

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: P644910

Luminaire Tested: OMN4DIP-SR4F0-50D150U835-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644910
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/16/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-50D150U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - FLAT FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

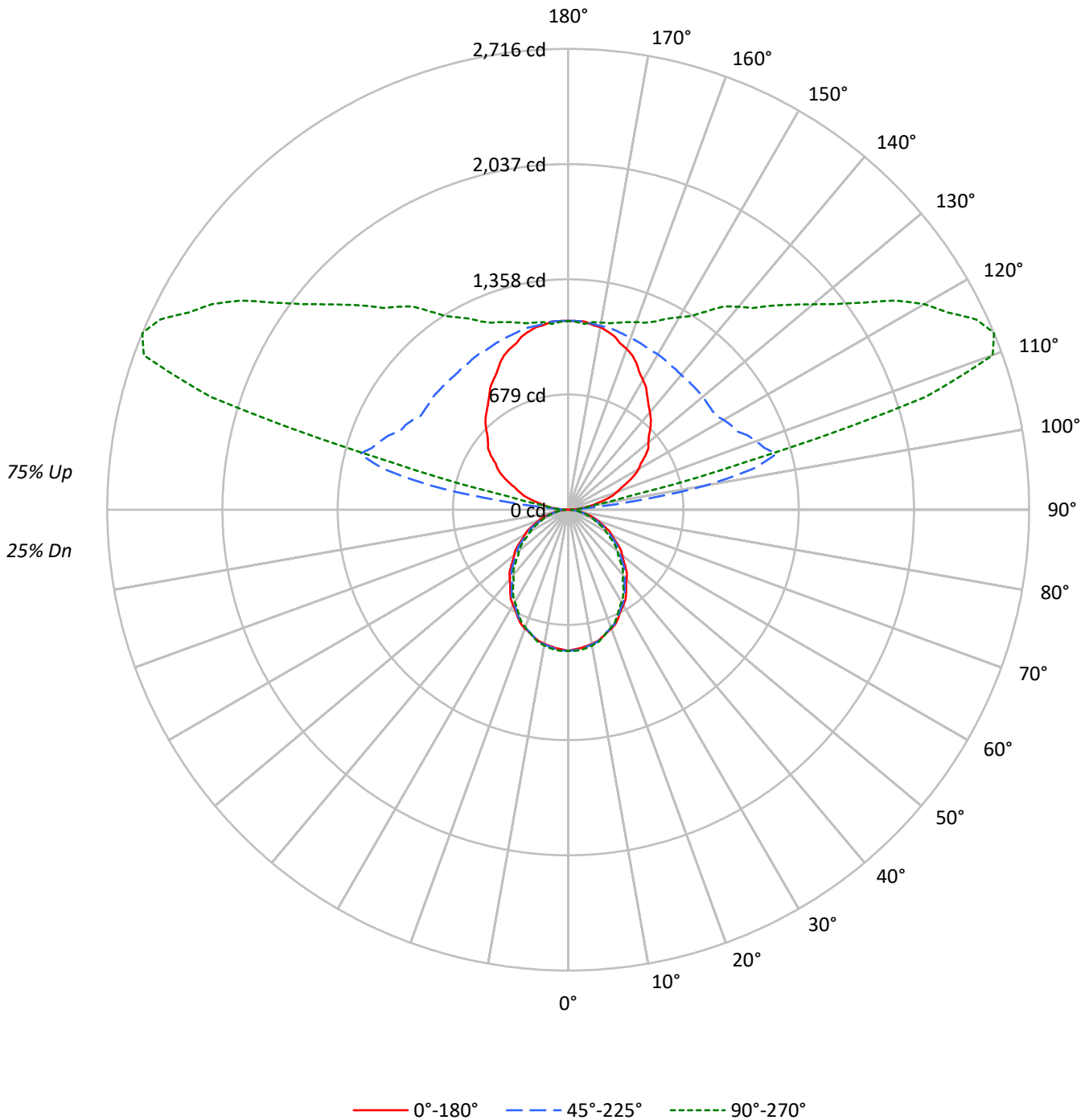
Lumens per Lamp: N/A
Luminaire Lumens: 8010.7 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
Input Voltage (V): 120
Input Current (A_{in}): 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





