

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: P645111

Luminaire Tested: OMN4DIP-SR4F0-75D150U940-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P645111
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-SR4F0-75D150U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - FLAT FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

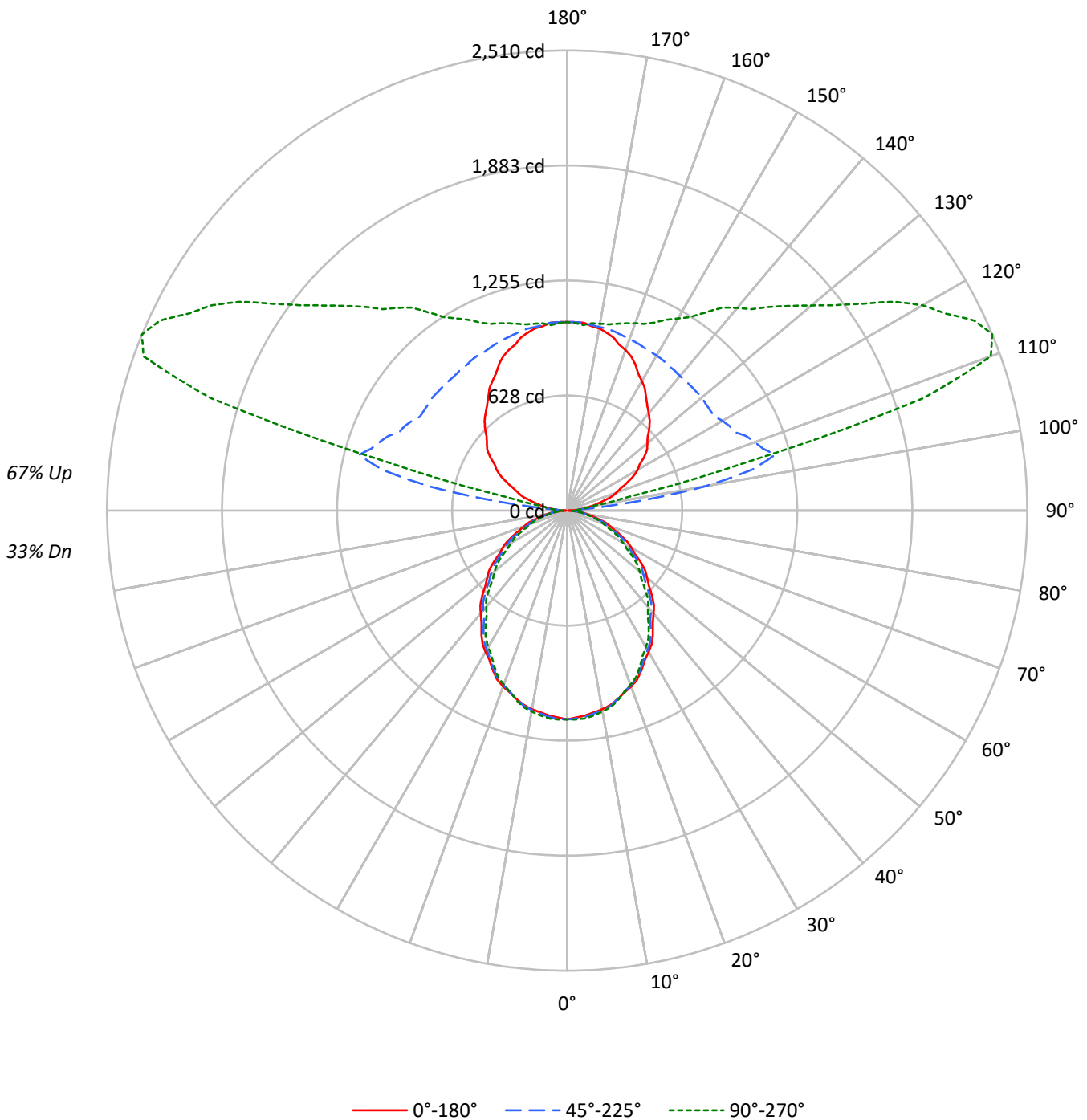
Lumens per Lamp: N/A
Luminaire Lumens: 8306.5 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 70.4
Input Voltage (V): 120
Input Current (A_{in}): 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 | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 74 | 74 | 74 | 57 | 57 | 57 | 41 | 41 | 41 | 33 | | | | | | | | | | | | | | | | | | | | |
| 1 | 94 | 90 | 86 | 83 | 85 | 81 | 78 | 75 | 65 | 63 | 61 | 50 | 48 | 47 | 36 | 35 | 34 | 28 | | | | | | | | | | | | | | | | | | | | |
| 2 | 86 | 79 | 73 | 68 | 77 | 71 | 66 | 62 | 57 | 53 | 50 | 44 | 42 | 39 | 32 | 30 | 29 | 24 | | | | | | | | | | | | | | | | | | | | |
| 3 | 78 | 69 | 62 | 56 | 70 | 62 | 56 | 52 | 50 | 46 | 42 | 39 | 36 | 33 | 28 | 26 | 25 | 20 | | | | | | | | | | | | | | | | | | | | |
| 4 | 71 | 61 | 53 | 48 | 64 | 55 | 49 | 44 | 45 | 40 | 36 | 35 | 31 | 29 | 25 | 23 | 21 | 17 | | | | | | | | | | | | | | | | | | | | |
| 5 | 66 | 54 | 46 | 41 | 59 | 49 | 43 | 37 | 40 | 35 | 31 | 31 | 28 | 25 | 23 | 21 | 19 | 15 | | | | | | | | | | | | | | | | | | | | |
| 6 | 60 | 49 | 41 | 35 | 54 | 44 | 37 | 32 | 36 | 31 | 27 | 28 | 24 | 22 | 21 | 18 | 16 | 13 | | | | | | | | | | | | | | | | | | | | |
| 7 | 56 | 44 | 36 | 31 | 50 | 40 | 33 | 28 | 32 | 27 | 24 | 25 | 22 | 19 | 19 | 16 | 15 | 12 | | | | | | | | | | | | | | | | | | | | |
| 8 | 52 | 40 | 32 | 27 | 46 | 36 | 30 | 25 | 30 | 25 | 21 | 23 | 20 | 17 | 17 | 15 | 13 | 11 | | | | | | | | | | | | | | | | | | | | |
| 9 | 48 | 36 | 29 | 24 | 43 | 33 | 27 | 22 | 27 | 22 | 19 | 21 | 18 | 15 | 16 | 14 | 12 | 10 | | | | | | | | | | | | | | | | | | | | |
| 10 | 45 | 33 | 26 | 21 | 40 | 30 | 24 | 20 | 25 | 20 | 17 | 20 | 16 | 14 | 15 | 12 | 11 | 9 | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18390 | 18390 | 18390 |
| 5° | 18185 | 18310 | 18436 |
| 10° | 18039 | 18115 | 18243 |
| 15° | 17795 | 17795 | 17899 |
