

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: P645024

Luminaire Tested: OMN4DIP-SR4F0-75D100U830-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P645024
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-SR4F0-75D100U830-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

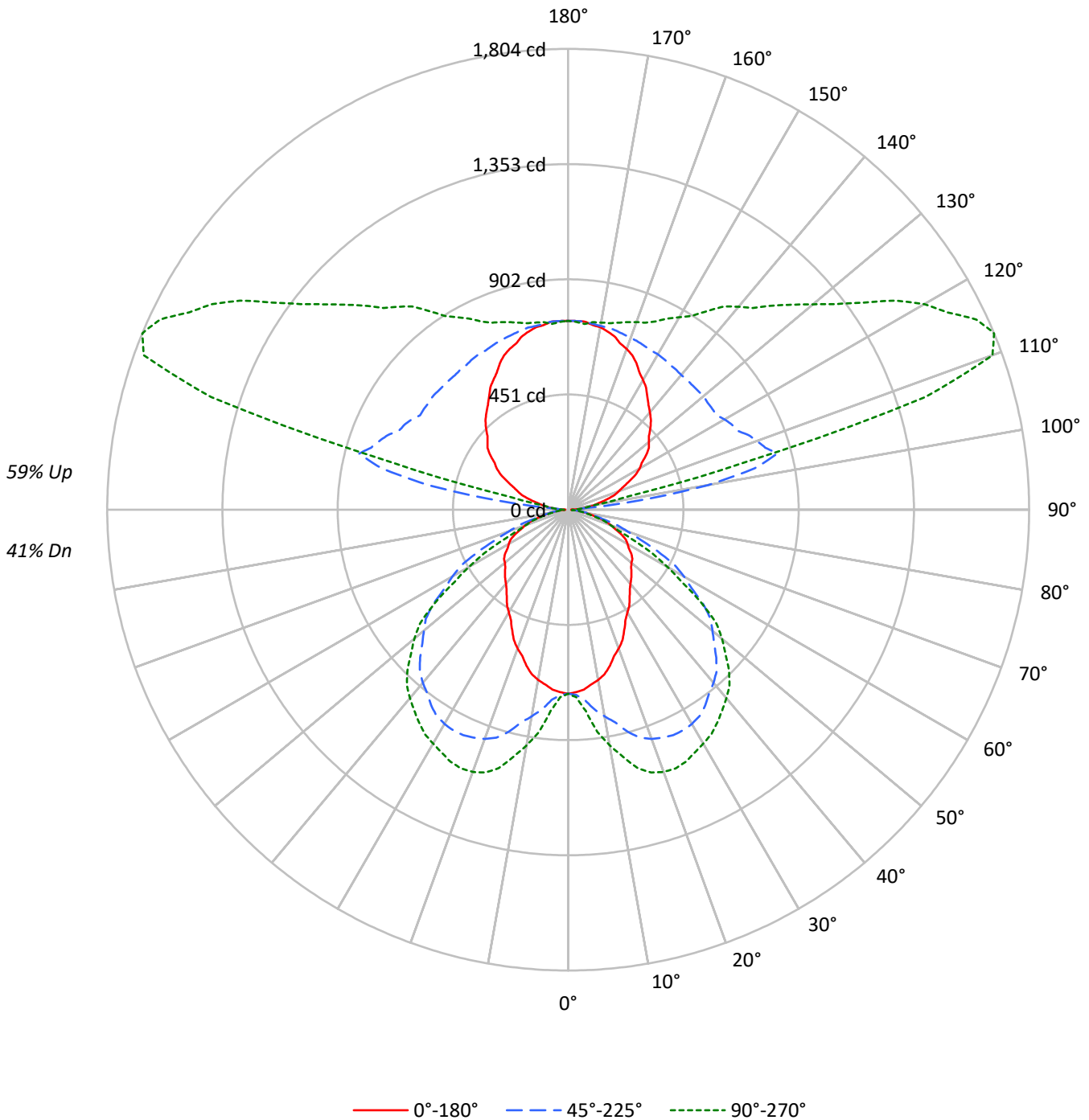
Lumens per Lamp: N/A
Luminaire Lumens: 6759.3 lumens
Efficiency: N/A
Efficacy: 133.1 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 50.8
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: P645024

