

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: P1032667

Luminaire Tested: S124DIW-B350D470UB2750-4F0-XX-W2A-D\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1032667  
REPORT IS A COMBINATION OF REPORTS P997497 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B350D470UB2750-4F0-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**

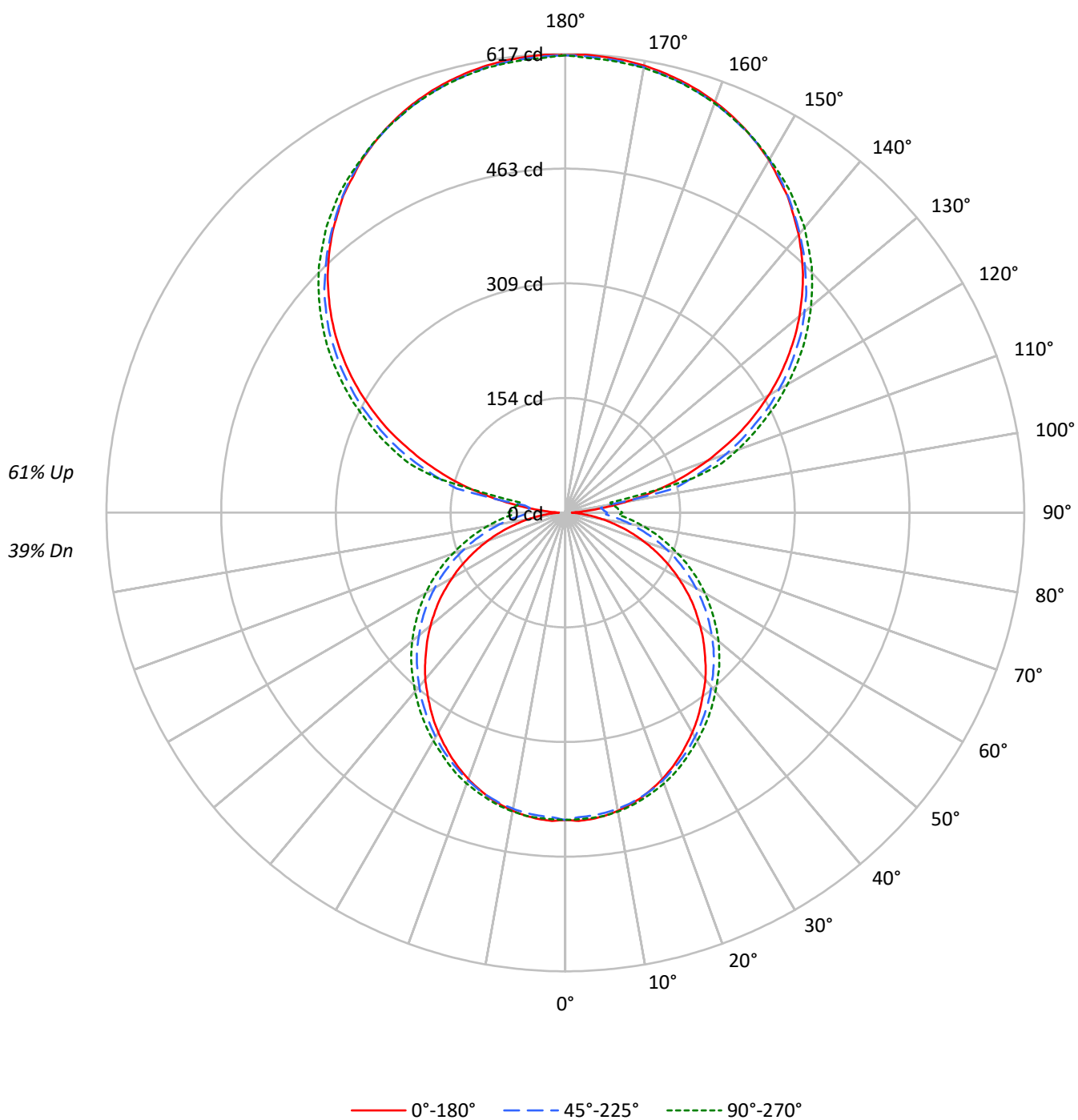
Lumens per Lamp: N/A  
Luminaire Lumens: 3314.0 lumens  
Efficiency: N/A  
Efficacy: 126.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 26.2  
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   | 105 | 105 | 105 | 105 | 95 | 95 | 95 | 95 | 77 | 77 | 77 | 61 | 61 | 61 | 46 | 46 | 46 |
| 1   | 95  | 90  | 86  | 82  | 86 | 82 | 78 | 75 | 67 | 64 | 62 | 53 | 51 | 49 | 40 | 39 | 38 |
| 2   | 86  | 78  | 72  | 66  | 78 | 71 | 66 | 61 | 58 | 54 | 50 | 46 | 43 | 40 | 34 | 33 | 31 |
| 3   | 78  | 68  | 61  | 55  | 70 | 62 | 56 | 50 | 51 | 46 | 42 | 40 | 37 | 34 | 30 | 28 | 26 |
| 4   | 71  | 60  | 52  | 46  | 64 | 55 | 48 | 42 | 45 | 40 | 35 | 36 | 32 | 29 | 27 | 24 | 22 |
| 5   | 65  | 53  | 45  | 39  | 59 | 49 | 42 | 36 | 40 | 35 | 30 | 32 | 28 | 25 | 24 | 21 | 19 |
| 6   | 60  | 48  | 40  | 34  | 54 | 44 | 36 | 31 | 36 | 30 | 26 | 29 | 25 | 21 | 22 | 19 | 17 |
| 7   | 55  | 43  | 35  | 29  | 50 | 39 | 32 | 27 | 32 | 27 | 23 | 26 | 22 | 19 | 20 | 17 | 15 |
| 8   | 51  | 39  | 31  | 26  | 46 | 36 | 29 | 24 | 29 | 24 | 20 | 24 | 20 | 17 | 18 | 15 | 13 |
| 9   | 48  | 35  | 28  | 23  | 43 | 32 | 26 | 21 | 27 | 22 | 18 | 22 | 18 | 15 | 17 | 14 | 12 |
| 10  | 44  | 32  | 25  | 20  | 40 | 30 | 23 | 19 | 25 | 20 | 16 | 20 | 16 | 13 | 15 | 13 | 11 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3370 | 3370 | 3370 |
| 5°  | 3379 | 3282 | 3288 |
| 10° | 3358 | 3218 | 3209 |
| 15° | 3326 | 3145 | 3119 |
