

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: P644638

Luminaire Tested: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644638
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-SR4F0-100D75U835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

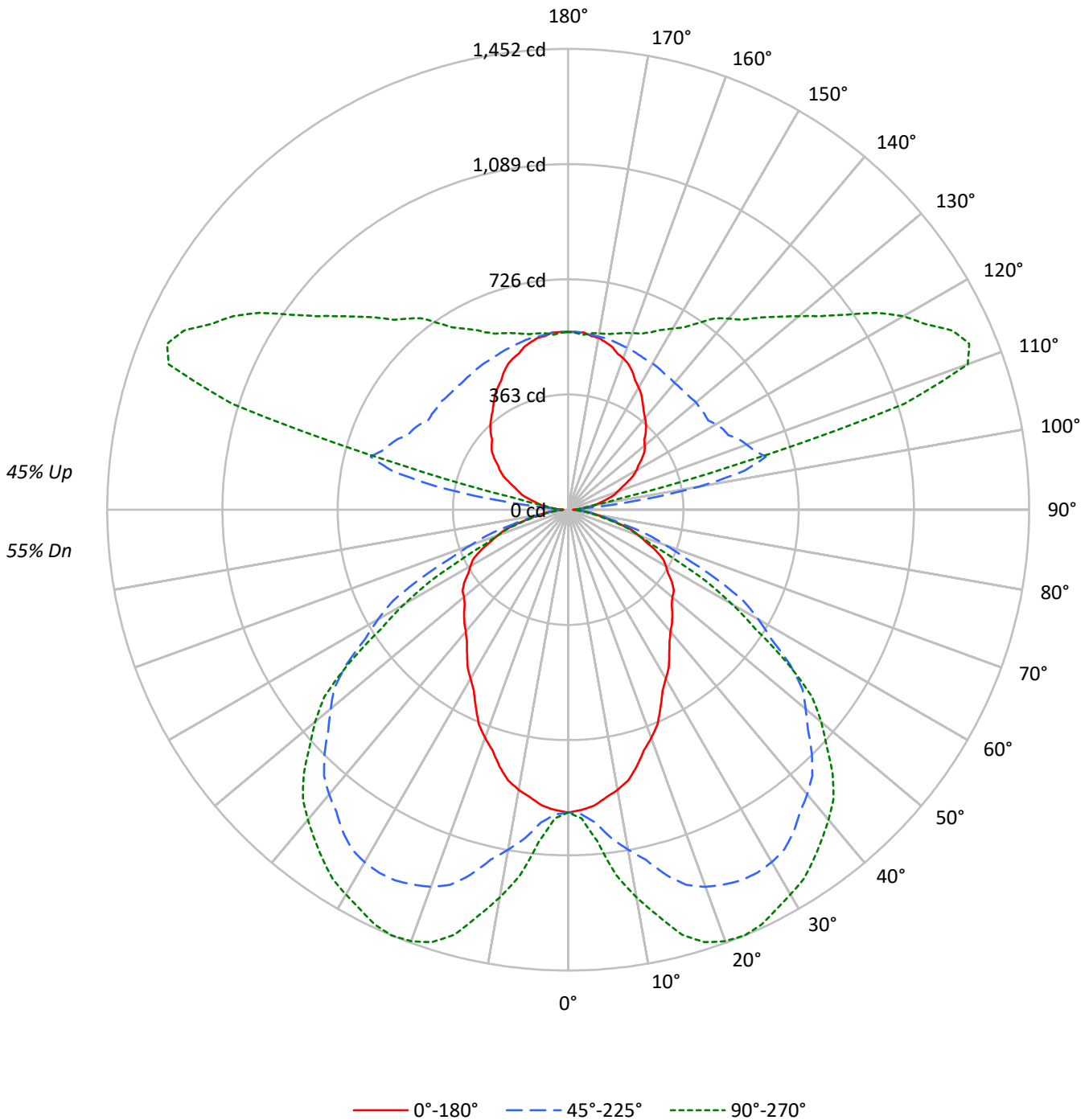
Lumens per Lamp: N/A
Luminaire Lumens: 6700.7 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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

TEST NUMBER: P644638

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644638

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

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° | 15403 | 15403 | 15403 |
| 5° | 15175 | 16037 | 16973 |
| 10° | 14695 | 17823 | 20333 |
| 15° | 13981 | 19915 | 23178 |
| 20° | 13151 | 21728 | 24854 |
| 25° | 12253 | 22963 | 25691 |
| 30° | 11458 | 23909 | 26099 |
| 35° | 10933 | 24402 | 26544 |
| 40° | 10568 | 24689 | 26888 |
| 45° | 10588 | 24772 | 26900 |
| 50° | 10756 | 24521 | 26136 |
| 55° | 11240 | 24045 | 23733 |
| 60° | 11464 | 22352 | 19272 |
| 65° | 11610 | 19580 | 14155 |
| 70° | 11103 | 15394 | 10999 |
| 75° | 9963 | 11485 | 9270 |
| 80° | 8461 | 9075 | 7429 |
| 85° | 8225 | 7392 | 6169 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 26900 cd/sqm



