

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P645245

Luminaire Tested: OMN4DP-SR4F0-50D930-BBM-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645245
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-23)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DP-SR4F0-50D930-BBM-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT
DIRECT ONLY
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

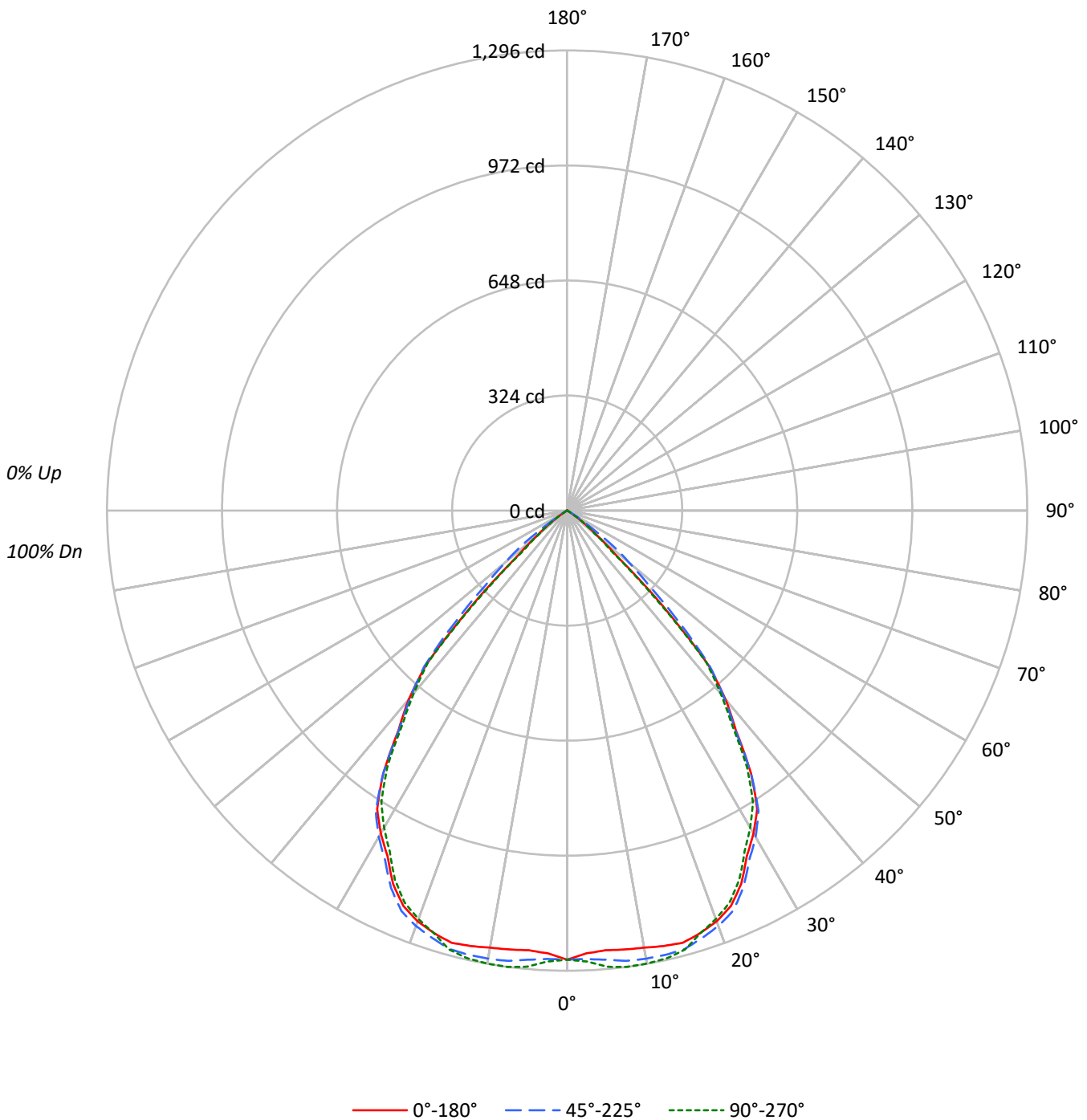
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1942.7 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 18.2
Input Voltage (V): 120
Input Current (A_{in}): 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | | 106 | 106 | 106 | | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 103 | 102 | 100 | | 100 | 98 | 97 | | 96 | 95 | 94 | 92 |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | | 93 | 90 | 87 | | 90 | 88 | 86 | 84 |
| 3 | 100 | 93 | 87 | 83 | 98 | 91 | 86 | 82 | 89 | 84 | 81 | | 86 | 82 | 79 | | 84 | 81 | 78 | 76 |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | | 80 | 75 | 72 | | 78 | 74 | 71 | 69 |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | | 74 | 69 | 65 | | 72 | 68 | 65 | 63 |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 65 | 61 | 70 | 64 | 60 | | 69 | 64 | 60 | | 67 | 63 | 59 | 58 |
| 7 | 78 | 67 | 60 | 56 | 76 | 66 | 60 | 55 | 65 | 59 | 55 | | 64 | 59 | 55 | | 63 | 58 | 54 | 53 |
| 8 | 73 | 62 | 56 | 51 | 72 | 62 | 55 | 51 | 61 | 55 | 51 | | 59 | 54 | 50 | | 58 | 54 | 50 | 49 |
| 9 | 69 | 58 | 51 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | | 56 | 50 | 46 | | 55 | 50 | 46 | 45 |
| 10 | 65 | 54 | 48 | 43 | 64 | 54 | 47 | 43 | 53 | 47 | 43 | | 52 | 47 | 43 | | 51 | 46 | 43 | 41 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 16336 | 16336 | 16336 |
| 5° | 16117 | 16462 | 16718 |
| 10° | 16394 | 16808 | 16989 |
| 15° | 16847 | 17097 | 17123 |
| 20° | 16922 | 17113 | 16827 |
| 25° | 16534 | 16716 | 16350 |
| 30° | 15653 | 15829 | 15373 |
| 35° | 14229 | 14229 | 13933 |
| 40° | 11704 | 11586 | 11336 |
| 45° | 6998 | 8224 | 6673 |
| 50° | 2261 | 4584 | 2122 |
| 55° | 799 | 1534 | 799 |
| 60° | 52 | 434 | 26 |
| 65° | 31 | 31 | 0 |
| 70° | 38 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 148 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 8224 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.7 | 6.3 |
| 10°-20° | 360.0 | 18.5 |
| 20°-30° | 532.8 | 27.4 |
| 30°-40° | 550.7 | 28.3 |
| 40°-50° | 320.4 | 16.5 |
| 50°-60° | 54.3 | 2.8 |
| 60°-70° | 2.1 | 0.1 |
| 70°-80° | 0.3 | 0.0 |
| 80°-90° | 0.3 | 0.0 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 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° | 1014.5 | 52.2 |
| 0°-40° | 1565.2 | 80.6 |
| 0°-60° | 1939.9 | 99.9 |
| 0°-90° | 1942.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1942.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1265 | 1265 | 1265 | 1265 | 1265 | |
| 5° | 1243 | 1276 | 1270 | 1273 | 1289 | 119 |
| 15° | 1260 | 1304 | 1278 | 1272 | 1280 | 354 |
| 25° | 1160 | 1199 | 1173 | 1138 | 1147 | 530 |
| 35° | 902 | 917 | 902 | 880 | 884 | 553 |
| 45° | 383 | 446 | 450 | 435 | 365 | 296 |
| 55° | 36 | 41 | 68 | 38 | 36 | 39 |
| 65° | 1 | 1 | 1 | 0 | 0 | 1 |
| 75° | 0 | 1 | 0 | 0 | 0 | 0 |
| 85° | 1 | 1 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P645245

