

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: P644942

Luminaire Tested: OMN4DIP-SR4F0-50D25U840-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644942
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-SR4F0-50D25U840-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

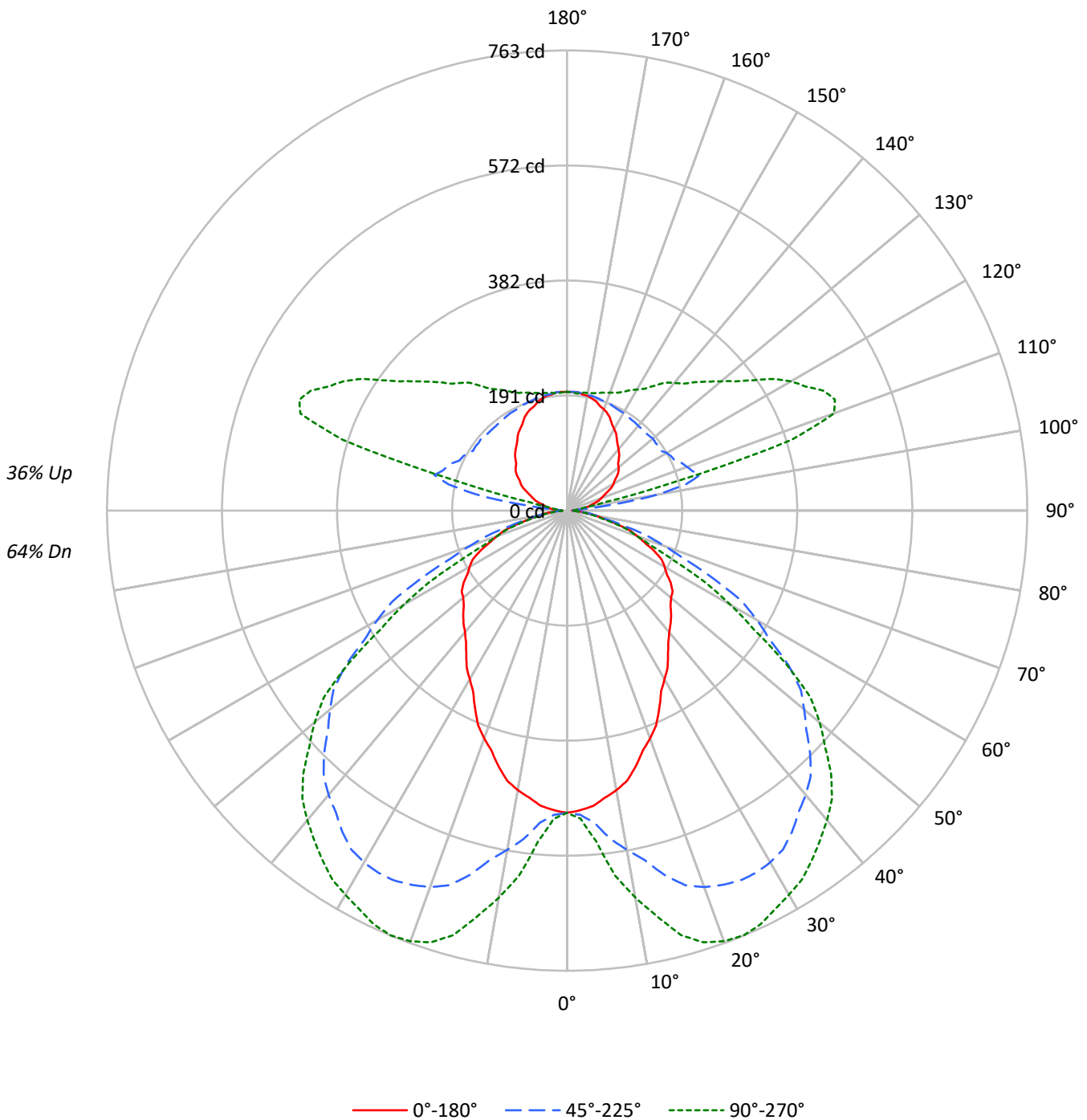
Lumens per Lamp: N/A
Luminaire Lumens: 2996.9 lumens
Efficiency: N/A
Efficacy: 132.6 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 22.6
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: P644942

