

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: P1011420

Luminaire Tested: S123DIP-B1165D805UB27-4F0-XX-W2A-D4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011420  
REPORT IS A COMBINATION OF REPORTS P989564 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1165D805UB27-4F0-XX-W2A-D4  
Description: Define 3 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

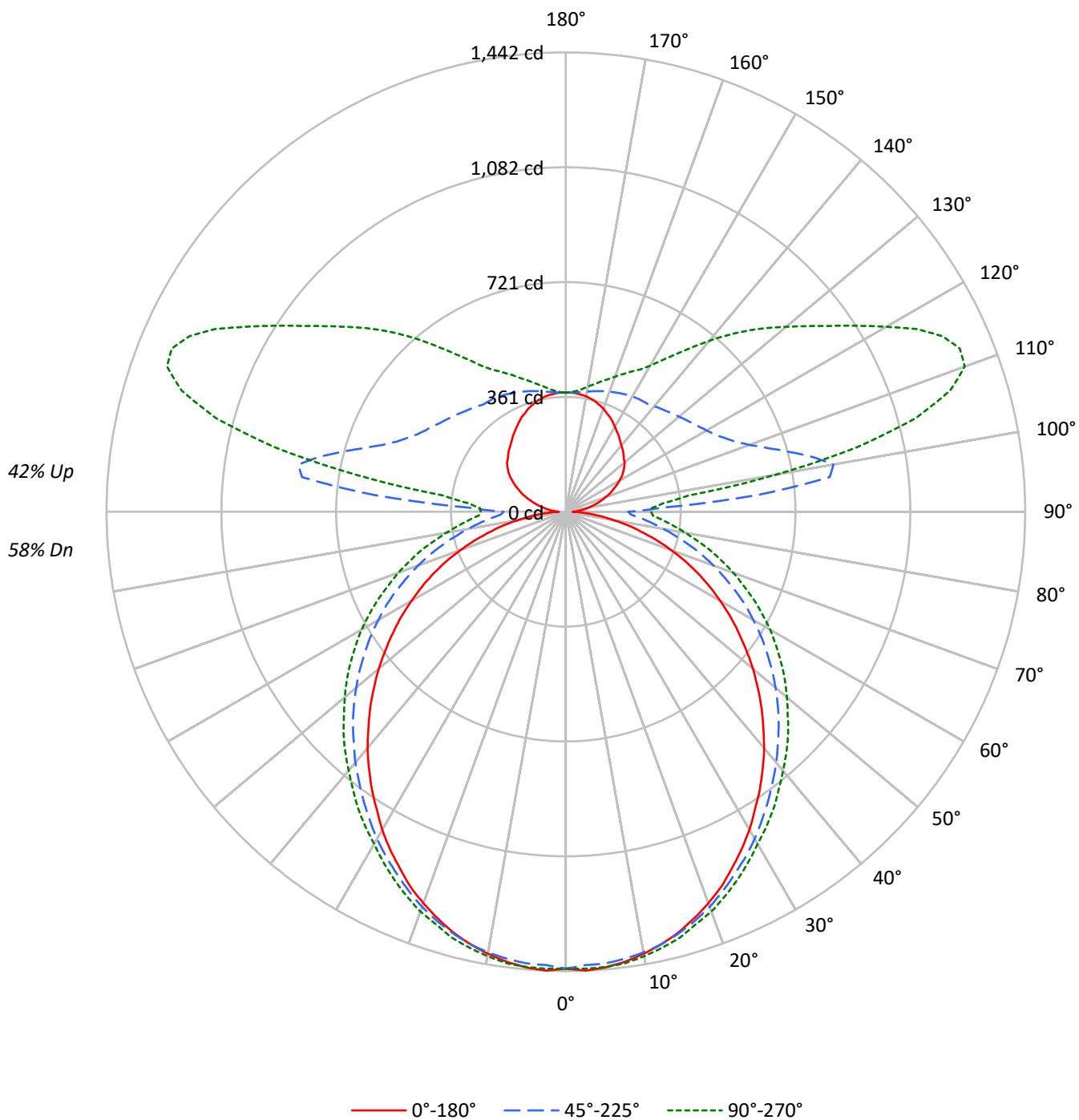
Lumens per Lamp: N/A  
Luminaire Lumens: 7640.6 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

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 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 63 | 63 | 63 |
| 1   | 98  | 93  | 89  | 85  | 91  | 87  | 83  | 80  | 75 | 72 | 70 | 64 | 62 | 60 | 54 | 52 | 51 |
| 2   | 89  | 81  | 74  | 69  | 83  | 75  | 69  | 64  | 65 | 61 | 57 | 56 | 52 | 49 | 47 | 44 | 42 |
| 3   | 81  | 71  | 63  | 57  | 75  | 66  | 59  | 53  | 57 | 52 | 47 | 49 | 45 | 41 | 41 | 38 | 35 |
| 4   | 74  | 62  | 54  | 48  | 68  | 58  | 51  | 45  | 50 | 45 | 40 | 43 | 39 | 35 | 37 | 33 | 30 |
| 5   | 68  | 55  | 47  | 41  | 63  | 52  | 44  | 38  | 45 | 39 | 34 | 39 | 34 | 30 | 33 | 29 | 26 |
| 6   | 62  | 50  | 41  | 35  | 58  | 47  | 39  | 33  | 41 | 34 | 30 | 35 | 30 | 26 | 30 | 26 | 23 |
| 7   | 58  | 45  | 37  | 31  | 53  | 42  | 34  | 29  | 37 | 31 | 26 | 32 | 27 | 23 | 27 | 23 | 20 |
| 8   | 54  | 41  | 33  | 27  | 50  | 38  | 31  | 26  | 33 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 18 |
| 9   | 50  | 37  | 29  | 24  | 46  | 35  | 28  | 23  | 31 | 25 | 21 | 27 | 22 | 18 | 23 | 19 | 16 |
| 10  | 47  | 34  | 27  | 22  | 43  | 32  | 25  | 21  | 28 | 23 | 19 | 25 | 20 | 17 | 21 | 17 | 15 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15434 | 15434 | 15434 |
| 5°  | 15477 | 14982 | 14969 |
| 10° | 15332 | 14576 | 14464 |
| 15° | 15129 | 14128 | 13929 |
| 20° | 14841 | 13628 | 13354 |
| 25° | 14487 | 13066 | 12758 |
| 30° | 14123 | 12556 | 12160 |
| 35° | 13716 | 12022 | 11673 |
| 40° | 13328 | 11534 | 11158 |
| 45° | 12898 | 11061 | 10734 |
| 50° | 12471 | 10593 | 10273 |
| 55° | 12000 | 10112 | 9850  |
| 60° | 11539 | 9621  | 9416  |
