

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: P1012403

Luminaire Tested: S123RDIP-B1165D805UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012403  
REPORT IS A COMBINATION OF REPORTS P993116 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B1165D805UB50-4F0-XX-W2A-F  
Description: Define 3 Regressed Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015}  
{m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

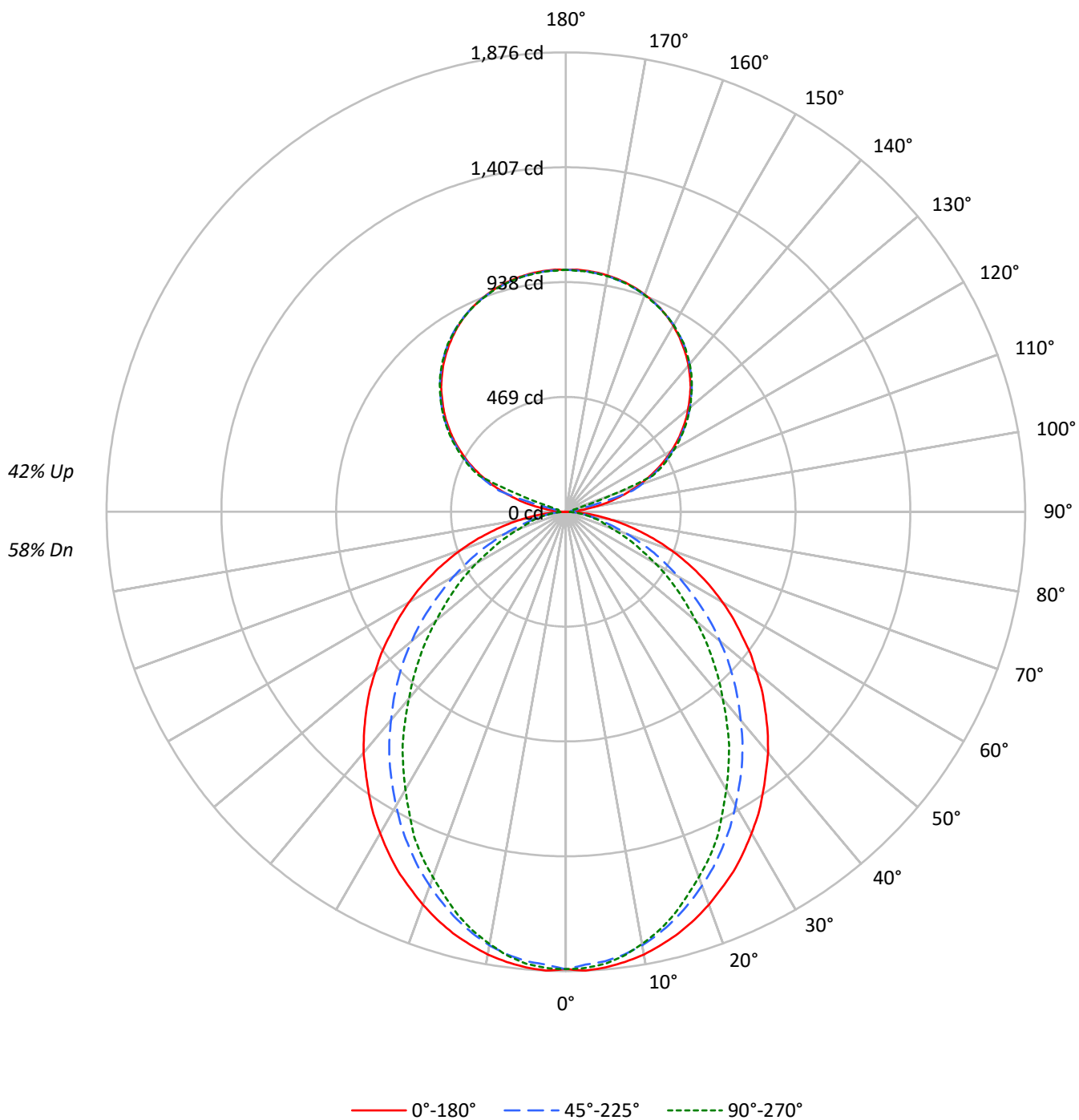
Lumens per Lamp: N/A  
Luminaire Lumens: 7235.0 lumens  
Efficiency: N/A  
Efficacy: 87.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 |
| 1   | 100 | 96  | 92  | 89  | 93  | 90  | 86  | 83  | 78 | 75 | 73 | 67 | 65 | 64 | 57 | 56 | 55 |
| 2   | 91  | 84  | 78  | 73  | 85  | 79  | 73  | 69  | 69 | 65 | 61 | 59 | 56 | 54 | 51 | 49 | 47 |
| 3   | 84  | 74  | 67  | 61  | 78  | 70  | 63  | 58  | 61 | 56 | 52 | 53 | 49 | 46 | 45 | 42 | 40 |
| 4   | 77  | 66  | 58  | 52  | 71  | 62  | 55  | 50  | 54 | 49 | 45 | 47 | 43 | 40 | 41 | 37 | 35 |
| 5   | 71  | 59  | 51  | 45  | 66  | 55  | 48  | 43  | 49 | 43 | 39 | 43 | 38 | 35 | 37 | 33 | 31 |
| 6   | 65  | 53  | 45  | 39  | 61  | 50  | 43  | 37  | 44 | 38 | 34 | 39 | 34 | 30 | 33 | 30 | 27 |
| 7   | 60  | 48  | 40  | 35  | 56  | 45  | 38  | 33  | 40 | 34 | 30 | 35 | 31 | 27 | 31 | 27 | 24 |
| 8   | 56  | 44  | 36  | 31  | 52  | 41  | 34  | 29  | 37 | 31 | 27 | 32 | 28 | 24 | 28 | 25 | 22 |
| 9   | 52  | 40  | 33  | 28  | 49  | 38  | 31  | 26  | 34 | 28 | 24 | 30 | 25 | 22 | 26 | 22 | 20 |
| 10  | 49  | 37  | 30  | 25  | 46  | 35  | 28  | 24  | 31 | 26 | 22 | 28 | 23 | 20 | 24 | 21 | 18 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 20106 | 20106 | 20106 |
| 5°  | 20139 | 19395 | 19343 |
| 10° | 19980 | 18665 | 18298 |
| 15° | 19721 | 17764 | 17154 |
| 20° | 19381 | 16784 | 15875 |
| 25° | 19030 | 15765 | 14664 |
| 30° | 18581 | 14682 | 13231 |
| 35° | 18116 | 13618 | 11928 |
| 40° | 17681 | 12462 | 10487 |
| 45° | 17122 | 11332 | 9191  |
| 50° | 16505 | 10124 | 7851  |
| 55° | 15865 | 8832  | 6623  |
| 60° | 15255 | 7507  | 5376  |
| 65° | 14465 | 6147  | 4195  |
