

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: P1011442

Luminaire Tested: S123DIP-B1165D805UB40-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011442  
REPORT IS A COMBINATION OF REPORTS P989604 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1165D805UB40-4F0-XX-W2A-D  
Description: Define 3 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

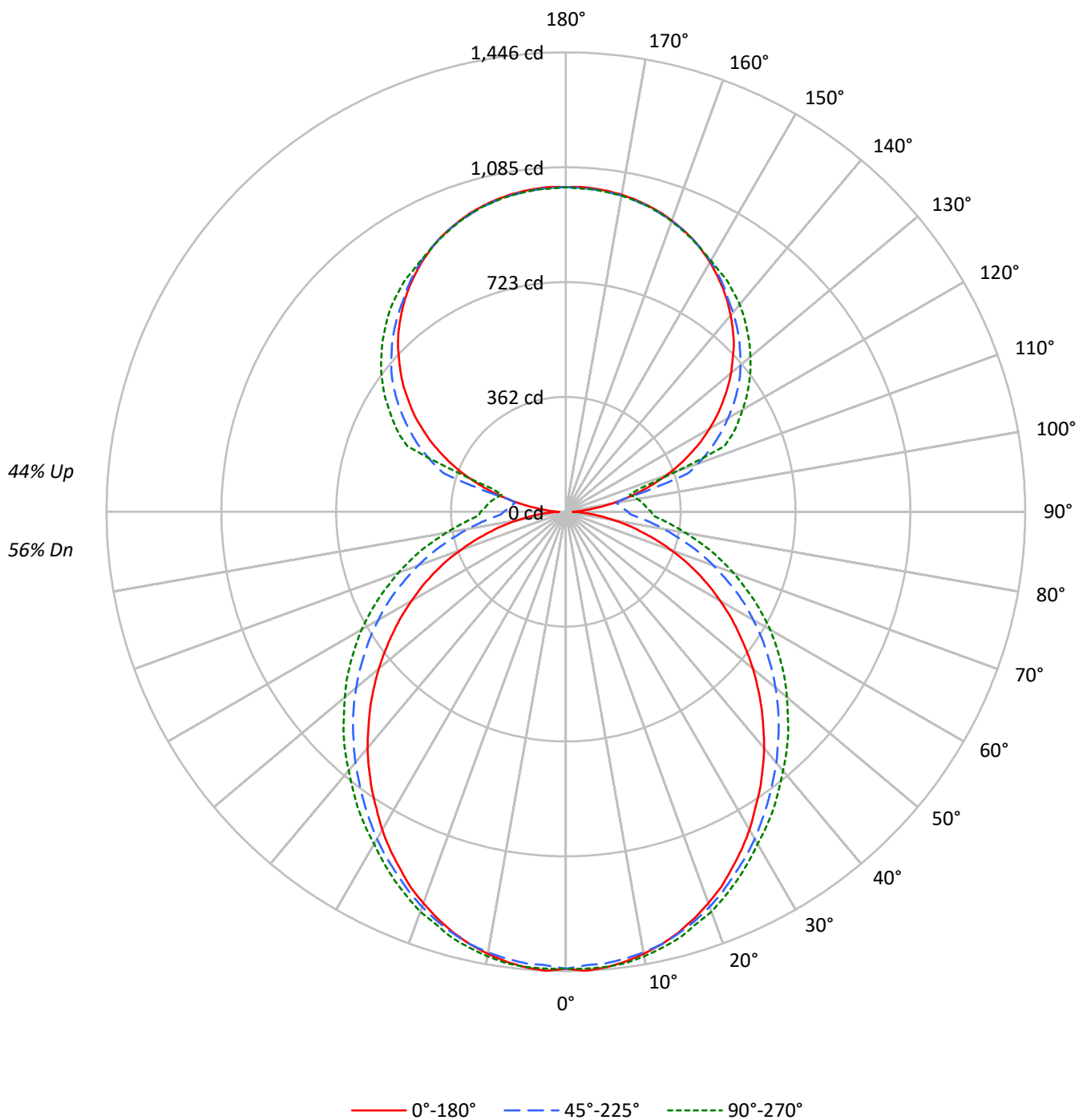
Lumens per Lamp: N/A  
Luminaire Lumens: 7950.0 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
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 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 73 | 73 | 73 | 61 | 61 | 61 |
| 1   | 98  | 93  | 89  | 85  | 91  | 86  | 83  | 79  | 74 | 71 | 69 | 63 | 61 | 59 | 52 | 51 | 50 |
| 2   | 89  | 81  | 74  | 68  | 82  | 75  | 69  | 64  | 64 | 60 | 56 | 55 | 51 | 48 | 45 | 43 | 41 |
| 3   | 81  | 70  | 63  | 56  | 74  | 66  | 59  | 53  | 56 | 51 | 47 | 48 | 44 | 40 | 40 | 37 | 34 |
| 4   | 74  | 62  | 54  | 47  | 68  | 58  | 50  | 45  | 50 | 44 | 39 | 42 | 38 | 34 | 35 | 32 | 29 |
| 5   | 67  | 55  | 47  | 40  | 62  | 52  | 44  | 38  | 44 | 38 | 34 | 38 | 33 | 29 | 32 | 28 | 25 |
| 6   | 62  | 49  | 41  | 35  | 57  | 46  | 39  | 33  | 40 | 34 | 29 | 34 | 29 | 26 | 29 | 25 | 22 |
| 7   | 57  | 45  | 36  | 31  | 53  | 42  | 34  | 29  | 36 | 30 | 26 | 31 | 26 | 23 | 26 | 22 | 20 |
| 8   | 53  | 40  | 32  | 27  | 49  | 38  | 31  | 26  | 33 | 27 | 23 | 28 | 24 | 20 | 24 | 20 | 17 |
| 9   | 50  | 37  | 29  | 24  | 46  | 35  | 28  | 23  | 30 | 24 | 20 | 26 | 21 | 18 | 22 | 18 | 16 |
| 10  | 46  | 34  | 26  | 21  | 43  | 32  | 25  | 20  | 28 | 22 | 18 | 24 | 20 | 16 | 21 | 17 | 14 |

