

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: P1012369

Luminaire Tested: S123RDIP-B1165D585UB40-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012369  
REPORT IS A COMBINATION OF REPORTS P993070 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B1165D585UB40-4F0-XX-W2A-F  
Description: Define 3 Regressed Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

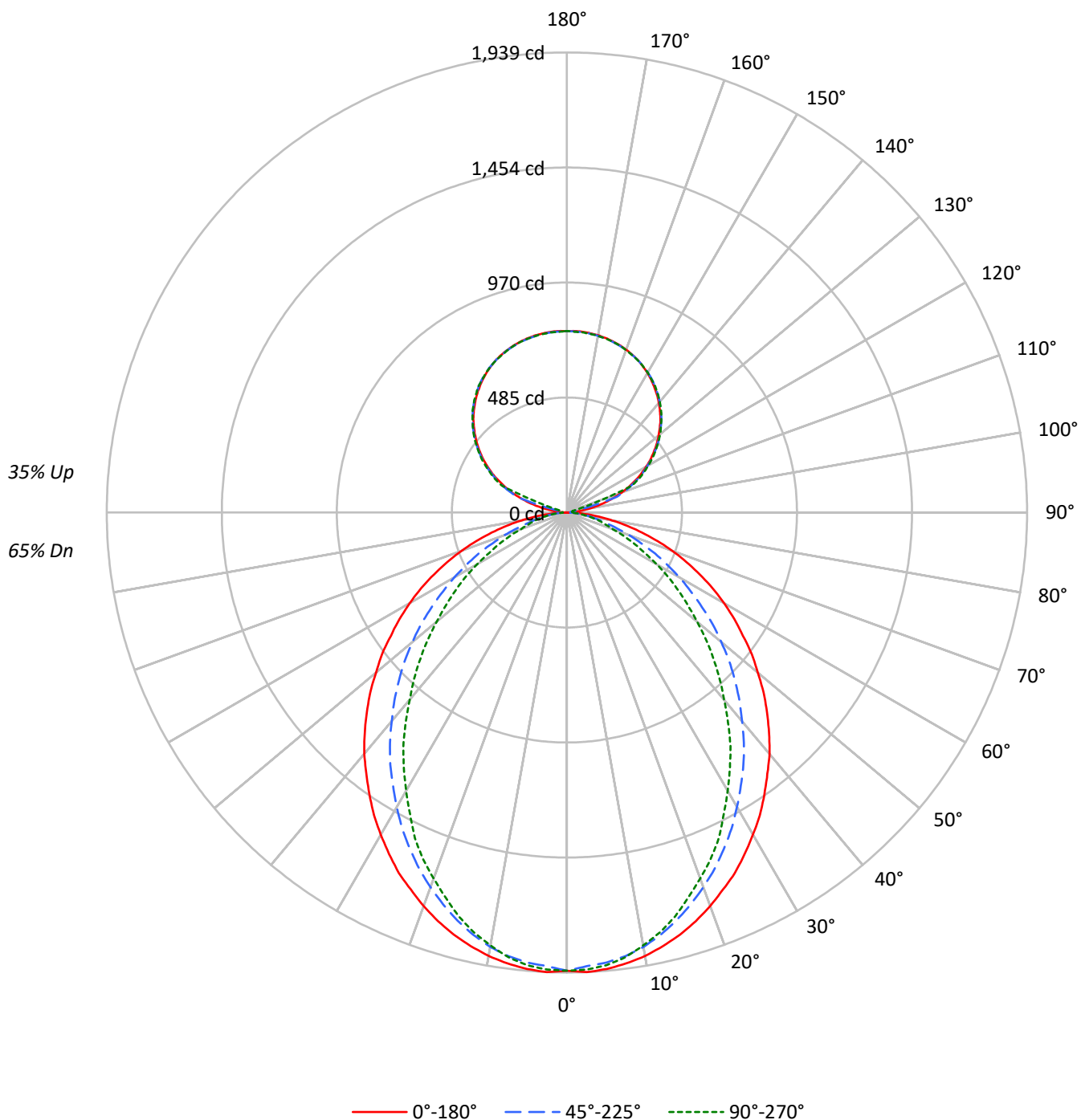
Lumens per Lamp: N/A  
Luminaire Lumens: 6696.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 76.7  
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   | 111 | 111 | 111 | 111 |  | 104 | 104 | 104 | 104 |  | 92 | 92 | 92 |  | 80 | 80 | 80 |  | 70 | 70 | 70 |
| 1   | 102 | 97  | 94  | 90  |  | 95  | 92  | 88  | 85  |  | 81 | 79 | 76 |  | 72 | 70 | 68 |  | 63 | 61 | 60 |
| 2   | 93  | 86  | 79  | 74  |  | 87  | 81  | 75  | 71  |  | 72 | 68 | 64 |  | 63 | 60 | 57 |  | 56 | 53 | 51 |
| 3   | 85  | 76  | 68  | 62  |  | 80  | 71  | 65  | 60  |  | 64 | 59 | 54 |  | 56 | 52 | 49 |  | 50 | 47 | 44 |
| 4   | 78  | 67  | 59  | 53  |  | 73  | 64  | 57  | 51  |  | 57 | 51 | 47 |  | 51 | 46 | 42 |  | 45 | 41 | 38 |
| 5   | 72  | 60  | 52  | 46  |  | 67  | 57  | 50  | 44  |  | 51 | 45 | 41 |  | 46 | 41 | 37 |  | 40 | 37 | 34 |
| 6   | 66  | 54  | 46  | 40  |  | 62  | 51  | 44  | 39  |  | 46 | 40 | 36 |  | 41 | 36 | 33 |  | 37 | 33 | 30 |
| 7   | 62  | 49  | 41  | 36  |  | 58  | 47  | 39  | 34  |  | 42 | 36 | 32 |  | 38 | 33 | 29 |  | 34 | 30 | 27 |
| 8   | 57  | 45  | 37  | 32  |  | 54  | 43  | 36  | 31  |  | 39 | 33 | 28 |  | 35 | 30 | 26 |  | 31 | 27 | 24 |
| 9   | 53  | 41  | 34  | 28  |  | 50  | 39  | 32  | 27  |  | 35 | 30 | 26 |  | 32 | 27 | 24 |  | 29 | 25 | 22 |
| 10  | 50  | 38  | 31  | 26  |  | 47  | 36  | 29  | 25  |  | 33 | 27 | 23 |  | 30 | 25 | 22 |  | 27 | 23 | 20 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 20787 | 20787 | 20787 |
| 5°  | 20821 | 20052 | 19998 |
| 10° | 20657 | 19298 | 18918 |
| 15° | 20390 | 18367 | 17735 |
| 20° | 20038 | 17353 | 16413 |
| 25° | 19675 | 16299 | 15161 |
| 30° | 19210 | 15180 | 13680 |
| 35° | 18731 | 14079 | 12332 |
| 40° | 18279 | 12884 | 10842 |
