

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: P906258

Luminaire Tested: DFN2DIP-SQ2F0-050D060US835-RLLFLL

Issue Date: 11/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P906258
REPORT IS A COMBINATION OF REPORTS P899812 AND P896659
Test Lab: INNOVATION CENTER
Issue Date: 11/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DIP-SQ2F0-050D060US835-RLLFLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens, Indirect Frosted Lens
Light Source: -
Ballast/Driver: -

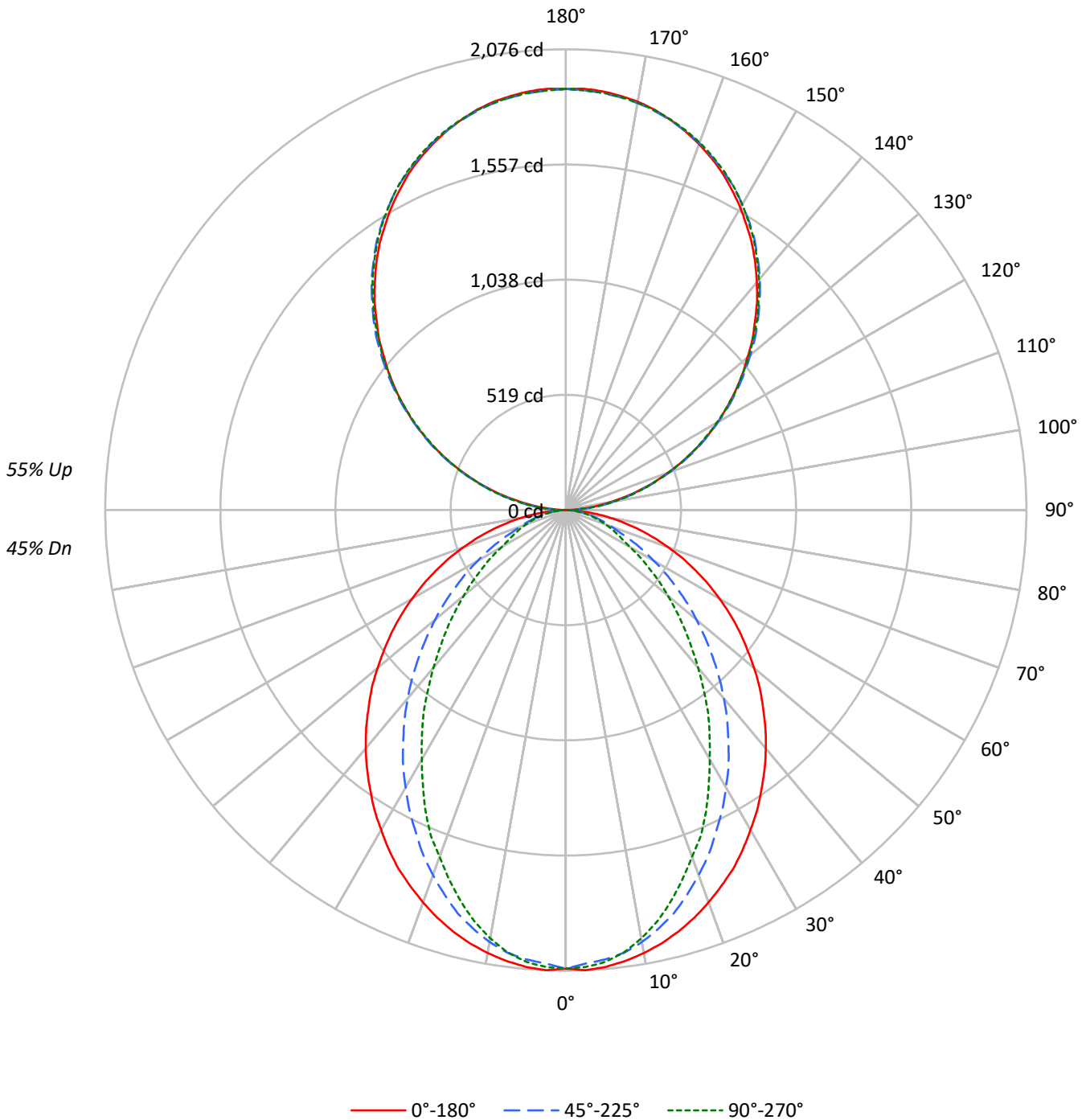
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9560.0 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 2.21' x L: 2.21' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 90.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
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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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 193.7 | 2.0 |
| 10°-20° | 531.7 | 5.6 |
| 20°-30° | 746.5 | 7.8 |
| 30°-40° | 813.7 | 8.5 |
| 40°-50° | 747.9 | 7.8 |
| 50°-60° | 587.3 | 6.1 |
| 60°-70° | 382.3 | 4.0 |
| 70°-80° | 196.8 | 2.1 |
| 80°-90° | 55.6 | 0.6 |
| 90°-100° | 117.4 | 1.2 |
| 100°-110° | 373.1 | 3.9 |
| 110°-120° | 638.5 | 6.7 |
| 120°-130° | 839.7 | 8.8 |
| 130°-140° | 942.5 | 9.9 |
| 140°-150° | 924.2 | 9.7 |
| 150°-160° | 775.3 | 8.1 |
| 160°-170° | 514.2 | 5.4 |
| 170°-180° | 179.7 | 1.9 |
| 0°-30° | 1471.8 | 15.4 |
| 0°-40° | 2285.5 | 23.9 |
| 0°-60° | 3620.7 | 37.9 |
| 0°-90° | 4255.4 | 44.5 |
| 90°-120° | 1129.0 | 11.8 |
| 90°-150° | 3835.4 | 40.1 |
| 90°-180° | 5305.0 | 55.5 |
| 0°-180° | 9560.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2066 | 2066 | 2066 | 2066 | 2066 | |
| 5° | 2066 | 2057 | 2033 | 2050 | 2044 | 196 |
| 15° | 1966 | 1945 | 1881 | 1846 | 1827 | 554 |
| 25° | 1784 | 1724 | 1601 | 1524 | 1496 | 821 |
| 35° | 1537 | 1442 | 1277 | 1160 | 1118 | 962 |
| 45° | 1257 | 1131 | 935 | 802 | 757 | 971 |
| 55° | 956 | 810 | 608 | 496 | 460 | 854 |
| 65° | 645 | 494 | 325 | 262 | 256 | 640 |
| 75° | 344 | 213 | 150 | 136 | 135 | 364 |
