

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: P644560

Luminaire Tested: OMN4DIP-SR4F0-100D150U930-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644560
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-27)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-100D150U930-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

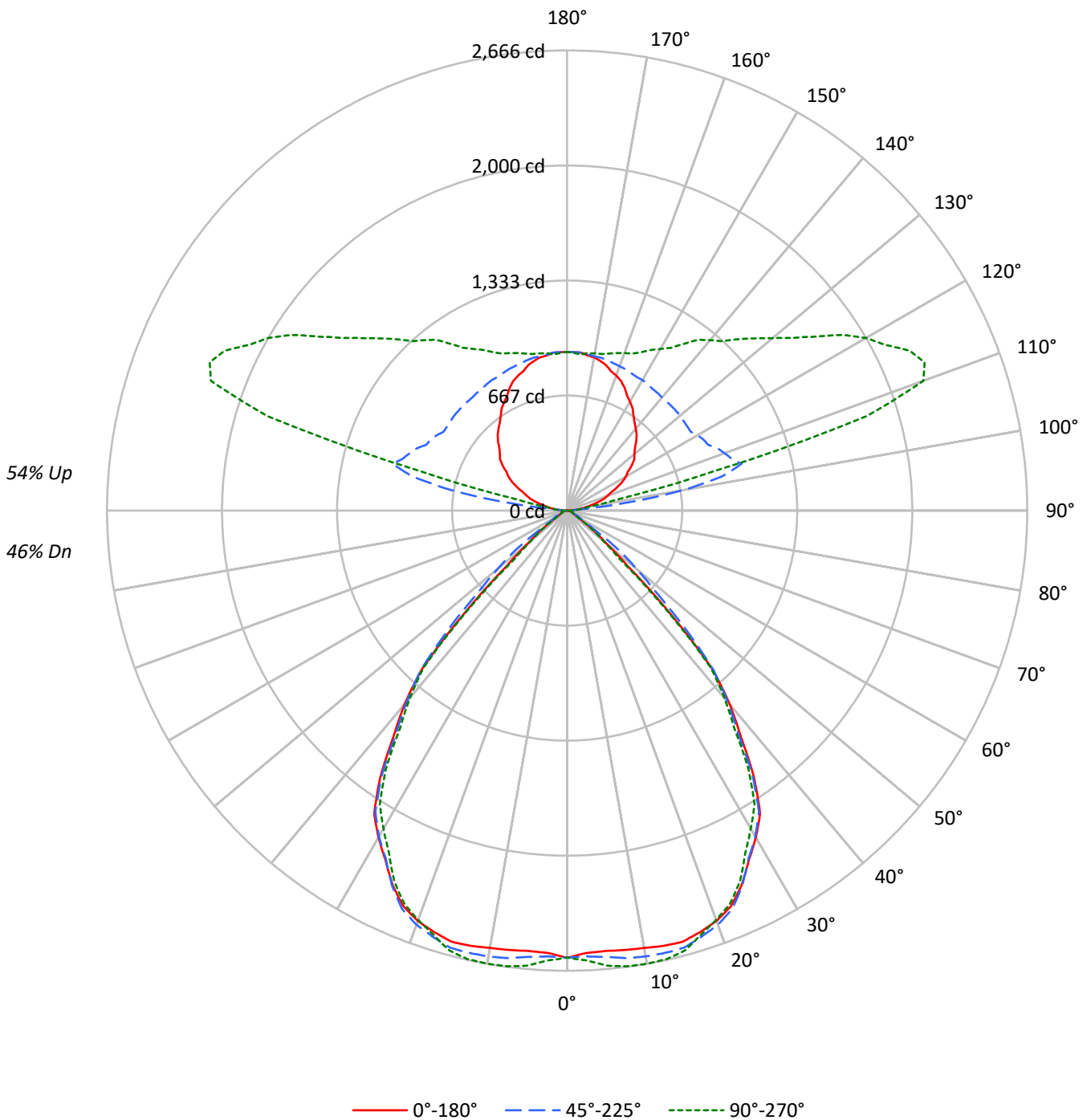
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9102.1 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 86.7
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

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Luminous Intensity Polar Plot