| 65° | 11064 | 9096  | 8908  |
| 70° | 10348 | 8509  | 8384  |
| 75° | 9449  | 7839  | 7845  |
| 80° | 8393  | 7161  | 7228  |
| 85° | 7348  | 6611  | 6785  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12898 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 136.0  | 1.8       |
| 10°-20°   | 387.8  | 5.1       |
| 20°-30°   | 579.9  | 7.6       |
| 30°-40°   | 692.3  | 9.1       |
| 40°-50°   | 724.4  | 9.5       |
| 50°-60°   | 679.8  | 8.9       |
| 60°-70°   | 567.8  | 7.4       |
| 70°-80°   | 406.0  | 5.3       |
| 80°-90°   | 243.7  | 3.2       |
| 90°-100°  | 364.3  | 4.8       |
| 100°-110° | 705.5  | 9.2       |
| 110°-120° | 653.7  | 8.6       |
| 120°-130° | 503.7  | 6.6       |
| 130°-140° | 383.1  | 5.0       |
| 140°-150° | 275.6  | 3.6       |
| 150°-160° | 189.5  | 2.5       |
| 160°-170° | 111.3  | 1.5       |
| 170°-180° | 36.2   | 0.5       |
| 0°-30°    | 1103.7 | 14.4      |
| 0°-40°    | 1796.0 | 23.5      |
| 0°-60°    | 3200.1 | 41.9      |
| 0°-90°    | 4417.6 | 57.8      |
| 90°-120°  | 1723.5 | 22.6      |
| 90°-150°  | 2885.9 | 37.8      |
| 90°-180°  | 3223.0 | 42.2      |
| 0°-180°   | 7640.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1434 | 1434  | 1434 | 1434  | 1434 |      |
| 5°   | 1436 | 1432  | 1423 | 1436  | 1434 | 136  |
| 15°  | 1367 | 1371  | 1370 | 1386  | 1384 | 385  |
| 25°  | 1234 | 1250  | 1254 | 1275  | 1275 | 569  |
| 35°  | 1062 | 1087  | 1107 | 1131  | 1137 | 664  |
| 45°  | 868  | 906   | 945  | 975   | 987  | 670  |
| 55°  | 662  | 714   | 770  | 812   | 825  | 593  |
| 65°  | 458  | 519   | 587  | 634   | 650  | 452  |
| 75°  | 248  | 322   | 400  | 451   | 470  | 265  |
| 85°  | 76   | 155   | 237  | 290   | 306  | 79   |
| 90°  | 22   | 106   | 195  | 251   | 267  | 17   |
| 95°  | 43   | 162   | 604  | 334   | 306  | 41   |
| 105° | 100  | 180   | 726  | 1225  | 1138 | 106  |
| 115° | 163  | 220   | 548  | 1141  | 1304 | 162  |
| 125° | 220  | 259   | 484  | 870   | 1017 | 196  |
| 135° | 256  | 303   | 447  | 695   | 803  | 198  |
| 145° | 290  | 330   | 423  | 544   | 604  | 181  |
| 155° | 328  | 354   | 410  | 466   | 485  | 151  |
