

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: P644956

Luminaire Tested: OMN4DIP-SR4F0-50D25U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644956
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-SR4F0-50D25U935-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

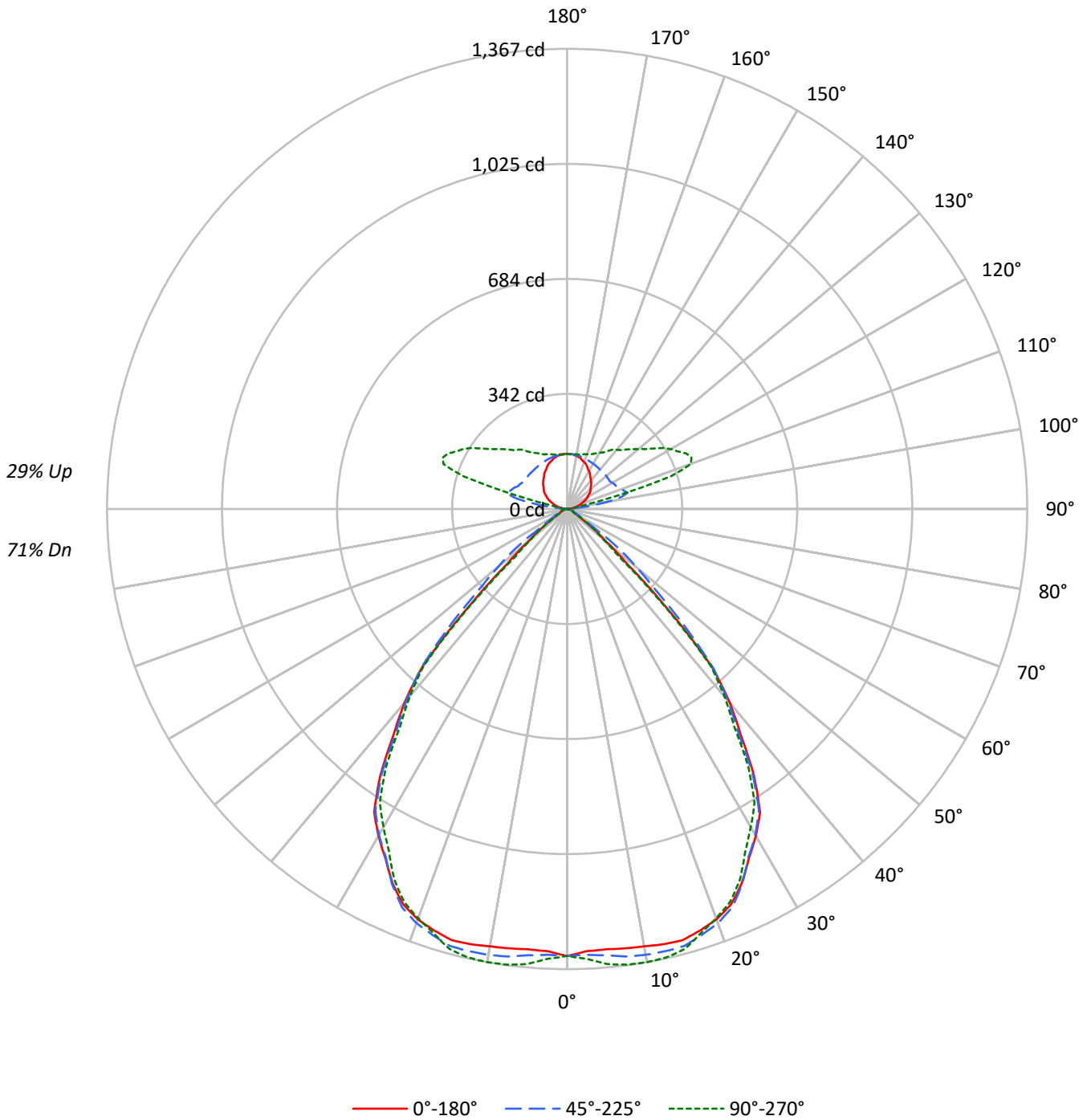
Lumens per Lamp: N/A
Luminaire Lumens: 3015.0 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 26.5
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: P644956

