

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735933

Luminaire Tested: S122RDRP-S675D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735933  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-S675D950-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

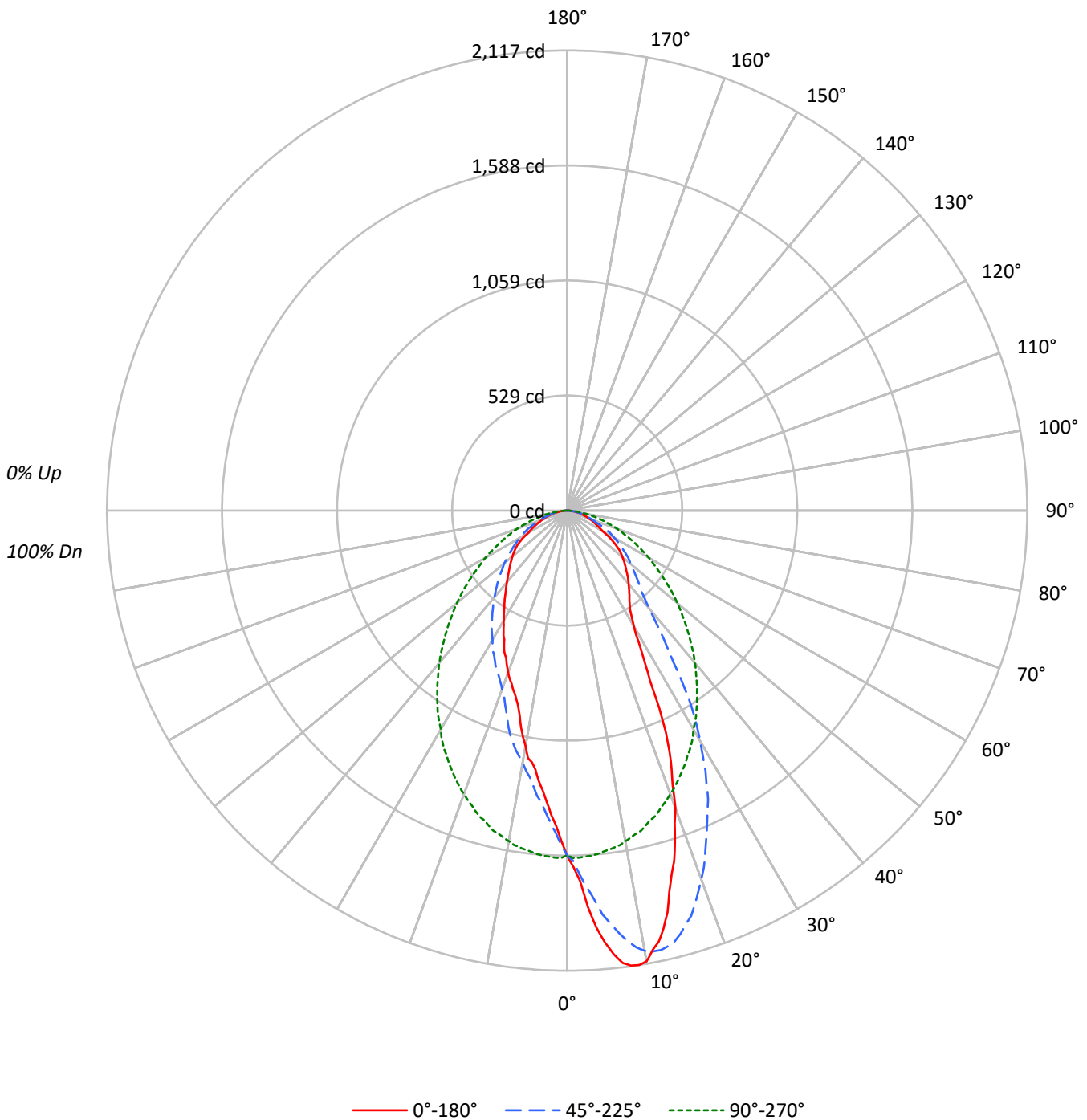
Lumens per Lamp: N/A  
Luminaire Lumens: 2718.4 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.3  
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