**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  | 1.7       |
| 10°-20°   | 388.9  | 4.9       |
| 20°-30°   | 581.6  | 7.3       |
| 30°-40°   | 694.4  | 8.7       |
| 40°-50°   | 726.5  | 9.1       |
| 50°-60°   | 681.7  | 8.6       |
| 60°-70°   | 569.4  | 7.2       |
| 70°-80°   | 407.2  | 5.1       |
| 80°-90°   | 244.3  | 3.1       |
| 90°-100°  | 188.3  | 2.4       |
| 100°-110° | 286.1  | 3.6       |
| 110°-120° | 501.6  | 6.3       |
| 120°-130° | 584.6  | 7.4       |
| 130°-140° | 598.1  | 7.5       |
| 140°-150° | 545.4  | 6.9       |
| 150°-160° | 436.7  | 5.5       |
| 160°-170° | 281.8  | 3.5       |
| 170°-180° | 97.1   | 1.2       |
| 0°-30°    | 1106.9 | 13.9      |
| 0°-40°    | 1801.2 | 22.7      |
| 0°-60°    | 3209.4 | 40.4      |
| 0°-90°    | 4430.4 | 55.7      |
| 90°-120°  | 976.0  | 12.3      |
| 90°-150°  | 2704.0 | 34.0      |
| 90°-180°  | 3520.0 | 44.3      |
| 0°-180°   | 7950.0 | 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   | 106   | 195  | 252   | 269  | 17   |
| 95°  | 64   | 94    | 179  | 232   | 248  | 69   |
| 105° | 239  | 285   | 284  | 193   | 209  | 252  |
| 115° | 432  | 456   | 519  | 564   | 580  | 427  |
| 125° | 603  | 609   | 657  | 692   | 704  | 539  |
| 135° | 748  | 751   | 771  | 802   | 807  | 576  |
| 145° | 861  | 865   | 866  | 880   | 886  | 539  |
| 155° | 947  | 945   | 946  | 950   | 945  | 436  |
| 165° | 998  | 996   | 995  | 1001  | 996  | 282  |
| 175° | 1022 | 1018  | 1019 | 1024  | 1018 | 97   |
| 180° | 1022 | 1022  | 1022 | 1022  | 1022 |      |

