

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: P1010522

Luminaire Tested: S123DIP-B1165D585UB2750-4F0-XX-W2A-D\_4000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1010522  
REPORT IS A COMBINATION OF REPORTS P989516 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1165D585UB2750-4F0-XX-W2A-D\_4000K  
Description: Define 3 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

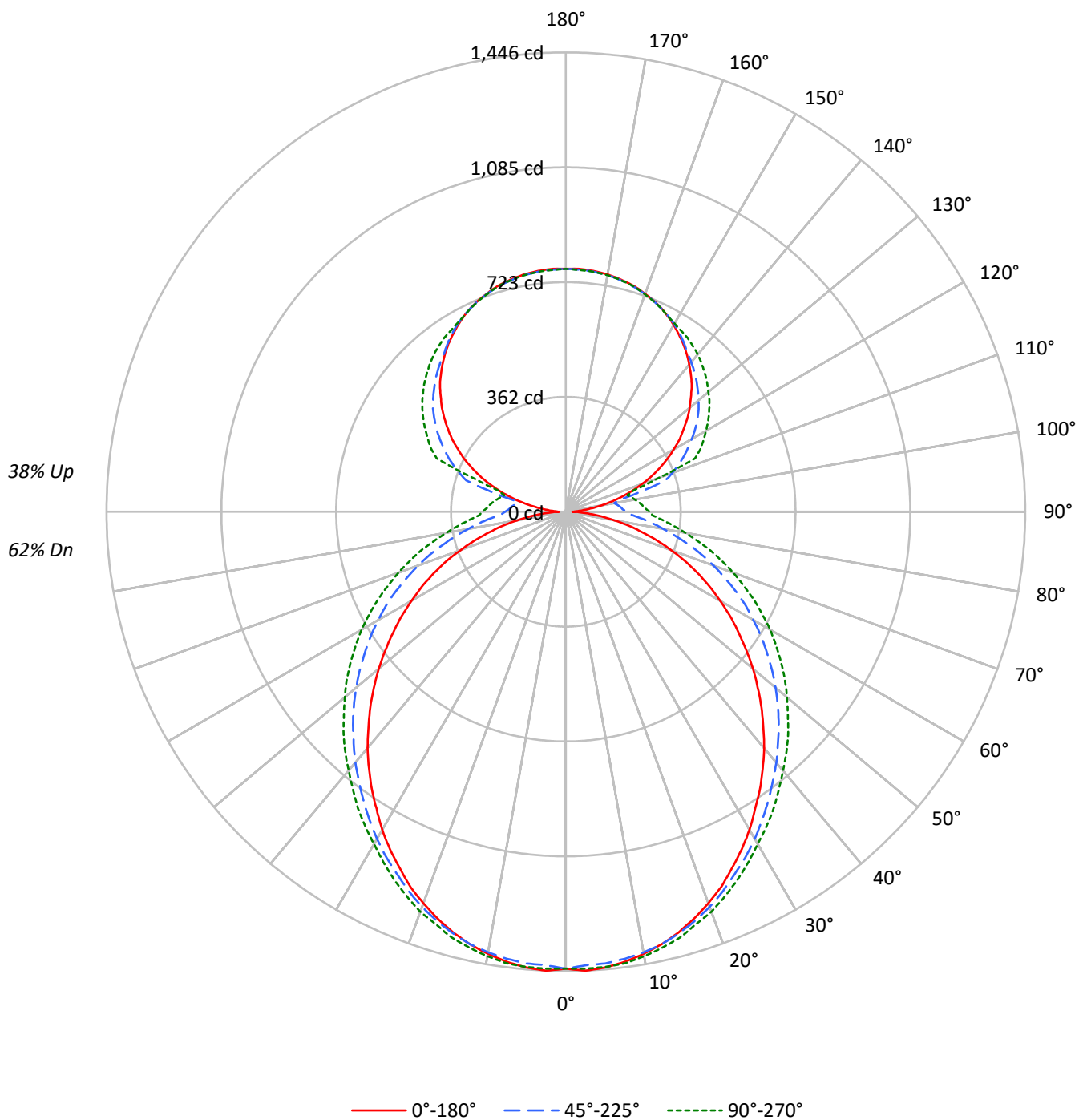
Lumens per Lamp: N/A  
Luminaire Lumens: 7166.0 lumens  
Efficiency: N/A  
Efficacy: 93.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 76.7  
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   | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 90 | 90 | 90 | 78 | 78 | 78 | 67 | 67 | 67 |
| 1   | 99  | 94  | 90  | 86  | 93  | 88  | 84  | 81  | 77 | 74 | 71 | 67 | 64 | 62 | 57 | 56 | 54 |
| 2   | 90  | 82  | 75  | 69  | 84  | 76  | 70  | 65  | 67 | 62 | 58 | 58 | 54 | 51 | 50 | 47 | 44 |
| 3   | 82  | 71  | 63  | 57  | 76  | 67  | 60  | 54  | 58 | 53 | 48 | 51 | 46 | 43 | 44 | 40 | 37 |
| 4   | 75  | 63  | 54  | 48  | 69  | 59  | 51  | 45  | 52 | 46 | 41 | 45 | 40 | 36 | 39 | 35 | 32 |
| 5   | 68  | 56  | 47  | 41  | 64  | 53  | 45  | 39  | 46 | 40 | 35 | 40 | 35 | 31 | 35 | 31 | 28 |
| 6   | 63  | 50  | 42  | 35  | 59  | 47  | 39  | 34  | 42 | 35 | 30 | 36 | 31 | 27 | 31 | 27 | 24 |
| 7   | 58  | 45  | 37  | 31  | 54  | 43  | 35  | 30  | 38 | 31 | 27 | 33 | 28 | 24 | 29 | 25 | 21 |
| 8   | 54  | 41  | 33  | 27  | 50  | 39  | 31  | 26  | 34 | 28 | 24 | 30 | 25 | 21 | 26 | 22 | 19 |
| 9   | 50  | 37  | 30  | 24  | 47  | 35  | 28  | 23  | 31 | 25 | 21 | 28 | 23 | 19 | 24 | 20 | 17 |
| 10  | 47  | 34  | 27  | 22  | 44  | 33  | 26  | 21  | 29 | 23 | 19 | 26 | 21 | 17 | 23 | 18 | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15480 | 15480 | 15480 |
| 5°  | 15521 | 15025 | 15013 |
| 10° | 15376 | 14618 | 14506 |
| 15° | 15173 | 14168 | 13969 |
| 20° | 14884 | 13668 | 13393 |
| 25° | 14528 | 13103 | 12795 |
| 30° | 14165 | 12593 | 12195 |
| 35° | 13756 | 12058 | 11706 |
| 40° | 13366 | 11567 | 11190 |
| 45° | 12935 | 11093 | 10764 |
| 50° | 12508 | 10623 | 10303 |