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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 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 91 | 91 | 91 | 80 | 80 | 80 | 69 | 69 | 69 | 64 |
| 1 | 101 | 97 | 93 | 89 | 95 | 91 | 88 | 85 | 80 | 78 | 75 | 70 | 69 | 67 | 61 | 60 | 59 | 54 |
| 2 | 92 | 84 | 78 | 73 | 86 | 80 | 74 | 69 | 70 | 66 | 62 | 62 | 59 | 56 | 54 | 52 | 49 | 46 |
| 3 | 84 | 74 | 67 | 61 | 78 | 70 | 63 | 58 | 62 | 57 | 52 | 55 | 50 | 47 | 48 | 45 | 42 | 38 |
| 4 | 77 | 66 | 57 | 51 | 72 | 62 | 55 | 49 | 55 | 49 | 44 | 48 | 44 | 40 | 42 | 39 | 36 | 33 |
| 5 | 70 | 58 | 50 | 44 | 66 | 55 | 47 | 42 | 49 | 43 | 38 | 43 | 38 | 35 | 38 | 34 | 31 | 28 |
| 6 | 65 | 52 | 44 | 38 | 60 | 49 | 42 | 36 | 44 | 38 | 33 | 39 | 34 | 30 | 34 | 30 | 27 | 24 |
| 7 | 60 | 47 | 39 | 33 | 56 | 45 | 37 | 32 | 40 | 34 | 29 | 35 | 30 | 26 | 31 | 27 | 24 | 21 |
| 8 | 55 | 43 | 35 | 29 | 52 | 40 | 33 | 28 | 36 | 30 | 26 | 32 | 27 | 23 | 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 | 30 | 25 | 21 | 27 | 22 | 19 | 24 | 20 | 17 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 8091 | 8091 | 8091 |
| 5° | 7971 | 8425 | 8916 |
| 10° | 7719 | 9361 | 10681 |
| 15° | 7345 | 10460 | 12176 |
| 20° | 6909 | 11414 | 13055 |
| 25° | 6437 | 12063 | 13495 |
| 30° | 6018 | 12558 | 13711 |
| 35° | 5744 | 12818 | 13943 |
| 40° | 5552 | 12969 | 14124 |
| 45° | 5562 | 13013 | 14129 |
| 50° | 5649 | 12881 | 13730 |
| 55° | 5906 | 12631 | 12467 |
| 60° | 6022 | 11741 | 10123 |
| 65° | 6101 | 10285 | 7435 |
| 70° | 5830 | 8087 | 5778 |
| 75° | 5234 | 6032 | 4872 |
| 80° | 4444 | 4770 | 3905 |
| 85° | 4316 | 3890 | 3242 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 14129 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 51.4 | 1.7 |
| 10°-20° | 170.8 | 5.7 |
| 20°-30° | 283.7 | 9.5 |
| 30°-40° | 357.9 | 11.9 |
| 40°-50° | 382.6 | 12.8 |
| 50°-60° | 337.7 | 11.3 |
| 60°-70° | 216.8 | 7.2 |
| 70°-80° | 96.1 | 3.2 |
| 80°-90° | 25.4 | 0.8 |
| 90°-100° | 30.8 | 1.0 |
| 100°-110° | 176.8 | 5.9 |
| 110°-120° | 237.5 | 7.9 |
| 120°-130° | 192.8 | 6.4 |
| 130°-140° | 153.6 | 5.1 |
| 140°-150° | 120.9 | 4.0 |
| 150°-160° | 88.4 | 3.0 |
| 160°-170° | 54.9 | 1.8 |
| 170°-180° | 18.7 | 0.6 |
| 0°-30° | 505.9 | 16.9 |
| 0°-40° | 863.9 | 28.8 |
| 0°-60° | 1584.2 | 52.9 |
| 0°-90° | 1922.5 | 64.1 |
| 90°-120° | 445.1 | 14.9 |
| 90°-150° | 912.4 | 30.4 |
| 90°-180° | 1074.0 | 35.8 |
| 0°-180° | 2996.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 501 | 501 | 501 | 501 | 501 | |
| 5° | 492 | 507 | 520 | 538 | 550 | 46 |
| 15° | 439 | 507 | 626 | 701 | 728 | 123 |
| 25° | 361 | 490 | 677 | 740 | 758 | 166 |
| 35° | 291 | 448 | 650 | 693 | 707 | 183 |
| 45° | 244 | 383 | 570 | 605 | 619 | 188 |
| 55° | 210 | 301 | 449 | 451 | 443 | 186 |
| 65° | 160 | 202 | 269 | 219 | 195 | 156 |
| 75° | 84 | 93 | 97 | 83 | 78 | 90 |
| 85° | 23 | 20 | 21 | 19 | 18 | 25 |
| 90° | 8 | 9 | 10 | 11 | 8 | 6 |
| 95° | 23 | 27 | 16 | 15 | 16 | 21 |
| 105° | 47 | 66 | 228 | 288 | 190 | 50 |
| 115° | 74 | 87 | 197 | 403 | 470 | 74 |
| 125° | 101 | 115 | 186 | 320 | 377 | 90 |
| 135° | 121 | 135 | 183 | 262 | 301 | 94 |
| 145° | 144 | 156 | 185 | 228 | 253 | 90 |
| 155° | 168 | 175 | 188 | 207 | 217 | 77 |
| 165° | 187 | 190 | 193 | 198 | 202 | 53 |
| 175° | 197 | 198 | 197 | 196 | 194 | 19 |
| 180° | 197 | 197 | 197 | 197 | 197 | |



