

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: P1012306

Luminaire Tested: S123RDIP-B1165D1195UB35-4F0-XX-W2A-F1

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1012306  
REPORT IS A COMBINATION OF REPORTS P992985 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-B1165D1195UB35-4F0-XX-W2A-F1  
Description: Define 3 Regressed Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721}  
{m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

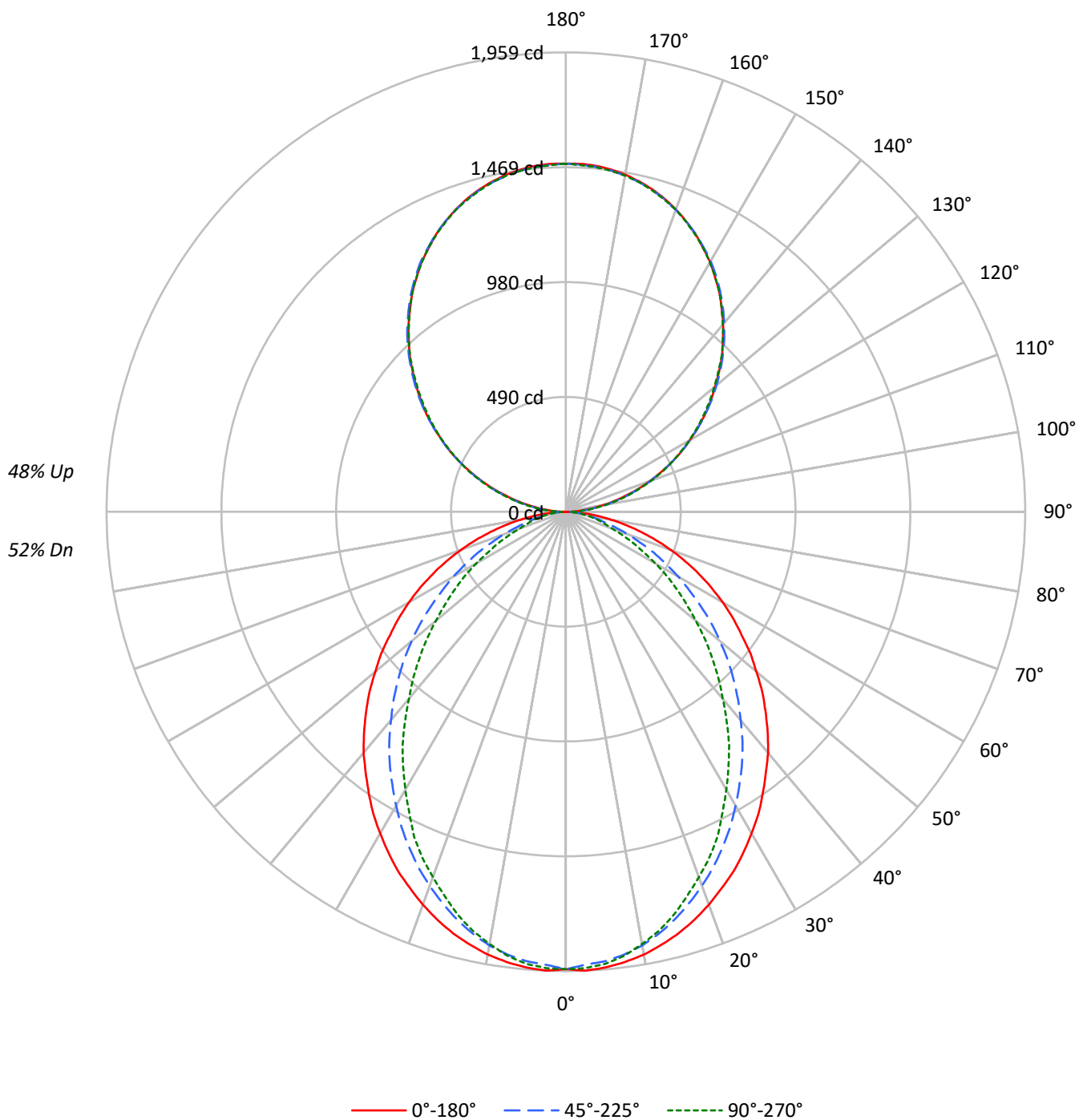
Lumens per Lamp: N/A  
Luminaire Lumens: 8523.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

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 |    |    |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 108 | 108 | 108 | 108 | 99 | 99 | 99 | 99 | 84 | 84 | 84 | 70 | 70 | 70 | 58 | 58 | 58 | 58 | 58 | 58 |
| 1   | 99  | 94  | 91  | 87  | 91 | 87 | 84 | 81 | 74 | 72 | 70 | 63 | 61 | 59 | 52 | 50 | 49 | 49 | 49 | 44 |
| 2   | 90  | 83  | 77  | 72  | 83 | 77 | 72 | 67 | 66 | 62 | 58 | 55 | 53 | 50 | 46 | 44 | 42 | 42 | 42 | 38 |
| 3   | 82  | 73  | 66  | 60  | 76 | 68 | 62 | 57 | 58 | 53 | 50 | 49 | 46 | 43 | 41 | 38 | 36 | 36 | 36 | 32 |
| 4   | 75  | 65  | 57  | 51  | 70 | 60 | 53 | 48 | 52 | 47 | 42 | 44 | 40 | 37 | 37 | 34 | 31 | 31 | 31 | 28 |
| 5   | 69  | 58  | 50  | 44  | 64 | 54 | 47 | 42 | 47 | 41 | 37 | 40 | 35 | 32 | 33 | 30 | 28 | 28 | 28 | 24 |
| 6   | 64  | 52  | 44  | 38  | 59 | 49 | 41 | 36 | 42 | 36 | 32 | 36 | 32 | 28 | 30 | 27 | 24 | 24 | 24 | 22 |
| 7   | 59  | 47  | 39  | 34  | 55 | 44 | 37 | 32 | 38 | 33 | 29 | 33 | 28 | 25 | 28 | 24 | 22 | 22 | 22 | 19 |
| 8   | 55  | 43  | 35  | 30  | 51 | 40 | 33 | 28 | 35 | 29 | 25 | 30 | 26 | 23 | 25 | 22 | 20 | 20 | 20 | 17 |
| 9   | 51  | 39  | 32  | 27  | 47 | 37 | 30 | 25 | 32 | 27 | 23 | 28 | 23 | 20 | 24 | 20 | 18 | 18 | 18 | 16 |
| 10  | 48  | 36  | 29  | 24  | 44 | 34 | 27 | 23 | 30 | 24 | 21 | 26 | 21 | 18 | 22 | 19 | 16 | 16 | 16 | 14 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 20997 | 20997 | 20997 |
| 5°  | 21031 | 20254 | 20200 |
| 10° | 20866 | 19492 | 19109 |
| 15° | 20595 | 18551 | 17913 |
| 20° | 20240 | 17528 | 16578 |
| 25° | 19873 | 16464 | 15314 |
| 30° | 19404 | 15332 | 13818 |
