

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: P645166

Luminaire Tested: OMN4DIP-SR4F0-75D50U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645166
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-SR4F0-75D50U935-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 - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

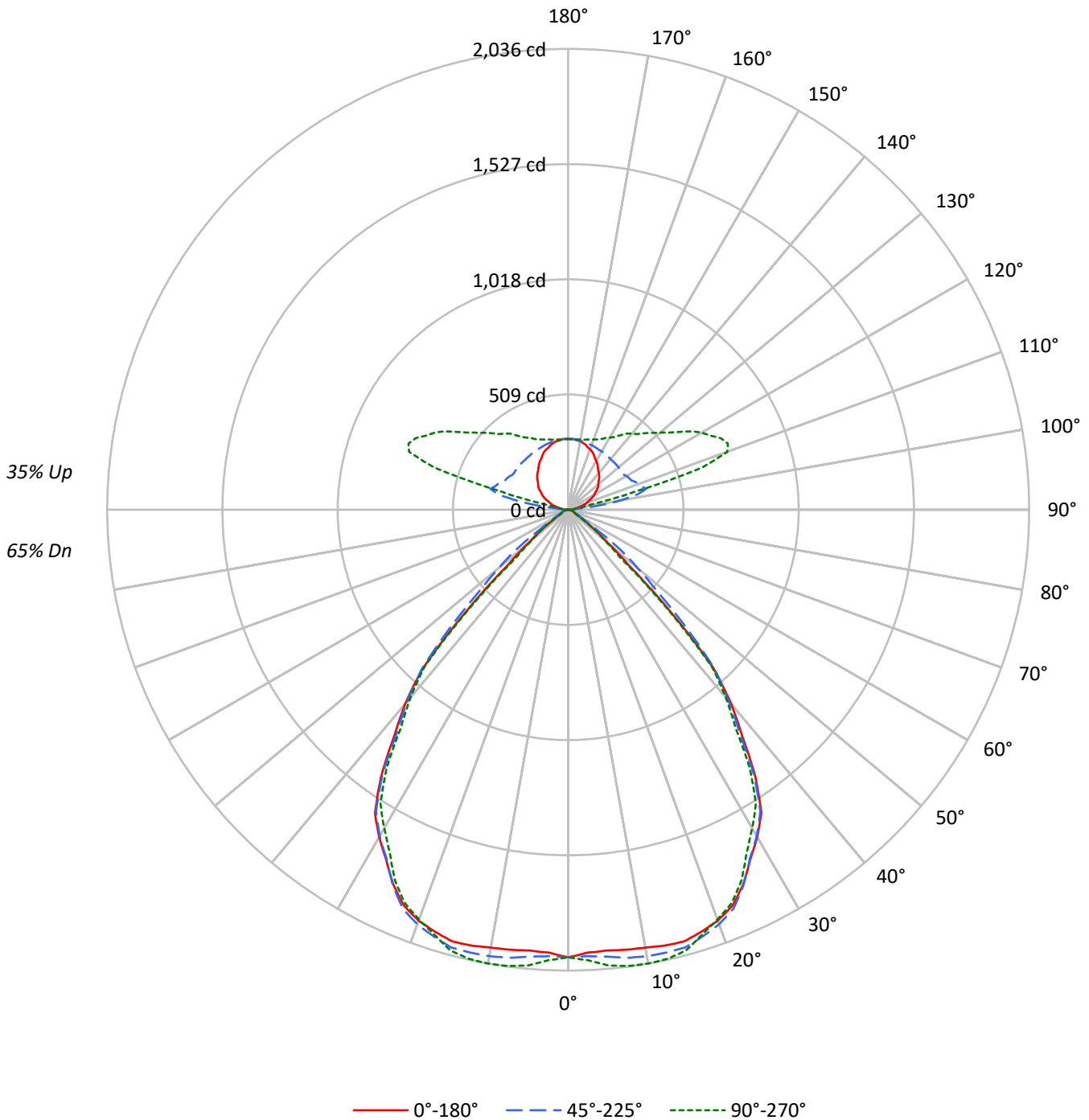
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4861.6 lumens
Efficiency: N/A
Efficacy: 114.4 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): 42.5
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





