

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: P645136

Luminaire Tested: OMN4DIP-SR4F0-75D25U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645136
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-SR4F0-75D25U935-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

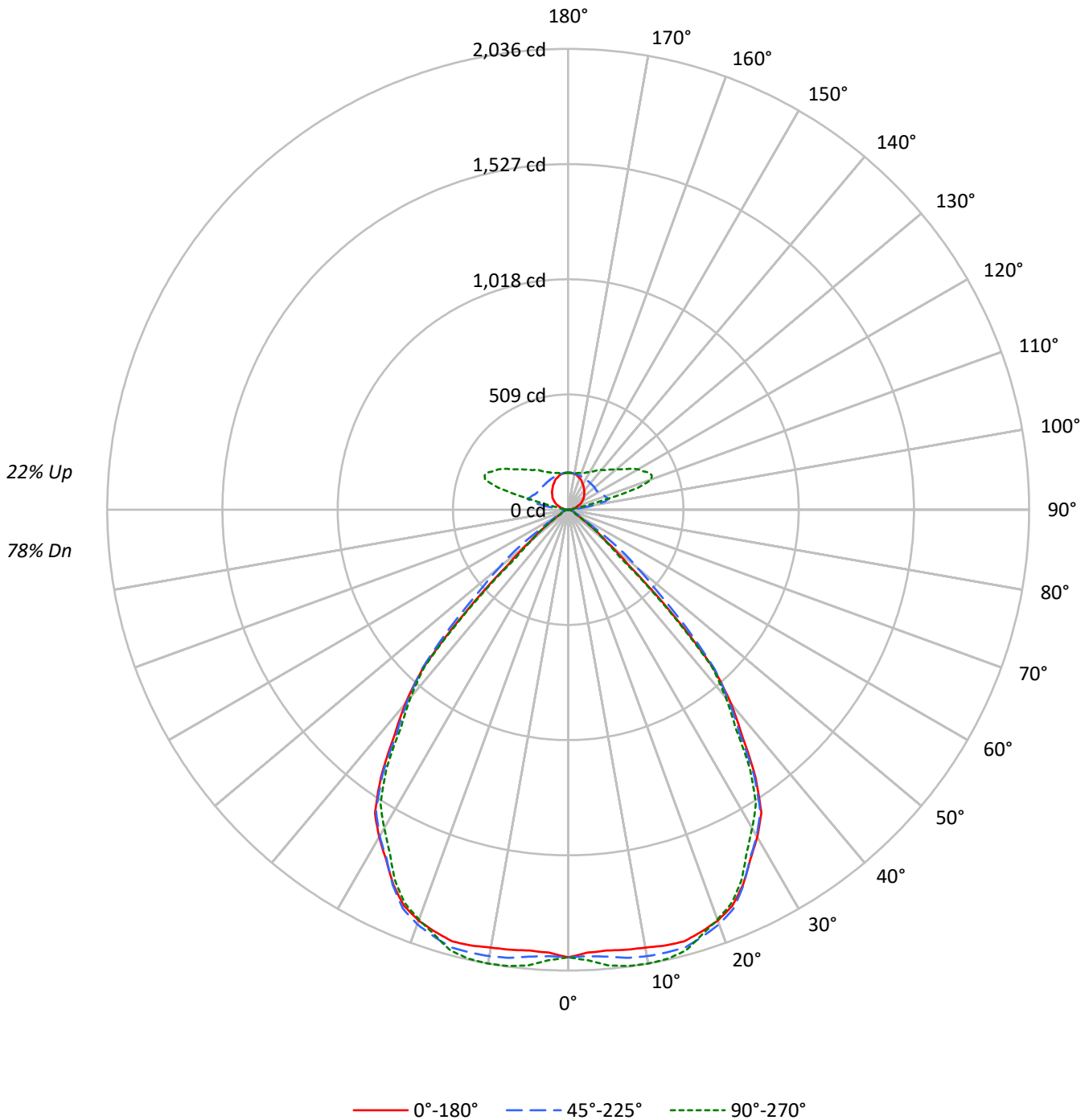
Lumens per Lamp: N/A
Luminaire Lumens: 4059.5 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 36.2
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 | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 99 | 99 | 99 | | 90 | 90 | 90 | | 82 | 82 | 82 | 78 |
| 1 | 107 | 103 | 100 | 98 | 102 | 99 | 97 | 94 | 91 | 89 | 87 | | 84 | 82 | 81 | | 77 | 76 | 75 | 72 |
| 2 | 100 | 94 | 89 | 85 | 95 | 90 | 86 | 82 | 83 | 80 | 77 | | 77 | 75 | 72 | | 71 | 69 | 68 | 65 |
| 3 | 93 | 85 | 79 | 75 | 89 | 82 | 77 | 73 | 76 | 72 | 69 | | 71 | 68 | 65 | | 66 | 63 | 61 | 59 |
| 4 | 87 | 78 | 71 | 66 | 83 | 75 | 69 | 65 | 70 | 65 | 61 | | 66 | 62 | 58 | | 61 | 58 | 56 | 53 |
| 5 | 81 | 71 | 64 | 59 | 78 | 69 | 63 | 58 | 65 | 59 | 55 | | 60 | 56 | 53 | | 57 | 53 | 50 | 48 |
| 6 | 76 | 65 | 58 | 53 | 73 | 63 | 57 | 52 | 59 | 54 | 50 | | 56 | 51 | 48 | | 53 | 49 | 46 | 44 |
| 7 | 71 | 60 | 53 | 48 | 68 | 58 | 52 | 47 | 55 | 49 | 45 | | 52 | 47 | 44 | | 49 | 45 | 42 | 40 |
| 8 | 67 | 55 | 48 | 44 | 64 | 54 | 47 | 43 | 51 | 45 | 41 | | 48 | 43 | 40 | | 46 | 42 | 39 | 37 |
| 9 | 63 | 51 | 45 | 40 | 60 | 50 | 44 | 39 | 47 | 42 | 38 | | 45 | 40 | 37 | | 43 | 38 | 36 | 34 |
| 10 | 59 | 48 | 41 | 37 | 57 | 46 | 40 | 36 | 44 | 39 | 35 | | 42 | 37 | 34 | | 40 | 36 | 33 | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 25544 | 25544 | 25544 |
| 5° | 25353 | 25700 | 26202 |
| 10° | 25762 | 26270 | 26700 |
| 15° | 26405 | 26765 | 26944 |
| 20° | 26550 | 26794 | 26488 |
| 25° | 26041 | 26105 | 25786 |
| 30° | 24899 | 24832 | 24232 |
| 35° | 22730 | 22543 | 22073 |
| 40° | 18883 | 18607 | 18254 |
| 45° | 11861 | 13492 | 11316 |
