

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: P1031550

Luminaire Tested: S123DIW-B1165D755UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1031550  
REPORT IS A COMBINATION OF REPORTS P991176 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B1165D755UB50-4F0-XX-W2A-F  
Description: Define 3 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

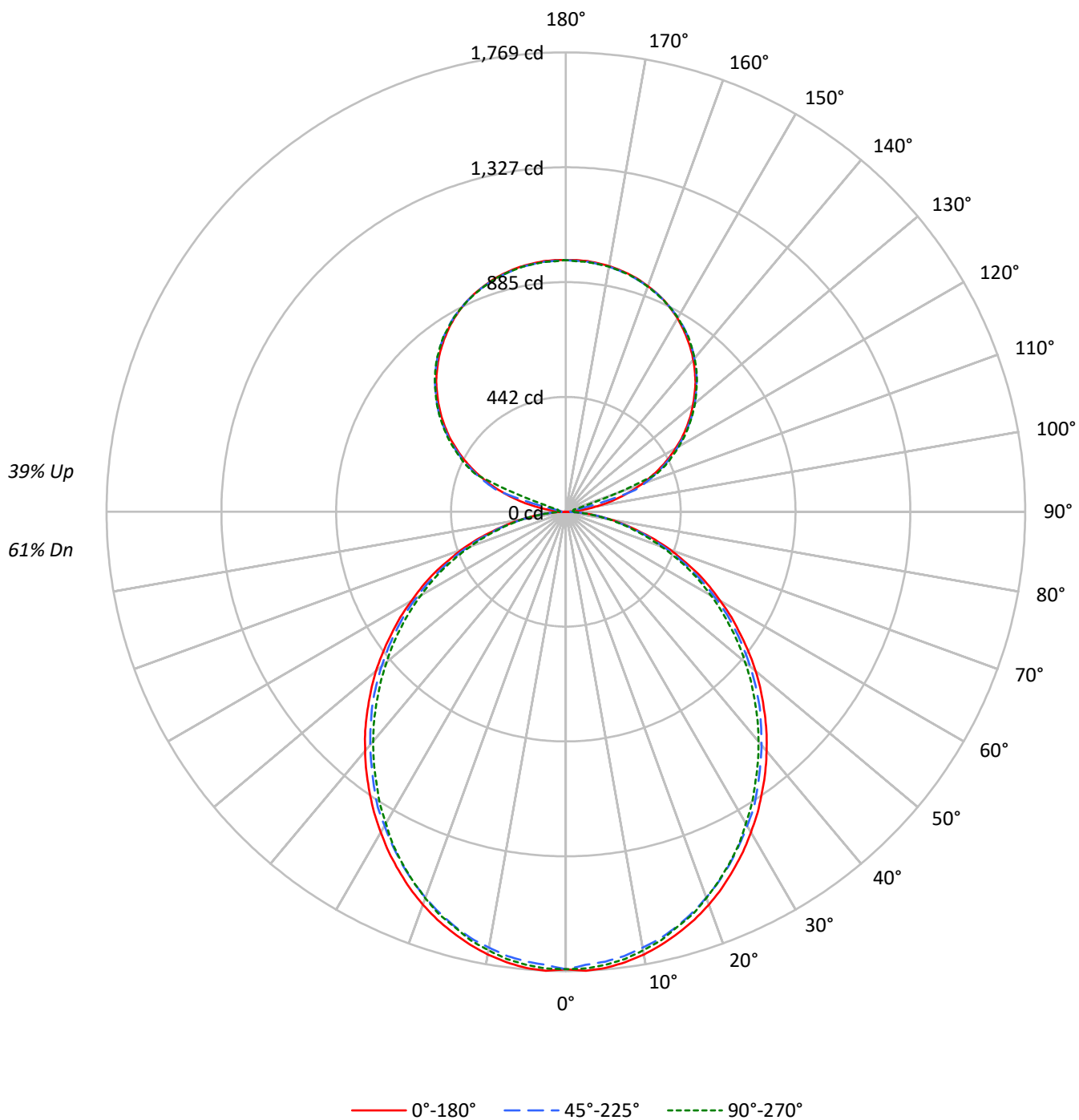
Lumens per Lamp: N/A  
Luminaire Lumens: 7540.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 84.5  
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   | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 89 | 89 | 89 | 77 | 77 | 77 | 66 | 66 | 66 |
| 1   | 100 | 96  | 92  | 88  | 94  | 90  | 86  | 83  | 78 | 76 | 73 | 68 | 66 | 64 | 58 | 57 | 56 |
| 2   | 91  | 84  | 77  | 72  | 85  | 78  | 73  | 68  | 69 | 64 | 61 | 60 | 56 | 54 | 51 | 49 | 47 |
| 3   | 83  | 73  | 66  | 60  | 77  | 69  | 62  | 57  | 61 | 55 | 51 | 53 | 49 | 45 | 45 | 42 | 40 |
| 4   | 76  | 65  | 57  | 51  | 71  | 61  | 54  | 48  | 54 | 48 | 44 | 47 | 42 | 39 | 41 | 37 | 34 |
| 5   | 70  | 58  | 50  | 44  | 65  | 55  | 47  | 42  | 48 | 42 | 38 | 42 | 37 | 34 | 37 | 33 | 30 |
| 6   | 64  | 52  | 44  | 38  | 60  | 49  | 42  | 36  | 43 | 37 | 33 | 38 | 33 | 30 | 33 | 29 | 26 |
| 7   | 60  | 47  | 39  | 33  | 56  | 44  | 37  | 32  | 39 | 33 | 29 | 35 | 30 | 26 | 30 | 26 | 23 |
| 8   | 55  | 43  | 35  | 29  | 52  | 40  | 33  | 28  | 36 | 30 | 26 | 32 | 27 | 23 | 28 | 24 | 21 |
| 9   | 52  | 39  | 31  | 26  | 48  | 37  | 30  | 25  | 33 | 27 | 23 | 29 | 24 | 21 | 26 | 22 | 19 |
| 10  | 48  | 36  | 29  | 24  | 45  | 34  | 27  | 23  | 30 | 25 | 21 | 27 | 22 | 19 | 24 | 20 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 18963 | 18963 | 18963 |
| 5°  | 19010 | 18309 | 18281 |
| 10° | 18841 | 17689 | 17508 |
| 15° | 18579 | 17045 | 16664 |
| 20° | 18278 | 16330 | 15828 |
| 25° | 17890 | 15574 | 14935 |
| 30° | 17464 | 14793 | 13996 |
| 35° | 17020 | 13994 | 13061 |
| 40° | 16554 | 13157 | 12144 |
| 45° | 16041 | 12340 | 11184 |
| 50° | 15518 | 11431 | 10221 |
| 55° | 14849 | 10482 | 9245  |
