

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: P645159

Luminaire Tested: OMN4DIP-SR4F0-75D50U930-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P645159  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DIP-SR4F0-75D50U930-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - FLAT FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

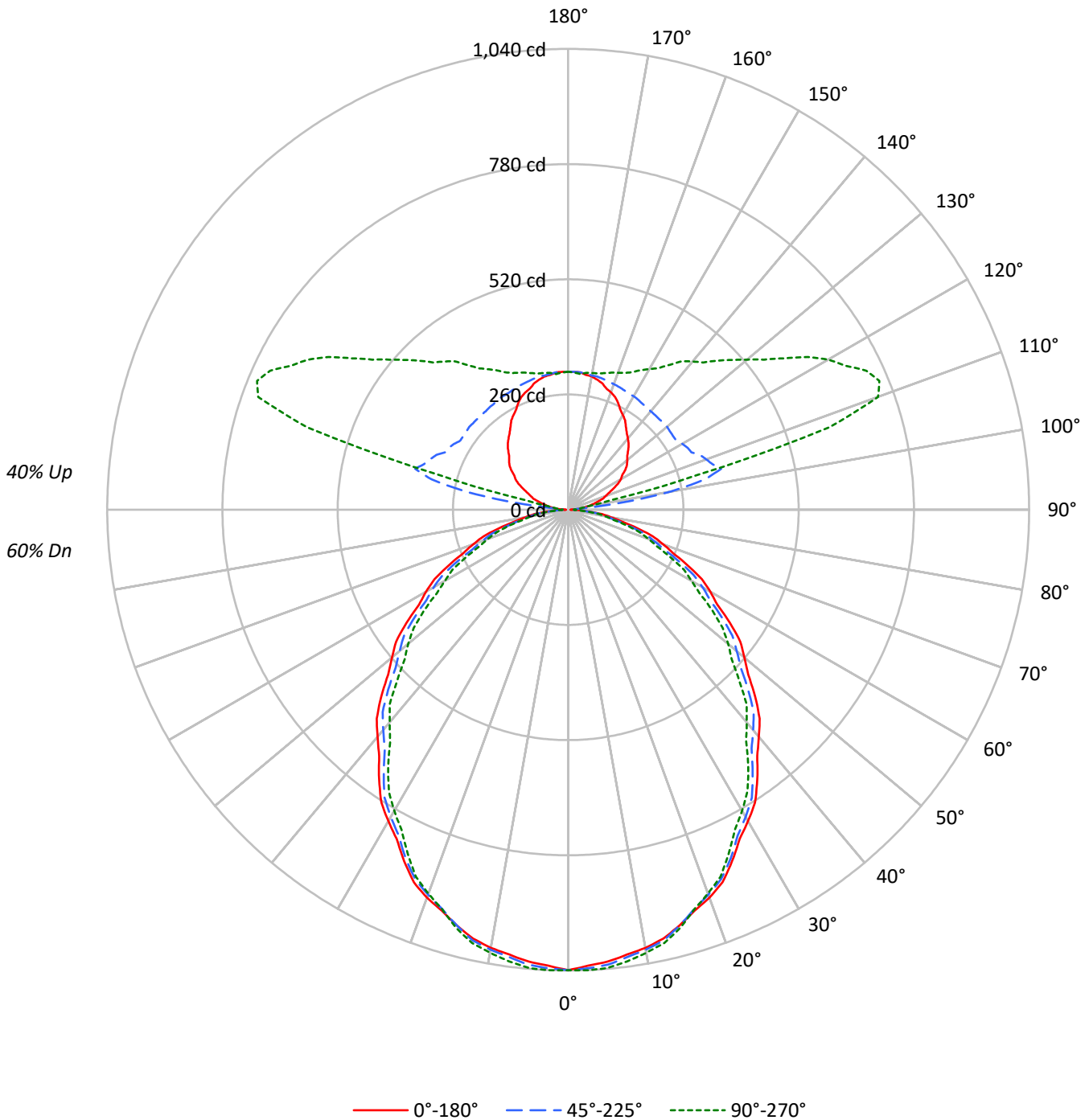
Lumens per Lamp: N/A  
Luminaire Lumens: 4207.8 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 36.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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 |  |  |  |  |  |  |  |  |    |   |
| 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 | 50 | 30 | 10 | 0 |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 0   | 110 | 110 | 110 | 110 | 102 | 102 | 102 | 102 | 89 | 89 | 89 | 77 | 77 | 77 | 65 | 65 | 65 | 60 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 1   | 100 | 96  | 92  | 88  | 93  | 90  | 86  | 83  | 78 | 76 | 73 | 68 | 66 | 64 | 58 | 56 | 55 | 51 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 2   | 91  | 84  | 78  | 72  | 85  | 78  | 73  | 68  | 69 | 64 | 61 | 59 | 56 | 54 | 51 | 49 | 47 | 43 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 3   | 83  | 74  | 66  | 60  | 78  | 69  | 63  | 57  | 61 | 56 | 51 | 53 | 49 | 46 | 45 | 42 | 40 | 36 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 4   | 76  | 65  | 57  | 51  | 71  | 61  | 54  | 49  | 54 | 48 | 44 | 47 | 43 | 39 | 41 | 37 | 35 | 31 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 5   | 70  | 58  | 50  | 44  | 65  | 55  | 48  | 42  | 48 | 43 | 38 | 42 | 38 | 34 | 37 | 33 | 30 | 27 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 6   | 65  | 53  | 44  | 38  | 60  | 49  | 42  | 37  | 44 | 38 | 33 | 38 | 34 | 30 | 33 | 30 | 27 | 24 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 7   | 60  | 48  | 39  | 34  | 56  | 45  | 38  | 32  | 40 | 34 | 29 | 35 | 30 | 27 | 31 | 27 | 24 | 21 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 8   | 56  | 43  | 35  | 30  | 52  | 41  | 34  | 29  | 36 | 30 | 26 | 32 | 27 | 24 | 28 | 24 | 21 | 19 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 9   | 52  | 40  | 32  | 27  | 49  | 37  | 31  | 26  | 33 | 28 | 24 | 30 | 25 | 21 | 26 | 22 | 19 | 17 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |
