

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: P1036922

Luminaire Tested: S122DS-B290DB2750-4F0-XX-W2A-D\_5000K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1036922  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DS-B290DB2750-4F0-XX-W2A-D\_5000K  
Description: Define 2 Direct Surface with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

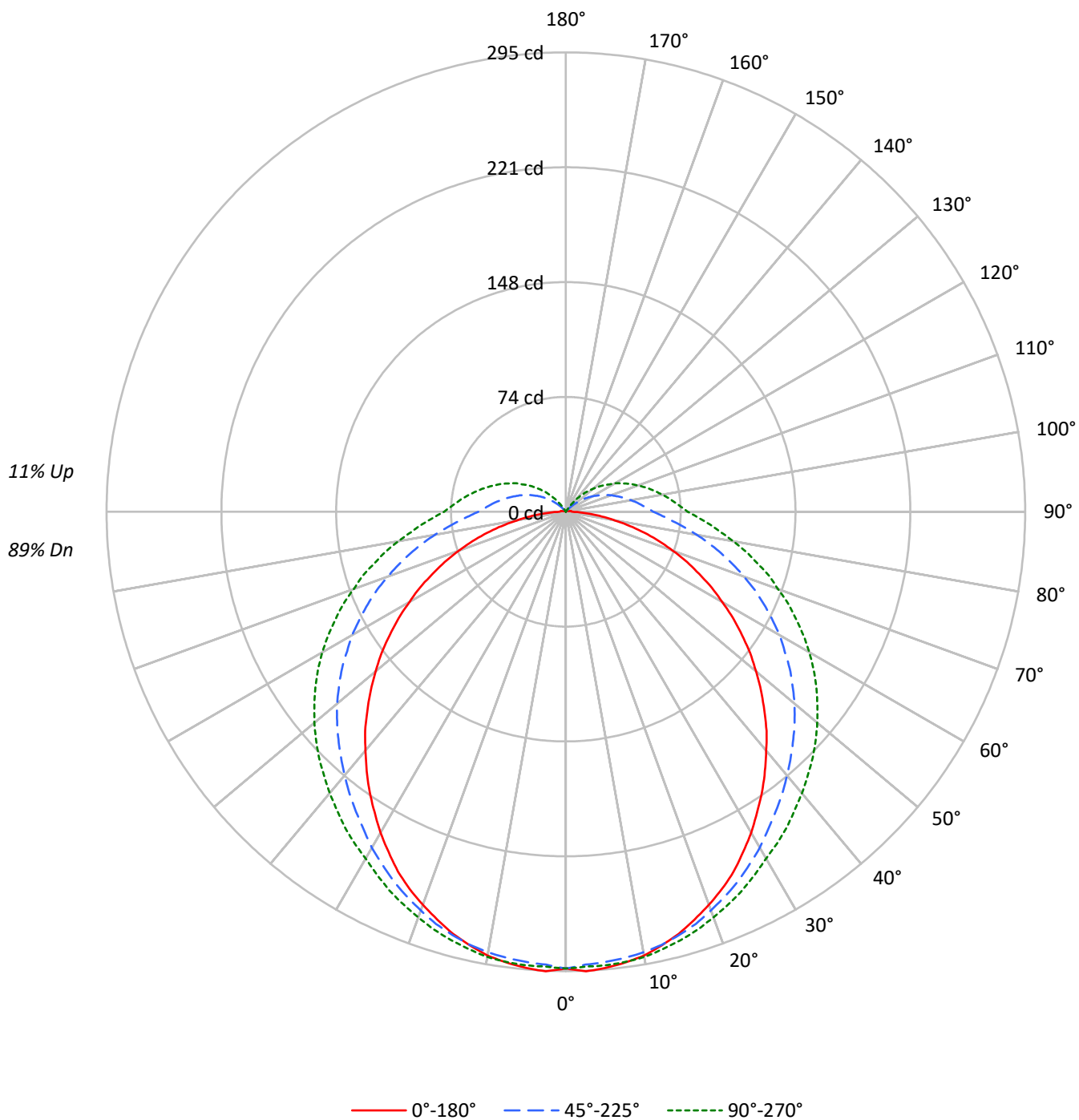
Lumens per Lamp: N/A  
Luminaire Lumens: 1119.1 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 13  
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 |    |    |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 92 | 92 | 92 | 89 |    |    |
| 1   | 104 | 98  | 93  | 88  | 100 | 95  | 90  | 86  | 88  | 85  | 81  | 82 | 79 | 77 | 77 | 75 | 72 | 69 |    |    |
| 2   | 94  | 84  | 77  | 70  | 90  | 81  | 74  | 68  | 76  | 70  | 65  | 71 | 66 | 62 | 66 | 62 | 59 | 56 |    |    |
| 3   | 85  | 73  | 64  | 57  | 81  | 71  | 63  | 56  | 66  | 59  | 54  | 62 | 56 | 51 | 58 | 53 | 49 | 46 |    |    |
| 4   | 77  | 64  | 55  | 48  | 74  | 62  | 54  | 47  | 58  | 51  | 45  | 55 | 48 | 43 | 51 | 46 | 42 | 39 |    |    |
| 5   | 71  | 57  | 48  | 41  | 68  | 56  | 47  | 40  | 52  | 44  | 39  | 49 | 42 | 37 | 46 | 40 | 36 | 33 |    |    |
| 6   | 65  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 47  | 39  | 34  | 44 | 37 | 32 | 42 | 36 | 31 | 29 |    |    |
| 7   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 35  | 30  | 40 | 34 | 29 | 38 | 32 | 28 | 25 |    |    |
| 8   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 27  | 39  | 32  | 26  | 37 | 30 | 25 | 35 | 29 | 25 | 23 |    |    |
| 9   | 52  | 39  | 30  | 25  | 50  | 38  | 30  | 24  | 36  | 29  | 24  | 34 | 27 | 23 | 32 | 26 | 22 | 20 |    |    |
| 10  | 49  | 36  | 28  | 22  | 47  | 35  | 27  | 22  | 33  | 26  | 21  | 31 | 25 | 21 | 30 | 24 | 20 | 18 |    |    |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 4643 | 4643  | 4643  |
| 5°  | 4673 | 4613  | 4646  |
| 10° | 4652 | 4618  | 4666  |
| 15° | 4597 | 4611  | 4667  |
| 20° | 4525 | 4589  | 4668  |
| 25° | 4454 | 4573  | 4684  |
| 30° | 4350 | 4553  | 4699  |
| 35° | 4245 | 4541  | 4781  |
| 40° | 4137 | 4567  | 4875  |
| 45° | 4034 | 4625  | 5014  |
| 50° | 3925 | 4721  | 5191  |
| 55° | 3811 | 4843  | 5420  |
| 60° | 3672 | 5018  | 5718  |
| 65° | 3536 | 5255  | 6113  |
| 70° | 3383 | 5628  | 6706  |
| 75° | 3199 | 6318  | 7773  |
| 80° | 2908 | 7785  | 9954  |
