

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: P996114

Luminaire Tested: S123DRP-B1000DB50-4F0-XX-W2A-D

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P996114  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DRP-B1000DB50-4F0-XX-W2A-D  
Description: Define 3 Direct Perimeter with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

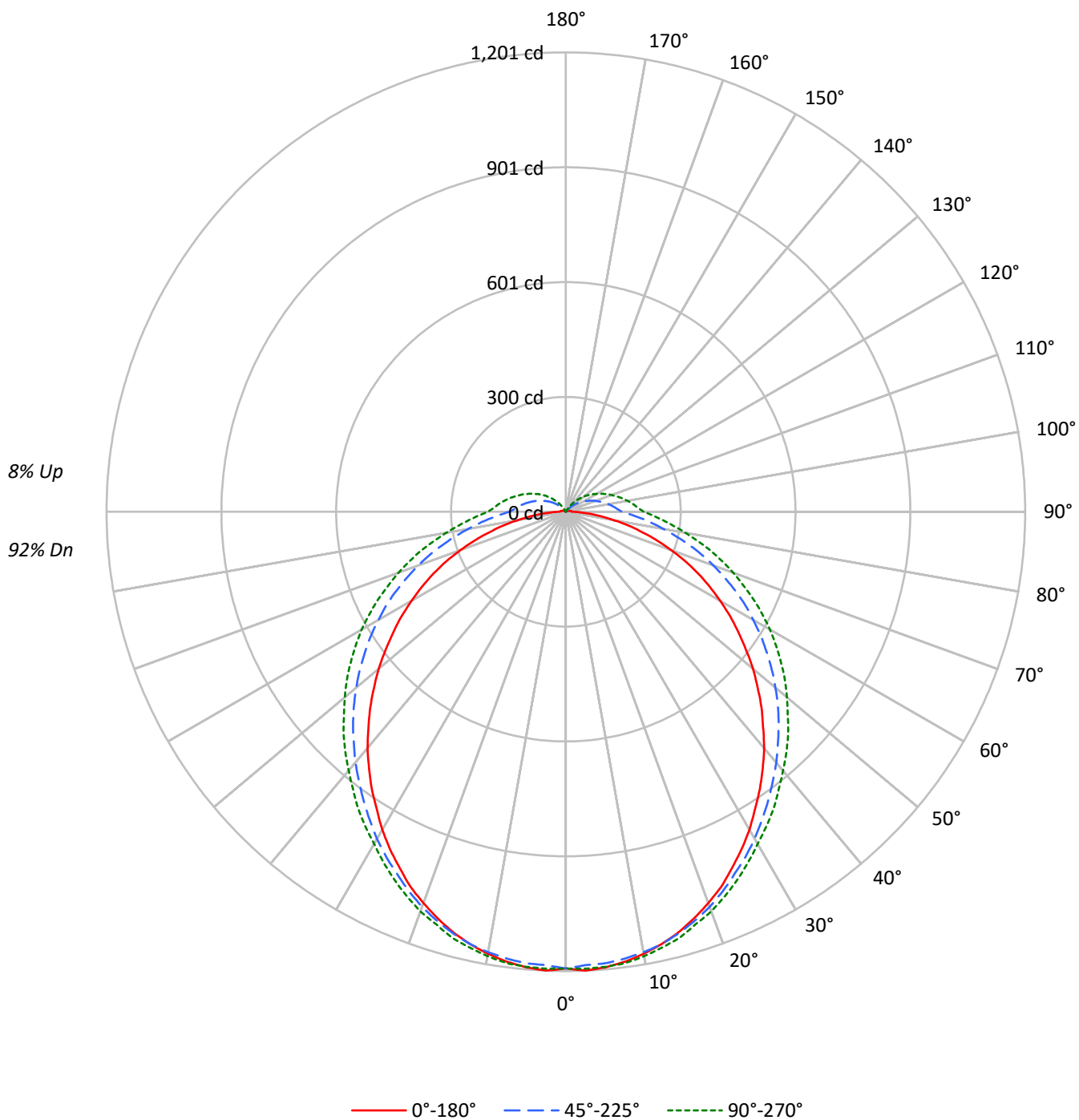
Lumens per Lamp: N/A  
Luminaire Lumens: 4013.0 lumens  
Efficiency: N/A  
Efficacy: 85.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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 |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50 | 30 | 10 | 0  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |    |    |    |    |
| 0   | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 |  | 100 | 100 | 100 |  | 94 | 94 | 94 | 92 |
| 1   | 105 | 100 | 95  | 90  | 102 | 97  | 92  | 88  | 91  | 87  | 84  |  | 85  | 82  | 80  |  | 80 | 78 | 76 | 73 |
| 2   | 95  | 86  | 79  | 72  | 92  | 83  | 77  | 71  | 79  | 73  | 68  |  | 74  | 69  | 65  |  | 70 | 66 | 63 | 60 |
| 3   | 86  | 75  | 67  | 60  | 83  | 73  | 65  | 59  | 69  | 62  | 56  |  | 65  | 59  | 54  |  | 61 | 56 | 52 | 50 |
| 4   | 79  | 66  | 57  | 50  | 76  | 64  | 56  | 49  | 61  | 54  | 48  |  | 57  | 51  | 46  |  | 54 | 49 | 45 | 42 |
| 5   | 72  | 59  | 50  | 43  | 70  | 58  | 49  | 42  | 54  | 47  | 41  |  | 52  | 45  | 40  |  | 49 | 43 | 39 | 36 |
| 6   | 67  | 53  | 44  | 37  | 64  | 52  | 43  | 37  | 49  | 42  | 36  |  | 47  | 40  | 35  |  | 44 | 38 | 34 | 32 |
| 7   | 62  | 48  | 39  | 33  | 60  | 47  | 38  | 32  | 45  | 37  | 32  |  | 42  | 36  | 31  |  | 40 | 35 | 30 | 28 |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 41  | 33  | 28  |  | 39  | 32  | 28  |  | 37 | 31 | 27 | 25 |
| 9   | 54  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 37  | 30  | 25  |  | 36  | 29  | 25  |  | 34 | 28 | 24 | 22 |
| 10  | 50  | 37  | 29  | 24  | 49  | 36  | 29  | 24  | 35  | 28  | 23  |  | 33  | 27  | 23  |  | 32 | 26 | 22 | 20 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 12853 | 12853 | 12853 |
| 5°  | 12916 | 12804 | 12902 |
| 10° | 12824 | 12782 | 12895 |
| 15° | 12683 | 12712 | 12842 |