| 10  | 49  | 36  | 29  | 24  | 45  | 34  | 28  | 23  | 31 | 25 | 21 | 27 | 23 | 20 | 24 | 20 | 18 | 16 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16779 | 16779 | 16779 |
| 5°  | 16592 | 16705 | 16820 |
| 10° | 16459 | 16528 | 16644 |
| 15° | 16236 | 16236 | 16331 |
| 20° | 16010 | 15888 | 15840 |
| 25° | 15592 | 15465 | 15264 |
| 30° | 15131 | 14920 | 14630 |
| 35° | 14659 | 14296 | 13963 |
| 40° | 14096 | 13679 | 13203 |
| 45° | 13625 | 13107 | 12463 |
| 50° | 13034 | 12466 | 11826 |
| 55° | 12538 | 11902 | 11184 |
| 60° | 11961 | 11321 | 10366 |
| 65° | 11343 | 10533 | 9723  |
| 70° | 10744 | 9744  | 9078  |
| 75° | 10056 | 8908  | 8465  |
| 80° | 9205  | 8154  | 7755  |
| 85° | 8651  | 7595  | 7077  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13625 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 97.8   | 2.3       |
| 10°-20°   | 274.3  | 6.5       |
| 20°-30°   | 398.9  | 9.5       |
| 30°-40°   | 453.7  | 10.8      |
| 40°-50°   | 442.4  | 10.5      |
| 50°-60°   | 377.6  | 9.0       |
| 60°-70°   | 274.4  | 6.5       |
| 70°-80°   | 155.2  | 3.7       |
| 80°-90°   | 48.5   | 1.2       |
| 90°-100°  | 44.3   | 1.1       |
| 100°-110° | 276.1  | 6.6       |
| 110°-120° | 372.3  | 8.8       |
| 120°-130° | 302.6  | 7.2       |
| 130°-140° | 242.5  | 5.8       |
| 140°-150° | 191.1  | 4.5       |
| 150°-160° | 139.7  | 3.3       |
| 160°-170° | 86.8   | 2.1       |
| 170°-180° | 29.6   | 0.7       |
| 0°-30°    | 771.0  | 18.3      |
| 0°-40°    | 1224.7 | 29.1      |
| 0°-60°    | 2044.7 | 48.6      |
| 0°-90°    | 2522.8 | 60.0      |
| 90°-120°  | 692.7  | 16.5      |
| 90°-150°  | 1428.9 | 34.0      |
| 90°-180°  | 1685.0 | 40.0      |
| 0°-180°   | 4207.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1039 | 1039  | 1039 | 1039  | 1039 |      |
| 5°   | 1024 | 1039  | 1031 | 1030  | 1038 | 97   |
| 15°  | 971  | 984   | 971  | 970   | 977  | 274  |
| 25°  | 875  | 884   | 868  | 853   | 857  | 403  |
| 35°  | 744  | 746   | 725  | 708   | 708  | 464  |
| 45°  | 597  | 594   | 574  | 554   | 546  | 459  |
| 55°  | 445  | 444   | 423  | 403   | 397  | 397  |
| 65°  | 297  | 294   | 276  | 259   | 254  | 295  |
| 75°  | 161  | 156   | 143  | 137   | 136  | 171  |
| 85°  | 47   | 41    | 41   | 40    | 38   | 50   |
