

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: P1036971

Luminaire Tested: S122DS-B675DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1036971  
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-B675DB27-4F0-XX-W2A-D  
Description: Define 2 Direct Surface with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

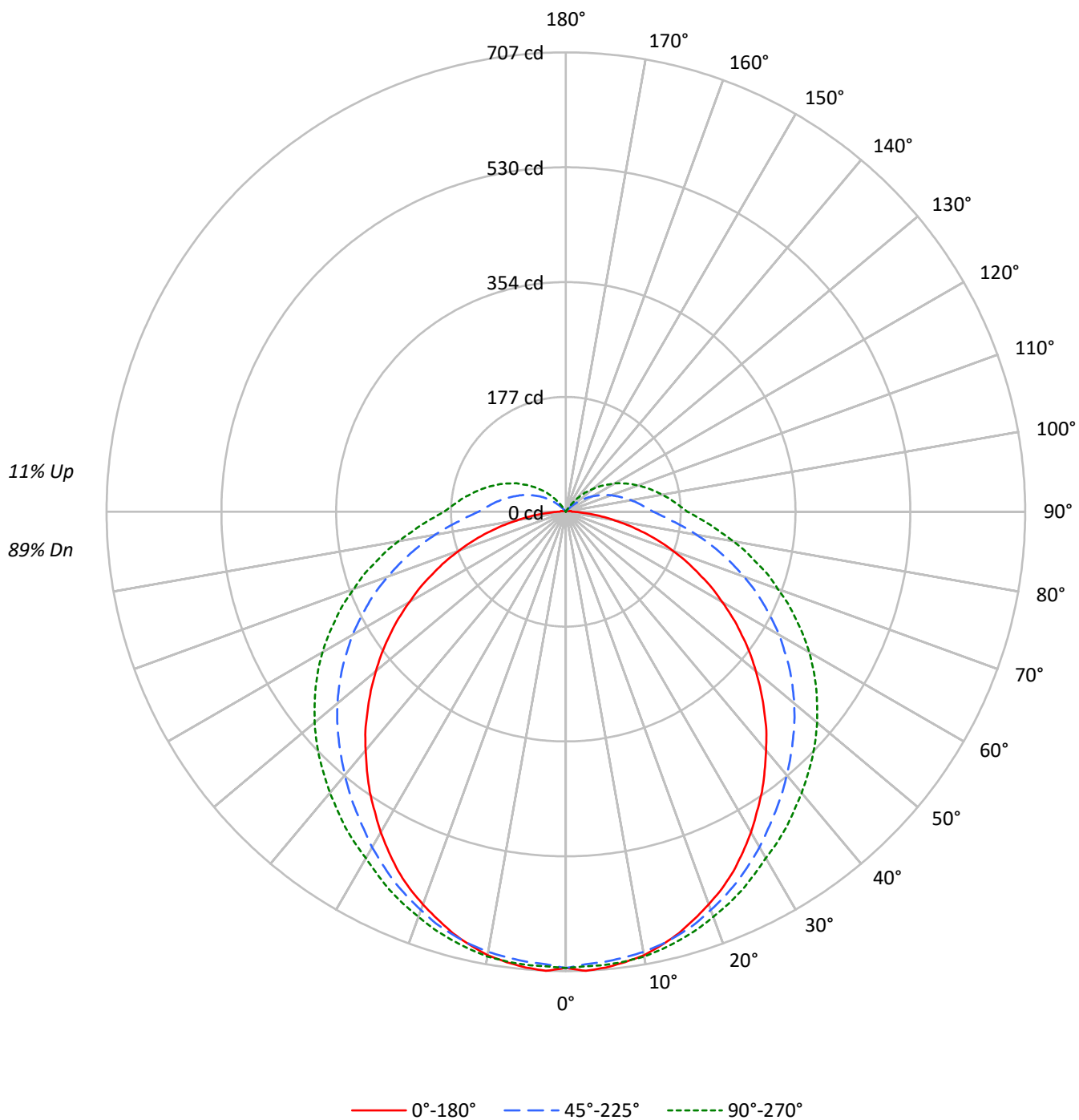
Lumens per Lamp: N/A  
Luminaire Lumens: 2679.0 lumens  
Efficiency: N/A  
Efficacy: 74.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 35.9  
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 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |    |    |    |  |    |
| 0   | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 |  | 98 | 98 | 98 |  | 92 |
| 1   | 104 | 98  | 93  | 88  | 100 | 95  | 90  | 86  | 88  | 85  | 81  |  | 82 | 79 | 77 |  | 77 |
| 2   | 94  | 84  | 77  | 70  | 90  | 81  | 74  | 68  | 76  | 70  | 65  |  | 71 | 66 | 62 |  | 66 |
| 3   | 85  | 73  | 64  | 57  | 81  | 71  | 63  | 56  | 66  | 59  | 54  |  | 62 | 56 | 51 |  | 58 |
| 4   | 77  | 64  | 55  | 48  | 74  | 62  | 54  | 47  | 58  | 51  | 45  |  | 55 | 48 | 43 |  | 51 |
| 5   | 71  | 57  | 48  | 41  | 68  | 56  | 47  | 40  | 52  | 44  | 39  |  | 49 | 42 | 37 |  | 46 |
| 6   | 65  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 47  | 39  | 34  |  | 44 | 37 | 32 |  | 42 |
| 7   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 43  | 35  | 30  |  | 40 | 34 | 29 |  | 38 |
| 8   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 27  | 39  | 32  | 26  |  | 37 | 30 | 25 |  | 35 |
| 9   | 52  | 39  | 30  | 25  | 50  | 38  | 30  | 24  | 36  | 29  | 24  |  | 34 | 27 | 23 |  | 32 |
| 10  | 49  | 36  | 28  | 22  | 47  | 35  | 27  | 22  | 33  | 26  | 21  |  | 31 | 25 | 21 |  | 30 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11114 | 11114 | 11114 |
| 5°  | 11188 | 11043 | 11124 |
| 10° | 11139 | 11057 | 11171 |
| 15° | 11006 | 11039 | 11173 |
| 20° | 10833 | 10986 | 11175 |
| 25° | 10663 | 10947 | 11215 |
| 30° | 10415 | 10899 | 11252 |
| 35° | 10166 | 10874 | 11444 |
| 40° | 9904  | 10933 | 11669 |
| 45° | 9657  | 11070 | 12003 |
| 50° | 9397  | 11301 | 12429 |
| 55° | 9126  | 11596 | 12974 |
| 60° | 8795  | 12014 | 13692 |
| 65° | 8461  | 12577 | 14634 |
| 70° | 8099  | 13468 | 16060 |
| 75° | 7657  | 15125 | 18605 |
| 80° | 6955  | 18642 | 23838 |
| 85° | 6647  | 29931 | 40283 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 73849 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 66.6   | 2.5       |
