

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: P1012635

Luminaire Tested: S123RDIP-B560D365UB40-4F0-XX-W2A-F4

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012635  
REPORT IS A COMBINATION OF REPORTS P993432 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B560D365UB40-4F0-XX-W2A-F4  
Description: Define 3 Regressed Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

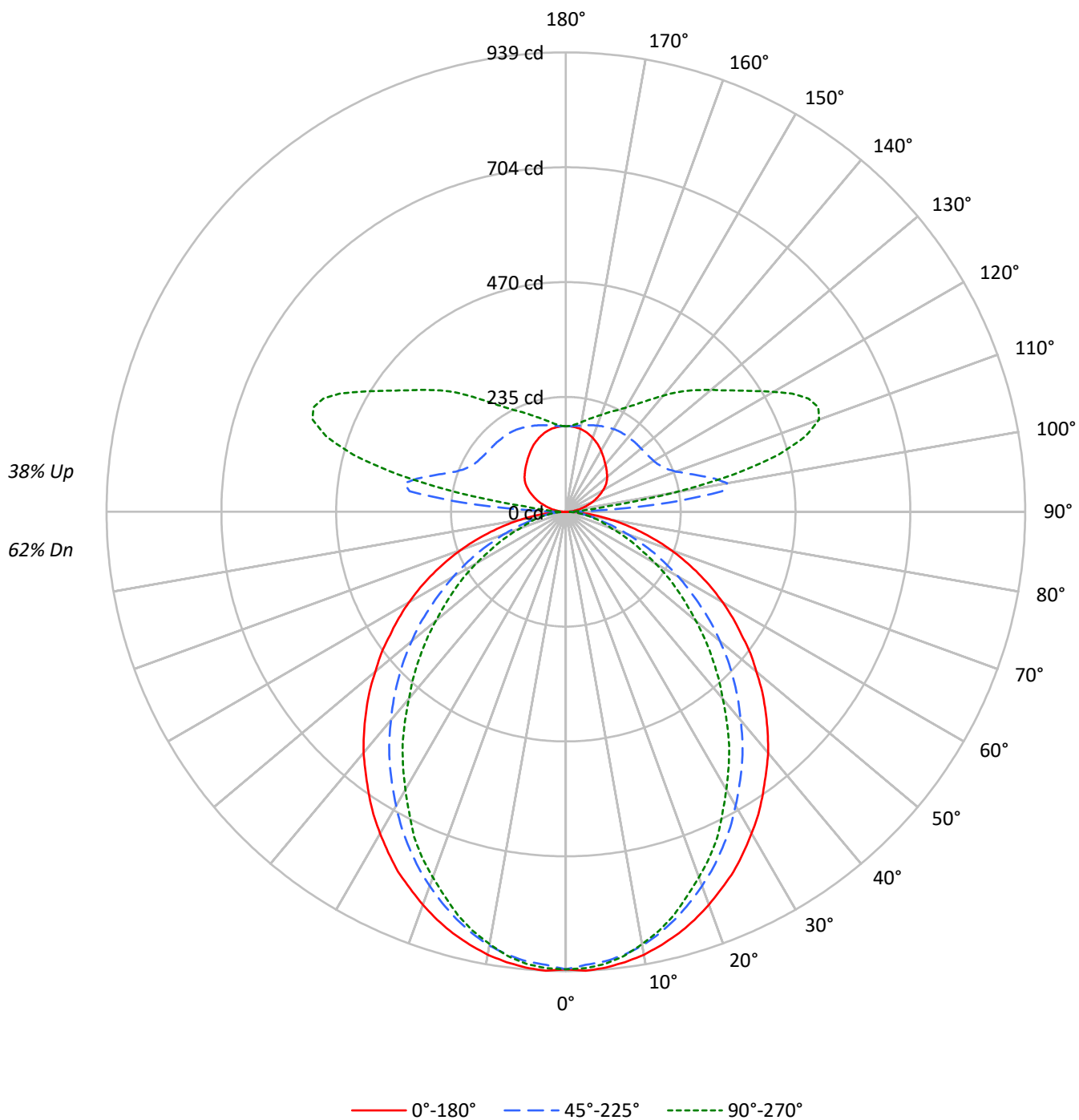
Lumens per Lamp: N/A  
Luminaire Lumens: 3431.1 lumens  
Efficiency: N/A  
Efficacy: 103.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 33.3  
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   | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 90 | 90 | 90 | 78 | 78 | 78 | 67 | 67 | 67 |
| 1   | 101 | 97  | 93  | 89  | 94  | 91  | 87  | 84  | 79 | 77 | 75 | 69 | 67 | 66 | 60 | 58 | 57 |
| 2   | 92  | 85  | 79  | 74  | 86  | 80  | 74  | 70  | 70 | 66 | 63 | 61 | 58 | 56 | 53 | 51 | 49 |
| 3   | 84  | 75  | 68  | 62  | 79  | 70  | 64  | 59  | 62 | 57 | 53 | 54 | 51 | 47 | 47 | 44 | 42 |
| 4   | 77  | 67  | 59  | 53  | 72  | 63  | 56  | 50  | 56 | 50 | 46 | 49 | 44 | 41 | 43 | 39 | 37 |
| 5   | 71  | 60  | 51  | 45  | 66  | 56  | 49  | 43  | 50 | 44 | 40 | 44 | 39 | 36 | 39 | 35 | 32 |
| 6   | 66  | 54  | 46  | 40  | 61  | 51  | 43  | 38  | 45 | 39 | 35 | 40 | 35 | 32 | 35 | 31 | 28 |
| 7   | 61  | 49  | 41  | 35  | 57  | 46  | 39  | 34  | 41 | 35 | 31 | 36 | 32 | 28 | 32 | 28 | 25 |
| 8   | 57  | 44  | 37  | 31  | 53  | 42  | 35  | 30  | 38 | 32 | 28 | 33 | 29 | 25 | 30 | 26 | 23 |
| 9   | 53  | 41  | 33  | 28  | 50  | 39  | 32  | 27  | 35 | 29 | 25 | 31 | 26 | 23 | 27 | 24 | 21 |
| 10  | 49  | 37  | 30  | 25  | 46  | 35  | 29  | 24  | 32 | 26 | 23 | 29 | 24 | 21 | 25 | 22 | 19 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10067 | 10067 | 10067 |
| 5°  | 10084 | 9711  | 9685  |
| 10° | 10005 | 9346  | 9162  |
| 15° | 9875  | 8895  | 8589  |
| 20° | 9704  | 8404  | 7949  |
| 25° | 9529  | 7894  | 7342  |
| 30° | 9303  | 7352  | 6625  |
| 35° | 9071  | 6819  | 5972  |
