

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: P644629

Luminaire Tested: OMN4DIP-SR4F0-100D50U940-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644629
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-SR4F0-100D50U940-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

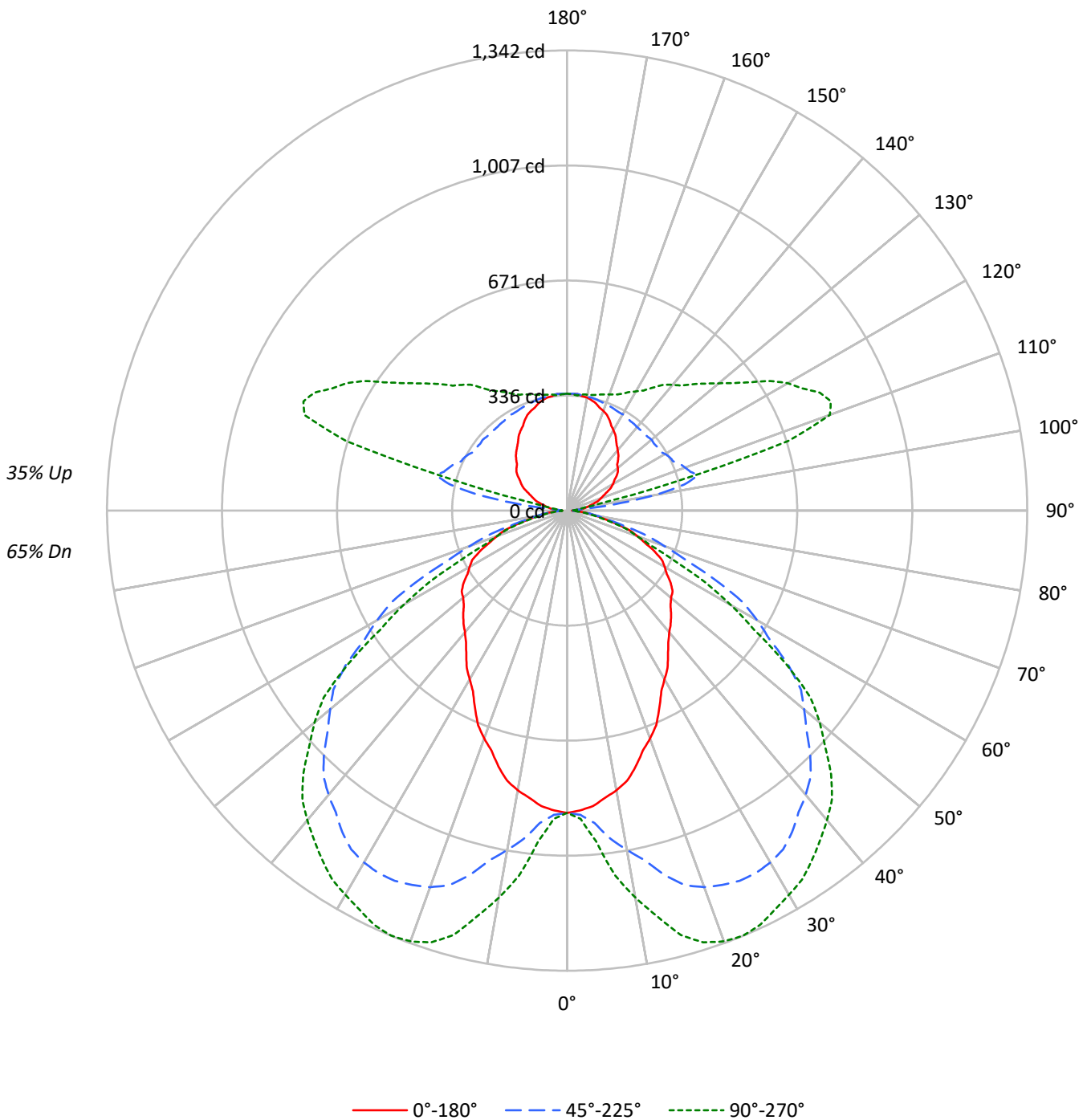
Lumens per Lamp: N/A
Luminaire Lumens: 5243.6 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 44.5
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: P644629

