

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: P1031480

Luminaire Tested: S123DIW-B1165D1535UB35-4F0-XX-W2A-D1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031480  
REPORT IS A COMBINATION OF REPORTS P991024 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B1165D1535UB35-4F0-XX-W2A-D1  
Description: Define 3 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

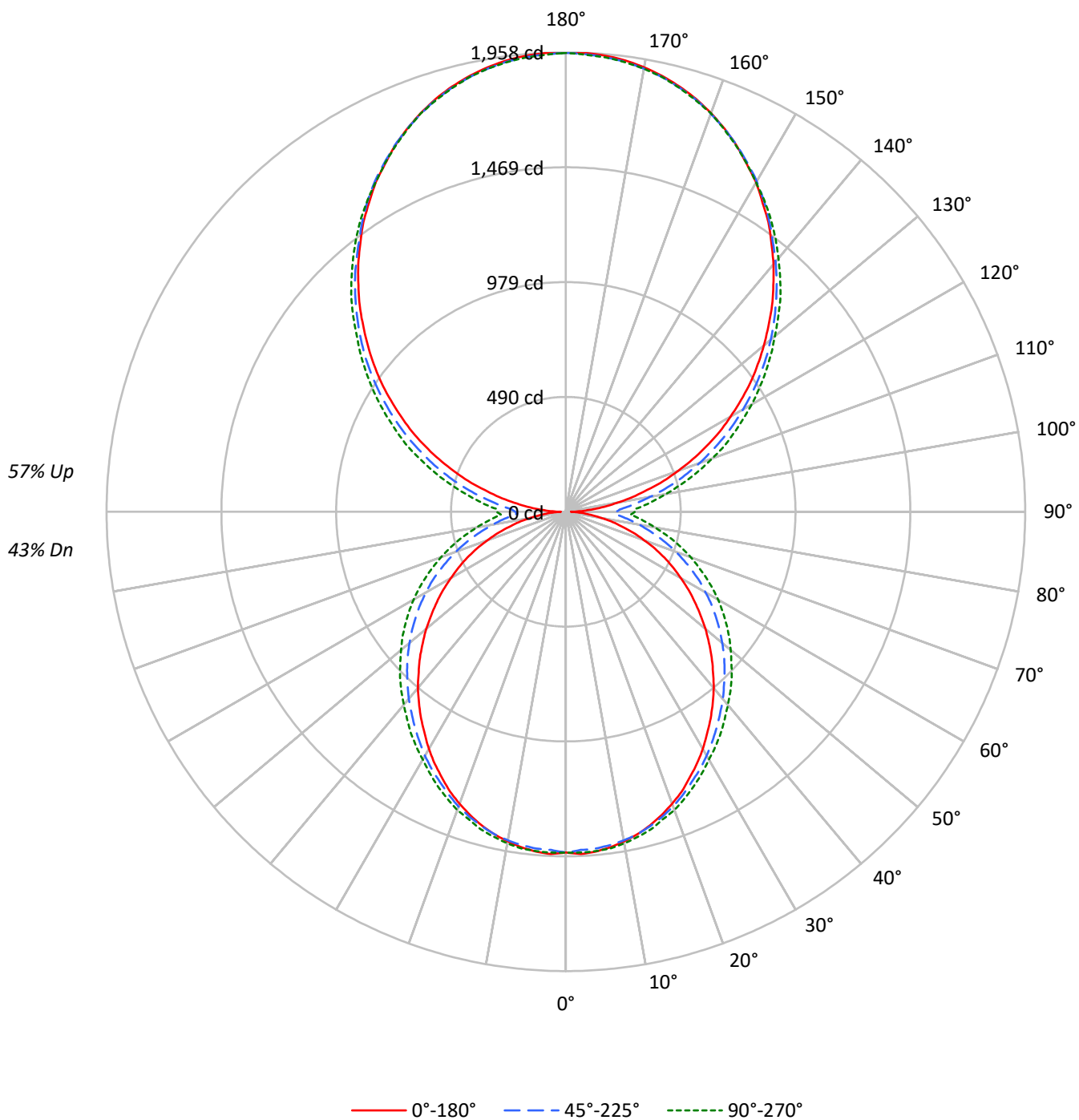
Lumens per Lamp: N/A  
Luminaire Lumens: 10305.0 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 113.5  
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   | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 |
| 1   | 95  | 91  | 87  | 83  | 87 | 83 | 79 | 76 | 68 | 66 | 63 | 55 | 53 | 52 | 43 | 42 | 40 |
| 2   | 86  | 79  | 72  | 67  | 79 | 72 | 66 | 62 | 59 | 55 | 52 | 48 | 45 | 42 | 37 | 35 | 33 |
| 3   | 79  | 69  | 61  | 55  | 71 | 63 | 56 | 51 | 52 | 47 | 43 | 42 | 38 | 35 | 33 | 30 | 28 |
| 4   | 72  | 61  | 53  | 46  | 65 | 56 | 49 | 43 | 46 | 41 | 36 | 37 | 33 | 30 | 29 | 26 | 24 |
| 5   | 66  | 54  | 46  | 39  | 60 | 49 | 42 | 37 | 41 | 36 | 31 | 33 | 29 | 26 | 26 | 23 | 21 |
| 6   | 60  | 48  | 40  | 34  | 55 | 44 | 37 | 32 | 37 | 31 | 27 | 30 | 26 | 23 | 24 | 20 | 18 |
| 7   | 56  | 43  | 35  | 30  | 51 | 40 | 33 | 28 | 33 | 28 | 24 | 27 | 23 | 20 | 21 | 18 | 16 |
| 8   | 52  | 39  | 32  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 18 | 20 | 17 | 14 |
| 9   | 48  | 36  | 28  | 23  | 44 | 33 | 26 | 22 | 28 | 22 | 19 | 23 | 19 | 16 | 18 | 15 | 13 |
| 10  | 45  | 33  | 26  | 21  | 41 | 30 | 24 | 19 | 26 | 20 | 17 | 21 | 17 | 14 | 17 | 14 | 12 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15632 | 15632 | 15632 |
| 5°  | 15675 | 15174 | 15162 |
| 10° | 15529 | 14763 | 14650 |
| 15° | 15323 | 14310 | 14108 |
| 20° | 15032 | 13803 | 13526 |
| 25° | 14672 | 13234 | 12922 |
| 30° | 14306 | 12718 | 12317 |
| 35° | 13893 | 12177 | 11822 |
| 40° | 13500 | 11682 | 11301 |
| 45° | 13063 | 11204 | 10872 |
| 50° | 12632 | 10728 | 10406 |
| 55° | 12154 | 10242 | 9976  |
| 60° | 11687 | 9744  | 9537  |
| 65° | 11204 | 9214  | 9022  |
| 70° | 10484 | 8617  | 8492  |
