

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: P644800

Luminaire Tested: OMN4DIP-SR4F0-125D50U930-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644800
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-SR4F0-125D50U930-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

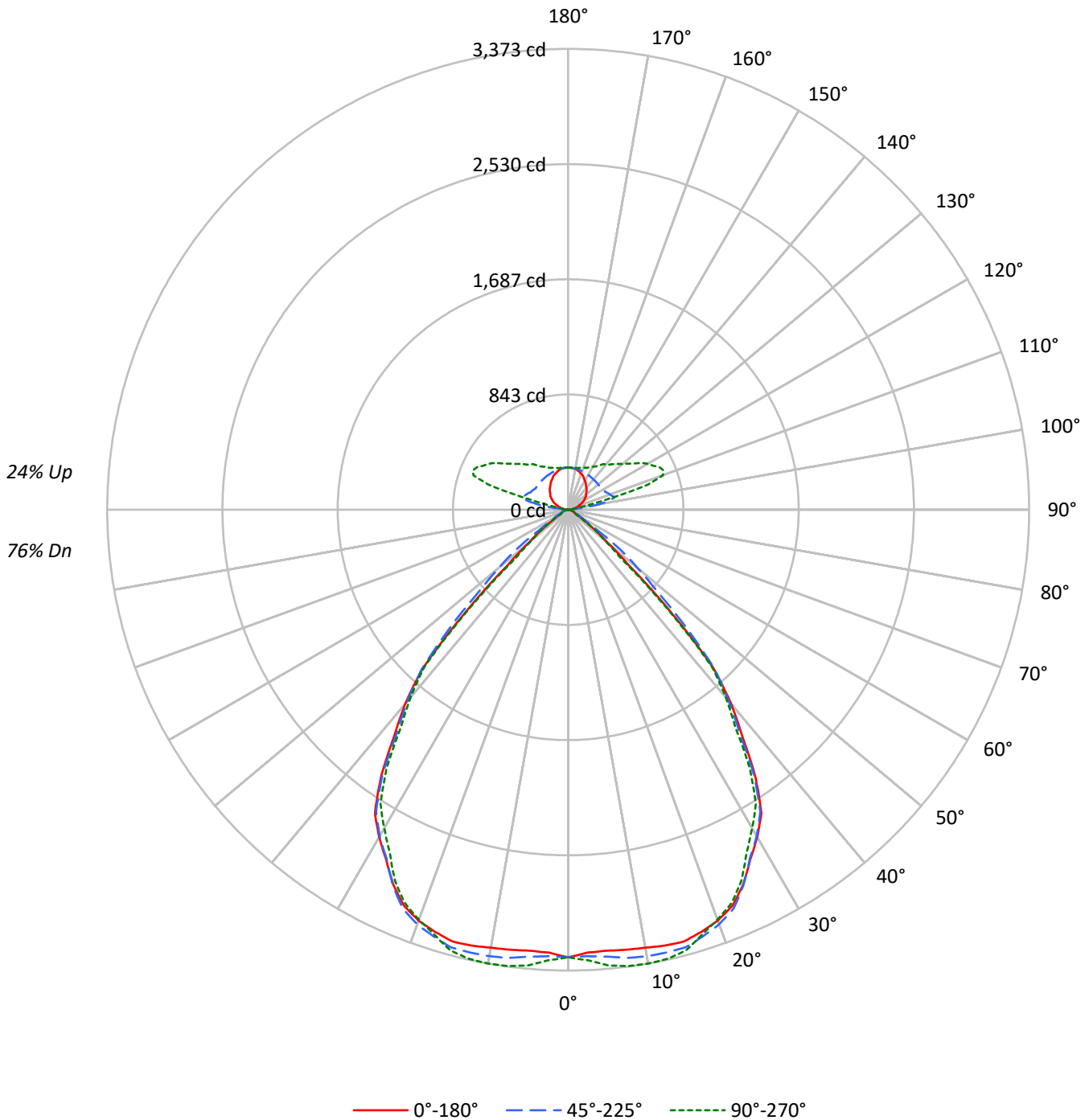
Lumens per Lamp: N/A
Luminaire Lumens: 6928.9 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 64.1
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

TEST NUMBER: P644800

CATALOG NUMBER: OMN4DIP-SR4F0-125D50U930-WBMOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644800