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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 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 91 | 91 | 91 | 80 | 80 | 80 | 69 | 69 | 69 | 65 | | | | |
| 1 | 101 | 97 | 93 | 89 | 95 | 91 | 88 | 85 | 80 | 78 | 76 | 71 | 69 | 67 | 62 | 60 | 59 | 55 | | | | |
| 2 | 92 | 85 | 78 | 73 | 86 | 80 | 74 | 69 | 71 | 66 | 63 | 62 | 59 | 56 | 54 | 52 | 50 | 46 | | | | |
| 3 | 84 | 74 | 67 | 61 | 79 | 70 | 63 | 58 | 62 | 57 | 52 | 55 | 51 | 47 | 48 | 45 | 42 | 39 | | | | |
| 4 | 77 | 66 | 57 | 51 | 72 | 62 | 55 | 49 | 55 | 49 | 45 | 49 | 44 | 40 | 43 | 39 | 36 | 33 | | | | |
| 5 | 70 | 58 | 50 | 44 | 66 | 55 | 48 | 42 | 49 | 43 | 38 | 43 | 39 | 35 | 38 | 34 | 31 | 28 | | | | |
| 6 | 65 | 52 | 44 | 38 | 61 | 49 | 42 | 36 | 44 | 38 | 33 | 39 | 34 | 30 | 35 | 30 | 27 | 25 | | | | |
| 7 | 60 | 47 | 39 | 33 | 56 | 45 | 37 | 32 | 40 | 34 | 29 | 35 | 30 | 27 | 31 | 27 | 24 | 22 | | | | |
| 8 | 55 | 43 | 35 | 29 | 52 | 40 | 33 | 28 | 36 | 30 | 26 | 32 | 27 | 24 | 29 | 24 | 21 | 19 | | | | |
| 9 | 52 | 39 | 31 | 26 | 48 | 37 | 30 | 25 | 33 | 27 | 23 | 30 | 25 | 21 | 26 | 22 | 19 | 17 | | | | |
| 10 | 48 | 36 | 28 | 23 | 45 | 34 | 27 | 22 | 31 | 25 | 21 | 27 | 22 | 19 | 24 | 20 | 17 | 15 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 14236 | 14236 | 14236 |
| 5° | 14024 | 14822 | 15686 |
| 10° | 13580 | 16472 | 18792 |
| 15° | 12921 | 18404 | 21421 |
| 20° | 12155 | 20081 | 22969 |
| 25° | 11323 | 21223 | 23742 |
| 30° | 10590 | 22095 | 24121 |
| 35° | 10104 | 22551 | 24532 |
| 40° | 9767 | 22818 | 24850 |
| 45° | 9784 | 22893 | 24859 |
| 50° | 9939 | 22662 | 24154 |
| 55° | 10390 | 22221 | 21931 |
| 60° | 10595 | 20657 | 17809 |
| 65° | 10732 | 18094 | 13081 |
| 70° | 10258 | 14228 | 10164 |
| 75° | 9208 | 10618 | 8571 |
| 80° | 7820 | 8387 | 6862 |
| 85° | 7595 | 6836 | 5706 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 24859 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.4 | 1.7 |
| 10°-20° | 300.5 | 5.7 |
| 20°-30° | 499.2 | 9.5 |
| 30°-40° | 629.8 | 12.0 |
| 40°-50° | 673.2 | 12.8 |
| 50°-60° | 594.2 | 11.3 |
| 60°-70° | 381.3 | 7.3 |
| 70°-80° | 169.1 | 3.2 |
| 80°-90° | 44.6 | 0.9 |
| 90°-100° | 53.5 | 1.0 |
| 100°-110° | 306.3 | 5.8 |
| 110°-120° | 411.4 | 7.8 |
| 120°-130° | 333.9 | 6.4 |
| 130°-140° | 266.0 | 5.1 |
| 140°-150° | 209.4 | 4.0 |
| 150°-160° | 153.1 | 2.9 |
| 160°-170° | 95.1 | 1.8 |
| 170°-180° | 32.4 | 0.6 |
| 0°-30° | 890.1 | 17.0 |
| 0°-40° | 1519.9 | 29.0 |
| 0°-60° | 2787.3 | 53.2 |
| 0°-90° | 3382.3 | 64.5 |
| 90°-120° | 771.2 | 14.7 |
| 90°-150° | 1580.6 | 30.1 |
| 90°-180° | 1861.0 | 35.5 |
| 0°-180° | 5243.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|------|-------|------|------|
| 0° | 882 | 882 | 882 | 882 | 882 | |
| 5° | 865 | 891 | 914 | 946 | 968 | 81 |
| 15° | 773 | 891 | 1101 | 1233 | 1282 | 216 |
| 25° | 636 | 862 | 1191 | 1303 | 1333 | 293 |
| 35° | 513 | 787 | 1144 | 1218 | 1245 | 322 |
| 45° | 428 | 673 | 1003 | 1065 | 1089 | 331 |
| 55° | 369 | 530 | 789 | 793 | 779 | 327 |
| 65° | 281 | 355 | 474 | 384 | 342 | 275 |
| 75° | 148 | 164 | 170 | 145 | 137 | 158 |
| 85° | 41 | 35 | 37 | 33 | 31 | 43 |
| 90° | 14 | 16 | 17 | 19 | 15 | 11 |
| 95° | 40 | 46 | 27 | 26 | 28 | 36 |
| 105° | 81 | 114 | 395 | 498 | 328 | 86 |
| 115° | 128 | 152 | 341 | 698 | 813 | 128 |
| 125° | 176 | 199 | 322 | 554 | 652 | 156 |
| 135° | 210 | 233 | 318 | 454 | 522 | 162 |
| 145° | 249 | 270 | 320 | 396 | 438 | 156 |
| 155° | 292 | 302 | 326 | 359 | 376 | 134 |
| 165° | 324 | 328 | 335 | 344 | 350 | 91 |
| 175° | 341 | 343 | 341 | 339 | 337 | 32 |
| 180° | 341 | 341 | 341 | 341 | 341 | |

