

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: P644931

Luminaire Tested: OMN4DIP-SR4F0-50D150U940-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644931
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-SR4F0-50D150U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

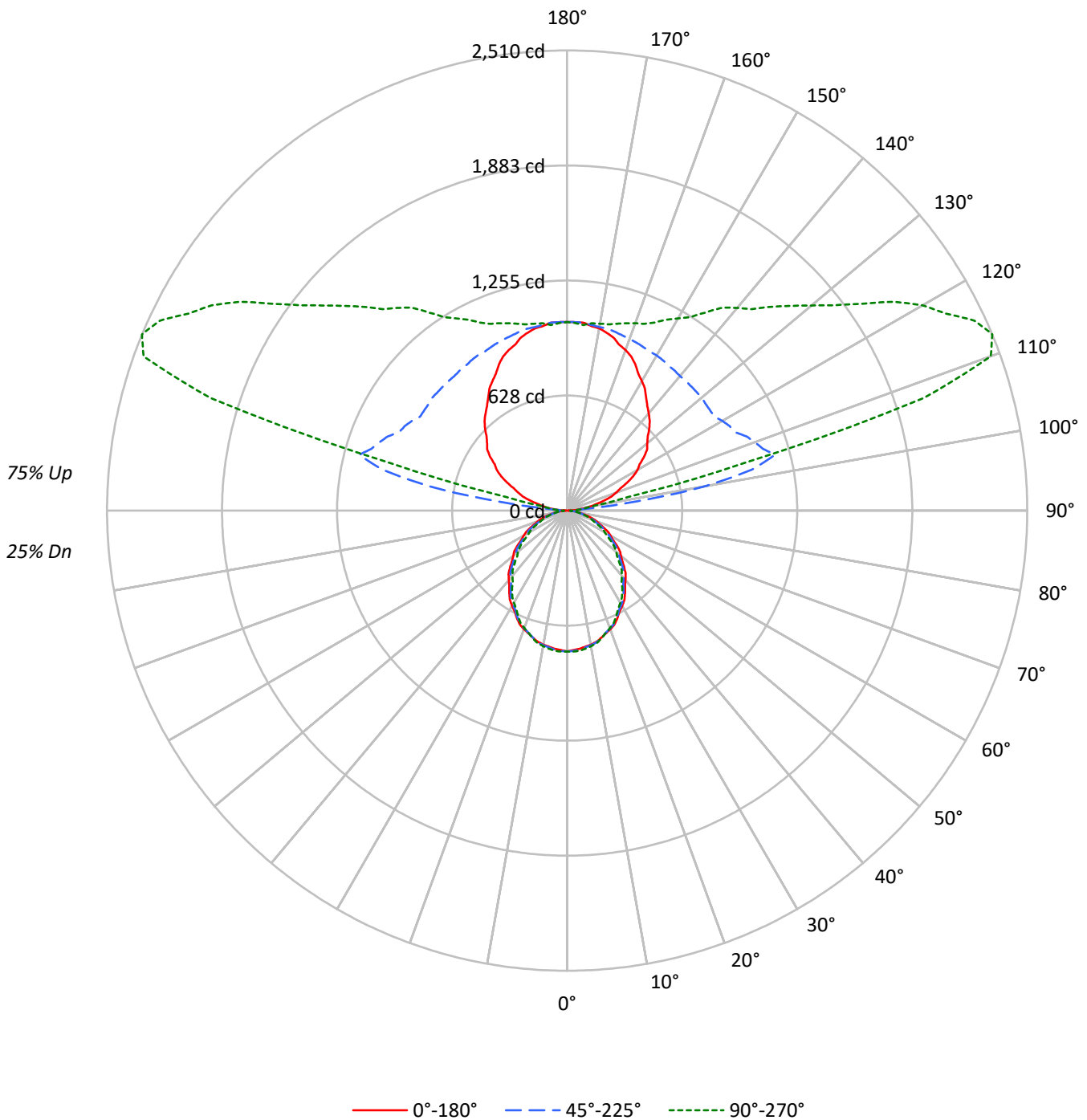
Lumens per Lamp: N/A
Luminaire Lumens: 7403.2 lumens
Efficiency: N/A
Efficacy: 117.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
Input Voltage (V): 120
Input Current (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