| 40° | 8853  | 6239  | 5251  |
| 45° | 8574  | 5673  | 4603  |
| 50° | 8264  | 5069  | 3932  |
| 55° | 7944  | 4422  | 3316  |
| 60° | 7639  | 3759  | 2691  |
| 65° | 7242  | 3077  | 2100  |
| 70° | 6747  | 2327  | 1501  |
| 75° | 6029  | 1576  | 1190  |
| 80° | 5147  | 1096  | 834   |
| 85° | 3861  | 590   | 437   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8574 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.9   | 2.6       |
| 10°-20°   | 244.6  | 7.1       |
| 20°-30°   | 352.2  | 10.3      |
| 30°-40°   | 396.6  | 11.6      |
| 40°-50°   | 379.4  | 11.1      |
| 50°-60°   | 310.5  | 9.1       |
| 60°-70°   | 209.4  | 6.1       |
| 70°-80°   | 105.0  | 3.1       |
| 80°-90°   | 28.4   | 0.8       |
| 90°-100°  | 99.3   | 2.9       |
| 100°-110° | 277.5  | 8.1       |
| 110°-120° | 270.6  | 7.9       |
| 120°-130° | 215.4  | 6.3       |
| 130°-140° | 170.1  | 5.0       |
| 140°-150° | 126.9  | 3.7       |
| 150°-160° | 88.5   | 2.6       |
| 160°-170° | 52.0   | 1.5       |
| 170°-180° | 16.9   | 0.5       |
| 0°-30°    | 684.7  | 20.0      |
| 0°-40°    | 1081.3 | 31.5      |
| 0°-60°    | 1771.2 | 51.6      |
| 0°-90°    | 2114.0 | 61.6      |
| 90°-120°  | 647.3  | 18.9      |
| 90°-150°  | 1159.7 | 33.8      |
| 90°-180°  | 1317.0 | 38.4      |
| 0°-180°   | 3431.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 935 | 935   | 935 | 935   | 935 |      |
| 5°   | 935 | 932   | 922 | 929   | 928 | 89   |
| 15°  | 892 | 884   | 862 | 859   | 853 | 251  |
| 25°  | 812 | 793   | 758 | 742   | 734 | 373  |
| 35°  | 702 | 675   | 628 | 596   | 582 | 440  |
| 45°  | 577 | 543   | 485 | 442   | 423 | 445  |
| 55°  | 438 | 401   | 337 | 293   | 278 | 393  |
| 65°  | 300 | 258   | 199 | 162   | 153 | 297  |
| 75°  | 158 | 122   | 80  | 73    | 71  | 169  |
| 85°  | 40  | 24    | 21  | 20    | 20  | 44   |
| 90°  | 1   | 4     | 9   | 10    | 10  | 3    |
| 95°  | 12  | 39    | 210 | 61    | 41  | 13   |
| 105° | 41  | 61    | 284 | 497   | 450 | 44   |
| 115° | 72  | 90    | 218 | 477   | 547 | 72   |
| 125° | 101 | 119   | 203 | 368   | 431 | 90   |
