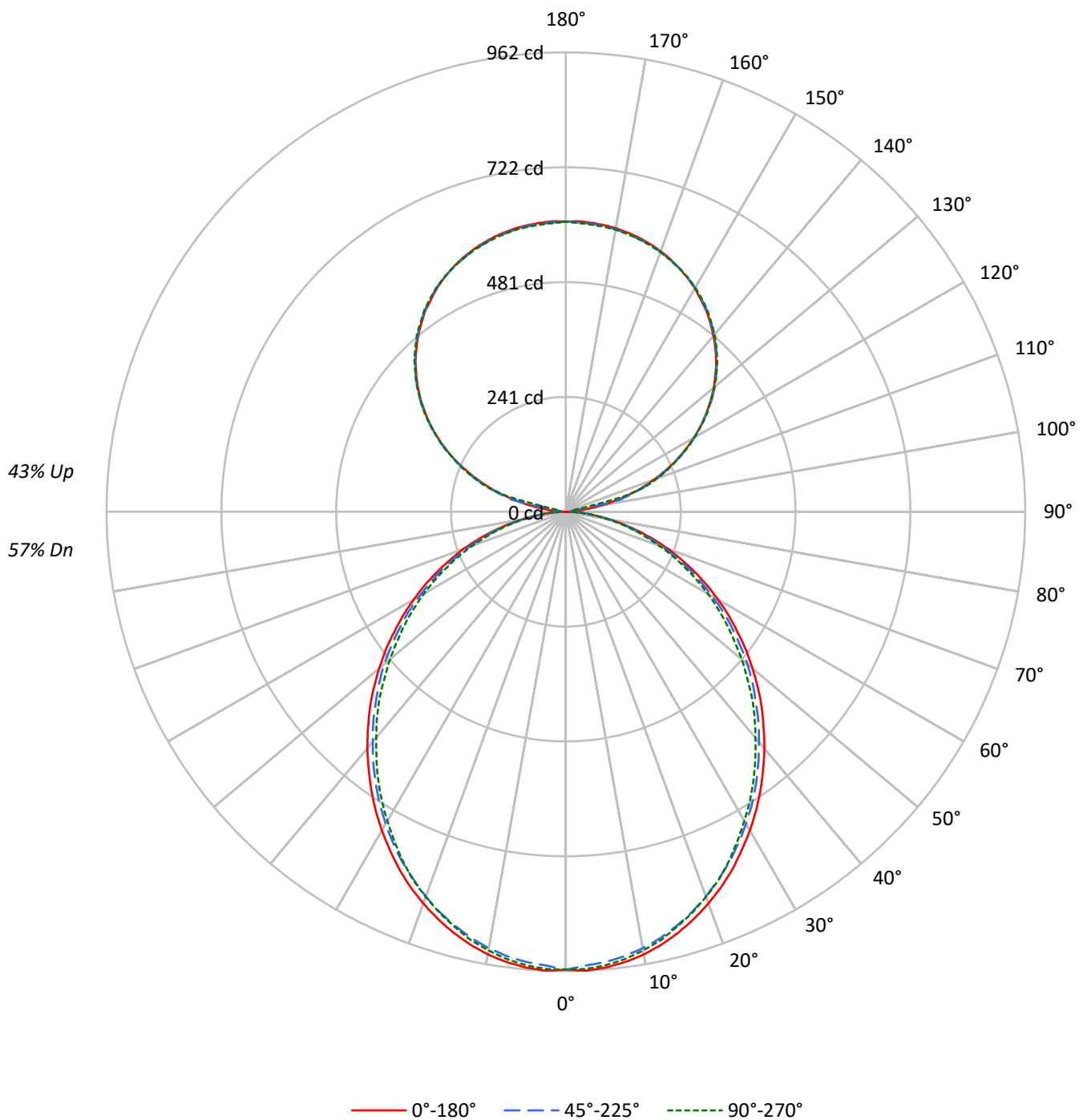
Lumens per Lamp: N/A  
Luminaire Lumens: 4342.0 lumens  
Efficiency: N/A  
Efficacy: 116.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 37.2  
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

