

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: P1012317

Luminaire Tested: S123RDIP-B1165D1195UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012317  
REPORT IS A COMBINATION OF REPORTS P992996 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B1165D1195UB50-4F0-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**

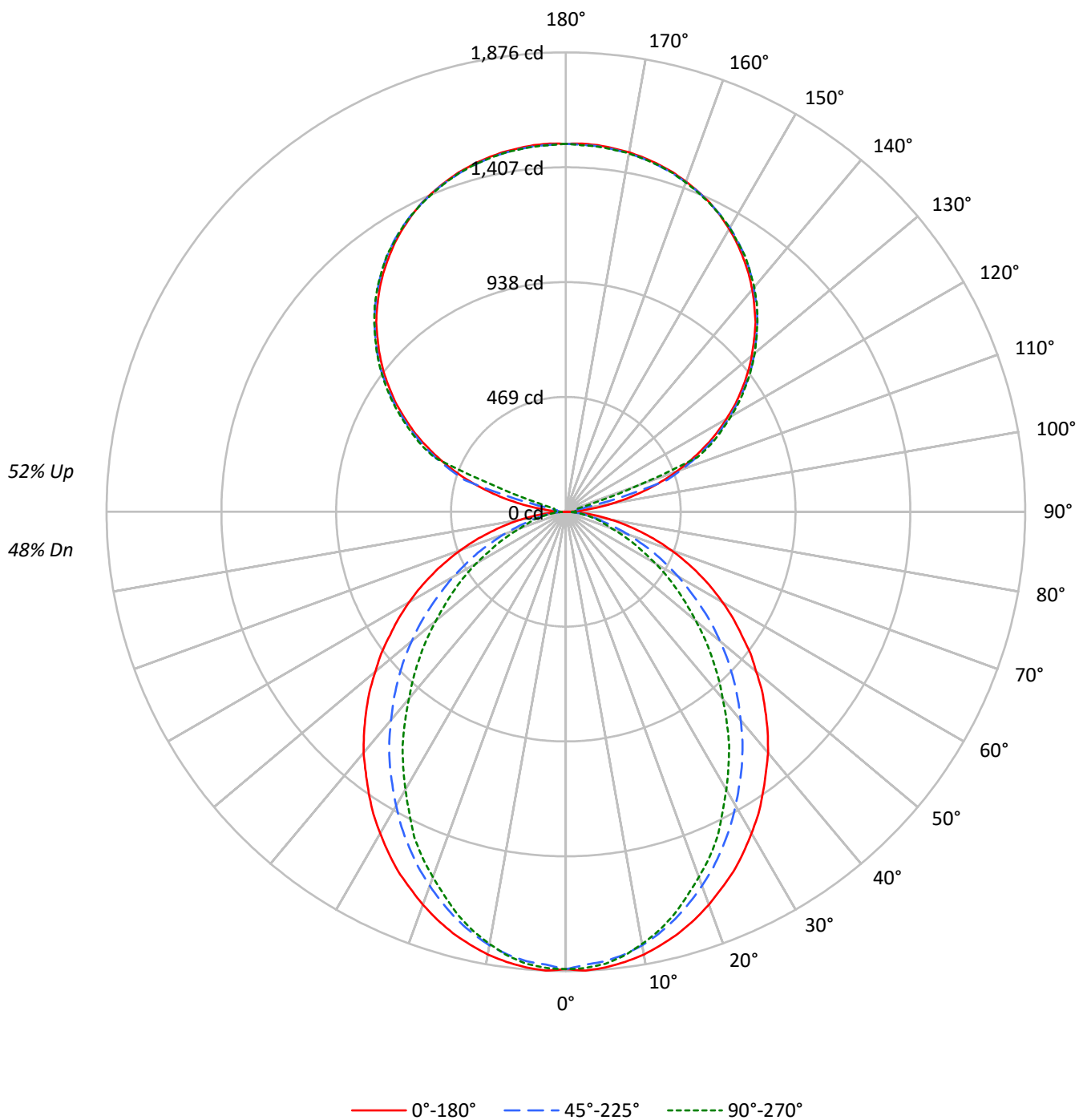
Lumens per Lamp: N/A  
Luminaire Lumens: 8804.0 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 96.3  
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   | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 82 | 82 | 82 | 68 | 68 | 68 | 54 | 54 | 54 |
| 1   | 98  | 93  | 90  | 86  | 90 | 86 | 83 | 80 | 73 | 70 | 68 | 60 | 58 | 57 | 48 | 47 | 46 |
| 2   | 89  | 82  | 76  | 71  | 82 | 76 | 71 | 66 | 64 | 60 | 57 | 53 | 50 | 48 | 43 | 41 | 40 |
| 3   | 82  | 72  | 65  | 59  | 75 | 67 | 61 | 56 | 57 | 52 | 48 | 47 | 44 | 41 | 38 | 36 | 34 |
| 4   | 75  | 64  | 56  | 51  | 69 | 59 | 53 | 47 | 50 | 45 | 41 | 42 | 38 | 35 | 34 | 32 | 30 |
| 5   | 69  | 57  | 49  | 43  | 63 | 53 | 46 | 41 | 45 | 40 | 36 | 38 | 34 | 31 | 31 | 28 | 26 |
| 6   | 63  | 51  | 44  | 38  | 58 | 48 | 41 | 36 | 41 | 35 | 31 | 34 | 30 | 27 | 28 | 25 | 23 |
| 7   | 59  | 47  | 39  | 33  | 54 | 43 | 36 | 31 | 37 | 32 | 28 | 31 | 27 | 24 | 26 | 23 | 20 |
| 8   | 54  | 42  | 35  | 29  | 50 | 39 | 33 | 28 | 34 | 29 | 25 | 29 | 25 | 22 | 24 | 21 | 18 |
| 9   | 51  | 39  | 31  | 26  | 47 | 36 | 29 | 25 | 31 | 26 | 22 | 26 | 22 | 19 | 22 | 19 | 17 |
| 10  | 47  | 35  | 28  | 24  | 44 | 33 | 27 | 22 | 29 | 24 | 20 | 25 | 20 | 18 | 21 | 17 | 15 |