| 45° | 17701 | 11715 | 9503  |
| 50° | 17064 | 10467 | 8117  |
| 55° | 16403 | 9131  | 6847  |
| 60° | 15771 | 7762  | 5557  |
| 65° | 14956 | 6356  | 4338  |
| 70° | 13929 | 4806  | 3101  |
| 75° | 12454 | 3254  | 2456  |
| 80° | 10630 | 2262  | 1722  |
| 85° | 7973  | 1222  | 902   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 17701 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 181.5  | 2.7       |
| 10°-20°   | 505.0  | 7.5       |
| 20°-30°   | 727.2  | 10.9      |
| 30°-40°   | 818.9  | 12.2      |
| 40°-50°   | 783.3  | 11.7      |
| 50°-60°   | 641.2  | 9.6       |
| 60°-70°   | 432.3  | 6.5       |
| 70°-80°   | 216.8  | 3.2       |
| 80°-90°   | 58.2   | 0.9       |
| 90°-100°  | 27.0   | 0.4       |
| 100°-110° | 130.4  | 1.9       |
| 110°-120° | 319.5  | 4.8       |
| 120°-130° | 405.6  | 6.1       |
| 130°-140° | 433.3  | 6.5       |
| 140°-150° | 405.2  | 6.1       |
| 150°-160° | 326.8  | 4.9       |
| 160°-170° | 210.9  | 3.1       |
| 170°-180° | 72.7   | 1.1       |
| 0°-30°    | 1413.8 | 21.1      |
| 0°-40°    | 2232.6 | 33.3      |
| 0°-60°    | 3657.2 | 54.6      |
| 0°-90°    | 4364.5 | 65.2      |
| 90°-120°  | 476.9  | 7.1       |
| 90°-150°  | 1721.0 | 25.7      |
| 90°-180°  | 2331.0 | 34.8      |
| 0°-180°   | 6696.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1931 | 1931  | 1931 | 1931  | 1931 |      |
| 5°   | 1931 | 1923  | 1905 | 1919  | 1916 | 183  |
| 15°  | 1842 | 1825  | 1781 | 1773  | 1762 | 519  |
| 25°  | 1676 | 1637  | 1565 | 1532  | 1515 | 771  |
| 35°  | 1450 | 1394  | 1297 | 1230  | 1201 | 908  |
| 45°  | 1192 | 1122  | 1001 | 912   | 874  | 920  |
| 55°  | 905  | 829   | 695  | 605   | 573  | 812  |
| 65°  | 619  | 532   | 410  | 334   | 316  | 612  |
| 75°  | 327  | 252   | 166  | 150   | 147  | 349  |
| 85°  | 83   | 49    | 44   | 41    | 41   | 91   |
| 90°  | 1    | 6     | 14   | 16    | 17   | 7    |
| 95°  | 35   | 11    | 18   | 22    | 22   | 41   |
| 105° | 169  | 176   | 124  | 24    | 25   | 180  |
| 115° | 318  | 321   | 326  | 332   | 334  | 314  |
| 125° | 448  | 452   | 454  | 456   | 457  | 400  |
| 135° | 557  | 561   | 563  | 565   | 563  | 429  |