TEST NUMBER: P735933

CATALOG NUMBER: S122RDRP-S675D950-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



TEST NUMBER: P735933

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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 | 50 | 30 | 10  | 0 |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |     |   |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    |    | 100 |   |  |   |
| 1   | 110 | 106 | 103 | 99  | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 92  | 91  | 89  | 87  |    |    |    |    | 87  |   |  |   |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |    | 75  |   |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 83  | 77  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |    |    | 66  |   |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 75  | 68  | 62  | 73  | 67  | 62  | 71  | 65  | 61  | 69  | 64  | 60  | 58  |    |    |    |    | 58  |   |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 61  | 55  | 66  | 60  | 55  | 64  | 59  | 54  | 63  | 58  | 54  | 52  |    |    |    |    | 52  |   |  |   |
| 6   | 75  | 63  | 55  | 50  | 74  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 46  |    |    |    |    | 46  |   |  |   |
| 7   | 71  | 58  | 50  | 45  | 69  | 57  | 50  | 45  | 56  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 44  | 42  |    |    |    |    | 42  |   |  |   |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |    |    | 35  |   |  |   |
| 10  | 59  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |    |    | 32  |   |  |   |

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

|     | 0°    | 45°   | 90°   | 135°  | 180°  |
|-----|-------|-------|-------|-------|-------|
| 0°  | 30495 | 30495 | 30495 | 30495 | 30495 |
| 5°  | 38472 | 35987 | 30611 | 26009 | 24906 |
| 10° | 41095 | 40127 | 30145 | 23013 | 21507 |
| 15° | 36145 | 40113 | 29350 | 20636 | 17921 |
| 20° | 29799 | 36921 | 28412 | 17914 | 16217 |
| 25° | 21244 | 32413 | 27274 | 16591 | 14587 |
| 30° | 13594 | 27186 | 25810 | 15223 | 12957 |
| 35° | 11707 | 20034 | 24467 | 14126 | 11754 |
| 40° | 11035 | 14648 | 22956 | 13070 | 10797 |
| 45° | 10425 | 12550 | 21341 | 12110 | 10191 |
| 50° | 9928  | 11441 | 19826 | 11267 | 9814  |
| 55° | 9112  | 10583 | 18126 | 10358 | 9464  |
| 60° | 7189  | 9645  | 16649 | 9718  | 7996  |
| 65° | 6508  | 8632  | 15100 | 9024  | 7291  |
| 70° | 6002  | 6969  | 13724 | 7772  | 6705  |
| 75° | 5600  | 6305  | 11972 | 6944  | 6305  |
| 80° | 5169  | 5701  | 10139 | 6232  | 5701  |
| 85° | 4631  | 5050  | 7785  | 5469  | 5050  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 29874 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 153.9  | 5.7       |
| 10°-20°   | 413.4  | 15.2      |
| 20°-30°   | 518.6  | 19.1      |
| 30°-40°   | 494.1  | 18.2      |
| 40°-50°   | 435.9  | 16.0      |
| 50°-60°   | 342.9  | 12.6      |
| 60°-70°   | 218.8  | 8.0       |
| 70°-80°   | 111.2  | 4.1       |
| 80°-90°   | 29.5   | 1.1       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1085.9 | 39.9      |
| 0°-40°    | 1580.0 | 58.1      |
| 0°-60°    | 2358.9 | 86.8      |
| 0°-90°    | 2718.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2718.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1586 | 1586 | 1586 | 1586 | 1586 |      |
| 5°  | 1994 | 1865 | 1586 | 1348 | 1291 | 194  |
| 15° | 1816 | 2016 | 1475 | 1037 | 901  | 503  |
| 25° | 1002 | 1528 | 1286 | 782  | 688  | 451  |
| 35° | 499  | 854  | 1043 | 602  | 501  | 317  |
| 45° | 384  | 462  | 785  | 446  | 375  | 297  |
| 55° | 272  | 316  | 541  | 309  | 282  | 239  |
| 65° | 143  | 190  | 332  | 198  | 160  | 143  |
| 75° | 75   | 85   | 161  | 94   | 85   | 80   |
| 85° | 21   | 23   | 35   | 25   | 23   | 24   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