TEST NUMBER: P644931

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| RF | 20 | | | | | 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 | 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° | 12411 | 12411 | 12411 |
| 5° | 12272 | 12357 | 12443 |
| 10° | 12175 | 12226 | 12311 |
| 15° | 12010 | 12010 | 12080 |
| 20° | 11842 | 11753 | 11716 |
| 25° | 11533 | 11441 | 11291 |
| 30° | 11192 | 11037 | 10821 |
| 35° | 10843 | 10575 | 10328 |
| 40° | 10427 | 10117 | 9765 |
| 45° | 10076 | 9695 | 9218 |
| 50° | 9640 | 9221 | 8749 |
| 55° | 9272 | 8802 | 8273 |
| 60° | 8848 | 8376 | 7666 |
| 65° | 8390 | 7790 | 7194 |
| 70° | 7950 | 7209 | 6713 |
| 75° | 7436 | 6588 | 6263 |
| 80° | 6806 | 6025 | 5737 |
| 85° | 6391 | 5613 | 5224 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10076 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 72.3 | 1.0 |
| 10°-20° | 202.9 | 2.7 |
| 20°-30° | 295.1 | 4.0 |
| 30°-40° | 335.6 | 4.5 |
| 40°-50° | 327.2 | 4.4 |
| 50°-60° | 279.3 | 3.8 |
| 60°-70° | 203.0 | 2.7 |
| 70°-80° | 114.8 | 1.6 |
| 80°-90° | 37.7 | 0.5 |
| 90°-100° | 130.9 | 1.8 |
| 100°-110° | 903.8 | 12.2 |
| 110°-120° | 1225.1 | 16.5 |
| 120°-130° | 996.7 | 13.5 |
| 130°-140° | 801.0 | 10.8 |
| 140°-150° | 631.5 | 8.5 |
| 150°-160° | 461.7 | 6.2 |
| 160°-170° | 286.8 | 3.9 |
| 170°-180° | 97.8 | 1.3 |
| 0°-30° | 570.3 | 7.7 |
| 0°-40° | 905.9 | 12.2 |
| 0°-60° | 1512.4 | 20.4 |
| 0°-90° | 1867.9 | 25.2 |
| 90°-120° | 2259.8 | 30.5 |
| 90°-150° | 4689.0 | 63.3 |
| 90°-180° | 5535.0 | 74.8 |
| 0°-180° | 7403.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 769 | 769 | 769 | 769 | 769 | |
| 5° | 757 | 768 | 762 | 762 | 768 | 72 |
| 15° | 718 | 728 | 718 | 718 | 723 | 203 |
| 25° | 647 | 654 | 642 | 631 | 634 | 298 |
| 35° | 550 | 552 | 536 | 524 | 524 | 343 |
| 45° | 441 | 439 | 425 | 410 | 404 | 340 |
| 55° | 329 | 328 | 313 | 298 | 294 | 294 |
| 65° | 220 | 218 | 204 | 191 | 188 | 218 |
| 75° | 119 | 115 | 106 | 101 | 100 | 127 |
| 85° | 34 | 30 | 30 | 29 | 28 | 37 |
| 90° | 4 | 12 | 19 | 25 | 25 | 6 |
| 95° | 60 | 100 | 55 | 62 | 73 | 64 |
| 105° | 206 | 311 | 1173 | 1497 | 990 | 218 |
| 115° | 359 | 434 | 1010 | 2098 | 2452 | 357 |
| 125° | 513 | 583 | 952 | 1663 | 1967 | 456 |
| 135° | 634 | 704 | 958 | 1370 | 1572 | 488 |
| 145° | 750 | 814 | 964 | 1193 | 1320 | 471 |
| 155° | 880 | 912 | 983 | 1082 | 1132 | 404 |
| 165° | 977 | 990 | 1009 | 1036 | 1055 | 274 |
| 175° | 1029 | 1035 | 1029 | 1022 | 1016 | 97 |
| 180° | 1029 | 1029 | 1029 | 1029 | 1029 | |



