

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: P644647

Luminaire Tested: OMN4DIP-SR4F0-100D75U930-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644647
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-SR4F0-100D75U930-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

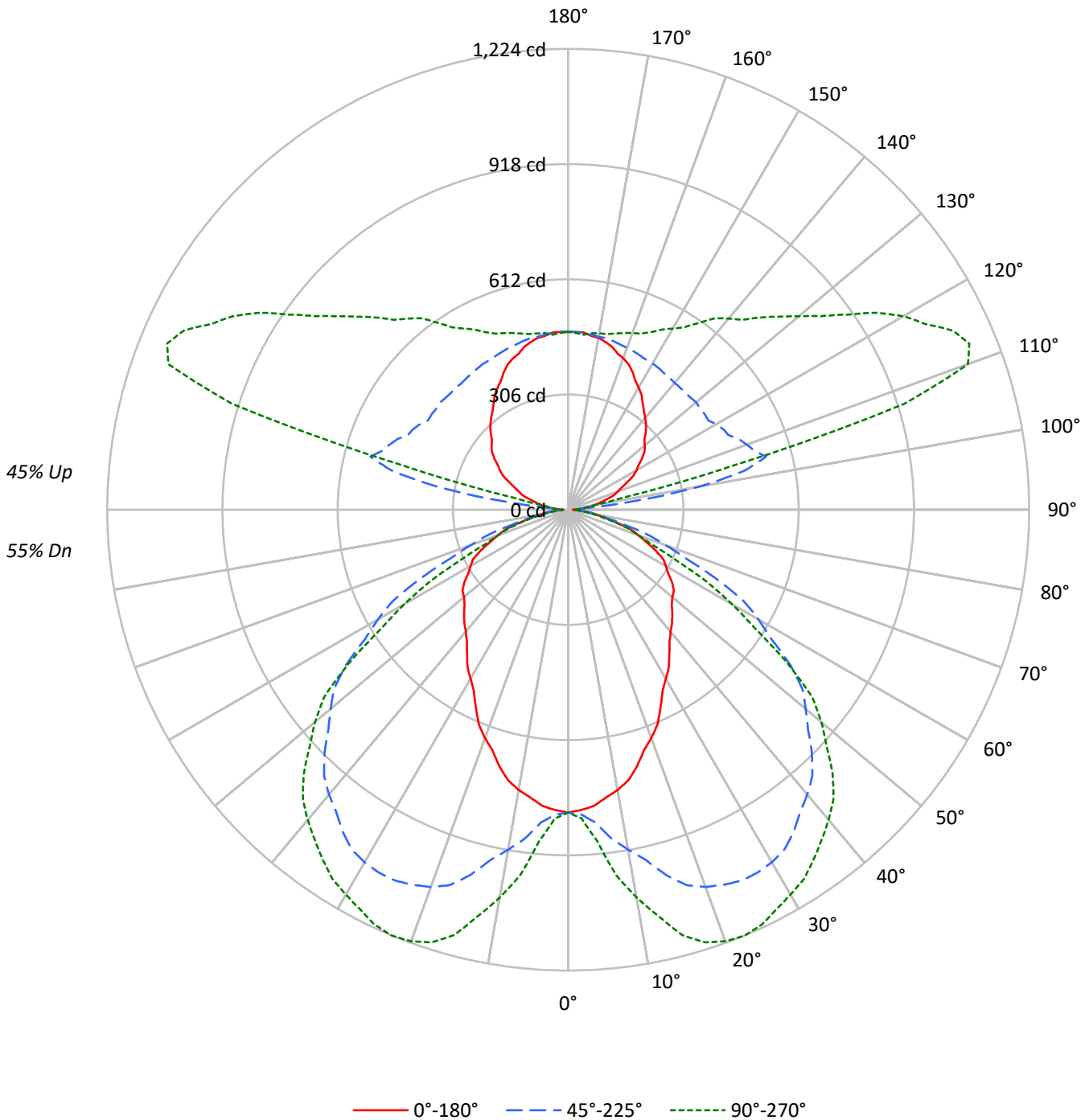
Lumens per Lamp: N/A
Luminaire Lumens: 5650.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 50.7
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