CATALOG NUMBER: OMN4DIP-SR4F0-125D50U930-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 | 113 | 113 | 113 | 113 | 108 | 108 | 108 | 108 | 98 | 98 | 98 | 89 | 89 | 89 | 80 | 80 | 80 | 80 | 80 | 80 | 76 | |
| 1 | 106 | 103 | 100 | 97 | 101 | 98 | 96 | 93 | 90 | 88 | 86 | 82 | 81 | 79 | 75 | 74 | 73 | 75 | 74 | 73 | 69 | |
| 2 | 99 | 93 | 88 | 84 | 95 | 89 | 85 | 81 | 82 | 79 | 76 | 76 | 73 | 71 | 70 | 68 | 66 | 70 | 68 | 66 | 63 | |
| 3 | 93 | 85 | 79 | 74 | 88 | 81 | 76 | 72 | 75 | 71 | 68 | 70 | 66 | 64 | 64 | 62 | 60 | 64 | 62 | 60 | 57 | |
| 4 | 86 | 77 | 71 | 65 | 82 | 74 | 68 | 64 | 69 | 64 | 60 | 64 | 60 | 57 | 60 | 57 | 54 | 60 | 57 | 54 | 52 | |
| 5 | 81 | 71 | 64 | 58 | 77 | 68 | 62 | 57 | 63 | 58 | 54 | 59 | 55 | 52 | 55 | 52 | 49 | 55 | 52 | 49 | 47 | |
| 6 | 75 | 65 | 58 | 52 | 72 | 63 | 56 | 51 | 59 | 53 | 49 | 55 | 50 | 47 | 51 | 48 | 45 | 51 | 48 | 45 | 43 | |
| 7 | 70 | 59 | 52 | 47 | 67 | 58 | 51 | 46 | 54 | 49 | 45 | 51 | 46 | 43 | 48 | 44 | 41 | 48 | 44 | 41 | 39 | |
| 8 | 66 | 55 | 48 | 43 | 63 | 53 | 47 | 42 | 50 | 45 | 41 | 47 | 42 | 39 | 44 | 40 | 38 | 44 | 40 | 38 | 36 | |
| 9 | 62 | 51 | 44 | 39 | 59 | 49 | 43 | 39 | 47 | 41 | 37 | 44 | 39 | 36 | 41 | 37 | 35 | 41 | 37 | 35 | 33 | |
| 10 | 58 | 47 | 41 | 36 | 56 | 46 | 40 | 35 | 43 | 38 | 34 | 41 | 36 | 33 | 39 | 35 | 32 | 39 | 35 | 32 | 30 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 42323 | 42323 | 42323 |
| 5° | 42005 | 42581 | 43413 |
| 10° | 42685 | 43525 | 44238 |
| 15° | 43750 | 44344 | 44641 |
| 20° | 43988 | 44394 | 43886 |
| 25° | 43147 | 43252 | 42725 |
| 30° | 41253 | 41143 | 40148 |
| 35° | 37661 | 37349 | 36572 |
| 40° | 31285 | 30828 | 30245 |
| 45° | 19652 | 22355 | 18749 |
| 50° | 7536 | 13238 | 6991 |
| 55° | 3556 | 5556 | 3612 |
| 60° | 1721 | 2806 | 1529 |
| 65° | 1583 | 1660 | 1433 |
| 70° | 1582 | 1582 | 1397 |
| 75° | 1602 | 1602 | 1352 |
| 80° | 1651 | 1465 | 1287 |
| 85° | 1823 | 1467 | 1097 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22355 cd/sqm



