

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: P1029290

Luminaire Tested: S122DIW-B1005D970UB2750-4F0-XX-W2A-D\_4000K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1029290  
REPORT IS A COMBINATION OF REPORTS P985415 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DIW-B1005D970UB2750-4F0-XX-W2A-D\_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**

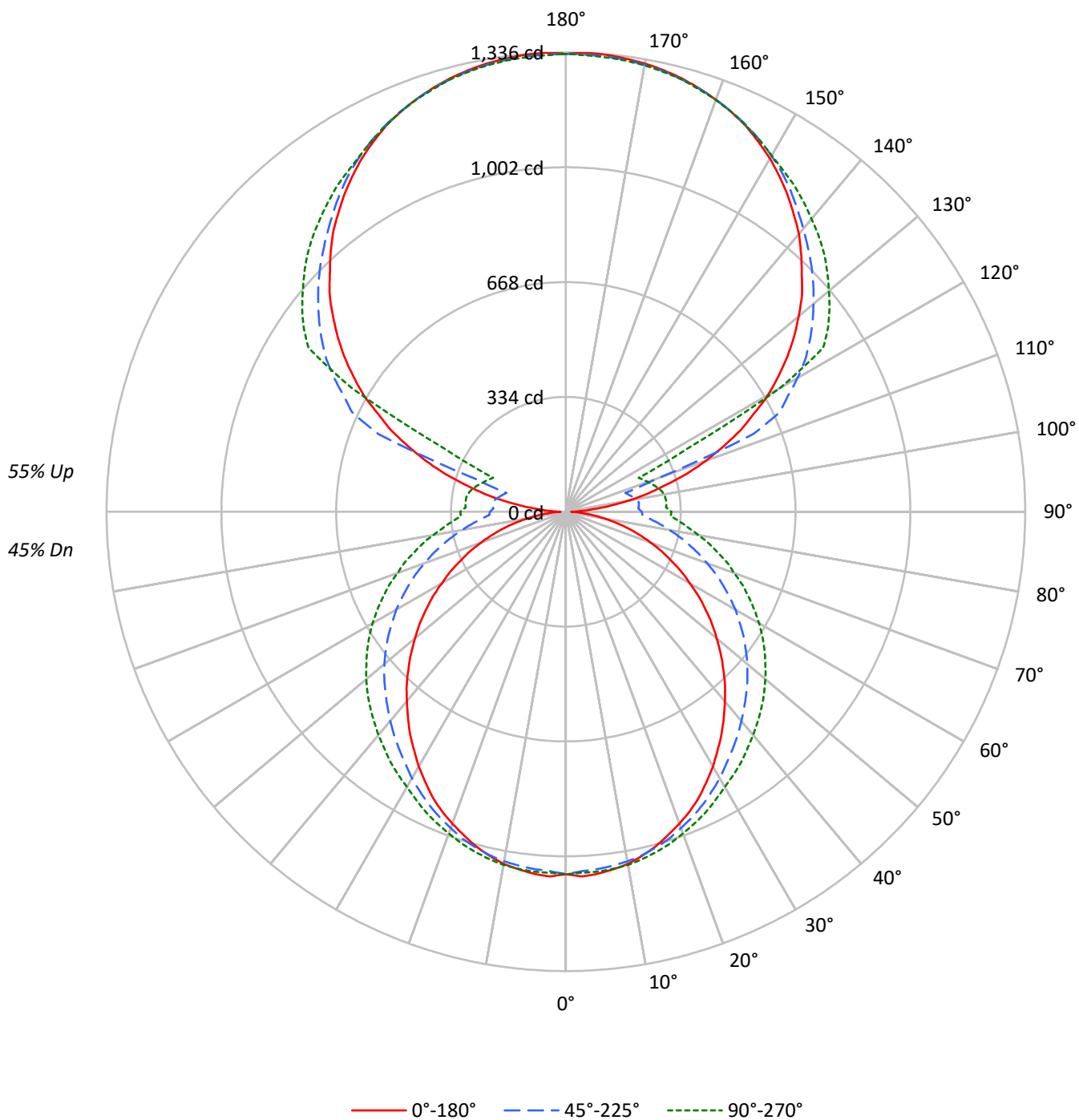
Lumens per Lamp: N/A  
Luminaire Lumens: 7927.0 lumens  
Efficiency: N/A  
Efficacy: 85.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

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 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 81 | 81 | 81 | 66 | 66 | 66 | 52 | 52 | 52 |
| 1   | 95  | 90  | 86  | 82  | 87 | 83 | 79 | 76 | 69 | 66 | 63 | 56 | 54 | 52 | 43 | 42 | 41 |
| 2   | 86  | 78  | 72  | 66  | 79 | 72 | 66 | 61 | 59 | 55 | 51 | 48 | 45 | 42 | 37 | 35 | 33 |
| 3   | 78  | 68  | 60  | 54  | 71 | 63 | 56 | 50 | 52 | 47 | 43 | 42 | 38 | 35 | 33 | 30 | 28 |
| 4   | 71  | 60  | 52  | 45  | 65 | 55 | 48 | 42 | 46 | 40 | 36 | 37 | 33 | 30 | 29 | 26 | 24 |
| 5   | 65  | 53  | 45  | 39  | 59 | 49 | 42 | 36 | 41 | 35 | 31 | 33 | 29 | 25 | 26 | 23 | 20 |
| 6   | 60  | 48  | 39  | 33  | 55 | 44 | 36 | 31 | 37 | 31 | 26 | 30 | 25 | 22 | 23 | 20 | 18 |
| 7   | 56  | 43  | 35  | 29  | 51 | 39 | 32 | 27 | 33 | 27 | 23 | 27 | 23 | 19 | 21 | 18 | 16 |
| 8   | 51  | 39  | 31  | 25  | 47 | 36 | 29 | 24 | 30 | 24 | 20 | 25 | 20 | 17 | 20 | 16 | 14 |
| 9   | 48  | 35  | 28  | 23  | 44 | 33 | 26 | 21 | 27 | 22 | 18 | 23 | 18 | 15 | 18 | 15 | 12 |
| 10  | 45  | 32  | 25  | 20  | 41 | 30 | 23 | 19 | 25 | 20 | 16 | 21 | 17 | 14 | 17 | 14 | 11 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16681 | 16681 | 16681 |
| 5°  | 16757 | 15969 | 15880 |
| 10° | 16645 | 15416 | 15191 |
| 15° | 16409 | 14845 | 14486 |
| 20° | 16112 | 14243 | 13816 |
| 25° | 15821 | 13668 | 13209 |
| 30° | 15411 | 13083 | 12607 |
| 35° | 14996 | 12520 | 12166 |
| 40° | 14558 | 12033 | 11726 |
| 45° | 14144 | 11591 | 11345 |
| 50° | 13695 | 11183 | 10966 |
| 55° | 13227 | 10751 | 10583 |
| 60° | 12651 | 10300 | 10179 |