TEST NUMBER: P644560

CATALOG NUMBER: OMN4DIP-SR4F0-100D150U930-WBMOOB-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 | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 81 | 81 | 81 | 66 | 66 | 66 | 52 | 52 | 52 | 46 | | | | |
| 1 | 98 | 95 | 92 | 89 | 90 | 87 | 85 | 82 | 73 | 71 | 70 | 60 | 59 | 58 | 49 | 48 | 47 | 42 | | | | |
| 2 | 91 | 85 | 80 | 75 | 84 | 78 | 74 | 70 | 66 | 63 | 61 | 55 | 53 | 51 | 45 | 44 | 42 | 38 | | | | |
| 3 | 84 | 76 | 70 | 65 | 77 | 71 | 65 | 61 | 60 | 56 | 53 | 50 | 48 | 46 | 41 | 40 | 38 | 34 | | | | |
| 4 | 78 | 69 | 62 | 56 | 72 | 64 | 58 | 53 | 55 | 50 | 47 | 46 | 43 | 41 | 38 | 36 | 35 | 31 | | | | |
| 5 | 72 | 62 | 55 | 50 | 67 | 58 | 52 | 47 | 50 | 45 | 42 | 42 | 39 | 36 | 35 | 33 | 31 | 28 | | | | |
| 6 | 67 | 56 | 49 | 44 | 62 | 53 | 46 | 42 | 46 | 41 | 37 | 39 | 35 | 33 | 33 | 30 | 28 | 26 | | | | |
| 7 | 62 | 51 | 44 | 39 | 58 | 48 | 42 | 37 | 42 | 37 | 33 | 36 | 32 | 30 | 30 | 28 | 26 | 23 | | | | |
| 8 | 58 | 47 | 40 | 35 | 54 | 44 | 38 | 34 | 38 | 34 | 30 | 33 | 30 | 27 | 28 | 26 | 24 | 21 | | | | |
| 9 | 54 | 43 | 36 | 32 | 50 | 41 | 35 | 30 | 36 | 31 | 27 | 31 | 27 | 25 | 26 | 24 | 22 | 20 | | | | |
| 10 | 51 | 40 | 33 | 29 | 47 | 38 | 32 | 28 | 33 | 28 | 25 | 29 | 25 | 23 | 25 | 22 | 20 | 18 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 33454 | 33454 | 33454 |
| 5° | 33202 | 33657 | 34315 |
| 10° | 33740 | 34405 | 34967 |
| 15° | 34582 | 35052 | 35286 |
| 20° | 34770 | 35091 | 34690 |
| 25° | 34105 | 34188 | 33772 |
| 30° | 32609 | 32521 | 31736 |
| 35° | 29769 | 29523 | 28908 |
| 40° | 24729 | 24368 | 23908 |
| 45° | 15532 | 17670 | 14820 |
| 50° | 5956 | 10463 | 5526 |
| 55° | 2810 | 4391 | 2855 |
| 60° | 1361 | 2217 | 1209 |
| 65° | 1253 | 1311 | 1134 |
| 70° | 1254 | 1254 | 1107 |
| 75° | 1268 | 1268 | 1073 |
| 80° | 1309 | 1160 | 1019 |
| 85° | 1452 | 1156 | 874 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17670 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 249.5 | 2.7 |
| 10°-20° | 737.8 | 8.1 |
| 20°-30° | 1096.1 | 12.0 |
| 30°-40° | 1147.2 | 12.6 |
| 40°-50° | 694.9 | 7.6 |
| 50°-60° | 160.3 | 1.8 |
| 60°-70° | 44.1 | 0.5 |
| 70°-80° | 25.8 | 0.3 |
| 80°-90° | 11.0 | 0.1 |
| 90°-100° | 113.0 | 1.2 |
| 100°-110° | 805.0 | 8.8 |
| 110°-120° | 1092.8 | 12.0 |
| 120°-130° | 889.4 | 9.8 |
| 130°-140° | 715.4 | 7.9 |
| 140°-150° | 564.0 | 6.2 |
| 150°-160° | 412.4 | 4.5 |
| 160°-170° | 256.1 | 2.8 |
| 170°-180° | 87.3 | 1.0 |
| 0°-30° | 2083.4 | 22.9 |
| 0°-40° | 3230.6 | 35.5 |
| 0°-60° | 4085.9 | 44.9 |
| 0°-90° | 4166.8 | 45.8 |
| 90°-120° | 2010.7 | 22.1 |
| 90°-150° | 4179.5 | 45.9 |
| 90°-180° | 4935.0 | 54.2 |
| 0°-180° | 9102.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2590 | 2590 | 2590 | 2590 | 2590 | |
| 5° | 2561 | 2620 | 2596 | 2606 | 2646 | 245 |
| 15° | 2586 | 2664 | 2621 | 2601 | 2639 | 728 |
| 25° | 2393 | 2464 | 2399 | 2337 | 2370 | 1096 |
| 35° | 1888 | 1916 | 1872 | 1830 | 1833 | 1160 |
| 45° | 850 | 967 | 967 | 933 | 811 | 653 |
| 55° | 125 | 142 | 195 | 134 | 127 | 130 |
| 65° | 41 | 43 | 43 | 39 | 37 | 41 |
| 75° | 25 | 25 | 25 | 23 | 22 | 27 |
| 85° | 10 | 10 | 8 | 8 | 6 | 10 |
| 90° | 0 | 6 | 12 | 17 | 17 | 3 |
| 95° | 46 | 86 | 46 | 52 | 64 | 52 |
| 105° | 179 | 275 | 1046 | 1336 | 884 | 189 |
| 115° | 318 | 386 | 901 | 1874 | 2190 | 315 |
| 125° | 456 | 519 | 849 | 1486 | 1757 | 406 |
| 135° | 566 | 628 | 855 | 1223 | 1404 | 436 |
| 145° | 670 | 727 | 861 | 1066 | 1179 | 421 |
| 155° | 786 | 814 | 878 | 966 | 1011 | 361 |
| 165° | 872 | 884 | 901 | 925 | 942 | 245 |
| 175° | 919 | 924 | 919 | 913 | 907 | 87 |
| 180° | 919 | 919 | 919 | 919 | 919 | |



