

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: P1010437

Luminaire Tested: S123DIP-B1000D365UB2750-4F0-XX-W2A-F\_4000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1010437  
REPORT IS A COMBINATION OF REPORTS P989161 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1000D365UB2750-4F0-XX-W2A-F\_4000K  
Description: Define 3 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

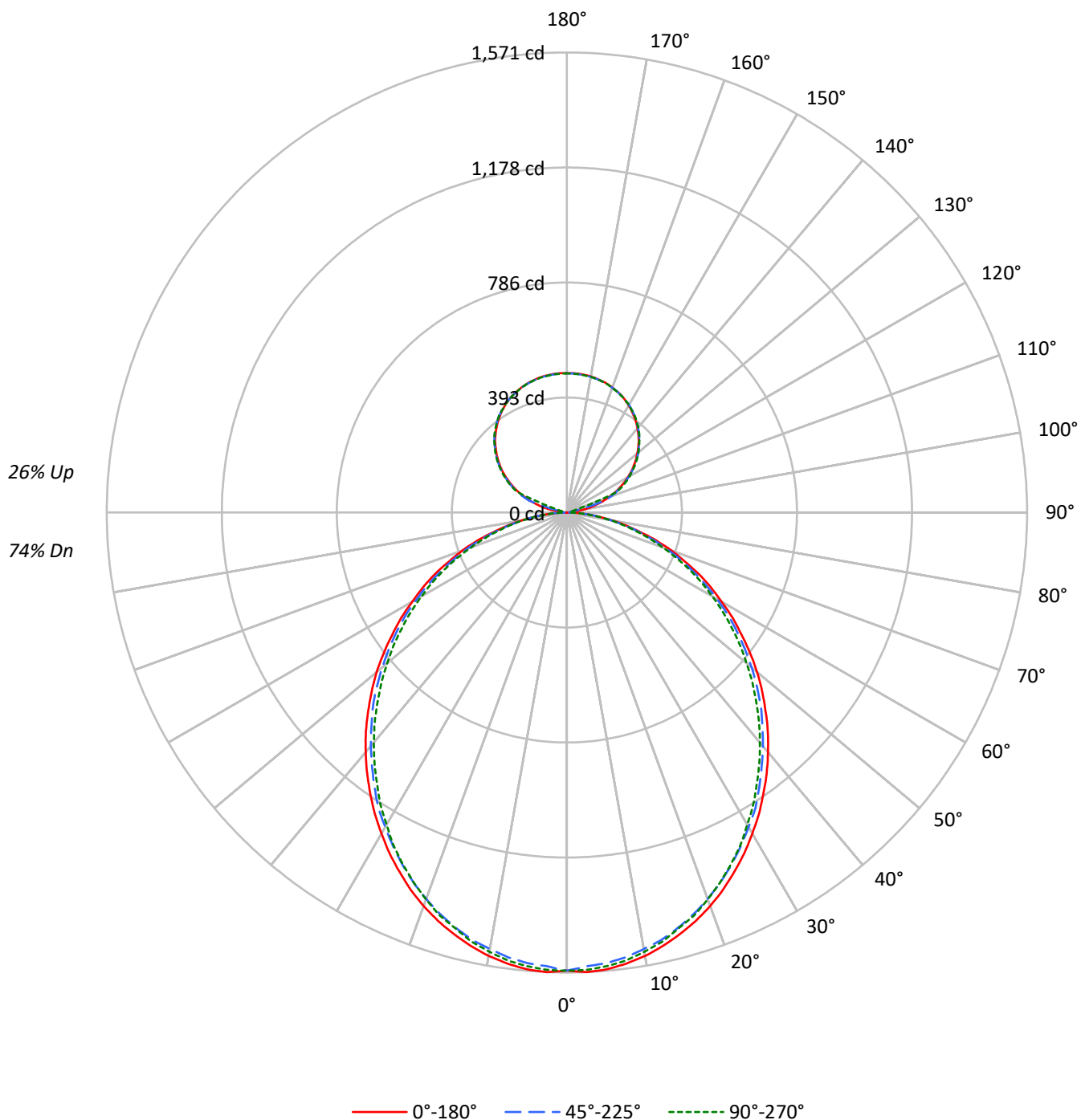
Lumens per Lamp: N/A  
Luminaire Lumens: 5523.0 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 56.1  
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   | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | 87 | 87 | 87 | 78 | 78 | 78 |
| 1   | 103 | 99  | 94  | 91  | 98  | 94  | 90  | 87  | 85 | 82 | 79 | 76 | 74 | 72 | 69 | 67 | 66 |
| 2   | 94  | 86  | 80  | 74  | 89  | 82  | 76  | 71  | 74 | 70 | 66 | 67 | 64 | 60 | 61 | 58 | 55 |
| 3   | 86  | 76  | 68  | 62  | 81  | 72  | 65  | 60  | 65 | 60 | 55 | 59 | 55 | 51 | 54 | 50 | 47 |
| 4   | 78  | 67  | 59  | 52  | 74  | 64  | 56  | 51  | 58 | 52 | 47 | 53 | 48 | 44 | 48 | 44 | 41 |
| 5   | 72  | 60  | 51  | 45  | 68  | 57  | 49  | 44  | 52 | 46 | 41 | 48 | 42 | 38 | 43 | 39 | 35 |
| 6   | 66  | 54  | 45  | 39  | 63  | 52  | 44  | 38  | 47 | 41 | 36 | 43 | 38 | 33 | 39 | 35 | 31 |
| 7   | 62  | 49  | 40  | 35  | 58  | 47  | 39  | 34  | 43 | 36 | 32 | 39 | 34 | 30 | 36 | 31 | 28 |
| 8   | 57  | 44  | 36  | 31  | 54  | 43  | 35  | 30  | 39 | 33 | 28 | 36 | 30 | 27 | 33 | 28 | 25 |
| 9   | 53  | 41  | 33  | 28  | 51  | 39  | 32  | 27  | 36 | 30 | 25 | 33 | 28 | 24 | 30 | 26 | 22 |
| 10  | 50  | 37  | 30  | 25  | 48  | 36  | 29  | 24  | 33 | 27 | 23 | 31 | 25 | 22 | 28 | 24 | 20 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16841 | 16841 | 16841 |
| 5°  | 16884 | 16260 | 16236 |
| 10° | 16733 | 15710 | 15549 |
| 15° | 16500 | 15138 | 14799 |
| 20° | 16234 | 14502 | 14058 |
| 25° | 15889 | 13832 | 13264 |
| 30° | 15511 | 13138 | 12430 |
| 35° | 15115 | 12429 | 11601 |
| 40° | 14701 | 11685 | 10784 |
| 45° | 14245 | 10959 | 9933  |
| 50° | 13783 | 10151 | 9078  |
| 55° | 13187 | 9310  | 8211  |
| 60° | 12575 | 8380  | 7288  |
| 65° | 12000 | 7375  | 6326  |
| 70° | 11173 | 6261  | 5204  |