TEST NUMBER: P645166

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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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 92 | 92 | 92 | 81 | 81 | 81 | 70 | 70 | 70 | 65 | | | | |
| 1 | 104 | 100 | 97 | 94 | 97 | 94 | 92 | 89 | 84 | 82 | 80 | 75 | 73 | 72 | 66 | 65 | 64 | 60 | | | | |
| 2 | 96 | 90 | 85 | 81 | 91 | 86 | 81 | 77 | 77 | 73 | 71 | 68 | 66 | 64 | 61 | 59 | 58 | 54 | | | | |
| 3 | 90 | 82 | 76 | 71 | 85 | 78 | 72 | 68 | 70 | 66 | 62 | 63 | 60 | 57 | 56 | 54 | 52 | 49 | | | | |
| 4 | 83 | 74 | 67 | 62 | 79 | 71 | 65 | 60 | 64 | 59 | 56 | 58 | 54 | 51 | 52 | 49 | 47 | 44 | | | | |
| 5 | 78 | 68 | 60 | 55 | 73 | 64 | 58 | 53 | 59 | 54 | 50 | 53 | 49 | 46 | 48 | 45 | 43 | 40 | | | | |
| 6 | 72 | 62 | 55 | 49 | 68 | 59 | 53 | 48 | 54 | 49 | 45 | 49 | 45 | 42 | 45 | 42 | 39 | 37 | | | | |
| 7 | 68 | 57 | 50 | 45 | 64 | 54 | 48 | 43 | 50 | 44 | 41 | 46 | 41 | 38 | 42 | 38 | 36 | 33 | | | | |
| 8 | 63 | 52 | 45 | 40 | 60 | 50 | 44 | 39 | 46 | 41 | 37 | 42 | 38 | 35 | 39 | 35 | 33 | 31 | | | | |
| 9 | 59 | 48 | 41 | 37 | 56 | 46 | 40 | 36 | 43 | 37 | 34 | 39 | 35 | 32 | 36 | 33 | 30 | 28 | | | | |
| 10 | 56 | 45 | 38 | 34 | 53 | 43 | 37 | 33 | 40 | 35 | 31 | 37 | 32 | 29 | 34 | 30 | 28 | 26 | | | | |

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 | 3.9 |
| 10°-20° | 563.4 | 11.6 |
| 20°-30° | 836.9 | 17.2 |
| 30°-40° | 876.0 | 18.0 |
| 40°-50° | 530.6 | 10.9 |
| 50°-60° | 122.4 | 2.5 |
| 60°-70° | 33.6 | 0.7 |
| 70°-80° | 19.7 | 0.4 |
| 80°-90° | 7.5 | 0.2 |
| 90°-100° | 38.5 | 0.8 |
| 100°-110° | 274.1 | 5.6 |
| 110°-120° | 372.2 | 7.7 |
| 120°-130° | 302.9 | 6.2 |
| 130°-140° | 243.6 | 5.0 |
| 140°-150° | 192.1 | 4.0 |
| 150°-160° | 140.4 | 2.9 |
| 160°-170° | 87.2 | 1.8 |
| 170°-180° | 29.7 | 0.6 |
| 0°-30° | 1590.8 | 32.7 |
| 0°-40° | 2466.8 | 50.7 |
| 0°-60° | 3119.8 | 64.2 |
| 0°-90° | 3180.7 | 65.4 |
| 90°-120° | 684.8 | 14.1 |
| 90°-150° | 1423.4 | 29.3 |
| 90°-180° | 1681.0 | 34.6 |
| 0°-180° | 4861.6 | 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 | 2 | 4 | 6 | 6 | 1 |
| 95° | 16 | 29 | 16 | 18 | 22 | 18 |
| 105° | 61 | 94 | 356 | 455 | 301 | 64 |
| 115° | 108 | 131 | 307 | 638 | 746 | 107 |
| 125° | 156 | 177 | 289 | 506 | 598 | 138 |
| 135° | 193 | 214 | 291 | 417 | 478 | 148 |
| 145° | 228 | 248 | 293 | 363 | 402 | 143 |
| 155° | 268 | 277 | 299 | 329 | 344 | 123 |
| 165° | 297 | 301 | 307 | 315 | 321 | 83 |
| 175° | 313 | 315 | 313 | 311 | 309 | 30 |
| 180° | 313 | 313 | 313 | 313 | 313 | |



