

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: P1012287

Luminaire Tested: S123RDIP-B1165D1025UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012287  
REPORT IS A COMBINATION OF REPORTS P992956 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B1165D1025UB50-4F0-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**

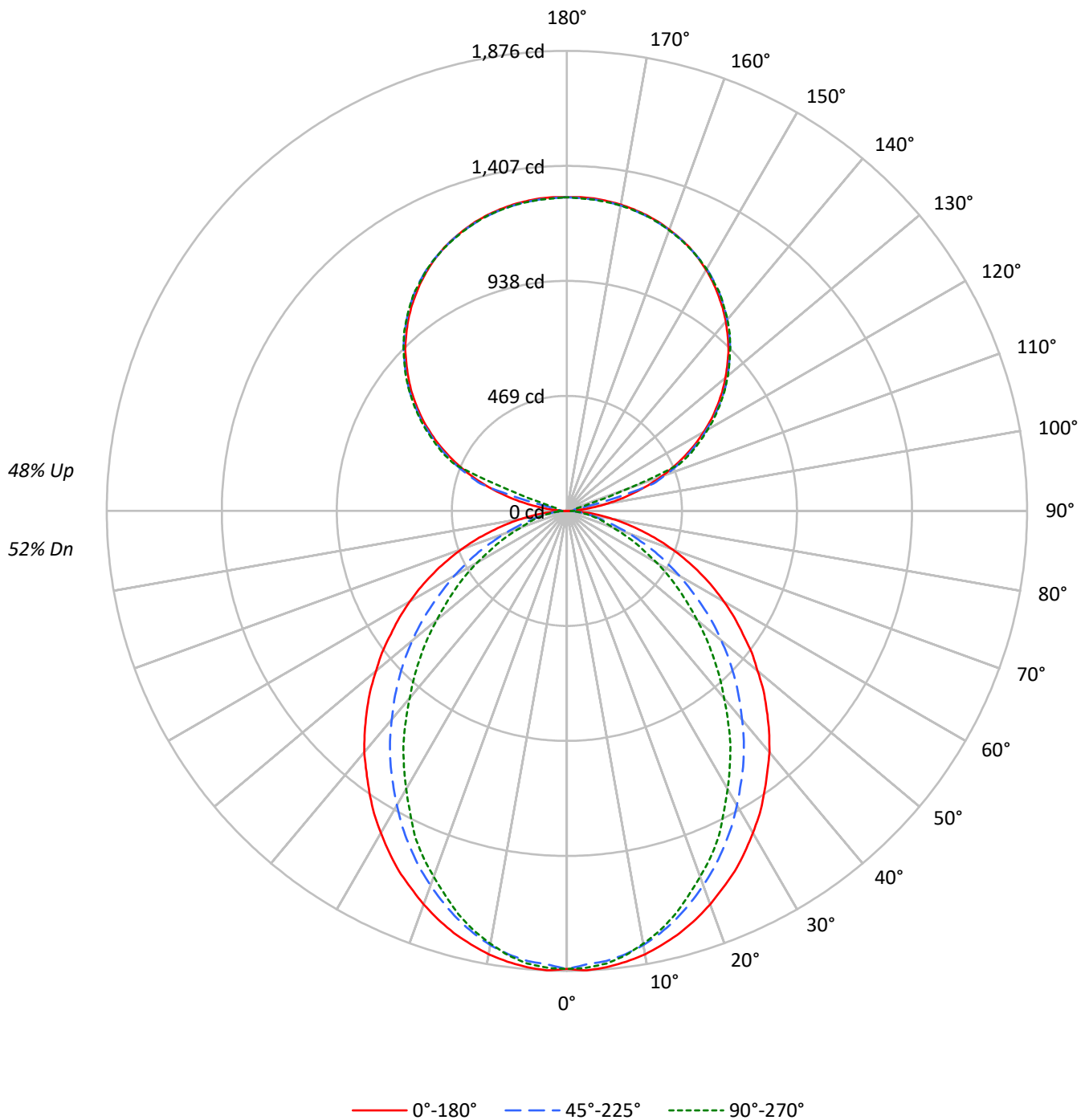
Lumens per Lamp: N/A  
Luminaire Lumens: 8121.0 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 89.8  
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   | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 84 | 84 | 84 | 71 | 71 | 71 | 58 | 58 | 58 |
| 1   | 99  | 94  | 91  | 87  | 91  | 87  | 84  | 81  | 75 | 72 | 70 | 63 | 61 | 60 | 52 | 51 | 50 |
| 2   | 90  | 83  | 77  | 72  | 83  | 77  | 72  | 67  | 66 | 62 | 59 | 55 | 53 | 50 | 46 | 44 | 42 |
| 3   | 82  | 73  | 66  | 60  | 76  | 68  | 62  | 57  | 58 | 54 | 50 | 49 | 46 | 43 | 41 | 39 | 36 |
| 4   | 75  | 65  | 57  | 51  | 70  | 60  | 54  | 48  | 52 | 47 | 43 | 44 | 40 | 37 | 37 | 34 | 32 |
| 5   | 69  | 58  | 50  | 44  | 64  | 54  | 47  | 42  | 47 | 41 | 37 | 40 | 36 | 32 | 33 | 30 | 28 |
| 6   | 64  | 52  | 44  | 38  | 59  | 49  | 42  | 36  | 42 | 37 | 32 | 36 | 32 | 28 | 30 | 27 | 25 |
| 7   | 59  | 47  | 39  | 34  | 55  | 44  | 37  | 32  | 38 | 33 | 29 | 33 | 29 | 25 | 28 | 24 | 22 |
| 8   | 55  | 43  | 35  | 30  | 51  | 40  | 33  | 28  | 35 | 29 | 26 | 30 | 26 | 23 | 26 | 22 | 20 |
| 9   | 51  | 39  | 32  | 27  | 48  | 37  | 30  | 25  | 32 | 27 | 23 | 28 | 23 | 20 | 24 | 20 | 18 |
| 10  | 48  | 36  | 29  | 24  | 44  | 34  | 27  | 23  | 30 | 24 | 21 | 26 | 21 | 19 | 22 | 19 | 16 |