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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 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 86 | 86 | 86 | 73 | 73 | 73 | 60 | 60 | 60 | 55 | | | | |
| 1 | 99 | 95 | 91 | 87 | 92 | 88 | 85 | 82 | 76 | 73 | 71 | 64 | 62 | 61 | 54 | 52 | 51 | 46 | | | | |
| 2 | 90 | 83 | 76 | 71 | 83 | 77 | 72 | 67 | 66 | 62 | 59 | 56 | 53 | 51 | 47 | 45 | 43 | 39 | | | | |
| 3 | 82 | 73 | 65 | 59 | 76 | 68 | 61 | 56 | 58 | 53 | 49 | 50 | 46 | 43 | 42 | 39 | 37 | 33 | | | | |
| 4 | 75 | 64 | 56 | 50 | 69 | 60 | 53 | 47 | 52 | 46 | 42 | 44 | 40 | 36 | 37 | 34 | 31 | 28 | | | | |
| 5 | 69 | 57 | 49 | 43 | 64 | 53 | 46 | 40 | 46 | 40 | 36 | 39 | 35 | 31 | 33 | 30 | 27 | 24 | | | | |
| 6 | 63 | 51 | 43 | 37 | 58 | 48 | 40 | 35 | 41 | 35 | 31 | 35 | 31 | 27 | 30 | 26 | 24 | 21 | | | | |
| 7 | 58 | 46 | 38 | 32 | 54 | 43 | 36 | 30 | 37 | 31 | 27 | 32 | 27 | 24 | 27 | 24 | 21 | 18 | | | | |
| 8 | 54 | 42 | 34 | 28 | 50 | 39 | 32 | 27 | 34 | 28 | 24 | 29 | 25 | 21 | 25 | 21 | 19 | 16 | | | | |
| 9 | 50 | 38 | 30 | 25 | 47 | 35 | 29 | 24 | 31 | 25 | 21 | 27 | 22 | 19 | 23 | 19 | 17 | 14 | | | | |
| 10 | 47 | 35 | 27 | 22 | 43 | 33 | 26 | 21 | 28 | 23 | 19 | 25 | 20 | 17 | 21 | 18 | 15 | 13 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12988 | 12988 | 12988 |
| 5° | 12794 | 13522 | 14311 |
| 10° | 12391 | 15028 | 17144 |
| 15° | 11789 | 16792 | 19544 |
| 20° | 11089 | 18321 | 20957 |
| 25° | 10331 | 19363 | 21663 |
| 30° | 9661 | 20159 | 22007 |
| 35° | 9219 | 20576 | 22381 |
| 40° | 8911 | 20818 | 22672 |
| 45° | 8928 | 20888 | 22681 |
| 50° | 9068 | 20675 | 22039 |
| 55° | 9478 | 20273 | 20011 |
| 60° | 9665 | 18849 | 16249 |
| 65° | 9792 | 16508 | 11935 |
| 70° | 9361 | 12982 | 9272 |
| 75° | 8403 | 9688 | 7817 |
| 80° | 7132 | 7652 | 6258 |
| 85° | 6928 | 6243 | 5206 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 22681 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 82.5 | 1.5 |
| 10°-20° | 274.2 | 4.9 |
| 20°-30° | 455.5 | 8.1 |
| 30°-40° | 574.6 | 10.2 |
| 40°-50° | 614.2 | 10.9 |
| 50°-60° | 542.1 | 9.6 |
| 60°-70° | 347.9 | 6.2 |
| 70°-80° | 154.3 | 2.7 |
| 80°-90° | 41.1 | 0.7 |
| 90°-100° | 68.6 | 1.2 |
| 100°-110° | 420.6 | 7.4 |
| 110°-120° | 567.0 | 10.0 |
| 120°-130° | 460.6 | 8.2 |
| 130°-140° | 368.2 | 6.5 |
| 140°-150° | 290.0 | 5.1 |
| 150°-160° | 212.0 | 3.8 |
| 160°-170° | 131.7 | 2.3 |
| 170°-180° | 44.9 | 0.8 |
| 0°-30° | 812.1 | 14.4 |
| 0°-40° | 1386.7 | 24.5 |
| 0°-60° | 2543.1 | 45.0 |
| 0°-90° | 3086.3 | 54.6 |
| 90°-120° | 1056.2 | 18.7 |
| 90°-150° | 2175.0 | 38.5 |
| 90°-180° | 2564.0 | 45.4 |
| 0°-180° | 5650.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|------|-------|------|------|
| 0° | 804 | 804 | 804 | 804 | 804 | |
| 5° | 789 | 813 | 834 | 863 | 883 | 74 |
| 15° | 705 | 813 | 1005 | 1125 | 1169 | 198 |
| 25° | 580 | 787 | 1087 | 1188 | 1216 | 267 |
| 35° | 468 | 718 | 1044 | 1112 | 1136 | 294 |
| 45° | 391 | 614 | 915 | 971 | 993 | 302 |
| 55° | 337 | 483 | 720 | 724 | 711 | 299 |
| 65° | 256 | 324 | 432 | 351 | 312 | 251 |
| 75° | 135 | 149 | 155 | 133 | 125 | 144 |
| 85° | 37 | 32 | 34 | 30 | 28 | 40 |
| 90° | 13 | 16 | 17 | 20 | 16 | 10 |
| 95° | 44 | 57 | 33 | 32 | 36 | 42 |
| 105° | 105 | 153 | 543 | 689 | 455 | 112 |
| 115° | 173 | 206 | 469 | 965 | 1126 | 172 |
| 125° | 240 | 272 | 442 | 766 | 903 | 214 |
| 135° | 291 | 323 | 440 | 629 | 722 | 225 |
| 145° | 345 | 374 | 443 | 548 | 606 | 216 |
| 155° | 404 | 419 | 452 | 497 | 520 | 186 |
| 165° | 449 | 454 | 464 | 476 | 484 | 126 |
| 175° | 472 | 475 | 472 | 469 | 466 | 45 |
| 180° | 472 | 472 | 472 | 472 | 472 | |



