

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: P1012615

Luminaire Tested: S123RDIP-B560D365UB27-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012615  
REPORT IS A COMBINATION OF REPORTS P993402 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B560D365UB27-4F0-XX-W2A-F  
Description: Define 3 Regressed Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473}  
{m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

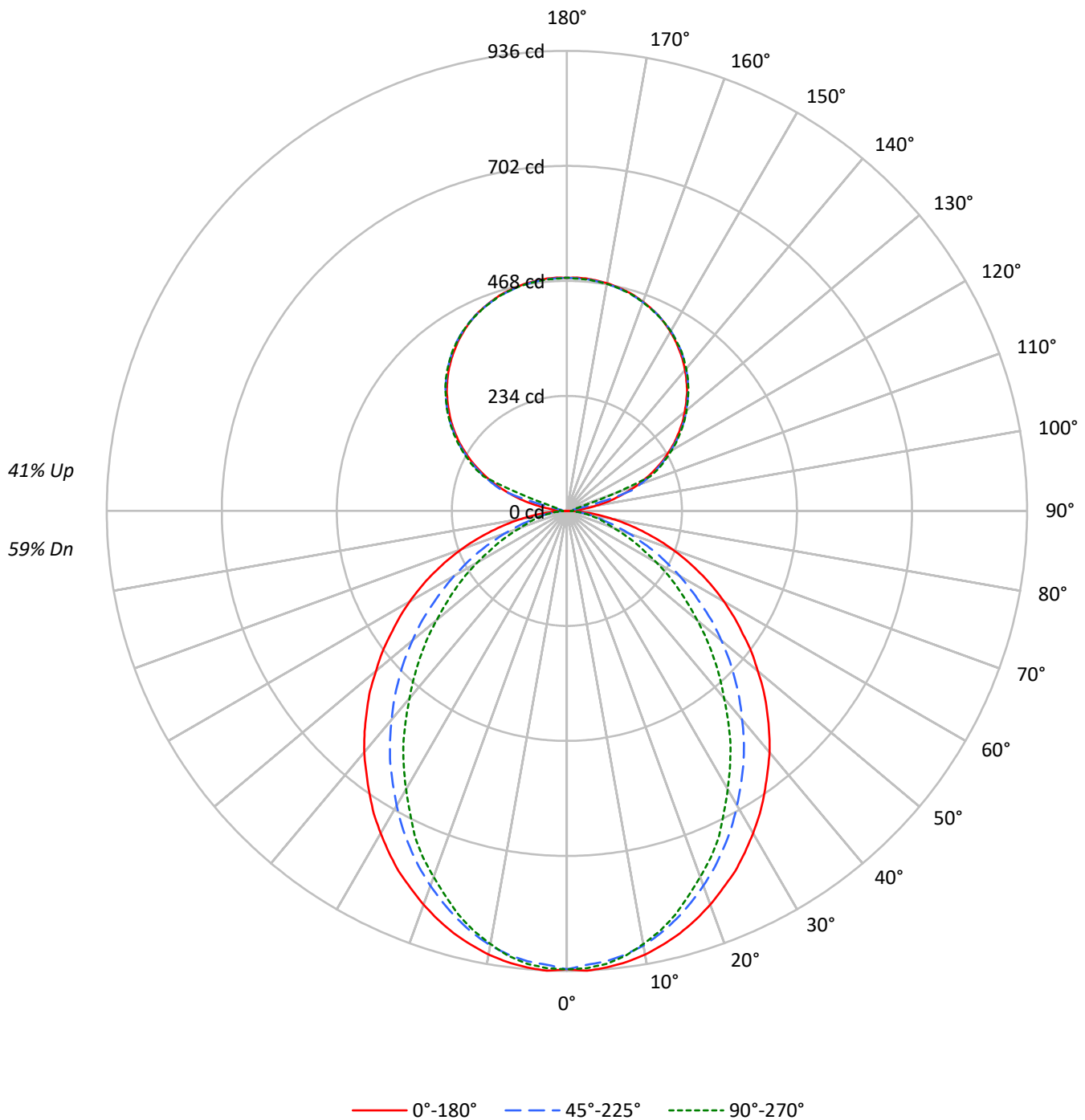
Lumens per Lamp: N/A  
Luminaire Lumens: 3554.0 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 89 | 89 | 89 | 76 | 76 | 76 | 65 | 65 | 65 |
| 1   | 100 | 96  | 92  | 89  | 93  | 90  | 87  | 84  | 78 | 76 | 74 | 68 | 66 | 64 | 58 | 57 | 55 |
| 2   | 92  | 84  | 78  | 73  | 85  | 79  | 74  | 69  | 69 | 65 | 62 | 60 | 57 | 54 | 51 | 49 | 47 |
| 3   | 84  | 74  | 67  | 61  | 78  | 70  | 63  | 58  | 61 | 56 | 52 | 53 | 49 | 46 | 46 | 43 | 41 |
| 4   | 77  | 66  | 58  | 52  | 72  | 62  | 55  | 50  | 55 | 49 | 45 | 48 | 43 | 40 | 41 | 38 | 35 |
| 5   | 71  | 59  | 51  | 45  | 66  | 56  | 48  | 43  | 49 | 43 | 39 | 43 | 38 | 35 | 37 | 34 | 31 |
| 6   | 65  | 53  | 45  | 39  | 61  | 50  | 43  | 38  | 44 | 39 | 34 | 39 | 34 | 31 | 34 | 30 | 27 |
| 7   | 61  | 48  | 40  | 35  | 56  | 46  | 38  | 33  | 40 | 35 | 30 | 36 | 31 | 27 | 31 | 27 | 25 |
| 8   | 56  | 44  | 36  | 31  | 53  | 42  | 35  | 30  | 37 | 31 | 27 | 33 | 28 | 25 | 29 | 25 | 22 |
| 9   | 52  | 40  | 33  | 28  | 49  | 38  | 31  | 27  | 34 | 28 | 24 | 30 | 26 | 22 | 26 | 23 | 20 |
| 10  | 49  | 37  | 30  | 25  | 46  | 35  | 28  | 24  | 31 | 26 | 22 | 28 | 23 | 20 | 25 | 21 | 18 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10038 | 10038 | 10038 |
| 5°  | 10055 | 9684  | 9658  |
| 10° | 9977  | 9319  | 9136  |
| 15° | 9846  | 8869  | 8564  |
| 20° | 9677  | 8380  | 7926  |
| 25° | 9501  | 7871  | 7321  |
| 30° | 9277  | 7330  | 6607  |
| 35° | 9045  | 6799  | 5956  |
| 40° | 8827  | 6221  | 5236  |
| 45° | 8548  | 5657  | 4590  |
| 50° | 8241  | 5055  | 3920  |
