

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: P644929

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

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644929
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-20)
Test Lab: INNOVATION CENTER
Issue Date: 2/16/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-50D150U940-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

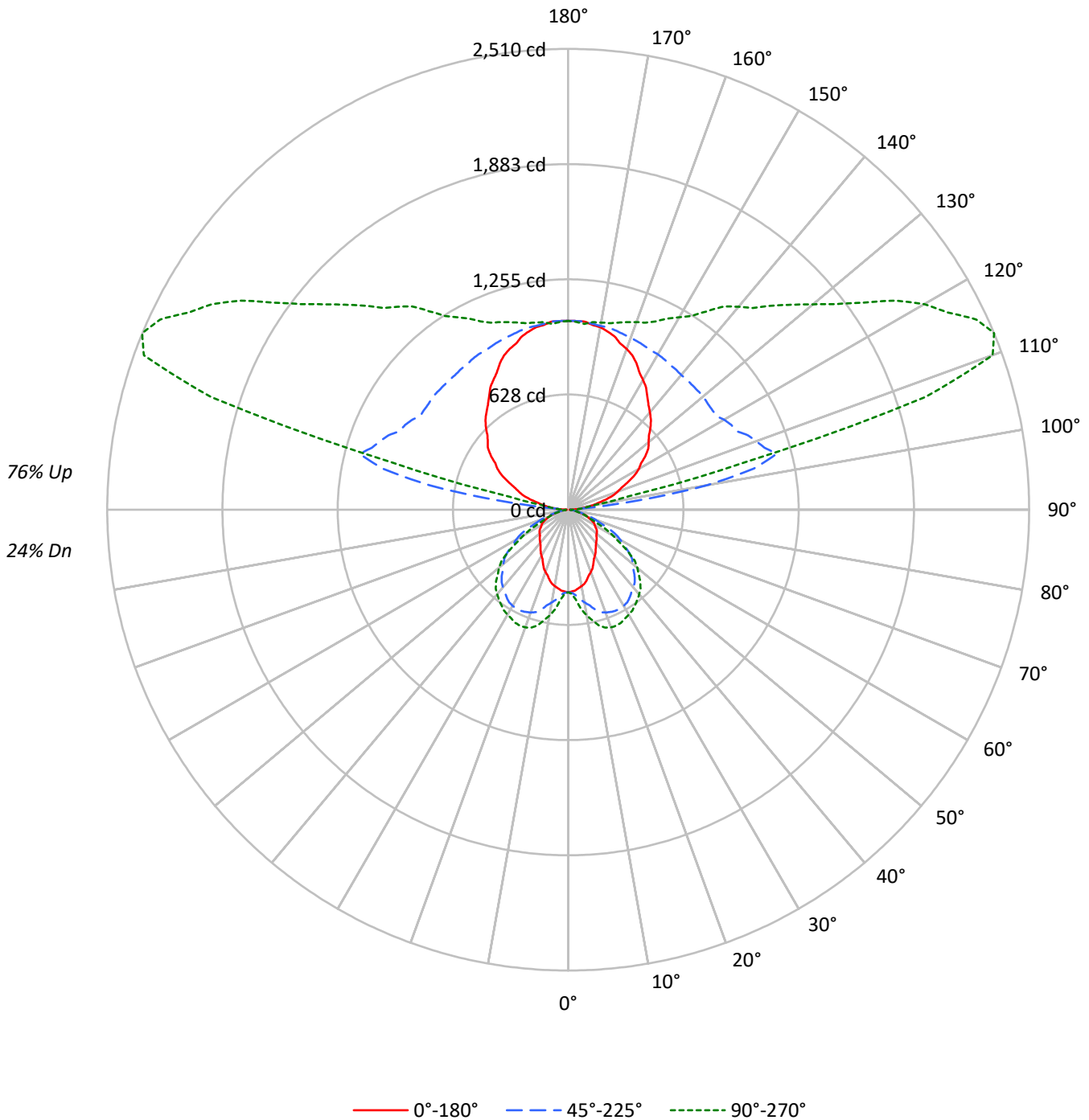
Lumens per Lamp: N/A
Luminaire Lumens: 7267.5 lumens
Efficiency: N/A
Efficacy: 115.5 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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: P644929