TEST NUMBER: P644910

CATALOG NUMBER: OMN4DIP-SR4F0-50D150U835-FLLOOB-1DUDD-WW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|----|--|--|--|--|--|--|--|--|----|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | |
| RC | 80 | | | | | | | | | 70 | | | | | | | | | 50 | | | | | | | | | 30 | | | | | | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 70 | 70 | 70 | 51 | 51 | 51 | 33 | 33 | 33 | 25 | | | | | | | | | | | | | | | | | | | | |
| 1 | 92 | 88 | 84 | 81 | 82 | 79 | 76 | 73 | 61 | 59 | 57 | 45 | 43 | 42 | 29 | 29 | 28 | 21 | | | | | | | | | | | | | | | | | | | | |
| 2 | 84 | 77 | 71 | 66 | 75 | 69 | 64 | 60 | 53 | 50 | 47 | 39 | 37 | 35 | 26 | 25 | 24 | 18 | | | | | | | | | | | | | | | | | | | | |
| 3 | 77 | 68 | 61 | 55 | 68 | 60 | 55 | 50 | 47 | 43 | 40 | 35 | 32 | 30 | 23 | 22 | 20 | 15 | | | | | | | | | | | | | | | | | | | | |
| 4 | 70 | 60 | 52 | 46 | 62 | 53 | 47 | 42 | 42 | 37 | 34 | 31 | 28 | 25 | 21 | 19 | 17 | 13 | | | | | | | | | | | | | | | | | | | | |
| 5 | 64 | 53 | 45 | 40 | 57 | 48 | 41 | 36 | 37 | 33 | 29 | 28 | 24 | 22 | 19 | 17 | 15 | 11 | | | | | | | | | | | | | | | | | | | | |
| 6 | 59 | 47 | 40 | 34 | 52 | 43 | 36 | 31 | 33 | 29 | 25 | 25 | 22 | 19 | 17 | 15 | 13 | 10 | | | | | | | | | | | | | | | | | | | | |
| 7 | 54 | 43 | 35 | 30 | 48 | 38 | 32 | 27 | 30 | 25 | 22 | 23 | 19 | 17 | 15 | 13 | 12 | 9 | | | | | | | | | | | | | | | | | | | | |
| 8 | 50 | 39 | 31 | 26 | 45 | 35 | 28 | 24 | 27 | 23 | 19 | 21 | 17 | 15 | 14 | 12 | 11 | 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | 47 | 35 | 28 | 23 | 42 | 32 | 25 | 21 | 25 | 20 | 17 | 19 | 16 | 13 | 13 | 11 | 10 | 7 | | | | | | | | | | | | | | | | | | | | |
| 10 | 44 | 32 | 25 | 21 | 39 | 29 | 23 | 19 | 23 | 19 | 15 | 17 | 14 | 12 | 12 | 10 | 9 | 7 | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13430 | 13430 | 13430 |
| 5° | 13279 | 13371 | 13462 |
| 10° | 13173 | 13229 | 13321 |
| 15° | 12996 | 12996 | 13071 |
| 20° | 12814 | 12716 | 12677 |
| 25° | 12479 | 12378 | 12218 |
| 30° | 12111 | 11941 | 11710 |
| 35° | 11734 | 11442 | 11176 |
| 40° | 11282 | 10947 | 10566 |
| 45° | 10905 | 10492 | 9974 |
| 50° | 10432 | 9977 | 9465 |
| 55° | 10035 | 9526 | 8952 |
| 60° | 9574 | 9064 | 8296 |
| 65° | 9077 | 8432 | 7782 |
| 70° | 8601 | 7799 | 7265 |
| 75° | 8047 | 7130 | 6775 |
| 80° | 7364 | 6527 | 6211 |
| 85° | 6910 | 6076 | 5669 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10905 cd/sqm



