

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: P1030723

Luminaire Tested: S123DIW-B1165D1030UB2750-4F0-XX-W2A-D\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1030723  
REPORT IS A COMBINATION OF REPORTS P990871 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B1165D1030UB2750-4F0-XX-W2A-D\_5000K  
Description: Define 3 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

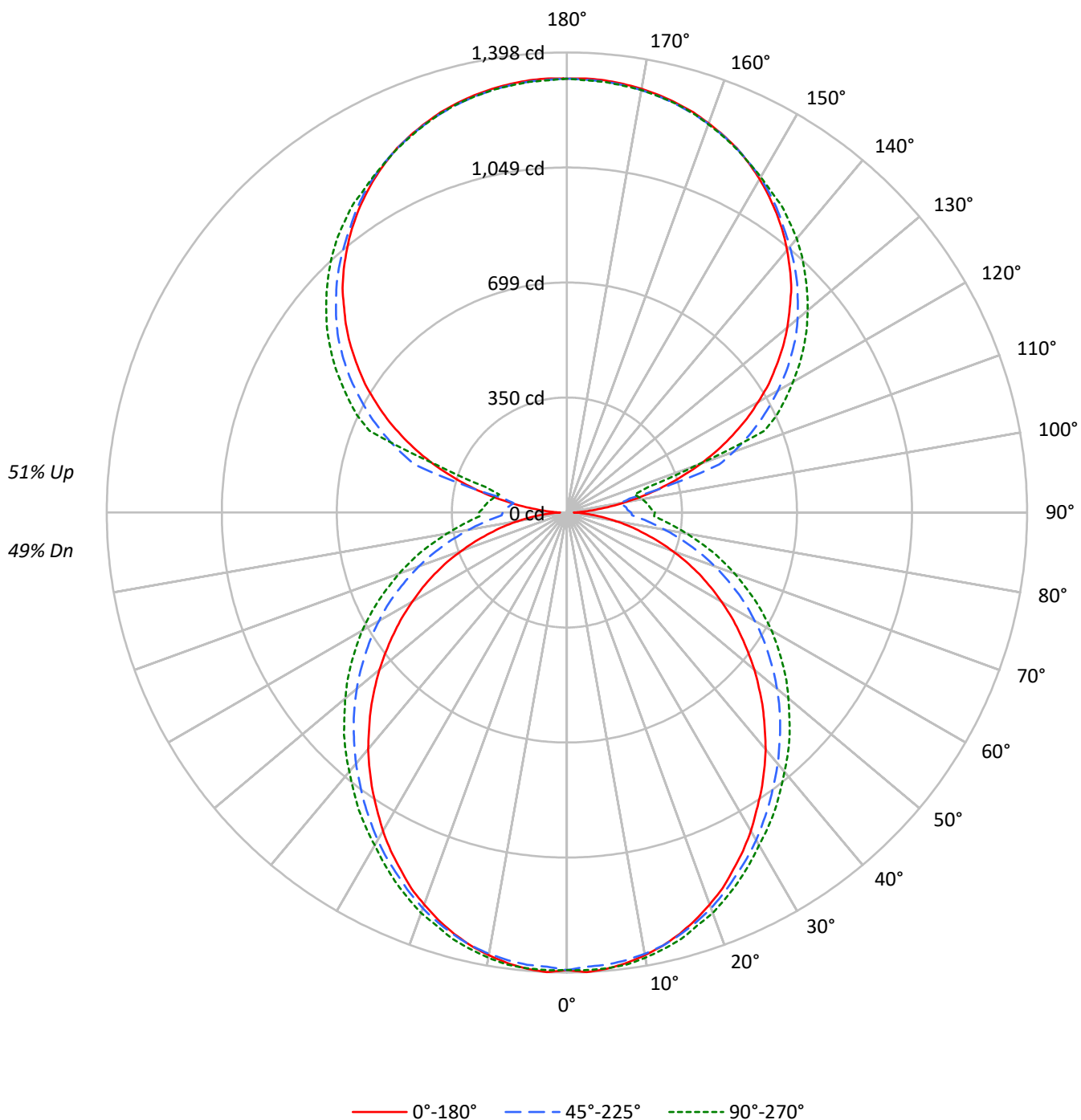
Lumens per Lamp: N/A  
Luminaire Lumens: 8695.0 lumens  
Efficiency: N/A  
Efficacy: 93.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 92.8  
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   | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 83 | 83 | 83 | 69 | 69 | 69 | 55 | 55 | 55 |
| 1   | 97  | 92  | 88  | 84  | 89 | 85 | 81 | 78 | 71 | 68 | 66 | 59 | 57 | 55 | 47 | 46 | 45 |
| 2   | 88  | 80  | 73  | 67  | 80 | 73 | 68 | 63 | 62 | 57 | 54 | 51 | 48 | 45 | 41 | 39 | 37 |
| 3   | 80  | 70  | 62  | 56  | 73 | 64 | 57 | 52 | 54 | 49 | 45 | 45 | 41 | 38 | 36 | 33 | 31 |
| 4   | 73  | 61  | 53  | 47  | 66 | 57 | 49 | 44 | 48 | 42 | 38 | 40 | 35 | 32 | 32 | 29 | 26 |
| 5   | 67  | 55  | 46  | 40  | 61 | 50 | 43 | 37 | 43 | 37 | 32 | 35 | 31 | 28 | 29 | 25 | 23 |
| 6   | 61  | 49  | 40  | 34  | 56 | 45 | 38 | 32 | 38 | 33 | 28 | 32 | 27 | 24 | 26 | 23 | 20 |
| 7   | 57  | 44  | 36  | 30  | 52 | 41 | 33 | 28 | 35 | 29 | 25 | 29 | 25 | 21 | 24 | 20 | 18 |
| 8   | 52  | 40  | 32  | 27  | 48 | 37 | 30 | 25 | 32 | 26 | 22 | 27 | 22 | 19 | 22 | 18 | 16 |
| 9   | 49  | 36  | 29  | 24  | 45 | 34 | 27 | 22 | 29 | 23 | 20 | 24 | 20 | 17 | 20 | 17 | 14 |
| 10  | 46  | 33  | 26  | 21  | 42 | 31 | 24 | 20 | 27 | 21 | 18 | 23 | 18 | 15 | 19 | 15 | 13 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14966 | 14966 | 14966 |
| 5°  | 15008 | 14527 | 14515 |
| 10° | 14867 | 14134 | 14026 |
| 15° | 14670 | 13699 | 13507 |
| 20° | 14391 | 13215 | 12949 |
| 25° | 14048 | 12670 | 12372 |
| 30° | 13696 | 12176 | 11792 |
| 35° | 13302 | 11658 | 11319 |
| 40° | 12924 | 11183 | 10819 |
| 45° | 12506 | 10726 | 10409 |
| 50° | 12093 | 10272 | 9962  |
| 55° | 11636 | 9805  | 9551  |
| 60° | 11188 | 9329  | 9130  |
