

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: P1032817

Luminaire Tested: S124DIW-B795D470UB2750-4F0-XX-W2A-D\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1032817  
REPORT IS A COMBINATION OF REPORTS P998157 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B795D470UB2750-4F0-XX-W2A-D\_3500K  
Description: Define 4 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

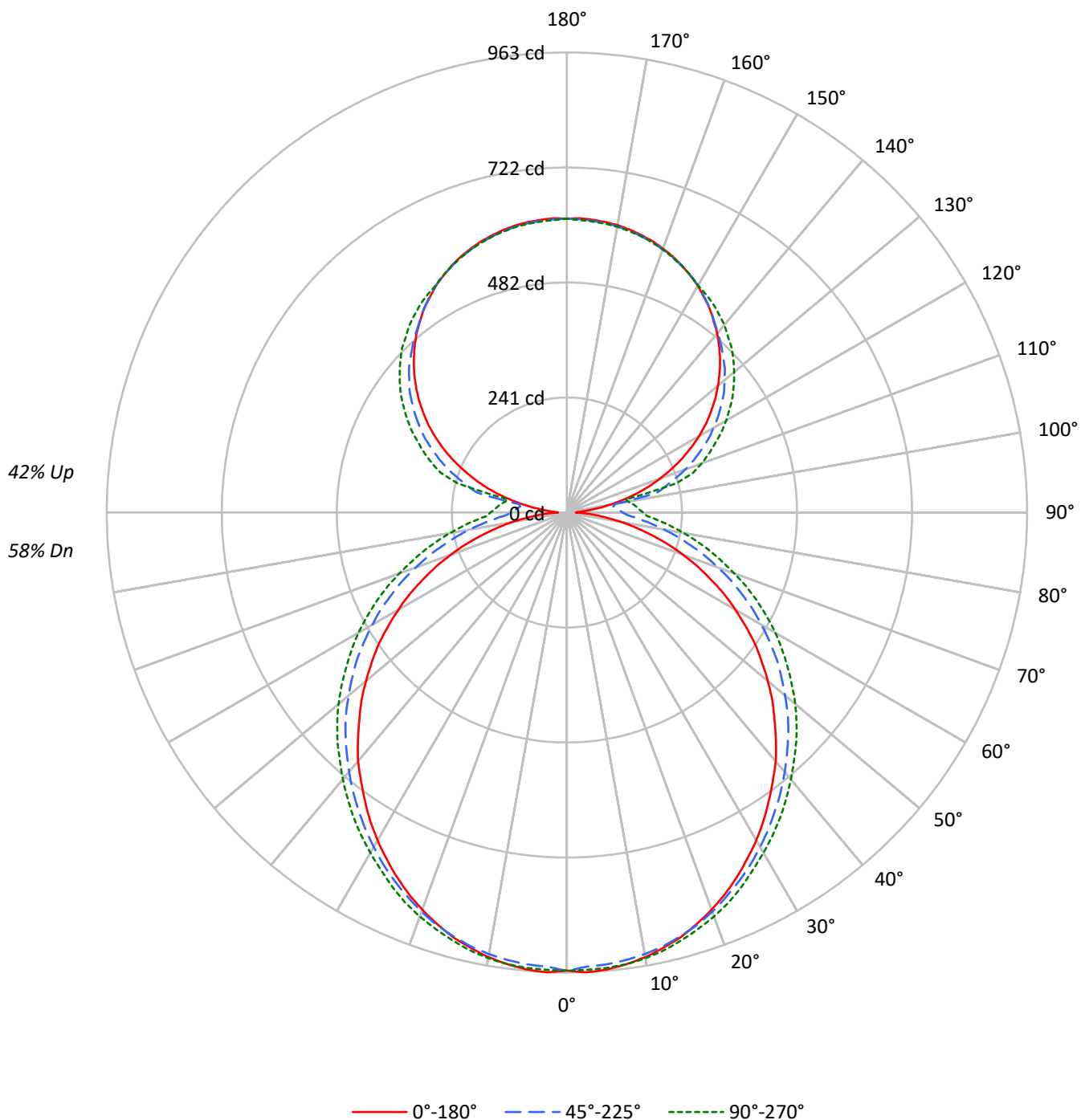
Lumens per Lamp: N/A  
Luminaire Lumens: 5175.0 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 49.1  
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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 |
| 1   | 99  | 94  | 89  | 85  | 92  | 87  | 83  | 80  | 75 | 73 | 70 | 65 | 62 | 60 | 55 | 53 | 52 |
| 2   | 89  | 81  | 74  | 69  | 83  | 76  | 70  | 65  | 65 | 61 | 57 | 56 | 53 | 50 | 47 | 45 | 43 |
| 3   | 81  | 71  | 63  | 57  | 75  | 66  | 59  | 53  | 57 | 52 | 47 | 49 | 45 | 41 | 42 | 38 | 36 |
| 4   | 74  | 62  | 54  | 48  | 69  | 58  | 51  | 45  | 51 | 45 | 40 | 44 | 39 | 35 | 37 | 33 | 30 |
| 5   | 68  | 56  | 47  | 41  | 63  | 52  | 44  | 38  | 45 | 39 | 34 | 39 | 34 | 30 | 33 | 29 | 26 |
| 6   | 62  | 50  | 41  | 35  | 58  | 47  | 39  | 33  | 41 | 34 | 30 | 35 | 30 | 26 | 30 | 26 | 23 |
| 7   | 58  | 45  | 36  | 31  | 54  | 42  | 34  | 29  | 37 | 31 | 26 | 32 | 27 | 23 | 27 | 23 | 20 |
| 8   | 54  | 41  | 33  | 27  | 50  | 38  | 31  | 26  | 34 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 18 |
| 9   | 50  | 37  | 29  | 24  | 46  | 35  | 28  | 23  | 31 | 25 | 21 | 27 | 22 | 18 | 23 | 19 | 16 |
| 10  | 47  | 34  | 27  | 22  | 43  | 32  | 25  | 21  | 28 | 23 | 19 | 25 | 20 | 17 | 21 | 18 | 15 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7821 | 7821 | 7821 |
| 5°  | 7843 | 7617 | 7631 |
| 10° | 7791 | 7467 | 7446 |
| 15° | 7718 | 7299 | 7237 |
| 20° | 7611 | 7116 | 7034 |
| 25° | 7489 | 6915 | 6816 |
| 30° | 7357 | 6715 | 6593 |
| 35° | 7208 | 6512 | 6395 |
| 40° | 7089 | 6317 | 6190 |
| 45° | 6911 | 6133 | 6008 |
| 50° | 6761 | 5924 | 5816 |