| 145° | 643  | 647   | 648  | 649   | 649  | 403  |
| 155° | 708  | 707   | 708  | 711   | 707  | 326  |
| 165° | 747  | 746   | 745  | 749   | 746  | 211  |
| 175° | 765  | 762   | 762  | 766   | 762  | 73   |
| 180° | 765  | 765   | 765  | 765   | 765  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1931.2 | 1931.2 | 1931.2 | 1931.2 | 1931.2 |
| 2.5°   | 1939.1 | 1932.8 | 1914.0 | 1931.2 | 1928.1 |
| 5°     | 1931.2 | 1923.4 | 1904.6 | 1918.7 | 1915.6 |
| 7.5°   | 1917.1 | 1909.3 | 1885.8 | 1895.2 | 1890.5 |
| 10°    | 1898.3 | 1887.4 | 1859.2 | 1860.8 | 1852.9 |
| 12.5°  | 1871.7 | 1859.2 | 1823.2 | 1821.6 | 1812.2 |
| 15°    | 1842.0 | 1824.7 | 1780.9 | 1773.0 | 1762.1 |
| 17.5°  | 1805.9 | 1787.1 | 1732.3 | 1716.7 | 1701.0 |
| 20°    | 1765.2 | 1740.1 | 1680.6 | 1660.3 | 1641.5 |
| 22.5°  | 1719.8 | 1690.0 | 1625.8 | 1599.2 | 1582.0 |
| 25°    | 1675.9 | 1636.8 | 1564.7 | 1531.8 | 1514.6 |
| 27.5°  | 1622.7 | 1580.4 | 1502.1 | 1458.2 | 1431.6 |
| 30°    | 1567.9 | 1520.9 | 1433.2 | 1379.9 | 1354.8 |
| 32.5°  | 1513.0 | 1458.2 | 1364.2 | 1304.7 | 1278.1 |
| 35°    | 1450.4 | 1394.0 | 1296.9 | 1229.5 | 1201.3 |
| 37.5°  | 1387.7 | 1326.6 | 1224.8 | 1149.7 | 1115.2 |
| 40°    | 1328.2 | 1259.3 | 1148.1 | 1066.6 | 1030.6 |
| 42.5°  | 1260.9 | 1191.9 | 1076.0 | 985.2  | 953.9  |
| 45°    | 1191.9 | 1121.5 | 1000.9 | 911.6  | 874.0  |
| 47.5°  | 1124.6 | 1046.3 | 927.2  | 830.1  | 797.2  |
| 50°    | 1049.4 | 975.8  | 848.9  | 751.8  | 715.8  |
| 52.5°  | 982.1  | 900.6  | 775.3  | 673.5  | 642.2  |
| 55°    | 905.3  | 828.6  | 695.4  | 604.6  | 573.3  |
| 57.5°  | 836.4  | 753.4  | 618.7  | 532.5  | 505.9  |
| 60°    | 764.3  | 678.2  | 548.2  | 463.6  | 437.0  |
| 62.5°  | 692.3  | 606.2  | 476.2  | 397.8  | 369.6  |
| 65°    | 618.7  | 532.5  | 410.4  | 333.6  | 316.4  |
| 67.5°  | 545.1  | 457.4  | 338.3  | 280.4  | 261.6  |
| 70°    | 473.0  | 388.4  | 278.8  | 224.0  | 206.8  |
| 72.5°  | 401.0  | 318.0  | 220.8  | 178.6  | 173.9  |
| 75°    | 327.4  | 252.2  | 166.0  | 150.4  | 147.2  |
| 77.5°  | 260.0  | 191.1  | 130.0  | 120.6  | 117.5  |
| 80°    | 195.8  | 131.6  | 98.7   | 94.0   | 90.8   |