| 65° | 12055 | 9782  | 9714  |
| 70° | 11377 | 9225  | 9213  |
| 75° | 10511 | 8668  | 8741  |
| 80° | 9141  | 8090  | 8252  |
| 85° | 7769  | 7544  | 7828  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14144 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 99.9   | 1.3       |
| 10°-20°   | 286.5  | 3.6       |
| 20°-30°   | 434.1  | 5.5       |
| 30°-40°   | 528.7  | 6.7       |
| 40°-50°   | 568.8  | 7.2       |
| 50°-60°   | 552.4  | 7.0       |
| 60°-70°   | 482.4  | 6.1       |
| 70°-80°   | 371.3  | 4.7       |
| 80°-90°   | 251.0  | 3.2       |
| 90°-100°  | 215.5  | 2.7       |
| 100°-110° | 289.0  | 3.6       |
| 110°-120° | 516.8  | 6.5       |
| 120°-130° | 766.1  | 9.7       |
| 130°-140° | 784.1  | 9.9       |
| 140°-150° | 714.1  | 9.0       |
| 150°-160° | 571.4  | 7.2       |
| 160°-170° | 368.2  | 4.6       |
| 170°-180° | 126.7  | 1.6       |
| 0°-30°    | 820.6  | 10.4      |
| 0°-40°    | 1349.2 | 17.0      |
| 0°-60°    | 2470.4 | 31.2      |
| 0°-90°    | 3575.1 | 45.1      |
| 90°-120°  | 1021.2 | 12.9      |
| 90°-150°  | 3285.5 | 41.4      |
| 90°-180°  | 4352.0 | 54.9      |
| 0°-180°   | 7927.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1054 | 1054  | 1054 | 1054  | 1054 |      |
| 5°   | 1057 | 1052  | 1043 | 1052  | 1051 | 100  |
| 15°  | 1008 | 1011  | 1011 | 1025  | 1023 | 284  |
| 25°  | 916  | 927   | 941  | 959   | 964  | 421  |
| 35°  | 790  | 816   | 845  | 878   | 889  | 494  |
| 45°  | 648  | 689   | 742  | 790   | 805  | 500  |
| 55°  | 496  | 551   | 631  | 686   | 706  | 444  |
| 65°  | 339  | 414   | 504  | 567   | 586  | 337  |
| 75°  | 188  | 273   | 371  | 437   | 457  | 199  |
| 85°  | 55   | 150   | 247  | 312   | 333  | 58   |
| 90°  | 16   | 116   | 221  | 287   | 307  | 14   |
| 95°  | 75   | 115   | 213  | 276   | 293  | 84   |
| 105° | 300  | 374   | 190  | 254   | 275  | 322  |
| 115° | 560  | 593   | 686  | 286   | 233  | 551  |
| 125° | 786  | 799   | 866  | 914   | 931  | 702  |
| 135° | 971  | 986   | 1010 | 1052  | 1062 | 750  |
| 145° | 1124 | 1123  | 1140 | 1156  | 1158 | 704  |
| 155° | 1238 | 1229  | 1241 | 1247  | 1239 | 571  |
