

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: P1026342

Luminaire Tested: S124RDIP-B350D590UB40-4F0-XX-W2A-F4

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1026342  
REPORT IS A COMBINATION OF REPORTS P999372 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-B350D590UB40-4F0-XX-W2A-F4  
Description: Define 4 Regressed Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

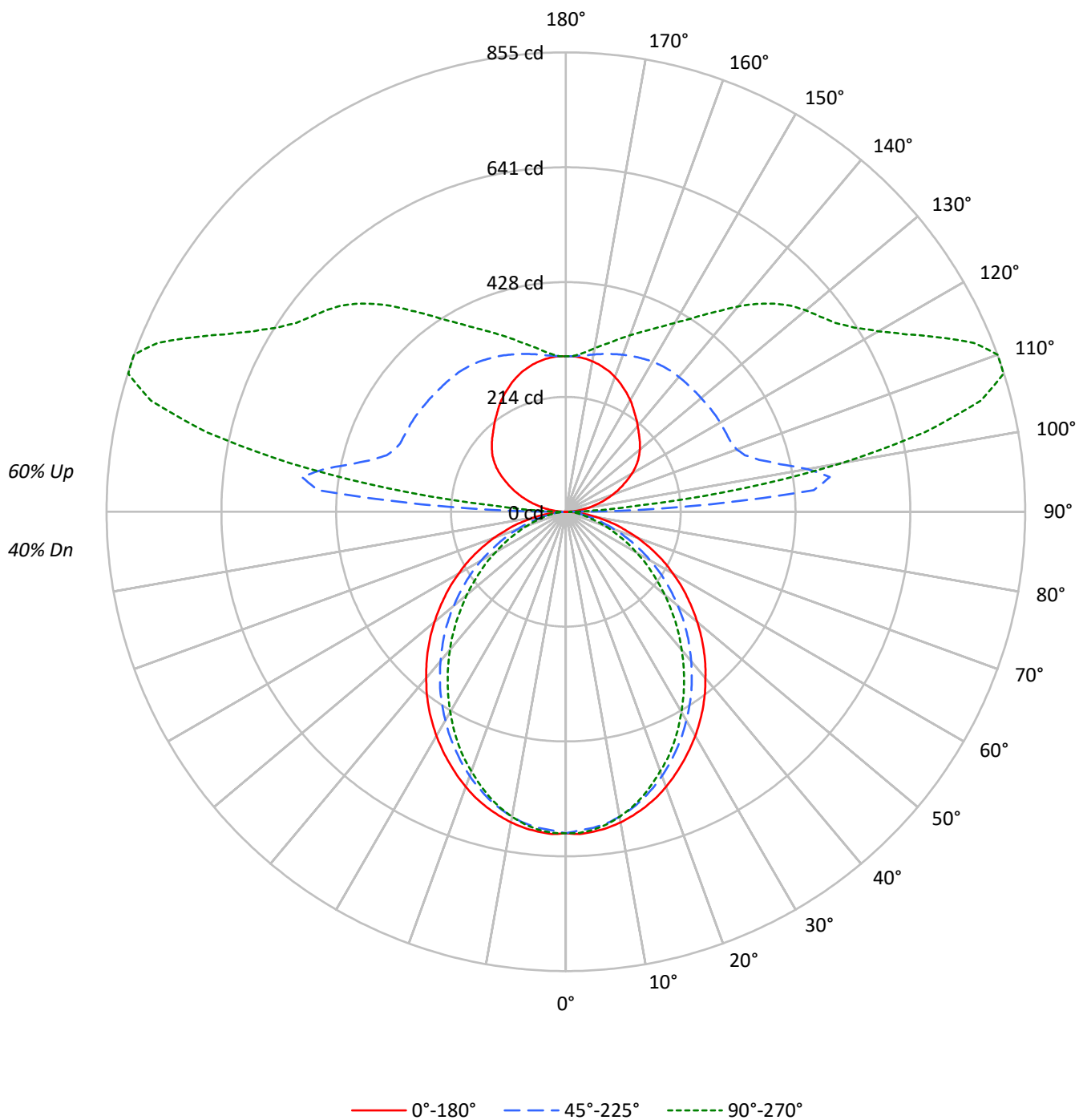
Lumens per Lamp: N/A  
Luminaire Lumens: 3495.2 lumens  
Efficiency: N/A  
Efficacy: 123.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 28.4  
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 | 61 | 61 | 61 | 47 | 47 | 47 |
| 1   | 96  | 92  | 88  | 84  | 87 | 83 | 80 | 77 | 68 | 66 | 64 | 54 | 53 | 52 | 41 | 41 | 40 |
| 2   | 87  | 80  | 74  | 69  | 79 | 73 | 68 | 64 | 60 | 56 | 53 | 48 | 45 | 43 | 37 | 35 | 34 |
| 3   | 80  | 71  | 63  | 58  | 72 | 65 | 58 | 53 | 53 | 49 | 45 | 43 | 39 | 37 | 33 | 31 | 29 |
| 4   | 73  | 63  | 55  | 49  | 66 | 57 | 51 | 45 | 47 | 42 | 38 | 38 | 35 | 32 | 29 | 27 | 25 |
| 5   | 67  | 56  | 48  | 42  | 61 | 51 | 44 | 39 | 42 | 37 | 33 | 34 | 30 | 28 | 27 | 24 | 22 |
| 6   | 62  | 50  | 42  | 36  | 56 | 46 | 39 | 34 | 38 | 33 | 29 | 31 | 27 | 24 | 24 | 21 | 19 |
| 7   | 57  | 45  | 37  | 32  | 52 | 41 | 35 | 30 | 35 | 29 | 26 | 28 | 24 | 21 | 22 | 19 | 17 |
| 8   | 53  | 41  | 33  | 28  | 48 | 38 | 31 | 26 | 32 | 26 | 23 | 26 | 22 | 19 | 20 | 18 | 16 |
| 9   | 49  | 37  | 30  | 25  | 45 | 34 | 28 | 23 | 29 | 24 | 20 | 24 | 20 | 17 | 19 | 16 | 14 |
| 10  | 46  | 34  | 27  | 22  | 42 | 32 | 25 | 21 | 27 | 22 | 18 | 22 | 18 | 16 | 17 | 15 | 13 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4880 | 4880 | 4880 |
| 5°  | 4881 | 4736 | 4737 |
| 10° | 4840 | 4586 | 4531 |
| 15° | 4773 | 4400 | 4291 |
| 20° | 4686 | 4188 | 4016 |
| 25° | 4578 | 3959 | 3747 |
| 30° | 4471 | 3726 | 3445 |
| 35° | 4354 | 3489 | 3150 |
| 40° | 4214 | 3235 | 2847 |
| 45° | 4084 | 2981 | 2547 |
| 50° | 3935 | 2705 | 2242 |
| 55° | 3775 | 2423 | 1928 |