| 55° | 12035 | 10141 | 9878  |
| 60° | 11572 | 9647  | 9442  |
| 65° | 11096 | 9122  | 8934  |
| 70° | 10381 | 8533  | 8408  |
| 75° | 9476  | 7861  | 7866  |
| 80° | 8420  | 7181  | 7248  |
| 85° | 7377  | 6630  | 6805  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12935 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 136.4  | 1.9       |
| 10°-20°   | 388.9  | 5.4       |
| 20°-30°   | 581.6  | 8.1       |
| 30°-40°   | 694.4  | 9.7       |
| 40°-50°   | 726.5  | 10.1      |
| 50°-60°   | 681.7  | 9.5       |
| 60°-70°   | 569.4  | 7.9       |
| 70°-80°   | 407.2  | 5.7       |
| 80°-90°   | 243.8  | 3.4       |
| 90°-100°  | 179.2  | 2.5       |
| 100°-110° | 242.3  | 3.4       |
| 110°-120° | 394.2  | 5.5       |
| 120°-130° | 448.3  | 6.3       |
| 130°-140° | 452.4  | 6.3       |
| 140°-150° | 409.2  | 5.7       |
| 150°-160° | 326.9  | 4.6       |
| 160°-170° | 210.9  | 2.9       |
| 170°-180° | 72.7   | 1.0       |
| 0°-30°    | 1106.9 | 15.4      |
| 0°-40°    | 1801.2 | 25.1      |
| 0°-60°    | 3209.4 | 44.8      |
| 0°-90°    | 4429.8 | 61.8      |
| 90°-120°  | 815.8  | 11.4      |
| 90°-150°  | 2125.7 | 29.7      |
| 90°-180°  | 2736.0 | 38.2      |
| 0°-180°   | 7166.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1438 | 1438  | 1438 | 1438  | 1438 |      |
| 5°   | 1440 | 1436  | 1427 | 1440  | 1438 | 137  |
| 15°  | 1371 | 1375  | 1374 | 1390  | 1388 | 386  |
| 25°  | 1238 | 1253  | 1258 | 1278  | 1278 | 570  |
| 35°  | 1065 | 1090  | 1111 | 1134  | 1140 | 666  |
| 45°  | 871  | 909   | 948  | 978   | 990  | 672  |
| 55°  | 664  | 716   | 772  | 815   | 827  | 595  |
| 65°  | 459  | 520   | 589  | 636   | 652  | 454  |
| 75°  | 249  | 323   | 401  | 453   | 472  | 266  |
| 85°  | 77   | 155   | 238  | 291   | 307  | 79   |
| 90°  | 21   | 103   | 191  | 246   | 263  | 17   |
| 95°  | 52   | 90    | 173  | 225   | 241  | 55   |
| 105° | 182  | 226   | 242  | 185   | 200  | 192  |
| 115° | 325  | 348   | 409  | 452   | 467  | 322  |
| 125° | 452  | 457   | 505  | 539   | 551  | 405  |
| 135° | 560  | 562   | 582  | 612   | 618  | 432  |
