

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: P644404

Luminaire Tested: CRQ4DIP-SR4F0-75D125U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644404
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-75D125U840-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

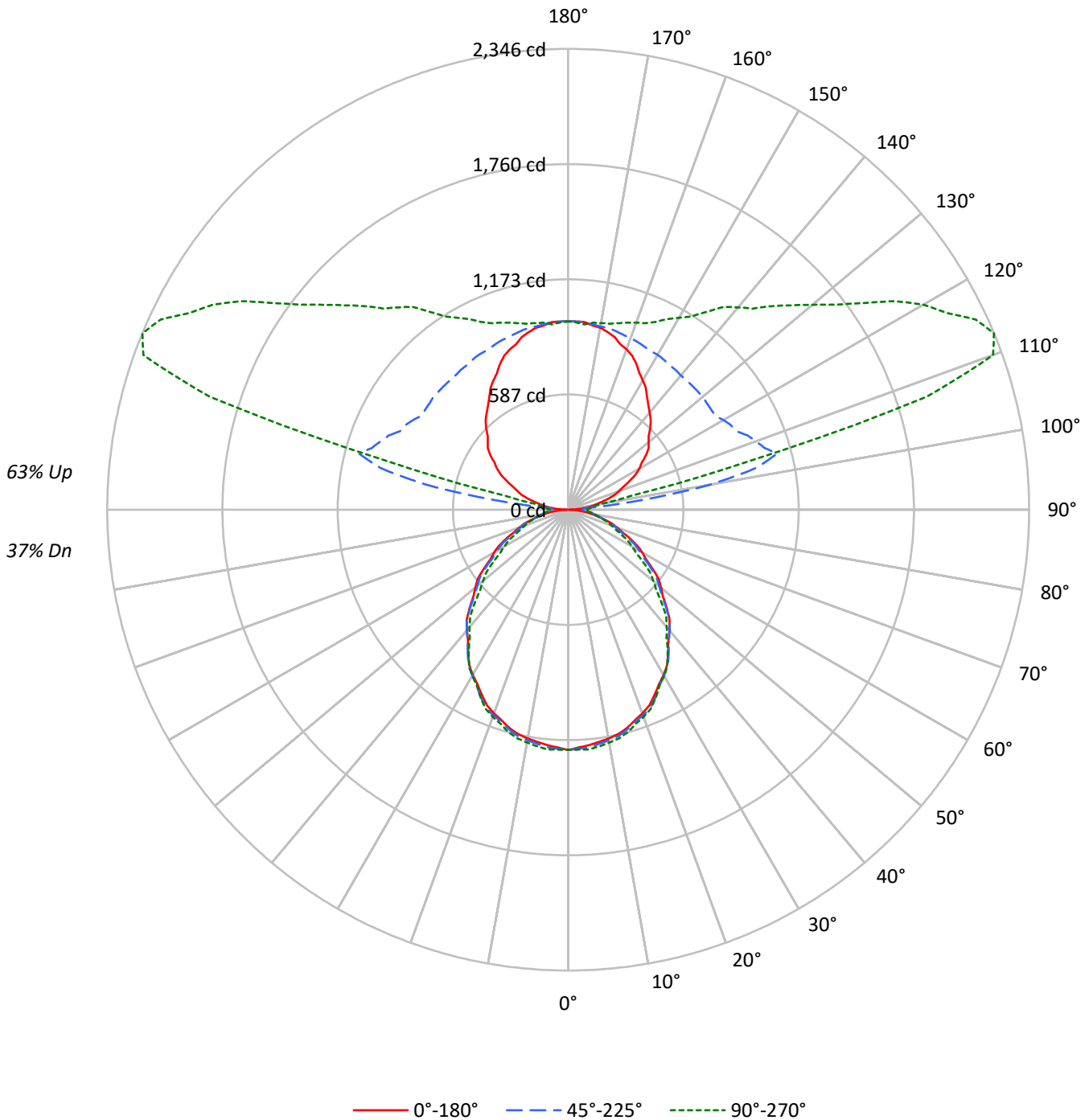
Lumens per Lamp: N/A
Luminaire Lumens: 8304.6 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 76 | 76 | 76 | 60 | 60 | 60 | 44 | 44 | 44 | 37 | | | | |
| 1 | 95 | 90 | 87 | 83 | 86 | 82 | 79 | 76 | 67 | 64 | 62 | 52 | 51 | 49 | 39 | 38 | 37 | 31 | | | | |
| 2 | 86 | 79 | 73 | 68 | 78 | 72 | 67 | 62 | 58 | 55 | 52 | 46 | 43 | 41 | 34 | 33 | 31 | 26 | | | | |
| 3 | 79 | 69 | 62 | 57 | 71 | 63 | 57 | 52 | 51 | 47 | 43 | 41 | 38 | 35 | 31 | 28 | 27 | 22 | | | | |
| 4 | 72 | 61 | 54 | 48 | 65 | 56 | 49 | 44 | 46 | 41 | 37 | 36 | 33 | 30 | 27 | 25 | 23 | 19 | | | | |
| 5 | 66 | 55 | 47 | 41 | 60 | 50 | 43 | 38 | 41 | 36 | 32 | 32 | 29 | 26 | 25 | 22 | 20 | 17 | | | | |
| 6 | 61 | 49 | 41 | 35 | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 29 | 26 | 23 | 22 | 20 | 18 | 15 | | | | |
| 7 | 56 | 44 | 36 | 31 | 51 | 40 | 34 | 29 | 33 | 28 | 24 | 27 | 23 | 20 | 20 | 18 | 16 | 13 | | | | |
| 8 | 52 | 40 | 33 | 27 | 47 | 37 | 30 | 25 | 30 | 25 | 22 | 24 | 21 | 18 | 19 | 16 | 14 | 12 | | | | |
| 9 | 48 | 37 | 29 | 24 | 44 | 34 | 27 | 23 | 28 | 23 | 19 | 22 | 19 | 16 | 17 | 15 | 13 | 11 | | | | |
| 10 | 45 | 33 | 26 | 22 | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 21 | 17 | 14 | 16 | 13 | 12 | 10 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 19740 | 19740 | 19740 |
| 5° | 19366 | 17430 | 16888 |
| 10° | 19113 | 15507 | 14588 |
| 15° | 18832 | 13887 | 12761 |
| 20° | 18401 | 12458 | 11161 |
| 25° | 17828 | 11124 | 9726 |
| 30° | 17263 | 9830 | 8442 |
| 35° | 16499 | 8645 | 7246 |
| 40° | 15783 | 7569 | 6142 |
| 45° | 14959 | 6504 | 5126 |
| 50° | 14087 | 5509 | 4205 |