| 60° | 14159 | 9436  | 8206  |
| 65° | 13513 | 8305  | 7123  |
| 70° | 12581 | 7050  | 5860  |
| 75° | 11237 | 5583  | 4550  |
| 80° | 9702  | 3924  | 3218  |
| 85° | 7569  | 2108  | 1611  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 16041 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 166.1  | 2.2       |
| 10°-20°   | 469.0  | 6.2       |
| 20°-30°   | 692.6  | 9.2       |
| 30°-40°   | 808.9  | 10.7      |
| 40°-50°   | 813.2  | 10.8      |
| 50°-60°   | 714.4  | 9.5       |
| 60°-70°   | 532.0  | 7.1       |
| 70°-80°   | 302.8  | 4.0       |
| 80°-90°   | 88.0   | 1.2       |
| 90°-100°  | 34.1   | 0.5       |
| 100°-110° | 165.2  | 2.2       |
| 110°-120° | 404.7  | 5.4       |
| 120°-130° | 513.8  | 6.8       |
| 130°-140° | 548.9  | 7.3       |
| 140°-150° | 513.2  | 6.8       |
| 150°-160° | 414.0  | 5.5       |
| 160°-170° | 267.2  | 3.5       |
| 170°-180° | 92.1   | 1.2       |
| 0°-30°    | 1327.7 | 17.6      |
| 0°-40°    | 2136.6 | 28.3      |
| 0°-60°    | 3664.1 | 48.6      |
| 0°-90°    | 4586.9 | 60.8      |
| 90°-120°  | 604.0  | 8.0       |
| 90°-150°  | 2179.9 | 28.9      |
| 90°-180°  | 2953.0 | 39.2      |
| 0°-180°   | 7540.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1762 | 1762  | 1762 | 1762  | 1762 |      |
| 5°   | 1763 | 1756  | 1739 | 1754  | 1751 | 167  |
| 15°  | 1678 | 1672  | 1653 | 1665  | 1656 | 473  |
| 25°  | 1524 | 1515  | 1495 | 1497  | 1492 | 702  |
| 35°  | 1318 | 1309  | 1289 | 1280  | 1272 | 825  |
| 45°  | 1080 | 1074  | 1054 | 1036  | 1029 | 834  |
| 55°  | 820  | 818   | 798  | 782   | 774  | 734  |
| 65°  | 559  | 551   | 536  | 524   | 520  | 551  |
| 75°  | 295  | 289   | 285  | 277   | 273  | 316  |
| 85°  | 79   | 76    | 76   | 73    | 73   | 84   |
| 90°  | 1    | 8     | 17   | 20    | 22   | 8    |
| 95°  | 44   | 14    | 22   | 27    | 27   | 52   |
| 105° | 214  | 222   | 158  | 30    | 32   | 227  |
| 115° | 402  | 407   | 413  | 420   | 423  | 397  |
| 125° | 567  | 573   | 576  | 577   | 579  | 507  |
| 135° | 706  | 710   | 713  | 715   | 713  | 544  |
| 145° | 815  | 820   | 821  | 823   | 823  | 510  |