| 60° | 3597 | 2122 | 1617 |
| 65° | 3425 | 1777 | 1318 |
| 70° | 3179 | 1415 | 1008 |
| 75° | 2867 | 1030 | 705  |
| 80° | 2394 | 633  | 506  |
| 85° | 1797 | 364  | 279  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 4084 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 56.3   | 1.6       |
| 10°-20°   | 156.9  | 4.5       |
| 20°-30°   | 226.6  | 6.5       |
| 30°-40°   | 256.8  | 7.3       |
| 40°-50°   | 247.9  | 7.1       |
| 50°-60°   | 206.1  | 5.9       |
| 60°-70°   | 142.3  | 4.1       |
| 70°-80°   | 71.9   | 2.1       |
| 80°-90°   | 19.4   | 0.6       |
| 90°-100°  | 214.9  | 6.1       |
| 100°-110° | 437.0  | 12.5      |
| 110°-120° | 389.5  | 11.1      |
| 120°-130° | 327.2  | 9.4       |
| 130°-140° | 273.1  | 7.8       |
| 140°-150° | 208.5  | 6.0       |
| 150°-160° | 146.6  | 4.2       |
| 160°-170° | 86.2   | 2.5       |
| 170°-180° | 28.0   | 0.8       |
| 0°-30°    | 439.8  | 12.6      |
| 0°-40°    | 696.6  | 19.9      |
| 0°-60°    | 1150.6 | 32.9      |
| 0°-90°    | 1384.1 | 39.6      |
| 90°-120°  | 1041.5 | 29.8      |
| 90°-150°  | 1850.3 | 52.9      |
| 90°-180°  | 2111.0 | 60.4      |
| 0°-180°   | 3495.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 598 | 598   | 598 | 598   | 598 |      |
| 5°   | 598 | 596   | 590 | 595   | 594 | 57   |
| 15°  | 569 | 565   | 554 | 553   | 550 | 160  |
| 25°  | 515 | 506   | 488 | 480   | 475 | 237  |
| 35°  | 445 | 430   | 407 | 392   | 384 | 278  |
| 45°  | 363 | 346   | 318 | 296   | 288 | 280  |
| 55°  | 275 | 257   | 227 | 203   | 194 | 246  |
| 65°  | 187 | 167   | 138 | 118   | 113 | 185  |
| 75°  | 100 | 82    | 61  | 50    | 48  | 105  |
| 85°  | 25  | 16    | 14  | 13    | 13  | 27   |
| 90°  | 1   | 4     | 10  | 11    | 12  | 3    |
| 95°  | 19  | 59    | 463 | 229   | 139 | 21   |
| 105° | 66  | 96    | 373 | 803   | 800 | 71   |
| 115° | 117 | 147   | 332 | 639   | 768 | 116  |
| 125° | 163 | 194   | 331 | 544   | 613 | 145  |
| 135° | 194 | 231   | 328 | 482   | 548 | 150  |