| 145° | 645  | 647   | 648  | 662   | 668  | 403  |
| 155° | 708  | 707   | 708  | 711   | 707  | 326  |
| 165° | 747  | 746   | 745  | 749   | 746  | 211  |
| 175° | 765  | 762   | 762  | 766   | 762  | 73   |
| 180° | 765  | 765   | 765  | 765   | 765  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1438.1 | 1438.1 | 1438.1 | 1438.1 | 1438.1 |
| 2.5°   | 1445.9 | 1441.2 | 1428.7 | 1441.2 | 1439.6 |
| 5°     | 1439.6 | 1436.5 | 1427.1 | 1439.6 | 1438.1 |
| 7.5°   | 1428.7 | 1428.7 | 1419.3 | 1434.9 | 1433.4 |
| 10°    | 1413.0 | 1416.1 | 1408.3 | 1424.0 | 1420.8 |
| 12.5°  | 1394.2 | 1398.9 | 1394.2 | 1408.3 | 1405.2 |
| 15°    | 1370.7 | 1375.4 | 1373.8 | 1389.5 | 1387.9 |
| 17.5°  | 1342.5 | 1351.9 | 1350.3 | 1364.4 | 1361.3 |
| 20°    | 1311.2 | 1320.6 | 1323.7 | 1337.8 | 1339.4 |
| 22.5°  | 1278.3 | 1287.7 | 1292.4 | 1311.2 | 1309.6 |
| 25°    | 1237.5 | 1253.2 | 1257.9 | 1278.3 | 1278.3 |
| 27.5°  | 1198.4 | 1215.6 | 1225.0 | 1242.2 | 1243.8 |
| 30°    | 1156.1 | 1176.5 | 1189.0 | 1207.8 | 1207.8 |
| 32.5°  | 1109.1 | 1132.6 | 1149.8 | 1170.2 | 1174.9 |
| 35°    | 1065.2 | 1090.3 | 1110.7 | 1134.2 | 1140.4 |
| 37.5°  | 1018.2 | 1046.4 | 1069.9 | 1096.6 | 1101.3 |
| 40°    | 971.2  | 999.4  | 1030.8 | 1057.4 | 1063.7 |
| 42.5°  | 919.5  | 955.6  | 988.5  | 1018.2 | 1027.6 |
| 45°    | 871.0  | 908.6  | 947.7  | 977.5  | 990.0  |
| 47.5°  | 819.3  | 861.6  | 905.4  | 938.3  | 947.7  |
| 50°    | 769.2  | 813.0  | 861.6  | 897.6  | 908.6  |
| 52.5°  | 715.9  | 762.9  | 817.7  | 855.3  | 869.4  |
| 55°    | 664.2  | 715.9  | 772.3  | 814.6  | 827.1  |
| 57.5°  | 614.1  | 667.3  | 728.4  | 770.7  | 784.8  |
| 60°    | 560.8  | 617.2  | 681.4  | 725.3  | 742.5  |
| 62.5°  | 510.7  | 568.6  | 637.6  | 681.4  | 697.1  |
| 65°    | 459.0  | 520.1  | 589.0  | 636.0  | 651.7  |
| 67.5°  | 407.3  | 471.5  | 540.4  | 592.1  | 604.7  |
| 70°    | 352.5  | 419.8  | 495.0  | 545.1  | 560.8  |
| 72.5°  | 302.3  | 369.7  | 448.0  | 499.7  | 515.4  |
| 75°    | 249.1  | 322.7  | 401.0  | 452.7  | 471.5  |
| 77.5°  | 203.6  | 277.3  | 355.6  | 410.4  | 424.5  |
| 80°    | 155.1  | 231.8  | 313.3  | 366.6  | 382.2  |