| 85° | 80 | 41 | 36 | 36 | 36 | 92 |
| 90° | 2 | 21 | 56 | 53 | 54 | 9 |
| 95° | 84 | 100 | 102 | 102 | 100 | 93 |
| 105° | 344 | 349 | 352 | 355 | 355 | 363 |
| 115° | 641 | 650 | 647 | 645 | 641 | 634 |
| 125° | 932 | 946 | 942 | 936 | 935 | 833 |
| 135° | 1205 | 1223 | 1226 | 1225 | 1220 | 932 |
| 145° | 1463 | 1475 | 1484 | 1486 | 1479 | 914 |
| 155° | 1673 | 1678 | 1683 | 1691 | 1686 | 770 |
| 165° | 1820 | 1819 | 1819 | 1830 | 1822 | 514 |
| 175° | 1894 | 1890 | 1886 | 1898 | 1888 | 180 |
| 180° | 1898 | 1898 | 1898 | 1898 | 1898 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2066.5 | 2066.5 | 2066.5 | 2066.5 | 2066.5 |
| 2.5° | 2075.8 | 2066.5 | 2045.9 | 2064.7 | 2060.9 |
| 5° | 2066.5 | 2057.2 | 2032.8 | 2049.6 | 2044.1 |
| 7.5° | 2049.6 | 2038.5 | 2012.3 | 2019.7 | 2010.3 |
| 10° | 2027.2 | 2014.1 | 1976.8 | 1971.1 | 1959.9 |
| 12.5° | 1999.2 | 1982.4 | 1931.8 | 1920.7 | 1900.0 |
| 15° | 1965.5 | 1944.9 | 1881.4 | 1845.9 | 1827.2 |
| 17.5° | 1926.2 | 1896.3 | 1817.7 | 1776.6 | 1746.6 |
| 20° | 1881.4 | 1843.9 | 1750.4 | 1703.8 | 1662.5 |
| 22.5° | 1832.8 | 1789.7 | 1681.2 | 1617.7 | 1589.7 |
| 25° | 1784.1 | 1724.2 | 1600.8 | 1524.2 | 1496.0 |
| 27.5° | 1726.2 | 1662.5 | 1526.0 | 1438.1 | 1395.1 |
| 30° | 1664.5 | 1593.3 | 1443.7 | 1348.4 | 1297.8 |
| 32.5° | 1604.6 | 1518.5 | 1365.3 | 1253.0 | 1206.2 |
| 35° | 1537.3 | 1441.9 | 1277.4 | 1159.5 | 1118.3 |
| 37.5° | 1471.8 | 1368.9 | 1195.1 | 1065.9 | 1019.3 |
| 40° | 1402.6 | 1290.5 | 1108.9 | 976.2 | 927.6 |
| 42.5° | 1331.6 | 1211.9 | 1023.0 | 884.5 | 837.9 |
| 45° | 1256.8 | 1131.4 | 935.1 | 802.2 | 757.3 |
| 47.5° | 1185.7 | 1053.0 | 851.0 | 718.1 | 677.0 |
| 50° | 1107.2 | 974.4 | 768.7 | 639.5 | 600.4 |
| 52.5° | 1030.4 | 890.1 | 690.1 | 566.7 | 531.2 |
| 55° | 955.6 | 809.7 | 607.7 | 495.6 | 460.1 |
| 57.5° | 879.0 | 729.4 | 534.9 | 430.2 | 400.2 |
| 60° | 800.4 | 650.8 | 458.1 | 362.9 | 332.9 |
| 62.5° | 723.8 | 574.2 | 392.7 | 303.0 | 288.1 |
| 65° | 645.2 | 493.7 | 325.4 | 261.9 | 256.2 |
| 67.5° | 570.4 | 418.9 | 261.9 | 230.0 | 224.4 |
| 70° | 491.9 | 346.0 | 216.9 | 198.2 | 190.7 |
