

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: P644844

Luminaire Tested: OMN4DIP-SR4F0-50D100U830-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644844  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DIP-SR4F0-50D100U830-CLBOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

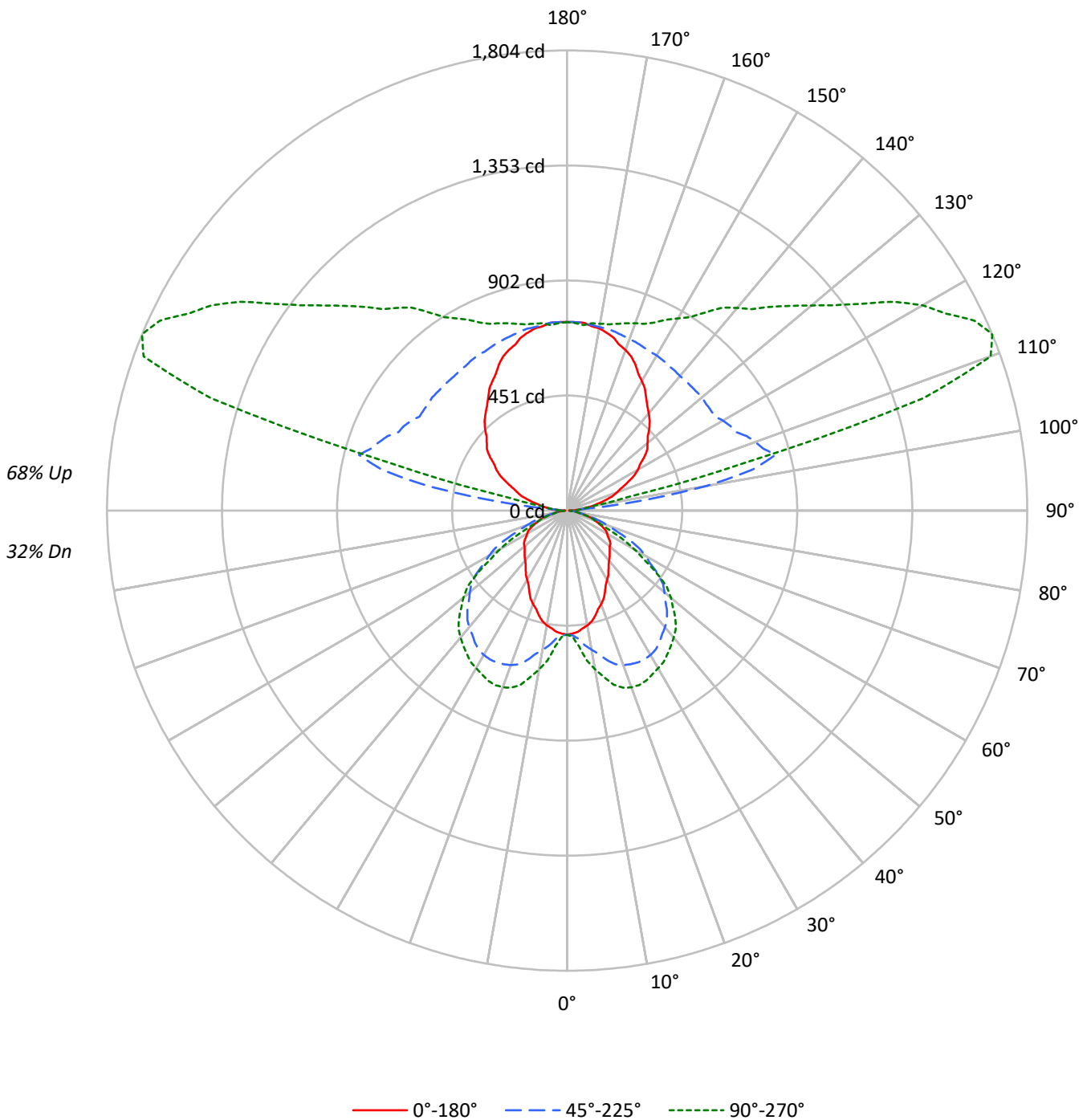
Lumens per Lamp: N/A  
Luminaire Lumens: 5853.5 lumens  
Efficiency: N/A  
Efficacy: 135.2 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 43.3  
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