**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  | 2.2       |
| 10°-20°   | 488.5  | 6.0       |
| 20°-30°   | 703.3  | 8.7       |
| 30°-40°   | 792.1  | 9.8       |
| 40°-50°   | 757.6  | 9.3       |
| 50°-60°   | 620.2  | 7.6       |
| 60°-70°   | 418.1  | 5.1       |
| 70°-80°   | 209.7  | 2.6       |
| 80°-90°   | 57.4   | 0.7       |
| 90°-100°  | 45.1   | 0.6       |
| 100°-110° | 218.0  | 2.7       |
| 110°-120° | 534.3  | 6.6       |
| 120°-130° | 678.2  | 8.4       |
| 130°-140° | 724.6  | 8.9       |
| 140°-150° | 677.5  | 8.3       |
| 150°-160° | 546.5  | 6.7       |
| 160°-170° | 352.7  | 4.3       |
| 170°-180° | 121.5  | 1.5       |
| 0°-30°    | 1367.4 | 16.8      |
| 0°-40°    | 2159.5 | 26.6      |
| 0°-60°    | 3537.3 | 43.6      |
| 0°-90°    | 4222.6 | 52.0      |
| 90°-120°  | 797.4  | 9.8       |
| 90°-150°  | 2877.8 | 35.4      |
| 90°-180°  | 3898.0 | 48.0      |
| 0°-180°   | 8121.0 | 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    | 10    | 23   | 27    | 28   | 8    |
| 95°  | 58   | 19    | 30   | 36    | 36   | 69   |
| 105° | 283  | 294   | 208  | 40    | 42   | 300  |
| 115° | 531  | 537   | 545  | 555   | 559  | 524  |
| 125° | 749  | 756   | 760  | 762   | 764  | 669  |
| 135° | 932  | 938   | 942  | 944   | 942  | 718  |
| 145° | 1076 | 1082  | 1084 | 1086  | 1086 | 673  |
| 155° | 1185 | 1183  | 1184 | 1188  | 1183 | 546  |
| 165° | 1249 | 1246  | 1246 | 1253  | 1246 | 353  |
| 175° | 1279 | 1274  | 1275 | 1282  | 1274 | 122  |
| 180° | 1279 | 1279  | 1279 | 1279  | 1279 |      |