| 55° | 6605 | 5723 | 5595 |
| 60° | 6364 | 5473 | 5387 |
| 65° | 6097 | 5203 | 5138 |
| 70° | 5774 | 4896 | 4849 |
| 75° | 5323 | 4553 | 4573 |
| 80° | 4816 | 4204 | 4286 |
| 85° | 4141 | 3854 | 4052 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6911 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.9   | 1.8       |
| 10°-20°   | 260.4  | 5.0       |
| 20°-30°   | 393.7  | 7.6       |
| 30°-40°   | 476.3  | 9.2       |
| 40°-50°   | 503.5  | 9.7       |
| 50°-60°   | 473.9  | 9.2       |
| 60°-70°   | 393.2  | 7.6       |
| 70°-80°   | 276.0  | 5.3       |
| 80°-90°   | 156.8  | 3.0       |
| 90°-100°  | 113.0  | 2.2       |
| 100°-110° | 203.1  | 3.9       |
| 110°-120° | 302.8  | 5.9       |
| 120°-130° | 351.9  | 6.8       |
| 130°-140° | 360.0  | 7.0       |
| 140°-150° | 328.4  | 6.3       |
| 150°-160° | 263.0  | 5.1       |
| 160°-170° | 169.6  | 3.3       |
| 170°-180° | 58.5   | 1.1       |
| 0°-30°    | 744.9  | 14.4      |
| 0°-40°    | 1221.2 | 23.6      |
| 0°-60°    | 2198.6 | 42.5      |
| 0°-90°    | 3024.7 | 58.4      |
| 90°-120°  | 618.9  | 12.0      |
| 90°-150°  | 1659.2 | 32.1      |
| 90°-180°  | 2150.0 | 41.5      |
| 0°-180°   | 5175.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 959 | 959   | 959 | 959   | 959 |      |
| 5°   | 960 | 957   | 949 | 958   | 957 | 91   |
| 15°  | 920 | 922   | 918 | 928   | 927 | 259  |
| 25°  | 842 | 848   | 852 | 864   | 865 | 388  |
| 35°  | 737 | 750   | 760 | 776   | 779 | 461  |
| 45°  | 614 | 635   | 655 | 673   | 679 | 475  |
| 55°  | 481 | 504   | 536 | 557   | 564 | 429  |
| 65°  | 333 | 367   | 404 | 431   | 439 | 330  |
| 75°  | 185 | 224   | 270 | 300   | 309 | 196  |
| 85°  | 57  | 102   | 150 | 183   | 193 | 59   |
| 90°  | 19  | 66    | 116 | 150   | 160 | 13   |
| 95°  | 39  | 59    | 104 | 135   | 145 | 42   |
| 105° | 148 | 172   | 214 | 245   | 237 | 156  |
| 115° | 265 | 276   | 310 | 334   | 342 | 261  |
| 125° | 368 | 369   | 394 | 416   | 423 | 329  |
| 135° | 453 | 453   | 462 | 480   | 488 | 349  |