| 165° | 1305 | 1299  | 1302 | 1308  | 1302 | 369  |
| 175° | 1334 | 1328  | 1330 | 1336  | 1327 | 127  |
| 180° | 1332 | 1332  | 1332 | 1332  | 1332 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1053.8 | 1053.8 | 1053.8 | 1053.8 | 1053.8 |
| 2.5°   | 1061.5 | 1056.9 | 1046.2 | 1053.8 | 1050.8 |
| 5°     | 1056.9 | 1052.3 | 1043.1 | 1052.3 | 1050.8 |
| 7.5°   | 1049.2 | 1046.2 | 1038.5 | 1049.2 | 1047.7 |
| 10°    | 1040.1 | 1037.0 | 1032.4 | 1044.7 | 1043.1 |
| 12.5°  | 1024.8 | 1026.3 | 1023.3 | 1035.5 | 1034.0 |
| 15°    | 1008.0 | 1011.1 | 1011.1 | 1024.8 | 1023.3 |
| 17.5°  | 986.6  | 992.7  | 997.3  | 1011.1 | 1011.1 |
| 20°    | 965.2  | 972.9  | 979.0  | 995.8  | 995.8  |
| 22.5°  | 942.3  | 951.5  | 960.7  | 977.5  | 980.5  |
| 25°    | 916.4  | 927.1  | 940.8  | 959.1  | 963.7  |
| 27.5°  | 885.8  | 902.6  | 917.9  | 940.8  | 943.9  |
| 30°    | 855.3  | 875.1  | 895.0  | 919.4  | 924.0  |
| 32.5°  | 821.7  | 844.6  | 869.0  | 898.0  | 907.2  |
| 35°    | 789.6  | 815.6  | 844.6  | 878.2  | 888.9  |
| 37.5°  | 754.5  | 783.5  | 820.1  | 856.8  | 867.5  |
| 40°    | 719.3  | 752.9  | 794.2  | 833.9  | 847.6  |
| 42.5°  | 685.7  | 719.3  | 768.2  | 812.5  | 826.3  |
| 45°    | 647.6  | 688.8  | 742.3  | 789.6  | 804.9  |
| 47.5°  | 610.9  | 655.2  | 716.3  | 765.2  | 782.0  |
| 50°    | 572.7  | 620.1  | 688.8  | 740.7  | 757.5  |
| 52.5°  | 536.1  | 586.5  | 659.8  | 713.2  | 731.6  |
| 55°    | 496.4  | 551.3  | 630.8  | 685.7  | 705.6  |
| 57.5°  | 458.2  | 519.3  | 598.7  | 658.3  | 678.1  |
| 60°    | 416.9  | 482.6  | 569.7  | 627.7  | 649.1  |
| 62.5°  | 380.3  | 449.0  | 536.1  | 598.7  | 618.5  |
| 65°    | 339.1  | 413.9  | 504.0  | 566.6  | 586.5  |
| 67.5°  | 302.4  | 380.3  | 471.9  | 534.5  | 555.9  |
| 70°    | 262.7  | 342.1  | 436.8  | 502.5  | 520.8  |
| 72.5°  | 226.0  | 308.5  | 404.7  | 468.9  | 491.8  |
| 75°    | 187.9  | 273.4  | 371.1  | 436.8  | 456.7  |
| 77.5°  | 151.2  | 239.8  | 339.1  | 404.7  | 426.1  |
| 80°    | 114.5  | 207.7  | 307.0  | 371.1  | 392.5  |
| 82.5°  | 84.0   | 175.6  | 276.4  | 340.6  | 360.4  |
| 85°    | 55.0   | 149.7  | 247.4  | 311.6  | 332.9  |
