

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: P1010401

Luminaire Tested: S123DIP-B1000D1025UB2750-4F0-XX-W2A-D\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1010401  
REPORT IS A COMBINATION OF REPORTS P989035 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1000D1025UB2750-4F0-XX-W2A-D\_3500K  
Description: Define 3 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

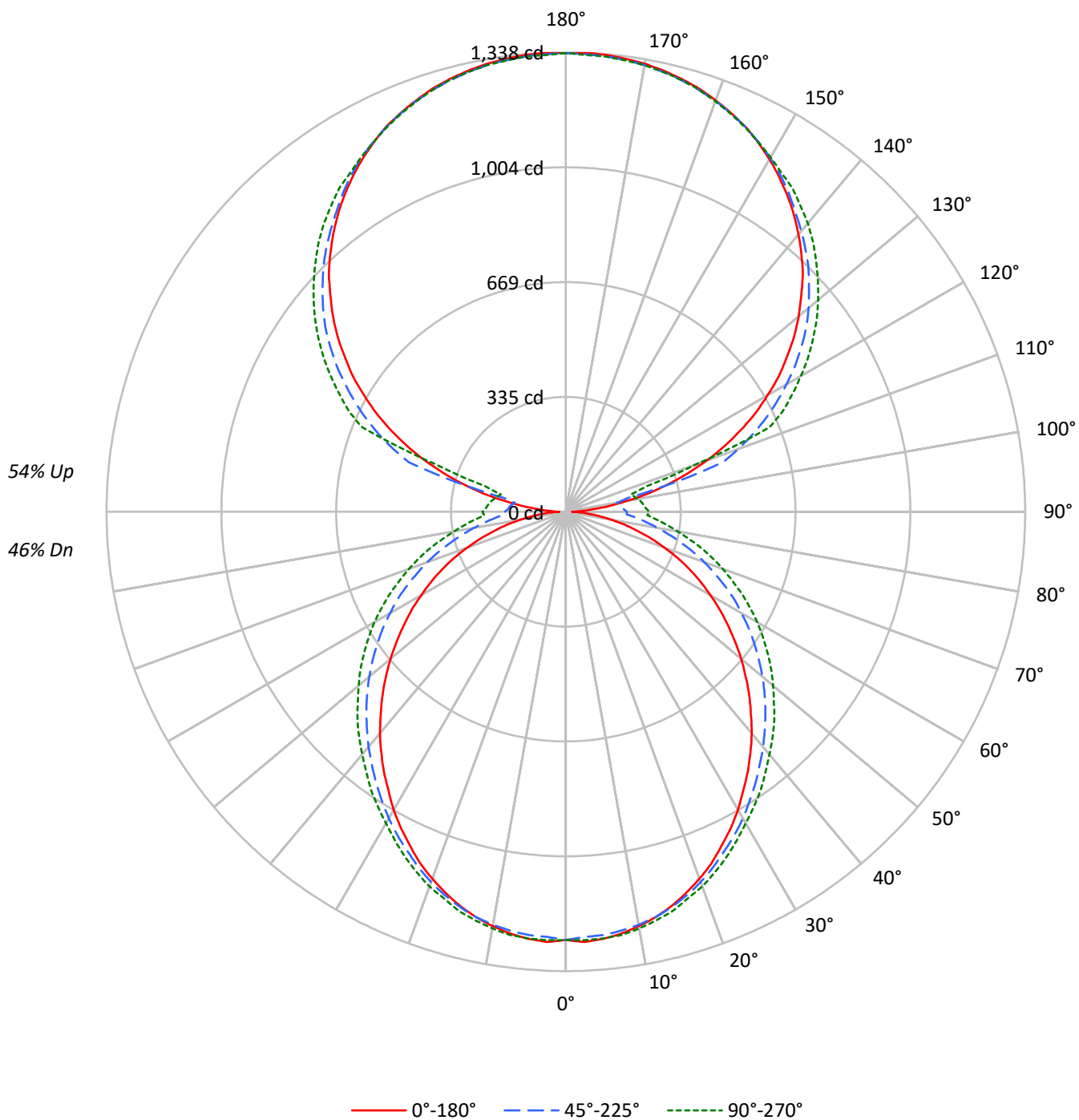
Lumens per Lamp: N/A  
Luminaire Lumens: 8267.0 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 75.3  
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   | 106 | 106 | 106 | 106 | 98 | 98 | 98 | 98 | 81 | 81 | 81 | 67 | 67 | 67 | 53 | 53 | 53 |
| 1   | 96  | 91  | 87  | 83  | 88 | 84 | 80 | 77 | 70 | 67 | 65 | 57 | 55 | 53 | 45 | 44 | 43 |
| 2   | 87  | 79  | 73  | 67  | 79 | 73 | 67 | 62 | 61 | 56 | 53 | 50 | 46 | 44 | 39 | 37 | 35 |
| 3   | 79  | 69  | 62  | 55  | 72 | 64 | 57 | 52 | 53 | 48 | 44 | 43 | 40 | 37 | 34 | 32 | 30 |
| 4   | 72  | 61  | 53  | 47  | 66 | 56 | 49 | 43 | 47 | 42 | 37 | 39 | 34 | 31 | 31 | 28 | 25 |
| 5   | 66  | 54  | 46  | 40  | 60 | 50 | 43 | 37 | 42 | 36 | 32 | 34 | 30 | 27 | 27 | 24 | 22 |
| 6   | 61  | 49  | 40  | 34  | 56 | 45 | 37 | 32 | 38 | 32 | 28 | 31 | 27 | 23 | 25 | 22 | 19 |
| 7   | 56  | 44  | 36  | 30  | 51 | 40 | 33 | 28 | 34 | 28 | 24 | 28 | 24 | 21 | 23 | 19 | 17 |
| 8   | 52  | 40  | 32  | 26  | 48 | 37 | 30 | 25 | 31 | 25 | 21 | 26 | 21 | 18 | 21 | 17 | 15 |
| 9   | 49  | 36  | 29  | 23  | 44 | 33 | 27 | 22 | 28 | 23 | 19 | 24 | 19 | 16 | 19 | 16 | 14 |
| 10  | 45  | 33  | 26  | 21  | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 22 | 18 | 15 | 18 | 15 | 12 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13426 | 13426 | 13426 |
| 5°  | 13463 | 13032 | 13021 |
| 10° | 13337 | 12679 | 12583 |
| 15° | 13160 | 12289 | 12116 |
| 20° | 12910 | 11855 | 11616 |
| 25° | 12602 | 11366 | 11098 |
| 30° | 12287 | 10923 | 10578 |
| 35° | 11931 | 10459 | 10154 |
| 40° | 11594 | 10033 | 9706  |
| 45° | 11220 | 9621  | 9337  |
| 50° | 10848 | 9214  | 8937  |
| 55° | 10439 | 8796  | 8568  |
| 60° | 10037 | 8369  | 8190  |
| 65° | 9624  | 7913  | 7749  |
| 70° | 9003  | 7402  | 7293  |
| 75° | 8217  | 6818  | 6823  |