| 72.5° | 417.1 | 278.6 | 181.4 | 166.5 | 162.7 |
| 75° | 344.1 | 213.1 | 149.6 | 136.5 | 134.7 |
| 77.5° | 271.2 | 151.4 | 117.9 | 110.3 | 106.5 |
| 80° | 203.8 | 108.5 | 89.7 | 82.3 | 82.3 |
| 82.5° | 142.1 | 73.0 | 61.7 | 57.9 | 57.9 |
| 85° | 80.4 | 41.1 | 35.5 | 35.5 | 35.5 |
| 87.5° | 30.0 | 14.9 | 14.9 | 13.1 | 13.1 |
| 90° | 1.7 | 20.6 | 56.1 | 52.6 | 54.3 |
| 92.5° | 35.5 | 48.1 | 49.8 | 51.5 | 51.5 |
| 95° | 83.5 | 99.5 | 102.4 | 102.4 | 99.5 |
| 97.5° | 139.0 | 153.9 | 160.2 | 160.2 | 160.2 |
| 100° | 203.1 | 216.2 | 220.8 | 220.8 | 219.1 |
| 102.5° | 270.6 | 280.3 | 286.6 | 288.3 | 286.6 |
| 105° | 344.4 | 349.0 | 352.4 | 355.3 | 355.3 |
| 107.5° | 417.6 | 424.5 | 424.5 | 425.6 | 417.6 |
| 110° | 488.6 | 497.7 | 497.7 | 497.7 | 493.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 565.2 | 574.9 | 573.2 | 568.6 | 565.2 |
| 115° | 640.7 | 649.9 | 647.0 | 645.3 | 640.7 |
| 117.5° | 715.7 | 728.3 | 720.2 | 715.7 | 711.1 |
| 120° | 791.2 | 803.8 | 791.2 | 791.2 | 786.0 |
| 122.5° | 859.8 | 875.8 | 867.8 | 863.3 | 859.8 |
| 125° | 931.9 | 946.2 | 941.6 | 936.5 | 934.8 |
| 127.5° | 1002.3 | 1020.0 | 1013.7 | 1006.9 | 1002.3 |
| 130° | 1068.1 | 1088.7 | 1085.8 | 1082.4 | 1076.1 |
| 132.5° | 1141.9 | 1157.9 | 1159.0 | 1151.0 | 1146.4 |
| 135° | 1205.4 | 1223.1 | 1226.5 | 1224.8 | 1220.2 |
| 137.5° | 1276.3 | 1290.6 | 1293.5 | 1292.3 | 1285.5 |
| 140° | 1338.7 | 1353.0 | 1361.0 | 1361.0 | 1354.7 |
| 142.5° | 1402.7 | 1417.0 | 1421.6 | 1423.3 | 1417.0 |
| 145° | 1463.4 | 1474.8 | 1484.0 | 1485.7 | 1479.4 |
| 147.5° | 1517.7 | 1532.0 | 1538.9 | 1541.7 | 1535.4 |
| 150° | 1573.8 | 1583.5 | 1589.8 | 1594.9 | 1589.8 |
| 152.5° | 1623.5 | 1633.3 | 1641.3 | 1647.6 | 1641.3 |
| 155° | 1673.3 | 1677.9 | 1683.0 | 1691.1 | 1685.9 |
| 157.5° | 1716.2 | 1719.7 | 1722.5 | 1734.0 | 1726.0 |
| 160° | 1754.6 | 1758.0 | 1759.7 | 1769.4 | 1762.6 |
| 162.5° | 1790.0 | 1790.0 | 1791.7 | 1802.6 | 1794.6 |
| 165° | 1820.3 | 1818.6 | 1818.6 | 1830.1 | 1822.1 |
| 167.5° | 1847.8 | 1842.7 | 1842.7 | 1854.1 | 1846.1 |
| 170° | 1868.4 | 1863.8 | 1862.1 | 1873.5 | 1863.8 |
