

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: P645069

Luminaire Tested: OMN4DIP-SR4F0-75D125U930-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P645069  
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-SR4F0-75D125U930-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - FLAT FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

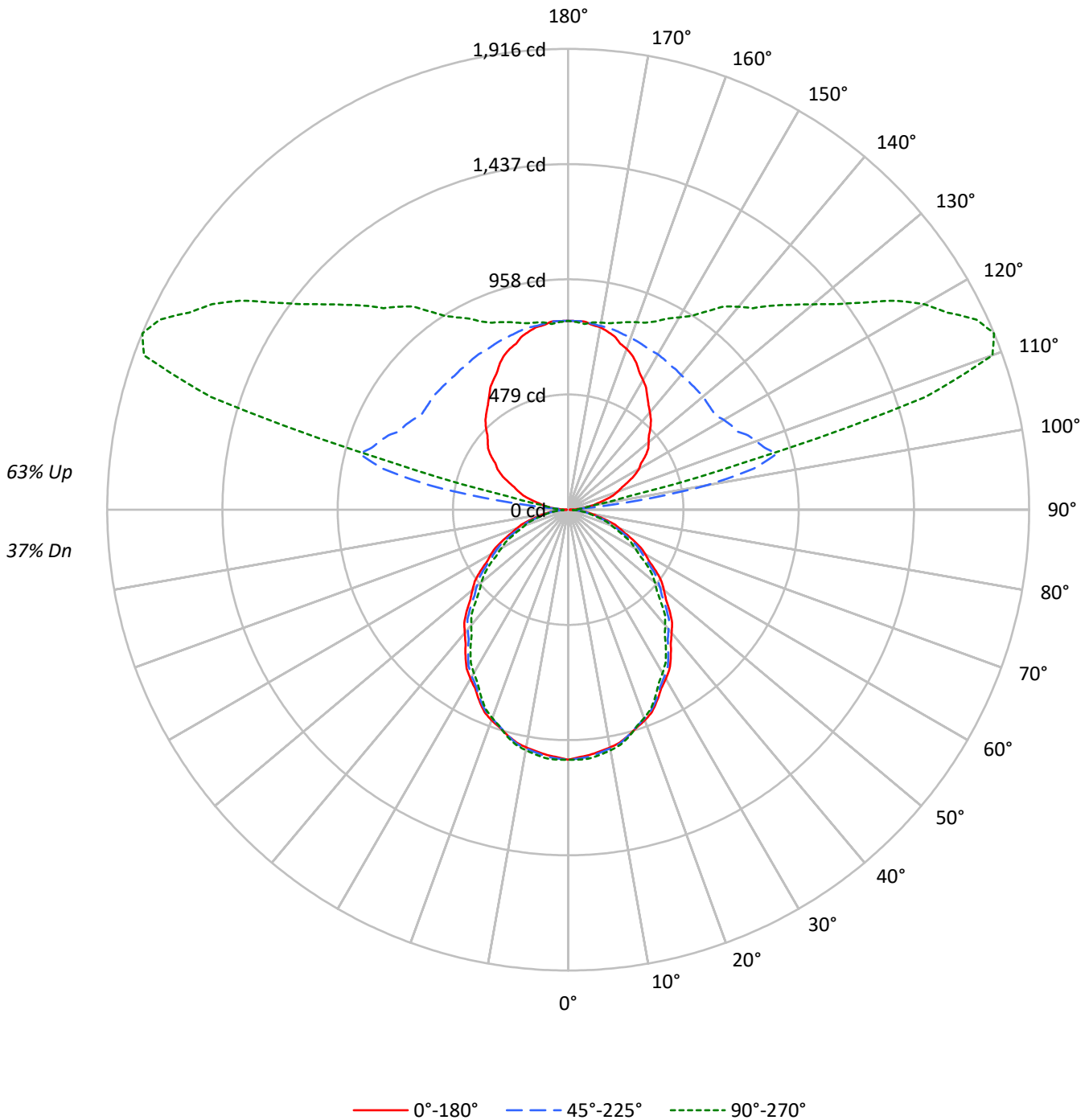
Lumens per Lamp: N/A  
Luminaire Lumens: 6753.7 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 60  
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   | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 76 | 76 | 76 | 60 | 60 | 60 | 45 | 45 | 45 | 37 |
| 1   | 95  | 91  | 87  | 84  | 86 | 82 | 79 | 76 | 67 | 65 | 63 | 53 | 51 | 50 | 39 | 38 | 38 | 32 |
| 2   | 87  | 79  | 73  | 68  | 78 | 72 | 67 | 63 | 59 | 55 | 52 | 46 | 44 | 42 | 35 | 33 | 32 | 27 |
| 3   | 79  | 70  | 63  | 57  | 71 | 64 | 57 | 52 | 52 | 47 | 44 | 41 | 38 | 35 | 31 | 29 | 27 | 23 |
| 4   | 72  | 62  | 54  | 48  | 65 | 56 | 50 | 44 | 46 | 41 | 37 | 36 | 33 | 30 | 28 | 25 | 23 | 19 |
| 5   | 66  | 55  | 47  | 41  | 60 | 50 | 43 | 38 | 41 | 36 | 32 | 33 | 29 | 26 | 25 | 22 | 20 | 17 |
| 6   | 61  | 49  | 41  | 36  | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 30 | 26 | 23 | 23 | 20 | 18 | 15 |
| 7   | 56  | 44  | 37  | 31  | 51 | 41 | 34 | 29 | 34 | 28 | 25 | 27 | 23 | 20 | 21 | 18 | 16 | 13 |
| 8   | 52  | 40  | 33  | 28  | 47 | 37 | 30 | 26 | 31 | 25 | 22 | 25 | 21 | 18 | 19 | 16 | 14 | 12 |
| 9   | 49  | 37  | 29  | 24  | 44 | 34 | 27 | 23 | 28 | 23 | 19 | 23 | 19 | 16 | 18 | 15 | 13 | 11 |
| 10  | 45  | 34  | 27  | 22  | 41 | 31 | 25 | 20 | 26 | 21 | 18 | 21 | 17 | 15 | 16 | 14 | 12 | 10 |