| 80° | 7302  | 6228  | 6287  |
| 85° | 6397  | 5750  | 5902  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11220 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 118.3  | 1.4       |
| 10°-20°   | 337.3  | 4.1       |
| 20°-30°   | 504.4  | 6.1       |
| 30°-40°   | 602.3  | 7.3       |
| 40°-50°   | 630.1  | 7.6       |
| 50°-60°   | 591.3  | 7.2       |
| 60°-70°   | 493.9  | 6.0       |
| 70°-80°   | 353.2  | 4.3       |
| 80°-90°   | 212.8  | 2.6       |
| 90°-100°  | 179.2  | 2.2       |
| 100°-110° | 324.8  | 3.9       |
| 110°-120° | 622.9  | 7.5       |
| 120°-130° | 745.5  | 9.0       |
| 130°-140° | 773.5  | 9.4       |
| 140°-150° | 711.2  | 8.6       |
| 150°-160° | 570.9  | 6.9       |
| 160°-170° | 368.4  | 4.5       |
| 170°-180° | 127.0  | 1.5       |
| 0°-30°    | 960.1  | 11.6      |
| 0°-40°    | 1562.3 | 18.9      |
| 0°-60°    | 2783.8 | 33.7      |
| 0°-90°    | 3843.7 | 46.5      |
| 90°-120°  | 1126.9 | 13.6      |
| 90°-150°  | 3357.1 | 40.6      |
| 90°-180°  | 4423.0 | 53.5      |
| 0°-180°   | 8267.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1247 | 1247  | 1247 | 1247  | 1247 |      |
| 5°   | 1249 | 1246  | 1238 | 1249  | 1247 | 118  |
| 15°  | 1189 | 1193  | 1192 | 1205  | 1204 | 335  |
| 25°  | 1073 | 1087  | 1091 | 1109  | 1109 | 495  |
| 35°  | 924  | 946   | 963  | 984   | 989  | 578  |
| 45°  | 756  | 788   | 822  | 848   | 859  | 583  |
| 55°  | 576  | 621   | 670  | 706   | 717  | 516  |
| 65°  | 398  | 451   | 511  | 552   | 565  | 394  |
| 75°  | 216  | 280   | 348  | 393   | 409  | 231  |
| 85°  | 67   | 134   | 206  | 253   | 266  | 69   |
| 90°  | 19   | 95    | 177  | 228   | 243  | 16   |
| 95°  | 75   | 88    | 165  | 214   | 228  | 84   |
| 105° | 307  | 350   | 319  | 182   | 196  | 325  |
| 115° | 562  | 584   | 642  | 684   | 699  | 555  |
| 125° | 786  | 794   | 837  | 868   | 879  | 703  |
| 135° | 976  | 981   | 1000 | 1027  | 1031 | 752  |
| 145° | 1125 | 1130  | 1132 | 1145  | 1151 | 704  |
| 155° | 1238 | 1236  | 1237 | 1242  | 1236 | 570  |
| 165° | 1305 | 1302  | 1301 | 1309  | 1302 | 369  |
| 175° | 1336 | 1331  | 1332 | 1339  | 1331 | 127  |
| 180° | 1336 | 1336  | 1336 | 1336  | 1336 |      |