| 75° | 9567  | 7939  | 7945  |
| 80° | 8502  | 7252  | 7320  |
| 85° | 7444  | 6697  | 6873  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13063 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 137.8   | 1.3       |
| 10°-20°   | 392.8   | 3.8       |
| 20°-30°   | 587.3   | 5.7       |
| 30°-40°   | 701.2   | 6.8       |
| 40°-50°   | 733.7   | 7.1       |
| 50°-60°   | 688.5   | 6.7       |
| 60°-70°   | 575.1   | 5.6       |
| 70°-80°   | 411.2   | 4.0       |
| 80°-90°   | 248.8   | 2.4       |
| 90°-100°  | 279.7   | 2.7       |
| 100°-110° | 494.1   | 4.8       |
| 110°-120° | 724.3   | 7.0       |
| 120°-130° | 896.6   | 8.7       |
| 130°-140° | 978.7   | 9.5       |
| 140°-150° | 947.2   | 9.2       |
| 150°-160° | 794.1   | 7.7       |
| 160°-170° | 528.7   | 5.1       |
| 170°-180° | 185.1   | 1.8       |
| 0°-30°    | 1117.9  | 10.8      |
| 0°-40°    | 1819.1  | 17.7      |
| 0°-60°    | 3241.3  | 31.5      |
| 0°-90°    | 4476.5  | 43.4      |
| 90°-120°  | 1498.1  | 14.5      |
| 90°-150°  | 4320.7  | 41.9      |
| 90°-180°  | 5829.0  | 56.6      |
| 0°-180°   | 10305.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1452 | 1452  | 1452 | 1452  | 1452 |      |
| 5°   | 1454 | 1451  | 1441 | 1454  | 1452 | 138  |
| 15°  | 1384 | 1389  | 1388 | 1403  | 1402 | 390  |
| 25°  | 1250 | 1266  | 1270 | 1291  | 1291 | 576  |
| 35°  | 1076 | 1101  | 1122 | 1145  | 1152 | 673  |
| 45°  | 880  | 918   | 957  | 987   | 1000 | 678  |
| 55°  | 671  | 723   | 780  | 823   | 835  | 601  |
| 65°  | 464  | 525   | 595  | 642   | 658  | 458  |
| 75°  | 252  | 326   | 405  | 457   | 476  | 269  |
| 85°  | 78   | 157   | 240  | 294   | 310  | 80   |
| 90°  | 22   | 115   | 216  | 276   | 294  | 21   |
| 95°  | 108  | 180   | 270  | 326   | 341  | 113  |
| 105° | 358  | 399   | 481  | 526   | 543  | 383  |
| 115° | 661  | 685   | 738  | 778   | 789  | 655  |
| 125° | 960  | 965   | 1008 | 1035  | 1040 | 857  |
| 135° | 1243 | 1251  | 1267 | 1289  | 1294 | 958  |
| 145° | 1506 | 1507  | 1512 | 1523  | 1523 | 940  |
| 155° | 1722 | 1722  | 1724 | 1730  | 1719 | 793  |
| 165° | 1876 | 1872  | 1872 | 1881  | 1870 | 529  |