| 55° | 7922  | 4409  | 3306  |
| 60° | 7616  | 3748  | 2683  |
| 65° | 7223  | 3070  | 2095  |
| 70° | 6726  | 2320  | 1496  |
| 75° | 6014  | 1572  | 1186  |
| 80° | 5130  | 1093  | 833   |
| 85° | 3852  | 590   | 437   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8548 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.7   | 2.5       |
| 10°-20°   | 243.9  | 6.9       |
| 20°-30°   | 351.2  | 9.9       |
| 30°-40°   | 395.5  | 11.1      |
| 40°-50°   | 378.3  | 10.6      |
| 50°-60°   | 309.7  | 8.7       |
| 60°-70°   | 208.8  | 5.9       |
| 70°-80°   | 104.7  | 2.9       |
| 80°-90°   | 28.3   | 0.8       |
| 90°-100°  | 16.7   | 0.5       |
| 100°-110° | 80.9   | 2.3       |
| 110°-120° | 198.2  | 5.6       |
| 120°-130° | 251.6  | 7.1       |
| 130°-140° | 268.8  | 7.6       |
| 140°-150° | 251.3  | 7.1       |
| 150°-160° | 202.7  | 5.7       |
| 160°-170° | 130.8  | 3.7       |
| 170°-180° | 45.1   | 1.3       |
| <hr/>     |        |           |
| 0°-30°    | 682.7  | 19.2      |
| 0°-40°    | 1078.2 | 30.3      |
| 0°-60°    | 1766.1 | 49.7      |
| 0°-90°    | 2107.9 | 59.3      |
| 90°-120°  | 295.8  | 8.3       |
| 90°-150°  | 1067.4 | 30.0      |
| 90°-180°  | 1446.0 | 40.7      |
| 0°-180°   | 3554.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 933 | 933   | 933 | 933   | 933 |      |
| 5°   | 933 | 929   | 920 | 927   | 925 | 88   |
| 15°  | 890 | 881   | 860 | 856   | 851 | 251  |
| 25°  | 809 | 790   | 756 | 740   | 731 | 372  |
| 35°  | 700 | 673   | 626 | 594   | 580 | 438  |
| 45°  | 576 | 542   | 483 | 440   | 422 | 444  |
| 55°  | 437 | 400   | 336 | 292   | 277 | 392  |
| 65°  | 299 | 257   | 198 | 161   | 153 | 296  |
| 75°  | 158 | 122   | 80  | 73    | 71  | 168  |
| 85°  | 40  | 23    | 21  | 20    | 20  | 44   |
| 90°  | 0   | 4     | 8   | 10    | 11  | 4    |
| 95°  | 22  | 7     | 11  | 13    | 13  | 26   |
| 105° | 105 | 109   | 77  | 15    | 16  | 111  |
| 115° | 197 | 199   | 202 | 206   | 207 | 195  |
| 125° | 278 | 280   | 282 | 283   | 283 | 248  |