TEST NUMBER: P644800

CATALOG NUMBER: OMN4DIP-SR4F0-125D50U930-WBMOOB-1DUDD-WW

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 315.6 | 4.6 |
| 10°-20° | 933.5 | 13.5 |
| 20°-30° | 1386.7 | 20.0 |
| 30°-40° | 1451.4 | 20.9 |
| 40°-50° | 879.1 | 12.7 |
| 50°-60° | 202.8 | 2.9 |
| 60°-70° | 55.7 | 0.8 |
| 70°-80° | 32.7 | 0.5 |
| 80°-90° | 12.0 | 0.2 |
| 90°-100° | 38.0 | 0.5 |
| 100°-110° | 270.7 | 3.9 |
| 110°-120° | 367.5 | 5.3 |
| 120°-130° | 299.1 | 4.3 |
| 130°-140° | 240.5 | 3.5 |
| 140°-150° | 189.6 | 2.7 |
| 150°-160° | 138.7 | 2.0 |
| 160°-170° | 86.1 | 1.2 |
| 170°-180° | 29.4 | 0.4 |
| 0°-30° | 2635.7 | 38.0 |
| 0°-40° | 4087.1 | 59.0 |
| 0°-60° | 5169.1 | 74.6 |
| 0°-90° | 5269.4 | 76.0 |
| 90°-120° | 676.1 | 9.8 |
| 90°-150° | 1405.3 | 20.3 |
| 90°-180° | 1659.0 | 23.9 |
| 0°-180° | 6928.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3277 | 3277 | 3277 | 3277 | 3277 | |
| 5° | 3240 | 3314 | 3284 | 3298 | 3348 | 310 |
| 15° | 3272 | 3371 | 3316 | 3290 | 3338 | 921 |
| 25° | 3027 | 3117 | 3035 | 2957 | 2998 | 1386 |
| 35° | 2388 | 2425 | 2369 | 2314 | 2319 | 1468 |
| 45° | 1076 | 1223 | 1224 | 1181 | 1026 | 826 |
| 55° | 158 | 180 | 247 | 170 | 160 | 164 |
| 65° | 52 | 54 | 54 | 49 | 47 | 52 |
| 75° | 32 | 32 | 32 | 30 | 27 | 34 |
| 85° | 12 | 12 | 10 | 10 | 7 | 12 |
| 90° | 0 | 2 | 4 | 6 | 6 | 1 |
| 95° | 16 | 29 | 16 | 18 | 21 | 17 |
| 105° | 60 | 92 | 352 | 449 | 297 | 63 |
| 115° | 107 | 130 | 303 | 630 | 736 | 106 |
| 125° | 154 | 174 | 286 | 500 | 591 | 136 |
| 135° | 190 | 211 | 288 | 411 | 472 | 146 |
| 145° | 225 | 244 | 290 | 358 | 396 | 142 |
| 155° | 264 | 274 | 295 | 325 | 340 | 121 |
| 165° | 293 | 297 | 303 | 311 | 317 | 82 |
| 175° | 309 | 311 | 309 | 307 | 305 | 29 |
| 180° | 309 | 309 | 309 | 309 | 309 | |



TEST NUMBER: P644800

CATALOG NUMBER: OMN4DIP-SR4F0-125D50U930-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3276.6 | 3276.6 | 3276.6 | 3276.6 | 3276.6 |
| 2.5° | 3245.0 | 3302.9 | 3270.7 | 3273.3 | 3300.3 |
| 5° | 3239.6 | 3314.4 | 3284.0 | 3297.5 | 3348.2 |
| 7.5° | 3248.5 | 3326.6 | 3308.7 | 3313.4 | 3368.9 |
| 10° | 3254.4 | 3336.4 | 3318.5 | 3317.3 | 3372.8 |
| 12.5° | 3268.2 | 3354.1 | 3320.5 | 3313.4 | 3366.9 |
| 15° | 3271.7 | 3370.6 | 3316.1 | 3290.0 | 3338.3 |
| 17.5° | 3239.6 | 3348.6 | 3275.1 | 3221.2 | 3259.8 |
| 20° | 3200.1 | 3311.1 | 3229.7 | 3154.1 | 3192.7 |
| 22.5° | 3138.9 | 3248.0 | 3160.6 | 3079.2 | 3119.7 |
| 25° | 3027.4 | 3116.7 | 3034.8 | 2956.8 | 2997.8 |
| 27.5° | 2886.3 | 2949.0 | 2878.9 | 2804.9 | 2828.0 |
| 30° | 2765.9 | 2828.6 | 2758.5 | 2682.2 | 2691.8 |
| 32.5° | 2631.6 | 2684.7 | 2616.3 | 2547.9 | 2555.7 |
| 35° | 2388.4 | 2424.6 | 2368.6 | 2314.5 | 2319.3 |
| 37.5° | 2092.3 | 2097.1 | 2059.2 | 2009.9 | 2010.9 |
| 40° | 1855.4 | 1869.9 | 1828.3 | 1788.9 | 1793.7 |
| 42.5° | 1573.2 | 1630.1 | 1589.4 | 1553.9 | 1554.9 |
| 45° | 1075.8 | 1222.9 | 1223.8 | 1180.8 | 1026.4 |
| 47.5° | 594.1 | 764.5 | 873.9 | 677.7 | 511.7 |
| 50° | 375.0 | 483.6 | 658.8 | 396.1 | 347.9 |
| 52.5° | 268.4 | 317.2 | 481.1 | 280.2 | 255.1 |
| 55° | 157.9 | 179.6 | 246.7 | 170.0 | 160.4 |
| 57.5° | 96.2 | 115.0 | 144.1 | 113.6 | 96.7 |
| 60° | 66.6 | 83.5 | 108.6 | 76.1 | 59.2 |
| 62.5° | 58.7 | 64.0 | 84.9 | 60.6 | 55.3 |
| 65° | 51.8 | 54.2 | 54.3 | 49.3 | 46.9 |
| 67.5° | 45.9 | 48.3 | 45.9 | 43.4 | 41.0 |
| 70° | 41.9 | 44.4 | 41.9 | 39.4 | 37.0 |
| 72.5° | 38.0 | 40.4 | 38.0 | 35.5 | 33.1 |
| 75° | 32.1 | 32.1 | 32.1 | 29.6 | 27.1 |
| 77.5° | 26.2 | 26.2 | 25.7 | 23.6 | 21.2 |
| 80° | 22.2 | 22.2 | 19.7 | 19.7 | 17.3 |
| 82.5° | 18.3 | 18.3 | 15.8 | 15.7 | 13.3 |
| 85° | 12.3 | 12.3 | 9.9 | 9.8 | 7.4 |
| 87.5° | 5.9 | 6.3 | 4.7 | 5.1 | 3.1 |
| 90° | 0.0 | 1.9 | 3.9 | 5.8 | 5.8 |
| 92.5° | 4.7 | 6.6 | 8.5 | 12.1 | 13.6 |
| 95° | 15.5 | 28.8 | 15.5 | 17.6 | 21.4 |
| 97.5° | 27.6 | 55.3 | 114.2 | 33.7 | 29.1 |
| 100° | 36.9 | 69.2 | 229.3 | 67.5 | 44.7 |
| 102.5° | 46.2 | 80.1 | 310.1 | 178.1 | 97.5 |
| 105° | 60.2 | 92.5 | 351.7 | 449.3 | 297.3 |
| 107.5° | 74.2 | 98.5 | 335.7 | 653.8 | 612.4 |
| 110° | 83.5 | 106.3 | 326.4 | 687.0 | 738.3 |