| 75° | 9978  | 4958  | 4041  |
| 80° | 8616  | 3484  | 2858  |
| 85° | 6724  | 1874  | 1432  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14245 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 147.5  | 2.7       |
| 10°-20°   | 416.5  | 7.5       |
| 20°-30°   | 615.1  | 11.1      |
| 30°-40°   | 718.4  | 13.0      |
| 40°-50°   | 722.2  | 13.1      |
| 50°-60°   | 634.4  | 11.5      |
| 60°-70°   | 472.5  | 8.6       |
| 70°-80°   | 268.9  | 4.9       |
| 80°-90°   | 77.4   | 1.4       |
| 90°-100°  | 16.8   | 0.3       |
| 100°-110° | 81.1   | 1.5       |
| 110°-120° | 198.7  | 3.6       |
| 120°-130° | 252.3  | 4.6       |
| 130°-140° | 269.5  | 4.9       |
| 140°-150° | 252.0  | 4.6       |
| 150°-160° | 203.3  | 3.7       |
| 160°-170° | 131.2  | 2.4       |
| 170°-180° | 45.2   | 0.8       |
| 0°-30°    | 1179.1 | 21.3      |
| 0°-40°    | 1897.5 | 34.4      |
| 0°-60°    | 3254.2 | 58.9      |
| 0°-90°    | 4073.0 | 73.7      |
| 90°-120°  | 296.6  | 5.4       |
| 90°-150°  | 1070.4 | 19.4      |
| 90°-180°  | 1450.0 | 26.3      |
| 0°-180°   | 5523.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1565 | 1565  | 1565 | 1565  | 1565 |      |
| 5°   | 1566 | 1559  | 1544 | 1558  | 1555 | 149  |
| 15°  | 1491 | 1485  | 1468 | 1478  | 1470 | 420  |
| 25°  | 1353 | 1345  | 1328 | 1329  | 1325 | 623  |
| 35°  | 1170 | 1162  | 1145 | 1137  | 1130 | 732  |
| 45°  | 959  | 954   | 936  | 920   | 914  | 741  |
| 55°  | 728  | 726   | 709  | 694   | 688  | 652  |
| 65°  | 496  | 490   | 476  | 466   | 461  | 490  |
| 75°  | 262  | 257   | 253  | 246   | 242  | 280  |
| 85°  | 70   | 67    | 67   | 65    | 65   | 75   |
| 90°  | 0    | 4     | 8    | 10    | 11   | 6    |
| 95°  | 22   | 7     | 11   | 13    | 13   | 26   |
| 105° | 105  | 109   | 77   | 15    | 16   | 112  |
| 115° | 198  | 200   | 203  | 206   | 208  | 195  |
| 125° | 278  | 281   | 283  | 283   | 284  | 249  |
| 135° | 347  | 349   | 350  | 351   | 350  | 267  |
| 145° | 400  | 402   | 403  | 404   | 404  | 250  |
| 155° | 441  | 440   | 440  | 442   | 440  | 203  |
| 165° | 465  | 464   | 463  | 466   | 464  | 131  |
| 175° | 476  | 474   | 474  | 477   | 474  | 45   |
| 180° | 476  | 476   | 476  | 476   | 476  |      |