TEST NUMBER: P644638

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.8 | 1.5 |
| 10°-20° | 325.1 | 4.9 |
| 20°-30° | 540.2 | 8.1 |
| 30°-40° | 681.4 | 10.2 |
| 40°-50° | 728.4 | 10.9 |
| 50°-60° | 642.9 | 9.6 |
| 60°-70° | 412.6 | 6.2 |
| 70°-80° | 183.0 | 2.7 |
| 80°-90° | 48.7 | 0.7 |
| 90°-100° | 81.4 | 1.2 |
| 100°-110° | 498.9 | 7.4 |
| 110°-120° | 672.5 | 10.0 |
| 120°-130° | 546.3 | 8.2 |
| 130°-140° | 436.6 | 6.5 |
| 140°-150° | 343.9 | 5.1 |
| 150°-160° | 251.5 | 3.8 |
| 160°-170° | 156.2 | 2.3 |
| 170°-180° | 53.3 | 0.8 |
| 0°-30° | 963.2 | 14.4 |
| 0°-40° | 1644.6 | 24.5 |
| 0°-60° | 3016.0 | 45.0 |
| 0°-90° | 3660.3 | 54.6 |
| 90°-120° | 1252.7 | 18.7 |
| 90°-150° | 2579.5 | 38.5 |
| 90°-180° | 3040.0 | 45.4 |
| 0°-180° | 6700.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|------|-------|------|------|
| 0° | 954 | 954 | 954 | 954 | 954 | |
| 5° | 936 | 964 | 990 | 1023 | 1047 | 88 |
| 15° | 836 | 964 | 1191 | 1335 | 1387 | 234 |
| 25° | 688 | 933 | 1289 | 1410 | 1442 | 317 |
| 35° | 555 | 852 | 1238 | 1318 | 1347 | 348 |
| 45° | 464 | 728 | 1085 | 1152 | 1178 | 358 |
| 55° | 399 | 573 | 854 | 858 | 843 | 354 |
| 65° | 304 | 384 | 512 | 416 | 370 | 297 |
| 75° | 160 | 177 | 184 | 157 | 149 | 171 |
| 85° | 44 | 38 | 40 | 35 | 33 | 47 |
| 90° | 16 | 19 | 20 | 24 | 19 | 12 |
| 95° | 53 | 68 | 39 | 38 | 43 | 50 |
| 105° | 125 | 181 | 644 | 817 | 539 | 133 |
| 115° | 205 | 244 | 556 | 1145 | 1336 | 204 |
| 125° | 285 | 323 | 525 | 908 | 1071 | 253 |
| 135° | 345 | 383 | 522 | 746 | 856 | 266 |
| 145° | 409 | 443 | 525 | 650 | 719 | 257 |
| 155° | 479 | 496 | 536 | 589 | 617 | 220 |
| 165° | 532 | 539 | 550 | 564 | 574 | 149 |
| 175° | 560 | 564 | 560 | 557 | 553 | 53 |
| 180° | 560 | 560 | 560 | 560 | 560 | |