TEST NUMBER: P645166

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U935-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 | 4.0 | 3.2 | 3.5 | 2.4 |
| 90° | 0.0 | 1.9 | 3.9 | 5.9 | 5.9 |
| 92.5° | 4.7 | 6.6 | 8.7 | 12.2 | 13.8 |
| 95° | 15.7 | 29.2 | 15.7 | 17.8 | 21.6 |
| 97.5° | 27.9 | 56.0 | 115.7 | 34.1 | 29.5 |
| 100° | 37.4 | 70.1 | 232.2 | 68.4 | 45.3 |
| 102.5° | 46.8 | 81.1 | 314.1 | 180.4 | 98.8 |
| 105° | 61.0 | 93.7 | 356.2 | 455.0 | 301.1 |
| 107.5° | 75.2 | 99.8 | 340.1 | 662.3 | 620.3 |
| 110° | 84.6 | 107.7 | 330.6 | 695.9 | 747.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 94.1 | 117.2 | 321.2 | 676.2 | 763.6 |
| 115° | 108.2 | 131.3 | 307.0 | 638.1 | 745.9 |
| 117.5° | 122.8 | 145.5 | 303.5 | 596.9 | 707.7 |
| 120° | 133.8 | 155.0 | 297.2 | 565.5 | 680.9 |
| 122.5° | 141.7 | 164.4 | 289.3 | 538.5 | 644.7 |
| 125° | 155.5 | 176.6 | 289.3 | 505.9 | 598.3 |
| 127.5° | 166.9 | 188.4 | 289.7 | 468.1 | 559.3 |
| 130° | 173.2 | 196.3 | 291.3 | 442.8 | 529.4 |
| 132.5° | 181.1 | 204.1 | 291.3 | 431.4 | 502.6 |
| 135° | 192.9 | 214.0 | 291.3 | 416.6 | 478.2 |
| 137.5° | 202.7 | 225.4 | 291.3 | 400.3 | 453.0 |
| 140° | 210.6 | 231.7 | 291.3 | 390.8 | 438.9 |
| 142.5° | 218.4 | 238.1 | 292.8 | 379.7 | 424.7 |
| 145° | 228.3 | 247.5 | 293.2 | 363.0 | 401.5 |
| 147.5° | 240.1 | 257.0 | 295.6 | 351.0 | 380.6 |
| 150° | 248.0 | 263.4 | 297.2 | 343.0 | 368.0 |
| 152.5° | 255.8 | 269.7 | 297.2 | 336.6 | 357.0 |
| 155° | 267.6 | 277.3 | 299.1 | 329.0 | 344.4 |
| 157.5° | 277.1 | 286.3 | 301.5 | 324.2 | 335.3 |
| 160° | 283.4 | 291.1 | 303.1 | 321.0 | 330.6 |
| 162.5° | 288.1 | 295.8 | 304.6 | 319.4 | 325.9 |
| 165° | 297.2 | 301.0 | 307.0 | 315.0 | 320.8 |
| 167.5° | 302.3 | 305.7 | 309.0 | 313.0 | 316.5 |
| 170° | 307.0 | 308.9 | 309.0 | 313.0 | 314.9 |
| 172.5° | 308.6 | 312.0 | 310.5 | 311.4 | 313.3 |
| 175° | 312.9 | 314.8 | 312.9 | 310.9 | 309.0 |
| 177.5° | 312.9 | 314.4 | 312.9 | 312.9 | 311.3 |
| 180° | 312.9 | 312.9 | 312.9 | 312.9 | 312.9 |

(END OF REPORT)