

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: P1000153

Luminaire Tested: SA2XXRDIP-B865D530UB2750-4F0-XX-W2A-F\_4000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1000153  
REPORT IS A COMBINATION OF REPORTS P988713 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B865D530UB2750-4F0-XX-W2A-F\_4000K  
Description: Define 2 Regressed Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

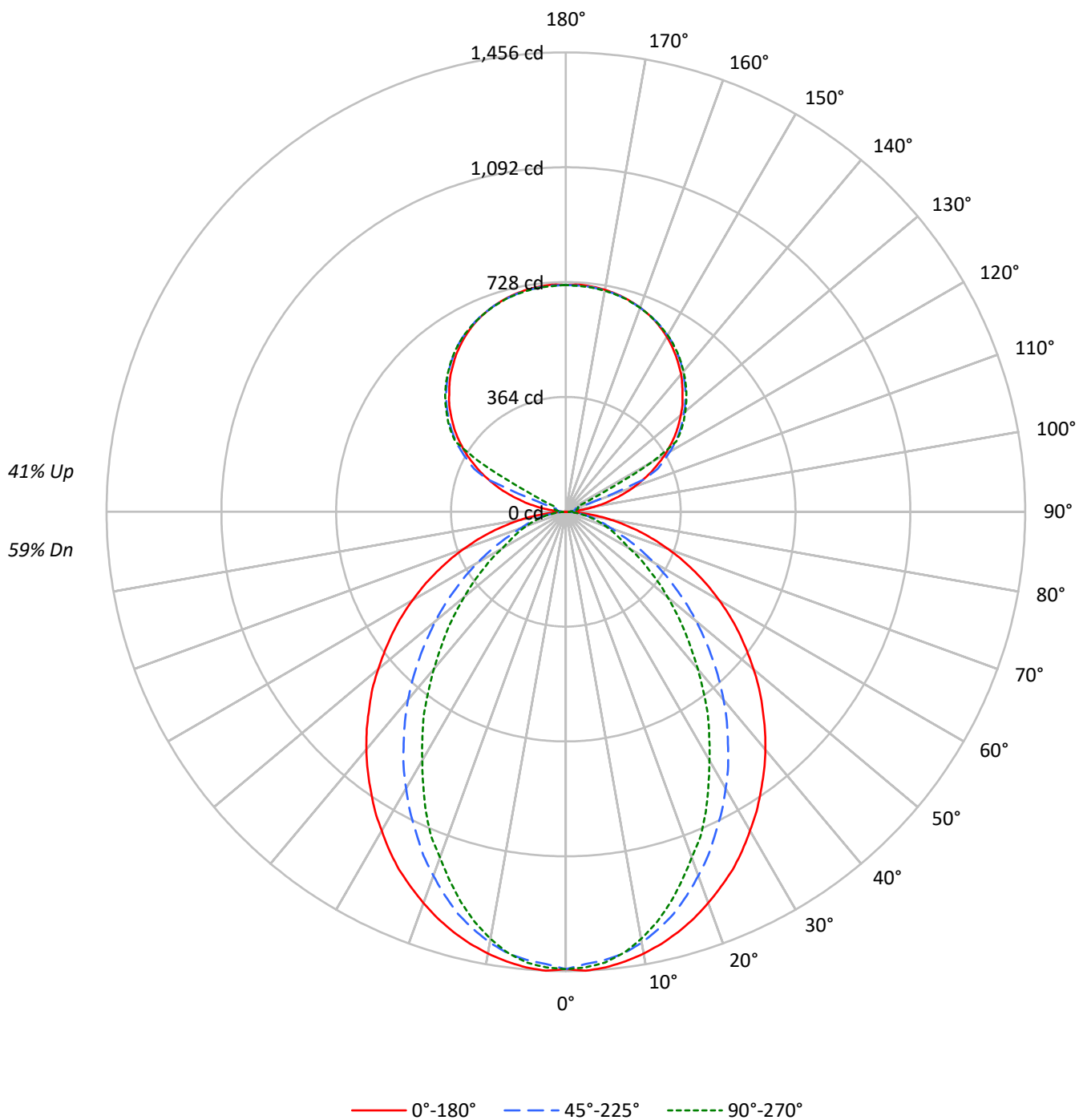
Lumens per Lamp: N/A  
Luminaire Lumens: 5089.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 62.2  
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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 76 | 76 | 76 | 64 | 64 | 64 |
| 1   | 100 | 96  | 92  | 89  | 93  | 90  | 87  | 84  | 78 | 76 | 74 | 67 | 66 | 64 | 57 | 56 | 55 |
| 2   | 92  | 85  | 79  | 74  | 85  | 79  | 74  | 70  | 69 | 65 | 62 | 60 | 57 | 54 | 51 | 49 | 47 |
| 3   | 84  | 75  | 68  | 62  | 78  | 70  | 64  | 59  | 62 | 57 | 53 | 53 | 50 | 47 | 46 | 43 | 41 |
| 4   | 77  | 67  | 59  | 53  | 72  | 63  | 56  | 50  | 55 | 50 | 45 | 48 | 44 | 41 | 41 | 38 | 36 |
| 5   | 71  | 60  | 52  | 46  | 66  | 56  | 49  | 44  | 50 | 44 | 40 | 43 | 39 | 36 | 38 | 34 | 32 |
| 6   | 66  | 54  | 46  | 40  | 61  | 51  | 44  | 38  | 45 | 39 | 35 | 39 | 35 | 31 | 34 | 31 | 28 |
| 7   | 61  | 49  | 41  | 36  | 57  | 46  | 39  | 34  | 41 | 35 | 31 | 36 | 32 | 28 | 32 | 28 | 25 |
| 8   | 57  | 45  | 37  | 32  | 53  | 42  | 35  | 30  | 38 | 32 | 28 | 33 | 29 | 25 | 29 | 25 | 23 |
| 9   | 53  | 41  | 33  | 28  | 50  | 39  | 32  | 27  | 35 | 29 | 25 | 31 | 26 | 23 | 27 | 23 | 21 |
| 10  | 50  | 38  | 30  | 26  | 46  | 36  | 29  | 25  | 32 | 27 | 23 | 28 | 24 | 21 | 25 | 22 | 19 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 22945 | 22945 | 22945 |
| 5°  | 22982 | 21828 | 21666 |
| 10° | 22755 | 20703 | 20020 |
| 15° | 22442 | 19374 | 18143 |
| 20° | 22028 | 17863 | 16179 |
| 25° | 21605 | 16312 | 14383 |
| 30° | 21034 | 14804 | 12420 |
| 35° | 20477 | 13280 | 10736 |
| 40° | 19911 | 11786 | 9001  |
| 45° | 19252 | 10242 | 7487  |
| 50° | 18569 | 8753  | 6096  |
| 55° | 17861 | 7265  | 4840  |