| 145° | 223 | 256   | 326 | 407   | 447 | 140  |
| 155° | 254 | 274   | 317 | 359   | 374 | 117  |
| 165° | 277 | 285   | 304 | 322   | 327 | 78   |
| 175° | 289 | 289   | 292 | 296   | 294 | 27   |
| 180° | 289 | 289   | 289 | 289   | 289 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 598.5 | 598.5 | 598.5 | 598.5 | 598.5 |
| 2.5°   | 600.4 | 598.5 | 593.5 | 598.5 | 598.1 |
| 5°     | 597.6 | 595.8 | 590.3 | 594.9 | 594.0 |
| 7.5°   | 593.5 | 591.7 | 584.8 | 588.0 | 586.6 |
| 10°    | 587.1 | 584.8 | 576.5 | 578.4 | 576.5 |
| 12.5°  | 578.8 | 576.1 | 566.0 | 566.9 | 564.2 |
| 15°    | 569.2 | 565.1 | 553.6 | 552.7 | 549.5 |
| 17.5°  | 558.2 | 552.3 | 539.0 | 536.7 | 532.1 |
| 20°    | 544.9 | 539.0 | 523.4 | 519.7 | 513.8 |
| 22.5°  | 530.3 | 523.4 | 506.4 | 500.5 | 495.9 |
| 25°    | 514.7 | 506.4 | 487.6 | 479.8 | 475.3 |
| 27.5°  | 498.6 | 488.6 | 468.8 | 459.7 | 453.3 |
| 30°    | 481.7 | 470.2 | 448.7 | 437.2 | 429.9 |
| 32.5°  | 463.8 | 450.5 | 428.1 | 414.3 | 407.4 |
| 35°    | 445.0 | 430.3 | 407.4 | 391.8 | 383.6 |
| 37.5°  | 425.3 | 410.2 | 385.0 | 368.0 | 359.8 |
| 40°    | 404.2 | 389.1 | 363.0 | 343.7 | 335.5 |
| 42.5°  | 384.1 | 368.0 | 340.5 | 320.8 | 312.1 |
| 45°    | 363.0 | 346.0 | 318.5 | 296.1 | 287.8 |
| 47.5°  | 341.4 | 324.0 | 295.6 | 272.2 | 263.1 |
| 50°    | 319.4 | 301.6 | 272.2 | 249.3 | 240.6 |
| 52.5°  | 297.0 | 279.6 | 249.3 | 225.9 | 216.8 |
| 55°    | 275.0 | 256.6 | 226.9 | 203.0 | 194.3 |
| 57.5°  | 253.4 | 234.2 | 204.9 | 180.6 | 174.2 |
| 60°    | 230.1 | 211.7 | 182.4 | 158.6 | 151.2 |
| 62.5°  | 209.0 | 189.7 | 159.5 | 137.9 | 132.4 |
| 65°    | 187.0 | 167.3 | 137.9 | 118.2 | 112.7 |
| 67.5°  | 164.1 | 145.3 | 117.8 | 100.4 | 94.0  |
| 70°    | 142.5 | 123.3 | 97.2  | 82.0  | 77.5  |
| 72.5°  | 119.6 | 102.7 | 78.4  | 66.0  | 61.9  |
| 75°    | 99.5  | 82.5  | 61.0  | 50.4  | 47.7  |
| 77.5°  | 78.4  | 63.7  | 45.4  | 38.0  | 37.1  |
| 80°    | 58.2  | 44.9  | 31.2  | 29.8  | 29.3  |
| 82.5°  | 40.8  | 28.9  | 22.5  | 21.5  | 21.1  |