| 85° | 2779 | 12514 | 16836 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 30846 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 27.8   | 2.5       |
| 10°-20°   | 79.7   | 7.1       |
| 20°-30°   | 120.8  | 10.8      |
| 30°-40°   | 147.1  | 13.1      |
| 40°-50°   | 158.3  | 14.1      |
| 50°-60°   | 153.7  | 13.7      |
| 60°-70°   | 134.3  | 12.0      |
| 70°-80°   | 103.3  | 9.2       |
| 80°-90°   | 69.2   | 6.2       |
| 90°-100°  | 47.8   | 4.3       |
| 100°-110° | 34.9   | 3.1       |
| 110°-120° | 23.0   | 2.1       |
| 120°-130° | 12.8   | 1.1       |
| 130°-140° | 5.4    | 0.5       |
| 140°-150° | 0.9    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 228.3  | 20.4      |
| 0°-40°    | 375.5  | 33.6      |
| 0°-60°    | 687.5  | 61.4      |
| 0°-90°    | 994.3  | 88.8      |
| 90°-120°  | 105.6  | 9.4       |
| 90°-150°  | 124.8  | 11.2      |
| 90°-180°  | 125.0  | 11.2      |
| 0°-180°   | 1119.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 293 | 293   | 293 | 293   | 293 |      |
| 5°   | 294 | 293   | 290 | 293   | 292 | 28   |
| 15°  | 280 | 281   | 281 | 285   | 285 | 79   |
| 25°  | 255 | 258   | 262 | 267   | 268 | 117  |
| 35°  | 220 | 227   | 235 | 244   | 247 | 137  |
| 45°  | 180 | 192   | 207 | 220   | 224 | 139  |
| 55°  | 138 | 153   | 176 | 191   | 196 | 124  |
| 65°  | 94  | 115   | 140 | 158   | 163 | 94   |
| 75°  | 52  | 76    | 103 | 122   | 127 | 55   |
| 85°  | 15  | 42    | 69  | 87    | 93  | 16   |
| 90°  | 4   | 29    | 56  | 73    | 78  | 3    |
| 95°  | 3   | 23    | 49  | 65    | 70  | 3    |
| 105° | 2   | 14    | 37  | 51    | 56  | 2    |
| 115° | 2   | 6     | 26  | 38    | 43  | 2    |
| 125° | 1   | 1     | 14  | 26    | 30  | 1    |
| 135° | 0   | 0     | 5   | 14    | 17  | 0    |
| 145° | 0   | 0     | 0   | 3     | 5   | 0    |
| 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°     | 293.3 | 293.3 | 293.3 | 293.3 | 293.3 |
| 2.5°   | 295.4 | 294.1 | 291.1 | 293.3 | 292.4 |
| 5°     | 294.1 | 292.8 | 290.3 | 292.8 | 292.4 |
| 7.5°   | 292.0 | 291.1 | 289.0 | 292.0 | 291.6 |
| 10°    | 289.4 | 288.6 | 287.3 | 290.7 | 290.3 |
| 12.5°  | 285.2 | 285.6 | 284.8 | 288.2 | 287.7 |
| 15°    | 280.5 | 281.4 | 281.4 | 285.2 | 284.8 |
| 17.5°  | 274.6 | 276.3 | 277.5 | 281.4 | 281.4 |
| 20°    | 268.6 | 270.7 | 272.4 | 277.1 | 277.1 |
| 22.5°  | 262.2 | 264.8 | 267.3 | 272.0 | 272.9 |
| 25°    | 255.0 | 258.0 | 261.8 | 266.9 | 268.2 |
| 27.5°  | 246.5 | 251.2 | 255.4 | 261.8 | 262.7 |
| 30°    | 238.0 | 243.5 | 249.1 | 255.9 | 257.1 |
| 32.5°  | 228.7 | 235.0 | 241.8 | 249.9 | 252.5 |