| 60° | 17035 | 5811  | 3662  |
| 65° | 16086 | 4429  | 2976  |
| 70° | 14941 | 3214  | 2367  |
| 75° | 13504 | 2450  | 1807  |
| 80° | 11417 | 1660  | 1213  |
| 85° | 7967  | 759   | 586   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 19252 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.8  | 2.7       |
| 10°-20°   | 372.9  | 7.3       |
| 20°-30°   | 523.6  | 10.3      |
| 30°-40°   | 570.7  | 11.2      |
| 40°-50°   | 524.5  | 10.3      |
| 50°-60°   | 412.0  | 8.1       |
| 60°-70°   | 268.1  | 5.3       |
| 70°-80°   | 138.0  | 2.7       |
| 80°-90°   | 36.5   | 0.7       |
| 90°-100°  | 23.7   | 0.5       |
| 100°-110° | 88.3   | 1.7       |
| 110°-120° | 234.3  | 4.6       |
| 120°-130° | 388.6  | 7.6       |
| 130°-140° | 412.7  | 8.1       |
| 140°-150° | 383.6  | 7.5       |
| 150°-160° | 308.4  | 6.1       |
| 160°-170° | 198.7  | 3.9       |
| 170°-180° | 68.4   | 1.3       |
| 0°-30°    | 1032.3 | 20.3      |
| 0°-40°    | 1603.1 | 31.5      |
| 0°-60°    | 2539.6 | 49.9      |
| 0°-90°    | 2982.3 | 58.6      |
| 90°-120°  | 346.3  | 6.8       |
| 90°-150°  | 1531.2 | 30.1      |
| 90°-180°  | 2107.0 | 41.4      |
| 0°-180°   | 5089.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1450 | 1450  | 1450 | 1450  | 1450 |      |
| 5°   | 1450 | 1443  | 1426 | 1438  | 1434 | 137  |
| 15°  | 1379 | 1364  | 1320 | 1295  | 1282 | 388  |
| 25°  | 1251 | 1209  | 1123 | 1069  | 1049 | 576  |
| 35°  | 1078 | 1011  | 896  | 813   | 784  | 675  |
| 45°  | 882  | 794   | 656  | 563   | 531  | 681  |
| 55°  | 670  | 568   | 426  | 348   | 323  | 599  |
| 65°  | 452  | 346   | 228  | 184   | 180  | 449  |
| 75°  | 241  | 150   | 105  | 96    | 94   | 255  |
| 85°  | 56   | 29    | 25   | 25    | 25   | 65   |
| 90°  | 0    | 6     | 10   | 13    | 14   | 5    |
| 95°  | 34   | 17    | 20   | 23    | 22   | 40   |
| 105° | 158  | 174   | 32   | 37    | 40   | 169  |
| 115° | 299  | 308   | 321  | 80    | 43   | 294  |
| 125° | 423  | 430   | 439  | 443   | 445  | 377  |
| 135° | 523  | 531   | 536  | 541   | 540  | 404  |
| 145° | 607  | 606   | 615  | 619   | 616  | 380  |
