

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: P996108

Luminaire Tested: S123DRP-B1000DB35-4F0-XX-W2A-D

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P996108  
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-B1000DB35-4F0-XX-W2A-D  
Description: Define 3 Direct Perimeter with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

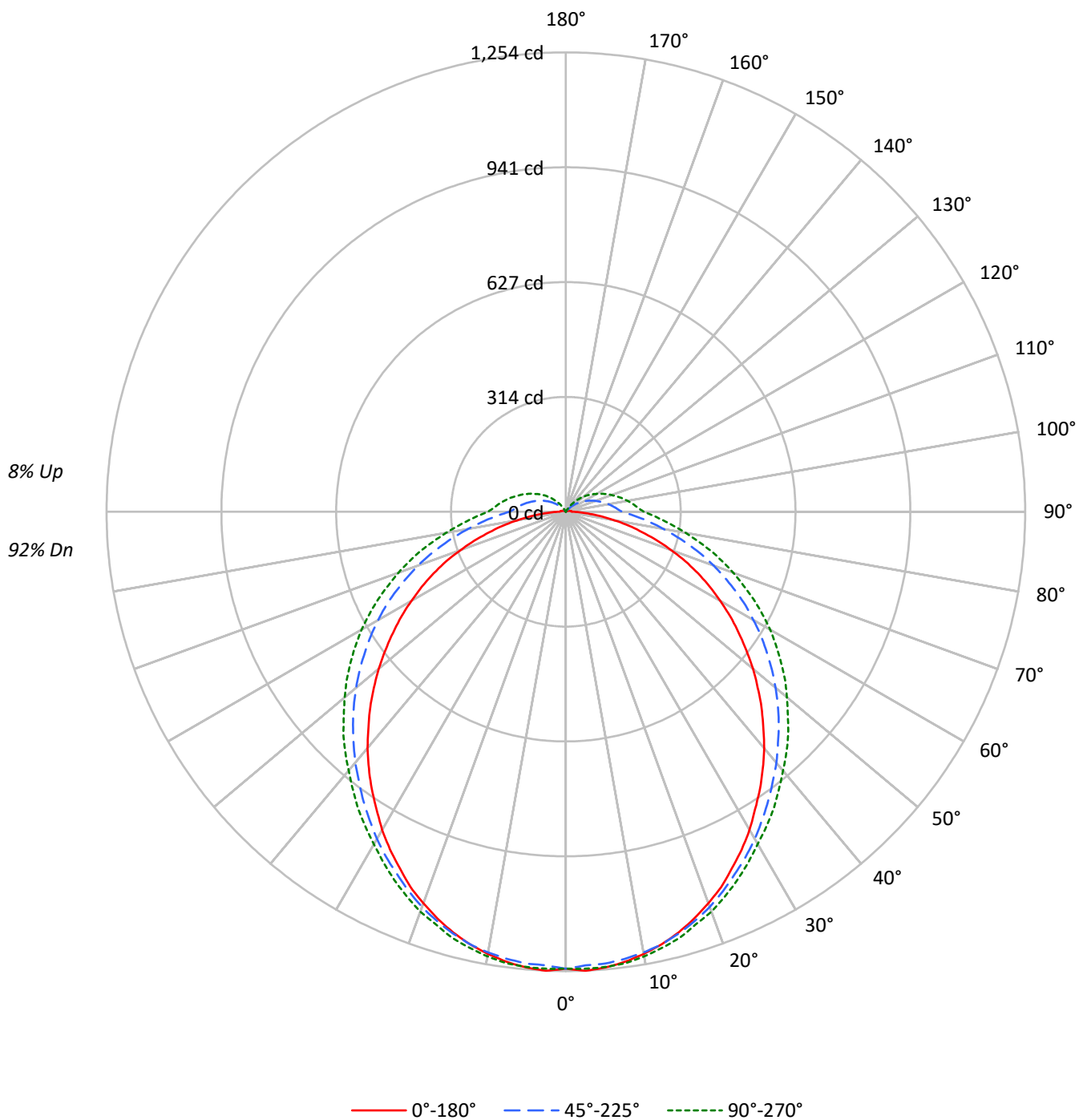
Lumens per Lamp: N/A  
Luminaire Lumens: 4192.0 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