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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 | 105 | 105 | 105 | 105 | 96 | 96 | 96 | 96 | 78 | 78 | 78 | 62 | 62 | 62 | 48 | 48 | 48 | 41 | | | | |
| 1 | 96 | 92 | 88 | 84 | 87 | 84 | 80 | 78 | 69 | 66 | 64 | 55 | 53 | 52 | 42 | 41 | 41 | 35 | | | | |
| 2 | 87 | 80 | 74 | 69 | 79 | 73 | 68 | 64 | 60 | 56 | 53 | 48 | 46 | 43 | 37 | 36 | 34 | 29 | | | | |
| 3 | 79 | 70 | 63 | 57 | 72 | 64 | 58 | 53 | 53 | 48 | 45 | 43 | 39 | 37 | 33 | 31 | 29 | 24 | | | | |
| 4 | 73 | 62 | 54 | 48 | 66 | 57 | 50 | 45 | 47 | 42 | 38 | 38 | 34 | 31 | 29 | 27 | 25 | 21 | | | | |
| 5 | 66 | 55 | 47 | 41 | 60 | 50 | 43 | 38 | 42 | 36 | 32 | 34 | 30 | 27 | 26 | 24 | 21 | 18 | | | | |
| 6 | 61 | 49 | 41 | 35 | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 30 | 26 | 23 | 24 | 21 | 19 | 16 | | | | |
| 7 | 56 | 44 | 36 | 31 | 51 | 41 | 34 | 29 | 34 | 28 | 25 | 27 | 23 | 20 | 21 | 19 | 16 | 14 | | | | |
| 8 | 52 | 40 | 32 | 27 | 47 | 37 | 30 | 25 | 31 | 25 | 22 | 25 | 21 | 18 | 20 | 17 | 15 | 12 | | | | |
| 9 | 48 | 36 | 29 | 24 | 44 | 33 | 27 | 22 | 28 | 23 | 19 | 23 | 19 | 16 | 18 | 15 | 13 | 11 | | | | |
| 10 | 45 | 33 | 26 | 21 | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 21 | 17 | 14 | 17 | 14 | 12 | 10 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 11631 | 11631 | 11631 |
| 5° | 11459 | 12110 | 12817 |
| 10° | 11096 | 13459 | 15354 |
| 15° | 10557 | 15039 | 17503 |
| 20° | 9931 | 16407 | 18768 |
| 25° | 9253 | 17341 | 19400 |
| 30° | 8652 | 18053 | 19708 |
| 35° | 8255 | 18425 | 20044 |
| 40° | 7980 | 18645 | 20303 |
| 45° | 7994 | 18705 | 20313 |
| 50° | 8121 | 18515 | 19736 |
| 55° | 8490 | 18156 | 17920 |
| 60° | 8657 | 16879 | 14554 |
| 65° | 8768 | 14785 | 10690 |
| 70° | 8384 | 11627 | 8304 |
| 75° | 7523 | 8677 | 6999 |
| 80° | 6388 | 6853 | 5607 |
| 85° | 6206 | 5595 | 4650 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 20313 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 73.9 | 1.1 |
| 10°-20° | 245.5 | 3.6 |
| 20°-30° | 407.9 | 6.0 |
| 30°-40° | 514.6 | 7.6 |
| 40°-50° | 550.1 | 8.1 |
| 50°-60° | 485.5 | 7.2 |
| 60°-70° | 311.6 | 4.6 |
| 70°-80° | 138.2 | 2.0 |
| 80°-90° | 37.5 | 0.6 |
| 90°-100° | 100.3 | 1.5 |
| 100°-110° | 653.8 | 9.7 |
| 110°-120° | 883.9 | 13.1 |
| 120°-130° | 718.7 | 10.6 |
| 130°-140° | 575.9 | 8.5 |
| 140°-150° | 453.8 | 6.7 |
| 150°-160° | 331.8 | 4.9 |
| 160°-170° | 206.1 | 3.0 |
| 170°-180° | 70.3 | 1.0 |
| 0°-30° | 727.3 | 10.8 |
| 0°-40° | 1241.9 | 18.4 |
| 0°-60° | 2277.4 | 33.7 |
| 0°-90° | 2764.7 | 40.9 |
| 90°-120° | 1638.0 | 24.2 |
| 90°-150° | 3386.4 | 50.1 |
| 90°-180° | 3995.0 | 59.1 |
| 0°-180° | 6759.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|------|------|
| 0° | 720 | 720 | 720 | 720 | 720 | |
| 5° | 707 | 728 | 747 | 773 | 791 | 66 |
| 15° | 632 | 728 | 900 | 1008 | 1047 | 177 |
| 25° | 519 | 704 | 973 | 1064 | 1089 | 239 |
| 35° | 419 | 643 | 935 | 996 | 1017 | 263 |
| 45° | 350 | 550 | 819 | 870 | 890 | 271 |
| 55° | 302 | 433 | 645 | 648 | 637 | 268 |
| 65° | 230 | 290 | 387 | 314 | 280 | 225 |
| 75° | 121 | 134 | 139 | 119 | 112 | 129 |
| 85° | 34 | 29 | 30 | 27 | 25 | 35 |
| 90° | 12 | 16 | 19 | 24 | 21 | 10 |
| 95° | 56 | 81 | 46 | 47 | 54 | 55 |
| 105° | 156 | 232 | 847 | 1077 | 711 | 165 |
| 115° | 264 | 317 | 730 | 1509 | 1762 | 263 |
| 125° | 372 | 422 | 689 | 1197 | 1414 | 331 |
| 135° | 456 | 506 | 688 | 984 | 1130 | 351 |
| 145° | 539 | 585 | 693 | 858 | 949 | 339 |
| 155° | 632 | 655 | 707 | 777 | 814 | 290 |
| 165° | 702 | 711 | 725 | 744 | 758 | 197 |
| 175° | 739 | 744 | 739 | 735 | 730 | 70 |
| 180° | 739 | 739 | 739 | 739 | 739 | |