| 35°    | 219.7 | 227.0 | 235.0 | 244.4 | 247.4 |
| 37.5°  | 210.0 | 218.0 | 228.2 | 238.4 | 241.4 |
| 40°    | 200.2 | 209.5 | 221.0 | 232.1 | 235.9 |
| 42.5°  | 190.8 | 200.2 | 213.8 | 226.1 | 229.9 |
| 45°    | 180.2 | 191.7 | 206.6 | 219.7 | 224.0 |
| 47.5°  | 170.0 | 182.3 | 199.3 | 212.9 | 217.6 |
| 50°    | 159.4 | 172.6 | 191.7 | 206.1 | 210.8 |
| 52.5°  | 149.2 | 163.2 | 183.6 | 198.5 | 203.6 |
| 55°    | 138.1 | 153.4 | 175.5 | 190.8 | 196.4 |
| 57.5°  | 127.5 | 144.5 | 166.6 | 183.2 | 188.7 |
| 60°    | 116.0 | 134.3 | 158.5 | 174.7 | 180.6 |
| 62.5°  | 105.8 | 125.0 | 149.2 | 166.6 | 172.1 |
| 65°    | 94.4  | 115.2 | 140.3 | 157.7 | 163.2 |
| 67.5°  | 84.2  | 105.8 | 131.3 | 148.8 | 154.7 |
| 70°    | 73.1  | 95.2  | 121.6 | 139.8 | 144.9 |
| 72.5°  | 62.9  | 85.9  | 112.6 | 130.5 | 136.9 |
| 75°    | 52.3  | 76.1  | 103.3 | 121.6 | 127.1 |
| 77.5°  | 42.1  | 66.7  | 94.4  | 112.6 | 118.6 |
| 80°    | 31.9  | 57.8  | 85.4  | 103.3 | 109.2 |
| 82.5°  | 23.4  | 48.9  | 76.9  | 94.8  | 100.3 |
| 85°    | 15.3  | 41.7  | 68.9  | 86.7  | 92.7  |
| 87.5°  | 9.4   | 34.9  | 62.1  | 79.5  | 85.0  |
| 90°    | 4.3   | 28.9  | 56.1  | 73.1  | 78.2  |
| 92.5°  | 3.8   | 26.4  | 52.3  | 68.9  | 74.0  |
| 95°    | 3.4   | 23.4  | 48.9  | 65.0  | 70.1  |
| 97.5°  | 3.0   | 21.3  | 45.9  | 61.6  | 66.7  |
| 100°   | 3.0   | 18.7  | 42.5  | 58.2  | 62.9  |
| 102.5° | 2.6   | 16.6  | 39.5  | 54.8  | 59.5  |
| 105°   | 2.1   | 14.5  | 36.6  | 51.4  | 56.1  |
| 107.5° | 2.1   | 12.3  | 33.6  | 48.0  | 52.7  |
| 110°   | 1.7   | 10.2  | 31.0  | 44.6  | 49.3  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°  |
|--------|-----|-------|------|-------|------|
| 112.5° | 1.7 | 8.5   | 28.1 | 41.7  | 46.3 |
| 115°   | 1.7 | 6.4   | 25.5 | 38.3  | 42.9 |
| 117.5° | 1.3 | 4.7   | 22.5 | 35.3  | 39.5 |
| 120°   | 1.3 | 3.0   | 20.0 | 31.9  | 36.6 |
| 122.5° | 1.3 | 1.7   | 17.4 | 28.9  | 32.7 |
| 125°   | 0.9 | 0.9   | 14.5 | 25.9  | 29.8 |
| 127.5° | 0.9 | 0.4   | 11.9 | 22.5  | 26.4 |
| 130°   | 0.9 | 0.4   | 9.4  | 19.6  | 23.0 |
| 132.5° | 0.9 | 0.4   | 6.8  | 16.6  | 20.0 |
| 135°   | 0.4 | 0.4   | 4.7  | 13.6  | 17.0 |
| 137.5° | 0.4 | 0.4   | 2.6  | 10.6  | 13.6 |
| 140°   | 0.4 | 0.0   | 0.9  | 7.7   | 10.2 |
| 142.5° | 0.4 | 0.0   | 0.0  | 5.1   | 7.2  |
| 145°   | 0.0 | 0.0   | 0.0  | 2.6   | 4.7  |
| 147.5° | 0.0 | 0.0   | 0.0  | 0.4   | 1.7  |
| 150°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 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)