| 145° | 521 | 521   | 521 | 528   | 533 | 326  |
| 155° | 570 | 571   | 569 | 571   | 570 | 263  |
| 165° | 601 | 599   | 599 | 603   | 599 | 170  |
| 175° | 615 | 612   | 613 | 617   | 612 | 59   |
| 180° | 615 | 615   | 615 | 615   | 615 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 959.1 | 959.1 | 959.1 | 959.1 | 959.1 |
| 2.5°   | 963.4 | 960.2 | 951.6 | 959.1 | 958.0 |
| 5°     | 960.2 | 957.0 | 949.4 | 958.0 | 957.0 |
| 7.5°   | 953.7 | 951.6 | 945.1 | 954.8 | 953.7 |
| 10°    | 945.1 | 944.1 | 938.7 | 948.4 | 947.3 |
| 12.5°  | 933.3 | 933.3 | 930.1 | 938.7 | 938.7 |
| 15°    | 920.4 | 921.5 | 918.3 | 928.0 | 926.9 |
| 17.5°  | 903.3 | 906.5 | 905.4 | 915.1 | 914.0 |
| 20°    | 885.0 | 888.2 | 889.3 | 900.0 | 900.0 |
| 22.5°  | 864.6 | 868.9 | 871.0 | 881.8 | 883.9 |
| 25°    | 842.0 | 848.5 | 851.7 | 863.5 | 864.6 |
| 27.5°  | 817.3 | 827.0 | 831.3 | 842.0 | 843.1 |
| 30°    | 792.6 | 801.2 | 808.7 | 820.6 | 822.7 |
| 32.5°  | 765.8 | 776.5 | 785.1 | 799.1 | 801.2 |
| 35°    | 736.8 | 749.7 | 760.4 | 775.5 | 778.7 |
| 37.5°  | 707.8 | 722.8 | 735.7 | 750.7 | 754.0 |
| 40°    | 679.9 | 693.8 | 708.9 | 725.0 | 729.3 |
| 42.5°  | 647.6 | 663.8 | 682.0 | 700.3 | 703.5 |
| 45°    | 614.3 | 634.8 | 655.2 | 673.4 | 678.8 |
| 47.5°  | 583.2 | 603.6 | 627.2 | 645.5 | 651.9 |
| 50°    | 548.8 | 572.5 | 596.1 | 617.6 | 624.0 |
| 52.5°  | 514.5 | 538.1 | 566.0 | 587.5 | 593.9 |
| 55°    | 481.2 | 503.7 | 535.9 | 557.4 | 563.9 |
| 57.5°  | 443.6 | 471.5 | 502.6 | 528.4 | 533.8 |
| 60°    | 407.1 | 435.0 | 470.4 | 495.1 | 503.7 |
| 62.5°  | 371.6 | 402.8 | 438.2 | 462.9 | 471.5 |
| 65°    | 332.9 | 367.3 | 403.8 | 430.7 | 439.3 |
| 67.5°  | 296.4 | 332.9 | 371.6 | 398.5 | 407.1 |
| 70°    | 258.8 | 295.4 | 336.2 | 365.2 | 372.7 |
| 72.5°  | 222.3 | 259.9 | 304.0 | 331.9 | 340.5 |
| 75°    | 184.7 | 224.5 | 269.6 | 299.7 | 309.3 |
| 77.5°  | 149.3 | 191.2 | 238.4 | 268.5 | 279.2 |
| 80°    | 117.1 | 160.0 | 207.3 | 239.5 | 248.1 |
| 82.5°  | 84.8  | 130.0 | 177.2 | 210.5 | 220.2 |