TEST NUMBER: P1010437

CATALOG NUMBER: S123DIP-B1000D365UB2750-4F0-XX-W2A-F\_4000K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1564.6 | 1564.6 | 1564.6 | 1564.6 | 1564.6 |
| 2.5°   | 1571.3 | 1566.0 | 1551.2 | 1564.6 | 1563.3 |
| 5°     | 1566.0 | 1559.2 | 1544.4 | 1557.9 | 1555.2 |
| 7.5°   | 1553.9 | 1547.1 | 1532.3 | 1544.4 | 1543.1 |
| 10°    | 1537.7 | 1531.0 | 1513.5 | 1525.6 | 1522.9 |
| 12.5°  | 1516.2 | 1510.8 | 1494.7 | 1502.7 | 1501.4 |
| 15°    | 1490.6 | 1485.2 | 1467.8 | 1478.5 | 1470.4 |
| 17.5°  | 1462.4 | 1455.6 | 1438.2 | 1446.2 | 1443.5 |
| 20°    | 1430.1 | 1422.0 | 1404.5 | 1409.9 | 1405.9 |
| 22.5°  | 1393.8 | 1385.7 | 1368.2 | 1372.2 | 1366.9 |
| 25°    | 1353.4 | 1345.3 | 1327.8 | 1329.2 | 1325.1 |
| 27.5°  | 1311.7 | 1303.6 | 1284.8 | 1286.1 | 1282.1 |
| 30°    | 1266.0 | 1259.2 | 1240.4 | 1240.4 | 1231.0 |
| 32.5°  | 1220.2 | 1210.8 | 1197.3 | 1187.9 | 1183.9 |
| 35°    | 1170.4 | 1162.4 | 1144.9 | 1136.8 | 1130.1 |
| 37.5°  | 1120.7 | 1109.9 | 1092.4 | 1083.0 | 1079.0 |
| 40°    | 1068.2 | 1060.1 | 1041.3 | 1030.5 | 1025.1 |
| 42.5°  | 1015.7 | 1006.3 | 987.5  | 976.7  | 971.3  |
| 45°    | 959.2  | 953.8  | 936.3  | 920.2  | 913.5  |
| 47.5°  | 904.1  | 896.0  | 879.8  | 863.7  | 858.3  |
| 50°    | 847.6  | 840.8  | 823.3  | 808.5  | 800.5  |
| 52.5°  | 788.4  | 784.3  | 765.5  | 753.4  | 745.3  |
| 55°    | 727.8  | 726.5  | 709.0  | 694.2  | 687.5  |
| 57.5°  | 671.3  | 665.9  | 652.5  | 639.0  | 631.0  |
| 60°    | 609.4  | 608.1  | 591.9  | 579.8  | 573.1  |
| 62.5°  | 554.3  | 550.2  | 534.1  | 522.0  | 518.0  |
| 65°    | 496.4  | 489.7  | 476.2  | 465.5  | 461.4  |
| 67.5°  | 434.5  | 429.2  | 418.4  | 409.0  | 403.6  |
| 70°    | 379.4  | 371.3  | 363.2  | 353.8  | 347.1  |
| 72.5°  | 321.5  | 316.2  | 306.7  | 298.7  | 296.0  |
| 75°    | 262.3  | 257.0  | 252.9  | 246.2  | 242.2  |
| 77.5°  | 209.9  | 207.2  | 201.8  | 196.4  | 196.4  |
| 80°    | 158.7  | 154.7  | 152.0  | 150.7  | 150.7  |
| 82.5°  | 109.0  | 109.0  | 109.0  | 106.3  | 104.9  |
| 85°    | 70.0   | 67.3   | 67.3   | 64.6   | 64.6   |
| 87.5°  | 35.0   | 30.9   | 29.6   | 28.3   | 28.3   |
| 90°    | 0.4    | 3.9    | 8.5    | 9.9    | 10.6   |
| 92.5°  | 8.1    | 6.0    | 9.2    | 11.7   | 12.0   |
| 95°    | 21.6   | 7.1    | 11.0   | 13.4   | 13.4   |
| 97.5°  | 39.2   | 29.3   | 11.3   | 14.1   | 14.5   |
| 100°   | 59.7   | 66.8   | 11.7   | 14.5   | 14.8   |
| 102.5° | 83.0   | 87.6   | 26.1   | 14.5   | 15.2   |
| 105°   | 105.3  | 109.2  | 77.4   | 14.8   | 15.5   |
| 107.5° | 129.0  | 132.2  | 137.5  | 83.0   | 36.8   |
| 110°   | 152.7  | 155.5  | 159.4  | 147.7  | 97.2   |



