

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: P1030722

Luminaire Tested: S123DIW-B1165D1030UB2750-4F0-XX-W2A-D\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1030722  
REPORT IS A COMBINATION OF REPORTS P990869 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B1165D1030UB2750-4F0-XX-W2A-D\_3500K  
Description: Define 3 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

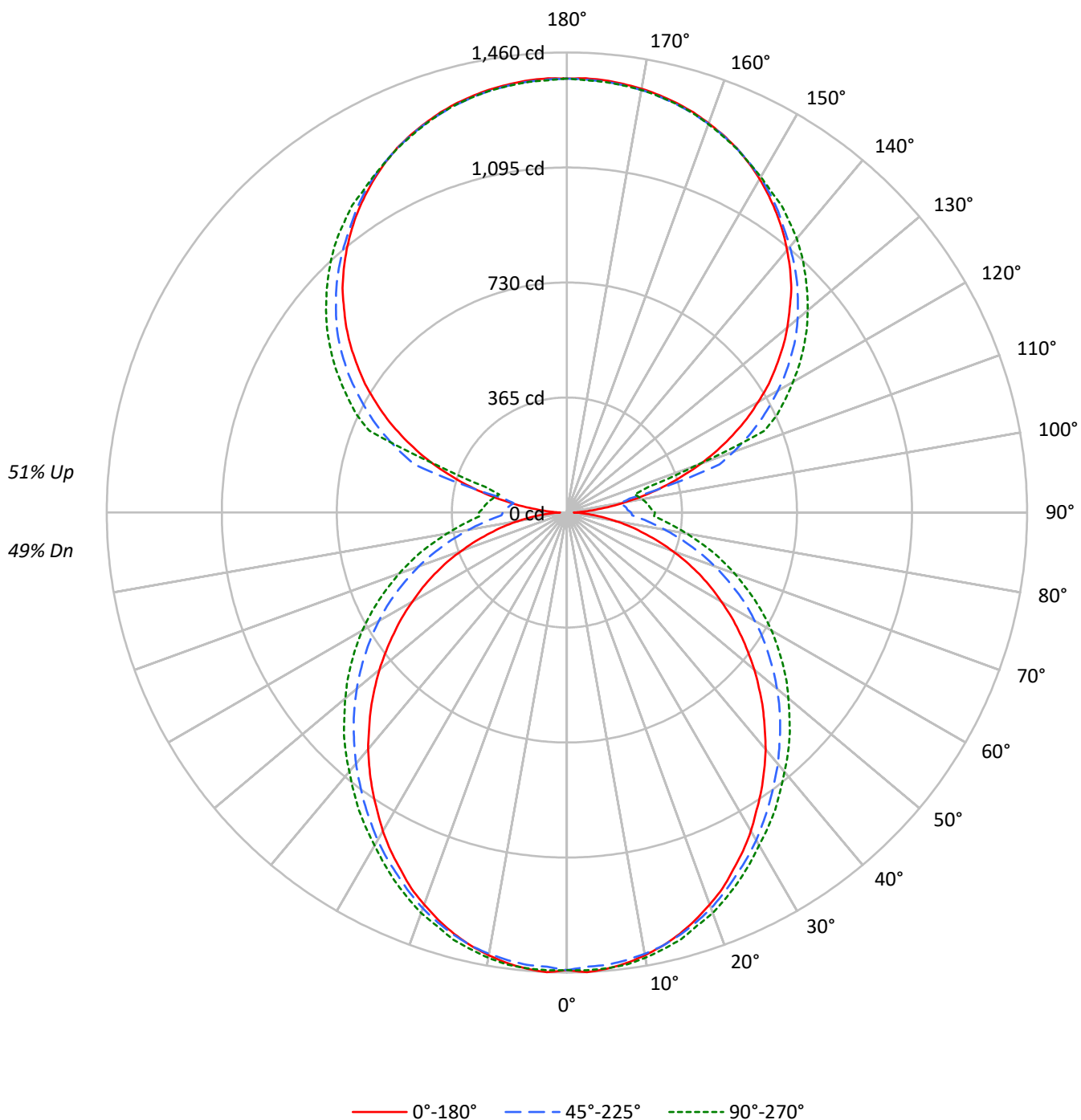
Lumens per Lamp: N/A  
Luminaire Lumens: 9082.0 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 92.8  
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 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 83 | 83 | 83 | 69 | 69 | 69 | 55 | 55 | 55 | 49 |    |    |
| 1   | 97  | 92  | 88  | 84  | 89 | 85 | 81 | 78 | 71 | 68 | 66 | 59 | 57 | 55 | 47 | 46 | 45 | 39 |    |    |
| 2   | 88  | 80  | 73  | 67  | 80 | 73 | 68 | 63 | 62 | 57 | 54 | 51 | 48 | 45 | 41 | 39 | 37 | 32 |    |    |
| 3   | 80  | 70  | 62  | 56  | 73 | 64 | 57 | 52 | 54 | 49 | 45 | 45 | 41 | 38 | 36 | 33 | 31 | 27 |    |    |
| 4   | 73  | 61  | 53  | 47  | 66 | 57 | 49 | 44 | 48 | 42 | 38 | 40 | 35 | 32 | 32 | 29 | 26 | 23 |    |    |
| 5   | 67  | 55  | 46  | 40  | 61 | 50 | 43 | 37 | 43 | 37 | 32 | 35 | 31 | 28 | 29 | 25 | 23 | 20 |    |    |
| 6   | 61  | 49  | 40  | 34  | 56 | 45 | 38 | 32 | 38 | 33 | 28 | 32 | 27 | 24 | 26 | 23 | 20 | 17 |    |    |
| 7   | 57  | 44  | 36  | 30  | 52 | 41 | 33 | 28 | 35 | 29 | 25 | 29 | 25 | 21 | 24 | 20 | 18 | 15 |    |    |
| 8   | 52  | 40  | 32  | 27  | 48 | 37 | 30 | 25 | 32 | 26 | 22 | 27 | 22 | 19 | 22 | 18 | 16 | 13 |    |    |
| 9   | 49  | 36  | 29  | 24  | 45 | 34 | 27 | 22 | 29 | 23 | 20 | 24 | 20 | 17 | 20 | 17 | 14 | 12 |    |    |
| 10  | 46  | 33  | 26  | 21  | 42 | 31 | 24 | 20 | 27 | 21 | 18 | 23 | 18 | 15 | 19 | 15 | 13 | 11 |    |    |