| 155° | 897  | 896   | 897  | 900   | 896  | 414  |
| 165° | 946  | 944   | 944  | 949   | 944  | 267  |
| 175° | 969  | 965   | 966  | 971   | 965  | 92   |
| 180° | 969  | 969   | 969  | 969   | 969  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1761.7 | 1761.7 | 1761.7 | 1761.7 | 1761.7 |
| 2.5°   | 1769.3 | 1763.2 | 1746.6 | 1761.7 | 1760.2 |
| 5°     | 1763.2 | 1755.7 | 1739.0 | 1754.2 | 1751.1 |
| 7.5°   | 1749.6 | 1742.0 | 1725.4 | 1739.0 | 1737.5 |
| 10°    | 1731.4 | 1723.9 | 1704.2 | 1717.8 | 1714.8 |
| 12.5°  | 1707.2 | 1701.1 | 1683.0 | 1692.0 | 1690.5 |
| 15°    | 1678.4 | 1672.4 | 1652.7 | 1664.8 | 1655.7 |
| 17.5°  | 1646.6 | 1639.0 | 1619.3 | 1628.4 | 1625.4 |
| 20°    | 1610.2 | 1601.2 | 1581.5 | 1587.5 | 1583.0 |
| 22.5°  | 1569.3 | 1560.3 | 1540.6 | 1545.1 | 1539.1 |
| 25°    | 1523.9 | 1514.8 | 1495.1 | 1496.6 | 1492.1 |
| 27.5°  | 1476.9 | 1467.9 | 1446.6 | 1448.2 | 1443.6 |
| 30°    | 1425.4 | 1417.9 | 1396.7 | 1396.7 | 1386.1 |
| 32.5°  | 1373.9 | 1363.3 | 1348.2 | 1337.6 | 1333.0 |
| 35°    | 1317.9 | 1308.8 | 1289.1 | 1280.0 | 1272.4 |
| 37.5°  | 1261.8 | 1249.7 | 1230.0 | 1219.4 | 1214.9 |
| 40°    | 1202.8 | 1193.7 | 1172.5 | 1160.3 | 1154.3 |
| 42.5°  | 1143.7 | 1133.1 | 1111.9 | 1099.8 | 1093.7 |
| 45°    | 1080.1 | 1074.0 | 1054.3 | 1036.1 | 1028.6 |
| 47.5°  | 1018.0 | 1008.9 | 990.7  | 972.5  | 966.5  |
| 50°    | 954.3  | 946.8  | 927.1  | 910.4  | 901.3  |
| 52.5°  | 887.7  | 883.1  | 861.9  | 848.3  | 839.2  |
| 55°    | 819.5  | 818.0  | 798.3  | 781.6  | 774.1  |
| 57.5°  | 755.9  | 749.8  | 734.7  | 719.5  | 710.4  |
| 60°    | 686.2  | 684.7  | 666.5  | 652.9  | 645.3  |
| 62.5°  | 624.1  | 619.6  | 601.4  | 587.7  | 583.2  |
| 65°    | 559.0  | 551.4  | 536.2  | 524.1  | 519.6  |
| 67.5°  | 489.3  | 483.2  | 471.1  | 460.5  | 454.4  |
| 70°    | 427.2  | 418.1  | 409.0  | 398.4  | 390.8  |
| 72.5°  | 362.0  | 356.0  | 345.4  | 336.3  | 333.3  |
| 75°    | 295.4  | 289.3  | 284.8  | 277.2  | 272.7  |
| 77.5°  | 236.3  | 233.3  | 227.2  | 221.2  | 221.2  |
| 80°    | 178.7  | 174.2  | 171.2  | 169.7  | 169.7  |
| 82.5°  | 122.7  | 122.7  | 122.7  | 119.7  | 118.2  |