| 50° | 4549 | 7990 | 4220 |
| 55° | 2146 | 3353 | 2180 |
| 60° | 1039 | 1692 | 922 |
| 65° | 957 | 1002 | 865 |
| 70° | 955 | 955 | 842 |
| 75° | 968 | 968 | 818 |
| 80° | 997 | 885 | 774 |
| 85° | 1097 | 889 | 667 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13492 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 190.5 | 4.7 |
| 10°-20° | 563.4 | 13.9 |
| 20°-30° | 836.9 | 20.6 |
| 30°-40° | 876.0 | 21.6 |
| 40°-50° | 530.6 | 13.1 |
| 50°-60° | 122.4 | 3.0 |
| 60°-70° | 33.6 | 0.8 |
| 70°-80° | 19.7 | 0.5 |
| 80°-90° | 7.2 | 0.2 |
| 90°-100° | 20.1 | 0.5 |
| 100°-110° | 143.4 | 3.5 |
| 110°-120° | 194.7 | 4.8 |
| 120°-130° | 158.4 | 3.9 |
| 130°-140° | 127.4 | 3.1 |
| 140°-150° | 100.5 | 2.5 |
| 150°-160° | 73.5 | 1.8 |
| 160°-170° | 45.6 | 1.1 |
| 170°-180° | 15.6 | 0.4 |
| 0°-30° | 1590.8 | 39.2 |
| 0°-40° | 2466.8 | 60.8 |
| 0°-60° | 3119.8 | 76.9 |
| 0°-90° | 3180.4 | 78.3 |
| 90°-120° | 358.2 | 8.8 |
| 90°-150° | 744.5 | 18.3 |
| 90°-180° | 879.0 | 21.7 |
| 0°-180° | 4059.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1978 | 1978 | 1978 | 1978 | 1978 | |
| 5° | 1955 | 2000 | 1982 | 1990 | 2021 | 187 |
| 15° | 1975 | 2034 | 2002 | 1986 | 2015 | 556 |
| 25° | 1827 | 1881 | 1832 | 1785 | 1809 | 837 |
| 35° | 1442 | 1463 | 1430 | 1397 | 1400 | 886 |
| 45° | 649 | 738 | 739 | 713 | 620 | 499 |
| 55° | 95 | 108 | 149 | 103 | 97 | 99 |
| 65° | 31 | 33 | 33 | 30 | 28 | 31 |
| 75° | 19 | 19 | 19 | 18 | 16 | 20 |
| 85° | 7 | 7 | 6 | 6 | 4 | 7 |
| 90° | 0 | 1 | 2 | 3 | 3 | 1 |
| 95° | 8 | 15 | 8 | 9 | 11 | 9 |
| 105° | 32 | 49 | 186 | 238 | 158 | 34 |
| 115° | 57 | 69 | 161 | 334 | 390 | 56 |
| 125° | 81 | 92 | 151 | 265 | 313 | 72 |
| 135° | 101 | 112 | 152 | 218 | 250 | 78 |
| 145° | 119 | 130 | 153 | 190 | 210 | 75 |
| 155° | 140 | 145 | 156 | 172 | 180 | 64 |
| 165° | 155 | 157 | 161 | 165 | 168 | 44 |
| 175° | 164 | 165 | 164 | 163 | 162 | 15 |
| 180° | 164 | 164 | 164 | 164 | 164 | |