| 70° | 13473 | 4649  | 2999  |
| 75° | 12043 | 3148  | 2376  |
| 80° | 10282 | 2187  | 1667  |
| 85° | 7713  | 1181  | 873   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 17122 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 175.6  | 2.4       |
| 10°-20°   | 488.5  | 6.8       |
| 20°-30°   | 703.3  | 9.7       |
| 30°-40°   | 792.1  | 10.9      |
| 40°-50°   | 757.6  | 10.5      |
| 50°-60°   | 620.2  | 8.6       |
| 60°-70°   | 418.1  | 5.8       |
| 70°-80°   | 209.7  | 2.9       |
| 80°-90°   | 56.8   | 0.8       |
| 90°-100°  | 34.9   | 0.5       |
| 100°-110° | 168.5  | 2.3       |
| 110°-120° | 412.9  | 5.7       |
| 120°-130° | 524.2  | 7.2       |
| 130°-140° | 560.0  | 7.7       |
| 140°-150° | 523.6  | 7.2       |
| 150°-160° | 422.4  | 5.8       |
| 160°-170° | 272.6  | 3.8       |
| 170°-180° | 93.9   | 1.3       |
| 0°-30°    | 1367.4 | 18.9      |
| 0°-40°    | 2159.5 | 29.8      |
| 0°-60°    | 3537.3 | 48.9      |
| 0°-90°    | 4222.0 | 58.4      |
| 90°-120°  | 616.3  | 8.5       |
| 90°-150°  | 2224.1 | 30.7      |
| 90°-180°  | 3013.0 | 41.6      |
| 0°-180°   | 7235.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1868 | 1868  | 1868 | 1868  | 1868 |      |
| 5°   | 1868 | 1860  | 1842 | 1856  | 1853 | 177  |
| 15°  | 1782 | 1765  | 1722 | 1715  | 1704 | 502  |
| 25°  | 1621 | 1583  | 1513 | 1482  | 1465 | 746  |
| 35°  | 1403 | 1348  | 1254 | 1189  | 1162 | 878  |
| 45°  | 1153 | 1085  | 968  | 882   | 845  | 890  |
| 55°  | 876  | 801   | 673  | 585   | 554  | 785  |
| 65°  | 598  | 515   | 397  | 323   | 306  | 592  |
| 75°  | 317  | 244   | 161  | 145   | 142  | 337  |
| 85°  | 80   | 47    | 42   | 39    | 39   | 88   |
| 90°  | 1    | 8     | 18   | 21    | 22   | 7    |
| 95°  | 45   | 15    | 23   | 28    | 28   | 54   |
| 105° | 219  | 227   | 161  | 31    | 32   | 232  |
| 115° | 410  | 415   | 422  | 429   | 432  | 405  |
| 125° | 579  | 584   | 587  | 589   | 590  | 517  |
| 135° | 720  | 725   | 728  | 730   | 728  | 555  |
| 145° | 831  | 836   | 838  | 839   | 839  | 520  |
| 155° | 916  | 914   | 915  | 919   | 914  | 422  |