**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  | 2.0       |
| 10°-20°   | 488.5  | 5.5       |
| 20°-30°   | 703.3  | 8.0       |
| 30°-40°   | 792.1  | 9.0       |
| 40°-50°   | 757.6  | 8.6       |
| 50°-60°   | 620.2  | 7.0       |
| 60°-70°   | 418.1  | 4.7       |
| 70°-80°   | 209.7  | 2.4       |
| 80°-90°   | 57.9   | 0.7       |
| 90°-100°  | 53.0   | 0.6       |
| 100°-110° | 256.2  | 2.9       |
| 110°-120° | 627.8  | 7.1       |
| 120°-130° | 797.0  | 9.1       |
| 130°-140° | 851.4  | 9.7       |
| 140°-150° | 796.2  | 9.0       |
| 150°-160° | 642.2  | 7.3       |
| 160°-170° | 414.4  | 4.7       |
| 170°-180° | 142.8  | 1.6       |
| 0°-30°    | 1367.4 | 15.5      |
| 0°-40°    | 2159.5 | 24.5      |
| 0°-60°    | 3537.3 | 40.2      |
| 0°-90°    | 4223.0 | 48.0      |
| 90°-120°  | 937.0  | 10.6      |
| 90°-150°  | 3381.6 | 38.4      |
| 90°-180°  | 4581.0 | 52.0      |
| 0°-180°   | 8804.0 | 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    | 12    | 27   | 31    | 34   | 9    |
| 95°  | 68   | 22    | 35   | 42    | 42   | 81   |
| 105° | 333  | 345   | 244  | 47    | 49   | 353  |
| 115° | 624  | 631   | 641  | 652   | 656  | 616  |
| 125° | 880  | 889   | 893  | 895   | 898  | 786  |
| 135° | 1095 | 1102  | 1106 | 1110  | 1106 | 843  |
| 145° | 1264 | 1272  | 1274 | 1276  | 1276 | 791  |
| 155° | 1392 | 1390  | 1391 | 1397  | 1390 | 641  |
| 165° | 1468 | 1465  | 1464 | 1472  | 1465 | 415  |
| 175° | 1503 | 1497  | 1498 | 1506  | 1497 | 143  |
| 180° | 1503 | 1503  | 1503 | 1503  | 1503 |      |