| 55° | 13161 | 4635 | 3391 |
| 60° | 12281 | 3800 | 2710 |
| 65° | 11195 | 3029 | 2145 |
| 70° | 10149 | 2374 | 1694 |
| 75° | 8874 | 1824 | 1336 |
| 80° | 7413 | 1356 | 1040 |
| 85° | 5408 | 987 | 791 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14959 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 115.4 | 1.4 |
| 10°-20° | 327.5 | 3.9 |
| 20°-30° | 483.4 | 5.8 |
| 30°-40° | 555.8 | 6.7 |
| 40°-50° | 539.1 | 6.5 |
| 50°-60° | 451.3 | 5.4 |
| 60°-70° | 325.2 | 3.9 |
| 70°-80° | 198.7 | 2.4 |
| 80°-90° | 98.7 | 1.2 |
| 90°-100° | 156.1 | 1.9 |
| 100°-110° | 853.9 | 10.3 |
| 110°-120° | 1145.3 | 13.8 |
| 120°-130° | 930.2 | 11.2 |
| 130°-140° | 746.8 | 9.0 |
| 140°-150° | 588.6 | 7.1 |
| 150°-160° | 430.4 | 5.2 |
| 160°-170° | 267.3 | 3.2 |
| 170°-180° | 91.2 | 1.1 |
| 0°-30° | 926.3 | 11.2 |
| 0°-40° | 1482.0 | 17.8 |
| 0°-60° | 2472.5 | 29.8 |
| 0°-90° | 3095.0 | 37.3 |
| 90°-120° | 2155.2 | 26.0 |
| 90°-150° | 4420.8 | 53.2 |
| 90°-180° | 5210.0 | 62.7 |
| 0°-180° | 8304.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1223 | 1223 | 1223 | 1223 | 1223 | |
| 5° | 1204 | 1226 | 1214 | 1216 | 1224 | 114 |
| 15° | 1152 | 1169 | 1159 | 1164 | 1172 | 324 |
| 25° | 1040 | 1056 | 1053 | 1048 | 1055 | 479 |
| 35° | 886 | 899 | 891 | 882 | 882 | 555 |
| 45° | 710 | 716 | 704 | 684 | 674 | 547 |
| 55° | 523 | 530 | 511 | 480 | 464 | 469 |
| 65° | 345 | 347 | 330 | 306 | 297 | 344 |
| 75° | 186 | 186 | 190 | 185 | 181 | 199 |
| 85° | 57 | 69 | 95 | 102 | 102 | 60 |
| 90° | 5 | 40 | 74 | 91 | 92 | 8 |
| 95° | 66 | 105 | 84 | 103 | 116 | 69 |
| 105° | 204 | 294 | 1100 | 1410 | 942 | 215 |
| 115° | 344 | 408 | 944 | 1959 | 2289 | 341 |
| 125° | 483 | 545 | 888 | 1550 | 1833 | 429 |
| 135° | 591 | 656 | 892 | 1277 | 1465 | 455 |
| 145° | 700 | 758 | 898 | 1112 | 1230 | 439 |
| 155° | 820 | 850 | 917 | 1008 | 1055 | 376 |
| 165° | 911 | 922 | 941 | 965 | 983 | 256 |
| 175° | 959 | 965 | 959 | 953 | 947 | 91 |