TEST NUMBER: P1010401

CATALOG NUMBER: S123DIP-B1000D1025UB2750-4F0-XX-W2A-D\_3500K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1247.3 | 1247.3 | 1247.3 | 1247.3 | 1247.3 |
| 2.5°   | 1254.1 | 1250.0 | 1239.2 | 1250.0 | 1248.7 |
| 5°     | 1248.7 | 1246.0 | 1237.8 | 1248.7 | 1247.3 |
| 7.5°   | 1239.2 | 1239.2 | 1231.0 | 1244.6 | 1243.3 |
| 10°    | 1225.6 | 1228.3 | 1221.5 | 1235.1 | 1232.4 |
| 12.5°  | 1209.3 | 1213.4 | 1209.3 | 1221.5 | 1218.8 |
| 15°    | 1188.9 | 1193.0 | 1191.6 | 1205.2 | 1203.8 |
| 17.5°  | 1164.4 | 1172.6 | 1171.2 | 1183.5 | 1180.7 |
| 20°    | 1137.3 | 1145.4 | 1148.1 | 1160.4 | 1161.7 |
| 22.5°  | 1108.7 | 1116.9 | 1121.0 | 1137.3 | 1135.9 |
| 25°    | 1073.4 | 1087.0 | 1091.1 | 1108.7 | 1108.7 |
| 27.5°  | 1039.4 | 1054.4 | 1062.5 | 1077.5 | 1078.8 |
| 30°    | 1002.8 | 1020.4 | 1031.3 | 1047.6 | 1047.6 |
| 32.5°  | 962.0  | 982.4  | 997.3  | 1015.0 | 1019.1 |
| 35°    | 923.9  | 945.7  | 963.4  | 983.7  | 989.2  |
| 37.5°  | 883.2  | 907.6  | 928.0  | 951.1  | 955.2  |
| 40°    | 842.4  | 866.9  | 894.1  | 917.2  | 922.6  |
| 42.5°  | 797.6  | 828.8  | 857.4  | 883.2  | 891.3  |
| 45°    | 755.5  | 788.1  | 822.0  | 847.9  | 858.7  |
| 47.5°  | 710.6  | 747.3  | 785.4  | 813.9  | 822.0  |
| 50°    | 667.1  | 705.2  | 747.3  | 778.6  | 788.1  |
| 52.5°  | 620.9  | 661.7  | 709.3  | 741.9  | 754.1  |
| 55°    | 576.1  | 620.9  | 669.9  | 706.5  | 717.4  |
| 57.5°  | 532.6  | 578.8  | 631.8  | 668.5  | 680.7  |
| 60°    | 486.4  | 535.3  | 591.1  | 629.1  | 644.0  |
| 62.5°  | 443.0  | 493.2  | 553.0  | 591.1  | 604.6  |
| 65°    | 398.1  | 451.1  | 510.9  | 551.7  | 565.2  |
| 67.5°  | 353.3  | 409.0  | 468.8  | 513.6  | 524.5  |
| 70°    | 305.7  | 364.1  | 429.4  | 472.8  | 486.4  |
| 72.5°  | 262.2  | 320.7  | 388.6  | 433.4  | 447.0  |
| 75°    | 216.0  | 279.9  | 347.8  | 392.7  | 409.0  |
| 77.5°  | 176.6  | 240.5  | 308.4  | 356.0  | 368.2  |
| 80°    | 134.5  | 201.1  | 271.7  | 317.9  | 331.5  |
| 82.5°  | 97.8   | 165.8  | 237.8  | 284.0  | 297.6  |
| 85°    | 66.6   | 134.5  | 206.5  | 252.7  | 266.3  |
| 87.5°  | 40.8   | 108.7  | 178.0  | 224.2  | 237.8  |
| 90°    | 18.7   | 95.1   | 177.3  | 227.5  | 243.1  |
| 92.5°  | 39.1   | 91.6   | 168.5  | 220.3  | 233.4  |
| 95°    | 75.4   | 87.7   | 165.3  | 214.3  | 227.9  |
| 97.5°  | 123.8  | 144.9  | 158.2  | 206.8  | 221.4  |
| 100°   | 179.9  | 243.3  | 151.0  | 198.3  | 212.9  |
| 102.5° | 244.1  | 295.0  | 183.5  | 188.8  | 204.4  |
| 105°   | 306.6  | 350.2  | 319.2  | 181.7  | 195.9  |
| 107.5° | 371.7  | 409.2  | 479.9  | 363.6  | 245.9  |
| 110°   | 436.9  | 469.3  | 534.6  | 537.1  | 406.1  |