| 165° | 358  | 368   | 392  | 416   | 423  | 101  |
| 175° | 373  | 374   | 376  | 382   | 381  | 35   |
| 180° | 374  | 374   | 374  | 374   | 374  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1433.9 | 1433.9 | 1433.9 | 1433.9 | 1433.9 |
| 2.5°   | 1441.7 | 1437.0 | 1424.5 | 1437.0 | 1435.5 |
| 5°     | 1435.5 | 1432.3 | 1423.0 | 1435.5 | 1433.9 |
| 7.5°   | 1424.5 | 1424.5 | 1415.1 | 1430.8 | 1429.2 |
| 10°    | 1408.9 | 1412.0 | 1404.2 | 1419.8 | 1416.7 |
| 12.5°  | 1390.2 | 1394.8 | 1390.2 | 1404.2 | 1401.1 |
| 15°    | 1366.7 | 1371.4 | 1369.9 | 1385.5 | 1383.9 |
| 17.5°  | 1338.6 | 1348.0 | 1346.4 | 1360.5 | 1357.4 |
| 20°    | 1307.4 | 1316.7 | 1319.9 | 1333.9 | 1335.5 |
| 22.5°  | 1274.6 | 1283.9 | 1288.6 | 1307.4 | 1305.8 |
| 25°    | 1234.0 | 1249.6 | 1254.3 | 1274.6 | 1274.6 |
| 27.5°  | 1194.9 | 1212.1 | 1221.5 | 1238.6 | 1240.2 |
| 30°    | 1152.7 | 1173.0 | 1185.5 | 1204.3 | 1204.3 |
| 32.5°  | 1105.9 | 1129.3 | 1146.5 | 1166.8 | 1171.5 |
| 35°    | 1062.1 | 1087.1 | 1107.4 | 1130.9 | 1137.1 |
| 37.5°  | 1015.3 | 1043.4 | 1066.8 | 1093.4 | 1098.1 |
| 40°    | 968.4  | 996.5  | 1027.8 | 1054.3 | 1060.6 |
| 42.5°  | 916.9  | 952.8  | 985.6  | 1015.3 | 1024.7 |
| 45°    | 868.5  | 905.9  | 945.0  | 974.7  | 987.2  |
| 47.5°  | 816.9  | 859.1  | 902.8  | 935.6  | 945.0  |
| 50°    | 766.9  | 810.7  | 859.1  | 895.0  | 905.9  |
| 52.5°  | 713.8  | 760.7  | 815.4  | 852.8  | 866.9  |
| 55°    | 662.3  | 713.8  | 770.1  | 812.2  | 824.7  |
| 57.5°  | 612.3  | 665.4  | 726.3  | 768.5  | 782.5  |
| 60°    | 559.2  | 615.4  | 679.5  | 723.2  | 740.4  |
| 62.5°  | 509.2  | 567.0  | 635.7  | 679.5  | 695.1  |
| 65°    | 457.7  | 518.6  | 587.3  | 634.2  | 649.8  |
| 67.5°  | 406.1  | 470.2  | 538.9  | 590.4  | 602.9  |
| 70°    | 351.4  | 418.6  | 493.6  | 543.6  | 559.2  |
| 72.5°  | 301.5  | 368.6  | 446.7  | 498.3  | 513.9  |
| 75°    | 248.4  | 321.8  | 399.9  | 451.4  | 470.2  |
| 77.5°  | 203.1  | 276.5  | 354.6  | 409.2  | 423.3  |
| 80°    | 154.6  | 231.2  | 312.4  | 365.5  | 381.1  |
| 82.5°  | 112.5  | 190.6  | 273.3  | 326.5  | 342.1  |