TEST NUMBER: P644647

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U930-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 804.4 | 804.4 | 804.4 | 804.4 | 804.4 |
| 2.5° | 798.4 | 810.1 | 810.4 | 815.0 | 820.9 |
| 5° | 789.4 | 813.2 | 834.3 | 862.9 | 883.0 |
| 7.5° | 770.7 | 813.2 | 880.7 | 947.0 | 979.9 |
| 10° | 755.8 | 814.3 | 916.6 | 1005.5 | 1045.7 |
| 12.5° | 736.3 | 813.9 | 952.6 | 1059.5 | 1105.6 |
| 15° | 705.3 | 813.2 | 1004.6 | 1125.3 | 1169.2 |
| 17.5° | 669.3 | 809.8 | 1045.4 | 1166.3 | 1204.7 |
| 20° | 645.4 | 806.4 | 1066.3 | 1181.3 | 1219.7 |
| 22.5° | 618.5 | 798.4 | 1078.3 | 1188.7 | 1224.2 |
| 25° | 579.9 | 786.6 | 1086.9 | 1188.5 | 1216.0 |
| 27.5° | 542.1 | 769.7 | 1087.3 | 1173.5 | 1196.9 |
| 30° | 518.2 | 756.0 | 1081.3 | 1158.5 | 1180.4 |
| 32.5° | 497.2 | 740.9 | 1069.3 | 1140.5 | 1164.0 |
| 35° | 467.7 | 718.3 | 1043.9 | 1111.7 | 1135.5 |
| 37.5° | 442.2 | 692.5 | 1011.7 | 1077.8 | 1105.6 |
| 40° | 422.8 | 671.5 | 987.7 | 1053.7 | 1075.7 |
| 42.5° | 407.8 | 649.3 | 959.3 | 1023.7 | 1042.7 |
| 45° | 391.0 | 614.1 | 914.8 | 971.4 | 993.3 |
| 47.5° | 373.0 | 577.9 | 863.5 | 917.0 | 931.2 |
| 50° | 361.0 | 551.3 | 823.1 | 871.9 | 877.4 |
| 52.5° | 353.6 | 523.3 | 784.2 | 814.9 | 816.0 |
| 55° | 336.7 | 483.1 | 720.2 | 723.7 | 710.9 |
| 57.5° | 314.3 | 436.1 | 639.0 | 620.8 | 590.0 |
| 60° | 299.3 | 403.6 | 583.7 | 547.1 | 503.2 |
| 62.5° | 284.3 | 372.5 | 525.3 | 466.1 | 414.9 |
| 65° | 256.3 | 324.0 | 432.1 | 350.8 | 312.4 |
| 67.5° | 223.7 | 270.6 | 339.3 | 262.4 | 236.8 |
| 70° | 198.3 | 234.9 | 275.0 | 214.7 | 196.4 |
| 72.5° | 174.3 | 199.2 | 222.6 | 177.5 | 168.0 |
| 75° | 134.7 | 149.3 | 155.3 | 132.7 | 125.3 |
| 77.5° | 99.1 | 99.9 | 107.8 | 93.5 | 89.8 |
| 80° | 76.7 | 73.0 | 82.3 | 71.0 | 67.3 |
| 82.5° | 58.7 | 53.6 | 59.9 | 51.6 | 49.4 |
| 85° | 37.4 | 31.9 | 33.7 | 29.9 | 28.1 |
| 87.5° | 22.1 | 18.3 | 18.4 | 17.4 | 15.3 |
| 90° | 13.1 | 16.0 | 17.2 | 20.1 | 16.4 |
| 92.5° | 24.7 | 23.2 | 22.8 | 26.6 | 25.3 |
| 95° | 44.3 | 57.4 | 33.1 | 32.4 | 36.4 |
| 97.5° | 60.5 | 97.5 | 181.8 | 55.2 | 46.4 |
| 100° | 73.3 | 117.2 | 356.2 | 106.9 | 70.2 |
| 102.5° | 86.1 | 133.7 | 479.8 | 274.5 | 149.5 |
| 105° | 105.2 | 152.8 | 543.4 | 688.8 | 454.6 |
| 107.5° | 126.2 | 160.1 | 519.0 | 1001.7 | 936.5 |
| 110° | 139.0 | 172.0 | 504.8 | 1052.4 | 1129.1 |