TEST NUMBER: P1010401

CATALOG NUMBER: S123DIP-B1000D1025UB2750-4F0-XX-W2A-D\_3500K

**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 500.4  | 526.4  | 588.9  | 631.8  | 642.1  |
| 115°   | 561.6  | 583.8  | 641.7  | 684.2  | 699.0  |
| 117.5° | 623.1  | 640.9  | 692.1  | 732.6  | 744.4  |
| 120°   | 678.3  | 694.0  | 741.9  | 781.0  | 790.5  |
| 122.5° | 735.8  | 745.6  | 791.6  | 826.5  | 837.0  |
| 125°   | 786.1  | 794.1  | 837.4  | 867.9  | 879.4  |
| 127.5° | 837.7  | 844.3  | 883.2  | 913.4  | 920.9  |
| 130°   | 885.4  | 891.9  | 923.1  | 952.9  | 959.1  |
| 132.5° | 929.6  | 937.6  | 960.9  | 989.4  | 995.9  |
| 135°   | 976.3  | 980.9  | 999.8  | 1027.3 | 1031.1 |
| 137.5° | 1016.0 | 1022.6 | 1034.1 | 1060.8 | 1065.6 |
| 140°   | 1054.4 | 1060.3 | 1067.3 | 1091.7 | 1096.5 |
| 142.5° | 1091.1 | 1095.6 | 1098.6 | 1119.3 | 1123.1 |
| 145°   | 1124.8 | 1130.4 | 1132.4 | 1145.2 | 1150.6 |
| 147.5° | 1156.2 | 1161.1 | 1163.1 | 1169.2 | 1169.7 |
| 150°   | 1186.0 | 1188.9 | 1190.9 | 1192.9 | 1192.6 |
| 152.5° | 1212.7 | 1213.7 | 1214.7 | 1218.7 | 1213.7 |
| 155°   | 1237.6 | 1235.6 | 1236.6 | 1241.5 | 1235.6 |
| 157.5° | 1257.4 | 1257.4 | 1256.4 | 1262.4 | 1254.4 |
| 160°   | 1275.3 | 1274.3 | 1273.3 | 1279.2 | 1272.3 |
| 162.5° | 1292.1 | 1289.2 | 1288.2 | 1295.1 | 1289.2 |
| 165°   | 1305.0 | 1302.1 | 1301.1 | 1309.0 | 1302.1 |
| 167.5° | 1316.0 | 1312.0 | 1312.0 | 1319.9 | 1312.0 |
| 170°   | 1324.9 | 1320.9 | 1320.9 | 1328.9 | 1320.9 |
| 172.5° | 1330.8 | 1325.9 | 1326.9 | 1334.8 | 1325.9 |
| 175°   | 1335.8 | 1330.8 | 1331.8 | 1338.8 | 1330.8 |
| 177.5° | 1337.8 | 1332.8 | 1333.8 | 1341.8 | 1331.8 |
| 180°   | 1335.8 | 1335.8 | 1335.8 | 1335.8 | 1335.8 |

(END OF REPORT)