| 90°  | 6    | 9     | 12   | 13    | 13   | 6    |
| 95°  | 27   | 35    | 20   | 22    | 24   | 26   |
| 105° | 68   | 98    | 357  | 454   | 300  | 72   |
| 115° | 112  | 134   | 307  | 635   | 742  | 112  |
| 125° | 158  | 179   | 289  | 503   | 595  | 140  |
| 135° | 192  | 213   | 290  | 414   | 476  | 148  |
| 145° | 227  | 246   | 292  | 361   | 399  | 143  |
| 155° | 266  | 276   | 298  | 327   | 343  | 122  |
| 165° | 296  | 300   | 305  | 313   | 319  | 83   |
| 175° | 311  | 313   | 311  | 309   | 307  | 29   |
| 180° | 311  | 311   | 311  | 311   | 311  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1039.2 | 1039.2 | 1039.2 | 1039.2 | 1039.2 |
| 2.5°   | 1030.2 | 1043.4 | 1035.8 | 1035.9 | 1040.3 |
| 5°     | 1023.7 | 1038.9 | 1030.7 | 1029.5 | 1037.8 |
| 7.5°   | 1012.9 | 1027.8 | 1018.3 | 1016.8 | 1027.6 |
| 10°    | 1003.9 | 1017.7 | 1008.1 | 1005.5 | 1015.2 |
| 12.5°  | 991.4  | 1005.3 | 995.7  | 991.9  | 1001.6 |
| 15°    | 971.3  | 983.8  | 971.3  | 970.1  | 977.0  |
| 17.5°  | 948.7  | 959.5  | 945.1  | 940.4  | 945.6  |
| 20°    | 931.8  | 941.4  | 924.7  | 917.7  | 921.9  |
| 22.5°  | 910.3  | 919.9  | 902.1  | 891.7  | 897.0  |
| 25°    | 875.2  | 883.5  | 868.1  | 852.7  | 856.8  |
| 27.5°  | 837.6  | 844.0  | 828.5  | 812.7  | 814.1  |
| 30°    | 811.6  | 815.7  | 800.3  | 783.3  | 784.7  |
| 32.5°  | 784.4  | 787.5  | 770.9  | 752.8  | 753.0  |
| 35°    | 743.7  | 746.5  | 725.3  | 708.4  | 708.4  |
| 37.5°  | 700.4  | 702.1  | 679.5  | 661.1  | 659.2  |
| 40°    | 668.8  | 671.5  | 649.0  | 630.5  | 626.4  |
| 42.5°  | 639.4  | 639.9  | 619.6  | 601.1  | 595.8  |
| 45°    | 596.7  | 593.9  | 574.0  | 554.1  | 545.8  |
| 47.5°  | 550.6  | 550.6  | 528.0  | 508.0  | 500.2  |
| 50°    | 518.9  | 518.9  | 496.3  | 476.4  | 470.8  |
| 52.5°  | 489.5  | 488.4  | 466.9  | 446.9  | 439.2  |
| 55°    | 445.4  | 444.0  | 422.8  | 402.8  | 397.3  |
| 57.5°  | 398.7  | 398.7  | 378.9  | 357.6  | 351.5  |
| 60°    | 370.4  | 370.4  | 350.6  | 329.3  | 321.0  |
| 62.5°  | 339.9  | 338.8  | 319.0  | 299.9  | 294.9  |
| 65°    | 296.9  | 294.2  | 275.7  | 258.6  | 254.5  |
| 67.5°  | 255.9  | 253.2  | 233.6  | 219.9  | 217.2  |
| 70°    | 227.6  | 224.9  | 206.4  | 195.1  | 192.3  |
| 72.5°  | 200.5  | 196.6  | 180.4  | 171.3  | 168.5  |