TEST NUMBER: P735933

CATALOG NUMBER: S122RDRP-S675D950-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1586.5 | 1586.5 | 1586.5 | 1586.5 | 1586.5 | 1586.5 | 1586.5 | 1586.5 | 1586.5 |
| 1°    | 1639.9 | 1647.6 | 1612.3 | 1616.1 | 1598.9 | 1568.4 | 1538.8 | 1541.7 | 1520.7 |
| 2°    | 1705.8 | 1725.8 | 1677.1 | 1647.6 | 1598.0 | 1544.5 | 1485.4 | 1477.7 | 1452.0 |
| 3°    | 1825.0 | 1815.5 | 1735.3 | 1675.2 | 1594.1 | 1514.0 | 1439.6 | 1422.4 | 1400.5 |
| 4°    | 1921.4 | 1892.7 | 1794.5 | 1710.5 | 1592.2 | 1478.7 | 1394.7 | 1365.2 | 1343.2 |
| 5°    | 1993.9 | 1957.6 | 1865.1 | 1737.2 | 1586.5 | 1458.7 | 1348.0 | 1314.6 | 1290.8 |
| 6°    | 2052.1 | 2024.4 | 1910.9 | 1762.0 | 1578.9 | 1429.1 | 1320.3 | 1275.5 | 1250.7 |
| 7°    | 2096.9 | 2074.0 | 1957.6 | 1795.4 | 1572.2 | 1399.5 | 1276.5 | 1229.7 | 1200.1 |
| 8°    | 2114.1 | 2103.6 | 2000.5 | 1819.3 | 1564.6 | 1378.5 | 1237.3 | 1195.4 | 1168.7 |
| 9°    | 2116.9 | 2117.9 | 2034.9 | 1842.2 | 1557.9 | 1340.4 | 1209.7 | 1166.7 | 1152.4 |
| 10°   | 2105.5 | 2114.1 | 2055.9 | 1867.9 | 1544.5 | 1321.3 | 1179.1 | 1138.1 | 1101.9 |
| 11°   | 2060.6 | 2098.8 | 2066.4 | 1885.1 | 1533.1 | 1290.8 | 1152.4 | 1099.0 | 1062.8 |
| 12°   | 2027.3 | 2063.5 | 2067.3 | 1907.0 | 1519.7 | 1276.5 | 1129.5 | 1058.0 | 1019.8 |
| 13°   | 1971.9 | 2010.1 | 2057.8 | 1912.8 | 1512.1 | 1241.2 | 1100.9 | 1016.0 | 969.3  |
| 14°   | 1906.1 | 1967.1 | 2042.5 | 1925.2 | 1493.0 | 1210.6 | 1072.3 | 956.9  | 929.2  |
| 15°   | 1816.4 | 1903.2 | 2015.8 | 1929.9 | 1474.9 | 1189.6 | 1037.0 | 927.3  | 900.6  |
| 16°   | 1742.0 | 1840.3 | 1979.6 | 1929.9 | 1463.4 | 1161.0 | 998.8  | 901.5  | 874.8  |
| 17°   | 1685.7 | 1765.9 | 1950.0 | 1930.9 | 1444.4 | 1141.0 | 960.7  | 877.7  | 856.7  |
| 18°   | 1606.5 | 1696.2 | 1903.2 | 1927.1 | 1424.3 | 1117.1 | 928.2  | 857.6  | 831.9  |
| 19°   | 1518.8 | 1625.6 | 1853.6 | 1920.4 | 1407.2 | 1092.3 | 893.9  | 836.7  | 814.7  |
| 20°   | 1456.8 | 1555.0 | 1805.0 | 1909.9 | 1389.0 | 1076.1 | 875.8  | 812.8  | 792.8  |