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 |
| 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°  | 13426 | 13426 | 13426 |
| 5°  | 13492 | 13374 | 13477 |
| 10° | 13396 | 13351 | 13470 |
| 15° | 13249 | 13279 | 13415 |
| 20° | 13027 | 13151 | 13307 |
| 25° | 12748 | 12959 | 13168 |
| 30° | 12464 | 12818 | 13021 |
| 35° | 12140 | 12659 | 12998 |
| 40° | 11837 | 12563 | 12964 |
| 45° | 11501 | 12513 | 13072 |
| 50° | 11171 | 12514 | 13197 |
| 55° | 10811 | 12572 | 13463 |
| 60° | 10471 | 12725 | 13864 |
| 65° | 10139 | 13012 | 14395 |
| 70° | 9621  | 13514 | 15308 |
| 75° | 8983  | 14465 | 17010 |
| 80° | 8337  | 16842 | 20549 |
| 85° | 8225  | 25503 | 32889 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 58682 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 118.3  | 2.8       |
| 10°-20°   | 337.3  | 8.0       |
| 20°-30°   | 504.4  | 12.0      |
| 30°-40°   | 602.3  | 14.4      |
| 40°-50°   | 630.1  | 15.0      |
| 50°-60°   | 591.3  | 14.1      |
| 60°-70°   | 493.9  | 11.8      |
| 70°-80°   | 353.2  | 8.4       |
| 80°-90°   | 210.1  | 5.0       |
| 90°-100°  | 132.0  | 3.1       |
| 100°-110° | 97.1   | 2.3       |
| 110°-120° | 64.8   | 1.5       |
| 120°-130° | 37.0   | 0.9       |
| 130°-140° | 16.6   | 0.4       |
| 140°-150° | 3.5    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 960.1  | 22.9      |
| 0°-40°    | 1562.3 | 37.3      |
| 0°-60°    | 2783.8 | 66.4      |
| 0°-90°    | 3841.0 | 91.6      |
| 90°-120°  | 293.9  | 7.0       |
| 90°-150°  | 351.0  | 8.4       |
| 90°-180°  | 351.0  | 8.4       |
| 0°-180°   | 4192.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1247 | 1247  | 1247 | 1247  | 1247 |      |
| 5°   | 1249 | 1246  | 1238 | 1249  | 1247 | 118  |
| 15°  | 1189 | 1193  | 1192 | 1205  | 1204 | 335  |
| 25°  | 1073 | 1087  | 1091 | 1109  | 1109 | 495  |
| 35°  | 924  | 946   | 963  | 984   | 989  | 578  |
| 45°  | 756  | 788   | 822  | 848   | 859  | 583  |
| 55°  | 576  | 621   | 670  | 706   | 717  | 516  |
| 65°  | 398  | 451   | 511  | 552   | 565  | 394  |
| 75°  | 216  | 280   | 348  | 393   | 409  | 231  |
| 85°  | 67   | 134   | 206  | 253   | 266  | 69   |
| 90°  | 18   | 84    | 154  | 200   | 213  | 13   |
| 95°  | 15   | 68    | 134  | 177   | 190  | 12   |
| 105° | 11   | 44    | 102  | 140   | 152  | 11   |
| 115° | 7    | 23    | 72   | 105   | 116  | 7    |
| 125° | 4    | 4     | 44   | 72    | 82   | 4    |
| 135° | 3    | 1     | 16   | 41    | 48   | 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°     | 1247.3 | 1247.3 | 1247.3 | 1247.3 | 1247.3 |
| 2.5°   | 1254.1 | 1250.0 | 1239.2 | 1250.0 | 1248.7 |
| 5°     | 1248.7 | 1246.0 | 1237.8 | 1248.7 | 1247.3 |
| 7.5°   | 1239.2 | 1239.2 | 1231.0 | 1244.6 | 1243.3 |
| 10°    | 1225.6 | 1228.3 | 1221.5 | 1235.1 | 1232.4 |
| 12.5°  | 1209.3 | 1213.4 | 1209.3 | 1221.5 | 1218.8 |
| 15°    | 1188.9 | 1193.0 | 1191.6 | 1205.2 | 1203.8 |