| 180° | 959 | 959 | 959 | 959 | 959 | |

TEST NUMBER: P644404

CATALOG NUMBER: CRQ4DIP-SR4F0-75D125U840-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1222.6 | 1222.6 | 1222.6 | 1222.6 | 1222.6 |
| 2.5° | 1211.5 | 1229.1 | 1218.5 | 1221.2 | 1222.6 |
| 5° | 1203.6 | 1225.5 | 1214.0 | 1215.9 | 1224.3 |
| 7.5° | 1192.5 | 1212.8 | 1202.6 | 1204.9 | 1214.7 |
| 10° | 1182.9 | 1203.1 | 1191.5 | 1195.2 | 1203.6 |
| 12.5° | 1170.4 | 1189.4 | 1180.5 | 1184.1 | 1192.5 |
| 15° | 1151.8 | 1168.7 | 1158.7 | 1164.1 | 1172.5 |
| 17.5° | 1124.2 | 1142.4 | 1131.8 | 1134.7 | 1143.2 |
| 20° | 1103.4 | 1120.3 | 1113.8 | 1114.0 | 1122.4 |
| 22.5° | 1078.6 | 1096.8 | 1091.7 | 1087.8 | 1097.6 |
| 25° | 1039.6 | 1056.4 | 1053.4 | 1048.3 | 1055.1 |
| 27.5° | 1000.9 | 1013.4 | 1007.4 | 1002.4 | 1007.4 |
| 30° | 970.5 | 985.7 | 975.7 | 970.6 | 975.7 |
| 32.5° | 937.3 | 952.5 | 942.5 | 936.0 | 938.4 |
| 35° | 885.9 | 899.4 | 891.0 | 882.4 | 882.4 |
| 37.5° | 837.2 | 845.9 | 840.3 | 825.7 | 822.0 |
| 40° | 801.2 | 811.4 | 803.0 | 785.6 | 780.5 |
| 42.5° | 763.9 | 774.1 | 764.3 | 745.5 | 737.7 |
| 45° | 709.7 | 716.5 | 704.5 | 683.6 | 673.5 |
| 47.5° | 653.8 | 660.9 | 644.5 | 621.4 | 609.2 |
| 50° | 616.5 | 624.9 | 604.4 | 579.9 | 566.4 |
| 52.5° | 580.6 | 586.3 | 567.1 | 538.5 | 526.3 |
| 55° | 523.2 | 530.0 | 511.1 | 479.7 | 464.5 |
| 57.5° | 469.7 | 476.1 | 453.8 | 423.8 | 412.0 |
| 60° | 435.2 | 440.2 | 417.9 | 386.5 | 374.7 |
| 62.5° | 396.5 | 401.5 | 380.6 | 353.4 | 341.6 |
| 65° | 345.4 | 347.1 | 329.8 | 305.5 | 297.0 |
| 67.5° | 297.4 | 297.4 | 282.9 | 264.7 | 258.0 |
| 70° | 264.2 | 264.2 | 253.8 | 239.9 | 233.1 |
| 72.5° | 233.8 | 232.5 | 226.2 | 216.4 | 211.0 |
| 75° | 186.5 | 186.5 | 190.0 | 184.7 | 181.3 |
| 77.5° | 145.1 | 142.4 | 157.1 | 156.4 | 154.7 |
| 80° | 117.4 | 117.4 | 136.4 | 139.8 | 138.1 |
| 82.5° | 92.6 | 95.3 | 119.8 | 124.6 | 123.0 |
| 85° | 57.0 | 68.8 | 95.0 | 101.9 | 101.9 |
| 87.5° | 25.9 | 47.7 | 77.0 | 87.2 | 87.5 |