TEST NUMBER: P645136

CATALOG NUMBER: OMN4DIP-SR4F0-75D25U935-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1977.6 | 1977.6 | 1977.6 | 1977.6 | 1977.6 |
| 2.5° | 1958.6 | 1993.5 | 1974.0 | 1975.6 | 1991.9 |
| 5° | 1955.3 | 2000.4 | 1982.1 | 1990.2 | 2020.8 |
| 7.5° | 1960.6 | 2007.8 | 1997.0 | 1999.8 | 2033.3 |
| 10° | 1964.2 | 2013.7 | 2002.9 | 2002.2 | 2035.7 |
| 12.5° | 1972.6 | 2024.4 | 2004.1 | 1999.8 | 2032.1 |
| 15° | 1974.6 | 2034.3 | 2001.5 | 1985.7 | 2014.9 |
| 17.5° | 1955.3 | 2021.1 | 1976.7 | 1944.2 | 1967.5 |
| 20° | 1931.5 | 1998.4 | 1949.3 | 1903.7 | 1927.0 |
| 22.5° | 1894.5 | 1960.3 | 1907.6 | 1858.4 | 1882.9 |
| 25° | 1827.2 | 1881.1 | 1831.7 | 1784.6 | 1809.3 |
| 27.5° | 1742.0 | 1779.9 | 1737.6 | 1692.9 | 1706.9 |
| 30° | 1669.4 | 1707.2 | 1664.9 | 1618.9 | 1624.7 |
| 32.5° | 1588.4 | 1620.4 | 1579.1 | 1537.8 | 1542.5 |
| 35° | 1441.5 | 1463.4 | 1429.6 | 1396.9 | 1399.8 |
| 37.5° | 1262.8 | 1265.7 | 1242.9 | 1213.1 | 1213.7 |
| 40° | 1119.9 | 1128.6 | 1103.5 | 1079.7 | 1082.6 |
| 42.5° | 949.5 | 983.9 | 959.3 | 937.9 | 938.5 |
| 45° | 649.3 | 738.1 | 738.6 | 712.7 | 619.5 |
| 47.5° | 358.6 | 461.4 | 527.5 | 409.0 | 308.9 |
| 50° | 226.4 | 291.9 | 397.6 | 239.1 | 210.0 |
| 52.5° | 162.0 | 191.4 | 290.4 | 169.1 | 154.0 |
| 55° | 95.3 | 108.4 | 148.9 | 102.6 | 96.8 |
| 57.5° | 58.1 | 69.4 | 87.0 | 68.6 | 58.4 |
| 60° | 40.2 | 50.4 | 65.5 | 45.9 | 35.7 |
| 62.5° | 35.4 | 38.6 | 51.2 | 36.6 | 33.4 |
| 65° | 31.3 | 32.7 | 32.8 | 29.8 | 28.3 |
| 67.5° | 27.7 | 29.2 | 27.7 | 26.2 | 24.7 |
| 70° | 25.3 | 26.8 | 25.3 | 23.8 | 22.3 |
| 72.5° | 22.9 | 24.4 | 22.9 | 21.4 | 20.0 |
| 75° | 19.4 | 19.4 | 19.4 | 17.8 | 16.4 |
| 77.5° | 15.8 | 15.8 | 15.5 | 14.3 | 12.8 |
| 80° | 13.4 | 13.4 | 11.9 | 11.9 | 10.4 |
| 82.5° | 11.0 | 11.0 | 9.5 | 9.5 | 8.0 |
| 85° | 7.4 | 7.4 | 6.0 | 5.9 | 4.5 |
| 87.5° | 3.6 | 3.8 | 2.8 | 3.0 | 1.8 |
| 90° | 0.0 | 1.0 | 2.1 | 3.1 | 3.1 |
| 92.5° | 2.5 | 3.5 | 4.5 | 6.4 | 7.2 |
| 95° | 8.2 | 15.3 | 8.2 | 9.3 | 11.3 |
| 97.5° | 14.6 | 29.3 | 60.5 | 17.9 | 15.4 |
| 100° | 19.6 | 36.7 | 121.5 | 35.8 | 23.7 |
| 102.5° | 24.5 | 42.4 | 164.3 | 94.3 | 51.7 |
| 105° | 31.9 | 49.0 | 186.3 | 238.0 | 157.5 |
| 107.5° | 39.3 | 52.2 | 177.9 | 346.4 | 324.4 |
| 110° | 44.3 | 56.3 | 172.9 | 364.0 | 391.1 |