**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  | 1.5       |
| 10°-20°   | 392.8  | 4.3       |
| 20°-30°   | 587.3  | 6.5       |
| 30°-40°   | 701.2  | 7.7       |
| 40°-50°   | 733.7  | 8.1       |
| 50°-60°   | 688.5  | 7.6       |
| 60°-70°   | 575.1  | 6.3       |
| 70°-80°   | 411.2  | 4.5       |
| 80°-90°   | 247.5  | 2.7       |
| 90°-100°  | 202.3  | 2.2       |
| 100°-110° | 347.8  | 3.8       |
| 110°-120° | 650.8  | 7.2       |
| 120°-130° | 773.5  | 8.5       |
| 130°-140° | 799.6  | 8.8       |
| 140°-150° | 733.7  | 8.1       |
| 150°-160° | 588.6  | 6.5       |
| 160°-170° | 379.8  | 4.2       |
| 170°-180° | 130.9  | 1.4       |
| 0°-30°    | 1117.9 | 12.3      |
| 0°-40°    | 1819.1 | 20.0      |
| 0°-60°    | 3241.3 | 35.7      |
| 0°-90°    | 4475.1 | 49.3      |
| 90°-120°  | 1201.0 | 13.2      |
| 90°-150°  | 3507.7 | 38.6      |
| 90°-180°  | 4607.0 | 50.7      |
| 0°-180°   | 9082.0 | 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   | 109   | 203  | 261   | 279  | 18   |
| 95°  | 80   | 100   | 188  | 245   | 260  | 88   |
| 105° | 318  | 367   | 343  | 206   | 222  | 336  |
| 115° | 580  | 605   | 671  | 719   | 736  | 573  |
| 125° | 811  | 819   | 869  | 904   | 918  | 725  |
| 135° | 1007 | 1011  | 1033 | 1064  | 1069 | 775  |
| 145° | 1160 | 1165  | 1167 | 1182  | 1188 | 726  |
| 155° | 1276 | 1274  | 1275 | 1280  | 1274 | 588  |
| 165° | 1345 | 1342  | 1341 | 1350  | 1342 | 380  |
| 175° | 1377 | 1372  | 1373 | 1380  | 1372 | 131  |
| 180° | 1377 | 1377  | 1377 | 1377  | 1377 |      |