CATALOG NUMBER: OMN4DP-SR4F0-50D930-BBM-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1264.7 | 1264.7 | 1264.7 | 1264.7 | 1264.7 |
| 2.5° | 1248.1 | 1272.8 | 1263.9 | 1264.8 | 1271.0 |
| 5° | 1243.0 | 1275.8 | 1269.6 | 1273.0 | 1289.4 |
| 7.5° | 1246.7 | 1279.9 | 1279.1 | 1280.1 | 1296.1 |
| 10° | 1249.9 | 1284.6 | 1281.5 | 1280.8 | 1295.3 |
| 12.5° | 1256.2 | 1294.1 | 1281.5 | 1280.0 | 1292.1 |
| 15° | 1259.8 | 1304.2 | 1278.5 | 1271.8 | 1280.5 |
| 17.5° | 1247.7 | 1297.1 | 1262.3 | 1244.4 | 1247.9 |
| 20° | 1231.1 | 1281.3 | 1245.0 | 1218.4 | 1224.2 |
| 22.5° | 1205.1 | 1253.0 | 1220.5 | 1187.7 | 1195.0 |
| 25° | 1160.1 | 1198.7 | 1172.9 | 1137.6 | 1147.2 |
| 27.5° | 1096.1 | 1126.6 | 1110.3 | 1076.1 | 1082.1 |
| 30° | 1049.5 | 1074.6 | 1061.3 | 1027.8 | 1030.7 |
| 32.5° | 995.8 | 1017.0 | 1002.9 | 974.0 | 973.9 |
| 35° | 902.4 | 916.9 | 902.4 | 879.8 | 883.6 |
| 37.5° | 780.1 | 791.2 | 776.4 | 762.8 | 764.7 |
| 40° | 694.1 | 702.7 | 687.1 | 674.3 | 672.3 |
| 42.5° | 586.6 | 610.8 | 595.5 | 578.0 | 580.7 |
| 45° | 383.1 | 445.8 | 450.2 | 434.8 | 365.3 |
| 47.5° | 193.1 | 261.7 | 313.4 | 237.8 | 170.4 |
| 50° | 112.5 | 154.1 | 228.1 | 125.9 | 105.6 |
| 52.5° | 73.8 | 91.4 | 159.3 | 79.6 | 70.1 |
| 55° | 35.5 | 41.3 | 68.1 | 38.4 | 35.5 |
| 57.5° | 12.2 | 18.8 | 30.2 | 19.2 | 13.6 |
| 60° | 2.0 | 7.8 | 16.8 | 5.8 | 1.0 |
| 62.5° | 1.2 | 2.3 | 10.5 | 1.2 | 0.2 |
| 65° | 1.0 | 1.0 | 1.0 | 0.0 | 0.0 |
| 67.5° | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 70° | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 85° | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.8 | 0.8 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)