TEST NUMBER: P644800

CATALOG NUMBER: OMN4DIP-SR4F0-125D50U930-WBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 92.9 | 115.7 | 317.1 | 667.6 | 753.9 |
| 115° | 106.9 | 129.7 | 303.1 | 630.0 | 736.4 |
| 117.5° | 121.2 | 143.7 | 299.6 | 589.3 | 698.7 |
| 120° | 132.1 | 153.0 | 293.4 | 558.3 | 672.3 |
| 122.5° | 139.9 | 162.3 | 285.6 | 531.6 | 636.5 |
| 125° | 153.5 | 174.4 | 285.6 | 499.5 | 590.7 |
| 127.5° | 164.8 | 186.0 | 286.0 | 462.1 | 552.2 |
| 130° | 171.0 | 193.8 | 287.6 | 437.2 | 522.7 |
| 132.5° | 178.8 | 201.5 | 287.6 | 425.9 | 496.2 |
| 135° | 190.4 | 211.3 | 287.6 | 411.3 | 472.1 |
| 137.5° | 200.1 | 222.5 | 287.6 | 395.2 | 447.3 |
| 140° | 207.9 | 228.8 | 287.6 | 385.8 | 433.3 |
| 142.5° | 215.7 | 235.0 | 289.1 | 374.8 | 419.3 |
| 145° | 225.4 | 244.4 | 289.5 | 358.4 | 396.4 |
| 147.5° | 237.0 | 253.8 | 291.8 | 346.5 | 375.8 |
| 150° | 244.8 | 260.0 | 293.4 | 338.6 | 363.3 |
| 152.5° | 252.6 | 266.3 | 293.4 | 332.3 | 352.5 |
| 155° | 264.2 | 273.7 | 295.3 | 324.8 | 340.0 |
| 157.5° | 273.6 | 282.7 | 297.7 | 320.1 | 331.1 |
| 160° | 279.8 | 287.4 | 299.2 | 316.9 | 326.4 |
| 162.5° | 284.4 | 292.0 | 300.8 | 315.3 | 321.8 |
| 165° | 293.4 | 297.2 | 303.1 | 311.0 | 316.7 |
| 167.5° | 298.4 | 301.9 | 305.0 | 309.0 | 312.4 |
| 170° | 303.1 | 305.0 | 305.0 | 309.0 | 310.9 |
| 172.5° | 304.7 | 308.1 | 306.6 | 307.4 | 309.3 |
| 175° | 308.9 | 310.8 | 308.9 | 306.9 | 305.0 |
| 177.5° | 308.9 | 310.4 | 308.9 | 308.9 | 307.4 |
| 180° | 308.9 | 308.9 | 308.9 | 308.9 | 308.9 |

(END OF REPORT)