TEST NUMBER: P644629

CATALOG NUMBER: OMN4DIP-SR4F0-100D50U940-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 881.7 | 881.7 | 881.7 | 881.7 | 881.7 |
| 2.5° | 875.1 | 887.9 | 888.2 | 893.3 | 899.7 |
| 5° | 865.3 | 891.3 | 914.5 | 945.7 | 967.8 |
| 7.5° | 844.8 | 891.3 | 965.3 | 1037.9 | 1074.0 |
| 10° | 828.3 | 892.5 | 1004.7 | 1102.0 | 1146.2 |
| 12.5° | 807.0 | 892.0 | 1044.0 | 1161.2 | 1211.8 |
| 15° | 773.0 | 891.3 | 1101.0 | 1233.4 | 1281.5 |
| 17.5° | 733.6 | 887.6 | 1145.7 | 1278.3 | 1320.4 |
| 20° | 707.4 | 883.8 | 1168.7 | 1294.7 | 1336.8 |
| 22.5° | 677.9 | 875.1 | 1181.8 | 1302.9 | 1341.8 |
| 25° | 635.6 | 862.2 | 1191.3 | 1302.7 | 1332.7 |
| 27.5° | 594.2 | 843.6 | 1191.7 | 1286.2 | 1311.8 |
| 30° | 568.0 | 828.6 | 1185.1 | 1269.7 | 1293.8 |
| 32.5° | 545.0 | 812.0 | 1172.0 | 1250.1 | 1275.7 |
| 35° | 512.6 | 787.2 | 1144.1 | 1218.5 | 1244.6 |
| 37.5° | 484.7 | 759.0 | 1108.8 | 1181.3 | 1211.8 |
| 40° | 463.4 | 736.0 | 1082.6 | 1154.9 | 1179.0 |
| 42.5° | 447.0 | 711.6 | 1051.4 | 1122.0 | 1142.9 |
| 45° | 428.5 | 673.1 | 1002.6 | 1064.7 | 1088.7 |
| 47.5° | 408.8 | 633.4 | 946.4 | 1005.0 | 1020.7 |
| 50° | 395.7 | 604.2 | 902.2 | 955.6 | 961.6 |
| 52.5° | 387.5 | 573.6 | 859.5 | 893.2 | 894.4 |
| 55° | 369.1 | 529.5 | 789.4 | 793.2 | 779.1 |
| 57.5° | 344.5 | 478.0 | 700.4 | 680.4 | 646.7 |
| 60° | 328.1 | 442.3 | 639.7 | 599.7 | 551.5 |
| 62.5° | 311.7 | 408.3 | 575.7 | 510.9 | 454.8 |
| 65° | 280.9 | 355.1 | 473.6 | 384.5 | 342.4 |
| 67.5° | 245.2 | 296.5 | 371.9 | 287.6 | 259.6 |
| 70° | 217.3 | 257.4 | 301.4 | 235.3 | 215.3 |
| 72.5° | 191.1 | 218.4 | 244.0 | 194.5 | 184.1 |
| 75° | 147.6 | 163.7 | 170.2 | 145.4 | 137.4 |
| 77.5° | 108.7 | 109.5 | 118.1 | 102.4 | 98.4 |
| 80° | 84.1 | 80.1 | 90.2 | 77.8 | 73.8 |
| 82.5° | 64.4 | 58.8 | 65.6 | 56.5 | 54.1 |
| 85° | 41.0 | 35.0 | 36.9 | 32.8 | 30.8 |
| 87.5° | 24.2 | 19.8 | 19.7 | 18.5 | 16.1 |
| 90° | 14.4 | 16.5 | 16.6 | 18.6 | 14.6 |
| 92.5° | 24.4 | 21.7 | 20.1 | 22.3 | 19.9 |
| 95° | 39.7 | 46.4 | 27.4 | 25.5 | 27.7 |
| 97.5° | 50.6 | 75.2 | 134.0 | 41.3 | 34.2 |
| 100° | 59.2 | 88.9 | 259.4 | 78.6 | 51.4 |
| 102.5° | 67.9 | 100.8 | 348.6 | 199.1 | 108.1 |
| 105° | 80.9 | 114.5 | 394.6 | 498.2 | 328.3 |
| 107.5° | 95.9 | 119.2 | 377.0 | 724.1 | 676.4 |
| 110° | 104.6 | 127.8 | 366.7 | 760.8 | 815.4 |