| 85°    | 56.9  | 102.0 | 150.4 | 182.6 | 193.3 |
| 87.5°  | 35.4  | 79.5  | 126.7 | 157.9 | 167.5 |
| 90°    | 18.6  | 66.5  | 116.4 | 150.4 | 159.9 |
| 92.5°  | 23.0  | 59.7  | 109.6 | 142.4 | 151.0 |
| 95°    | 39.3  | 59.1  | 103.5 | 135.3 | 145.4 |
| 97.5°  | 61.2  | 102.4 | 98.2  | 128.4 | 138.6 |
| 100°   | 87.3  | 123.4 | 101.8 | 123.0 | 131.0 |
| 102.5° | 117.6 | 146.8 | 193.2 | 117.5 | 126.1 |
| 105°   | 148.2 | 172.4 | 214.5 | 245.4 | 237.4 |
| 107.5° | 178.1 | 197.7 | 238.5 | 267.7 | 277.1 |
| 110°   | 207.4 | 223.8 | 264.1 | 289.7 | 299.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 235.7 | 251.4 | 287.7 | 311.0 | 321.4 |
| 115°   | 265.0 | 276.1 | 310.0 | 334.5 | 342.0 |
| 117.5° | 292.2 | 300.5 | 334.1 | 356.2 | 364.8 |
| 120°   | 318.8 | 323.8 | 354.4 | 376.9 | 384.5 |
| 122.5° | 344.5 | 345.5 | 375.4 | 397.2 | 403.9 |
| 125°   | 367.8 | 368.6 | 394.5 | 416.3 | 423.2 |
| 127.5° | 391.3 | 390.7 | 414.5 | 433.3 | 440.4 |
| 130°   | 412.7 | 412.1 | 430.7 | 450.5 | 456.9 |
| 132.5° | 433.4 | 433.3 | 448.0 | 466.8 | 472.7 |
| 135°   | 453.1 | 452.6 | 462.0 | 480.2 | 487.5 |
| 137.5° | 471.5 | 470.5 | 477.1 | 494.1 | 499.0 |
| 140°   | 489.4 | 489.3 | 491.2 | 506.6 | 512.5 |
| 142.5° | 504.5 | 506.4 | 505.7 | 518.4 | 522.7 |
| 145°   | 521.1 | 521.4 | 521.4 | 528.2 | 533.4 |
| 147.5° | 534.0 | 535.6 | 535.2 | 536.7 | 541.5 |
| 150°   | 548.2 | 549.0 | 548.5 | 548.5 | 549.0 |
| 152.5° | 559.1 | 560.5 | 559.5 | 560.5 | 560.0 |
| 155°   | 570.1 | 570.6 | 569.2 | 571.1 | 569.7 |
| 157.5° | 579.8 | 579.8 | 578.0 | 580.3 | 578.0 |
| 160°   | 588.1 | 586.7 | 586.2 | 589.0 | 586.2 |
| 162.5° | 595.4 | 593.6 | 593.1 | 595.9 | 592.7 |
| 165°   | 601.4 | 599.1 | 599.1 | 602.8 | 598.7 |
| 167.5° | 606.5 | 604.2 | 603.7 | 607.9 | 603.3 |
| 170°   | 610.6 | 607.9 | 608.3 | 612.0 | 607.4 |
| 172.5° | 613.4 | 610.6 | 611.1 | 614.8 | 609.7 |
| 175°   | 615.2 | 612.5 | 612.9 | 617.1 | 611.5 |
| 177.5° | 616.6 | 613.4 | 614.3 | 618.0 | 612.5 |
| 180°   | 615.2 | 615.2 | 615.2 | 615.2 | 615.2 |

(END OF REPORT)