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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 69 | 69 | 69 | 50 | 50 | 50 | 32 | 32 | 32 | 24 |
| 1 | 92 | 88 | 84 | 81 | 82 | 78 | 75 | 72 | 60 | 58 | 56 | 44 | 42 | 41 | 28 | 28 | 27 | 20 |
| 2 | 84 | 77 | 71 | 66 | 74 | 68 | 63 | 59 | 53 | 49 | 47 | 38 | 36 | 34 | 25 | 24 | 23 | 17 |
| 3 | 76 | 67 | 60 | 55 | 67 | 60 | 54 | 49 | 46 | 42 | 39 | 34 | 31 | 29 | 22 | 21 | 19 | 14 |
| 4 | 70 | 59 | 52 | 46 | 62 | 53 | 47 | 42 | 41 | 37 | 33 | 30 | 27 | 25 | 20 | 18 | 16 | 12 |
| 5 | 64 | 53 | 45 | 39 | 56 | 47 | 40 | 35 | 36 | 32 | 28 | 27 | 24 | 21 | 18 | 16 | 14 | 10 |
| 6 | 58 | 47 | 39 | 34 | 52 | 42 | 35 | 30 | 33 | 28 | 24 | 24 | 21 | 18 | 16 | 14 | 12 | 9 |
| 7 | 54 | 42 | 34 | 29 | 48 | 38 | 31 | 26 | 29 | 25 | 21 | 22 | 18 | 16 | 14 | 12 | 11 | 8 |
| 8 | 50 | 38 | 31 | 25 | 44 | 34 | 28 | 23 | 27 | 22 | 19 | 20 | 16 | 14 | 13 | 11 | 10 | 7 |
| 9 | 46 | 34 | 27 | 22 | 41 | 31 | 25 | 20 | 24 | 20 | 16 | 18 | 15 | 13 | 12 | 10 | 9 | 6 |
| 10 | 43 | 31 | 24 | 20 | 38 | 28 | 22 | 18 | 22 | 18 | 15 | 16 | 13 | 11 | 11 | 9 | 8 | 6 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 7261 | 7261 | 7261 |
| 5° | 7152 | 7559 | 8000 |
| 10° | 6927 | 8402 | 9584 |
| 15° | 6591 | 9387 | 10927 |
| 20° | 6199 | 10242 | 11716 |
| 25° | 5776 | 10824 | 12111 |
| 30° | 5401 | 11270 | 12303 |
| 35° | 5154 | 11503 | 12512 |
| 40° | 4983 | 11639 | 12676 |
| 45° | 4991 | 11677 | 12680 |
| 50° | 5069 | 11560 | 12321 |
| 55° | 5301 | 11336 | 11187 |
| 60° | 5402 | 10537 | 9084 |
| 65° | 5475 | 9230 | 6674 |
| 70° | 5235 | 7256 | 5183 |
| 75° | 4697 | 5415 | 4373 |
| 80° | 3989 | 4277 | 3505 |
| 85° | 3872 | 3483 | 2908 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 12680 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 46.1 | 0.6 |
| 10°-20° | 153.3 | 2.1 |
| 20°-30° | 254.6 | 3.5 |
| 30°-40° | 321.2 | 4.4 |
| 40°-50° | 343.4 | 4.7 |
| 50°-60° | 303.1 | 4.2 |
| 60°-70° | 194.5 | 2.7 |
| 70°-80° | 86.3 | 1.2 |
| 80°-90° | 24.7 | 0.3 |
| 90°-100° | 132.4 | 1.8 |
| 100°-110° | 905.0 | 12.5 |
| 110°-120° | 1226.4 | 16.9 |
| 120°-130° | 997.7 | 13.7 |
| 130°-140° | 801.1 | 11.0 |
| 140°-150° | 631.5 | 8.7 |
| 150°-160° | 461.7 | 6.4 |
| 160°-170° | 286.8 | 3.9 |
| 170°-180° | 97.8 | 1.3 |
| 0°-30° | 454.0 | 6.2 |
| 0°-40° | 775.2 | 10.7 |
| 0°-60° | 1421.7 | 19.6 |
| 0°-90° | 1727.2 | 23.8 |
| 90°-120° | 2263.8 | 31.1 |
| 90°-150° | 4694.1 | 64.6 |
| 90°-180° | 5540.0 | 76.2 |
| 0°-180° | 7267.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 450 | 450 | 450 | 450 | 450 | |
| 5° | 441 | 455 | 466 | 482 | 494 | 41 |
| 15° | 394 | 455 | 562 | 629 | 654 | 110 |
| 25° | 324 | 440 | 608 | 664 | 680 | 149 |
| 35° | 262 | 402 | 584 | 622 | 635 | 164 |
| 45° | 219 | 343 | 511 | 543 | 555 | 169 |
| 55° | 188 | 270 | 403 | 405 | 397 | 167 |
| 65° | 143 | 181 | 242 | 196 | 175 | 140 |
| 75° | 75 | 84 | 87 | 74 | 70 | 80 |
| 85° | 21 | 18 | 19 | 17 | 16 | 22 |
| 90° | 7 | 14 | 19 | 26 | 24 | 7 |
| 95° | 63 | 104 | 57 | 62 | 73 | 66 |
| 105° | 208 | 314 | 1174 | 1497 | 990 | 220 |
| 115° | 361 | 436 | 1012 | 2099 | 2452 | 359 |
| 125° | 514 | 584 | 954 | 1664 | 1967 | 457 |
| 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: P644929