| 85°    | 24.7  | 15.6  | 14.2  | 13.3  | 13.3  |
| 87.5°  | 10.5  | 6.9   | 6.4   | 6.0   | 6.4   |
| 90°    | 0.6   | 4.5   | 10.2  | 11.4  | 11.9  |
| 92.5°  | 8.0   | 43.8  | 222.8 | 73.6  | 51.7  |
| 95°    | 18.8  | 59.1  | 463.2 | 229.4 | 138.7 |
| 97.5°  | 31.3  | 65.4  | 495.6 | 468.3 | 333.0 |
| 100°   | 43.2  | 73.9  | 456.9 | 647.9 | 521.1 |
| 102.5° | 54.6  | 84.1  | 408.6 | 760.4 | 684.8 |
| 105°   | 66.5  | 96.4  | 372.8 | 802.8 | 799.6 |
| 107.5° | 79.6  | 108.8 | 349.5 | 790.0 | 854.2 |
| 110°   | 92.6  | 121.4 | 338.7 | 744.5 | 855.3 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 105.1 | 133.8 | 333.6 | 688.8 | 821.8 |
| 115°   | 117.1 | 146.9 | 332.5 | 638.8 | 767.8 |
| 117.5° | 129.6 | 159.1 | 331.9 | 599.6 | 714.9 |
| 120°   | 142.1 | 171.0 | 331.9 | 573.2 | 671.8 |
| 122.5° | 153.4 | 182.7 | 331.3 | 555.8 | 637.7 |
| 125°   | 163.1 | 193.8 | 330.8 | 543.6 | 612.6 |
| 127.5° | 172.2 | 204.0 | 329.6 | 532.0 | 596.7 |
| 130°   | 179.6 | 214.0 | 329.1 | 518.0 | 583.1 |
| 132.5° | 187.0 | 222.5 | 328.5 | 501.6 | 567.8 |
| 135°   | 193.8 | 230.7 | 327.9 | 482.5 | 547.9 |
| 137.5° | 200.6 | 237.8 | 327.9 | 462.0 | 524.6 |
| 140°   | 208.0 | 244.4 | 327.4 | 442.2 | 499.0 |
| 142.5° | 216.0 | 250.4 | 327.4 | 423.6 | 471.7 |
| 145°   | 223.3 | 255.8 | 326.2 | 407.0 | 447.3 |
| 147.5° | 231.9 | 260.8 | 324.5 | 393.0 | 424.5 |
| 150°   | 239.8 | 265.7 | 322.8 | 380.2 | 405.8 |
| 152.5° | 247.2 | 270.2 | 320.0 | 369.4 | 388.7 |
| 155°   | 254.0 | 274.2 | 317.1 | 359.2 | 374.5 |
| 157.5° | 260.9 | 277.9 | 314.3 | 349.5 | 361.5 |
| 160°   | 267.1 | 281.0 | 310.9 | 339.8 | 349.5 |
| 162.5° | 272.8 | 283.6 | 307.5 | 330.5 | 338.2 |
| 165°   | 276.8 | 285.3 | 304.1 | 322.0 | 326.8 |
| 167.5° | 281.3 | 286.7 | 300.6 | 314.5 | 317.7 |
| 170°   | 284.2 | 287.8 | 297.2 | 307.2 | 309.2 |
| 172.5° | 287.0 | 288.7 | 293.8 | 300.6 | 300.6 |
| 175°   | 288.7 | 289.3 | 291.5 | 295.5 | 294.4 |
| 177.5° | 289.8 | 289.3 | 289.8 | 291.8 | 289.8 |
| 180°   | 289.3 | 289.3 | 289.3 | 289.3 | 289.3 |

(END OF REPORT)