

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: P996094

Luminaire Tested: S123DRP-B1000DB2750-4F0-XX-W2A-D\_2700K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P996094  
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-B1000DB2750-4F0-XX-W2A-D\_2700K  
Description: Define 3 Direct Perimeter with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

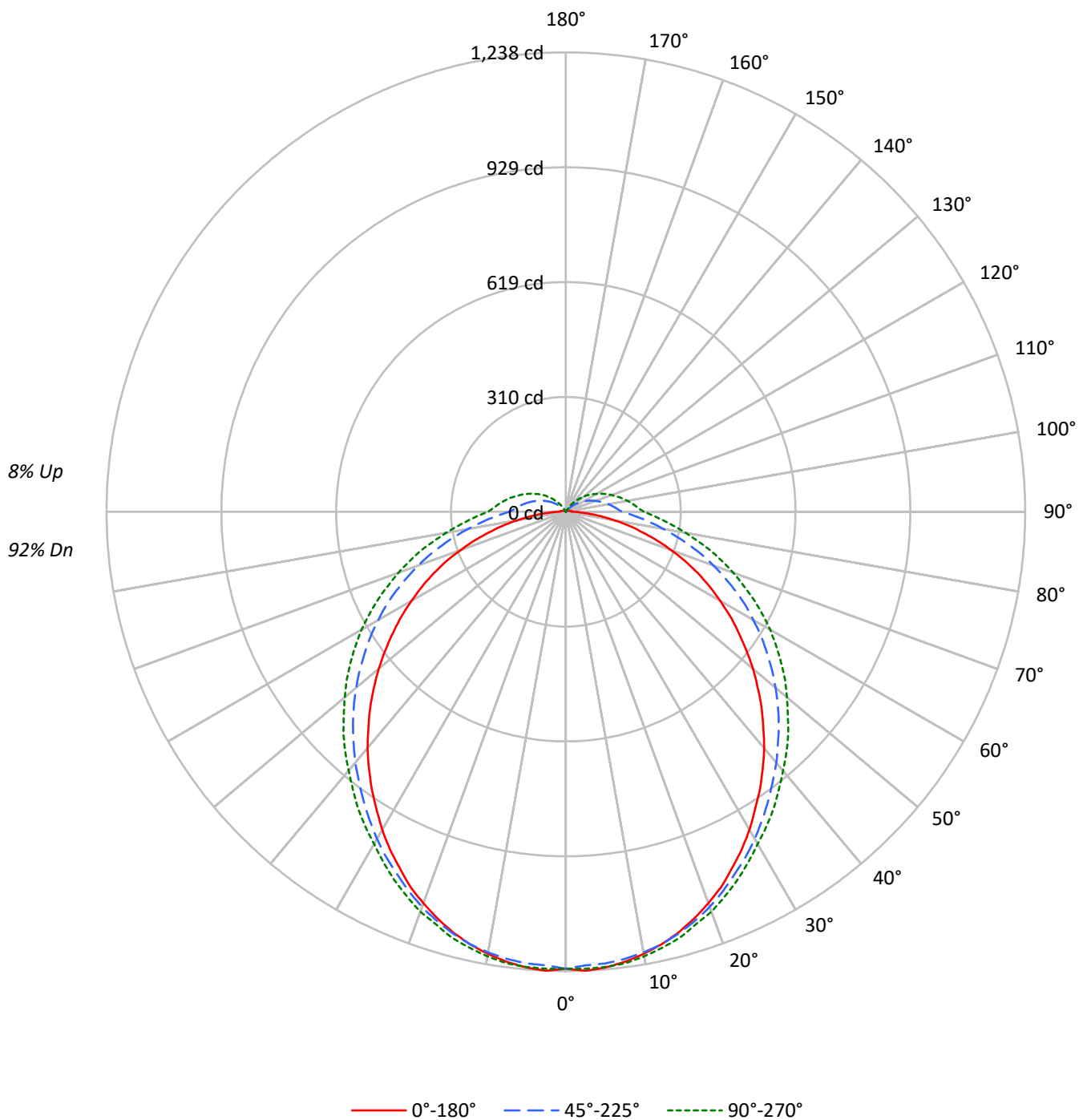
Lumens per Lamp: N/A  
Luminaire Lumens: 4138.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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   | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | 100 | 100 | 100 | 94 | 94 | 94 |
| 1   | 105 | 100 | 95  | 90  | 102 | 97  | 92  | 88  | 91  | 87  | 84  | 85  | 82  | 80  | 80 | 78 | 76 |
| 2   | 95  | 86  | 79  | 72  | 92  | 83  | 77  | 71  | 79  | 73  | 68  | 74  | 69  | 65  | 70 | 66 | 63 |
| 3   | 86  | 75  | 67  | 60  | 83  | 73  | 65  | 59  | 69  | 62  | 56  | 65  | 59  | 54  | 61 | 56 | 52 |
| 4   | 79  | 66  | 57  | 50  | 76  | 64  | 56  | 49  | 61  | 54  | 48  | 57  | 51  | 46  | 54 | 49 | 45 |
| 5   | 72  | 59  | 50  | 43  | 70  | 58  | 49  | 42  | 54  | 47  | 41  | 52  | 45  | 40  | 49 | 43 | 39 |
| 6   | 67  | 53  | 44  | 37  | 64  | 52  | 43  | 37  | 49  | 42  | 36  | 47  | 40  | 35  | 44 | 38 | 34 |
| 7   | 62  | 48  | 39  | 33  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 42  | 36  | 31  | 40 | 35 | 30 |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 41  | 33  | 28  | 39  | 32  | 28  | 37 | 31 | 27 |
| 9   | 54  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 37  | 30  | 25  | 36  | 29  | 25  | 34 | 28 | 24 |
| 10  | 50  | 37  | 29  | 24  | 49  | 36  | 29  | 24  | 35  | 28  | 23  | 33  | 27  | 23  | 32 | 26 | 22 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13254 | 13254 | 13254 |
| 5°  | 13318 | 13203 | 13304 |
| 10° | 13223 | 13179 | 13296 |
| 15° | 13078 | 13108 | 13242 |
| 20° | 12859 | 12982 | 13136 |
| 25° | 12585 | 12791 | 12999 |
| 30° | 12302 | 12653 | 12853 |
| 35° | 11984 | 12495 | 12830 |
| 40° | 11685 | 12400 | 12797 |
| 45° | 11351 | 12353 | 12904 |
| 50° | 11027 | 12353 | 13026 |
| 55° | 10672 | 12408 | 13290 |
| 60° | 10338 | 12559 | 13685 |
| 65° | 10010 | 12844 | 14212 |
| 70° | 9498  | 13338 | 15113 |
| 75° | 8871  | 14282 | 16789 |
| 80° | 8232  | 16625 | 20288 |
| 85° | 8114  | 25182 | 32469 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 57917 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 116.8  | 2.8       |
| 10°-20°   | 333.0  | 8.0       |