| 35° | 18919 | 14221 | 12457 |
| 40° | 18464 | 13014 | 10952 |
| 45° | 17881 | 11834 | 9599  |
| 50° | 17237 | 10573 | 8199  |
| 55° | 16568 | 9223  | 6915  |
| 60° | 15932 | 7839  | 5613  |
| 65° | 15106 | 6420  | 4382  |
| 70° | 14071 | 4854  | 3131  |
| 75° | 12580 | 3287  | 2481  |
| 80° | 10738 | 2285  | 1741  |
| 85° | 8059  | 1234  | 911   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 17881 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 183.4  | 2.2       |
| 10°-20°   | 510.1  | 6.0       |
| 20°-30°   | 734.5  | 8.6       |
| 30°-40°   | 827.2  | 9.7       |
| 40°-50°   | 791.2  | 9.3       |
| 50°-60°   | 647.7  | 7.6       |
| 60°-70°   | 436.7  | 5.1       |
| 70°-80°   | 219.0  | 2.6       |
| 80°-90°   | 60.4   | 0.7       |
| 90°-100°  | 95.6   | 1.1       |
| 100°-110° | 289.2  | 3.4       |
| 110°-120° | 492.4  | 5.8       |
| 120°-130° | 647.7  | 7.6       |
| 130°-140° | 728.0  | 8.5       |
| 140°-150° | 715.8  | 8.4       |
| 150°-160° | 602.6  | 7.1       |
| 160°-170° | 401.2  | 4.7       |
| 170°-180° | 140.5  | 1.6       |
| 0°-30°    | 1428.0 | 16.8      |
| 0°-40°    | 2255.2 | 26.5      |
| 0°-60°    | 3694.0 | 43.3      |
| 0°-90°    | 4410.1 | 51.7      |
| 90°-120°  | 877.1  | 10.3      |
| 90°-150°  | 2968.6 | 34.8      |
| 90°-180°  | 4113.0 | 48.3      |
| 0°-180°   | 8523.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1951 | 1951  | 1951 | 1951  | 1951 |      |
| 5°   | 1951 | 1943  | 1924 | 1938  | 1935 | 185  |
| 15°  | 1860 | 1843  | 1799 | 1791  | 1780 | 524  |
| 25°  | 1693 | 1653  | 1580 | 1547  | 1530 | 779  |
| 35°  | 1465 | 1408  | 1310 | 1242  | 1214 | 917  |
| 45°  | 1204 | 1133  | 1011 | 921   | 883  | 929  |
| 55°  | 914  | 837   | 702  | 611   | 579  | 820  |
| 65°  | 625  | 538   | 414  | 337   | 320  | 618  |
| 75°  | 331  | 255   | 168  | 152   | 149  | 352  |
| 85°  | 84   | 49    | 44   | 41    | 41   | 92   |
| 90°  | 1    | 13    | 28   | 33    | 35   | 10   |
| 95°  | 69   | 77    | 86   | 91    | 91   | 76   |
| 105° | 262  | 265   | 275  | 275   | 278  | 281  |
| 115° | 496  | 499   | 497  | 498   | 497  | 490  |
| 125° | 725  | 729   | 726  | 722   | 717  | 647  |
| 135° | 941  | 948   | 947  | 942   | 940  | 725  |