| 20° | 12471 | 12590 | 12739 |
| 25° | 12204 | 12405 | 12606 |
| 30° | 11931 | 12271 | 12465 |
| 35° | 11623 | 12118 | 12443 |
| 40° | 11332 | 12027 | 12410 |
| 45° | 11009 | 11979 | 12514 |
| 50° | 10695 | 11980 | 12633 |
| 55° | 10350 | 12035 | 12889 |
| 60° | 10026 | 12180 | 13272 |
| 65° | 9706  | 12457 | 13782 |
| 70° | 9212  | 12935 | 14656 |
| 75° | 8601  | 13849 | 16282 |
| 80° | 7984  | 16123 | 19675 |
| 85° | 7867  | 24416 | 31481 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 56165 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 113.3  | 2.8       |
| 10°-20°   | 322.9  | 8.0       |
| 20°-30°   | 482.9  | 12.0      |
| 30°-40°   | 576.5  | 14.4      |
| 40°-50°   | 603.2  | 15.0      |
| 50°-60°   | 566.1  | 14.1      |
| 60°-70°   | 472.8  | 11.8      |
| 70°-80°   | 338.1  | 8.4       |
| 80°-90°   | 201.2  | 5.0       |
| 90°-100°  | 126.4  | 3.2       |
| 100°-110° | 92.9   | 2.3       |
| 110°-120° | 62.0   | 1.5       |
| 120°-130° | 35.4   | 0.9       |
| 130°-140° | 15.9   | 0.4       |
| 140°-150° | 3.3    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| <hr/>     |        |           |
| 0°-30°    | 919.1  | 22.9      |
| 0°-40°    | 1495.6 | 37.3      |
| 0°-60°    | 2664.9 | 66.4      |
| 0°-90°    | 3677.0 | 91.6      |
| 90°-120°  | 281.4  | 7.0       |
| 90°-150°  | 336.0  | 8.4       |
| 90°-180°  | 336.0  | 8.4       |
| 0°-180°   | 4013.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1194 | 1194  | 1194 | 1194  | 1194 |      |
| 5°   | 1195 | 1193  | 1185 | 1195  | 1194 | 113  |
| 15°  | 1138 | 1142  | 1141 | 1154  | 1152 | 321  |
| 25°  | 1028 | 1041  | 1044 | 1061  | 1061 | 474  |
| 35°  | 884  | 905   | 922  | 942   | 947  | 553  |
| 45°  | 723  | 754   | 787  | 812   | 822  | 558  |
| 55°  | 552  | 594   | 641  | 676   | 687  | 494  |
| 65°  | 381  | 432   | 489  | 528   | 541  | 377  |
| 75°  | 207  | 268   | 333  | 376   | 392  | 221  |
| 85°  | 64   | 129   | 198  | 242   | 255  | 66   |
| 90°  | 17   | 81    | 147  | 191   | 204  | 12   |
| 95°  | 14   | 65    | 129  | 169   | 182  | 11   |
| 105° | 10   | 42    | 98   | 134   | 146  | 10   |
| 115° | 6    | 22    | 69   | 100   | 111  | 7    |