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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   | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 73 | 73 | 73 | 56 | 56 | 56 | 39 | 39 | 39 | 32 |
| 1   | 94  | 90  | 86  | 82  | 84 | 81 | 78 | 75 | 64 | 62 | 60 | 49 | 48 | 46 | 35 | 34 | 33 | 27 |
| 2   | 85  | 78  | 72  | 67  | 77 | 71 | 66 | 61 | 56 | 53 | 50 | 43 | 41 | 39 | 31 | 29 | 28 | 23 |
| 3   | 78  | 69  | 62  | 56  | 70 | 62 | 56 | 51 | 49 | 45 | 42 | 38 | 35 | 33 | 27 | 25 | 24 | 19 |
| 4   | 71  | 61  | 53  | 47  | 64 | 55 | 48 | 43 | 44 | 39 | 35 | 34 | 30 | 28 | 24 | 22 | 20 | 16 |
| 5   | 65  | 54  | 46  | 40  | 58 | 49 | 42 | 37 | 39 | 34 | 30 | 30 | 27 | 24 | 22 | 19 | 18 | 14 |
| 6   | 60  | 48  | 40  | 34  | 53 | 43 | 37 | 32 | 35 | 30 | 26 | 27 | 23 | 21 | 20 | 17 | 15 | 12 |
| 7   | 55  | 43  | 35  | 30  | 49 | 39 | 32 | 28 | 31 | 26 | 23 | 24 | 21 | 18 | 18 | 15 | 14 | 11 |
| 8   | 51  | 39  | 31  | 26  | 46 | 35 | 29 | 24 | 29 | 24 | 20 | 22 | 19 | 16 | 16 | 14 | 12 | 9  |
| 9   | 47  | 35  | 28  | 23  | 42 | 32 | 26 | 21 | 26 | 21 | 18 | 20 | 17 | 14 | 15 | 12 | 11 | 8  |
| 10  | 44  | 32  | 25  | 21  | 40 | 29 | 23 | 19 | 24 | 19 | 16 | 19 | 15 | 13 | 14 | 11 | 10 | 8  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 7850 | 7850  | 7850  |
| 5°  | 7733 | 8173  | 8650  |
| 10° | 7489 | 9083  | 10362 |
| 15° | 7126 | 10150 | 11813 |
| 20° | 6703 | 11074 | 12667 |
| 25° | 6244 | 11703 | 13092 |
| 30° | 5839 | 12184 | 13300 |
| 35° | 5572 | 12435 | 13527 |
| 40° | 5385 | 12583 | 13702 |
| 45° | 5396 | 12625 | 13709 |
| 50° | 5481 | 12496 | 13320 |
| 55° | 5728 | 12253 | 12093 |
| 60° | 5842 | 11393 | 9820  |
| 65° | 5918 | 9979  | 7213  |
| 70° | 5655 | 7846  | 5604  |
| 75° | 5078 | 5852  | 4729  |
| 80° | 4314 | 4621  | 3784  |
| 85° | 4187 | 3779  | 3149  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 13709 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.9   | 0.9       |
| 10°-20°   | 165.7  | 2.8       |
| 20°-30°   | 275.3  | 4.7       |
| 30°-40°   | 347.3  | 5.9       |
| 40°-50°   | 371.2  | 6.3       |
| 50°-60°   | 327.7  | 5.6       |
| 60°-70°   | 210.3  | 3.6       |
| 70°-80°   | 93.3   | 1.6       |
| 80°-90°   | 25.8   | 0.4       |
| 90°-100°  | 97.3   | 1.7       |
| 100°-110° | 651.8  | 11.1      |
| 110°-120° | 882.5  | 15.1      |
| 120°-130° | 717.7  | 12.3      |
| 130°-140° | 575.8  | 9.8       |
| 140°-150° | 453.8  | 7.8       |
| 150°-160° | 331.8  | 5.7       |
| 160°-170° | 206.1  | 3.5       |
| 170°-180° | 70.3   | 1.2       |
| 0°-30°    | 490.8  | 8.4       |
| 0°-40°    | 838.1  | 14.3      |
| 0°-60°    | 1537.0 | 26.3      |
| 0°-90°    | 1866.4 | 31.9      |
| 90°-120°  | 1631.5 | 27.9      |
| 90°-150°  | 3378.9 | 57.7      |
| 90°-180°  | 3987.0 | 68.1      |
| 0°-180°   | 5853.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90°  | Flux |
|------|-----|-------|-----|-------|------|------|
| 0°   | 486 | 486   | 486 | 486   | 486  |      |
| 5°   | 477 | 492   | 504 | 522   | 534  | 45   |
| 15°  | 426 | 492   | 607 | 680   | 707  | 119  |
| 25°  | 350 | 475   | 657 | 718   | 735  | 161  |
| 35°  | 283 | 434   | 631 | 672   | 686  | 177  |
| 45°  | 236 | 371   | 553 | 587   | 600  | 183  |
| 55°  | 204 | 292   | 435 | 437   | 430  | 181  |
| 65°  | 155 | 196   | 261 | 212   | 189  | 152  |
| 75°  | 81  | 90    | 94  | 80    | 76   | 87   |
| 85°  | 23  | 19    | 20  | 18    | 17   | 24   |
| 90°  | 8   | 12    | 16  | 21    | 18   | 7    |
| 95°  | 50  | 77    | 43  | 45    | 53   | 51   |
| 105° | 152 | 228   | 845 | 1076  | 711  | 161  |
| 115° | 261 | 315   | 729 | 1509  | 1762 | 260  |
| 125° | 371 | 421   | 687 | 1196  | 1414 | 329  |
| 135° | 456 | 506   | 688 | 984   | 1130 | 351  |
| 145° | 539 | 585   | 693 | 858   | 949  | 339  |
| 155° | 632 | 655   | 707 | 777   | 814  | 290  |
| 165° | 702 | 711   | 725 | 744   | 758  | 197  |
| 175° | 739 | 744   | 739 | 735   | 730  | 70   |
| 180° | 739 | 739   | 739 | 739   | 739  |      |



