

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: P1032688

Luminaire Tested: S124DIW-B350D770UB2750-4F0-XX-W2A-F\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1032688  
REPORT IS A COMBINATION OF REPORTS P997572 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B350D770UB2750-4F0-XX-W2A-F\_5000K  
Description: Define 4 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

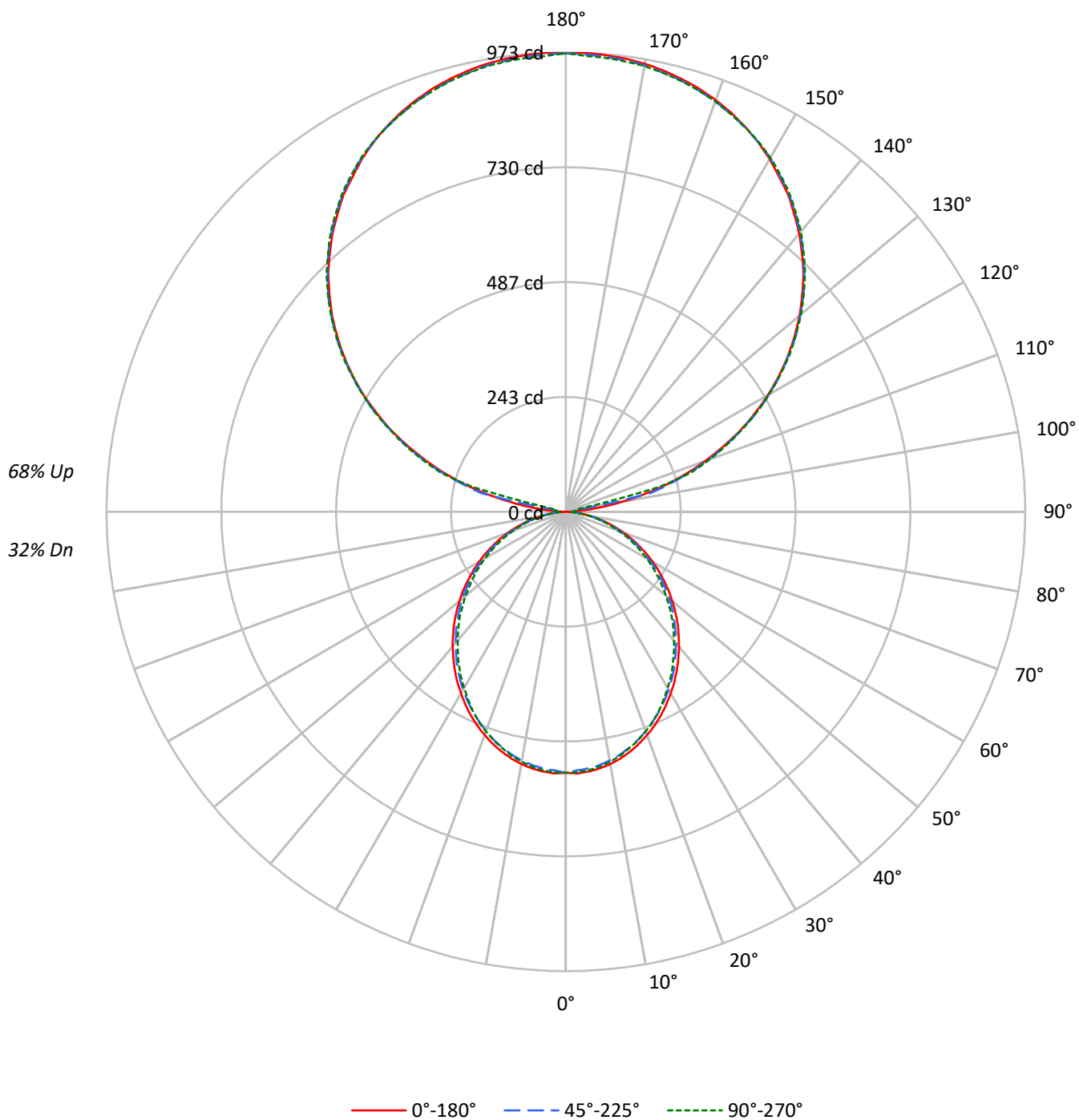
Lumens per Lamp: N/A  
Luminaire Lumens: 4425.0 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 36.2  
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   | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 73 | 73 | 73 | 56 | 56 | 56 | 40 | 40 | 40 |
| 1   | 94  | 90  | 86  | 82  | 84 | 81 | 78 | 75 | 64 | 62 | 60 | 49 | 48 | 46 | 35 | 34 | 33 |
| 2   | 85  | 78  | 72  | 67  | 77 | 71 | 65 | 61 | 56 | 53 | 50 | 43 | 41 | 39 | 31 | 29 | 28 |
| 3   | 78  | 69  | 62  | 56  | 70 | 62 | 56 | 51 | 50 | 45 | 42 | 38 | 35 | 33 | 27 | 25 | 24 |
| 4   | 71  | 61  | 53  | 47  | 64 | 55 | 48 | 43 | 44 | 39 | 35 | 34 | 31 | 28 | 24 | 22 | 21 |
| 5   | 65  | 54  | 46  | 40  | 58 | 49 | 42 | 37 | 39 | 34 | 30 | 30 | 27 | 24 | 22 | 20 | 18 |
| 6   | 60  | 48  | 40  | 35  | 54 | 44 | 37 | 32 | 35 | 30 | 26 | 27 | 24 | 21 | 20 | 18 | 16 |
| 7   | 55  | 43  | 36  | 30  | 50 | 39 | 33 | 28 | 32 | 27 | 23 | 25 | 21 | 19 | 18 | 16 | 14 |
| 8   | 51  | 39  | 32  | 27  | 46 | 36 | 29 | 25 | 29 | 24 | 20 | 23 | 19 | 16 | 17 | 14 | 12 |
| 9   | 48  | 36  | 29  | 24  | 43 | 33 | 26 | 22 | 26 | 22 | 18 | 21 | 17 | 15 | 15 | 13 | 11 |
| 10  | 44  | 33  | 26  | 21  | 40 | 30 | 24 | 19 | 24 | 20 | 16 | 19 | 16 | 13 | 14 | 12 | 10 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4509 | 4509 | 4509 |
| 5°  | 4512 | 4379 | 4384 |
| 10° | 4474 | 4257 | 4227 |
| 15° | 4409 | 4112 | 4050 |
| 20° | 4327 | 3956 | 3867 |
| 25° | 4235 | 3791 | 3671 |
| 30° | 4124 | 3612 | 3454 |
| 35° | 4009 | 3430 | 3245 |
| 40° | 3889 | 3233 | 3023 |
| 45° | 3763 | 3036 | 2815 |
| 50° | 3623 | 2844 | 2585 |