TEST NUMBER: P644942

CATALOG NUMBER: OMN4DIP-SR4F0-50D25U840-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 501.1 | 501.1 | 501.1 | 501.1 | 501.1 |
| 2.5° | 497.4 | 504.7 | 504.9 | 507.7 | 511.4 |
| 5° | 491.8 | 506.6 | 519.8 | 537.5 | 550.1 |
| 7.5° | 480.1 | 506.6 | 548.7 | 589.9 | 610.4 |
| 10° | 470.8 | 507.3 | 571.0 | 626.4 | 651.5 |
| 12.5° | 458.7 | 507.0 | 593.4 | 660.0 | 688.8 |
| 15° | 439.4 | 506.6 | 625.8 | 701.0 | 728.4 |
| 17.5° | 417.0 | 504.5 | 651.2 | 726.6 | 750.5 |
| 20° | 402.1 | 502.3 | 664.3 | 735.9 | 759.8 |
| 22.5° | 385.3 | 497.4 | 671.7 | 740.5 | 762.6 |
| 25° | 361.3 | 490.0 | 677.1 | 740.4 | 757.5 |
| 27.5° | 337.7 | 479.5 | 677.3 | 731.0 | 745.6 |
| 30° | 322.8 | 471.0 | 673.6 | 721.7 | 735.4 |
| 32.5° | 309.8 | 461.5 | 666.1 | 710.5 | 725.1 |
| 35° | 291.4 | 447.5 | 650.3 | 692.6 | 707.4 |
| 37.5° | 275.5 | 431.4 | 630.2 | 671.4 | 688.8 |
| 40° | 263.4 | 418.4 | 615.3 | 656.4 | 670.1 |
| 42.5° | 254.1 | 404.5 | 597.6 | 637.7 | 649.6 |
| 45° | 243.6 | 382.6 | 569.9 | 605.2 | 618.8 |
| 47.5° | 232.4 | 360.0 | 537.9 | 571.2 | 580.1 |
| 50° | 224.9 | 343.4 | 512.8 | 543.2 | 546.6 |
| 52.5° | 220.3 | 326.0 | 488.5 | 507.7 | 508.3 |
| 55° | 209.8 | 300.9 | 448.7 | 450.8 | 442.9 |
| 57.5° | 195.8 | 271.7 | 398.1 | 386.7 | 367.6 |
| 60° | 186.5 | 251.4 | 363.6 | 340.8 | 313.5 |
| 62.5° | 177.1 | 232.1 | 327.2 | 290.4 | 258.5 |
| 65° | 159.7 | 201.8 | 269.2 | 218.6 | 194.6 |
| 67.5° | 139.4 | 168.6 | 211.4 | 163.5 | 147.5 |
| 70° | 123.5 | 146.3 | 171.3 | 133.8 | 122.4 |
| 72.5° | 108.6 | 124.1 | 138.7 | 110.6 | 104.7 |
| 75° | 83.9 | 93.0 | 96.7 | 82.6 | 78.1 |
| 77.5° | 61.8 | 62.2 | 67.1 | 58.2 | 55.9 |
| 80° | 47.8 | 45.5 | 51.3 | 44.2 | 42.0 |
| 82.5° | 36.6 | 33.4 | 37.3 | 32.1 | 30.8 |
| 85° | 23.3 | 19.9 | 21.0 | 18.6 | 17.5 |
| 87.5° | 13.8 | 11.3 | 11.2 | 10.5 | 9.1 |
| 90° | 8.2 | 9.4 | 9.5 | 10.7 | 8.4 |
| 92.5° | 13.9 | 12.4 | 11.5 | 12.8 | 11.5 |
| 95° | 22.7 | 26.7 | 15.7 | 14.7 | 16.0 |
| 97.5° | 29.0 | 43.3 | 77.3 | 23.8 | 19.8 |
| 100° | 34.0 | 51.2 | 149.7 | 45.3 | 29.7 |
| 102.5° | 39.0 | 58.1 | 201.2 | 114.9 | 62.4 |
| 105° | 46.6 | 66.0 | 227.8 | 287.6 | 189.6 |
| 107.5° | 55.3 | 68.7 | 217.6 | 418.1 | 390.5 |
| 110° | 60.3 | 73.7 | 211.7 | 439.3 | 470.8 |