| 65° | 10728 | 8820  | 8638  |
| 70° | 10036 | 8250  | 8130  |
| 75° | 9160  | 7602  | 7606  |
| 80° | 8143  | 6943  | 7009  |
| 85° | 7127  | 6410  | 6581  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12506 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 131.9  | 1.5       |
| 10°-20°   | 376.0  | 4.3       |
| 20°-30°   | 562.3  | 6.5       |
| 30°-40°   | 671.4  | 7.7       |
| 40°-50°   | 702.4  | 8.1       |
| 50°-60°   | 659.2  | 7.6       |
| 60°-70°   | 550.6  | 6.3       |
| 70°-80°   | 393.7  | 4.5       |
| 80°-90°   | 236.9  | 2.7       |
| 90°-100°  | 193.7  | 2.2       |
| 100°-110° | 333.0  | 3.8       |
| 110°-120° | 623.1  | 7.2       |
| 120°-130° | 740.5  | 8.5       |
| 130°-140° | 765.5  | 8.8       |
| 140°-150° | 702.4  | 8.1       |
| 150°-160° | 563.5  | 6.5       |
| 160°-170° | 363.6  | 4.2       |
| 170°-180° | 125.3  | 1.4       |
| 0°-30°    | 1070.2 | 12.3      |
| 0°-40°    | 1741.6 | 20.0      |
| 0°-60°    | 3103.2 | 35.7      |
| 0°-90°    | 4284.4 | 49.3      |
| 90°-120°  | 1149.8 | 13.2      |
| 90°-150°  | 3358.2 | 38.6      |
| 90°-180°  | 4411.0 | 50.7      |
| 0°-180°   | 8695.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1390 | 1390  | 1390 | 1390  | 1390 |      |
| 5°   | 1392 | 1389  | 1380 | 1392  | 1390 | 132  |
| 15°  | 1325 | 1330  | 1328 | 1344  | 1342 | 373  |
| 25°  | 1197 | 1212  | 1216 | 1236  | 1236 | 552  |
| 35°  | 1030 | 1054  | 1074 | 1097  | 1103 | 644  |
| 45°  | 842  | 878   | 916  | 945   | 957  | 649  |
| 55°  | 642  | 692   | 747  | 788   | 800  | 575  |
| 65°  | 444  | 503   | 570  | 615   | 630  | 439  |
| 75°  | 241  | 312   | 388  | 438   | 456  | 257  |
| 85°  | 74   | 150   | 230  | 282   | 297  | 76   |
| 90°  | 21   | 105   | 195  | 250   | 267  | 17   |
| 95°  | 76   | 95    | 180  | 234   | 249  | 84   |
| 105° | 304  | 351   | 328  | 197   | 213  | 322  |
| 115° | 555  | 579   | 642  | 689   | 705  | 549  |
| 125° | 776  | 784   | 832  | 866   | 878  | 694  |
| 135° | 964  | 968   | 989  | 1019  | 1024 | 742  |
| 145° | 1110 | 1116  | 1118 | 1132  | 1138 | 695  |
| 155° | 1222 | 1220  | 1220 | 1225  | 1220 | 563  |