| 55° | 3472 | 2621 | 2356 |
| 60° | 3317 | 2376 | 2118 |
| 65° | 3139 | 2124 | 1849 |
| 70° | 2936 | 1819 | 1563 |
| 75° | 2631 | 1466 | 1251 |
| 80° | 2242 | 1061 | 879  |
| 85° | 1739 | 589  | 474  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3763 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 52.1   | 1.2       |
| 10°-20°   | 146.8  | 3.3       |
| 20°-30°   | 216.1  | 4.9       |
| 30°-40°   | 251.2  | 5.7       |
| 40°-50°   | 251.1  | 5.7       |
| 50°-60°   | 219.6  | 5.0       |
| 60°-70°   | 163.1  | 3.7       |
| 70°-80°   | 92.5   | 2.1       |
| 80°-90°   | 28.5   | 0.6       |
| 90°-100°  | 32.2   | 0.7       |
| 100°-110° | 212.2  | 4.8       |
| 110°-120° | 405.3  | 9.2       |
| 120°-130° | 514.5  | 11.6      |
| 130°-140° | 550.4  | 12.4      |
| 140°-150° | 514.6  | 11.6      |
| 150°-160° | 415.0  | 9.4       |
| 160°-170° | 267.6  | 6.0       |
| 170°-180° | 92.2   | 2.1       |
| 0°-30°    | 415.0  | 9.4       |
| 0°-40°    | 666.1  | 15.1      |
| 0°-60°    | 1136.9 | 25.7      |
| 0°-90°    | 1421.0 | 32.1      |
| 90°-120°  | 649.7  | 14.7      |
| 90°-150°  | 2229.1 | 50.4      |
| 90°-180°  | 3004.0 | 67.9      |
| 0°-180°   | 4425.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 553 | 553   | 553 | 553   | 553 |      |
| 5°   | 552 | 551   | 546 | 551   | 550 | 52   |
| 15°  | 526 | 524   | 517 | 520   | 519 | 148  |
| 25°  | 476 | 473   | 467 | 467   | 466 | 219  |
| 35°  | 410 | 407   | 400 | 397   | 395 | 256  |
| 45°  | 334 | 331   | 324 | 319   | 318 | 258  |
| 55°  | 253 | 252   | 245 | 240   | 237 | 227  |
| 65°  | 171 | 169   | 165 | 160   | 158 | 170  |
| 75°  | 91  | 89    | 87  | 85    | 85  | 97   |
| 85°  | 24  | 24    | 23  | 23    | 23  | 26   |
| 90°  | 2   | 10    | 16  | 20    | 22  | 4    |
| 95°  | 40  | 15    | 16  | 20    | 21  | 49   |
| 105° | 219 | 223   | 226 | 233   | 207 | 229  |
| 115° | 408 | 410   | 410 | 411   | 411 | 402  |
| 125° | 574 | 576   | 575 | 577   | 578 | 512  |
| 135° | 712 | 711   | 714 | 715   | 717 | 548  |