| 90° | 5.2 | 39.8 | 74.2 | 90.7 | 92.3 |
| 92.5° | 25.2 | 46.3 | 77.6 | 99.0 | 106.8 |
| 95° | 65.5 | 105.1 | 84.5 | 102.9 | 116.4 |
| 97.5° | 106.4 | 182.0 | 380.8 | 140.9 | 128.8 |
| 100° | 135.3 | 223.7 | 732.3 | 238.9 | 171.5 |
| 102.5° | 162.9 | 256.0 | 977.6 | 576.6 | 328.6 |
| 105° | 204.2 | 294.3 | 1100.1 | 1409.9 | 941.6 |
| 107.5° | 245.6 | 311.2 | 1046.9 | 2039.0 | 1912.1 |
| 110° | 273.1 | 335.4 | 1016.5 | 2139.2 | 2300.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 302.1 | 364.4 | 987.6 | 2076.2 | 2345.6 |
| 115° | 343.8 | 407.8 | 944.2 | 1958.7 | 2288.9 |
| 117.5° | 386.3 | 451.2 | 933.0 | 1830.2 | 2169.9 |
| 120° | 418.7 | 480.2 | 912.3 | 1732.7 | 2086.5 |
| 122.5° | 442.8 | 507.7 | 888.2 | 1650.0 | 1975.5 |
| 125° | 483.3 | 544.8 | 888.2 | 1550.2 | 1833.2 |
| 127.5° | 516.2 | 580.9 | 889.4 | 1434.3 | 1713.8 |
| 130° | 534.1 | 604.9 | 894.2 | 1356.8 | 1622.1 |
| 132.5° | 555.5 | 626.2 | 892.8 | 1322.0 | 1540.1 |
| 135° | 591.0 | 655.8 | 892.5 | 1276.7 | 1465.4 |
| 137.5° | 621.1 | 690.7 | 892.5 | 1226.6 | 1388.2 |
| 140° | 645.2 | 710.1 | 892.5 | 1197.3 | 1344.7 |
| 142.5° | 669.4 | 729.5 | 897.3 | 1163.4 | 1301.3 |
| 145° | 699.5 | 758.5 | 898.5 | 1112.2 | 1230.2 |
| 147.5° | 735.7 | 787.6 | 905.7 | 1075.5 | 1166.3 |
| 150° | 759.8 | 807.0 | 910.6 | 1051.0 | 1127.7 |
| 152.5° | 783.9 | 826.4 | 910.6 | 1031.4 | 1093.9 |
| 155° | 820.1 | 849.6 | 916.6 | 1008.1 | 1055.3 |
| 157.5° | 849.1 | 877.4 | 923.8 | 993.4 | 1027.6 |
| 160° | 868.4 | 891.9 | 928.7 | 983.6 | 1013.1 |
| 162.5° | 882.8 | 906.4 | 933.5 | 978.6 | 998.6 |
| 165° | 910.6 | 922.4 | 940.7 | 965.2 | 982.9 |
| 167.5° | 926.2 | 936.9 | 946.8 | 959.1 | 969.7 |
| 170° | 940.7 | 946.6 | 946.8 | 958.9 | 964.8 |
| 172.5° | 945.5 | 956.2 | 951.6 | 954.1 | 960.0 |
| 175° | 958.8 | 964.7 | 958.8 | 952.6 | 946.8 |
| 177.5° | 958.8 | 963.5 | 958.8 | 958.7 | 954.0 |
| 180° | 958.8 | 958.8 | 958.8 | 958.8 | 958.8 |

(END OF REPORT)