| 20° | 3279 | 3066 | 3031 |
| 25° | 3227 | 2980 | 2937 |
| 30° | 3170 | 2894 | 2841 |
| 35° | 3106 | 2806 | 2755 |
| 40° | 3054 | 2721 | 2667 |
| 45° | 2978 | 2643 | 2589 |
| 50° | 2913 | 2552 | 2506 |
| 55° | 2846 | 2466 | 2411 |
| 60° | 2742 | 2358 | 2321 |
| 65° | 2628 | 2242 | 2214 |
| 70° | 2488 | 2110 | 2089 |
| 75° | 2294 | 1962 | 1971 |
| 80° | 2073 | 1811 | 1847 |
| 85° | 1783 | 1660 | 1746 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2978 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 39.2   | 1.2       |
| 10°-20°   | 112.2  | 3.4       |
| 20°-30°   | 169.6  | 5.1       |
| 30°-40°   | 205.2  | 6.2       |
| 40°-50°   | 217.0  | 6.5       |
| 50°-60°   | 204.2  | 6.2       |
| 60°-70°   | 169.4  | 5.1       |
| 70°-80°   | 118.9  | 3.6       |
| 80°-90°   | 68.3   | 2.1       |
| 90°-100°  | 60.3   | 1.8       |
| 100°-110° | 164.0  | 4.9       |
| 110°-120° | 276.6  | 8.3       |
| 120°-130° | 337.2  | 10.2      |
| 130°-140° | 353.6  | 10.7      |
| 140°-150° | 327.1  | 9.9       |
| 150°-160° | 263.0  | 7.9       |
| 160°-170° | 169.6  | 5.1       |
| 170°-180° | 58.5   | 1.8       |
| 0°-30°    | 321.0  | 9.7       |
| 0°-40°    | 526.2  | 15.9      |
| 0°-60°    | 947.4  | 28.6      |
| 0°-90°    | 1304.0 | 39.3      |
| 90°-120°  | 501.0  | 15.1      |
| 90°-150°  | 1518.9 | 45.8      |
| 90°-180°  | 2010.0 | 60.7      |
| 0°-180°   | 3314.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 413 | 413   | 413 | 413   | 413 |      |
| 5°   | 414 | 412   | 409 | 413   | 412 | 39   |
| 15°  | 397 | 397   | 396 | 400   | 399 | 112  |
| 25°  | 363 | 366   | 367 | 372   | 372 | 167  |
| 35°  | 318 | 323   | 328 | 334   | 336 | 199  |
| 45°  | 265 | 274   | 282 | 290   | 292 | 205  |
| 55°  | 207 | 217   | 231 | 240   | 243 | 185  |
| 65°  | 144 | 158   | 174 | 186   | 189 | 142  |