| 135° | 346 | 348   | 349 | 350   | 349 | 266  |
| 145° | 399 | 401   | 402 | 403   | 403 | 250  |
| 155° | 439 | 439   | 439 | 441   | 439 | 202  |
| 165° | 463 | 462   | 462 | 465   | 462 | 131  |
| 175° | 474 | 473   | 473 | 475   | 473 | 45   |
| 180° | 474 | 474   | 474 | 474   | 474 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 932.6 | 932.6 | 932.6 | 932.6 | 932.6 |
| 2.5°   | 936.4 | 933.4 | 924.3 | 932.6 | 931.1 |
| 5°     | 932.6 | 928.9 | 919.8 | 926.6 | 925.1 |
| 7.5°   | 925.8 | 922.1 | 910.7 | 915.2 | 913.0 |
| 10°    | 916.8 | 911.5 | 897.8 | 898.6 | 894.8 |
| 12.5°  | 903.9 | 897.8 | 880.4 | 879.7 | 875.2 |
| 15°    | 889.5 | 881.2 | 860.0 | 856.2 | 850.9 |
| 17.5°  | 872.1 | 863.1 | 836.6 | 829.0 | 821.4 |
| 20°    | 852.5 | 840.4 | 811.6 | 801.8 | 792.7 |
| 22.5°  | 830.5 | 816.2 | 785.1 | 772.3 | 764.0 |
| 25°    | 809.3 | 790.4 | 755.6 | 739.8 | 731.4 |
| 27.5°  | 783.6 | 763.2 | 725.4 | 704.2 | 691.3 |
| 30°    | 757.2 | 734.5 | 692.1 | 666.4 | 654.3 |
| 32.5°  | 730.7 | 704.2 | 658.8 | 630.1 | 617.2 |
| 35°    | 700.4 | 673.2 | 626.3 | 593.8 | 580.2 |
| 37.5°  | 670.2 | 640.7 | 591.5 | 555.2 | 538.6 |
| 40°    | 641.4 | 608.1 | 554.4 | 515.1 | 497.7 |
| 42.5°  | 608.9 | 575.6 | 519.6 | 475.8 | 460.6 |
| 45°    | 575.6 | 541.6 | 483.3 | 440.2 | 422.1 |
| 47.5°  | 543.1 | 505.3 | 447.8 | 400.9 | 385.0 |
| 50°    | 506.8 | 471.2 | 410.0 | 363.1 | 345.7 |
| 52.5°  | 474.3 | 434.9 | 374.4 | 325.3 | 310.1 |
| 55°    | 437.2 | 400.1 | 335.8 | 292.0 | 276.8 |
| 57.5°  | 403.9 | 363.8 | 298.8 | 257.2 | 244.3 |
| 60°    | 369.1 | 327.5 | 264.7 | 223.9 | 211.0 |
| 62.5°  | 334.3 | 292.7 | 229.9 | 192.1 | 178.5 |
| 65°    | 298.8 | 257.2 | 198.2 | 161.1 | 152.8 |
| 67.5°  | 263.2 | 220.9 | 163.4 | 135.4 | 126.3 |
| 70°    | 228.4 | 187.6 | 134.6 | 108.2 | 99.8  |
| 72.5°  | 193.6 | 153.5 | 106.7 | 86.2  | 84.0  |
| 75°    | 158.1 | 121.8 | 80.2  | 72.6  | 71.1  |
| 77.5°  | 125.6 | 92.3  | 62.8  | 58.2  | 56.7  |
| 80°    | 94.5  | 63.5  | 47.7  | 45.4  | 43.9  |
| 82.5°  | 65.1  | 39.3  | 34.0  | 31.8  | 31.8  |