TEST NUMBER: P644931

CATALOG NUMBER: OMN4DIP-SR4F0-50D150U940-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 768.7 | 768.7 | 768.7 | 768.7 | 768.7 |
| 2.5° | 762.0 | 771.8 | 766.2 | 766.3 | 769.5 |
| 5° | 757.2 | 768.4 | 762.4 | 761.5 | 767.7 |
| 7.5° | 749.2 | 760.3 | 753.2 | 752.1 | 760.1 |
| 10° | 742.6 | 752.8 | 745.7 | 743.8 | 750.9 |
| 12.5° | 733.4 | 743.6 | 736.5 | 733.7 | 740.9 |
| 15° | 718.5 | 727.7 | 718.5 | 717.6 | 722.7 |
| 17.5° | 701.8 | 709.7 | 699.0 | 695.6 | 699.5 |
| 20° | 689.2 | 696.4 | 684.0 | 678.8 | 681.9 |
| 22.5° | 673.3 | 680.5 | 667.3 | 659.6 | 663.5 |
| 25° | 647.4 | 653.5 | 642.2 | 630.7 | 633.8 |
| 27.5° | 619.6 | 624.3 | 612.9 | 601.2 | 602.2 |
| 30° | 600.3 | 603.4 | 592.0 | 579.4 | 580.4 |
| 32.5° | 580.2 | 582.5 | 570.2 | 556.8 | 557.0 |
| 35° | 550.1 | 552.2 | 536.5 | 524.0 | 524.0 |
| 37.5° | 518.1 | 519.3 | 502.6 | 489.0 | 487.6 |
| 40° | 494.7 | 496.7 | 480.0 | 466.4 | 463.3 |
| 42.5° | 472.9 | 473.3 | 458.3 | 444.6 | 440.7 |
| 45° | 441.3 | 439.3 | 424.6 | 409.8 | 403.7 |
| 47.5° | 407.3 | 407.3 | 390.5 | 375.7 | 370.0 |
| 50° | 383.8 | 383.8 | 367.1 | 352.4 | 348.3 |
| 52.5° | 362.1 | 361.3 | 345.3 | 330.6 | 324.8 |
| 55° | 329.4 | 328.4 | 312.7 | 298.0 | 293.9 |
| 57.5° | 294.9 | 294.9 | 280.3 | 264.5 | 260.0 |
| 60° | 274.0 | 274.0 | 259.4 | 243.5 | 237.4 |
| 62.5° | 251.4 | 250.6 | 235.9 | 221.8 | 218.2 |
| 65° | 219.6 | 217.6 | 203.9 | 191.3 | 188.3 |
| 67.5° | 189.3 | 187.3 | 172.8 | 162.7 | 160.6 |
| 70° | 168.4 | 166.3 | 152.7 | 144.3 | 142.2 |
| 72.5° | 148.3 | 145.4 | 133.5 | 126.7 | 124.7 |
| 75° | 119.2 | 115.1 | 105.6 | 101.4 | 100.4 |
| 77.5° | 91.6 | 84.7 | 80.7 | 77.8 | 76.8 |
| 80° | 73.2 | 67.1 | 64.8 | 62.7 | 61.7 |
| 82.5° | 57.3 | 51.2 | 50.6 | 49.3 | 48.3 |
| 85° | 34.5 | 30.4 | 30.3 | 29.3 | 28.2 |
| 87.5° | 15.1 | 14.1 | 15.6 | 16.6 | 16.6 |
| 90° | 4.2 | 11.5 | 19.2 | 24.6 | 24.6 |
| 92.5° | 23.1 | 27.1 | 33.1 | 44.6 | 48.8 |
| 95° | 60.1 | 100.3 | 54.9 | 61.6 | 73.3 |
| 97.5° | 99.2 | 188.5 | 383.4 | 114.1 | 98.1 |
| 100° | 130.2 | 234.7 | 765.5 | 225.8 | 149.9 |
| 102.5° | 160.5 | 270.0 | 1034.7 | 594.0 | 325.0 |
| 105° | 205.8 | 311.3 | 1173.1 | 1497.0 | 989.9 |
| 107.5° | 252.2 | 331.3 | 1120.1 | 2178.2 | 2039.3 |
| 110° | 282.4 | 357.3 | 1089.0 | 2288.7 | 2458.5 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 313.4 | 388.3 | 1058.0 | 2224.1 | 2510.3 |
| 115° | 359.0 | 433.9 | 1010.3 | 2097.8 | 2452.0 |
| 117.5° | 406.9 | 480.5 | 998.7 | 1962.2 | 2326.5 |
| 120° | 443.1 | 511.6 | 978.0 | 1859.0 | 2238.5 |
| 122.5° | 468.1 | 542.6 | 952.1 | 1770.3 | 2119.5 |
| 125° | 513.2 | 582.8 | 952.1 | 1663.2 | 1966.8 |
| 127.5° | 549.7 | 621.4 | 953.4 | 1538.9 | 1838.7 |
| 130° | 570.4 | 646.3 | 958.6 | 1455.7 | 1740.4 |
| 132.5° | 595.4 | 671.3 | 957.7 | 1418.3 | 1652.4 |
| 135° | 634.0 | 703.6 | 957.5 | 1369.7 | 1572.2 |
| 137.5° | 666.4 | 741.0 | 957.5 | 1316.0 | 1489.3 |
| 140° | 692.3 | 761.9 | 957.5 | 1284.6 | 1442.8 |
| 142.5° | 718.1 | 782.7 | 962.7 | 1248.1 | 1396.2 |
| 145° | 750.5 | 813.8 | 964.0 | 1193.3 | 1319.8 |
| 147.5° | 789.3 | 845.0 | 971.8 | 1153.8 | 1251.3 |
| 150° | 815.2 | 865.8 | 976.9 | 1127.6 | 1209.8 |
| 152.5° | 841.1 | 886.6 | 976.9 | 1106.6 | 1173.6 |
| 155° | 879.9 | 911.5 | 983.4 | 1081.6 | 1132.2 |
| 157.5° | 910.9 | 941.3 | 991.2 | 1065.8 | 1102.4 |
| 160° | 931.6 | 957.0 | 996.3 | 1055.3 | 1086.9 |
| 162.5° | 947.2 | 972.5 | 1001.5 | 1049.9 | 1071.4 |
| 165° | 976.9 | 989.6 | 1009.3 | 1035.6 | 1054.6 |
| 167.5° | 993.8 | 1005.1 | 1015.8 | 1029.0 | 1040.3 |
| 170° | 1009.3 | 1015.6 | 1015.8 | 1028.8 | 1035.2 |
| 172.5° | 1014.5 | 1025.8 | 1020.9 | 1023.7 | 1030.0 |
| 175° | 1028.7 | 1035.0 | 1028.7 | 1022.1 | 1015.8 |
| 177.5° | 1028.7 | 1033.8 | 1028.7 | 1028.6 | 1023.5 |
| 180° | 1028.7 | 1028.7 | 1028.7 | 1028.7 | 1028.7 |

(END OF REPORT)