TEST NUMBER: P1033621

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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   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 |
| 1   | 99  | 95  | 91  | 87  | 92  | 88  | 85  | 82  | 76 | 74 | 71 | 65 | 63 | 62 | 55 | 54 | 53 |
| 2   | 90  | 83  | 77  | 71  | 84  | 77  | 72  | 67  | 67 | 63 | 59 | 57 | 54 | 52 | 48 | 46 | 44 |
| 3   | 82  | 73  | 65  | 59  | 76  | 68  | 61  | 56  | 59 | 54 | 50 | 51 | 47 | 44 | 43 | 40 | 38 |
| 4   | 75  | 64  | 56  | 50  | 70  | 60  | 53  | 48  | 52 | 47 | 42 | 45 | 41 | 37 | 38 | 35 | 32 |
| 5   | 69  | 57  | 49  | 43  | 64  | 54  | 46  | 41  | 47 | 41 | 37 | 41 | 36 | 32 | 35 | 31 | 28 |
| 6   | 64  | 52  | 43  | 37  | 59  | 48  | 41  | 36  | 42 | 36 | 32 | 37 | 32 | 28 | 31 | 28 | 25 |
| 7   | 59  | 47  | 39  | 33  | 55  | 44  | 37  | 31  | 38 | 33 | 28 | 33 | 29 | 25 | 29 | 25 | 22 |
| 8   | 55  | 42  | 35  | 29  | 51  | 40  | 33  | 28  | 35 | 29 | 25 | 31 | 26 | 22 | 26 | 23 | 20 |
| 9   | 51  | 39  | 31  | 26  | 48  | 36  | 30  | 25  | 32 | 27 | 23 | 28 | 24 | 20 | 24 | 21 | 18 |
| 10  | 48  | 36  | 28  | 23  | 44  | 34  | 27  | 22  | 30 | 24 | 20 | 26 | 22 | 18 | 23 | 19 | 16 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7819 | 7819 | 7819 |
| 5°  | 7826 | 7594 | 7603 |
| 10° | 7759 | 7383 | 7331 |
| 15° | 7648 | 7133 | 7025 |
| 20° | 7506 | 6861 | 6708 |
| 25° | 7345 | 6575 | 6366 |
| 30° | 7153 | 6265 | 5990 |
| 35° | 6953 | 5948 | 5628 |
| 40° | 6745 | 5607 | 5242 |
| 45° | 6527 | 5265 | 4882 |
| 50° | 6284 | 4933 | 4482 |
| 55° | 6022 | 4545 | 4086 |
| 60° | 5753 | 4121 | 3673 |
| 65° | 5445 | 3683 | 3208 |
| 70° | 5091 | 3156 | 2709 |
| 75° | 4562 | 2543 | 2169 |
| 80° | 3887 | 1839 | 1527 |
| 85° | 3020 | 1025 | 822  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6527 cd/sqm

TEST NUMBER: P1033621

CATALOG NUMBER: S124DIW-B575D470UB27-4F0-XX-W2A-F

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.4   | 2.1       |
| 10°-20°   | 254.6  | 5.9       |
| 20°-30°   | 374.7  | 8.6       |
| 30°-40°   | 435.6  | 10.0      |
| 40°-50°   | 435.5  | 10.0      |
| 50°-60°   | 380.9  | 8.8       |
| 60°-70°   | 282.8  | 6.5       |
| 70°-80°   | 160.5  | 3.7       |
| 80°-90°   | 47.2   | 1.1       |
| 90°-100°  | 20.2   | 0.5       |
| 100°-110° | 132.8  | 3.1       |
| 110°-120° | 253.6  | 5.8       |
| 120°-130° | 321.9  | 7.4       |
| 130°-140° | 344.4  | 7.9       |
| 140°-150° | 322.0  | 7.4       |
| 150°-160° | 259.7  | 6.0       |
| 160°-170° | 167.5  | 3.9       |
| 170°-180° | 57.7   | 1.3       |
| 0°-30°    | 719.7  | 16.6      |
| 0°-40°    | 1155.3 | 26.6      |
| 0°-60°    | 1971.8 | 45.4      |
| 0°-90°    | 2462.3 | 56.7      |
| 90°-120°  | 406.6  | 9.4       |
| 90°-150°  | 1394.9 | 32.1      |
| 90°-180°  | 1880.0 | 43.3      |
| 0°-180°   | 4342.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 959 | 959   | 959 | 959   | 959 |      |
| 5°   | 958 | 955   | 946 | 955   | 953 | 91   |
| 15°  | 912 | 909   | 897 | 902   | 900 | 257  |
| 25°  | 826 | 820   | 810 | 810   | 808 | 380  |
| 35°  | 711 | 705   | 694 | 689   | 685 | 444  |
| 45°  | 580 | 575   | 562 | 554   | 552 | 447  |
| 55°  | 439 | 436   | 426 | 416   | 412 | 393  |
| 65°  | 297 | 294   | 286 | 278   | 274 | 294  |
| 75°  | 158 | 154   | 151 | 148   | 147 | 168  |
| 85°  | 42  | 42    | 40  | 40    | 39  | 45   |
| 90°  | 1   | 6     | 10  | 13    | 14  | 4    |
| 95°  | 25  | 10    | 10  | 13    | 13  | 31   |
| 105° | 137 | 140   | 142 | 146   | 130 | 143  |
| 115° | 255 | 257   | 256 | 257   | 257 | 251  |
| 125° | 359 | 361   | 360 | 361   | 362 | 321  |
| 135° | 445 | 445   | 447 | 448   | 448 | 343  |
| 145° | 513 | 515   | 515 | 515   | 516 | 321  |
| 155° | 563 | 563   | 562 | 564   | 562 | 260  |
| 165° | 594 | 592   | 592 | 595   | 591 | 168  |
| 175° | 608 | 605   | 605 | 609   | 604 | 58   |
| 180° | 608 | 608   | 608 | 608   | 608 |      |