TEST NUMBER: P644560

CATALOG NUMBER: OMN4DIP-SR4F0-100D150U930-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2590.0 | 2590.0 | 2590.0 | 2590.0 | 2590.0 |
| 2.5° | 2565.0 | 2610.8 | 2585.3 | 2587.3 | 2608.7 |
| 5° | 2560.7 | 2619.8 | 2595.8 | 2606.5 | 2646.5 |
| 7.5° | 2567.7 | 2629.5 | 2615.3 | 2619.1 | 2662.9 |
| 10° | 2572.4 | 2637.3 | 2623.1 | 2622.2 | 2666.0 |
| 12.5° | 2583.3 | 2651.2 | 2624.7 | 2619.0 | 2661.4 |
| 15° | 2586.1 | 2664.3 | 2621.2 | 2600.6 | 2638.7 |
| 17.5° | 2560.7 | 2646.9 | 2588.8 | 2546.2 | 2576.7 |
| 20° | 2529.5 | 2617.2 | 2552.9 | 2493.2 | 2523.7 |
| 22.5° | 2481.1 | 2567.3 | 2498.3 | 2433.9 | 2465.9 |
| 25° | 2393.0 | 2463.6 | 2398.8 | 2337.2 | 2369.6 |
| 27.5° | 2281.4 | 2331.0 | 2275.6 | 2217.1 | 2235.4 |
| 30° | 2186.3 | 2235.8 | 2180.4 | 2120.1 | 2127.8 |
| 32.5° | 2080.2 | 2122.1 | 2068.1 | 2014.0 | 2020.1 |
| 35° | 1887.9 | 1916.5 | 1872.3 | 1829.5 | 1833.3 |
| 37.5° | 1653.8 | 1657.7 | 1627.7 | 1588.7 | 1589.5 |
| 40° | 1466.6 | 1478.1 | 1445.2 | 1414.0 | 1417.9 |
| 42.5° | 1243.5 | 1288.5 | 1256.4 | 1228.3 | 1229.1 |
| 45° | 850.3 | 966.6 | 967.3 | 933.4 | 811.3 |
| 47.5° | 469.6 | 604.3 | 690.8 | 535.7 | 404.5 |
| 50° | 296.4 | 382.3 | 520.7 | 313.1 | 275.0 |
| 52.5° | 212.2 | 250.7 | 380.3 | 221.5 | 201.7 |
| 55° | 124.8 | 142.0 | 195.0 | 134.4 | 126.8 |
| 57.5° | 76.1 | 90.9 | 113.9 | 89.8 | 76.5 |
| 60° | 52.7 | 66.0 | 85.8 | 60.2 | 46.8 |
| 62.5° | 46.4 | 50.6 | 67.1 | 47.9 | 43.7 |
| 65° | 41.0 | 42.9 | 42.9 | 39.0 | 37.1 |
| 67.5° | 36.3 | 38.2 | 36.3 | 34.3 | 32.4 |
| 70° | 33.2 | 35.1 | 33.2 | 31.2 | 29.3 |
| 72.5° | 30.0 | 31.9 | 30.0 | 28.0 | 26.1 |
| 75° | 25.4 | 25.4 | 25.4 | 23.4 | 21.5 |
| 77.5° | 20.7 | 20.7 | 20.3 | 18.7 | 16.8 |
| 80° | 17.6 | 17.6 | 15.6 | 15.6 | 13.7 |
| 82.5° | 14.4 | 14.4 | 12.5 | 12.4 | 10.5 |
| 85° | 9.8 | 9.8 | 7.8 | 7.8 | 5.9 |
| 87.5° | 4.7 | 5.8 | 5.4 | 6.6 | 5.0 |
| 90° | 0.0 | 5.7 | 11.6 | 17.3 | 17.3 |
| 92.5° | 13.9 | 19.5 | 25.4 | 35.9 | 40.4 |
| 95° | 46.2 | 85.8 | 46.2 | 52.3 | 63.6 |
| 97.5° | 82.1 | 164.5 | 339.8 | 100.2 | 86.7 |
| 100° | 109.8 | 205.8 | 681.9 | 200.7 | 132.9 |
| 102.5° | 137.5 | 238.1 | 922.2 | 529.6 | 290.1 |
| 105° | 179.1 | 275.2 | 1045.9 | 1336.1 | 884.1 |
| 107.5° | 220.7 | 293.1 | 998.5 | 1944.5 | 1821.4 |
| 110° | 248.5 | 316.3 | 970.8 | 2043.3 | 2195.8 |