| 75°    | 161.2  | 155.7  | 142.8  | 137.1  | 135.7  |
| 77.5°  | 123.9  | 114.5  | 109.2  | 105.2  | 103.8  |
| 80°    | 99.0   | 90.7   | 87.7   | 84.8   | 83.4   |
| 82.5°  | 77.5   | 69.2   | 68.4   | 66.7   | 65.3   |
| 85°    | 46.7   | 41.1   | 41.0   | 39.6   | 38.2   |
| 87.5°  | 20.4   | 17.7   | 18.3   | 18.4   | 18.4   |
| 90°    | 5.7    | 9.0    | 12.4   | 12.9   | 12.9   |
| 92.5°  | 14.9   | 13.8   | 14.8   | 18.1   | 18.5   |
| 95°    | 27.0   | 34.8   | 19.9   | 21.9   | 24.4   |
| 97.5°  | 37.7   | 61.5   | 119.1  | 36.5   | 30.8   |
| 100°   | 47.1   | 75.5   | 233.9  | 69.4   | 46.4   |
| 102.5° | 55.4   | 85.3   | 315.3  | 180.8  | 98.6   |
| 105°   | 67.8   | 97.5   | 357.2  | 454.1  | 299.6  |
| 107.5° | 81.6   | 103.6  | 341.1  | 660.2  | 617.1  |
| 110°   | 89.8   | 111.4  | 331.8  | 693.7  | 744.0  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 99.2  | 120.8 | 322.4 | 674.1 | 759.7 |
| 115°   | 111.9 | 133.5 | 306.8 | 634.8 | 742.0 |
| 117.5° | 126.4 | 147.6 | 303.3 | 593.8 | 704.1 |
| 120°   | 137.4 | 157.1 | 297.1 | 562.6 | 677.4 |
| 122.5° | 144.1 | 166.4 | 289.2 | 535.7 | 641.4 |
| 125°   | 157.5 | 178.6 | 289.2 | 503.3 | 595.2 |
| 127.5° | 167.4 | 190.0 | 289.6 | 465.7 | 556.4 |
| 130°   | 173.7 | 196.7 | 291.2 | 440.5 | 526.7 |
| 132.5° | 180.4 | 203.4 | 290.0 | 429.2 | 500.0 |
| 135°   | 191.9 | 212.9 | 289.8 | 414.5 | 475.8 |
| 137.5° | 201.7 | 224.3 | 289.8 | 398.2 | 450.7 |
| 140°   | 209.5 | 230.6 | 289.8 | 388.7 | 436.6 |
| 142.5° | 217.3 | 236.9 | 291.3 | 377.7 | 422.5 |
| 145°   | 227.1 | 246.3 | 291.7 | 361.1 | 399.4 |
| 147.5° | 238.9 | 255.7 | 294.1 | 349.2 | 378.7 |
| 150°   | 246.7 | 262.0 | 295.6 | 341.2 | 366.1 |
| 152.5° | 254.5 | 268.3 | 295.6 | 334.9 | 355.2 |
| 155°   | 266.3 | 275.8 | 297.6 | 327.3 | 342.6 |
| 157.5° | 275.7 | 284.9 | 299.9 | 322.5 | 333.6 |
| 160°   | 281.9 | 289.6 | 301.5 | 319.4 | 328.9 |
| 162.5° | 286.6 | 294.3 | 303.1 | 317.7 | 324.2 |
| 165°   | 295.6 | 299.5 | 305.4 | 313.4 | 319.1 |
| 167.5° | 300.7 | 304.2 | 307.4 | 311.4 | 314.8 |
| 170°   | 305.4 | 307.3 | 307.4 | 311.3 | 313.3 |
| 172.5° | 307.0 | 310.4 | 309.0 | 309.8 | 311.7 |
| 175°   | 311.3 | 313.2 | 311.3 | 309.3 | 307.4 |
| 177.5° | 311.3 | 312.8 | 311.3 | 311.3 | 309.7 |
| 180°   | 311.3 | 311.3 | 311.3 | 311.3 | 311.3 |

(END OF REPORT)