TEST NUMBER: P645136

CATALOG NUMBER: OMN4DIP-SR4F0-75D25U935-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 49.2 | 61.3 | 168.0 | 353.7 | 399.4 |
| 115° | 56.6 | 68.7 | 160.6 | 333.8 | 390.1 |
| 117.5° | 64.2 | 76.1 | 158.7 | 312.2 | 370.1 |
| 120° | 70.0 | 81.1 | 155.4 | 295.8 | 356.1 |
| 122.5° | 74.1 | 86.0 | 151.3 | 281.7 | 337.2 |
| 125° | 81.3 | 92.4 | 151.3 | 264.6 | 312.9 |
| 127.5° | 87.3 | 98.6 | 151.5 | 244.8 | 292.5 |
| 130° | 90.6 | 102.7 | 152.3 | 231.6 | 276.9 |
| 132.5° | 94.7 | 106.8 | 152.3 | 225.7 | 262.9 |
| 135° | 100.9 | 111.9 | 152.3 | 217.9 | 250.1 |
| 137.5° | 106.0 | 117.9 | 152.3 | 209.4 | 237.0 |
| 140° | 110.1 | 121.2 | 152.3 | 204.4 | 229.5 |
| 142.5° | 114.3 | 124.5 | 153.2 | 198.6 | 222.1 |
| 145° | 119.4 | 129.5 | 153.4 | 189.9 | 210.0 |
| 147.5° | 125.6 | 134.4 | 154.6 | 183.6 | 199.1 |
| 150° | 129.7 | 137.7 | 155.4 | 179.4 | 192.5 |
| 152.5° | 133.8 | 141.1 | 155.4 | 176.1 | 186.7 |
| 155° | 140.0 | 145.0 | 156.5 | 172.1 | 180.1 |
| 157.5° | 144.9 | 149.8 | 157.7 | 169.6 | 175.4 |
| 160° | 148.2 | 152.3 | 158.5 | 167.9 | 172.9 |
| 162.5° | 150.7 | 154.7 | 159.3 | 167.0 | 170.5 |
| 165° | 155.4 | 157.4 | 160.6 | 164.8 | 167.8 |
| 167.5° | 158.1 | 159.9 | 161.6 | 163.7 | 165.5 |
| 170° | 160.6 | 161.6 | 161.6 | 163.7 | 164.7 |
| 172.5° | 161.4 | 163.2 | 162.4 | 162.9 | 163.9 |
| 175° | 163.7 | 164.7 | 163.7 | 162.6 | 161.6 |
| 177.5° | 163.7 | 164.5 | 163.7 | 163.6 | 162.8 |
| 180° | 163.7 | 163.7 | 163.7 | 163.7 | 163.7 |

(END OF REPORT)