| 172.5° | 1882.7 | 1878.1 | 1876.4 | 1887.8 | 1878.1 |
| 175° | 1894.1 | 1889.6 | 1886.1 | 1897.6 | 1887.8 |
| 177.5° | 1900.4 | 1895.9 | 1892.4 | 1902.1 | 1892.4 |
| 180° | 1897.6 | 1897.6 | 1897.6 | 1897.6 | 1897.6 |



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CIE UGR TABLE:

| Reflectances: | | | | | | | | | | | |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling | | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 11.75 | 12.54 | 12.76 | 13.56 | 14.91 | 7.72 | 8.50 | 8.72 | 9.52 | 10.87 |
| | 3H | 13.41 | 14.11 | 14.43 | 15.14 | 16.51 | 8.88 | 9.59 | 9.90 | 10.61 | 11.98 |
| | 4H | 14.00 | 14.67 | 15.04 | 15.70 | 17.07 | 9.32 | 9.98 | 10.35 | 11.01 | 12.39 |
| | 6H | 14.41 | 15.02 | 15.45 | 16.05 | 17.44 | 9.62 | 10.23 | 10.66 | 11.26 | 12.65 |
| | 8H | 14.52 | 15.11 | 15.57 | 16.15 | 17.54 | 9.70 | 10.28 | 10.75 | 11.33 | 12.72 |
| | 12H | 14.58 | 15.13 | 15.63 | 16.17 | 17.58 | 9.73 | 10.29 | 10.79 | 11.33 | 12.74 |
| 4H | 2H | 11.76 | 12.43 | 12.80 | 13.46 | 14.83 | 8.30 | 8.96 | 9.33 | 9.99 | 11.37 |
| | 3H | 13.57 | 14.12 | 14.61 | 15.17 | 16.57 | 9.62 | 10.17 | 10.67 | 11.23 | 12.62 |
| | 4H | 14.24 | 14.75 | 15.29 | 15.79 | 17.21 | 10.15 | 10.66 | 11.20 | 11.70 | 13.12 |
| | 6H | 14.73 | 15.17 | 15.80 | 16.24 | 17.65 | 10.55 | 10.98 | 11.61 | 12.05 | 13.46 |
| | 8H | 14.90 | 15.30 | 15.96 | 16.37 | 17.79 | 10.67 | 11.07 | 11.73 | 12.13 | 13.56 |
| | 12H | 14.98 | 15.35 | 16.06 | 16.42 | 17.85 | 10.72 | 11.08 | 11.80 | 12.16 | 13.59 |
| 8H | 4H | 14.20 | 14.61 | 15.26 | 15.67 | 17.09 | 10.42 | 10.82 | 11.48 | 11.88 | 13.31 |
| | 6H | 14.74 | 15.08 | 15.83 | 16.18 | 17.60 | 10.91 | 11.24 | 11.99 | 12.35 | 13.77 |
| | 8H | 14.95 | 15.24 | 16.04 | 16.33 | 17.77 | 11.08 | 11.38 | 12.18 | 12.47 | 13.91 |
| | 12H | 15.07 | 15.33 | 16.17 | 16.41 | 17.89 | 11.19 | 11.45 | 12.28 | 12.53 | 14.01 |
| 12H | 4H | 14.15 | 14.52 | 15.23 | 15.59 | 17.02 | 10.42 | 10.78 | 11.50 | 11.86 | 13.29 |
| | 6H | 14.72 | 15.01 | 15.81 | 16.10 | 17.54 | 10.95 | 11.25 | 12.04 | 12.33 | 13.77 |
| | 8H | 14.92 | 15.18 | 16.02 | 16.26 | 17.74 | 11.14 | 11.40 | 12.24 | 12.49 | 13.97 |