| 82.5°  | 134.7  | 81.4   | 70.5   | 65.8   | 65.8   |
| 85°    | 83.0   | 48.6   | 43.9   | 40.7   | 40.7   |
| 87.5°  | 37.6   | 20.4   | 20.4   | 18.8   | 17.2   |
| 90°    | 0.6    | 6.2    | 13.6   | 15.9   | 17.0   |
| 92.5°  | 13.1   | 9.7    | 14.8   | 18.7   | 19.3   |
| 95°    | 34.7   | 11.4   | 17.6   | 21.6   | 21.6   |
| 97.5°  | 63.1   | 47.2   | 18.2   | 22.7   | 23.3   |
| 100°   | 96.0   | 107.4  | 18.7   | 23.3   | 23.9   |
| 102.5° | 133.5  | 140.9  | 42.0   | 23.3   | 24.4   |
| 105°   | 169.3  | 175.6  | 124.4  | 23.9   | 25.0   |
| 107.5° | 207.4  | 212.5  | 221.0  | 133.5  | 59.1   |
| 110°   | 245.5  | 250.0  | 256.2  | 237.5  | 156.2  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 281.8 | 285.8 | 292.0 | 297.2 | 296.0 |
| 115°   | 317.6 | 321.0 | 326.1 | 331.8 | 334.1 |
| 117.5° | 352.8 | 356.8 | 359.7 | 364.2 | 364.8 |
| 120°   | 385.2 | 390.3 | 392.0 | 396.6 | 396.6 |
| 122.5° | 418.2 | 422.2 | 424.4 | 427.3 | 427.8 |
| 125°   | 447.7 | 452.3 | 454.5 | 455.7 | 456.8 |
| 127.5° | 477.3 | 481.8 | 484.7 | 486.4 | 485.2 |
| 130°   | 504.5 | 509.1 | 511.4 | 513.6 | 512.5 |
| 132.5° | 530.7 | 535.2 | 536.9 | 539.2 | 537.5 |
| 135°   | 557.4 | 560.8 | 563.1 | 564.8 | 563.1 |
| 137.5° | 580.1 | 584.7 | 585.8 | 588.6 | 587.5 |
| 140°   | 602.8 | 606.2 | 608.0 | 610.2 | 609.1 |
| 142.5° | 623.9 | 627.3 | 629.0 | 630.7 | 629.0 |
| 145°   | 643.2 | 647.2 | 648.3 | 649.4 | 649.4 |
| 147.5° | 661.9 | 664.8 | 665.9 | 667.0 | 664.2 |
| 150°   | 679.0 | 680.7 | 681.8 | 683.0 | 681.2 |
| 152.5° | 694.3 | 694.9 | 695.5 | 697.7 | 694.9 |
| 155°   | 708.5 | 707.4 | 708.0 | 710.8 | 707.4 |
| 157.5° | 719.9 | 719.9 | 719.3 | 722.7 | 718.2 |
| 160°   | 730.1 | 729.5 | 729.0 | 732.4 | 728.4 |
| 162.5° | 739.8 | 738.1 | 737.5 | 741.5 | 738.1 |
| 165°   | 747.2 | 745.5 | 744.9 | 749.4 | 745.5 |
| 167.5° | 753.4 | 751.1 | 751.1 | 755.7 | 751.1 |
| 170°   | 758.5 | 756.2 | 756.2 | 760.8 | 756.2 |
| 172.5° | 761.9 | 759.1 | 759.7 | 764.2 | 759.1 |
| 175°   | 764.8 | 761.9 | 762.5 | 766.5 | 761.9 |
| 177.5° | 765.9 | 763.1 | 763.6 | 768.2 | 762.5 |
| 180°   | 764.8 | 764.8 | 764.8 | 764.8 | 764.8 |

(END OF REPORT)