| 75°  | 80  | 97    | 116 | 129   | 133 | 85   |
| 85°  | 24  | 44    | 65  | 79    | 83  | 26   |
| 90°  | 9   | 32    | 56  | 72    | 77  | 6    |
| 95°  | 31  | 31    | 50  | 66    | 70  | 36   |
| 105° | 143 | 155   | 174 | 190   | 177 | 150  |
| 115° | 261 | 267   | 281 | 292   | 296 | 257  |
| 125° | 365 | 367   | 377 | 388   | 391 | 326  |
| 135° | 452 | 451   | 456 | 465   | 468 | 348  |
| 145° | 520 | 521   | 521 | 525   | 527 | 325  |
| 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°     | 413.3 | 413.3 | 413.3 | 413.3 | 413.3 |
| 2.5°   | 415.1 | 413.7 | 410.0 | 413.3 | 412.8 |
| 5°     | 413.7 | 412.3 | 409.1 | 412.8 | 412.3 |
| 7.5°   | 411.0 | 410.0 | 407.3 | 411.4 | 411.0 |
| 10°    | 407.3 | 406.8 | 404.5 | 408.6 | 408.2 |
| 12.5°  | 402.2 | 402.2 | 400.8 | 404.5 | 404.5 |
| 15°    | 396.6 | 397.1 | 395.7 | 399.8 | 399.4 |
| 17.5°  | 389.2 | 390.6 | 390.1 | 394.3 | 393.8 |
| 20°    | 381.3 | 382.7 | 383.2 | 387.8 | 387.8 |
| 22.5°  | 372.5 | 374.4 | 375.3 | 379.9 | 380.9 |
| 25°    | 362.8 | 365.6 | 367.0 | 372.1 | 372.5 |
| 27.5°  | 352.2 | 356.3 | 358.2 | 362.8 | 363.3 |
| 30°    | 341.5 | 345.2 | 348.5 | 353.6 | 354.5 |
| 32.5°  | 330.0 | 334.6 | 338.3 | 344.3 | 345.2 |
| 35°    | 317.5 | 323.0 | 327.7 | 334.1 | 335.5 |
| 37.5°  | 305.0 | 311.5 | 317.0 | 323.5 | 324.9 |
| 40°    | 292.9 | 299.0 | 305.4 | 312.4 | 314.2 |
| 42.5°  | 279.1 | 286.0 | 293.9 | 301.7 | 303.1 |
| 45°    | 264.7 | 273.5 | 282.3 | 290.2 | 292.5 |
| 47.5°  | 251.3 | 260.1 | 270.3 | 278.1 | 280.9 |
| 50°    | 236.5 | 246.7 | 256.8 | 266.1 | 268.9 |
| 52.5°  | 221.7 | 231.9 | 243.9 | 253.1 | 255.9 |
| 55°    | 207.3 | 217.0 | 230.9 | 240.2 | 243.0 |
| 57.5°  | 191.1 | 203.2 | 216.6 | 227.7 | 230.0 |
| 60°    | 175.4 | 187.4 | 202.7 | 213.3 | 217.0 |
| 62.5°  | 160.1 | 173.5 | 188.8 | 199.5 | 203.2 |