TEST NUMBER: P644942

CATALOG NUMBER: OMN4DIP-SR4F0-50D25U840-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 66.2 | 79.6 | 205.7 | 426.9 | 480.7 |
| 115° | 74.0 | 87.4 | 196.8 | 402.9 | 469.6 |
| 117.5° | 82.9 | 96.3 | 194.6 | 376.9 | 445.6 |
| 120° | 88.9 | 102.2 | 190.6 | 357.2 | 428.7 |
| 122.5° | 93.9 | 107.3 | 184.7 | 340.2 | 405.9 |
| 125° | 101.4 | 114.7 | 185.6 | 319.7 | 376.7 |
| 127.5° | 107.4 | 121.9 | 184.7 | 295.6 | 352.1 |
| 130° | 111.4 | 125.9 | 185.7 | 278.8 | 333.3 |
| 132.5° | 114.5 | 129.0 | 183.8 | 271.6 | 316.4 |
| 135° | 121.4 | 134.8 | 183.4 | 262.3 | 301.1 |
| 137.5° | 127.6 | 141.9 | 183.4 | 252.0 | 285.2 |
| 140° | 132.6 | 145.9 | 183.4 | 246.0 | 276.3 |
| 142.5° | 137.5 | 149.9 | 184.4 | 239.0 | 267.4 |
| 145° | 143.7 | 155.8 | 184.6 | 228.5 | 252.8 |
| 147.5° | 151.2 | 161.8 | 186.1 | 221.0 | 239.6 |
| 150° | 156.1 | 165.8 | 187.1 | 216.0 | 231.7 |
| 152.5° | 161.1 | 169.8 | 187.1 | 211.9 | 224.8 |
| 155° | 168.5 | 174.6 | 188.3 | 207.1 | 216.8 |
| 157.5° | 174.5 | 180.3 | 189.8 | 204.1 | 211.1 |
| 160° | 178.4 | 183.3 | 190.8 | 202.1 | 208.2 |
| 162.5° | 181.4 | 186.2 | 191.8 | 201.1 | 205.2 |
| 165° | 187.1 | 189.5 | 193.3 | 198.3 | 202.0 |
| 167.5° | 190.3 | 192.5 | 194.5 | 197.1 | 199.2 |
| 170° | 193.3 | 194.5 | 194.5 | 197.0 | 198.2 |
| 172.5° | 194.3 | 196.5 | 195.5 | 196.0 | 197.3 |
| 175° | 197.0 | 198.2 | 197.0 | 195.7 | 194.5 |
| 177.5° | 197.0 | 198.0 | 197.0 | 197.0 | 196.0 |
| 180° | 197.0 | 197.0 | 197.0 | 197.0 | 197.0 |

(END OF REPORT)