| 155° | 668  | 664   | 670  | 673   | 669  | 308  |
| 165° | 704  | 701   | 702  | 706   | 702  | 199  |
| 175° | 720  | 716   | 718  | 721   | 716  | 69   |
| 180° | 719  | 719   | 719  | 719   | 719  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1449.5 | 1449.5 | 1449.5 | 1449.5 | 1449.5 |
| 2.5°   | 1456.0 | 1449.5 | 1435.0 | 1448.1 | 1445.5 |
| 5°     | 1449.5 | 1442.9 | 1425.8 | 1437.7 | 1433.7 |
| 7.5°   | 1437.7 | 1429.8 | 1411.4 | 1416.7 | 1410.1 |
| 10°    | 1421.9 | 1412.7 | 1386.5 | 1382.6 | 1374.7 |
| 12.5°  | 1402.2 | 1390.4 | 1355.0 | 1347.1 | 1332.7 |
| 15°    | 1378.6 | 1364.2 | 1319.6 | 1294.7 | 1281.6 |
| 17.5°  | 1351.1 | 1330.1 | 1275.0 | 1246.1 | 1225.2 |
| 20°    | 1319.6 | 1293.4 | 1227.8 | 1195.0 | 1166.1 |
| 22.5°  | 1285.5 | 1255.3 | 1179.2 | 1134.6 | 1115.0 |
| 25°    | 1251.4 | 1209.4 | 1122.8 | 1069.1 | 1049.4 |
| 27.5°  | 1210.7 | 1166.1 | 1070.4 | 1008.7 | 978.5  |
| 30°    | 1167.4 | 1117.6 | 1012.7 | 945.8  | 910.3  |
| 32.5°  | 1125.5 | 1065.1 | 957.6  | 878.9  | 846.1  |
| 35°    | 1078.2 | 1011.3 | 895.9  | 813.3  | 784.4  |
| 37.5°  | 1032.3 | 960.2  | 838.2  | 747.7  | 714.9  |
| 40°    | 983.8  | 905.1  | 777.9  | 684.7  | 650.6  |
| 42.5°  | 934.0  | 850.0  | 717.5  | 620.4  | 587.7  |
| 45°    | 881.5  | 793.6  | 655.9  | 562.7  | 531.2  |
| 47.5°  | 831.6  | 738.5  | 596.8  | 503.7  | 474.8  |
| 50°    | 776.5  | 683.4  | 539.1  | 448.6  | 421.1  |
| 52.5°  | 722.8  | 624.4  | 484.0  | 397.5  | 372.5  |
| 55°    | 670.3  | 568.0  | 426.3  | 347.6  | 322.7  |
| 57.5°  | 616.5  | 511.6  | 375.2  | 301.7  | 280.7  |
| 60°    | 561.4  | 456.5  | 321.4  | 254.5  | 233.5  |
| 62.5°  | 507.6  | 402.7  | 275.5  | 212.5  | 202.0  |
| 65°    | 452.5  | 346.3  | 228.2  | 183.6  | 179.7  |
| 67.5°  | 400.1  | 293.8  | 183.6  | 161.3  | 157.4  |
| 70°    | 345.0  | 242.7  | 152.2  | 139.0  | 133.8  |
| 72.5°  | 292.5  | 195.4  | 127.2  | 116.7  | 114.1  |
| 75°    | 241.4  | 149.5  | 104.9  | 95.8   | 94.4   |
| 77.5°  | 190.2  | 106.2  | 82.6   | 77.4   | 74.8   |
| 80°    | 143.0  | 76.1   | 63.0   | 57.7   | 57.7   |
| 82.5°  | 99.7   | 51.2   | 43.3   | 40.7   | 40.7   |