| 135° | 118 | 141   | 200 | 303   | 350 | 91   |
| 145° | 135 | 154   | 198 | 248   | 273 | 84   |
| 155° | 153 | 165   | 191 | 218   | 227 | 70   |
| 165° | 167 | 172   | 183 | 194   | 198 | 47   |
| 175° | 174 | 174   | 176 | 178   | 178 | 17   |
| 180° | 175 | 175   | 175 | 175   | 175 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 935.3 | 935.3 | 935.3 | 935.3 | 935.3 |
| 2.5°   | 939.1 | 936.1 | 927.0 | 935.3 | 933.8 |
| 5°     | 935.3 | 931.5 | 922.4 | 929.2 | 927.7 |
| 7.5°   | 928.5 | 924.7 | 913.3 | 917.8 | 915.6 |
| 10°    | 919.4 | 914.1 | 900.4 | 901.2 | 897.4 |
| 12.5°  | 906.5 | 900.4 | 883.0 | 882.2 | 877.6 |
| 15°    | 892.1 | 883.7 | 862.5 | 858.7 | 853.4 |
| 17.5°  | 874.6 | 865.5 | 839.0 | 831.4 | 823.8 |
| 20°    | 854.9 | 842.8 | 813.9 | 804.1 | 795.0 |
| 22.5°  | 832.9 | 818.5 | 787.4 | 774.5 | 766.1 |
| 25°    | 811.7 | 792.7 | 757.8 | 741.9 | 733.5 |
| 27.5°  | 785.9 | 765.4 | 727.5 | 706.2 | 693.3 |
| 30°    | 759.3 | 736.6 | 694.1 | 668.3 | 656.1 |
| 32.5°  | 732.8 | 706.2 | 660.7 | 631.9 | 619.0 |
| 35°    | 702.4 | 675.1 | 628.1 | 595.5 | 581.8 |
| 37.5°  | 672.1 | 642.5 | 593.2 | 556.8 | 540.1 |
| 40°    | 643.3 | 609.9 | 556.0 | 516.6 | 499.1 |
| 42.5°  | 610.6 | 577.3 | 521.1 | 477.1 | 462.0 |
| 45°    | 577.3 | 543.1 | 484.7 | 441.5 | 423.3 |
| 47.5°  | 544.6 | 506.7 | 449.1 | 402.0 | 386.1 |
| 50°    | 508.2 | 472.6 | 411.1 | 364.1 | 346.7 |
| 52.5°  | 475.6 | 436.2 | 375.5 | 326.2 | 311.0 |
| 55°    | 438.4 | 401.3 | 336.8 | 292.8 | 277.6 |
| 57.5°  | 405.1 | 364.9 | 299.6 | 257.9 | 245.0 |
| 60°    | 370.2 | 328.5 | 265.5 | 224.5 | 211.6 |
| 62.5°  | 335.3 | 293.6 | 230.6 | 192.7 | 179.0 |
| 65°    | 299.6 | 257.9 | 198.7 | 161.6 | 153.2 |
| 67.5°  | 264.0 | 221.5 | 163.8 | 135.8 | 126.7 |
| 70°    | 229.1 | 188.1 | 135.0 | 108.5 | 100.1 |
| 72.5°  | 194.2 | 154.0 | 107.0 | 86.5  | 84.2  |
| 75°    | 158.5 | 122.1 | 80.4  | 72.8  | 71.3  |
| 77.5°  | 125.9 | 92.5  | 63.0  | 58.4  | 56.9  |
| 80°    | 94.8  | 63.7  | 47.8  | 45.5  | 44.0  |
| 82.5°  | 65.2  | 39.4  | 34.1  | 31.9  | 31.9  |