| 165° | 966  | 963   | 963  | 968   | 963  | 273  |
| 175° | 988  | 985   | 985  | 990   | 985  | 94   |
| 180° | 988  | 988   | 988  | 988   | 988  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1867.9 | 1867.9 | 1867.9 | 1867.9 | 1867.9 |
| 2.5°   | 1875.5 | 1869.5 | 1851.3 | 1867.9 | 1864.9 |
| 5°     | 1867.9 | 1860.4 | 1842.2 | 1855.8 | 1852.8 |
| 7.5°   | 1854.3 | 1846.7 | 1824.0 | 1833.1 | 1828.5 |
| 10°    | 1836.1 | 1825.5 | 1798.2 | 1799.8 | 1792.2 |
| 12.5°  | 1810.4 | 1798.2 | 1763.4 | 1761.9 | 1752.8 |
| 15°    | 1781.6 | 1764.9 | 1722.5 | 1714.9 | 1704.3 |
| 17.5°  | 1746.7 | 1728.6 | 1675.5 | 1660.4 | 1645.2 |
| 20°    | 1707.4 | 1683.1 | 1625.5 | 1605.8 | 1587.7 |
| 22.5°  | 1663.4 | 1634.6 | 1572.5 | 1546.8 | 1530.1 |
| 25°    | 1621.0 | 1583.1 | 1513.4 | 1481.6 | 1465.0 |
| 27.5°  | 1569.5 | 1528.6 | 1452.8 | 1410.4 | 1384.7 |
| 30°    | 1516.5 | 1471.0 | 1386.2 | 1334.7 | 1310.4 |
| 32.5°  | 1463.4 | 1410.4 | 1319.5 | 1262.0 | 1236.2 |
| 35°    | 1402.8 | 1348.3 | 1254.4 | 1189.2 | 1162.0 |
| 37.5°  | 1342.2 | 1283.2 | 1184.7 | 1112.0 | 1078.6 |
| 40°    | 1284.7 | 1218.0 | 1110.5 | 1031.7 | 996.8  |
| 42.5°  | 1219.5 | 1152.9 | 1040.8 | 952.9  | 922.6  |
| 45°    | 1152.9 | 1084.7 | 968.1  | 881.7  | 845.3  |
| 47.5°  | 1087.7 | 1012.0 | 896.9  | 802.9  | 771.1  |
| 50°    | 1015.0 | 943.8  | 821.1  | 727.2  | 692.3  |
| 52.5°  | 949.9  | 871.1  | 749.9  | 651.4  | 621.1  |
| 55°    | 875.6  | 801.4  | 672.6  | 584.8  | 554.5  |
| 57.5°  | 809.0  | 728.7  | 598.4  | 515.1  | 489.3  |
| 60°    | 739.3  | 656.0  | 530.2  | 448.4  | 422.7  |
| 62.5°  | 669.6  | 586.3  | 460.5  | 384.8  | 357.5  |
| 65°    | 598.4  | 515.1  | 396.9  | 322.7  | 306.0  |
| 67.5°  | 527.2  | 442.4  | 327.2  | 271.2  | 253.0  |
| 70°    | 457.5  | 375.7  | 269.7  | 216.6  | 200.0  |
| 72.5°  | 387.8  | 307.5  | 213.6  | 172.7  | 168.2  |
| 75°    | 316.6  | 243.9  | 160.6  | 145.4  | 142.4  |
| 77.5°  | 251.5  | 184.8  | 125.7  | 116.7  | 113.6  |
| 80°    | 189.4  | 127.3  | 95.4   | 90.9   | 87.9   |
| 82.5°  | 130.3  | 78.8   | 68.2   | 63.6   | 63.6   |