| 85°    | 76.5   | 154.6  | 237.4  | 290.5  | 306.1  |
| 87.5°  | 46.9   | 125.0  | 204.6  | 257.7  | 273.3  |
| 90°    | 21.8   | 105.8  | 195.4  | 250.8  | 267.2  |
| 92.5°  | 30.1   | 131.3  | 304.8  | 263.6  | 269.7  |
| 95°    | 42.9   | 161.8  | 603.5  | 334.0  | 306.5  |
| 97.5°  | 56.5   | 167.6  | 835.7  | 521.4  | 387.9  |
| 100°   | 70.1   | 169.6  | 852.8  | 870.0  | 671.4  |
| 102.5° | 84.4   | 173.1  | 794.2  | 1092.7 | 937.6  |
| 105°   | 100.3  | 179.8  | 725.7  | 1225.2 | 1137.8 |
| 107.5° | 115.4  | 188.6  | 664.2  | 1276.7 | 1264.7 |
| 110°   | 132.0  | 198.0  | 613.2  | 1269.3 | 1332.5 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 148.7 | 208.0 | 575.1 | 1215.6 | 1339.0 |
| 115°   | 163.0 | 220.0 | 548.4 | 1141.1 | 1303.9 |
| 117.5° | 178.9 | 229.6 | 526.1 | 1062.0 | 1241.5 |
| 120°   | 193.9 | 239.3 | 510.0 | 986.8  | 1160.9 |
| 122.5° | 208.3 | 249.8 | 496.9 | 925.6  | 1086.4 |
| 125°   | 220.4 | 259.4 | 484.5 | 870.1  | 1017.2 |
| 127.5° | 231.0 | 271.5 | 474.4 | 822.8  | 956.4  |
| 130°   | 240.9 | 283.6 | 464.4 | 778.6  | 903.1  |
| 132.5° | 246.9 | 294.6 | 455.8 | 736.8  | 853.6  |
| 135°   | 255.9 | 303.2 | 447.2 | 695.2  | 803.4  |
| 137.5° | 264.3 | 311.6 | 439.4 | 654.1  | 752.3  |
| 140°   | 271.1 | 319.2 | 432.4 | 615.2  | 700.6  |
| 142.5° | 280.2 | 324.4 | 424.7 | 577.4  | 650.3  |
| 145°   | 290.0 | 330.4 | 423.2 | 544.3  | 603.9  |
| 147.5° | 298.3 | 336.8 | 420.9 | 516.8  | 564.3  |
| 150°   | 308.1 | 342.2 | 417.9 | 494.7  | 529.2  |
| 152.5° | 317.9 | 347.8 | 414.1 | 479.6  | 503.4  |
| 155°   | 327.8 | 353.5 | 409.5 | 465.6  | 485.2  |
| 157.5° | 335.3 | 358.5 | 405.7 | 451.9  | 467.8  |
| 160°   | 344.4 | 362.6 | 401.2 | 439.4  | 451.2  |
| 162.5° | 351.2 | 365.6 | 396.7 | 427.7  | 436.0  |
| 165°   | 358.1 | 368.2 | 392.1 | 416.0  | 423.2  |
| 167.5° | 363.4 | 370.5 | 387.6 | 405.8  | 410.3  |
| 170°   | 367.9 | 371.6 | 383.0 | 396.6  | 398.9  |
| 172.5° | 370.9 | 372.8 | 379.3 | 388.7  | 388.3  |
| 175°   | 373.2 | 373.6 | 376.2 | 381.5  | 380.8  |
| 177.5° | 374.7 | 374.0 | 374.0 | 377.0  | 375.5  |
| 180°   | 374.0 | 374.0 | 374.0 | 374.0  | 374.0  |

(END OF REPORT)