

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: P1031152

Luminaire Tested: S123RDIW-B340D460UB2750-4F0-XX-W2A-F\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031152  
REPORT IS A COMBINATION OF REPORTS P994308 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIW-B340D460UB2750-4F0-XX-W2A-F\_3500K  
Description: Define 3 Regressed Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721}  
{m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

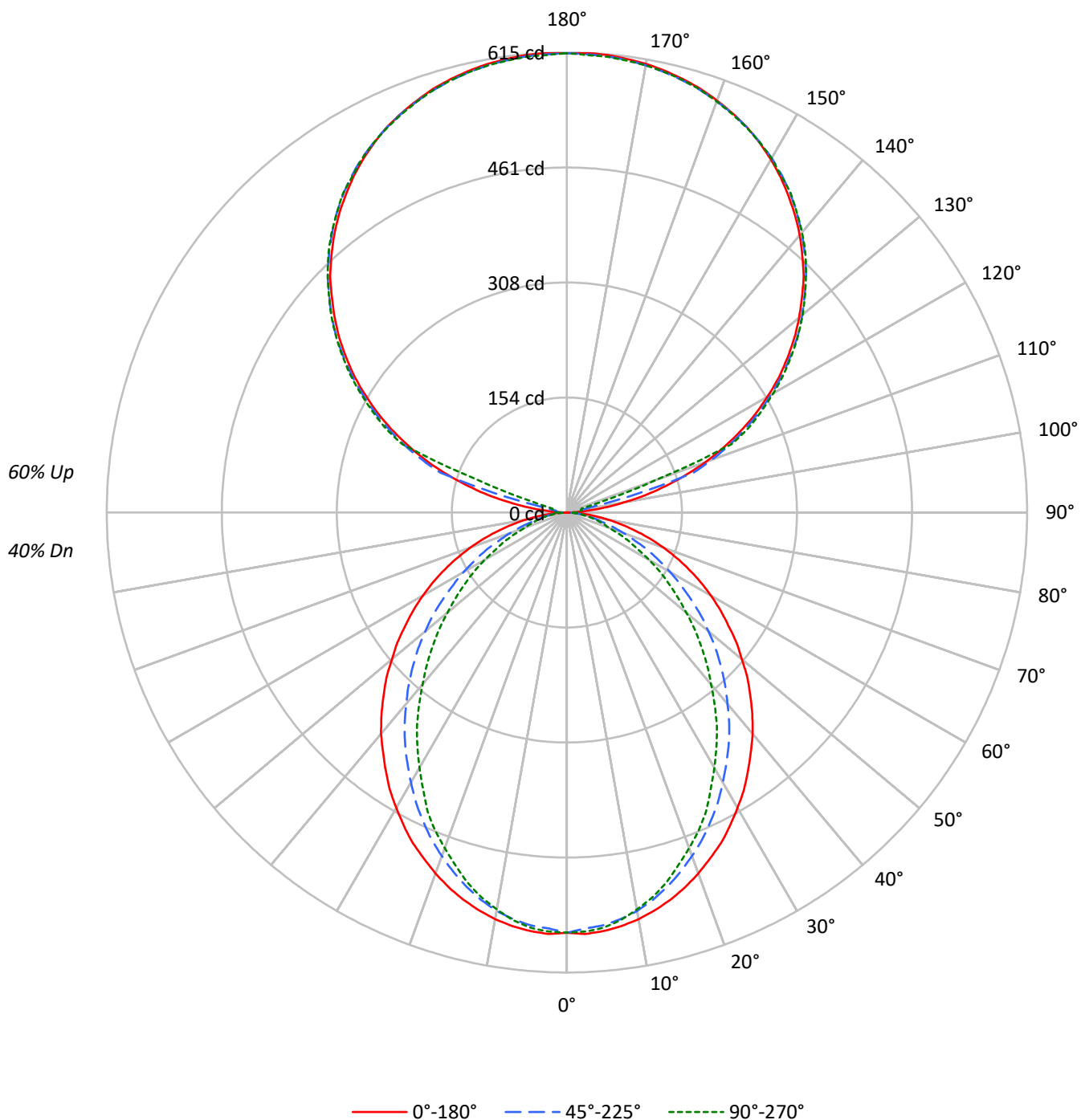
Lumens per Lamp: N/A  
Luminaire Lumens: 3142.0 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

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 | 78 | 78 | 78 | 62 | 62 | 62 | 47 | 47 | 47 |
| 1   | 96  | 92  | 88  | 85  | 87 | 84 | 81 | 78 | 69 | 67 | 65 | 55 | 53 | 52 | 42 | 41 | 40 |
| 2   | 88  | 80  | 74  | 70  | 80 | 73 | 68 | 64 | 61 | 57 | 54 | 49 | 46 | 44 | 37 | 36 | 34 |
| 3   | 80  | 71  | 64  | 58  | 73 | 65 | 59 | 54 | 54 | 49 | 45 | 43 | 40 | 37 | 33 | 31 | 30 |
| 4   | 73  | 63  | 55  | 49  | 66 | 58 | 51 | 46 | 48 | 43 | 39 | 39 | 35 | 32 | 30 | 28 | 26 |
| 5   | 67  | 56  | 48  | 42  | 61 | 51 | 45 | 39 | 43 | 38 | 34 | 35 | 31 | 28 | 27 | 25 | 23 |
| 6   | 62  | 50  | 42  | 37  | 56 | 46 | 39 | 34 | 39 | 33 | 29 | 31 | 28 | 25 | 25 | 22 | 20 |
| 7   | 57  | 45  | 38  | 32  | 52 | 42 | 35 | 30 | 35 | 30 | 26 | 29 | 25 | 22 | 23 | 20 | 18 |
| 8   | 53  | 41  | 34  | 28  | 48 | 38 | 31 | 27 | 32 | 27 | 23 | 26 | 22 | 19 | 21 | 18 | 16 |
| 9   | 49  | 38  | 30  | 25  | 45 | 35 | 28 | 24 | 29 | 24 | 21 | 24 | 20 | 18 | 19 | 16 | 14 |
| 10  | 46  | 34  | 27  | 23  | 42 | 32 | 26 | 21 | 27 | 22 | 19 | 22 | 19 | 16 | 18 | 15 | 13 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6046 | 6046 | 6046 |
| 5°  | 6056 | 5833 | 5817 |
| 10° | 6008 | 5613 | 5502 |
| 15° | 5930 | 5342 | 5158 |
| 20° | 5828 | 5047 | 4774 |
| 25° | 5723 | 4741 | 4409 |
| 30° | 5587 | 4415 | 3979 |
| 35° | 5449 | 4095 | 3587 |
| 40° | 5316 | 3747 | 3154 |
| 45° | 5149 | 3407 | 2764 |
| 50° | 4963 | 3044 | 2361 |