| 85°    | 80.3   | 47.0   | 42.4   | 39.4   | 39.4   |
| 87.5°  | 36.4   | 19.7   | 19.7   | 18.2   | 16.7   |
| 90°    | 0.7    | 8.1    | 17.6   | 20.6   | 22.0   |
| 92.5°  | 16.9   | 12.5   | 19.1   | 24.2   | 25.0   |
| 95°    | 44.8   | 14.7   | 22.8   | 27.9   | 27.9   |
| 97.5°  | 81.5   | 60.9   | 23.5   | 29.4   | 30.1   |
| 100°   | 124.1  | 138.8  | 24.2   | 30.1   | 30.8   |
| 102.5° | 172.6  | 182.1  | 54.3   | 30.1   | 31.6   |
| 105°   | 218.8  | 226.9  | 160.8  | 30.8   | 32.3   |
| 107.5° | 268.0  | 274.6  | 285.6  | 172.6  | 76.4   |
| 110°   | 317.2  | 323.1  | 331.2  | 306.9  | 201.9  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 364.2 | 369.3 | 377.4 | 384.0 | 382.6 |
| 115°   | 410.5 | 414.9 | 421.5 | 428.8 | 431.8 |
| 117.5° | 456.0 | 461.1 | 464.8 | 470.7 | 471.4 |
| 120°   | 497.8 | 504.4 | 506.7 | 512.5 | 512.5 |
| 122.5° | 540.4 | 545.6 | 548.5 | 552.2 | 552.9 |
| 125°   | 578.6 | 584.5 | 587.4 | 588.9 | 590.4 |
| 127.5° | 616.8 | 622.7 | 626.3 | 628.5 | 627.1 |
| 130°   | 652.0 | 657.9 | 660.8 | 663.8 | 662.3 |
| 132.5° | 685.8 | 691.7 | 693.9 | 696.8 | 694.6 |
| 135°   | 720.3 | 724.7 | 727.7 | 729.9 | 727.7 |
| 137.5° | 749.7 | 755.6 | 757.0 | 760.7 | 759.2 |
| 140°   | 779.1 | 783.5 | 785.7 | 788.6 | 787.1 |
| 142.5° | 806.2 | 810.6 | 812.8 | 815.0 | 812.8 |
| 145°   | 831.2 | 836.3 | 837.8 | 839.3 | 839.3 |
| 147.5° | 855.4 | 859.1 | 860.6 | 862.0 | 858.4 |
| 150°   | 877.5 | 879.7 | 881.1 | 882.6 | 880.4 |
| 152.5° | 897.3 | 898.0 | 898.8 | 901.7 | 898.0 |
| 155°   | 915.6 | 914.2 | 914.9 | 918.6 | 914.2 |
| 157.5° | 930.3 | 930.3 | 929.6 | 934.0 | 928.1 |
| 160°   | 943.5 | 942.8 | 942.1 | 946.5 | 941.3 |
| 162.5° | 956.0 | 953.8 | 953.1 | 958.2 | 953.8 |
| 165°   | 965.6 | 963.4 | 962.6 | 968.5 | 963.4 |
| 167.5° | 973.7 | 970.7 | 970.7 | 976.6 | 970.7 |
| 170°   | 980.3 | 977.3 | 977.3 | 983.2 | 977.3 |
| 172.5° | 984.7 | 981.0 | 981.7 | 987.6 | 981.0 |
| 175°   | 988.3 | 984.7 | 985.4 | 990.5 | 984.7 |
| 177.5° | 989.8 | 986.1 | 986.9 | 992.7 | 985.4 |
| 180°   | 988.3 | 988.3 | 988.3 | 988.3 | 988.3 |

(END OF REPORT)