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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°    | 21.6   | 109.4  | 203.4  | 261.2  | 279.1  |
| 92.5°  | 42.5   | 104.4  | 192.7  | 252.1  | 267.4  |
| 95°    | 79.8   | 99.6   | 188.3  | 244.6  | 260.4  |
| 97.5°  | 129.4  | 157.7  | 179.8  | 235.5  | 252.3  |
| 100°   | 187.1  | 258.3  | 171.4  | 225.4  | 242.3  |
| 102.5° | 253.1  | 310.7  | 203.8  | 214.3  | 232.3  |
| 105°   | 317.6  | 366.7  | 342.8  | 206.0  | 222.2  |
| 107.5° | 384.5  | 426.9  | 507.2  | 392.3  | 272.5  |
| 110°   | 451.5  | 488.2  | 562.7  | 570.1  | 436.4  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 517.0  | 546.2  | 617.7  | 666.4  | 678.6  |
| 115°   | 579.8  | 605.0  | 671.1  | 719.3  | 736.1  |
| 117.5° | 643.3  | 663.1  | 722.0  | 768.1  | 781.8  |
| 120°   | 700.0  | 717.1  | 772.4  | 816.9  | 828.0  |
| 122.5° | 759.3  | 769.7  | 822.8  | 862.7  | 874.8  |
| 125°   | 810.9  | 819.1  | 869.1  | 904.3  | 917.5  |
| 127.5° | 864.1  | 870.8  | 915.4  | 950.2  | 959.1  |
| 130°   | 913.2  | 919.9  | 955.6  | 989.8  | 997.3  |
| 132.5° | 958.8  | 967.0  | 993.7  | 1026.3 | 1034.3 |
| 135°   | 1006.9 | 1011.4 | 1032.9 | 1064.5 | 1069.3 |
| 137.5° | 1047.8 | 1054.4 | 1067.5 | 1097.9 | 1103.8 |
| 140°   | 1087.1 | 1093.3 | 1101.0 | 1128.9 | 1134.8 |
| 142.5° | 1125.0 | 1129.5 | 1132.6 | 1156.3 | 1161.1 |
| 145°   | 1159.8 | 1165.3 | 1167.4 | 1182.1 | 1188.4 |
| 147.5° | 1191.9 | 1197.0 | 1199.1 | 1205.8 | 1207.1 |
| 150°   | 1222.6 | 1225.7 | 1227.7 | 1229.8 | 1229.9 |
| 152.5° | 1250.2 | 1251.3 | 1252.3 | 1256.4 | 1251.3 |
| 155°   | 1275.8 | 1273.8 | 1274.8 | 1279.9 | 1273.8 |
| 157.5° | 1296.3 | 1296.3 | 1295.3 | 1301.4 | 1293.2 |
| 160°   | 1314.7 | 1313.7 | 1312.7 | 1318.8 | 1311.6 |
| 162.5° | 1332.1 | 1329.0 | 1328.0 | 1335.2 | 1329.0 |
| 165°   | 1345.4 | 1342.3 | 1341.3 | 1349.5 | 1342.3 |
| 167.5° | 1356.7 | 1352.6 | 1352.6 | 1360.7 | 1352.6 |
| 170°   | 1365.9 | 1361.8 | 1361.8 | 1370.0 | 1361.8 |
| 172.5° | 1372.0 | 1366.9 | 1367.9 | 1376.1 | 1366.9 |
| 175°   | 1377.1 | 1372.0 | 1373.0 | 1380.2 | 1372.0 |
| 177.5° | 1379.2 | 1374.0 | 1375.1 | 1383.3 | 1373.0 |
| 180°   | 1377.1 | 1377.1 | 1377.1 | 1377.1 | 1377.1 |

(END OF REPORT)