| 125° | 4    | 4     | 42   | 69    | 78   | 4    |
| 135° | 3    | 1     | 16   | 39    | 46   | 2    |
| 145° | 1    | 0     | 0    | 10    | 16   | 1    |
| 155° | 0    | 0     | 0    | 0     | 0    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 0    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    | 0    |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1194.1 | 1194.1 | 1194.1 | 1194.1 | 1194.1 |
| 2.5°   | 1200.6 | 1196.7 | 1186.3 | 1196.7 | 1195.4 |
| 5°     | 1195.4 | 1192.8 | 1185.0 | 1195.4 | 1194.1 |
| 7.5°   | 1186.3 | 1186.3 | 1178.5 | 1191.5 | 1190.2 |
| 10°    | 1173.3 | 1175.9 | 1169.4 | 1182.4 | 1179.8 |
| 12.5°  | 1157.6 | 1161.5 | 1157.6 | 1169.4 | 1166.8 |
| 15°    | 1138.1 | 1142.0 | 1140.7 | 1153.7 | 1152.4 |
| 17.5°  | 1114.7 | 1122.5 | 1121.2 | 1132.9 | 1130.3 |
| 20°    | 1088.7 | 1096.5 | 1099.1 | 1110.8 | 1112.1 |
| 22.5°  | 1061.4 | 1069.2 | 1073.1 | 1088.7 | 1087.4 |
| 25°    | 1027.6 | 1040.6 | 1044.5 | 1061.4 | 1061.4 |
| 27.5°  | 995.1  | 1009.4 | 1017.2 | 1031.5 | 1032.8 |
| 30°    | 959.9  | 976.8  | 987.3  | 1002.9 | 1002.9 |
| 32.5°  | 920.9  | 940.4  | 954.7  | 971.6  | 975.5  |
| 35°    | 884.5  | 905.3  | 922.2  | 941.7  | 946.9  |
| 37.5°  | 845.5  | 868.9  | 888.4  | 910.5  | 914.4  |
| 40°    | 806.5  | 829.9  | 855.9  | 878.0  | 883.2  |
| 42.5°  | 763.5  | 793.4  | 820.8  | 845.5  | 853.3  |
| 45°    | 723.2  | 754.4  | 786.9  | 811.7  | 822.1  |
| 47.5°  | 680.3  | 715.4  | 751.8  | 779.1  | 786.9  |
| 50°    | 638.7  | 675.1  | 715.4  | 745.3  | 754.4  |
| 52.5°  | 594.4  | 633.5  | 679.0  | 710.2  | 721.9  |
| 55°    | 551.5  | 594.4  | 641.3  | 676.4  | 686.8  |
| 57.5°  | 509.9  | 554.1  | 604.8  | 640.0  | 651.7  |
| 60°    | 465.7  | 512.5  | 565.8  | 602.2  | 616.5  |
| 62.5°  | 424.0  | 472.2  | 529.4  | 565.8  | 578.8  |
| 65°    | 381.1  | 431.8  | 489.1  | 528.1  | 541.1  |
| 67.5°  | 338.2  | 391.5  | 448.8  | 491.7  | 502.1  |
| 70°    | 292.7  | 348.6  | 411.0  | 452.7  | 465.7  |
| 72.5°  | 251.0  | 307.0  | 372.0  | 414.9  | 427.9  |
| 75°    | 206.8  | 267.9  | 333.0  | 375.9  | 391.5  |
| 77.5°  | 169.1  | 230.2  | 295.3  | 340.8  | 352.5  |
| 80°    | 128.8  | 192.5  | 260.1  | 304.4  | 317.4  |