TEST NUMBER: P644844

CATALOG NUMBER: OMN4DIP-SR4F0-50D100U830-CLBOOB-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 0°     | 486.2 | 486.2 | 486.2 | 486.2  | 486.2  |
| 2.5°   | 482.6 | 489.6 | 489.8 | 492.6  | 496.1  |
| 5°     | 477.1 | 491.5 | 504.3 | 521.5  | 533.7  |
| 7.5°   | 465.8 | 491.5 | 532.3 | 572.3  | 592.2  |
| 10°    | 456.8 | 492.2 | 554.0 | 607.7  | 632.0  |
| 12.5°  | 445.0 | 491.9 | 575.7 | 640.4  | 668.2  |
| 15°    | 426.3 | 491.5 | 607.2 | 680.1  | 706.7  |
| 17.5°  | 404.5 | 489.4 | 631.8 | 704.9  | 728.1  |
| 20°    | 390.1 | 487.4 | 644.5 | 714.0  | 737.2  |
| 22.5°  | 373.8 | 482.6 | 651.7 | 718.4  | 739.9  |
| 25°    | 350.5 | 475.4 | 656.9 | 718.3  | 734.9  |
| 27.5°  | 327.7 | 465.2 | 657.1 | 709.2  | 723.4  |
| 30°    | 313.2 | 456.9 | 653.5 | 700.2  | 713.4  |
| 32.5°  | 300.5 | 447.8 | 646.3 | 689.3  | 703.5  |
| 35°    | 282.7 | 434.1 | 630.9 | 671.9  | 686.3  |
| 37.5°  | 267.3 | 418.5 | 611.5 | 651.4  | 668.2  |
| 40°    | 255.5 | 405.9 | 597.0 | 636.9  | 650.1  |
| 42.5°  | 246.5 | 392.4 | 579.8 | 618.7  | 630.2  |
| 45°    | 236.3 | 371.2 | 552.9 | 587.1  | 600.4  |
| 47.5°  | 225.5 | 349.3 | 521.9 | 554.2  | 562.8  |
| 50°    | 218.2 | 333.2 | 497.5 | 527.0  | 530.3  |
| 52.5°  | 213.7 | 316.3 | 474.0 | 492.5  | 493.2  |
| 55°    | 203.5 | 292.0 | 435.3 | 437.4  | 429.6  |
| 57.5°  | 189.9 | 263.6 | 386.2 | 375.2  | 356.6  |
| 60°    | 180.9 | 243.9 | 352.8 | 330.7  | 304.1  |
| 62.5°  | 171.9 | 225.1 | 317.5 | 281.7  | 250.8  |
| 65°    | 154.9 | 195.8 | 261.2 | 212.0  | 188.8  |
| 67.5°  | 135.2 | 163.5 | 205.1 | 158.6  | 143.1  |
| 70°    | 119.8 | 142.0 | 166.2 | 129.8  | 118.7  |
| 72.5°  | 105.4 | 120.4 | 134.5 | 107.3  | 101.5  |
| 75°    | 81.4  | 90.3  | 93.8  | 80.2   | 75.8   |
| 77.5°  | 59.9  | 60.4  | 65.1  | 56.5   | 54.3   |
| 80°    | 46.4  | 44.1  | 49.7  | 42.9   | 40.7   |
| 82.5°  | 35.5  | 32.4  | 36.2  | 31.2   | 29.8   |
| 85°    | 22.6  | 19.3  | 20.4  | 18.1   | 17.0   |
| 87.5°  | 13.3  | 11.6  | 12.3  | 12.3   | 10.9   |
| 90°    | 7.9   | 12.5  | 16.1  | 20.7   | 18.5   |
| 92.5°  | 21.8  | 23.7  | 26.3  | 33.8   | 35.3   |
| 95°    | 49.6  | 77.0  | 42.9  | 45.4   | 53.4   |
| 97.5°  | 77.1  | 140.2 | 277.7 | 82.9   | 70.9   |
| 100°   | 98.5  | 172.5 | 552.1 | 163.7  | 108.1  |
| 102.5° | 119.9 | 198.4 | 745.5 | 427.5  | 233.6  |
| 105°   | 152.1 | 228.2 | 845.0 | 1076.2 | 711.4  |
| 107.5° | 185.3 | 241.5 | 806.9 | 1565.8 | 1465.6 |
| 110°   | 206.7 | 260.2 | 784.6 | 1645.3 | 1766.9 |