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 70 | | | | | | | | | 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 | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 95 | 95 | 95 | 85 | 85 | 85 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 71 | | | | | | | | | | | | | |
| 1 | 105 | 101 | 98 | 96 | 99 | 96 | 94 | 91 | 87 | 85 | 83 | 78 | 77 | 76 | 70 | 69 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 65 | | | | | | | | | | | | | |
| 2 | 98 | 92 | 87 | 83 | 93 | 88 | 83 | 79 | 80 | 76 | 73 | 72 | 70 | 67 | 65 | 63 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 59 | | | | | | | | | | | | | |
| 3 | 91 | 83 | 77 | 72 | 86 | 80 | 74 | 70 | 73 | 69 | 65 | 66 | 63 | 60 | 60 | 58 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 53 | | | | | | | | | | | | | |
| 4 | 85 | 76 | 69 | 64 | 81 | 73 | 67 | 62 | 67 | 62 | 58 | 61 | 57 | 54 | 56 | 53 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 48 | | | | | | | | | | | | | |
| 5 | 79 | 69 | 62 | 57 | 75 | 66 | 60 | 55 | 61 | 56 | 52 | 56 | 52 | 49 | 52 | 49 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 44 | | | | | | | | | | | | | |
| 6 | 74 | 63 | 56 | 51 | 70 | 61 | 54 | 50 | 56 | 51 | 47 | 52 | 48 | 44 | 48 | 45 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 40 | | | | | | | | | | | | | |
| 7 | 69 | 58 | 51 | 46 | 66 | 56 | 49 | 45 | 52 | 47 | 43 | 48 | 44 | 40 | 45 | 41 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 36 | | | | | | | | | | | | | |
| 8 | 65 | 54 | 47 | 42 | 62 | 52 | 45 | 41 | 48 | 43 | 39 | 45 | 40 | 37 | 42 | 38 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 33 | | | | | | | | | | | | | |
| 9 | 61 | 49 | 43 | 38 | 58 | 48 | 42 | 37 | 45 | 39 | 36 | 42 | 37 | 34 | 39 | 35 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 31 | | | | | | | | | | | | | |
| 10 | 57 | 46 | 39 | 35 | 55 | 44 | 38 | 34 | 42 | 36 | 33 | 39 | 34 | 31 | 36 | 33 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 28 | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 17153 | 17153 | 17153 |
| 5° | 17024 | 17258 | 17595 |
| 10° | 17300 | 17641 | 17930 |
| 15° | 17732 | 17972 | 18093 |
| 20° | 17828 | 17993 | 17787 |
| 25° | 17487 | 17530 | 17316 |
| 30° | 16720 | 16675 | 16272 |
| 35° | 15264 | 15138 | 14822 |
| 40° | 12680 | 12494 | 12258 |
| 45° | 7964 | 9060 | 7599 |
| 50° | 3054 | 5365 | 2833 |
| 55° | 1441 | 2252 | 1464 |
| 60° | 698 | 1137 | 620 |
| 65° | 642 | 672 | 581 |
| 70° | 642 | 642 | 566 |
| 75° | 649 | 649 | 549 |
| 80° | 669 | 595 | 521 |
| 85° | 741 | 593 | 445 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9060 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 127.9 | 4.2 |
| 10°-20° | 378.3 | 12.5 |
| 20°-30° | 562.0 | 18.6 |
| 30°-40° | 588.2 | 19.5 |
| 40°-50° | 356.3 | 11.8 |
| 50°-60° | 82.2 | 2.7 |
| 60°-70° | 22.6 | 0.7 |
| 70°-80° | 13.2 | 0.4 |
| 80°-90° | 4.9 | 0.2 |
| 90°-100° | 20.1 | 0.7 |
| 100°-110° | 143.4 | 4.8 |
| 110°-120° | 194.7 | 6.5 |
| 120°-130° | 158.4 | 5.3 |
| 130°-140° | 127.4 | 4.2 |
| 140°-150° | 100.5 | 3.3 |
| 150°-160° | 73.5 | 2.4 |
| 160°-170° | 45.6 | 1.5 |
| 170°-180° | 15.6 | 0.5 |
| 0°-30° | 1068.3 | 35.4 |
| 0°-40° | 1656.5 | 54.9 |
| 0°-60° | 2095.0 | 69.5 |
| 0°-90° | 2135.8 | 70.8 |
| 90°-120° | 358.2 | 11.9 |
| 90°-150° | 744.5 | 24.7 |
| 90°-180° | 879.0 | 29.2 |
| 0°-180° | 3015.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1328 | 1328 | 1328 | 1328 | 1328 | |
| 5° | 1313 | 1343 | 1331 | 1336 | 1357 | 126 |
| 15° | 1326 | 1366 | 1344 | 1333 | 1353 | 373 |
| 25° | 1227 | 1263 | 1230 | 1198 | 1215 | 562 |
| 35° | 968 | 983 | 960 | 938 | 940 | 595 |
| 45° | 436 | 496 | 496 | 479 | 416 | 335 |
| 55° | 64 | 73 | 100 | 69 | 65 | 66 |
| 65° | 21 | 22 | 22 | 20 | 19 | 21 |
| 75° | 13 | 13 | 13 | 12 | 11 | 14 |
| 85° | 5 | 5 | 4 | 4 | 3 | 5 |
| 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: P644956