TEST NUMBER: P1010437

CATALOG NUMBER: S123DIP-B1000D365UB2750-4F0-XX-W2A-F\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 175.3 | 177.7 | 181.6 | 184.8 | 184.1 |
| 115°   | 197.5 | 199.7 | 202.8 | 206.4 | 207.8 |
| 117.5° | 219.4 | 221.9 | 223.7 | 226.5 | 226.9 |
| 120°   | 239.6 | 242.8 | 243.8 | 246.7 | 246.7 |
| 122.5° | 260.1 | 262.6 | 264.0 | 265.7 | 266.1 |
| 125°   | 278.5 | 281.3 | 282.7 | 283.4 | 284.1 |
| 127.5° | 296.8 | 299.7 | 301.4 | 302.5 | 301.8 |
| 130°   | 313.8 | 316.6 | 318.0 | 319.5 | 318.7 |
| 132.5° | 330.1 | 332.9 | 333.9 | 335.4 | 334.3 |
| 135°   | 346.7 | 348.8 | 350.2 | 351.3 | 350.2 |
| 137.5° | 360.8 | 363.6 | 364.3 | 366.1 | 365.4 |
| 140°   | 374.9 | 377.1 | 378.1 | 379.5 | 378.8 |
| 142.5° | 388.0 | 390.1 | 391.2 | 392.2 | 391.2 |
| 145°   | 400.0 | 402.5 | 403.2 | 403.9 | 403.9 |
| 147.5° | 411.7 | 413.5 | 414.2 | 414.9 | 413.1 |
| 150°   | 422.3 | 423.3 | 424.1 | 424.8 | 423.7 |
| 152.5° | 431.8 | 432.2 | 432.5 | 433.9 | 432.2 |
| 155°   | 440.7 | 440.0 | 440.3 | 442.1 | 440.0 |
| 157.5° | 447.7 | 447.7 | 447.4 | 449.5 | 446.7 |
| 160°   | 454.1 | 453.7 | 453.4 | 455.5 | 453.0 |
| 162.5° | 460.1 | 459.0 | 458.7 | 461.2 | 459.0 |
| 165°   | 464.7 | 463.6 | 463.3 | 466.1 | 463.6 |
| 167.5° | 468.6 | 467.2 | 467.2 | 470.0 | 467.2 |
| 170°   | 471.8 | 470.3 | 470.3 | 473.2 | 470.3 |
| 172.5° | 473.9 | 472.1 | 472.5 | 475.3 | 472.1 |
| 175°   | 475.6 | 473.9 | 474.2 | 476.7 | 473.9 |
| 177.5° | 476.4 | 474.6 | 474.9 | 477.8 | 474.2 |
| 180°   | 475.6 | 475.6 | 475.6 | 475.6 | 475.6 |

(END OF REPORT)