| 87.5°  | 33.6   | 125.2  | 223.0  | 285.6  | 305.5  |
| 90°    | 16.3   | 115.5  | 220.9  | 286.8  | 307.0  |
| 92.5°  | 37.8   | 114.9  | 211.0  | 272.5  | 291.7  |
| 95°    | 74.8   | 114.8  | 213.2  | 276.1  | 293.4  |
| 97.5°  | 123.4  | 110.1  | 214.0  | 273.5  | 292.8  |
| 100°   | 181.2  | 105.7  | 207.6  | 271.8  | 290.6  |
| 102.5° | 243.3  | 291.8  | 198.8  | 264.4  | 284.1  |
| 105°   | 300.5  | 373.7  | 190.1  | 254.2  | 274.8  |
| 107.5° | 368.9  | 429.7  | 181.4  | 243.9  | 264.6  |
| 110°   | 432.9  | 483.8  | 280.1  | 232.7  | 253.3  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 494.6  | 536.3  | 590.3  | 223.9  | 243.6  |
| 115°   | 560.1  | 593.3  | 686.1  | 285.9  | 233.3  |
| 117.5° | 615.5  | 646.9  | 727.4  | 635.5  | 398.3  |
| 120°   | 679.0  | 699.6  | 778.0  | 832.3  | 719.0  |
| 122.5° | 733.0  | 749.9  | 825.7  | 872.8  | 887.4  |
| 125°   | 786.4  | 799.0  | 866.1  | 914.1  | 930.7  |
| 127.5° | 836.5  | 848.4  | 904.2  | 951.9  | 966.7  |
| 130°   | 883.7  | 897.6  | 940.3  | 987.6  | 998.8  |
| 132.5° | 931.9  | 942.8  | 976.3  | 1020.2 | 1031.4 |
| 135°   | 970.8  | 986.2  | 1010.2 | 1051.9 | 1062.2 |
| 137.5° | 1013.2 | 1024.7 | 1042.1 | 1080.7 | 1088.5 |
| 140°   | 1054.6 | 1060.8 | 1074.5 | 1107.6 | 1112.0 |
| 142.5° | 1089.3 | 1094.5 | 1107.1 | 1133.1 | 1136.0 |
| 145°   | 1124.4 | 1123.4 | 1139.8 | 1155.8 | 1158.5 |
| 147.5° | 1156.2 | 1153.3 | 1169.7 | 1176.0 | 1176.8 |
| 150°   | 1187.0 | 1180.3 | 1195.7 | 1201.5 | 1196.7 |
| 152.5° | 1213.0 | 1205.3 | 1219.8 | 1225.6 | 1218.8 |
| 155°   | 1238.1 | 1229.4 | 1241.0 | 1246.8 | 1239.1 |
| 157.5° | 1258.3 | 1250.6 | 1259.3 | 1266.0 | 1258.3 |
| 160°   | 1275.7 | 1269.9 | 1275.7 | 1281.5 | 1274.7 |
| 162.5° | 1291.1 | 1285.3 | 1290.1 | 1296.9 | 1288.2 |
| 165°   | 1304.6 | 1298.8 | 1301.7 | 1308.4 | 1301.7 |
| 167.5° | 1315.2 | 1309.4 | 1312.3 | 1319.0 | 1310.4 |
| 170°   | 1323.8 | 1318.1 | 1320.0 | 1326.7 | 1318.1 |
| 172.5° | 1329.6 | 1323.8 | 1325.8 | 1332.5 | 1323.8 |
| 175°   | 1334.4 | 1327.7 | 1329.6 | 1336.4 | 1326.7 |
| 177.5° | 1336.4 | 1329.6 | 1330.6 | 1337.3 | 1328.7 |
| 180°   | 1331.6 | 1331.6 | 1331.6 | 1331.6 | 1331.6 |

(END OF REPORT)