TEST NUMBER: P644638

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 954.0 | 954.0 | 954.0 | 954.0 | 954.0 |
| 2.5° | 946.9 | 960.8 | 961.1 | 966.6 | 973.5 |
| 5° | 936.3 | 964.5 | 989.5 | 1023.3 | 1047.2 |
| 7.5° | 914.1 | 964.4 | 1044.5 | 1123.1 | 1162.1 |
| 10° | 896.3 | 965.7 | 1087.1 | 1192.5 | 1240.2 |
| 12.5° | 873.2 | 965.2 | 1129.7 | 1256.5 | 1311.2 |
| 15° | 836.4 | 964.4 | 1191.4 | 1334.6 | 1386.6 |
| 17.5° | 793.8 | 960.4 | 1239.8 | 1383.2 | 1428.8 |
| 20° | 765.4 | 956.3 | 1264.6 | 1401.0 | 1446.5 |
| 22.5° | 733.5 | 946.9 | 1278.8 | 1409.8 | 1451.9 |
| 25° | 687.8 | 932.9 | 1289.0 | 1409.6 | 1442.1 |
| 27.5° | 643.0 | 912.8 | 1289.5 | 1391.7 | 1419.5 |
| 30° | 614.6 | 896.6 | 1282.4 | 1373.9 | 1399.9 |
| 32.5° | 589.7 | 878.7 | 1268.2 | 1352.6 | 1380.4 |
| 35° | 554.7 | 851.8 | 1238.0 | 1318.5 | 1346.7 |
| 37.5° | 524.5 | 821.2 | 1199.8 | 1278.2 | 1311.2 |
| 40° | 501.4 | 796.4 | 1171.4 | 1249.7 | 1275.7 |
| 42.5° | 483.7 | 770.0 | 1137.7 | 1214.1 | 1236.6 |
| 45° | 463.7 | 728.3 | 1084.9 | 1152.0 | 1178.1 |
| 47.5° | 442.4 | 685.4 | 1024.1 | 1087.5 | 1104.4 |
| 50° | 428.2 | 653.8 | 976.2 | 1034.0 | 1040.5 |
| 52.5° | 419.3 | 620.6 | 930.0 | 966.5 | 967.8 |
| 55° | 399.3 | 572.9 | 854.2 | 858.3 | 843.1 |
| 57.5° | 372.7 | 517.2 | 757.9 | 736.2 | 699.7 |
| 60° | 355.0 | 478.6 | 692.2 | 648.9 | 596.8 |
| 62.5° | 337.2 | 441.8 | 623.0 | 552.8 | 492.1 |
| 65° | 303.9 | 384.2 | 512.5 | 416.1 | 370.5 |
| 67.5° | 265.3 | 320.9 | 402.5 | 311.2 | 280.9 |
| 70° | 235.2 | 278.6 | 326.1 | 254.6 | 233.0 |
| 72.5° | 206.8 | 236.3 | 264.0 | 210.5 | 199.2 |
| 75° | 159.7 | 177.1 | 184.1 | 157.3 | 148.6 |
| 77.5° | 117.6 | 118.5 | 127.8 | 110.8 | 106.5 |
| 80° | 91.0 | 86.6 | 97.6 | 84.2 | 79.9 |
| 82.5° | 69.7 | 63.6 | 71.0 | 61.2 | 58.6 |
| 85° | 44.4 | 37.9 | 39.9 | 35.4 | 33.3 |
| 87.5° | 26.2 | 21.7 | 21.8 | 20.7 | 18.1 |
| 90° | 15.5 | 19.0 | 20.4 | 23.8 | 19.4 |
| 92.5° | 29.3 | 27.6 | 27.0 | 31.6 | 30.0 |
| 95° | 52.6 | 68.0 | 39.3 | 38.5 | 43.2 |
| 97.5° | 71.8 | 115.6 | 215.6 | 65.5 | 55.1 |
| 100° | 86.9 | 139.0 | 422.5 | 126.8 | 83.3 |
| 102.5° | 102.1 | 158.6 | 569.0 | 325.6 | 177.3 |
| 105° | 124.8 | 181.2 | 644.5 | 816.9 | 539.1 |
| 107.5° | 149.7 | 189.9 | 615.6 | 1188.0 | 1110.7 |
| 110° | 164.8 | 204.0 | 598.6 | 1248.2 | 1339.0 |

TEST NUMBER: P644638

CATALOG NUMBER: OMN4DIP-SR4F0-100D75U835-CLBOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 181.7 | 220.9 | 581.7 | 1213.0 | 1367.2 |
| 115° | 204.9 | 244.1 | 556.4 | 1144.7 | 1335.5 |
| 117.5° | 230.5 | 269.5 | 550.0 | 1070.9 | 1267.1 |
| 120° | 248.5 | 286.4 | 538.7 | 1014.7 | 1219.2 |
| 122.5° | 262.6 | 301.5 | 522.9 | 966.4 | 1154.4 |
| 125° | 285.0 | 322.9 | 524.6 | 908.0 | 1071.2 |
| 127.5° | 303.3 | 343.6 | 523.1 | 839.9 | 1001.5 |
| 130° | 314.5 | 355.9 | 526.0 | 792.8 | 947.9 |
| 132.5° | 325.1 | 366.4 | 522.4 | 772.5 | 900.0 |
| 135° | 345.3 | 383.2 | 521.5 | 746.0 | 856.3 |
| 137.5° | 362.9 | 403.6 | 521.5 | 716.8 | 811.2 |
| 140° | 377.0 | 414.9 | 521.5 | 699.7 | 785.8 |
| 142.5° | 391.1 | 426.3 | 524.3 | 679.8 | 760.4 |
| 145° | 408.8 | 443.2 | 525.0 | 649.9 | 718.8 |
| 147.5° | 429.9 | 460.2 | 529.3 | 628.4 | 681.5 |
| 150° | 444.0 | 471.6 | 532.1 | 614.2 | 658.9 |
| 152.5° | 458.1 | 482.9 | 532.1 | 602.7 | 639.2 |
| 155° | 479.2 | 496.5 | 535.6 | 589.1 | 616.7 |
| 157.5° | 496.1 | 512.7 | 539.8 | 580.5 | 600.4 |
| 160° | 507.4 | 521.2 | 542.7 | 574.8 | 592.0 |
| 162.5° | 515.9 | 529.7 | 545.5 | 571.8 | 583.5 |
| 165° | 532.1 | 539.0 | 549.7 | 564.0 | 574.4 |
| 167.5° | 541.2 | 547.5 | 553.2 | 560.4 | 566.6 |
| 170° | 549.7 | 553.2 | 553.2 | 560.4 | 563.8 |
| 172.5° | 552.5 | 558.7 | 556.0 | 557.5 | 561.0 |
| 175° | 560.3 | 563.7 | 560.3 | 556.7 | 553.2 |
| 177.5° | 560.3 | 563.0 | 560.3 | 560.2 | 557.5 |
| 180° | 560.3 | 560.3 | 560.3 | 560.3 | 560.3 |

(END OF REPORT)