| 175° | 1951 | 1945  | 1945 | 1954  | 1944 | 185  |
| 180° | 1956 | 1956  | 1956 | 1956  | 1956 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1452.3 | 1452.3 | 1452.3 | 1452.3 | 1452.3 |
| 2.5°   | 1460.3 | 1455.5 | 1442.8 | 1455.5 | 1453.9 |
| 5°     | 1453.9 | 1450.8 | 1441.3 | 1453.9 | 1452.3 |
| 7.5°   | 1442.8 | 1442.8 | 1433.4 | 1449.2 | 1447.6 |
| 10°    | 1427.0 | 1430.2 | 1422.3 | 1438.1 | 1434.9 |
| 12.5°  | 1408.0 | 1412.8 | 1408.0 | 1422.3 | 1419.1 |
| 15°    | 1384.3 | 1389.1 | 1387.5 | 1403.3 | 1401.7 |
| 17.5°  | 1355.8 | 1365.3 | 1363.7 | 1378.0 | 1374.8 |
| 20°    | 1324.2 | 1333.7 | 1336.8 | 1351.1 | 1352.7 |
| 22.5°  | 1291.0 | 1300.5 | 1305.2 | 1324.2 | 1322.6 |
| 25°    | 1249.8 | 1265.7 | 1270.4 | 1291.0 | 1291.0 |
| 27.5°  | 1210.3 | 1227.7 | 1237.2 | 1254.6 | 1256.2 |
| 30°    | 1167.6 | 1188.1 | 1200.8 | 1219.8 | 1219.8 |
| 32.5°  | 1120.1 | 1143.8 | 1161.2 | 1181.8 | 1186.6 |
| 35°    | 1075.8 | 1101.1 | 1121.7 | 1145.4 | 1151.7 |
| 37.5°  | 1028.3 | 1056.8 | 1080.6 | 1107.4 | 1112.2 |
| 40°    | 980.9  | 1009.4 | 1041.0 | 1067.9 | 1074.2 |
| 42.5°  | 928.7  | 965.1  | 998.3  | 1028.3 | 1037.8 |
| 45°    | 879.6  | 917.6  | 957.2  | 987.2  | 999.9  |
| 47.5°  | 827.4  | 870.1  | 914.4  | 947.7  | 957.2  |
| 50°    | 776.8  | 821.1  | 870.1  | 906.5  | 917.6  |
| 52.5°  | 723.0  | 770.5  | 825.8  | 863.8  | 878.0  |
| 55°    | 670.8  | 723.0  | 780.0  | 822.7  | 835.3  |
| 57.5°  | 620.2  | 674.0  | 735.7  | 778.4  | 792.6  |
| 60°    | 566.4  | 623.3  | 688.2  | 732.5  | 749.9  |
| 62.5°  | 515.8  | 574.3  | 643.9  | 688.2  | 704.0  |
| 65°    | 463.5  | 525.2  | 594.9  | 642.3  | 658.1  |
| 67.5°  | 411.3  | 476.2  | 545.8  | 598.0  | 610.7  |
| 70°    | 356.0  | 424.0  | 499.9  | 550.6  | 566.4  |
| 72.5°  | 305.3  | 373.4  | 452.5  | 504.7  | 520.5  |
| 75°    | 251.5  | 325.9  | 405.0  | 457.2  | 476.2  |
| 77.5°  | 205.7  | 280.0  | 359.1  | 414.5  | 428.7  |
| 80°    | 156.6  | 234.1  | 316.4  | 370.2  | 386.0  |
| 82.5°  | 113.9  | 193.0  | 276.9  | 330.7  | 346.5  |
| 85°    | 77.5   | 156.6  | 240.5  | 294.3  | 310.1  |
| 87.5°  | 47.5   | 126.6  | 207.3  | 261.0  | 276.9  |