| 20° | 17546 | 17414 | 17361 |
| 25° | 17090 | 16951 | 16730 |
| 30° | 16583 | 16352 | 16035 |
| 35° | 16066 | 15670 | 15303 |
| 40° | 15449 | 14992 | 14469 |
| 45° | 14933 | 14367 | 13659 |
| 50° | 14285 | 13662 | 12961 |
| 55° | 13743 | 13044 | 12259 |
| 60° | 13110 | 12410 | 11360 |
| 65° | 12432 | 11545 | 10655 |
| 70° | 11778 | 10683 | 9951 |
| 75° | 11023 | 9763 | 9283 |
| 80° | 10088 | 8935 | 8498 |
| 85° | 9466 | 8318 | 7744 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14933 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.1 | 1.3 |
| 10°-20° | 300.7 | 3.6 |
| 20°-30° | 437.2 | 5.3 |
| 30°-40° | 497.3 | 6.0 |
| 40°-50° | 484.9 | 5.8 |
| 50°-60° | 413.9 | 5.0 |
| 60°-70° | 300.8 | 3.6 |
| 70°-80° | 170.1 | 2.0 |
| 80°-90° | 54.7 | 0.7 |
| 90°-100° | 133.1 | 1.6 |
| 100°-110° | 904.9 | 10.9 |
| 110°-120° | 1225.8 | 14.8 |
| 120°-130° | 997.2 | 12.0 |
| 130°-140° | 801.1 | 9.6 |
| 140°-150° | 631.5 | 7.6 |
| 150°-160° | 461.7 | 5.6 |
| 160°-170° | 286.8 | 3.5 |
| 170°-180° | 97.8 | 1.2 |
| 0°-30° | 845.0 | 10.2 |
| 0°-40° | 1342.3 | 16.2 |
| 0°-60° | 2241.1 | 27.0 |
| 0°-90° | 2766.6 | 33.3 |
| 90°-120° | 2263.9 | 27.3 |
| 90°-150° | 4693.6 | 56.5 |
| 90°-180° | 5540.0 | 66.7 |
| 0°-180° | 8306.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1139 | 1139 | 1139 | 1139 | 1139 | |
| 5° | 1122 | 1139 | 1130 | 1128 | 1138 | 106 |
| 15° | 1065 | 1078 | 1065 | 1063 | 1071 | 300 |
| 25° | 959 | 968 | 952 | 935 | 939 | 441 |
| 35° | 815 | 818 | 795 | 776 | 776 | 509 |
| 45° | 654 | 651 | 629 | 607 | 598 | 503 |
| 55° | 488 | 487 | 463 | 442 | 436 | 436 |
| 65° | 325 | 322 | 302 | 284 | 279 | 323 |
| 75° | 177 | 171 | 156 | 150 | 149 | 188 |
| 85° | 51 | 45 | 45 | 43 | 42 | 55 |
| 90° | 6 | 14 | 22 | 27 | 27 | 8 |
| 95° | 64 | 102 | 56 | 63 | 74 | 67 |
| 105° | 208 | 313 | 1174 | 1498 | 990 | 220 |
| 115° | 360 | 435 | 1011 | 2098 | 2452 | 358 |
| 125° | 514 | 584 | 953 | 1663 | 1967 | 457 |
| 135° | 634 | 704 | 958 | 1370 | 1572 | 488 |
| 145° | 750 | 814 | 964 | 1193 | 1320 | 471 |
| 155° | 880 | 912 | 983 | 1082 | 1132 | 404 |
| 165° | 977 | 990 | 1009 | 1036 | 1055 | 274 |
| 175° | 1029 | 1035 | 1029 | 1022 | 1016 | 97 |
| 180° | 1029 | 1029 | 1029 | 1029 | 1029 | |