| 145° | 1142 | 1144  | 1147 | 1146  | 1142 | 713  |
| 155° | 1307 | 1307  | 1308 | 1313  | 1305 | 602  |
| 165° | 1424 | 1420  | 1420 | 1427  | 1419 | 402  |
| 175° | 1481 | 1476  | 1476 | 1483  | 1475 | 141  |
| 180° | 1484 | 1484  | 1484 | 1484  | 1484 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1950.7 | 1950.7 | 1950.7 | 1950.7 | 1950.7 |
| 2.5°   | 1958.6 | 1952.3 | 1933.3 | 1950.7 | 1947.5 |
| 5°     | 1950.7 | 1942.8 | 1923.8 | 1938.1 | 1934.9 |
| 7.5°   | 1936.5 | 1928.6 | 1904.8 | 1914.3 | 1909.6 |
| 10°    | 1917.5 | 1906.4 | 1877.9 | 1879.5 | 1871.6 |
| 12.5°  | 1890.6 | 1877.9 | 1841.5 | 1840.0 | 1830.5 |
| 15°    | 1860.5 | 1843.1 | 1798.8 | 1790.9 | 1779.8 |
| 17.5°  | 1824.1 | 1805.2 | 1749.8 | 1734.0 | 1718.1 |
| 20°    | 1783.0 | 1757.7 | 1697.6 | 1677.0 | 1658.0 |
| 22.5°  | 1737.1 | 1707.1 | 1642.2 | 1615.3 | 1597.9 |
| 25°    | 1692.8 | 1653.3 | 1580.5 | 1547.3 | 1529.9 |
| 27.5°  | 1639.0 | 1596.3 | 1517.2 | 1472.9 | 1446.0 |
| 30°    | 1583.7 | 1536.2 | 1447.6 | 1393.8 | 1368.5 |
| 32.5°  | 1528.3 | 1472.9 | 1378.0 | 1317.9 | 1291.0 |
| 35°    | 1465.0 | 1408.1 | 1310.0 | 1241.9 | 1213.5 |
| 37.5°  | 1401.7 | 1340.0 | 1237.2 | 1161.2 | 1126.4 |
| 40°    | 1341.6 | 1272.0 | 1159.7 | 1077.4 | 1041.0 |
| 42.5°  | 1273.6 | 1204.0 | 1086.9 | 995.1  | 963.5  |
| 45°    | 1204.0 | 1132.8 | 1011.0 | 920.8  | 882.8  |
| 47.5°  | 1135.9 | 1056.8 | 936.6  | 838.5  | 805.3  |
| 50°    | 1060.0 | 985.6  | 857.5  | 759.4  | 723.0  |
| 52.5°  | 992.0  | 909.7  | 783.1  | 680.3  | 648.7  |
| 55°    | 914.4  | 836.9  | 702.4  | 610.7  | 579.0  |
| 57.5°  | 844.8  | 761.0  | 624.9  | 537.9  | 511.0  |
| 60°    | 772.1  | 685.0  | 553.7  | 468.3  | 441.4  |
| 62.5°  | 699.3  | 612.3  | 481.0  | 401.8  | 373.4  |
| 65°    | 624.9  | 537.9  | 414.5  | 337.0  | 319.6  |
| 67.5°  | 550.6  | 462.0  | 341.7  | 283.2  | 264.2  |
| 70°    | 477.8  | 392.4  | 281.6  | 226.2  | 208.8  |
| 72.5°  | 405.0  | 321.2  | 223.1  | 180.4  | 175.6  |
| 75°    | 330.7  | 254.7  | 167.7  | 151.9  | 148.7  |
| 77.5°  | 262.6  | 193.0  | 131.3  | 121.8  | 118.7  |
| 80°    | 197.8  | 132.9  | 99.7   | 94.9   | 91.8   |
| 82.5°  | 136.1  | 82.3   | 71.2   | 66.4   | 66.4   |
