

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: P1029648

Luminaire Tested: S122DIW-B675D1440UB2750-4F0-XX-W2A-F1\_4000K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1029648  
REPORT IS A COMBINATION OF REPORTS P986500 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DIW-B675D1440UB2750-4F0-XX-W2A-F1\_4000K  
Description: Define 2 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

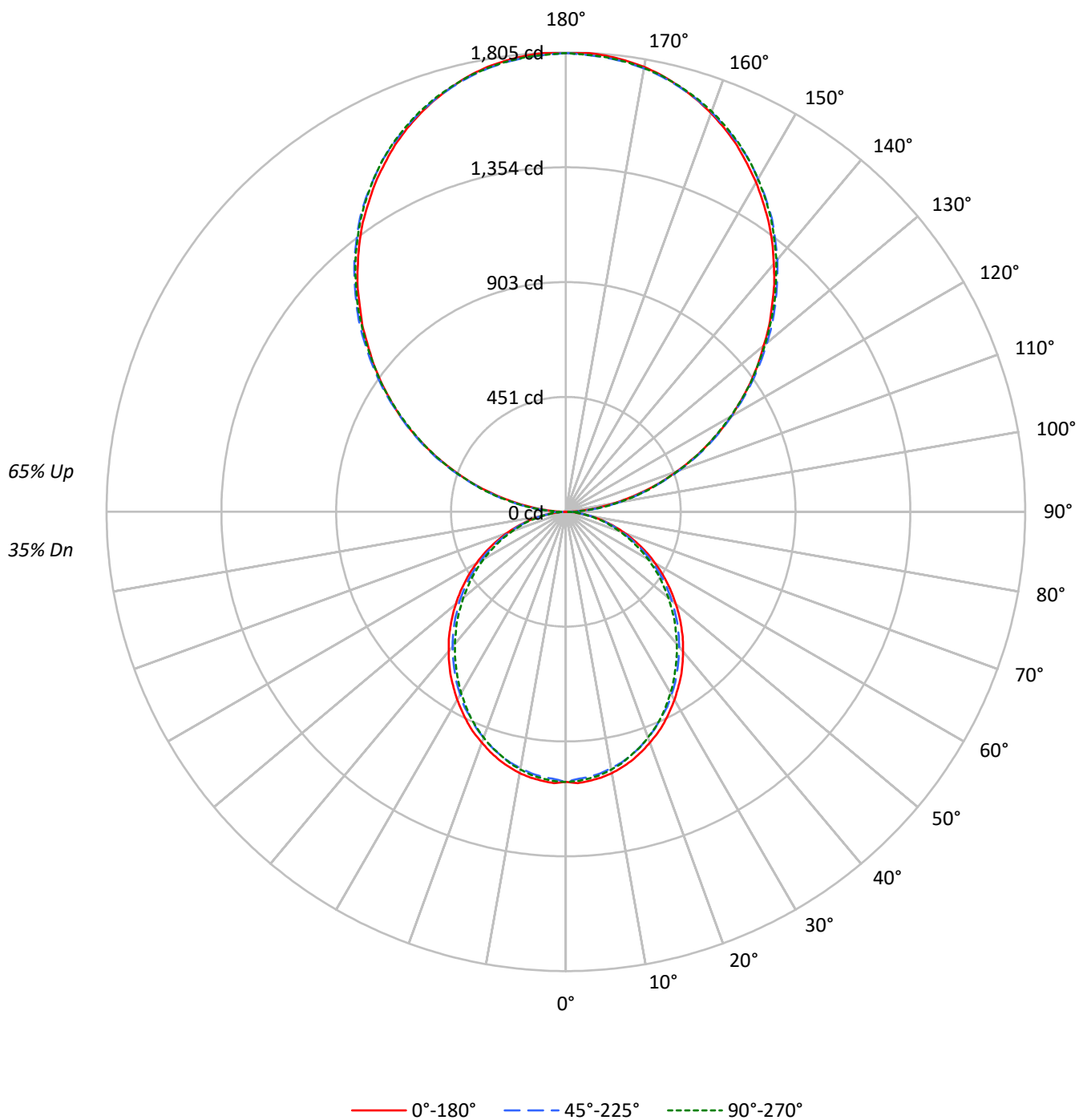
Lumens per Lamp: N/A  
Luminaire Lumens: 7744.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 88.1  
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   | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 75 | 75 | 75 | 58 | 58 | 58 | 42 | 42 | 42 |    |    | 35 |
| 1   | 94  | 90  | 86  | 83  | 85 | 82 | 78 | 76 | 66 | 63 | 61 | 51 | 49 | 48 | 37 | 36 | 36 |    |    | 29 |
| 2   | 86  | 79  | 73  | 68  | 77 | 71 | 66 | 62 | 57 | 54 | 51 | 45 | 42 | 40 | 33 | 31 | 30 |    |    | 25 |
| 3   | 78  | 69  | 62  | 56  | 71 | 63 | 57 | 52 | 51 | 46 | 43 | 39 | 36 | 34 | 29 | 27 | 26 |    |    | 21 |
| 4   | 72  | 61  | 53  | 48  | 64 | 56 | 49 | 44 | 45 | 40 | 36 | 35 | 32 | 29 | 26 | 24 | 22 |    |    | 18 |
| 5   | 66  | 54  | 46  | 41  | 59 | 49 | 43 | 37 | 40 | 35 | 31 | 31 | 28 | 25 | 23 | 21 | 19 |    |    | 16 |
| 6   | 60  | 49  | 41  | 35  | 54 | 44 | 37 | 32 | 36 | 31 | 27 | 28 | 25 | 22 | 21 | 19 | 17 |    |    | 14 |
| 7   | 56  | 44  | 36  | 31  | 50 | 40 | 33 | 28 | 33 | 28 | 24 | 26 | 22 | 19 | 19 | 17 | 15 |    |    | 12 |
| 8   | 52  | 40  | 32  | 27  | 47 | 36 | 30 | 25 | 30 | 25 | 21 | 24 | 20 | 17 | 18 | 15 | 13 |    |    | 11 |
| 9   | 48  | 36  | 29  | 24  | 43 | 33 | 27 | 22 | 27 | 22 | 19 | 22 | 18 | 15 | 16 | 14 | 12 |    |    | 10 |
| 10  | 45  | 33  | 26  | 21  | 41 | 30 | 24 | 20 | 25 | 20 | 17 | 20 | 16 | 14 | 15 | 13 | 11 |    |    | 9  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16800 | 16800 | 16800 |
| 5°  | 16827 | 16012 | 15899 |
| 10° | 16689 | 15283 | 14979 |
| 15° | 16445 | 14547 | 14012 |
| 20° | 16114 | 13747 | 13096 |
| 25° | 15785 | 12913 | 12182 |
| 30° | 15371 | 12127 | 11222 |
| 35° | 14981 | 11300 | 10279 |
| 40° | 14497 | 10483 | 9388  |
| 45° | 14019 | 9672  | 8515  |