| 82.5°  | 93.7   | 158.7  | 227.6  | 271.9  | 284.9  |
| 85°    | 63.7   | 128.8  | 197.7  | 241.9  | 254.9  |
| 87.5°  | 39.0   | 104.1  | 170.4  | 214.6  | 227.6  |
| 90°    | 16.9   | 80.6   | 147.0  | 191.2  | 204.2  |
| 92.5°  | 15.6   | 71.5   | 136.6  | 179.5  | 191.2  |
| 95°    | 14.3   | 65.0   | 128.8  | 169.1  | 182.1  |
| 97.5°  | 13.0   | 59.8   | 121.0  | 160.0  | 173.0  |
| 100°   | 11.7   | 53.3   | 113.2  | 150.9  | 163.9  |
| 102.5° | 10.4   | 46.8   | 105.4  | 141.8  | 154.8  |
| 105°   | 10.4   | 41.6   | 97.6   | 134.0  | 145.7  |
| 107.5° | 9.1    | 36.4   | 89.8   | 124.9  | 136.6  |
| 110°   | 7.8    | 31.2   | 83.2   | 117.1  | 127.5  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 7.8 | 26.0  | 75.4 | 108.0 | 119.7 |
| 115°   | 6.5 | 22.1  | 68.9 | 100.2 | 110.6 |
| 117.5° | 6.5 | 16.9  | 61.1 | 92.4  | 102.8 |
| 120°   | 5.2 | 11.7  | 54.6 | 84.5  | 93.7  |
| 122.5° | 5.2 | 7.8   | 48.1 | 76.7  | 85.8  |
| 125°   | 3.9 | 3.9   | 41.6 | 68.9  | 78.0  |
| 127.5° | 3.9 | 2.6   | 35.1 | 61.1  | 70.2  |
| 130°   | 3.9 | 2.6   | 28.6 | 53.3  | 61.1  |
| 132.5° | 2.6 | 2.6   | 22.1 | 45.5  | 54.6  |
| 135°   | 2.6 | 1.3   | 15.6 | 39.0  | 45.5  |
| 137.5° | 2.6 | 1.3   | 10.4 | 31.2  | 37.7  |
| 140°   | 1.3 | 1.3   | 5.2  | 24.7  | 31.2  |
| 142.5° | 1.3 | 0.0   | 0.0  | 16.9  | 23.4  |
| 145°   | 1.3 | 0.0   | 0.0  | 10.4  | 15.6  |
| 147.5° | 0.0 | 0.0   | 0.0  | 3.9   | 9.1   |
| 150°   | 0.0 | 0.0   | 0.0  | 0.0   | 2.6   |
| 152.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 155°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 157.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 160°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 162.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 165°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 167.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 170°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 172.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 175°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 177.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 180°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |

(END OF REPORT)