| 82.5°  | 112.8  | 191.1  | 274.1  | 327.4  | 343.1  |
| 85°    | 76.8   | 155.1  | 238.1  | 291.4  | 307.0  |
| 87.5°  | 47.0   | 125.3  | 205.2  | 258.5  | 274.1  |
| 90°    | 21.0   | 103.3  | 190.6  | 246.2  | 262.9  |
| 92.5°  | 31.9   | 95.9   | 179.3  | 234.9  | 249.6  |
| 95°    | 51.9   | 89.7   | 172.7  | 225.2  | 240.9  |
| 97.5°  | 78.8   | 119.3  | 163.9  | 215.4  | 231.6  |
| 100°   | 110.1  | 171.6  | 155.0  | 205.0  | 221.3  |
| 102.5° | 146.0  | 197.3  | 168.9  | 194.0  | 210.8  |
| 105°   | 181.8  | 225.7  | 241.9  | 185.3  | 200.4  |
| 107.5° | 218.4  | 256.4  | 329.1  | 283.9  | 223.6  |
| 110°   | 254.9  | 287.6  | 356.5  | 378.5  | 309.7  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 291.2 | 317.1 | 382.9 | 427.2 | 440.1 |
| 115°   | 325.4 | 347.6 | 409.1 | 452.4 | 467.3 |
| 117.5° | 360.6 | 377.2 | 433.3 | 475.4 | 488.6 |
| 120°   | 391.5 | 404.4 | 457.8 | 498.4 | 509.4 |
| 122.5° | 424.5 | 431.6 | 482.4 | 519.7 | 531.2 |
| 125°   | 452.4 | 457.0 | 504.6 | 538.7 | 550.8 |
| 127.5° | 482.0 | 484.9 | 527.0 | 560.0 | 569.8 |
| 130°   | 509.2 | 512.2 | 545.9 | 577.8 | 586.1 |
| 132.5° | 533.8 | 538.3 | 563.5 | 594.0 | 603.3 |
| 135°   | 560.5 | 562.4 | 581.9 | 611.8 | 617.9 |
| 137.5° | 583.2 | 586.3 | 598.3 | 626.2 | 632.9 |
| 140°   | 604.4 | 607.8 | 614.3 | 640.0 | 646.7 |
| 142.5° | 625.5 | 627.3 | 629.0 | 651.1 | 657.2 |
| 145°   | 644.8 | 647.2 | 648.3 | 661.9 | 668.2 |
| 147.5° | 661.9 | 664.8 | 665.9 | 671.7 | 675.2 |
| 150°   | 679.0 | 680.7 | 681.8 | 683.0 | 684.3 |
| 152.5° | 694.3 | 694.9 | 695.5 | 697.7 | 694.9 |
| 155°   | 708.5 | 707.4 | 708.0 | 710.8 | 707.4 |
| 157.5° | 719.9 | 719.9 | 719.3 | 722.7 | 718.2 |
| 160°   | 730.1 | 729.5 | 729.0 | 732.4 | 728.4 |
| 162.5° | 739.8 | 738.1 | 737.5 | 741.5 | 738.1 |
| 165°   | 747.2 | 745.5 | 744.9 | 749.4 | 745.5 |
| 167.5° | 753.4 | 751.1 | 751.1 | 755.7 | 751.1 |
| 170°   | 758.5 | 756.2 | 756.2 | 760.8 | 756.2 |
| 172.5° | 761.9 | 759.1 | 759.7 | 764.2 | 759.1 |
| 175°   | 764.8 | 761.9 | 762.5 | 766.5 | 761.9 |
| 177.5° | 765.9 | 763.1 | 763.6 | 768.2 | 762.5 |
| 180°   | 764.8 | 764.8 | 764.8 | 764.8 | 764.8 |

(END OF REPORT)