TEST NUMBER: P645111

CATALOG NUMBER: OMN4DIP-SR4F0-75D150U940-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1139.0 | 1139.0 | 1139.0 | 1139.0 | 1139.0 |
| 2.5° | 1129.1 | 1143.7 | 1135.3 | 1135.4 | 1140.3 |
| 5° | 1122.0 | 1138.6 | 1129.7 | 1128.4 | 1137.5 |
| 7.5° | 1110.2 | 1126.6 | 1116.1 | 1114.5 | 1126.3 |
| 10° | 1100.3 | 1115.4 | 1104.9 | 1102.1 | 1112.7 |
| 12.5° | 1086.6 | 1101.8 | 1091.3 | 1087.2 | 1097.8 |
| 15° | 1064.6 | 1078.3 | 1064.6 | 1063.3 | 1070.8 |
| 17.5° | 1039.8 | 1051.7 | 1035.8 | 1030.7 | 1036.4 |
| 20° | 1021.2 | 1031.9 | 1013.5 | 1005.9 | 1010.4 |
| 22.5° | 997.7 | 1008.3 | 988.7 | 977.4 | 983.1 |
| 25° | 959.3 | 968.3 | 951.5 | 934.6 | 939.1 |
| 27.5° | 918.0 | 925.0 | 908.1 | 890.8 | 892.3 |
| 30° | 889.5 | 894.1 | 877.1 | 858.6 | 860.1 |
| 32.5° | 859.8 | 863.1 | 844.9 | 825.1 | 825.4 |
| 35° | 815.1 | 818.2 | 795.0 | 776.4 | 776.4 |
| 37.5° | 767.7 | 769.5 | 744.8 | 724.6 | 722.5 |
| 40° | 733.0 | 736.0 | 711.3 | 691.1 | 686.5 |
| 42.5° | 700.8 | 701.4 | 679.1 | 658.8 | 653.0 |
| 45° | 654.0 | 650.9 | 629.2 | 607.3 | 598.2 |
| 47.5° | 603.4 | 603.4 | 578.7 | 556.8 | 548.3 |
| 50° | 568.7 | 568.7 | 543.9 | 522.1 | 516.0 |
| 52.5° | 536.5 | 535.3 | 511.7 | 489.8 | 481.3 |
| 55° | 488.2 | 486.6 | 463.4 | 441.5 | 435.5 |
| 57.5° | 437.0 | 437.0 | 415.3 | 391.9 | 385.3 |
| 60° | 406.0 | 406.0 | 384.3 | 360.9 | 351.8 |
| 62.5° | 372.5 | 371.3 | 349.6 | 328.7 | 323.3 |
| 65° | 325.4 | 322.4 | 302.2 | 283.5 | 278.9 |
| 67.5° | 280.5 | 277.5 | 256.0 | 241.1 | 238.0 |
| 70° | 249.5 | 246.5 | 226.3 | 213.8 | 210.8 |
| 72.5° | 219.7 | 215.5 | 197.7 | 187.8 | 184.7 |
| 75° | 176.7 | 170.6 | 156.5 | 150.3 | 148.8 |
| 77.5° | 135.8 | 125.4 | 119.6 | 115.3 | 113.7 |
| 80° | 108.5 | 99.4 | 96.1 | 92.9 | 91.4 |
| 82.5° | 84.9 | 75.8 | 75.0 | 73.1 | 71.6 |
| 85° | 51.1 | 45.1 | 44.9 | 43.4 | 41.8 |
| 87.5° | 22.3 | 20.2 | 21.8 | 22.8 | 22.8 |
| 90° | 6.2 | 14.0 | 22.2 | 27.2 | 27.2 |
| 92.5° | 26.7 | 29.7 | 35.3 | 46.7 | 50.6 |
| 95° | 64.2 | 102.4 | 56.4 | 63.1 | 74.3 |
| 97.5° | 102.7 | 190.5 | 384.8 | 115.0 | 98.6 |
| 100° | 133.8 | 236.8 | 766.5 | 226.3 | 150.4 |
| 102.5° | 163.6 | 271.6 | 1035.7 | 594.5 | 325.1 |
| 105° | 208.3 | 312.8 | 1174.1 | 1497.5 | 989.9 |
| 107.5° | 254.6 | 332.8 | 1121.1 | 2178.7 | 2039.3 |
| 110° | 284.4 | 358.8 | 1090.0 | 2289.2 | 2458.5 |