| 20°-30°   | 497.9  | 12.0      |
| 30°-40°   | 594.5  | 14.4      |
| 40°-50°   | 622.0  | 15.0      |
| 50°-60°   | 583.7  | 14.1      |
| 60°-70°   | 487.5  | 11.8      |
| 70°-80°   | 348.6  | 8.4       |
| 80°-90°   | 207.4  | 5.0       |
| 90°-100°  | 130.4  | 3.2       |
| 100°-110° | 95.8   | 2.3       |
| 110°-120° | 64.0   | 1.5       |
| 120°-130° | 36.5   | 0.9       |
| 130°-140° | 16.4   | 0.4       |
| 140°-150° | 3.4    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 947.7  | 22.9      |
| 0°-40°    | 1542.2 | 37.3      |
| 0°-60°    | 2747.9 | 66.4      |
| 0°-90°    | 3791.5 | 91.6      |
| 90°-120°  | 290.1  | 7.0       |
| 90°-150°  | 346.4  | 8.4       |
| 90°-180°  | 346.0  | 8.4       |
| 0°-180°   | 4138.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1231 | 1231  | 1231 | 1231  | 1231 |      |
| 5°   | 1233 | 1230  | 1222 | 1233  | 1231 | 117  |
| 15°  | 1174 | 1178  | 1176 | 1190  | 1188 | 331  |
| 25°  | 1060 | 1073  | 1077 | 1094  | 1094 | 488  |
| 35°  | 912  | 934   | 951  | 971   | 976  | 570  |
| 45°  | 746  | 778   | 812  | 837   | 848  | 575  |
| 55°  | 569  | 613   | 661  | 697   | 708  | 509  |
| 65°  | 393  | 445   | 504  | 544   | 558  | 388  |
| 75°  | 213  | 276   | 343  | 388   | 404  | 228  |
| 85°  | 66   | 133   | 204  | 250   | 263  | 68   |
| 90°  | 17   | 83    | 152  | 197   | 211  | 12   |
| 95°  | 15   | 67    | 133  | 174   | 188  | 12   |
| 105° | 11   | 43    | 101  | 138   | 150  | 11   |
| 115° | 7    | 23    | 71   | 103   | 114  | 7    |
| 125° | 4    | 4     | 43   | 71    | 80   | 4    |
| 135° | 3    | 1     | 16   | 40    | 47   | 2    |
| 145° | 1    | 0     | 0    | 11    | 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°     | 1231.3 | 1231.3 | 1231.3 | 1231.3 | 1231.3 |
| 2.5°   | 1238.0 | 1233.9 | 1223.2 | 1233.9 | 1232.6 |
| 5°     | 1232.6 | 1229.9 | 1221.9 | 1232.6 | 1231.3 |
| 7.5°   | 1223.2 | 1223.2 | 1215.2 | 1228.6 | 1227.2 |
| 10°    | 1209.8 | 1212.5 | 1205.8 | 1219.2 | 1216.5 |
| 12.5°  | 1193.7 | 1197.7 | 1193.7 | 1205.8 | 1203.1 |
| 15°    | 1173.6 | 1177.6 | 1176.3 | 1189.7 | 1188.3 |
| 17.5°  | 1149.4 | 1157.5 | 1156.2 | 1168.2 | 1165.5 |
| 20°    | 1122.6 | 1130.7 | 1133.3 | 1145.4 | 1146.8 |
| 22.5°  | 1094.5 | 1102.5 | 1106.5 | 1122.6 | 1121.3 |
| 25°    | 1059.6 | 1073.0 | 1077.0 | 1094.5 | 1094.5 |
| 27.5°  | 1026.1 | 1040.8 | 1048.9 | 1063.6 | 1064.9 |
| 30°    | 989.8  | 1007.3 | 1018.0 | 1034.1 | 1034.1 |
| 32.5°  | 949.6  | 969.7  | 984.5  | 1001.9 | 1005.9 |
| 35°    | 912.0  | 933.5  | 950.9  | 971.1  | 976.4  |