| 10°-20°   | 190.9  | 7.1       |
| 20°-30°   | 289.2  | 10.8      |
| 30°-40°   | 352.2  | 13.1      |
| 40°-50°   | 379.0  | 14.1      |
| 50°-60°   | 368.0  | 13.7      |
| 60°-70°   | 321.4  | 12.0      |
| 70°-80°   | 247.4  | 9.2       |
| 80°-90°   | 165.7  | 6.2       |
| 90°-100°  | 114.3  | 4.3       |
| 100°-110° | 83.5   | 3.1       |
| 110°-120° | 55.1   | 2.1       |
| 120°-130° | 30.7   | 1.1       |
| 130°-140° | 12.9   | 0.5       |
| 140°-150° | 2.2    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| <hr/>     |        |           |
| 0°-30°    | 546.7  | 20.4      |
| 0°-40°    | 898.9  | 33.6      |
| 0°-60°    | 1645.9 | 61.4      |
| 0°-90°    | 2380.3 | 88.9      |
| 90°-120°  | 252.9  | 9.4       |
| 90°-150°  | 298.7  | 11.1      |
| 90°-180°  | 299.0  | 11.2      |
| 0°-180°   | 2679.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 702 | 702   | 702 | 702   | 702 |      |
| 5°   | 704 | 701   | 695 | 701   | 700 | 67   |
| 15°  | 672 | 674   | 674 | 683   | 682 | 189  |
| 25°  | 610 | 618   | 627 | 639   | 642 | 281  |
| 35°  | 526 | 543   | 563 | 585   | 592 | 329  |
| 45°  | 431 | 459   | 494 | 526   | 536 | 333  |
| 55°  | 331 | 367   | 420 | 457   | 470 | 296  |
| 65°  | 226 | 276   | 336 | 378   | 391 | 224  |
| 75°  | 125 | 182   | 247 | 291   | 304 | 132  |
| 85°  | 37  | 100   | 165 | 208   | 222 | 39   |
| 90°  | 10  | 69    | 134 | 175   | 187 | 7    |
| 95°  | 8   | 56    | 117 | 156   | 168 | 6    |
| 105° | 5   | 35    | 88  | 123   | 134 | 6    |
| 115° | 4   | 15    | 61  | 92    | 103 | 4    |
| 125° | 2   | 2     | 35  | 62    | 71  | 2    |
| 135° | 1   | 1     | 11  | 33    | 41  | 1    |
| 145° | 0   | 0     | 0   | 6     | 11  | 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°     | 702.1 | 702.1 | 702.1 | 702.1 | 702.1 |
| 2.5°   | 707.2 | 704.1 | 697.0 | 702.1 | 700.1 |
| 5°     | 704.1 | 701.1 | 695.0 | 701.1 | 700.1 |
| 7.5°   | 699.1 | 697.0 | 691.9 | 699.1 | 698.0 |
| 10°    | 693.0 | 690.9 | 687.9 | 696.0 | 695.0 |
| 12.5°  | 682.8 | 683.8 | 681.8 | 689.9 | 688.9 |
| 15°    | 671.6 | 673.6 | 673.6 | 682.8 | 681.8 |
| 17.5°  | 657.3 | 661.4 | 664.5 | 673.6 | 673.6 |
| 20°    | 643.1 | 648.2 | 652.2 | 663.4 | 663.4 |
| 22.5°  | 627.8 | 633.9 | 640.0 | 651.2 | 653.3 |
| 25°    | 610.5 | 617.7 | 626.8 | 639.0 | 642.1 |
| 27.5°  | 590.2 | 601.4 | 611.5 | 626.8 | 628.8 |
| 30°    | 569.8 | 583.1 | 596.3 | 612.6 | 615.6 |