| 50° | 13494 | 8847  | 7608  |
| 55° | 12942 | 7966  | 6749  |
| 60° | 12323 | 7011  | 5857  |
| 65° | 11646 | 6040  | 4917  |
| 70° | 10783 | 4978  | 3972  |
| 75° | 9588  | 3838  | 3066  |
| 80° | 8143  | 2609  | 1974  |
| 85° | 5905  | 1214  | 839   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14019 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.9   | 1.3       |
| 10°-20°   | 281.0  | 3.6       |
| 20°-30°   | 413.0  | 5.3       |
| 30°-40°   | 479.7  | 6.2       |
| 40°-50°   | 479.1  | 6.2       |
| 50°-60°   | 417.7  | 5.4       |
| 60°-70°   | 308.8  | 4.0       |
| 70°-80°   | 174.7  | 2.3       |
| 80°-90°   | 51.2   | 0.7       |
| 90°-100°  | 111.5  | 1.4       |
| 100°-110° | 354.4  | 4.6       |
| 110°-120° | 606.5  | 7.8       |
| 120°-130° | 797.6  | 10.3      |
| 130°-140° | 895.3  | 11.6      |
| 140°-150° | 878.0  | 11.3      |
| 150°-160° | 736.5  | 9.5       |
| 160°-170° | 488.4  | 6.3       |
| 170°-180° | 170.7  | 2.2       |
| 0°-30°    | 793.9  | 10.3      |
| 0°-40°    | 1273.6 | 16.4      |
| 0°-60°    | 2170.4 | 28.0      |
| 0°-90°    | 2705.1 | 34.9      |
| 90°-120°  | 1072.4 | 13.8      |
| 90°-150°  | 3643.2 | 47.0      |
| 90°-180°  | 5039.0 | 65.1      |
| 0°-180°   | 7744.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1061 | 1061  | 1061 | 1061  | 1061 |      |
| 5°   | 1061 | 1057  | 1046 | 1054  | 1052 | 101  |
| 15°  | 1010 | 1004  | 991  | 995   | 990  | 285  |
| 25°  | 914  | 906   | 889  | 891   | 889  | 421  |
| 35°  | 789  | 779   | 762  | 756   | 751  | 493  |
| 45°  | 642  | 635   | 619  | 608   | 604  | 495  |
| 55°  | 486  | 480   | 467  | 455   | 450  | 434  |
| 65°  | 328  | 321   | 311  | 302   | 297  | 324  |
| 75°  | 171  | 169   | 164  | 158   | 160  | 183  |
| 85°  | 42   | 41    | 40   | 37    | 36   | 47   |
| 90°  | 2    | 20    | 53   | 50    | 52   | 8    |
| 95°  | 79   | 94    | 97   | 97    | 94   | 88   |
| 105° | 327  | 332   | 335  | 338   | 338  | 345  |
| 115° | 608  | 618   | 614  | 613   | 608  | 602  |
| 125° | 885  | 899   | 894  | 890   | 888  | 791  |
| 135° | 1145 | 1162  | 1165 | 1164  | 1159 | 885  |
| 145° | 1390 | 1401  | 1410 | 1411  | 1405 | 869  |