| 17.5°  | 1164.4 | 1172.6 | 1171.2 | 1183.5 | 1180.7 |
| 20°    | 1137.3 | 1145.4 | 1148.1 | 1160.4 | 1161.7 |
| 22.5°  | 1108.7 | 1116.9 | 1121.0 | 1137.3 | 1135.9 |
| 25°    | 1073.4 | 1087.0 | 1091.1 | 1108.7 | 1108.7 |
| 27.5°  | 1039.4 | 1054.4 | 1062.5 | 1077.5 | 1078.8 |
| 30°    | 1002.8 | 1020.4 | 1031.3 | 1047.6 | 1047.6 |
| 32.5°  | 962.0  | 982.4  | 997.3  | 1015.0 | 1019.1 |
| 35°    | 923.9  | 945.7  | 963.4  | 983.7  | 989.2  |
| 37.5°  | 883.2  | 907.6  | 928.0  | 951.1  | 955.2  |
| 40°    | 842.4  | 866.9  | 894.1  | 917.2  | 922.6  |
| 42.5°  | 797.6  | 828.8  | 857.4  | 883.2  | 891.3  |
| 45°    | 755.5  | 788.1  | 822.0  | 847.9  | 858.7  |
| 47.5°  | 710.6  | 747.3  | 785.4  | 813.9  | 822.0  |
| 50°    | 667.1  | 705.2  | 747.3  | 778.6  | 788.1  |
| 52.5°  | 620.9  | 661.7  | 709.3  | 741.9  | 754.1  |
| 55°    | 576.1  | 620.9  | 669.9  | 706.5  | 717.4  |
| 57.5°  | 532.6  | 578.8  | 631.8  | 668.5  | 680.7  |
| 60°    | 486.4  | 535.3  | 591.1  | 629.1  | 644.0  |
| 62.5°  | 443.0  | 493.2  | 553.0  | 591.1  | 604.6  |
| 65°    | 398.1  | 451.1  | 510.9  | 551.7  | 565.2  |
| 67.5°  | 353.3  | 409.0  | 468.8  | 513.6  | 524.5  |
| 70°    | 305.7  | 364.1  | 429.4  | 472.8  | 486.4  |
| 72.5°  | 262.2  | 320.7  | 388.6  | 433.4  | 447.0  |
| 75°    | 216.0  | 279.9  | 347.8  | 392.7  | 409.0  |
| 77.5°  | 176.6  | 240.5  | 308.4  | 356.0  | 368.2  |
| 80°    | 134.5  | 201.1  | 271.7  | 317.9  | 331.5  |
| 82.5°  | 97.8   | 165.8  | 237.8  | 284.0  | 297.6  |
| 85°    | 66.6   | 134.5  | 206.5  | 252.7  | 266.3  |
| 87.5°  | 40.8   | 108.7  | 178.0  | 224.2  | 237.8  |
| 90°    | 17.7   | 84.2   | 153.5  | 199.7  | 213.3  |
| 92.5°  | 16.3   | 74.7   | 142.7  | 187.5  | 199.7  |
| 95°    | 14.9   | 67.9   | 134.5  | 176.6  | 190.2  |
| 97.5°  | 13.6   | 62.5   | 126.4  | 167.1  | 180.7  |
| 100°   | 12.2   | 55.7   | 118.2  | 157.6  | 171.2  |
| 102.5° | 10.9   | 48.9   | 110.1  | 148.1  | 161.7  |
| 105°   | 10.9   | 43.5   | 101.9  | 140.0  | 152.2  |
| 107.5° | 9.5    | 38.0   | 93.8   | 130.4  | 142.7  |
| 110°   | 8.2    | 32.6   | 87.0   | 122.3  | 133.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 8.2 | 27.2  | 78.8 | 112.8 | 125.0 |
| 115°   | 6.8 | 23.1  | 72.0 | 104.6 | 115.5 |
| 117.5° | 6.8 | 17.7  | 63.9 | 96.5  | 107.3 |
| 120°   | 5.4 | 12.2  | 57.1 | 88.3  | 97.8  |
| 122.5° | 5.4 | 8.2   | 50.3 | 80.2  | 89.7  |
| 125°   | 4.1 | 4.1   | 43.5 | 72.0  | 81.5  |
| 127.5° | 4.1 | 2.7   | 36.7 | 63.9  | 73.4  |
| 130°   | 4.1 | 2.7   | 29.9 | 55.7  | 63.9  |
| 132.5° | 2.7 | 2.7   | 23.1 | 47.6  | 57.1  |
| 135°   | 2.7 | 1.4   | 16.3 | 40.8  | 47.6  |
| 137.5° | 2.7 | 1.4   | 10.9 | 32.6  | 39.4  |
| 140°   | 1.4 | 1.4   | 5.4  | 25.8  | 32.6  |
| 142.5° | 1.4 | 0.0   | 0.0  | 17.7  | 24.5  |
| 145°   | 1.4 | 0.0   | 0.0  | 10.9  | 16.3  |
| 147.5° | 0.0 | 0.0   | 0.0  | 4.1   | 9.5   |
| 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)