| 85°    | 40.1  | 23.4  | 21.2  | 19.7  | 19.7  |
| 87.5°  | 18.2  | 9.8   | 9.8   | 9.1   | 8.3   |
| 90°    | 0.4   | 3.9   | 8.5   | 9.9   | 10.6  |
| 92.5°  | 8.1   | 6.0   | 9.2   | 11.6  | 12.0  |
| 95°    | 21.5  | 7.0   | 10.9  | 13.4  | 13.4  |
| 97.5°  | 39.1  | 29.2  | 11.3  | 14.1  | 14.4  |
| 100°   | 59.6  | 66.6  | 11.6  | 14.4  | 14.8  |
| 102.5° | 82.8  | 87.4  | 26.1  | 14.4  | 15.2  |
| 105°   | 105.0 | 108.9 | 77.2  | 14.8  | 15.5  |
| 107.5° | 128.6 | 131.8 | 137.1 | 82.8  | 36.7  |
| 110°   | 152.2 | 155.1 | 158.9 | 147.3 | 96.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 174.8 | 177.3 | 181.1 | 184.3 | 183.6 |
| 115°   | 197.0 | 199.1 | 202.3 | 205.8 | 207.2 |
| 117.5° | 218.8 | 221.3 | 223.1 | 225.9 | 226.2 |
| 120°   | 238.9 | 242.1 | 243.2 | 246.0 | 246.0 |
| 122.5° | 259.4 | 261.8 | 263.2 | 265.0 | 265.4 |
| 125°   | 277.7 | 280.5 | 281.9 | 282.6 | 283.3 |
| 127.5° | 296.0 | 298.8 | 300.6 | 301.7 | 301.0 |
| 130°   | 312.9 | 315.8 | 317.2 | 318.6 | 317.9 |
| 132.5° | 329.1 | 332.0 | 333.0 | 334.4 | 333.4 |
| 135°   | 345.7 | 347.8 | 349.2 | 350.3 | 349.2 |
| 137.5° | 359.8 | 362.6 | 363.3 | 365.1 | 364.4 |
| 140°   | 373.9 | 376.0 | 377.1 | 378.5 | 377.8 |
| 142.5° | 386.9 | 389.1 | 390.1 | 391.2 | 390.1 |
| 145°   | 398.9 | 401.4 | 402.1 | 402.8 | 402.8 |
| 147.5° | 410.6 | 412.3 | 413.0 | 413.7 | 412.0 |
| 150°   | 421.1 | 422.2 | 422.9 | 423.6 | 422.5 |
| 152.5° | 430.6 | 431.0 | 431.3 | 432.8 | 431.0 |
| 155°   | 439.4 | 438.7 | 439.1 | 440.9 | 438.7 |
| 157.5° | 446.5 | 446.5 | 446.1 | 448.3 | 445.4 |
| 160°   | 452.8 | 452.5 | 452.1 | 454.2 | 451.8 |
| 162.5° | 458.8 | 457.8 | 457.4 | 459.9 | 457.8 |
| 165°   | 463.4 | 462.4 | 462.0 | 464.8 | 462.4 |
| 167.5° | 467.3 | 465.9 | 465.9 | 468.7 | 465.9 |
| 170°   | 470.5 | 469.0 | 469.0 | 471.9 | 469.0 |
| 172.5° | 472.6 | 470.8 | 471.2 | 474.0 | 470.8 |
| 175°   | 474.3 | 472.6 | 472.9 | 475.4 | 472.6 |
| 177.5° | 475.0 | 473.3 | 473.6 | 476.5 | 472.9 |
| 180°   | 474.3 | 474.3 | 474.3 | 474.3 | 474.3 |

(END OF REPORT)