TEST NUMBER: P1033621

CATALOG NUMBER: S124DIW-B575D470UB27-4F0-XX-W2A-F

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 958.8 | 958.8 | 958.8 | 958.8 | 958.8 |
| 2.5°   | 961.9 | 959.6 | 951.1 | 958.8 | 958.1 |
| 5°     | 958.1 | 955.0 | 946.5 | 955.0 | 953.4 |
| 7.5°   | 951.1 | 948.1 | 938.8 | 945.8 | 945.0 |
| 10°    | 941.2 | 938.1 | 928.1 | 934.2 | 932.7 |
| 12.5°  | 928.1 | 925.0 | 914.3 | 921.2 | 918.9 |
| 15°    | 912.0 | 908.9 | 897.4 | 902.0 | 899.7 |
| 17.5°  | 893.5 | 889.7 | 878.9 | 882.0 | 880.5 |
| 20°    | 872.8 | 868.9 | 857.4 | 859.7 | 858.2 |
| 22.5°  | 850.5 | 845.1 | 833.6 | 838.2 | 835.1 |
| 25°    | 825.9 | 820.5 | 809.8 | 810.5 | 807.5 |
| 27.5°  | 798.2 | 792.9 | 782.9 | 781.3 | 777.5 |
| 30°    | 770.6 | 764.4 | 754.5 | 751.4 | 747.5 |
| 32.5°  | 741.4 | 736.0 | 725.3 | 721.4 | 717.6 |
| 35°    | 710.7 | 705.3 | 694.5 | 689.2 | 685.3 |
| 37.5°  | 678.4 | 673.8 | 662.3 | 656.9 | 651.5 |
| 40°    | 646.9 | 640.8 | 629.2 | 621.5 | 617.7 |
| 42.5°  | 613.1 | 610.0 | 597.0 | 587.7 | 585.4 |
| 45°    | 580.1 | 574.7 | 562.4 | 553.9 | 551.6 |
| 47.5°  | 545.5 | 541.6 | 530.1 | 520.9 | 514.8 |
| 50°    | 510.1 | 507.1 | 496.3 | 485.6 | 480.9 |
| 52.5°  | 475.6 | 471.7 | 460.2 | 451.0 | 444.8 |
| 55°    | 438.7 | 436.4 | 425.6 | 416.4 | 411.8 |
| 57.5°  | 404.1 | 401.8 | 391.1 | 381.8 | 377.2 |
| 60°    | 368.0 | 364.2 | 354.2 | 347.3 | 343.4 |
| 62.5°  | 332.7 | 329.6 | 318.8 | 312.7 | 308.9 |
| 65°    | 297.3 | 293.5 | 285.8 | 278.1 | 274.3 |
| 67.5°  | 261.2 | 258.1 | 250.5 | 242.8 | 242.0 |
| 70°    | 228.2 | 222.8 | 216.7 | 210.5 | 208.2 |
| 72.5°  | 192.8 | 187.5 | 182.9 | 178.2 | 175.9 |
| 75°    | 158.3 | 154.4 | 150.6 | 147.5 | 146.7 |
| 77.5°  | 124.5 | 122.9 | 119.1 | 118.3 | 116.0 |
| 80°    | 94.5  | 92.2  | 90.7  | 89.1  | 88.4  |
| 82.5°  | 65.3  | 64.5  | 64.5  | 63.8  | 63.0  |
| 85°    | 41.5  | 41.5  | 40.0  | 40.0  | 39.2  |
| 87.5°  | 20.0  | 19.2  | 18.4  | 18.4  | 18.4  |
| 90°    | 1.4   | 6.4   | 10.0  | 12.7  | 13.6  |
| 92.5°  | 6.8   | 5.9   | 9.5   | 12.3  | 12.3  |
| 95°    | 25.0  | 9.5   | 10.0  | 12.7  | 13.2  |
| 97.5°  | 47.7  | 57.7  | 10.0  | 12.3  | 12.7  |
| 100°   | 74.5  | 82.7  | 20.0  | 12.3  | 12.7  |
| 102.5° | 104.5 | 110.0 | 115.4 | 13.2  | 13.2  |
| 105°   | 136.8 | 139.5 | 141.8 | 145.8 | 129.5 |
| 107.5° | 166.3 | 167.7 | 170.8 | 173.1 | 174.9 |
| 110°   | 196.3 | 197.6 | 200.4 | 201.3 | 202.6 |