TEST NUMBER: P644910

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.2 | 1.0 |
| 10°-20° | 219.6 | 2.7 |
| 20°-30° | 319.3 | 4.0 |
| 30°-40° | 363.2 | 4.5 |
| 40°-50° | 354.1 | 4.4 |
| 50°-60° | 302.2 | 3.8 |
| 60°-70° | 219.6 | 2.7 |
| 70°-80° | 124.2 | 1.6 |
| 80°-90° | 40.8 | 0.5 |
| 90°-100° | 141.7 | 1.8 |
| 100°-110° | 977.9 | 12.2 |
| 110°-120° | 1325.6 | 16.5 |
| 120°-130° | 1078.5 | 13.5 |
| 130°-140° | 866.8 | 10.8 |
| 140°-150° | 683.3 | 8.5 |
| 150°-160° | 499.6 | 6.2 |
| 160°-170° | 310.3 | 3.9 |
| 170°-180° | 105.8 | 1.3 |
| 0°-30° | 617.1 | 7.7 |
| 0°-40° | 980.2 | 12.2 |
| 0°-60° | 1636.6 | 20.4 |
| 0°-90° | 2021.2 | 25.2 |
| 90°-120° | 2445.2 | 30.5 |
| 90°-150° | 5073.7 | 63.3 |
| 90°-180° | 5989.0 | 74.8 |
| 0°-180° | 8010.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 832 | 832 | 832 | 832 | 832 | |
| 5° | 819 | 832 | 825 | 824 | 831 | 78 |
| 15° | 778 | 787 | 778 | 776 | 782 | 219 |
| 25° | 700 | 707 | 695 | 682 | 686 | 322 |
| 35° | 595 | 598 | 580 | 567 | 567 | 372 |
| 45° | 478 | 475 | 460 | 444 | 437 | 368 |
| 55° | 356 | 355 | 338 | 322 | 318 | 318 |
| 65° | 238 | 235 | 221 | 207 | 204 | 236 |
| 75° | 129 | 125 | 114 | 110 | 109 | 137 |
| 85° | 37 | 33 | 33 | 32 | 31 | 40 |
| 90° | 4 | 12 | 21 | 27 | 27 | 7 |
| 95° | 65 | 108 | 59 | 67 | 79 | 69 |
| 105° | 223 | 337 | 1269 | 1620 | 1071 | 235 |
| 115° | 388 | 470 | 1093 | 2270 | 2653 | 386 |
| 125° | 555 | 631 | 1030 | 1800 | 2128 | 493 |
| 135° | 686 | 761 | 1036 | 1482 | 1701 | 528 |
| 145° | 812 | 880 | 1043 | 1291 | 1428 | 510 |
| 155° | 952 | 986 | 1064 | 1170 | 1225 | 437 |
| 165° | 1057 | 1071 | 1092 | 1121 | 1141 | 297 |
| 175° | 1113 | 1120 | 1113 | 1106 | 1099 | 105 |
| 180° | 1113 | 1113 | 1113 | 1113 | 1113 | |



TEST NUMBER: P644910

CATALOG NUMBER: OMN4DIP-SR4F0-50D150U835-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 831.8 | 831.8 | 831.8 | 831.8 | 831.8 |
| 2.5° | 824.5 | 835.2 | 829.1 | 829.1 | 832.7 |
| 5° | 819.3 | 831.5 | 825.0 | 824.0 | 830.6 |
| 7.5° | 810.7 | 822.7 | 815.0 | 813.9 | 822.5 |
| 10° | 803.5 | 814.5 | 806.9 | 804.8 | 812.5 |
| 12.5° | 793.5 | 804.6 | 796.9 | 793.9 | 801.7 |
| 15° | 777.5 | 787.4 | 777.5 | 776.4 | 782.0 |
| 17.5° | 759.3 | 768.0 | 756.4 | 752.7 | 756.9 |
| 20° | 745.8 | 753.5 | 740.1 | 734.5 | 737.8 |
| 22.5° | 728.6 | 736.3 | 722.0 | 713.7 | 717.9 |
| 25° | 700.5 | 707.1 | 694.8 | 682.5 | 685.8 |
| 27.5° | 670.4 | 675.5 | 663.2 | 650.5 | 651.6 |
| 30° | 649.6 | 652.9 | 640.5 | 627.0 | 628.1 |
| 32.5° | 627.8 | 630.3 | 617.0 | 602.5 | 602.7 |
| 35° | 595.3 | 597.5 | 580.5 | 567.0 | 567.0 |
| 37.5° | 560.6 | 562.0 | 543.9 | 529.1 | 527.6 |
| 40° | 535.3 | 537.5 | 519.4 | 504.6 | 501.3 |
| 42.5° | 511.7 | 512.2 | 495.9 | 481.1 | 476.9 |
| 45° | 477.6 | 475.4 | 459.5 | 443.5 | 436.8 |
| 47.5° | 440.7 | 440.7 | 422.6 | 406.6 | 400.4 |
| 50° | 415.3 | 415.3 | 397.2 | 381.3 | 376.8 |
| 52.5° | 391.8 | 390.9 | 373.7 | 357.7 | 351.5 |
| 55° | 356.5 | 355.4 | 338.4 | 322.4 | 318.0 |
| 57.5° | 319.1 | 319.1 | 303.3 | 286.2 | 281.3 |
| 60° | 296.5 | 296.5 | 280.7 | 263.5 | 256.9 |
| 62.5° | 272.1 | 271.2 | 255.3 | 240.0 | 236.1 |
| 65° | 237.6 | 235.4 | 220.7 | 207.0 | 203.7 |
| 67.5° | 204.8 | 202.6 | 187.0 | 176.0 | 173.8 |
| 70° | 182.2 | 180.0 | 165.2 | 156.1 | 153.9 |
| 72.5° | 160.5 | 157.4 | 144.4 | 137.1 | 134.9 |
| 75° | 129.0 | 124.6 | 114.3 | 109.7 | 108.6 |
| 77.5° | 99.1 | 91.6 | 87.4 | 84.2 | 83.1 |
| 80° | 79.2 | 72.6 | 70.2 | 67.9 | 66.8 |
| 82.5° | 62.0 | 55.4 | 54.8 | 53.4 | 52.3 |
| 85° | 37.3 | 32.9 | 32.8 | 31.7 | 30.6 |
| 87.5° | 16.3 | 15.2 | 16.8 | 18.0 | 18.0 |
| 90° | 4.5 | 12.5 | 20.8 | 26.7 | 26.7 |
| 92.5° | 24.9 | 29.4 | 35.8 | 48.3 | 52.9 |
| 95° | 65.1 | 108.5 | 59.4 | 66.7 | 79.3 |
| 97.5° | 107.3 | 203.9 | 414.8 | 123.5 | 106.1 |
| 100° | 140.9 | 254.0 | 828.3 | 244.3 | 162.1 |
| 102.5° | 173.6 | 292.2 | 1119.6 | 642.8 | 351.7 |
| 105° | 222.7 | 336.8 | 1269.4 | 1619.8 | 1071.1 |
| 107.5° | 272.9 | 358.5 | 1212.0 | 2356.9 | 2206.6 |
| 110° | 305.6 | 386.6 | 1178.4 | 2476.5 | 2660.2 |