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

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 449.7 | 449.7 | 449.7 | 449.7 | 449.7 |
| 2.5° | 446.4 | 452.9 | 453.1 | 455.6 | 458.9 |
| 5° | 441.3 | 454.6 | 466.4 | 482.4 | 493.6 |
| 7.5° | 430.9 | 454.6 | 492.4 | 529.4 | 547.8 |
| 10° | 422.5 | 455.2 | 512.5 | 562.1 | 584.6 |
| 12.5° | 411.6 | 455.0 | 532.5 | 592.3 | 618.1 |
| 15° | 394.3 | 454.6 | 561.6 | 629.1 | 653.7 |
| 17.5° | 374.2 | 452.7 | 584.4 | 652.1 | 673.5 |
| 20° | 360.8 | 450.8 | 596.1 | 660.4 | 681.9 |
| 22.5° | 345.8 | 446.4 | 602.8 | 664.6 | 684.4 |
| 25° | 324.2 | 439.8 | 607.6 | 664.5 | 679.8 |
| 27.5° | 303.1 | 430.3 | 607.8 | 656.0 | 669.1 |
| 30° | 289.7 | 422.6 | 604.5 | 647.7 | 659.9 |
| 32.5° | 278.0 | 414.2 | 597.8 | 637.6 | 650.7 |
| 35° | 261.5 | 401.6 | 583.6 | 621.5 | 634.8 |
| 37.5° | 247.2 | 387.1 | 565.6 | 602.6 | 618.1 |
| 40° | 236.4 | 375.4 | 552.2 | 589.1 | 601.4 |
| 42.5° | 228.0 | 363.0 | 536.3 | 572.3 | 583.0 |
| 45° | 218.6 | 343.3 | 511.4 | 543.1 | 555.3 |
| 47.5° | 208.5 | 323.1 | 482.8 | 512.6 | 520.6 |
| 50° | 201.8 | 308.2 | 460.2 | 487.4 | 490.5 |
| 52.5° | 197.7 | 292.6 | 438.4 | 455.6 | 456.2 |
| 55° | 188.3 | 270.1 | 402.7 | 404.6 | 397.4 |
| 57.5° | 175.7 | 243.8 | 357.3 | 347.0 | 329.9 |
| 60° | 167.3 | 225.6 | 326.3 | 305.9 | 281.3 |
| 62.5° | 159.0 | 208.3 | 293.7 | 260.6 | 232.0 |
| 65° | 143.3 | 181.1 | 241.6 | 196.1 | 174.7 |
| 67.5° | 125.1 | 151.3 | 189.7 | 146.7 | 132.4 |
| 70° | 110.9 | 131.3 | 153.7 | 120.0 | 109.8 |
| 72.5° | 97.5 | 111.4 | 124.5 | 99.2 | 93.9 |
| 75° | 75.3 | 83.5 | 86.8 | 74.2 | 70.1 |
| 77.5° | 55.4 | 55.8 | 60.2 | 52.2 | 50.2 |
| 80° | 42.9 | 40.8 | 46.0 | 39.7 | 37.7 |
| 82.5° | 32.8 | 30.0 | 33.5 | 28.8 | 27.6 |
| 85° | 20.9 | 17.8 | 18.8 | 16.7 | 15.7 |
| 87.5° | 12.3 | 11.2 | 12.2 | 12.6 | 11.4 |
| 90° | 7.3 | 13.6 | 19.2 | 25.6 | 23.6 |
| 92.5° | 25.4 | 29.2 | 33.9 | 44.8 | 47.8 |
| 95° | 63.3 | 103.5 | 57.0 | 61.6 | 73.3 |
| 97.5° | 102.1 | 191.4 | 384.4 | 114.3 | 98.1 |
| 100° | 132.3 | 236.8 | 766.6 | 226.8 | 149.9 |
| 102.5° | 162.6 | 272.9 | 1035.7 | 594.2 | 325.0 |
| 105° | 207.9 | 314.4 | 1174.2 | 1497.0 | 989.9 |
| 107.5° | 254.3 | 333.4 | 1121.1 | 2178.2 | 2039.3 |
| 110° | 284.5 | 359.4 | 1090.1 | 2288.7 | 2458.5 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 315.5 | 390.4 | 1059.0 | 2224.1 | 2510.3 |
| 115° | 361.1 | 436.0 | 1012.4 | 2098.8 | 2452.0 |
| 117.5° | 408.7 | 482.6 | 1000.8 | 1963.2 | 2326.5 |
| 120° | 444.1 | 513.7 | 980.1 | 1860.0 | 2238.5 |
| 122.5° | 470.0 | 543.8 | 953.4 | 1771.3 | 2119.5 |
| 125° | 514.2 | 583.8 | 954.2 | 1664.2 | 1966.8 |
| 127.5° | 550.7 | 622.4 | 954.4 | 1539.7 | 1838.7 |
| 130° | 571.4 | 647.3 | 959.6 | 1455.7 | 1740.4 |
| 132.5° | 595.6 | 671.5 | 957.9 | 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)