**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   | 1.4       |
| 10°-20°   | 274.3  | 4.1       |
| 20°-30°   | 398.9  | 5.9       |
| 30°-40°   | 453.7  | 6.7       |
| 40°-50°   | 442.4  | 6.6       |
| 50°-60°   | 377.6  | 5.6       |
| 60°-70°   | 274.4  | 4.1       |
| 70°-80°   | 155.2  | 2.3       |
| 80°-90°   | 49.6   | 0.7       |
| 90°-100°  | 102.5  | 1.5       |
| 100°-110° | 691.2  | 10.2      |
| 110°-120° | 935.8  | 13.9      |
| 120°-130° | 761.2  | 11.3      |
| 130°-140° | 611.4  | 9.1       |
| 140°-150° | 481.9  | 7.1       |
| 150°-160° | 352.4  | 5.2       |
| 160°-170° | 218.9  | 3.2       |
| 170°-180° | 74.6   | 1.1       |
| 0°-30°    | 771.0  | 11.4      |
| 0°-40°    | 1224.7 | 18.1      |
| 0°-60°    | 2044.7 | 30.3      |
| 0°-90°    | 2523.9 | 37.4      |
| 90°-120°  | 1729.5 | 25.6      |
| 90°-150°  | 3584.0 | 53.1      |
| 90°-180°  | 4230.0 | 62.6      |
| 0°-180°   | 6753.7 | 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    | 12    | 18   | 22    | 22   | 7    |
| 95°  | 51   | 79    | 44   | 49    | 57   | 53   |
| 105° | 160  | 239   | 896  | 1143  | 755  | 169  |
| 115° | 276  | 332   | 772  | 1601  | 1871 | 274  |
| 125° | 393  | 446   | 727  | 1269  | 1501 | 349  |
| 135° | 484  | 537   | 731  | 1045  | 1200 | 372  |
| 145° | 573  | 621   | 736  | 911   | 1007 | 360  |
| 155° | 672  | 696   | 750  | 825   | 864  | 308  |
| 165° | 746  | 755   | 770  | 790   | 805  | 209  |
| 175° | 785  | 790   | 785  | 780   | 775  | 74   |
| 180° | 785  | 785   | 785  | 785   | 785  |      |