| 55° | 4771 | 2656 | 1991 |
| 60° | 4587 | 2257 | 1616 |
| 65° | 4349 | 1849 | 1261 |
| 70° | 4052 | 1398 | 901  |
| 75° | 3621 | 947  | 714  |
| 80° | 3089 | 658  | 501  |
| 85° | 2315 | 356  | 262  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5149 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 52.8   | 1.7       |
| 10°-20°   | 146.9  | 4.7       |
| 20°-30°   | 211.5  | 6.7       |
| 30°-40°   | 238.2  | 7.6       |
| 40°-50°   | 227.8  | 7.3       |
| 50°-60°   | 186.5  | 5.9       |
| 60°-70°   | 125.7  | 4.0       |
| 70°-80°   | 63.1   | 2.0       |
| 80°-90°   | 17.7   | 0.6       |
| 90°-100°  | 21.7   | 0.7       |
| 100°-110° | 104.7  | 3.3       |
| 110°-120° | 256.5  | 8.2       |
| 120°-130° | 325.6  | 10.4      |
| 130°-140° | 347.9  | 11.1      |
| 140°-150° | 325.3  | 10.4      |
| 150°-160° | 262.4  | 8.4       |
| 160°-170° | 169.3  | 5.4       |
| 170°-180° | 58.4   | 1.9       |
| 0°-30°    | 411.2  | 13.1      |
| 0°-40°    | 649.4  | 20.7      |
| 0°-60°    | 1063.7 | 33.9      |
| 0°-90°    | 1270.2 | 40.4      |
| 90°-120°  | 382.9  | 12.2      |
| 90°-150°  | 1381.7 | 44.0      |
| 90°-180°  | 1872.0 | 59.6      |
| 0°-180°   | 3142.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 562 | 562   | 562 | 562   | 562 |      |
| 5°   | 562 | 559   | 554 | 558   | 557 | 53   |
| 15°  | 536 | 531   | 518 | 516   | 512 | 151  |
| 25°  | 488 | 476   | 455 | 446   | 440 | 224  |
| 35°  | 422 | 406   | 377 | 358   | 349 | 264  |
| 45°  | 347 | 326   | 291 | 265   | 254 | 268  |
| 55°  | 263 | 241   | 202 | 176   | 167 | 236  |
| 65°  | 180 | 155   | 119 | 97    | 92  | 178  |
| 75°  | 95  | 73    | 48  | 44    | 43  | 101  |
| 85°  | 24  | 14    | 13  | 12    | 12  | 26   |
| 90°  | 0   | 5     | 11  | 13    | 14  | 3    |
| 95°  | 28  | 9     | 14  | 17    | 17  | 33   |
| 105° | 136 | 141   | 100 | 19    | 20  | 144  |
| 115° | 255 | 258   | 262 | 266   | 268 | 252  |
| 125° | 359 | 363   | 365 | 366   | 367 | 321  |
| 135° | 448 | 450   | 452 | 453   | 452 | 345  |