| 155° | 1589 | 1594  | 1598 | 1606  | 1602 | 732  |
| 165° | 1729 | 1728  | 1728 | 1738  | 1731 | 488  |
| 175° | 1799 | 1795  | 1792 | 1802  | 1793 | 171  |
| 180° | 1802 | 1802  | 1802 | 1802  | 1802 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1061.3 | 1061.3 | 1061.3 | 1061.3 | 1061.3 |
| 2.5°   | 1067.4 | 1062.3 | 1051.0 | 1061.3 | 1059.2 |
| 5°     | 1061.3 | 1057.2 | 1045.9 | 1054.1 | 1052.1 |
| 7.5°   | 1054.1 | 1048.0 | 1036.8 | 1044.9 | 1042.9 |
| 10°    | 1042.9 | 1035.7 | 1023.5 | 1031.7 | 1028.6 |
| 12.5°  | 1027.6 | 1021.5 | 1009.2 | 1014.3 | 1012.3 |
| 15°    | 1010.2 | 1004.1 | 990.8  | 994.9  | 989.8  |
| 17.5°  | 988.8  | 982.7  | 969.4  | 974.5  | 969.4  |
| 20°    | 965.3  | 959.2  | 944.9  | 948.0  | 943.9  |
| 22.5°  | 941.9  | 932.7  | 919.4  | 919.4  | 917.4  |
| 25°    | 914.3  | 906.1  | 888.8  | 890.8  | 888.8  |
| 27.5°  | 883.7  | 876.6  | 863.3  | 860.2  | 855.1  |
| 30°    | 853.1  | 844.9  | 829.6  | 826.6  | 822.5  |
| 32.5°  | 820.4  | 814.3  | 798.0  | 791.9  | 787.8  |
| 35°    | 788.8  | 778.6  | 762.3  | 756.1  | 751.0  |
| 37.5°  | 753.1  | 743.9  | 727.6  | 720.4  | 715.3  |
| 40°    | 716.3  | 708.2  | 691.9  | 682.7  | 678.6  |
| 42.5°  | 680.6  | 672.5  | 656.1  | 645.9  | 639.8  |
| 45°    | 641.9  | 634.7  | 619.4  | 608.2  | 604.1  |
| 47.5°  | 604.1  | 597.0  | 580.6  | 569.4  | 563.3  |
| 50°    | 564.3  | 559.2  | 544.9  | 530.6  | 525.5  |
| 52.5°  | 525.5  | 518.4  | 505.1  | 493.9  | 486.7  |
| 55°    | 485.7  | 479.6  | 467.4  | 455.1  | 450.0  |
| 57.5°  | 445.9  | 440.8  | 427.6  | 415.3  | 411.2  |
| 60°    | 406.1  | 402.1  | 387.8  | 376.5  | 373.5  |
| 62.5°  | 367.4  | 360.2  | 350.0  | 339.8  | 335.7  |
| 65°    | 327.6  | 321.4  | 311.2  | 302.0  | 296.9  |
| 67.5°  | 286.7  | 281.6  | 272.5  | 265.3  | 261.2  |
| 70°    | 249.0  | 244.9  | 235.7  | 228.6  | 224.5  |
| 72.5°  | 210.2  | 206.1  | 201.0  | 193.9  | 190.8  |
| 75°    | 171.4  | 169.4  | 164.3  | 158.2  | 160.2  |
| 77.5°  | 136.7  | 132.7  | 130.6  | 127.6  | 124.5  |
| 80°    | 102.0  | 101.0  | 99.0   | 95.9   | 93.9   |
| 82.5°  | 69.4   | 69.4   | 68.4   | 64.3   | 64.3   |
| 85°    | 41.8   | 40.8   | 39.8   | 36.7   | 35.7   |
