

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: P645219

Luminaire Tested: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P645219
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-19)
Test Lab: INNOVATION CENTER
Issue Date: 2/16/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - FLAT FROSTED LENS - 1000 LUMENS PER FOOT
DIRECT ONLY
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

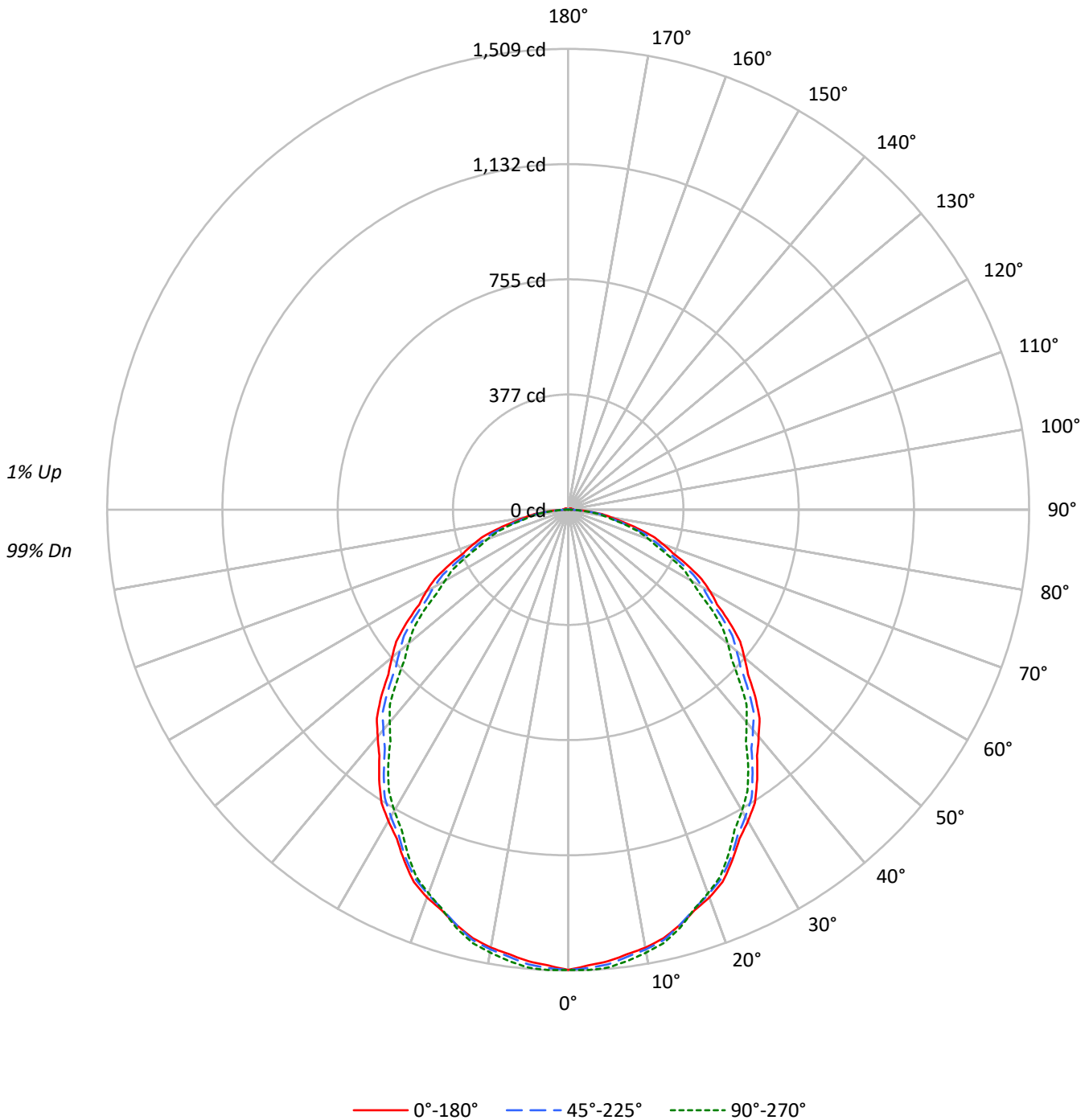
Lumens per Lamp: N/A
Luminaire Lumens: 3675.9 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 29.9
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: P645219