TEST NUMBER: P1033621

CATALOG NUMBER: S124DIW-B575D470UB27-4F0-XX-W2A-F

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 225.4 | 228.1 | 229.0 | 228.5 | 230.4 |
| 115°   | 255.3 | 256.7 | 256.3 | 257.2 | 257.2 |
| 117.5° | 282.2 | 284.0 | 285.3 | 284.9 | 284.9 |
| 120°   | 309.4 | 311.2 | 310.8 | 311.7 | 310.8 |
| 122.5° | 334.9 | 335.8 | 336.7 | 337.1 | 336.2 |
| 125°   | 358.9 | 360.8 | 359.9 | 361.2 | 361.7 |
| 127.5° | 382.1 | 382.6 | 384.8 | 384.4 | 383.9 |
| 130°   | 404.4 | 404.8 | 406.2 | 406.7 | 406.7 |
| 132.5° | 424.8 | 425.7 | 427.6 | 428.0 | 427.6 |
| 135°   | 445.3 | 444.8 | 446.6 | 447.5 | 448.5 |
| 137.5° | 463.4 | 463.4 | 465.7 | 466.6 | 466.2 |
| 140°   | 481.2 | 482.1 | 483.0 | 484.3 | 484.8 |
| 142.5° | 497.1 | 498.9 | 499.3 | 500.2 | 500.2 |
| 145°   | 513.4 | 514.8 | 514.8 | 515.2 | 516.2 |
| 147.5° | 526.1 | 528.9 | 528.4 | 528.9 | 529.3 |
| 150°   | 540.2 | 542.0 | 541.6 | 541.6 | 542.0 |
| 152.5° | 552.0 | 553.4 | 552.5 | 553.4 | 553.0 |
| 155°   | 562.9 | 563.4 | 562.0 | 563.9 | 562.5 |
| 157.5° | 572.5 | 572.5 | 570.7 | 572.9 | 570.7 |
| 160°   | 580.7 | 579.3 | 578.9 | 581.6 | 578.9 |
| 162.5° | 587.9 | 586.1 | 585.7 | 588.4 | 585.2 |
| 165°   | 593.8 | 591.6 | 591.6 | 595.2 | 591.1 |
| 167.5° | 598.8 | 596.6 | 596.1 | 600.2 | 595.7 |
| 170°   | 602.9 | 600.2 | 600.7 | 604.3 | 599.8 |
| 172.5° | 605.7 | 602.9 | 603.4 | 607.0 | 602.0 |
| 175°   | 607.5 | 604.8 | 605.2 | 609.3 | 603.8 |
| 177.5° | 608.8 | 605.7 | 606.6 | 610.2 | 604.8 |
| 180°   | 607.5 | 607.5 | 607.5 | 607.5 | 607.5 |

(END OF REPORT)