CATALOG NUMBER: OMN4DIP-SR4F0-50D25U935-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1328.0 | 1328.0 | 1328.0 | 1328.0 | 1328.0 |
| 2.5° | 1315.2 | 1338.7 | 1325.6 | 1326.6 | 1337.6 |
| 5° | 1313.0 | 1343.3 | 1331.0 | 1336.5 | 1357.0 |
| 7.5° | 1316.6 | 1348.3 | 1341.0 | 1342.9 | 1365.4 |
| 10° | 1319.0 | 1352.2 | 1345.0 | 1344.5 | 1367.0 |
| 12.5° | 1324.6 | 1359.4 | 1345.8 | 1342.9 | 1364.6 |
| 15° | 1326.0 | 1366.1 | 1344.0 | 1333.4 | 1353.0 |
| 17.5° | 1313.0 | 1357.2 | 1327.4 | 1305.6 | 1321.2 |
| 20° | 1297.0 | 1342.0 | 1309.0 | 1278.4 | 1294.0 |
| 22.5° | 1272.2 | 1316.4 | 1281.0 | 1248.0 | 1264.4 |
| 25° | 1227.0 | 1263.2 | 1230.0 | 1198.4 | 1215.0 |
| 27.5° | 1169.8 | 1195.2 | 1166.8 | 1136.8 | 1146.2 |
| 30° | 1121.0 | 1146.4 | 1118.0 | 1087.1 | 1091.0 |
| 32.5° | 1066.6 | 1088.1 | 1060.4 | 1032.7 | 1035.8 |
| 35° | 968.0 | 982.7 | 960.0 | 938.0 | 940.0 |
| 37.5° | 848.0 | 850.0 | 834.6 | 814.6 | 815.0 |
| 40° | 752.0 | 757.9 | 741.0 | 725.0 | 727.0 |
| 42.5° | 637.6 | 660.7 | 644.2 | 629.8 | 630.2 |
| 45° | 436.0 | 495.6 | 496.0 | 478.6 | 416.0 |
| 47.5° | 240.8 | 309.8 | 354.2 | 274.7 | 207.4 |
| 50° | 152.0 | 196.0 | 267.0 | 160.6 | 141.0 |
| 52.5° | 108.8 | 128.6 | 195.0 | 113.6 | 103.4 |
| 55° | 64.0 | 72.8 | 100.0 | 68.9 | 65.0 |
| 57.5° | 39.0 | 46.6 | 58.4 | 46.0 | 39.2 |
| 60° | 27.0 | 33.8 | 44.0 | 30.8 | 24.0 |
| 62.5° | 23.8 | 26.0 | 34.4 | 24.6 | 22.4 |
| 65° | 21.0 | 22.0 | 22.0 | 20.0 | 19.0 |
| 67.5° | 18.6 | 19.6 | 18.6 | 17.6 | 16.6 |
| 70° | 17.0 | 18.0 | 17.0 | 16.0 | 15.0 |
| 72.5° | 15.4 | 16.4 | 15.4 | 14.4 | 13.4 |
| 75° | 13.0 | 13.0 | 13.0 | 12.0 | 11.0 |
| 77.5° | 10.6 | 10.6 | 10.4 | 9.6 | 8.6 |
| 80° | 9.0 | 9.0 | 8.0 | 8.0 | 7.0 |
| 82.5° | 7.4 | 7.4 | 6.4 | 6.4 | 5.4 |
| 85° | 5.0 | 5.0 | 4.0 | 4.0 | 3.0 |
| 87.5° | 2.4 | 2.6 | 2.0 | 2.2 | 1.4 |
| 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: P644956

CATALOG NUMBER: OMN4DIP-SR4F0-50D25U935-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)