CATALOG NUMBER: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P645219

CATALOG NUMBER: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|---|--|--|--|----|--|--|--|--|--|--|--|--|----|---|
| RF | 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 | 50 | 30 | 10 | 0 | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 99 | | | | | | | | | | | | | | | | | | | | |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 | | | | | | | | | | | | | | | | | | | | |
| 2 | 99 | 91 | 85 | 79 | 97 | 90 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 75 | 80 | 76 | 73 | 71 | | | | | | | | | | | | | | | | | | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 73 | 68 | 63 | 71 | 66 | 62 | 60 | | | | | | | | | | | | | | | | | | | | |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 56 | 68 | 61 | 56 | 66 | 60 | 55 | 63 | 58 | 54 | 52 | | | | | | | | | | | | | | | | | | | | |
| 5 | 77 | 65 | 56 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 | | | | | | | | | | | | | | | | | | | | |
| 6 | 71 | 58 | 50 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 42 | 52 | 46 | 42 | 40 | | | | | | | | | | | | | | | | | | | | |
| 7 | 66 | 53 | 44 | 38 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 37 | 35 | | | | | | | | | | | | | | | | | | | | |
| 8 | 62 | 49 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | | | | | | | | | | | | | | | | | |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 29 | | | | | | | | | | | | | | | | | | | | |
| 10 | 54 | 41 | 34 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 24332 | 24332 | 24332 |
| 5° | 24060 | 24225 | 24392 |
| 10° | 23868 | 23968 | 24137 |
| 15° | 23545 | 23545 | 23682 |
| 20° | 23216 | 23039 | 22969 |
| 25° | 22611 | 22427 | 22135 |
| 30° | 21942 | 21636 | 21216 |
| 35° | 21258 | 20731 | 20247 |
| 40° | 20440 | 19835 | 19144 |
| 45° | 19758 | 19009 | 18071 |
| 50° | 18902 | 18078 | 17151 |
| 55° | 18182 | 17258 | 16220 |
| 60° | 17347 | 16420 | 15029 |
| 65° | 16451 | 15274 | 14101 |
| 70° | 15583 | 14134 | 13166 |
| 75° | 14579 | 12919 | 12277 |
| 80° | 13343 | 11818 | 11251 |
| 85° | 12542 | 11023 | 10263 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19758 cd/sqm



TEST NUMBER: P645219

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 141.8 | 3.9 |
| 10°-20° | 397.8 | 10.8 |
| 20°-30° | 578.4 | 15.7 |
| 30°-40° | 658.0 | 17.9 |
| 40°-50° | 641.5 | 17.5 |
| 50°-60° | 547.6 | 14.9 |
| 60°-70° | 398.0 | 10.8 |
| 70°-80° | 225.0 | 6.1 |
| 80°-90° | 69.3 | 1.9 |
| 90°-100° | 8.7 | 0.2 |
| 100°-110° | 4.9 | 0.1 |
| 110°-120° | 3.0 | 0.1 |
| 120°-130° | 1.7 | 0.0 |
| 130°-140° | 0.2 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1118.0 | 30.4 |
| 0°-40° | 1776.0 | 48.3 |
| 0°-60° | 2965.1 | 80.7 |
| 0°-90° | 3657.4 | 99.5 |
| 90°-120° | 16.6 | 0.5 |
| 90°-150° | 18.5 | 0.5 |
| 90°-180° | 19.0 | 0.5 |
| 0°-180° | 3675.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1507 | 1507 | 1507 | 1507 | 1507 | |
| 5° | 1484 | 1506 | 1495 | 1493 | 1505 | 141 |
| 15° | 1409 | 1427 | 1409 | 1407 | 1417 | 397 |
| 25° | 1269 | 1281 | 1259 | 1236 | 1242 | 584 |
| 35° | 1078 | 1082 | 1052 | 1027 | 1027 | 673 |
| 45° | 865 | 861 | 832 | 804 | 791 | 666 |
| 55° | 646 | 644 | 613 | 584 | 576 | 576 |
| 65° | 431 | 427 | 400 | 375 | 369 | 427 |
| 75° | 234 | 226 | 207 | 199 | 197 | 248 |
| 85° | 68 | 60 | 60 | 57 | 55 | 73 |
| 90° | 8 | 10 | 12 | 10 | 10 | 8 |
| 95° | 16 | 8 | 6 | 6 | 4 | 12 |
| 105° | 10 | 6 | 4 | 2 | 0 | 12 |
| 115° | 6 | 4 | 2 | 0 | 0 | 7 |
| 125° | 4 | 4 | 2 | 0 | 0 | 3 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P645219