| 165° | 1288 | 1285  | 1284 | 1292  | 1285 | 364  |
| 175° | 1318 | 1314  | 1314 | 1321  | 1314 | 125  |
| 180° | 1318 | 1318  | 1318 | 1318  | 1318 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1390.4 | 1390.4 | 1390.4 | 1390.4 | 1390.4 |
| 2.5°   | 1398.0 | 1393.5 | 1381.4 | 1393.5 | 1392.0 |
| 5°     | 1392.0 | 1388.9 | 1379.8 | 1392.0 | 1390.4 |
| 7.5°   | 1381.4 | 1381.4 | 1372.3 | 1387.4 | 1385.9 |
| 10°    | 1366.2 | 1369.2 | 1361.7 | 1376.8 | 1373.8 |
| 12.5°  | 1348.0 | 1352.6 | 1348.0 | 1361.7 | 1358.6 |
| 15°    | 1325.3 | 1329.9 | 1328.3 | 1343.5 | 1342.0 |
| 17.5°  | 1298.1 | 1307.1 | 1305.6 | 1319.3 | 1316.2 |
| 20°    | 1267.8 | 1276.9 | 1279.9 | 1293.5 | 1295.0 |
| 22.5°  | 1236.0 | 1245.0 | 1249.6 | 1267.8 | 1266.2 |
| 25°    | 1196.6 | 1211.7 | 1216.3 | 1236.0 | 1236.0 |
| 27.5°  | 1158.7 | 1175.4 | 1184.5 | 1201.1 | 1202.6 |
| 30°    | 1117.8 | 1137.5 | 1149.6 | 1167.8 | 1167.8 |
| 32.5°  | 1072.4 | 1095.1 | 1111.8 | 1131.4 | 1136.0 |
| 35°    | 1030.0 | 1054.2 | 1073.9 | 1096.6 | 1102.7 |
| 37.5°  | 984.5  | 1011.8 | 1034.5 | 1060.3 | 1064.8 |
| 40°    | 939.1  | 966.3  | 996.6  | 1022.4 | 1028.4 |
| 42.5°  | 889.1  | 923.9  | 955.7  | 984.5  | 993.6  |
| 45°    | 842.1  | 878.5  | 916.4  | 945.1  | 957.3  |
| 47.5°  | 792.2  | 833.1  | 875.5  | 907.3  | 916.4  |
| 50°    | 743.7  | 786.1  | 833.1  | 867.9  | 878.5  |
| 52.5°  | 692.2  | 737.6  | 790.6  | 827.0  | 840.6  |
| 55°    | 642.2  | 692.2  | 746.7  | 787.6  | 799.7  |
| 57.5°  | 593.7  | 645.2  | 704.3  | 745.2  | 758.8  |
| 60°    | 542.2  | 596.8  | 658.9  | 701.3  | 717.9  |
| 62.5°  | 493.8  | 549.8  | 616.5  | 658.9  | 674.0  |
| 65°    | 443.8  | 502.9  | 569.5  | 614.9  | 630.1  |
| 67.5°  | 393.8  | 455.9  | 522.6  | 572.5  | 584.7  |
| 70°    | 340.8  | 405.9  | 478.6  | 527.1  | 542.2  |
| 72.5°  | 292.3  | 357.5  | 433.2  | 483.2  | 498.3  |
| 75°    | 240.8  | 312.0  | 387.8  | 437.7  | 455.9  |
| 77.5°  | 196.9  | 268.1  | 343.8  | 396.8  | 410.5  |
| 80°    | 150.0  | 224.2  | 302.9  | 354.4  | 369.6  |
| 82.5°  | 109.1  | 184.8  | 265.1  | 316.6  | 331.7  |
| 85°    | 74.2   | 150.0  | 230.2  | 281.7  | 296.9  |