| 85°    | 56.4   | 28.9   | 24.9   | 24.9   | 24.9   |
| 87.5°  | 21.0   | 10.5   | 10.5   | 9.2    | 9.2    |
| 90°    | 0.5    | 6.2    | 10.4   | 13.0   | 14.0   |
| 92.5°  | 13.0   | 10.9   | 12.5   | 13.5   | 14.0   |
| 95°    | 33.8   | 16.6   | 20.3   | 22.9   | 22.4   |
| 97.5°  | 60.8   | 18.2   | 26.5   | 28.1   | 28.6   |
| 100°   | 92.0   | 20.8   | 29.6   | 33.8   | 34.8   |
| 102.5° | 126.4  | 125.3  | 30.7   | 36.4   | 38.0   |
| 105°   | 158.1  | 173.7  | 31.7   | 37.4   | 39.5   |
| 107.5° | 195.0  | 208.0  | 32.8   | 38.5   | 40.6   |
| 110°   | 230.4  | 241.3  | 91.0   | 39.0   | 41.1   |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 263.6 | 273.0 | 264.2 | 40.0  | 41.6  |
| 115°   | 299.0 | 307.8 | 320.8 | 80.1  | 42.6  |
| 117.5° | 329.7 | 340.1 | 348.9 | 274.6 | 138.3 |
| 120°   | 364.0 | 371.8 | 381.1 | 387.4 | 317.2 |
| 122.5° | 393.1 | 401.4 | 411.8 | 414.9 | 415.5 |
| 125°   | 422.7 | 429.5 | 439.4 | 443.0 | 444.6 |
| 127.5° | 449.8 | 457.1 | 464.9 | 470.1 | 470.6 |
| 130°   | 475.3 | 483.6 | 489.3 | 495.0 | 494.5 |
| 132.5° | 501.3 | 508.0 | 513.7 | 518.4 | 517.9 |
| 135°   | 523.1 | 531.4 | 536.1 | 541.3 | 540.3 |
| 137.5° | 546.0 | 552.2 | 557.4 | 562.6 | 561.1 |
| 140°   | 568.3 | 572.5 | 578.2 | 582.9 | 580.3 |
| 142.5° | 587.1 | 590.7 | 597.5 | 601.6 | 599.0 |
| 145°   | 606.8 | 606.3 | 615.1 | 618.8 | 616.2 |
| 147.5° | 624.0 | 622.4 | 631.3 | 633.9 | 631.8 |
| 150°   | 640.6 | 637.0 | 645.3 | 648.4 | 645.8 |
| 152.5° | 654.7 | 650.5 | 658.3 | 661.4 | 657.8 |
| 155°   | 668.2 | 663.5 | 669.7 | 672.9 | 668.7 |
| 157.5° | 679.1 | 674.9 | 679.6 | 683.3 | 679.1 |
| 160°   | 688.5 | 685.3 | 688.5 | 691.6 | 687.9 |
| 162.5° | 696.8 | 693.7 | 696.3 | 699.9 | 695.2 |
| 165°   | 704.1 | 700.9 | 702.5 | 706.1 | 702.5 |
| 167.5° | 709.8 | 706.7 | 708.2 | 711.9 | 707.2 |
| 170°   | 714.5 | 711.3 | 712.4 | 716.0 | 711.3 |
| 172.5° | 717.6 | 714.5 | 715.5 | 719.1 | 714.5 |
| 175°   | 720.2 | 716.5 | 717.6 | 721.2 | 716.0 |
| 177.5° | 721.2 | 717.6 | 718.1 | 721.7 | 717.1 |
| 180°   | 718.6 | 718.6 | 718.6 | 718.6 | 718.6 |

(END OF REPORT)