TEST NUMBER: P645024

CATALOG NUMBER: OMN4DIP-SR4F0-75D100U830-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 0° | 720.4 | 720.4 | 720.4 | 720.4 | 720.4 |
| 2.5° | 715.0 | 725.5 | 725.8 | 729.9 | 735.1 |
| 5° | 707.0 | 728.3 | 747.2 | 772.7 | 790.8 |
| 7.5° | 690.2 | 728.2 | 788.7 | 848.1 | 877.5 |
| 10° | 676.8 | 729.3 | 820.9 | 900.5 | 936.5 |
| 12.5° | 659.4 | 728.9 | 853.1 | 948.8 | 990.1 |
| 15° | 631.6 | 728.2 | 899.7 | 1007.8 | 1047.1 |
| 17.5° | 599.4 | 725.2 | 936.2 | 1044.5 | 1078.9 |
| 20° | 578.0 | 722.1 | 954.9 | 1057.9 | 1092.3 |
| 22.5° | 553.9 | 715.1 | 965.7 | 1064.6 | 1096.3 |
| 25° | 519.4 | 704.5 | 973.4 | 1064.4 | 1089.0 |
| 27.5° | 485.5 | 689.3 | 973.7 | 1050.9 | 1071.9 |
| 30° | 464.1 | 677.0 | 968.3 | 1037.5 | 1057.1 |
| 32.5° | 445.3 | 663.5 | 957.6 | 1021.4 | 1042.4 |
| 35° | 418.8 | 643.3 | 934.8 | 995.6 | 1016.9 |
| 37.5° | 396.0 | 620.1 | 906.0 | 965.2 | 990.1 |
| 40° | 378.6 | 601.4 | 884.6 | 943.7 | 963.3 |
| 42.5° | 365.2 | 581.5 | 859.1 | 916.8 | 933.8 |
| 45° | 350.1 | 550.0 | 819.2 | 869.9 | 889.6 |
| 47.5° | 334.1 | 517.5 | 773.3 | 821.2 | 834.0 |
| 50° | 323.3 | 493.7 | 737.1 | 780.8 | 785.7 |
| 52.5° | 316.6 | 468.7 | 702.3 | 729.8 | 730.8 |
| 55° | 301.6 | 432.6 | 645.0 | 648.1 | 636.6 |
| 57.5° | 281.5 | 390.6 | 572.3 | 555.9 | 528.4 |
| 60° | 268.1 | 361.4 | 522.7 | 490.0 | 450.7 |
| 62.5° | 254.7 | 333.6 | 470.4 | 417.5 | 371.6 |
| 65° | 229.5 | 290.1 | 387.0 | 314.2 | 279.8 |
| 67.5° | 200.4 | 242.3 | 303.9 | 235.0 | 212.1 |
| 70° | 177.6 | 210.3 | 246.3 | 192.3 | 175.9 |
| 72.5° | 156.1 | 178.4 | 199.4 | 159.0 | 150.4 |
| 75° | 120.6 | 133.7 | 139.1 | 118.8 | 112.2 |
| 77.5° | 88.8 | 89.4 | 96.5 | 83.7 | 80.4 |
| 80° | 68.7 | 65.4 | 73.7 | 63.6 | 60.3 |
| 82.5° | 52.6 | 48.0 | 53.6 | 46.2 | 44.2 |
| 85° | 33.5 | 28.6 | 30.2 | 26.8 | 25.1 |
| 87.5° | 19.8 | 16.7 | 17.3 | 16.8 | 14.9 |
| 90° | 11.7 | 16.3 | 19.4 | 23.9 | 20.7 |
| 92.5° | 26.9 | 27.5 | 29.2 | 36.2 | 36.6 |
| 95° | 55.6 | 80.9 | 45.6 | 47.0 | 54.5 |
| 97.5° | 82.4 | 143.9 | 279.8 | 84.0 | 71.4 |
| 100° | 103.4 | 175.8 | 553.7 | 164.8 | 108.6 |
| 102.5° | 124.4 | 201.7 | 747.1 | 428.2 | 233.8 |
| 105° | 155.9 | 231.5 | 846.6 | 1076.8 | 711.4 |
| 107.5° | 189.0 | 244.3 | 808.5 | 1566.4 | 1465.6 |
| 110° | 210.0 | 262.9 | 786.2 | 1645.8 | 1766.9 |