| 87.5°  | 45.4   | 121.2  | 198.4  | 249.9  | 265.1  |
| 90°    | 20.7   | 104.7  | 194.7  | 250.1  | 267.2  |
| 92.5°  | 40.7   | 100.0  | 184.5  | 241.3  | 256.0  |
| 95°    | 76.5   | 95.3   | 180.4  | 234.1  | 249.3  |
| 97.5°  | 123.8  | 151.0  | 172.2  | 225.5  | 241.6  |
| 100°   | 179.1  | 247.2  | 164.1  | 215.9  | 231.9  |
| 102.5° | 242.3  | 297.4  | 195.2  | 205.3  | 222.3  |
| 105°   | 304.0  | 351.2  | 328.1  | 197.1  | 212.7  |
| 107.5° | 368.1  | 408.7  | 485.5  | 375.6  | 260.9  |
| 110°   | 432.3  | 467.4  | 538.7  | 545.7  | 417.8  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 494.9  | 523.0  | 591.3  | 638.0  | 649.6  |
| 115°   | 555.2  | 579.1  | 642.5  | 688.6  | 704.7  |
| 117.5° | 615.9  | 634.8  | 691.2  | 735.4  | 748.6  |
| 120°   | 670.2  | 686.5  | 739.5  | 782.2  | 792.8  |
| 122.5° | 727.0  | 736.9  | 787.7  | 826.0  | 837.6  |
| 125°   | 776.4  | 784.2  | 832.1  | 865.9  | 878.4  |
| 127.5° | 827.3  | 833.6  | 876.4  | 909.7  | 918.3  |
| 130°   | 874.3  | 880.7  | 914.9  | 947.6  | 954.7  |
| 132.5° | 917.9  | 925.7  | 951.3  | 982.6  | 990.2  |
| 135°   | 963.9  | 968.3  | 988.9  | 1019.0 | 1023.7 |
| 137.5° | 1003.1 | 1009.4 | 1022.0 | 1051.2 | 1056.7 |
| 140°   | 1040.8 | 1046.7 | 1054.2 | 1080.8 | 1086.4 |
| 142.5° | 1077.0 | 1081.4 | 1084.3 | 1107.0 | 1111.6 |
| 145°   | 1110.3 | 1115.7 | 1117.6 | 1131.7 | 1137.8 |
| 147.5° | 1141.1 | 1146.0 | 1148.0 | 1154.5 | 1155.7 |
| 150°   | 1170.5 | 1173.5 | 1175.4 | 1177.4 | 1177.4 |
| 152.5° | 1197.0 | 1198.0 | 1198.9 | 1202.9 | 1198.0 |
| 155°   | 1221.5 | 1219.5 | 1220.5 | 1225.4 | 1219.5 |
| 157.5° | 1241.1 | 1241.1 | 1240.1 | 1246.0 | 1238.1 |
| 160°   | 1258.7 | 1257.7 | 1256.7 | 1262.6 | 1255.7 |
| 162.5° | 1275.3 | 1272.4 | 1271.4 | 1278.3 | 1272.4 |
| 165°   | 1288.1 | 1285.1 | 1284.2 | 1292.0 | 1285.1 |
| 167.5° | 1298.8 | 1294.9 | 1294.9 | 1302.8 | 1294.9 |
| 170°   | 1307.7 | 1303.7 | 1303.7 | 1311.6 | 1303.7 |
| 172.5° | 1313.5 | 1308.6 | 1309.6 | 1317.5 | 1308.6 |
| 175°   | 1318.4 | 1313.5 | 1314.5 | 1321.4 | 1313.5 |
| 177.5° | 1320.4 | 1315.5 | 1316.5 | 1324.3 | 1314.5 |
| 180°   | 1318.4 | 1318.4 | 1318.4 | 1318.4 | 1318.4 |

(END OF REPORT)