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CATALOG NUMBER: OMN4DIP-SR4F0-75D125U930-FLLOOB-1DUDD-WW

**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   | 18.3   | 19.5   | 20.2   | 20.2   |
| 90°    | 5.7    | 11.9   | 18.4   | 21.9   | 21.9   |
| 92.5°  | 22.0   | 23.8   | 27.9   | 36.6   | 39.4   |
| 95°    | 50.8   | 79.1   | 43.7   | 48.9   | 57.1   |
| 97.5°  | 80.0   | 146.3  | 294.3  | 88.2   | 75.5   |
| 100°   | 103.7  | 181.6  | 585.4  | 172.9  | 115.0  |
| 102.5° | 126.3  | 208.1  | 790.8  | 453.9  | 248.1  |
| 105°   | 160.1  | 239.4  | 896.5  | 1143.0 | 755.4  |
| 107.5° | 195.4  | 254.7  | 856.0  | 1662.9 | 1556.3 |
| 110°   | 218.0  | 274.5  | 832.3  | 1747.3 | 1876.2 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 241.7 | 298.2 | 808.6 | 1697.9 | 1915.7 |
| 115°   | 275.8 | 332.4 | 771.7 | 1600.9 | 1871.3 |
| 117.5° | 312.3 | 367.9 | 762.8 | 1497.4 | 1775.5 |
| 120°   | 340.0 | 391.7 | 747.0 | 1418.7 | 1708.4 |
| 122.5° | 358.6 | 415.3 | 727.2 | 1351.0 | 1617.5 |
| 125°   | 392.9 | 446.0 | 727.2 | 1269.3 | 1501.0 |
| 127.5° | 420.1 | 475.3 | 728.2 | 1174.4 | 1403.2 |
| 130°   | 435.9 | 493.8 | 732.2 | 1110.9 | 1328.2 |
| 132.5° | 454.5 | 512.5 | 731.0 | 1082.4 | 1261.0 |
| 135°   | 483.9 | 537.0 | 730.7 | 1045.3 | 1199.8 |
| 137.5° | 508.6 | 565.5 | 730.7 | 1004.3 | 1136.6 |
| 140°   | 528.3 | 581.4 | 730.7 | 980.4  | 1101.1 |
| 142.5° | 548.1 | 597.3 | 734.7 | 952.5  | 1065.5 |
| 145°   | 572.7 | 621.0 | 735.7 | 910.7  | 1007.2 |
| 147.5° | 602.4 | 644.9 | 741.6 | 880.6  | 954.9  |
| 150°   | 622.1 | 660.7 | 745.6 | 860.5  | 923.3  |
| 152.5° | 641.9 | 676.6 | 745.6 | 844.5  | 895.7  |
| 155°   | 671.5 | 695.6 | 750.5 | 825.4  | 864.1  |
| 157.5° | 695.2 | 718.4 | 756.4 | 813.3  | 841.3  |
| 160°   | 711.0 | 730.3 | 760.4 | 805.4  | 829.5  |
| 162.5° | 722.8 | 742.2 | 764.3 | 801.2  | 817.6  |
| 165°   | 745.6 | 755.2 | 770.2 | 790.3  | 804.8  |
| 167.5° | 758.4 | 767.1 | 775.2 | 785.3  | 793.9  |
| 170°   | 770.2 | 775.1 | 775.2 | 785.2  | 790.0  |
| 172.5° | 774.2 | 782.9 | 779.1 | 781.2  | 786.0  |
| 175°   | 785.1 | 789.9 | 785.1 | 780.0  | 775.2  |
| 177.5° | 785.1 | 788.9 | 785.1 | 785.0  | 781.1  |
| 180°   | 785.1 | 785.1 | 785.1 | 785.1  | 785.1  |

(END OF REPORT)