| 87.5°  | 18.4   | 16.3   | 14.3   | 11.2   | 10.2   |
| 90°    | 1.5    | 19.8   | 53.2   | 50.2   | 51.7   |
| 92.5°  | 33.5   | 45.6   | 47.1   | 48.7   | 48.7   |
| 95°    | 79.1   | 94.3   | 97.3   | 97.3   | 94.3   |
| 97.5°  | 132.3  | 146.0  | 152.1  | 152.1  | 152.1  |
| 100°   | 193.2  | 205.3  | 209.9  | 209.9  | 208.4  |
| 102.5° | 257.0  | 266.2  | 272.2  | 273.8  | 272.2  |
| 105°   | 327.0  | 331.6  | 334.6  | 337.6  | 337.6  |
| 107.5° | 397.0  | 403.0  | 403.0  | 404.6  | 397.0  |
| 110°   | 463.9  | 473.0  | 473.0  | 473.0  | 468.4  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 536.9  | 546.0  | 544.5  | 539.9  | 536.9  |
| 115°   | 608.4  | 617.5  | 614.5  | 612.9  | 608.4  |
| 117.5° | 679.9  | 692.0  | 684.4  | 679.9  | 675.3  |
| 120°   | 751.3  | 763.5  | 751.3  | 751.3  | 746.8  |
| 122.5° | 816.7  | 831.9  | 824.3  | 819.8  | 816.7  |
| 125°   | 885.2  | 898.9  | 894.3  | 889.7  | 888.2  |
| 127.5° | 952.1  | 968.8  | 962.7  | 956.7  | 952.1  |
| 130°   | 1014.5 | 1034.2 | 1031.2 | 1028.1 | 1022.1 |
| 132.5° | 1084.4 | 1099.6 | 1101.1 | 1093.5 | 1089.0 |
| 135°   | 1145.3 | 1162.0 | 1165.0 | 1163.5 | 1158.9 |
| 137.5° | 1212.2 | 1225.9 | 1228.9 | 1227.4 | 1221.3 |
| 140°   | 1271.5 | 1285.2 | 1292.8 | 1292.8 | 1286.7 |
| 142.5° | 1332.3 | 1346.0 | 1350.6 | 1352.1 | 1346.0 |
| 145°   | 1390.1 | 1400.8 | 1409.9 | 1411.4 | 1405.3 |
| 147.5° | 1441.8 | 1455.5 | 1461.6 | 1464.6 | 1458.6 |
| 150°   | 1495.1 | 1504.2 | 1510.3 | 1514.8 | 1510.3 |
| 152.5° | 1542.2 | 1551.3 | 1558.9 | 1565.0 | 1558.9 |
| 155°   | 1589.4 | 1593.9 | 1598.5 | 1606.1 | 1601.5 |
| 157.5° | 1630.4 | 1633.5 | 1636.5 | 1647.2 | 1639.6 |
| 160°   | 1666.9 | 1670.0 | 1671.5 | 1680.6 | 1674.5 |
| 162.5° | 1700.4 | 1700.4 | 1701.9 | 1712.6 | 1705.0 |
| 165°   | 1729.3 | 1727.8 | 1727.8 | 1738.4 | 1730.8 |
| 167.5° | 1755.1 | 1750.6 | 1750.6 | 1761.2 | 1753.6 |
| 170°   | 1774.9 | 1770.4 | 1768.8 | 1779.5 | 1770.4 |
| 172.5° | 1788.6 | 1784.0 | 1782.5 | 1793.2 | 1784.0 |
| 175°   | 1799.3 | 1794.7 | 1791.6 | 1802.3 | 1793.2 |
| 177.5° | 1805.3 | 1800.8 | 1797.7 | 1806.9 | 1797.7 |
| 180°   | 1802.3 | 1802.3 | 1802.3 | 1802.3 | 1802.3 |

(END OF REPORT)