| 145° | 516 | 520   | 520 | 521   | 521 | 323  |
| 155° | 569 | 568   | 568 | 571   | 568 | 262  |
| 165° | 600 | 598   | 598 | 602   | 598 | 169  |
| 175° | 614 | 612   | 612 | 615   | 612 | 58   |
| 180° | 614 | 614   | 614 | 614   | 614 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 561.7 | 561.7 | 561.7 | 561.7 | 561.7 |
| 2.5°   | 564.0 | 562.2 | 556.7 | 561.7 | 560.8 |
| 5°     | 561.7 | 559.4 | 554.0 | 558.1 | 557.2 |
| 7.5°   | 557.6 | 555.3 | 548.5 | 551.2 | 549.9 |
| 10°    | 552.1 | 549.0 | 540.8 | 541.2 | 538.9 |
| 12.5°  | 544.4 | 540.8 | 530.3 | 529.8 | 527.1 |
| 15°    | 535.7 | 530.7 | 518.0 | 515.7 | 512.5 |
| 17.5°  | 525.3 | 519.8 | 503.9 | 499.3 | 494.7 |
| 20°    | 513.4 | 506.1 | 488.8 | 482.9 | 477.4 |
| 22.5°  | 500.2 | 491.6 | 472.9 | 465.1 | 460.1 |
| 25°    | 487.5 | 476.1 | 455.1 | 445.5 | 440.5 |
| 27.5°  | 472.0 | 459.7 | 436.9 | 424.1 | 416.4 |
| 30°    | 456.0 | 442.4 | 416.8 | 401.4 | 394.1 |
| 32.5°  | 440.1 | 424.1 | 396.8 | 379.5 | 371.7 |
| 35°    | 421.9 | 405.5 | 377.2 | 357.6 | 349.4 |
| 37.5°  | 403.6 | 385.9 | 356.3 | 334.4 | 324.4 |
| 40°    | 386.3 | 366.3 | 333.9 | 310.2 | 299.8 |
| 42.5°  | 366.7 | 346.7 | 313.0 | 286.5 | 277.4 |
| 45°    | 346.7 | 326.2 | 291.1 | 265.1 | 254.2 |
| 47.5°  | 327.1 | 304.3 | 269.7 | 241.4 | 231.9 |
| 50°    | 305.2 | 283.8 | 246.9 | 218.7 | 208.2 |
| 52.5°  | 285.6 | 261.9 | 225.5 | 195.9 | 186.8 |
| 55°    | 263.3 | 241.0 | 202.3 | 175.8 | 166.7 |
| 57.5°  | 243.3 | 219.1 | 179.9 | 154.9 | 147.1 |
| 60°    | 222.3 | 197.3 | 159.4 | 134.8 | 127.1 |
| 62.5°  | 201.4 | 176.3 | 138.5 | 115.7 | 107.5 |
| 65°    | 179.9 | 154.9 | 119.4 | 97.0  | 92.0  |
| 67.5°  | 158.5 | 133.0 | 98.4  | 81.5  | 76.1  |
| 70°    | 137.6 | 113.0 | 81.1  | 65.1  | 60.1  |
| 72.5°  | 116.6 | 92.5  | 64.2  | 51.9  | 50.6  |
| 75°    | 95.2  | 73.3  | 48.3  | 43.7  | 42.8  |
| 77.5°  | 75.6  | 55.6  | 37.8  | 35.1  | 34.2  |
| 80°    | 56.9  | 38.3  | 28.7  | 27.3  | 26.4  |
| 82.5°  | 39.2  | 23.7  | 20.5  | 19.1  | 19.1  |