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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°    | 1.0    | 10.5   | 22.8   | 26.6   | 28.5   |
| 92.5°  | 21.9   | 16.2   | 24.7   | 31.4   | 32.3   |
| 95°    | 58.0   | 19.0   | 29.5   | 36.1   | 36.1   |
| 97.5°  | 105.5  | 78.9   | 30.4   | 38.0   | 39.0   |
| 100°   | 160.6  | 179.6  | 31.4   | 39.0   | 39.9   |
| 102.5° | 223.3  | 235.6  | 70.3   | 39.0   | 40.9   |
| 105°   | 283.1  | 293.6  | 208.1  | 39.9   | 41.8   |
| 107.5° | 346.8  | 355.3  | 369.6  | 223.3  | 98.8   |
| 110°   | 410.4  | 418.0  | 428.5  | 397.1  | 261.3  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 471.2  | 477.9  | 488.3  | 496.9  | 495.0  |
| 115°   | 531.1  | 536.8  | 545.3  | 554.8  | 558.6  |
| 117.5° | 590.0  | 596.6  | 601.4  | 609.0  | 609.9  |
| 120°   | 644.1  | 652.7  | 655.5  | 663.1  | 663.1  |
| 122.5° | 699.2  | 705.9  | 709.7  | 714.4  | 715.4  |
| 125°   | 748.6  | 756.2  | 760.0  | 761.9  | 763.8  |
| 127.5° | 798.0  | 805.6  | 810.4  | 813.2  | 811.3  |
| 130°   | 843.6  | 851.2  | 855.0  | 858.8  | 856.9  |
| 132.5° | 887.4  | 895.0  | 897.8  | 901.6  | 898.8  |
| 135°   | 932.0  | 937.7  | 941.5  | 944.4  | 941.5  |
| 137.5° | 970.0  | 977.6  | 979.5  | 984.3  | 982.4  |
| 140°   | 1008.0 | 1013.7 | 1016.6 | 1020.4 | 1018.5 |
| 142.5° | 1043.2 | 1048.9 | 1051.7 | 1054.6 | 1051.7 |
| 145°   | 1075.5 | 1082.1 | 1084.0 | 1085.9 | 1085.9 |
| 147.5° | 1106.8 | 1111.6 | 1113.5 | 1115.4 | 1110.6 |
| 150°   | 1135.3 | 1138.2 | 1140.1 | 1142.0 | 1139.1 |
| 152.5° | 1161.0 | 1161.9 | 1162.9 | 1166.7 | 1161.9 |
| 155°   | 1184.7 | 1182.8 | 1183.8 | 1188.5 | 1182.8 |
| 157.5° | 1203.7 | 1203.7 | 1202.8 | 1208.5 | 1200.9 |
| 160°   | 1220.8 | 1219.9 | 1218.9 | 1224.6 | 1218.0 |
| 162.5° | 1237.0 | 1234.1 | 1233.2 | 1239.8 | 1234.1 |
| 165°   | 1249.3 | 1246.5 | 1245.5 | 1253.1 | 1246.5 |
| 167.5° | 1259.8 | 1256.0 | 1256.0 | 1263.6 | 1256.0 |
| 170°   | 1268.3 | 1264.5 | 1264.5 | 1272.1 | 1264.5 |
| 172.5° | 1274.0 | 1269.3 | 1270.2 | 1277.8 | 1269.3 |
| 175°   | 1278.8 | 1274.0 | 1275.0 | 1281.6 | 1274.0 |
| 177.5° | 1280.7 | 1275.9 | 1276.9 | 1284.5 | 1275.0 |
| 180°   | 1278.8 | 1278.8 | 1278.8 | 1278.8 | 1278.8 |

(END OF REPORT)