| 32.5°  | 547.4 | 562.7 | 579.0 | 598.3 | 604.4 |
| 35°    | 526.1 | 543.4 | 562.7 | 585.1 | 592.2 |
| 37.5°  | 502.7 | 522.0 | 546.4 | 570.8 | 578.0 |
| 40°    | 479.3 | 501.7 | 529.1 | 555.6 | 564.7 |
| 42.5°  | 456.9 | 479.3 | 511.8 | 541.3 | 550.5 |
| 45°    | 431.4 | 458.9 | 494.5 | 526.1 | 536.2 |
| 47.5°  | 407.0 | 436.5 | 477.2 | 509.8 | 521.0 |
| 50°    | 381.6 | 413.1 | 458.9 | 493.5 | 504.7 |
| 52.5°  | 357.2 | 390.7 | 439.6 | 475.2 | 487.4 |
| 55°    | 330.7 | 367.3 | 420.2 | 456.9 | 470.1 |
| 57.5°  | 305.3 | 346.0 | 398.9 | 438.6 | 451.8 |
| 60°    | 277.8 | 321.5 | 379.5 | 418.2 | 432.5 |
| 62.5°  | 253.4 | 299.2 | 357.2 | 398.9 | 412.1 |
| 65°    | 225.9 | 275.8 | 335.8 | 377.5 | 390.7 |
| 67.5°  | 201.5 | 253.4 | 314.4 | 356.1 | 370.4 |
| 70°    | 175.0 | 227.9 | 291.0 | 334.8 | 347.0 |
| 72.5°  | 150.6 | 205.5 | 269.7 | 312.4 | 327.7 |
| 75°    | 125.2 | 182.1 | 247.3 | 291.0 | 304.2 |
| 77.5°  | 100.7 | 159.8 | 225.9 | 269.7 | 283.9 |
| 80°    | 76.3  | 138.4 | 204.5 | 247.3 | 261.5 |
| 82.5°  | 56.0  | 117.0 | 184.2 | 226.9 | 240.1 |
| 85°    | 36.6  | 99.7  | 164.8 | 207.6 | 221.8 |
| 87.5°  | 22.4  | 83.4  | 148.6 | 190.3 | 203.5 |
| 90°    | 10.2  | 69.2  | 134.3 | 175.0 | 187.2 |
| 92.5°  | 9.2   | 63.1  | 125.2 | 164.8 | 177.1 |
| 95°    | 8.1   | 56.0  | 117.0 | 155.7 | 167.9 |
| 97.5°  | 7.1   | 50.9  | 109.9 | 147.5 | 159.8 |
| 100°   | 7.1   | 44.8  | 101.8 | 139.4 | 150.6 |
| 102.5° | 6.1   | 39.7  | 94.6  | 131.3 | 142.5 |
| 105°   | 5.1   | 34.6  | 87.5  | 123.1 | 134.3 |
| 107.5° | 5.1   | 29.5  | 80.4  | 115.0 | 126.2 |
| 110°   | 4.1   | 24.4  | 74.3  | 106.8 | 118.0 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 4.1 | 20.4  | 67.2 | 99.7  | 110.9 |
| 115°   | 4.1 | 15.3  | 61.1 | 91.6  | 102.8 |
| 117.5° | 3.1 | 11.2  | 53.9 | 84.5  | 94.6  |
| 120°   | 3.1 | 7.1   | 47.8 | 76.3  | 87.5  |
| 122.5° | 3.1 | 4.1   | 41.7 | 69.2  | 78.4  |
| 125°   | 2.0 | 2.0   | 34.6 | 62.1  | 71.2  |
| 127.5° | 2.0 | 1.0   | 28.5 | 53.9  | 63.1  |
| 130°   | 2.0 | 1.0   | 22.4 | 46.8  | 54.9  |
| 132.5° | 2.0 | 1.0   | 16.3 | 39.7  | 47.8  |
| 135°   | 1.0 | 1.0   | 11.2 | 32.6  | 40.7  |
| 137.5° | 1.0 | 1.0   | 6.1  | 25.4  | 32.6  |
| 140°   | 1.0 | 0.0   | 2.0  | 18.3  | 24.4  |
| 142.5° | 1.0 | 0.0   | 0.0  | 12.2  | 17.3  |
| 145°   | 0.0 | 0.0   | 0.0  | 6.1   | 11.2  |
| 147.5° | 0.0 | 0.0   | 0.0  | 1.0   | 4.1   |
| 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)