| 85°    | 24.1  | 14.1  | 12.8  | 11.8  | 11.8  |
| 87.5°  | 10.9  | 5.9   | 5.9   | 5.5   | 5.0   |
| 90°    | 0.5   | 5.0   | 10.9  | 12.8  | 13.7  |
| 92.5°  | 10.5  | 7.8   | 11.9  | 15.1  | 15.5  |
| 95°    | 27.8  | 9.1   | 14.1  | 17.3  | 17.3  |
| 97.5°  | 50.6  | 37.9  | 14.6  | 18.2  | 18.7  |
| 100°   | 77.1  | 86.2  | 15.1  | 18.7  | 19.2  |
| 102.5° | 107.2 | 113.1 | 33.8  | 18.7  | 19.6  |
| 105°   | 135.9 | 141.0 | 99.9  | 19.2  | 20.1  |
| 107.5° | 166.5 | 170.6 | 177.4 | 107.2 | 47.4  |
| 110°   | 197.1 | 200.7 | 205.7 | 190.7 | 125.4 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 226.3 | 229.4 | 234.5 | 238.6 | 237.7 |
| 115°   | 255.0 | 257.7 | 261.8 | 266.4 | 268.2 |
| 117.5° | 283.3 | 286.5 | 288.7 | 292.4 | 292.8 |
| 120°   | 309.3 | 313.4 | 314.7 | 318.4 | 318.4 |
| 122.5° | 335.7 | 338.9 | 340.7 | 343.0 | 343.5 |
| 125°   | 359.4 | 363.1 | 364.9 | 365.8 | 366.7 |
| 127.5° | 383.2 | 386.8 | 389.1 | 390.5 | 389.6 |
| 130°   | 405.1 | 408.7 | 410.5 | 412.4 | 411.4 |
| 132.5° | 426.0 | 429.7 | 431.1 | 432.9 | 431.5 |
| 135°   | 447.5 | 450.2 | 452.0 | 453.4 | 452.0 |
| 137.5° | 465.7 | 469.4 | 470.3 | 472.6 | 471.7 |
| 140°   | 484.0 | 486.7 | 488.1 | 489.9 | 489.0 |
| 142.5° | 500.9 | 503.6 | 505.0 | 506.3 | 505.0 |
| 145°   | 516.4 | 519.6 | 520.5 | 521.4 | 521.4 |
| 147.5° | 531.4 | 533.7 | 534.6 | 535.5 | 533.2 |
| 150°   | 545.1 | 546.5 | 547.4 | 548.3 | 546.9 |
| 152.5° | 557.4 | 557.9 | 558.3 | 560.2 | 557.9 |
| 155°   | 568.8 | 567.9 | 568.4 | 570.6 | 567.9 |
| 157.5° | 577.9 | 577.9 | 577.5 | 580.2 | 576.6 |
| 160°   | 586.2 | 585.7 | 585.2 | 588.0 | 584.8 |
| 162.5° | 593.9 | 592.5 | 592.1 | 595.3 | 592.5 |
| 165°   | 599.8 | 598.5 | 598.0 | 601.7 | 598.5 |
| 167.5° | 604.9 | 603.0 | 603.0 | 606.7 | 603.0 |
| 170°   | 609.0 | 607.1 | 607.1 | 610.8 | 607.1 |
| 172.5° | 611.7 | 609.4 | 609.9 | 613.5 | 609.4 |
| 175°   | 614.0 | 611.7 | 612.2 | 615.3 | 611.7 |
| 177.5° | 614.9 | 612.6 | 613.1 | 616.7 | 612.2 |
| 180°   | 614.0 | 614.0 | 614.0 | 614.0 | 614.0 |

(END OF REPORT)