| 85°    | 40.2  | 23.5  | 21.2  | 19.7  | 19.7  |
| 87.5°  | 18.2  | 9.9   | 9.9   | 9.1   | 8.3   |
| 90°    | 0.7   | 4.2   | 8.8   | 9.9   | 10.3  |
| 92.5°  | 5.3   | 21.2  | 65.8  | 22.4  | 18.7  |
| 95°    | 12.0  | 39.1  | 209.7 | 61.2  | 41.0  |
| 97.5°  | 19.1  | 44.7  | 322.5 | 153.8 | 84.2  |
| 100°   | 26.2  | 49.3  | 334.9 | 321.8 | 221.7 |
| 102.5° | 33.6  | 54.6  | 311.9 | 430.9 | 351.1 |
| 105°   | 41.0  | 60.6  | 284.3 | 497.2 | 449.8 |
| 107.5° | 48.8  | 67.7  | 259.9 | 526.4 | 514.2 |
| 110°   | 57.3  | 75.0  | 239.8 | 527.2 | 550.9 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 65.1  | 82.6  | 226.3 | 507.3 | 558.4 |
| 115°   | 72.5  | 90.4  | 217.5 | 476.8 | 547.1 |
| 117.5° | 79.9  | 97.8  | 211.5 | 444.3 | 522.3 |
| 120°   | 87.7  | 105.2 | 207.6 | 413.6 | 489.8 |
| 122.5° | 94.4  | 112.2 | 205.1 | 389.4 | 459.4 |
| 125°   | 100.8 | 119.0 | 203.0 | 367.8 | 431.4 |
| 127.5° | 105.7 | 125.4 | 201.9 | 350.1 | 407.4 |
| 130°   | 110.3 | 131.0 | 200.9 | 333.8 | 387.6 |
| 132.5° | 113.9 | 136.1 | 200.5 | 318.6 | 368.1 |
| 135°   | 118.1 | 140.9 | 200.2 | 302.9 | 349.7 |
| 137.5° | 122.0 | 144.8 | 199.4 | 288.0 | 330.3 |
| 140°   | 125.9 | 148.4 | 199.1 | 273.5 | 309.8 |
| 142.5° | 130.1 | 151.6 | 198.4 | 260.2 | 290.7 |
| 145°   | 134.7 | 154.4 | 197.7 | 248.4 | 273.4 |
| 147.5° | 139.3 | 157.4 | 196.6 | 239.2 | 258.5 |
| 150°   | 143.9 | 159.8 | 195.2 | 231.1 | 245.8 |
| 152.5° | 148.5 | 162.5 | 193.4 | 224.0 | 235.2 |
| 155°   | 153.1 | 165.1 | 191.3 | 217.5 | 226.7 |
| 157.5° | 156.7 | 167.4 | 189.5 | 211.1 | 218.5 |
| 160°   | 160.9 | 169.4 | 187.4 | 205.2 | 210.8 |
| 162.5° | 164.1 | 170.8 | 185.3 | 199.8 | 203.7 |
| 165°   | 167.3 | 172.0 | 183.2 | 194.3 | 197.7 |
| 167.5° | 169.7 | 173.1 | 181.1 | 189.5 | 191.7 |
| 170°   | 171.9 | 173.6 | 178.9 | 185.3 | 186.4 |
| 172.5° | 173.3 | 174.2 | 177.2 | 181.6 | 181.4 |
| 175°   | 174.3 | 174.5 | 175.8 | 178.2 | 177.9 |
| 177.5° | 175.0 | 174.7 | 174.7 | 176.1 | 175.4 |
| 180°   | 174.7 | 174.7 | 174.7 | 174.7 | 174.7 |

(END OF REPORT)