| 65°    | 143.5 | 158.3 | 174.0 | 185.6 | 189.3 |
| 67.5°  | 127.7 | 143.5 | 160.1 | 171.7 | 175.4 |
| 70°    | 111.5 | 127.3 | 144.9 | 157.3 | 160.6 |
| 72.5°  | 95.8  | 112.0 | 131.0 | 143.0 | 146.7 |
| 75°    | 79.6  | 96.7  | 116.2 | 129.1 | 133.3 |
| 77.5°  | 64.3  | 82.4  | 102.7 | 115.7 | 120.3 |
| 80°    | 50.4  | 69.0  | 89.3  | 103.2 | 106.9 |
| 82.5°  | 36.6  | 56.0  | 76.4  | 90.7  | 94.9  |
| 85°    | 24.5  | 44.0  | 64.8  | 78.7  | 83.3  |
| 87.5°  | 15.3  | 34.2  | 54.6  | 68.0  | 72.2  |
| 90°    | 8.8   | 32.3  | 55.9  | 72.1  | 76.7  |
| 92.5°  | 13.8  | 29.1  | 52.7  | 68.4  | 72.1  |
| 95°    | 31.3  | 31.0  | 50.4  | 65.7  | 70.2  |
| 97.5°  | 53.9  | 77.4  | 48.0  | 62.4  | 67.0  |
| 100°   | 80.6  | 100.8 | 55.4  | 60.1  | 63.8  |
| 102.5° | 110.9 | 126.7 | 149.8 | 58.2  | 61.9  |
| 105°   | 142.7 | 154.7 | 174.1 | 189.8 | 176.9 |
| 107.5° | 172.6 | 181.8 | 201.2 | 215.1 | 220.2 |
| 110°   | 202.5 | 210.4 | 229.3 | 240.8 | 245.9 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 231.4 | 239.8 | 256.0 | 265.7 | 271.2 |
| 115°   | 261.4 | 266.9 | 281.3 | 292.3 | 295.6 |
| 117.5° | 288.6 | 293.2 | 308.4 | 317.7 | 321.4 |
| 120°   | 315.7 | 318.9 | 331.8 | 342.1 | 344.8 |
| 122.5° | 341.4 | 342.4 | 355.8 | 365.5 | 367.8 |
| 125°   | 365.4 | 366.8 | 377.4 | 387.6 | 390.8 |
| 127.5° | 388.9 | 388.9 | 400.4 | 408.3 | 411.0 |
| 130°   | 410.9 | 410.9 | 419.7 | 428.5 | 431.2 |
| 132.5° | 431.6 | 432.1 | 439.5 | 447.8 | 450.1 |
| 135°   | 451.9 | 451.4 | 456.5 | 464.9 | 468.5 |
| 137.5° | 470.3 | 469.9 | 474.0 | 481.9 | 483.7 |
| 140°   | 488.2 | 488.7 | 490.0 | 497.4 | 500.3 |
| 142.5° | 503.9 | 505.8 | 505.7 | 511.7 | 513.5 |
| 145°   | 520.5 | 521.4 | 521.4 | 524.6 | 527.3 |
| 147.5° | 533.4 | 535.6 | 535.2 | 536.1 | 538.4 |
| 150°   | 547.6 | 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)