TEST NUMBER: P644910

CATALOG NUMBER: OMN4DIP-SR4F0-50D150U835-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 339.2 | 420.2 | 1144.8 | 2406.6 | 2716.2 |
| 115° | 388.4 | 469.5 | 1093.2 | 2269.9 | 2653.2 |
| 117.5° | 440.2 | 519.9 | 1080.6 | 2123.1 | 2517.4 |
| 120° | 479.4 | 553.6 | 1058.2 | 2011.5 | 2422.2 |
| 122.5° | 506.5 | 587.1 | 1030.2 | 1915.6 | 2293.4 |
| 125° | 555.3 | 630.6 | 1030.2 | 1799.6 | 2128.2 |
| 127.5° | 594.8 | 672.3 | 1031.6 | 1665.1 | 1989.6 |
| 130° | 617.2 | 699.3 | 1037.2 | 1575.1 | 1883.2 |
| 132.5° | 644.3 | 726.4 | 1036.3 | 1534.7 | 1788.0 |
| 135° | 686.1 | 761.4 | 1036.1 | 1482.1 | 1701.2 |
| 137.5° | 721.1 | 801.8 | 1036.1 | 1424.0 | 1611.5 |
| 140° | 749.1 | 824.4 | 1036.1 | 1390.0 | 1561.1 |
| 142.5° | 777.1 | 846.9 | 1041.7 | 1350.6 | 1510.7 |
| 145° | 812.1 | 880.5 | 1043.1 | 1291.2 | 1428.1 |
| 147.5° | 854.1 | 914.3 | 1051.5 | 1248.5 | 1353.9 |
| 150° | 882.1 | 936.8 | 1057.1 | 1220.1 | 1309.1 |
| 152.5° | 910.1 | 959.4 | 1057.1 | 1197.4 | 1269.9 |
| 155° | 952.1 | 986.3 | 1064.1 | 1170.3 | 1225.1 |
| 157.5° | 985.7 | 1018.5 | 1072.5 | 1153.2 | 1192.9 |
| 160° | 1008.1 | 1035.5 | 1078.1 | 1141.9 | 1176.1 |
| 162.5° | 1024.9 | 1052.3 | 1083.7 | 1136.0 | 1159.3 |
| 165° | 1057.1 | 1070.8 | 1092.1 | 1120.6 | 1141.1 |
| 167.5° | 1075.3 | 1087.6 | 1099.1 | 1113.4 | 1125.7 |
| 170° | 1092.1 | 1098.9 | 1099.1 | 1113.3 | 1120.1 |
| 172.5° | 1097.7 | 1110.0 | 1104.7 | 1107.7 | 1114.5 |
| 175° | 1113.1 | 1119.9 | 1113.1 | 1105.9 | 1099.1 |
| 177.5° | 1113.1 | 1118.6 | 1113.1 | 1113.0 | 1107.5 |
| 180° | 1113.1 | 1113.1 | 1113.1 | 1113.1 | 1113.1 |

(END OF REPORT)