| 85°    | 78.8   | 75.7   | 75.7   | 72.7   | 72.7   |
| 87.5°  | 39.4   | 34.8   | 33.3   | 31.8   | 31.8   |
| 90°    | 0.7    | 7.9    | 17.3   | 20.2   | 21.6   |
| 92.5°  | 16.6   | 12.2   | 18.7   | 23.7   | 24.5   |
| 95°    | 43.9   | 14.4   | 22.3   | 27.3   | 27.3   |
| 97.5°  | 79.9   | 59.7   | 23.0   | 28.8   | 29.5   |
| 100°   | 121.6  | 136.0  | 23.7   | 29.5   | 30.2   |
| 102.5° | 169.1  | 178.5  | 53.3   | 29.5   | 30.9   |
| 105°   | 214.5  | 222.4  | 157.6  | 30.2   | 31.7   |
| 107.5° | 262.7  | 269.2  | 279.9  | 169.1  | 74.8   |
| 110°   | 310.9  | 316.7  | 324.6  | 300.8  | 197.9  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 357.0 | 362.0 | 369.9 | 376.4 | 374.9 |
| 115°   | 402.3 | 406.6 | 413.1 | 420.3 | 423.2 |
| 117.5° | 446.9 | 451.9 | 455.5 | 461.3 | 462.0 |
| 120°   | 487.9 | 494.4 | 496.6 | 502.3 | 502.3 |
| 122.5° | 529.7 | 534.7 | 537.6 | 541.2 | 541.9 |
| 125°   | 567.1 | 572.9 | 575.7 | 577.2 | 578.6 |
| 127.5° | 604.5 | 610.3 | 613.9 | 616.0 | 614.6 |
| 130°   | 639.1 | 644.8 | 647.7 | 650.6 | 649.1 |
| 132.5° | 672.2 | 677.9 | 680.1 | 683.0 | 680.8 |
| 135°   | 706.0 | 710.3 | 713.2 | 715.3 | 713.2 |
| 137.5° | 734.8 | 740.5 | 742.0 | 745.6 | 744.1 |
| 140°   | 763.6 | 767.9 | 770.0 | 772.9 | 771.5 |
| 142.5° | 790.2 | 794.5 | 796.7 | 798.8 | 796.7 |
| 145°   | 814.7 | 819.7 | 821.1 | 822.6 | 822.6 |
| 147.5° | 838.4 | 842.0 | 843.4 | 844.9 | 841.3 |
| 150°   | 860.0 | 862.2 | 863.6 | 865.0 | 862.9 |
| 152.5° | 879.4 | 880.1 | 880.9 | 883.7 | 880.1 |
| 155°   | 897.4 | 896.0 | 896.7 | 900.3 | 896.0 |
| 157.5° | 911.8 | 911.8 | 911.1 | 915.4 | 909.7 |
| 160°   | 924.8 | 924.0 | 923.3 | 927.6 | 922.6 |
| 162.5° | 937.0 | 934.8 | 934.1 | 939.2 | 934.8 |
| 165°   | 946.4 | 944.2 | 943.5 | 949.2 | 944.2 |
| 167.5° | 954.3 | 951.4 | 951.4 | 957.2 | 951.4 |
| 170°   | 960.8 | 957.9 | 957.9 | 963.6 | 957.9 |
| 172.5° | 965.1 | 961.5 | 962.2 | 967.9 | 961.5 |
| 175°   | 968.7 | 965.1 | 965.8 | 970.8 | 965.1 |
| 177.5° | 970.1 | 966.5 | 967.2 | 973.0 | 965.8 |
| 180°   | 968.7 | 968.7 | 968.7 | 968.7 | 968.7 |

(END OF REPORT)