TEST NUMBER: P645024

CATALOG NUMBER: OMN4DIP-SR4F0-75D100U830-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 232.3 | 285.2 | 763.9 | 1599.4 | 1804.1 |
| 115° | 264.1 | 317.0 | 730.4 | 1509.3 | 1762.3 |
| 117.5° | 298.2 | 350.5 | 722.0 | 1411.8 | 1672.1 |
| 120° | 322.9 | 372.9 | 707.1 | 1337.7 | 1608.8 |
| 122.5° | 341.5 | 393.8 | 687.2 | 1274.0 | 1523.3 |
| 125° | 372.4 | 422.4 | 688.6 | 1197.0 | 1413.5 |
| 127.5° | 397.7 | 449.9 | 687.8 | 1107.3 | 1321.5 |
| 130° | 412.5 | 467.1 | 691.5 | 1046.2 | 1250.8 |
| 132.5° | 428.5 | 483.0 | 688.8 | 1019.3 | 1187.6 |
| 135° | 455.7 | 505.7 | 688.2 | 984.4 | 1129.9 |
| 137.5° | 478.9 | 532.6 | 688.2 | 945.8 | 1070.4 |
| 140° | 497.5 | 547.5 | 688.2 | 923.2 | 1036.9 |
| 142.5° | 516.1 | 562.5 | 691.9 | 897.0 | 1003.4 |
| 145° | 539.4 | 584.8 | 692.8 | 857.6 | 948.6 |
| 147.5° | 567.3 | 607.3 | 698.4 | 829.3 | 899.3 |
| 150° | 585.9 | 622.3 | 702.1 | 810.4 | 869.5 |
| 152.5° | 604.5 | 637.2 | 702.1 | 795.3 | 843.5 |
| 155° | 632.4 | 655.1 | 706.8 | 777.3 | 813.7 |
| 157.5° | 654.7 | 676.5 | 712.4 | 766.0 | 792.3 |
| 160° | 669.6 | 687.8 | 716.1 | 758.4 | 781.2 |
| 162.5° | 680.7 | 698.9 | 719.8 | 754.6 | 770.0 |
| 165° | 702.1 | 711.2 | 725.4 | 744.3 | 757.9 |
| 167.5° | 714.2 | 722.4 | 730.0 | 739.5 | 747.7 |
| 170° | 725.4 | 729.9 | 730.0 | 739.4 | 744.0 |
| 172.5° | 729.1 | 737.3 | 733.7 | 735.7 | 740.3 |
| 175° | 739.3 | 743.9 | 739.3 | 734.6 | 730.0 |
| 177.5° | 739.3 | 743.0 | 739.3 | 739.2 | 735.6 |
| 180° | 739.3 | 739.3 | 739.3 | 739.3 | 739.3 |

(END OF REPORT)