| 145° | 820 | 823   | 823 | 823   | 825 | 513  |
| 155° | 900 | 900   | 898 | 901   | 899 | 415  |
| 165° | 949 | 945   | 945 | 951   | 945 | 268  |
| 175° | 971 | 966   | 967 | 974   | 965 | 92   |
| 180° | 971 | 971   | 971 | 971   | 971 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 552.9 | 552.9 | 552.9 | 552.9 | 552.9 |
| 2.5°   | 554.6 | 553.3 | 548.4 | 552.9 | 552.4 |
| 5°     | 552.4 | 550.6 | 545.8 | 550.6 | 549.8 |
| 7.5°   | 548.4 | 546.6 | 541.3 | 545.3 | 544.9 |
| 10°    | 542.7 | 540.9 | 535.1 | 538.7 | 537.8 |
| 12.5°  | 535.1 | 533.4 | 527.2 | 531.1 | 529.8 |
| 15°    | 525.8 | 524.1 | 517.4 | 520.1 | 518.7 |
| 17.5°  | 515.2 | 513.0 | 506.8 | 508.6 | 507.7 |
| 20°    | 503.2 | 501.0 | 494.4 | 495.7 | 494.8 |
| 22.5°  | 490.4 | 487.3 | 480.6 | 483.3 | 481.5 |
| 25°    | 476.2 | 473.1 | 466.9 | 467.4 | 465.6 |
| 27.5°  | 460.3 | 457.2 | 451.4 | 450.5 | 448.3 |
| 30°    | 444.3 | 440.8 | 435.0 | 433.2 | 431.0 |
| 32.5°  | 427.5 | 424.4 | 418.2 | 416.0 | 413.8 |
| 35°    | 409.8 | 406.7 | 400.5 | 397.4 | 395.1 |
| 37.5°  | 391.2 | 388.5 | 381.9 | 378.8 | 375.7 |
| 40°    | 373.0 | 369.5 | 362.8 | 358.4 | 356.2 |
| 42.5°  | 353.5 | 351.7 | 344.2 | 338.9 | 337.6 |
| 45°    | 334.5 | 331.4 | 324.3 | 319.4 | 318.1 |
| 47.5°  | 314.5 | 312.3 | 305.7 | 300.3 | 296.8 |
| 50°    | 294.1 | 292.4 | 286.2 | 280.0 | 277.3 |
| 52.5°  | 274.2 | 272.0 | 265.4 | 260.0 | 256.5 |
| 55°    | 252.9 | 251.6 | 245.4 | 240.1 | 237.4 |
| 57.5°  | 233.0 | 231.7 | 225.5 | 220.2 | 217.5 |
| 60°    | 212.2 | 210.0 | 204.2 | 200.2 | 198.0 |
| 62.5°  | 191.8 | 190.0 | 183.8 | 180.3 | 178.1 |
| 65°    | 171.4 | 169.2 | 164.8 | 160.4 | 158.1 |
| 67.5°  | 150.6 | 148.8 | 144.4 | 140.0 | 139.5 |
| 70°    | 131.6 | 128.5 | 124.9 | 121.4 | 120.1 |
| 72.5°  | 111.2 | 108.1 | 105.4 | 102.8 | 101.4 |
| 75°    | 91.3  | 89.0  | 86.8  | 85.1  | 84.6  |
| 77.5°  | 71.8  | 70.9  | 68.7  | 68.2  | 66.9  |
| 80°    | 54.5  | 53.2  | 52.3  | 51.4  | 50.9  |
| 82.5°  | 37.7  | 37.2  | 37.2  | 36.8  | 36.3  |