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CATALOG NUMBER: OMN4DIP-SR4F0-100D75U930-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 153.2 | 186.3 | 490.5 | 1022.8 | 1152.8 |
| 115° | 172.8 | 205.8 | 469.1 | 965.2 | 1126.1 |
| 117.5° | 194.4 | 227.2 | 463.8 | 902.9 | 1068.4 |
| 120° | 209.5 | 241.5 | 454.3 | 855.6 | 1028.0 |
| 122.5° | 221.4 | 254.2 | 440.9 | 814.8 | 973.4 |
| 125° | 240.3 | 272.3 | 442.4 | 765.6 | 903.2 |
| 127.5° | 255.7 | 289.7 | 441.1 | 708.2 | 844.4 |
| 130° | 265.2 | 300.1 | 443.5 | 668.5 | 799.3 |
| 132.5° | 274.1 | 309.0 | 440.5 | 651.4 | 758.8 |
| 135° | 291.2 | 323.1 | 439.7 | 629.0 | 722.0 |
| 137.5° | 306.0 | 340.3 | 439.7 | 604.4 | 684.0 |
| 140° | 317.9 | 349.9 | 439.7 | 589.9 | 662.6 |
| 142.5° | 329.8 | 359.4 | 442.1 | 573.2 | 641.2 |
| 145° | 344.7 | 373.7 | 442.7 | 548.0 | 606.1 |
| 147.5° | 362.5 | 388.1 | 446.3 | 529.9 | 574.6 |
| 150° | 374.4 | 397.6 | 448.7 | 517.8 | 555.6 |
| 152.5° | 386.3 | 407.2 | 448.7 | 508.2 | 539.0 |
| 155° | 404.1 | 418.6 | 451.6 | 496.7 | 520.0 |
| 157.5° | 418.3 | 432.3 | 455.2 | 489.4 | 506.3 |
| 160° | 427.9 | 439.5 | 457.6 | 484.6 | 499.2 |
| 162.5° | 435.0 | 446.6 | 459.9 | 482.2 | 492.0 |
| 165° | 448.7 | 454.5 | 463.5 | 475.6 | 484.3 |
| 167.5° | 456.4 | 461.6 | 466.5 | 472.5 | 477.8 |
| 170° | 463.5 | 466.4 | 466.5 | 472.5 | 475.4 |
| 172.5° | 465.9 | 471.1 | 468.9 | 470.1 | 473.0 |
| 175° | 472.4 | 475.3 | 472.4 | 469.4 | 466.5 |
| 177.5° | 472.4 | 474.7 | 472.4 | 472.4 | 470.0 |
| 180° | 472.4 | 472.4 | 472.4 | 472.4 | 472.4 |

(END OF REPORT)