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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°    | 1.1    | 12.3   | 26.8   | 31.3   | 33.5   |
| 92.5°  | 25.7   | 19.0   | 29.0   | 36.8   | 38.0   |
| 95°    | 68.1   | 22.3   | 34.6   | 42.4   | 42.4   |
| 97.5°  | 123.9  | 92.7   | 35.7   | 44.7   | 45.8   |
| 100°   | 188.7  | 211.0  | 36.8   | 45.8   | 46.9   |
| 102.5° | 262.4  | 276.9  | 82.6   | 45.8   | 48.0   |
| 105°   | 332.7  | 345.0  | 244.5  | 46.9   | 49.1   |
| 107.5° | 407.5  | 417.5  | 434.3  | 262.4  | 116.1  |
| 110°   | 482.3  | 491.2  | 503.5  | 466.7  | 307.0  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 553.7  | 561.5  | 573.8  | 583.9  | 581.6  |
| 115°   | 624.1  | 630.8  | 640.8  | 652.0  | 656.4  |
| 117.5° | 693.3  | 701.1  | 706.7  | 715.6  | 716.7  |
| 120°   | 756.9  | 767.0  | 770.3  | 779.2  | 779.2  |
| 122.5° | 821.7  | 829.5  | 833.9  | 839.5  | 840.6  |
| 125°   | 879.7  | 888.6  | 893.1  | 895.3  | 897.6  |
| 127.5° | 937.8  | 946.7  | 952.3  | 955.6  | 953.4  |
| 130°   | 991.4  | 1000.3 | 1004.8 | 1009.2 | 1007.0 |
| 132.5° | 1042.7 | 1051.6 | 1055.0 | 1059.5 | 1056.1 |
| 135°   | 1095.2 | 1101.9 | 1106.3 | 1109.7 | 1106.3 |
| 137.5° | 1139.8 | 1148.8 | 1151.0 | 1156.6 | 1154.3 |
| 140°   | 1184.5 | 1191.2 | 1194.5 | 1199.0 | 1196.8 |
| 142.5° | 1225.8 | 1232.5 | 1235.8 | 1239.2 | 1235.8 |
| 145°   | 1263.8 | 1271.6 | 1273.8 | 1276.0 | 1276.0 |
| 147.5° | 1300.6 | 1306.2 | 1308.4 | 1310.6 | 1305.1 |
| 150°   | 1334.1 | 1337.4 | 1339.7 | 1341.9 | 1338.6 |
| 152.5° | 1364.2 | 1365.3 | 1366.5 | 1370.9 | 1365.3 |
| 155°   | 1392.1 | 1389.9 | 1391.0 | 1396.6 | 1389.9 |
| 157.5° | 1414.5 | 1414.5 | 1413.4 | 1420.1 | 1411.1 |
| 160°   | 1434.6 | 1433.4 | 1432.3 | 1439.0 | 1431.2 |
| 162.5° | 1453.5 | 1450.2 | 1449.1 | 1456.9 | 1450.2 |
| 165°   | 1468.1 | 1464.7 | 1463.6 | 1472.5 | 1464.7 |
| 167.5° | 1480.3 | 1475.9 | 1475.9 | 1484.8 | 1475.9 |
| 170°   | 1490.4 | 1485.9 | 1485.9 | 1494.8 | 1485.9 |
| 172.5° | 1497.1 | 1491.5 | 1492.6 | 1501.5 | 1491.5 |
| 175°   | 1502.7 | 1497.1 | 1498.2 | 1506.0 | 1497.1 |
| 177.5° | 1504.9 | 1499.3 | 1500.4 | 1509.4 | 1498.2 |
| 180°   | 1502.7 | 1502.7 | 1502.7 | 1502.7 | 1502.7 |

(END OF REPORT)