| 85°    | 23.9  | 23.9  | 23.0  | 23.0  | 22.6  |
| 87.5°  | 11.5  | 11.1  | 10.6  | 10.6  | 10.6  |
| 90°    | 2.2   | 10.2  | 16.0  | 20.3  | 21.8  |
| 92.5°  | 10.9  | 9.4   | 15.2  | 19.6  | 19.6  |
| 95°    | 39.9  | 15.2  | 16.0  | 20.3  | 21.1  |
| 97.5°  | 76.2  | 92.2  | 16.0  | 19.6  | 20.3  |
| 100°   | 119.1 | 132.2 | 31.9  | 19.6  | 20.3  |
| 102.5° | 167.0 | 175.7 | 184.4 | 21.1  | 21.1  |
| 105°   | 218.6 | 222.9 | 226.5 | 233.1 | 206.9 |
| 107.5° | 265.8 | 267.9 | 273.0 | 276.6 | 279.5 |
| 110°   | 313.7 | 315.9 | 320.2 | 321.7 | 323.8 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 360.1 | 364.5 | 366.0 | 365.2 | 368.1 |
| 115°   | 408.1 | 410.2 | 409.5 | 411.0 | 411.0 |
| 117.5° | 450.9 | 453.8 | 456.0 | 455.3 | 455.3 |
| 120°   | 494.5 | 497.4 | 496.7 | 498.1 | 496.7 |
| 122.5° | 535.1 | 536.6 | 538.0 | 538.8 | 537.3 |
| 125°   | 573.6 | 576.5 | 575.1 | 577.3 | 578.0 |
| 127.5° | 610.7 | 611.4 | 615.0 | 614.3 | 613.6 |
| 130°   | 646.2 | 647.0 | 649.1 | 649.9 | 649.9 |
| 132.5° | 678.9 | 680.4 | 683.3 | 684.0 | 683.3 |
| 135°   | 711.6 | 710.9 | 713.8 | 715.2 | 716.7 |
| 137.5° | 740.6 | 740.6 | 744.3 | 745.7 | 745.0 |
| 140°   | 768.9 | 770.4 | 771.8 | 774.0 | 774.8 |
| 142.5° | 794.4 | 797.3 | 798.0 | 799.4 | 799.4 |
| 145°   | 820.5 | 822.7 | 822.7 | 823.4 | 824.9 |
| 147.5° | 840.8 | 845.2 | 844.5 | 845.2 | 845.9 |
| 150°   | 863.3 | 866.2 | 865.5 | 865.5 | 866.2 |
| 152.5° | 882.2 | 884.4 | 882.9 | 884.4 | 883.7 |
| 155°   | 899.6 | 900.4 | 898.2 | 901.1 | 898.9 |
| 157.5° | 914.9 | 914.9 | 912.0 | 915.6 | 912.0 |
| 160°   | 928.0 | 925.8 | 925.1 | 929.4 | 925.1 |
| 162.5° | 939.6 | 936.7 | 935.9 | 940.3 | 935.2 |
| 165°   | 949.0 | 945.4 | 945.4 | 951.2 | 944.7 |
| 167.5° | 957.0 | 953.4 | 952.6 | 959.2 | 951.9 |
| 170°   | 963.5 | 959.2 | 959.9 | 965.7 | 958.5 |
| 172.5° | 967.9 | 963.5 | 964.3 | 970.1 | 962.1 |
| 175°   | 970.8 | 966.4 | 967.2 | 973.7 | 965.0 |
| 177.5° | 973.0 | 967.9 | 969.3 | 975.2 | 966.4 |
| 180°   | 970.8 | 970.8 | 970.8 | 970.8 | 970.8 |

(END OF REPORT)