TEST NUMBER: P645111

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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 315.5 | 389.9 | 1059.0 | 2224.6 | 2510.3 |
| 115° | 360.5 | 434.9 | 1010.8 | 2097.8 | 2452.0 |
| 117.5° | 408.4 | 481.5 | 999.2 | 1962.2 | 2326.5 |
| 120° | 444.6 | 512.7 | 978.5 | 1859.0 | 2238.5 |
| 122.5° | 469.2 | 543.6 | 952.6 | 1770.3 | 2119.5 |
| 125° | 514.2 | 583.8 | 952.6 | 1663.2 | 1966.8 |
| 127.5° | 550.2 | 622.2 | 953.9 | 1538.9 | 1838.7 |
| 130° | 570.9 | 646.8 | 959.1 | 1455.7 | 1740.4 |
| 132.5° | 595.5 | 671.4 | 957.8 | 1418.3 | 1652.4 |
| 135° | 634.0 | 703.6 | 957.5 | 1369.7 | 1572.2 |
| 137.5° | 666.4 | 741.0 | 957.5 | 1316.0 | 1489.3 |
| 140° | 692.3 | 761.9 | 957.5 | 1284.6 | 1442.8 |
| 142.5° | 718.1 | 782.7 | 962.7 | 1248.1 | 1396.2 |
| 145° | 750.5 | 813.8 | 964.0 | 1193.3 | 1319.8 |
| 147.5° | 789.3 | 845.0 | 971.8 | 1153.8 | 1251.3 |
| 150° | 815.2 | 865.8 | 976.9 | 1127.6 | 1209.8 |
| 152.5° | 841.1 | 886.6 | 976.9 | 1106.6 | 1173.6 |
| 155° | 879.9 | 911.5 | 983.4 | 1081.6 | 1132.2 |
| 157.5° | 910.9 | 941.3 | 991.2 | 1065.8 | 1102.4 |
| 160° | 931.6 | 957.0 | 996.3 | 1055.3 | 1086.9 |
| 162.5° | 947.2 | 972.5 | 1001.5 | 1049.9 | 1071.4 |
| 165° | 976.9 | 989.6 | 1009.3 | 1035.6 | 1054.6 |
| 167.5° | 993.8 | 1005.1 | 1015.8 | 1029.0 | 1040.3 |
| 170° | 1009.3 | 1015.6 | 1015.8 | 1028.8 | 1035.2 |
| 172.5° | 1014.5 | 1025.8 | 1020.9 | 1023.7 | 1030.0 |
| 175° | 1028.7 | 1035.0 | 1028.7 | 1022.1 | 1015.8 |
| 177.5° | 1028.7 | 1033.8 | 1028.7 | 1028.6 | 1023.5 |
| 180° | 1028.7 | 1028.7 | 1028.7 | 1028.7 | 1028.7 |

(END OF REPORT)