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CATALOG NUMBER: OMN4DIP-SR4F0-100D150U930-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 276.2 | 344.0 | 943.0 | 1985.5 | 2242.0 |
| 115° | 317.8 | 385.6 | 901.4 | 1873.6 | 2190.0 |
| 117.5° | 360.6 | 427.2 | 891.0 | 1752.5 | 2077.9 |
| 120° | 392.9 | 455.1 | 872.5 | 1660.3 | 1999.3 |
| 122.5° | 416.0 | 482.7 | 849.4 | 1581.1 | 1893.0 |
| 125° | 456.5 | 518.6 | 849.4 | 1485.5 | 1756.7 |
| 127.5° | 490.0 | 553.3 | 850.6 | 1374.4 | 1642.2 |
| 130° | 508.5 | 576.3 | 855.2 | 1300.2 | 1554.4 |
| 132.5° | 531.6 | 599.4 | 855.2 | 1266.8 | 1475.8 |
| 135° | 566.3 | 628.4 | 855.2 | 1223.4 | 1404.2 |
| 137.5° | 595.2 | 661.9 | 855.2 | 1175.4 | 1330.2 |
| 140° | 618.3 | 680.4 | 855.2 | 1147.3 | 1288.6 |
| 142.5° | 641.4 | 699.0 | 859.8 | 1114.8 | 1247.0 |
| 145° | 670.3 | 726.8 | 861.0 | 1065.8 | 1178.8 |
| 147.5° | 705.0 | 754.7 | 867.9 | 1030.5 | 1117.6 |
| 150° | 728.1 | 773.3 | 872.5 | 1007.1 | 1080.6 |
| 152.5° | 751.2 | 791.9 | 872.5 | 988.3 | 1048.2 |
| 155° | 785.9 | 814.1 | 878.3 | 966.0 | 1011.2 |
| 157.5° | 813.6 | 840.7 | 885.3 | 951.9 | 984.7 |
| 160° | 832.1 | 854.7 | 889.9 | 942.5 | 970.8 |
| 162.5° | 846.0 | 868.6 | 894.5 | 937.7 | 956.9 |
| 165° | 872.5 | 883.8 | 901.4 | 924.9 | 941.9 |
| 167.5° | 887.6 | 897.7 | 907.2 | 919.0 | 929.2 |
| 170° | 901.4 | 907.1 | 907.2 | 918.9 | 924.6 |
| 172.5° | 906.1 | 916.2 | 911.8 | 914.3 | 919.9 |
| 175° | 918.8 | 924.4 | 918.8 | 912.9 | 907.2 |
| 177.5° | 918.8 | 923.3 | 918.8 | 918.7 | 914.2 |
| 180° | 918.8 | 918.8 | 918.8 | 918.8 | 918.8 |

(END OF REPORT)