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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°    | 21.2   | 105.5  | 195.2  | 251.6  | 268.7  |
| 92.5°  | 36.3   | 99.1   | 184.2  | 241.3  | 256.1  |
| 95°    | 63.5   | 93.5   | 178.6  | 232.4  | 248.1  |
| 97.5°  | 100.0  | 135.1  | 170.0  | 223.1  | 239.4  |
| 100°   | 142.4  | 207.7  | 161.4  | 212.8  | 229.3  |
| 102.5° | 190.9  | 244.7  | 183.1  | 201.8  | 219.0  |
| 105°   | 238.7  | 284.7  | 283.7  | 193.3  | 208.8  |
| 107.5° | 288.1  | 327.8  | 403.4  | 328.8  | 243.4  |
| 110°   | 337.3  | 371.6  | 442.7  | 458.3  | 362.3  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 385.9  | 413.1  | 481.1  | 527.0  | 539.6  |
| 115°   | 432.1  | 455.5  | 518.7  | 563.9  | 579.6  |
| 117.5° | 479.2  | 497.1  | 554.1  | 597.8  | 611.2  |
| 120°   | 521.0  | 535.6  | 589.6  | 631.7  | 642.7  |
| 122.5° | 565.0  | 573.4  | 625.1  | 663.3  | 675.0  |
| 125°   | 602.9  | 609.0  | 657.4  | 691.8  | 704.3  |
| 127.5° | 642.4  | 646.8  | 689.8  | 723.4  | 732.9  |
| 130°   | 678.8  | 683.3  | 717.7  | 750.4  | 758.3  |
| 132.5° | 712.1  | 718.2  | 744.0  | 775.2  | 783.9  |
| 135°   | 747.8  | 750.8  | 771.1  | 801.6  | 807.1  |
| 137.5° | 778.2  | 782.7  | 795.2  | 824.0  | 830.3  |
| 140°   | 807.0  | 811.6  | 818.6  | 845.1  | 851.4  |
| 142.5° | 835.1  | 838.1  | 840.3  | 863.0  | 868.5  |
| 145°   | 860.9  | 864.6  | 866.2  | 880.2  | 886.5  |
| 147.5° | 884.4  | 888.2  | 889.7  | 895.9  | 898.4  |
| 150°   | 907.1  | 909.4  | 910.9  | 912.5  | 913.3  |
| 152.5° | 927.6  | 928.4  | 929.2  | 932.2  | 928.4  |
| 155°   | 946.6  | 945.1  | 945.9  | 949.7  | 945.1  |
| 157.5° | 961.8  | 961.8  | 961.0  | 965.6  | 959.5  |
| 160°   | 975.5  | 974.7  | 973.9  | 978.5  | 973.2  |
| 162.5° | 988.4  | 986.1  | 985.3  | 990.6  | 986.1  |
| 165°   | 998.2  | 996.0  | 995.2  | 1001.3 | 996.0  |
| 167.5° | 1006.6 | 1003.6 | 1003.6 | 1009.6 | 1003.6 |
| 170°   | 1013.4 | 1010.4 | 1010.4 | 1016.5 | 1010.4 |
| 172.5° | 1018.0 | 1014.2 | 1014.9 | 1021.0 | 1014.2 |
| 175°   | 1021.8 | 1018.0 | 1018.7 | 1024.0 | 1018.0 |
| 177.5° | 1023.3 | 1019.5 | 1020.3 | 1026.3 | 1018.7 |
| 180°   | 1021.8 | 1021.8 | 1021.8 | 1021.8 | 1021.8 |

(END OF REPORT)