CATALOG NUMBER: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1507.0 | 1507.0 | 1507.0 | 1507.0 | 1507.0 |
| 2.5° | 1493.9 | 1513.1 | 1502.1 | 1502.2 | 1508.7 |
| 5° | 1484.5 | 1506.5 | 1494.7 | 1492.9 | 1505.0 |
| 7.5° | 1468.9 | 1490.5 | 1476.7 | 1474.6 | 1490.2 |
| 10° | 1455.8 | 1475.8 | 1461.9 | 1458.1 | 1472.2 |
| 12.5° | 1437.7 | 1457.8 | 1443.9 | 1438.4 | 1452.5 |
| 15° | 1408.6 | 1426.6 | 1408.6 | 1406.8 | 1416.8 |
| 17.5° | 1375.8 | 1391.4 | 1370.5 | 1363.7 | 1371.3 |
| 20° | 1351.2 | 1365.2 | 1340.9 | 1330.8 | 1336.8 |
| 22.5° | 1320.0 | 1334.1 | 1308.1 | 1293.1 | 1300.8 |
| 25° | 1269.2 | 1281.2 | 1258.9 | 1236.5 | 1242.5 |
| 27.5° | 1214.6 | 1223.9 | 1201.5 | 1178.6 | 1180.6 |
| 30° | 1176.9 | 1182.9 | 1160.5 | 1136.0 | 1138.0 |
| 32.5° | 1137.5 | 1142.0 | 1117.9 | 1091.6 | 1092.0 |
| 35° | 1078.5 | 1082.5 | 1051.8 | 1027.2 | 1027.2 |
| 37.5° | 1015.8 | 1018.2 | 985.4 | 958.7 | 955.9 |
| 40° | 969.8 | 973.8 | 941.1 | 914.3 | 908.3 |
| 42.5° | 927.2 | 928.0 | 898.5 | 871.6 | 864.0 |
| 45° | 865.3 | 861.2 | 832.5 | 803.5 | 791.4 |
| 47.5° | 798.4 | 798.4 | 765.6 | 736.6 | 725.4 |
| 50° | 752.5 | 752.5 | 719.7 | 690.8 | 682.8 |
| 52.5° | 709.8 | 708.2 | 677.0 | 648.1 | 636.8 |
| 55° | 645.9 | 643.9 | 613.1 | 584.2 | 576.2 |
| 57.5° | 578.2 | 578.2 | 549.5 | 518.5 | 509.7 |
| 60° | 537.2 | 537.2 | 508.5 | 477.5 | 465.4 |
| 62.5° | 492.9 | 491.3 | 462.6 | 434.9 | 427.7 |
| 65° | 430.6 | 426.6 | 399.8 | 375.1 | 369.1 |
| 67.5° | 371.1 | 367.1 | 338.7 | 318.9 | 314.9 |
| 70° | 330.1 | 326.1 | 299.4 | 282.9 | 278.9 |
| 72.5° | 290.7 | 285.1 | 261.6 | 248.4 | 244.4 |
| 75° | 233.7 | 225.7 | 207.1 | 198.8 | 196.8 |
| 77.5° | 179.6 | 166.0 | 158.3 | 152.5 | 150.5 |
| 80° | 143.5 | 131.5 | 127.1 | 123.0 | 121.0 |
| 82.5° | 112.4 | 100.3 | 99.2 | 96.7 | 94.7 |
| 85° | 67.7 | 59.6 | 59.5 | 57.4 | 55.4 |
| 87.5° | 29.5 | 25.1 | 25.4 | 25.0 | 25.0 |
| 90° | 8.2 | 10.2 | 12.3 | 10.3 | 10.3 |
| 92.5° | 14.8 | 10.4 | 9.0 | 8.6 | 7.0 |
| 95° | 16.4 | 8.4 | 6.2 | 6.1 | 4.1 |
| 97.5° | 14.4 | 8.3 | 5.7 | 3.7 | 2.1 |
| 100° | 14.4 | 8.3 | 4.1 | 2.1 | 2.1 |
| 102.5° | 12.7 | 6.7 | 4.1 | 2.0 | 0.4 |
| 105° | 10.3 | 6.2 | 4.1 | 2.0 | 0.0 |
| 107.5° | 9.8 | 6.2 | 4.1 | 2.0 | 0.0 |
| 110° | 8.2 | 6.2 | 4.1 | 2.0 | 0.0 |



TEST NUMBER: P645219

CATALOG NUMBER: OMN4DP-SR4F0-100D940-FLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 8.2 | 6.2 | 4.1 | 2.0 | 0.0 |
| 115° | 6.2 | 4.1 | 2.1 | 0.0 | 0.0 |
| 117.5° | 6.2 | 4.1 | 2.1 | 0.0 | 0.0 |
| 120° | 6.2 | 4.1 | 2.1 | 0.0 | 0.0 |
| 122.5° | 4.5 | 4.1 | 2.1 | 0.0 | 0.0 |
| 125° | 4.1 | 4.1 | 2.1 | 0.0 | 0.0 |
| 127.5° | 2.1 | 3.7 | 2.1 | 0.0 | 0.0 |
| 130° | 2.1 | 2.1 | 2.1 | 0.0 | 0.0 |
| 132.5° | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)