TEST NUMBER: P644844

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 229.0 | 282.5 | 762.2 | 1598.8 | 1804.1 |
| 115°   | 261.4 | 314.8 | 728.8 | 1508.8 | 1762.3 |
| 117.5° | 295.6 | 348.3 | 720.4 | 1411.3 | 1672.1 |
| 120°   | 320.7 | 370.7 | 705.5 | 1337.2 | 1608.8 |
| 122.5° | 339.3 | 392.1 | 686.0 | 1273.4 | 1523.3 |
| 125°   | 370.7 | 420.7 | 686.9 | 1196.4 | 1413.5 |
| 127.5° | 396.6 | 448.4 | 686.7 | 1106.9 | 1321.5 |
| 130°   | 411.4 | 466.0 | 690.4 | 1046.2 | 1250.8 |
| 132.5° | 428.2 | 482.8 | 688.6 | 1019.3 | 1187.6 |
| 135°   | 455.7 | 505.7 | 688.2 | 984.4  | 1129.9 |
| 137.5° | 478.9 | 532.6 | 688.2 | 945.8  | 1070.4 |
| 140°   | 497.5 | 547.5 | 688.2 | 923.2  | 1036.9 |
| 142.5° | 516.1 | 562.5 | 691.9 | 897.0  | 1003.4 |
| 145°   | 539.4 | 584.8 | 692.8 | 857.6  | 948.6  |
| 147.5° | 567.3 | 607.3 | 698.4 | 829.3  | 899.3  |
| 150°   | 585.9 | 622.3 | 702.1 | 810.4  | 869.5  |
| 152.5° | 604.5 | 637.2 | 702.1 | 795.3  | 843.5  |
| 155°   | 632.4 | 655.1 | 706.8 | 777.3  | 813.7  |
| 157.5° | 654.7 | 676.5 | 712.4 | 766.0  | 792.3  |
| 160°   | 669.6 | 687.8 | 716.1 | 758.4  | 781.2  |
| 162.5° | 680.7 | 698.9 | 719.8 | 754.6  | 770.0  |
| 165°   | 702.1 | 711.2 | 725.4 | 744.3  | 757.9  |
| 167.5° | 714.2 | 722.4 | 730.0 | 739.5  | 747.7  |
| 170°   | 725.4 | 729.9 | 730.0 | 739.4  | 744.0  |
| 172.5° | 729.1 | 737.3 | 733.7 | 735.7  | 740.3  |
| 175°   | 739.3 | 743.9 | 739.3 | 734.6  | 730.0  |
| 177.5° | 739.3 | 743.0 | 739.3 | 739.2  | 735.6  |
| 180°   | 739.3 | 739.3 | 739.3 | 739.3  | 739.3  |

(END OF REPORT)