| 37.5°  | 871.8  | 895.9  | 916.1  | 938.9  | 942.9  |
| 40°    | 831.6  | 855.7  | 882.5  | 905.3  | 910.7  |
| 42.5°  | 787.3  | 818.2  | 846.3  | 871.8  | 879.9  |
| 45°    | 745.7  | 777.9  | 811.5  | 836.9  | 847.7  |
| 47.5°  | 701.5  | 737.7  | 775.2  | 803.4  | 811.5  |
| 50°    | 658.5  | 696.1  | 737.7  | 768.5  | 777.9  |
| 52.5°  | 612.9  | 653.2  | 700.1  | 732.3  | 744.4  |
| 55°    | 568.7  | 612.9  | 661.2  | 697.4  | 708.2  |
| 57.5°  | 525.8  | 571.4  | 623.7  | 659.9  | 672.0  |
| 60°    | 480.2  | 528.4  | 583.4  | 621.0  | 635.7  |
| 62.5°  | 437.2  | 486.9  | 545.9  | 583.4  | 596.9  |
| 65°    | 393.0  | 445.3  | 504.3  | 544.5  | 558.0  |
| 67.5°  | 348.7  | 403.7  | 462.7  | 507.0  | 517.7  |
| 70°    | 301.8  | 359.5  | 423.8  | 466.8  | 480.2  |
| 72.5°  | 258.9  | 316.5  | 383.6  | 427.9  | 441.3  |
| 75°    | 213.3  | 276.3  | 343.4  | 387.6  | 403.7  |
| 77.5°  | 174.4  | 237.4  | 304.5  | 351.4  | 363.5  |
| 80°    | 132.8  | 198.5  | 268.2  | 313.9  | 327.3  |
| 82.5°  | 96.6   | 163.6  | 234.7  | 280.3  | 293.7  |
| 85°    | 65.7   | 132.8  | 203.9  | 249.5  | 262.9  |
| 87.5°  | 40.2   | 107.3  | 175.7  | 221.3  | 234.7  |
| 90°    | 17.4   | 83.2   | 151.6  | 197.2  | 210.6  |
| 92.5°  | 16.1   | 73.8   | 140.8  | 185.1  | 197.2  |
| 95°    | 14.8   | 67.1   | 132.8  | 174.4  | 187.8  |
| 97.5°  | 13.4   | 61.7   | 124.7  | 165.0  | 178.4  |
| 100°   | 12.1   | 55.0   | 116.7  | 155.6  | 169.0  |
| 102.5° | 10.7   | 48.3   | 108.6  | 146.2  | 159.6  |
| 105°   | 10.7   | 42.9   | 100.6  | 138.1  | 150.2  |
| 107.5° | 9.4    | 37.6   | 92.5   | 128.8  | 140.8  |
| 110°   | 8.0    | 32.2   | 85.8   | 120.7  | 131.4  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 8.0 | 26.8  | 77.8 | 111.3 | 123.4 |
| 115°   | 6.7 | 22.8  | 71.1 | 103.3 | 114.0 |
| 117.5° | 6.7 | 17.4  | 63.0 | 95.2  | 106.0 |
| 120°   | 5.4 | 12.1  | 56.3 | 87.2  | 96.6  |
| 122.5° | 5.4 | 8.0   | 49.6 | 79.1  | 88.5  |
| 125°   | 4.0 | 4.0   | 42.9 | 71.1  | 80.5  |
| 127.5° | 4.0 | 2.7   | 36.2 | 63.0  | 72.4  |
| 130°   | 4.0 | 2.7   | 29.5 | 55.0  | 63.0  |
| 132.5° | 2.7 | 2.7   | 22.8 | 46.9  | 56.3  |
| 135°   | 2.7 | 1.3   | 16.1 | 40.2  | 46.9  |
| 137.5° | 2.7 | 1.3   | 10.7 | 32.2  | 38.9  |
| 140°   | 1.3 | 1.3   | 5.4  | 25.5  | 32.2  |
| 142.5° | 1.3 | 0.0   | 0.0  | 17.4  | 24.1  |
| 145°   | 1.3 | 0.0   | 0.0  | 10.7  | 16.1  |
| 147.5° | 0.0 | 0.0   | 0.0  | 4.0   | 9.4   |
| 150°   | 0.0 | 0.0   | 0.0  | 0.0   | 2.7   |
| 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)