| 85°    | 83.9   | 49.0   | 44.3   | 41.1   | 41.1   |
| 87.5°  | 38.0   | 20.6   | 20.6   | 19.0   | 17.4   |
| 90°    | 1.2    | 12.8   | 28.0   | 32.6   | 35.0   |
| 92.5°  | 35.0   | 42.0   | 49.0   | 52.5   | 50.1   |
| 95°    | 68.8   | 77.0   | 86.3   | 90.9   | 90.9   |
| 97.5°  | 113.1  | 118.9  | 125.9  | 131.8  | 130.6  |
| 100°   | 158.6  | 165.6  | 171.4  | 174.9  | 177.2  |
| 102.5° | 211.1  | 214.5  | 222.7  | 226.2  | 225.0  |
| 105°   | 262.4  | 264.7  | 275.2  | 275.2  | 277.5  |
| 107.5° | 323.0  | 324.2  | 328.8  | 332.3  | 331.2  |
| 110°   | 379.0  | 381.3  | 383.6  | 388.3  | 386.0  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 437.3  | 438.4  | 438.4  | 444.3  | 444.3  |
| 115°   | 495.6  | 499.1  | 496.7  | 497.9  | 496.7  |
| 117.5° | 555.0  | 556.2  | 553.9  | 553.9  | 550.4  |
| 120°   | 609.8  | 616.8  | 611.0  | 609.8  | 607.5  |
| 122.5° | 667.0  | 671.6  | 669.3  | 665.8  | 662.3  |
| 125°   | 725.3  | 728.8  | 726.4  | 721.8  | 717.1  |
| 127.5° | 778.9  | 785.9  | 783.6  | 776.6  | 771.9  |
| 130°   | 832.5  | 841.9  | 838.4  | 833.7  | 825.5  |
| 132.5° | 886.2  | 895.5  | 893.2  | 887.3  | 881.5  |
| 135°   | 941.0  | 948.0  | 946.8  | 942.1  | 939.8  |
| 137.5° | 991.1  | 997.0  | 1000.4 | 994.6  | 991.1  |
| 140°   | 1043.6 | 1049.4 | 1050.6 | 1049.4 | 1041.3 |
| 142.5° | 1091.4 | 1097.2 | 1099.6 | 1098.4 | 1092.6 |
| 145°   | 1141.5 | 1143.9 | 1147.4 | 1146.2 | 1141.5 |
| 147.5° | 1184.7 | 1189.3 | 1192.8 | 1192.8 | 1185.8 |
| 150°   | 1230.2 | 1232.5 | 1234.8 | 1234.8 | 1227.8 |
| 152.5° | 1267.5 | 1271.0 | 1272.1 | 1274.5 | 1268.6 |
| 155°   | 1307.1 | 1307.1 | 1308.3 | 1312.9 | 1304.8 |
| 157.5° | 1340.9 | 1339.8 | 1340.9 | 1345.6 | 1338.6 |
| 160°   | 1372.4 | 1370.1 | 1370.1 | 1375.9 | 1371.2 |
| 162.5° | 1400.4 | 1396.9 | 1398.1 | 1403.9 | 1395.7 |
| 165°   | 1423.7 | 1420.2 | 1420.2 | 1427.2 | 1419.1 |
| 167.5° | 1443.5 | 1438.9 | 1440.0 | 1447.0 | 1440.0 |
| 170°   | 1459.9 | 1455.2 | 1455.2 | 1463.4 | 1455.2 |
| 172.5° | 1472.7 | 1468.0 | 1468.0 | 1475.0 | 1466.9 |
| 175°   | 1480.9 | 1476.2 | 1476.2 | 1483.2 | 1475.0 |
| 177.5° | 1485.5 | 1480.9 | 1480.9 | 1487.8 | 1479.7 |
| 180°   | 1484.3 | 1484.3 | 1484.3 | 1484.3 | 1484.3 |

(END OF REPORT)