| 90°    | 22.1   | 115.0  | 215.7  | 275.6  | 294.5  |
| 92.5°  | 65.1   | 142.3  | 230.6  | 287.4  | 298.7  |
| 95°    | 108.1  | 180.5  | 270.3  | 325.6  | 341.4  |
| 97.5°  | 164.8  | 229.5  | 313.0  | 368.2  | 382.5  |
| 100°   | 223.2  | 283.1  | 363.5  | 414.0  | 432.9  |
| 102.5° | 290.8  | 339.7  | 421.6  | 470.5  | 484.9  |
| 105°   | 358.4  | 399.4  | 481.3  | 525.6  | 542.9  |
| 107.5° | 436.7  | 471.5  | 542.5  | 589.8  | 602.5  |
| 110°   | 508.9  | 540.5  | 606.8  | 654.1  | 663.6  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 585.7  | 609.3  | 669.5  | 716.7  | 731.0  |
| 115°   | 660.9  | 684.6  | 738.4  | 777.9  | 789.1  |
| 117.5° | 739.3  | 753.5  | 804.3  | 842.2  | 850.3  |
| 120°   | 809.9  | 827.0  | 871.6  | 906.4  | 914.5  |
| 122.5° | 885.2  | 894.6  | 940.5  | 970.7  | 977.2  |
| 125°   | 960.4  | 965.1  | 1007.9 | 1034.9 | 1039.9 |
| 127.5° | 1031.1 | 1038.8 | 1075.3 | 1097.8 | 1102.6 |
| 130°   | 1101.8 | 1112.6 | 1139.6 | 1163.5 | 1162.3 |
| 132.5° | 1171.0 | 1183.3 | 1203.9 | 1224.7 | 1228.0 |
| 135°   | 1243.2 | 1250.8 | 1266.7 | 1289.0 | 1293.9 |
| 137.5° | 1309.3 | 1315.4 | 1331.1 | 1348.7 | 1352.0 |
| 140°   | 1376.8 | 1384.5 | 1390.7 | 1413.0 | 1410.2 |
| 142.5° | 1439.8 | 1445.9 | 1449.0 | 1468.0 | 1468.3 |
| 145°   | 1505.9 | 1507.4 | 1512.0 | 1523.1 | 1523.3 |
| 147.5° | 1561.2 | 1567.3 | 1571.9 | 1576.6 | 1573.8 |
| 150°   | 1621.1 | 1624.2 | 1627.2 | 1627.2 | 1621.2 |
| 152.5° | 1670.3 | 1674.9 | 1676.4 | 1679.5 | 1671.8 |
| 155°   | 1722.5 | 1722.5 | 1724.0 | 1730.2 | 1719.4 |
| 157.5° | 1767.1 | 1765.5 | 1767.1 | 1773.2 | 1764.0 |
| 160°   | 1808.5 | 1805.5 | 1805.5 | 1813.2 | 1807.0 |
| 162.5° | 1845.4 | 1840.8 | 1842.3 | 1850.0 | 1839.3 |
| 165°   | 1876.2 | 1871.5 | 1871.5 | 1880.8 | 1870.0 |
| 167.5° | 1902.3 | 1896.1 | 1897.7 | 1906.9 | 1897.7 |
| 170°   | 1923.8 | 1917.6 | 1917.6 | 1928.4 | 1917.6 |
| 172.5° | 1940.7 | 1934.5 | 1934.5 | 1943.8 | 1933.0 |
| 175°   | 1951.4 | 1945.3 | 1945.3 | 1954.5 | 1943.8 |
| 177.5° | 1957.6 | 1951.4 | 1951.4 | 1960.7 | 1949.9 |
| 180°   | 1956.1 | 1956.1 | 1956.1 | 1956.1 | 1956.1 |

(END OF REPORT)