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CATALOG NUMBER: OMN4DIP-SR4F0-100D50U940-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 114.9 | 138.1 | 356.4 | 739.4 | 832.6 |
| 115° | 128.3 | 151.5 | 340.9 | 697.8 | 813.3 |
| 117.5° | 143.7 | 166.9 | 337.0 | 652.8 | 771.7 |
| 120° | 154.1 | 177.2 | 330.2 | 618.6 | 742.5 |
| 122.5° | 162.7 | 185.9 | 320.0 | 589.2 | 703.0 |
| 125° | 175.7 | 198.8 | 321.6 | 553.6 | 652.4 |
| 127.5° | 186.1 | 211.2 | 320.0 | 512.0 | 609.9 |
| 130° | 192.9 | 218.1 | 321.7 | 482.8 | 577.2 |
| 132.5° | 198.2 | 223.4 | 318.4 | 470.4 | 548.1 |
| 135° | 210.3 | 233.4 | 317.6 | 454.3 | 521.5 |
| 137.5° | 221.0 | 245.8 | 317.6 | 436.5 | 494.0 |
| 140° | 229.6 | 252.7 | 317.6 | 426.1 | 478.5 |
| 142.5° | 238.2 | 259.6 | 319.3 | 414.0 | 463.1 |
| 145° | 248.9 | 269.9 | 319.7 | 395.8 | 437.8 |
| 147.5° | 261.8 | 280.3 | 322.3 | 382.7 | 415.0 |
| 150° | 270.4 | 287.2 | 324.0 | 374.0 | 401.3 |
| 152.5° | 279.0 | 294.1 | 324.0 | 367.0 | 389.3 |
| 155° | 291.8 | 302.3 | 326.2 | 358.7 | 375.5 |
| 157.5° | 302.1 | 312.2 | 328.8 | 353.5 | 365.7 |
| 160° | 309.0 | 317.4 | 330.5 | 350.0 | 360.5 |
| 162.5° | 314.2 | 322.6 | 332.2 | 348.2 | 355.4 |
| 165° | 324.0 | 328.2 | 334.8 | 343.5 | 349.8 |
| 167.5° | 329.6 | 333.4 | 336.9 | 341.3 | 345.1 |
| 170° | 334.8 | 336.9 | 336.9 | 341.2 | 343.3 |
| 172.5° | 336.5 | 340.3 | 338.6 | 339.5 | 341.6 |
| 175° | 341.2 | 343.3 | 341.2 | 339.0 | 336.9 |
| 177.5° | 341.2 | 342.9 | 341.2 | 341.2 | 339.5 |
| 180° | 341.2 | 341.2 | 341.2 | 341.2 | 341.2 |

(END OF REPORT)