| 21°   | 1352.8 | 1473.0 | 1756.3 | 1895.6 | 1369.9 | 1048.4 | 851.0  | 791.8  | 769.9  |
| 22.5° | 1246.9 | 1357.5 | 1666.6 | 1871.7 | 1338.5 | 1014.1 | 823.3  | 766.1  | 733.6  |
| 23°   | 1205.9 | 1329.9 | 1639.0 | 1865.1 | 1328.0 | 1005.5 | 814.7  | 754.6  | 726.0  |
| 24°   | 1118.1 | 1246.9 | 1581.7 | 1844.1 | 1305.1 | 976.9  | 798.5  | 731.7  | 711.7  |
| 25°   | 1001.7 | 1176.3 | 1528.3 | 1822.1 | 1286.0 | 955.9  | 782.3  | 713.6  | 687.8  |
| 26°   | 870.0  | 1079.9 | 1479.7 | 1795.4 | 1259.3 | 927.3  | 760.3  | 696.4  | 660.2  |
| 27°   | 789.0  | 996.9  | 1413.8 | 1766.8 | 1240.2 | 906.3  | 742.2  | 670.7  | 644.9  |
| 28°   | 724.1  | 866.2  | 1354.7 | 1739.1 | 1217.3 | 880.5  | 729.8  | 652.5  | 622.0  |
| 29°   | 653.5  | 794.7  | 1285.0 | 1701.9 | 1192.5 | 851.0  | 709.8  | 634.4  | 602.0  |
| 30°   | 612.5  | 718.4  | 1224.9 | 1674.3 | 1162.9 | 830.9  | 685.9  | 616.3  | 583.8  |
| 32.5° | 538.1  | 592.4  | 1061.8 | 1595.1 | 1106.6 | 773.7  | 646.8  | 566.7  | 539.0  |
| 35°   | 498.9  | 527.6  | 853.8  | 1502.6 | 1042.7 | 726.0  | 602.0  | 525.7  | 500.9  |
| 37.5° | 469.4  | 486.5  | 705.0  | 1403.3 | 977.9  | 684.0  | 561.0  | 487.5  | 463.6  |
| 40°   | 439.8  | 453.2  | 583.8  | 1307.9 | 914.9  | 643.0  | 520.9  | 448.4  | 430.3  |
| 42.5° | 413.1  | 423.6  | 506.6  | 1213.5 | 850.0  | 601.0  | 481.8  | 417.9  | 401.6  |
| 45°   | 383.5  | 393.0  | 461.7  | 1099.0 | 785.1  | 558.1  | 445.5  | 384.5  | 374.9  |
| 47.5° | 358.7  | 365.4  | 418.8  | 996.9  | 721.2  | 517.1  | 408.3  | 357.8  | 351.1  |
| 50°   | 332.0  | 340.6  | 382.6  | 883.4  | 663.0  | 477.0  | 376.8  | 333.9  | 328.2  |
| 52.5° | 306.2  | 310.1  | 352.0  | 769.9  | 602.0  | 437.9  | 343.4  | 310.1  | 306.2  |
| 55°   | 271.9  | 287.2  | 315.8  | 653.5  | 540.9  | 401.6  | 309.1  | 285.2  | 282.4  |
| 57.5° | 232.8  | 252.8  | 283.3  | 548.6  | 483.7  | 361.6  | 281.4  | 262.4  | 249.9  |
| 60°   | 187.0  | 210.8  | 250.9  | 456.0  | 433.1  | 325.3  | 252.8  | 223.2  | 208.0  |
| 62.5° | 164.1  | 171.7  | 221.3  | 381.6  | 381.6  | 291.0  | 224.2  | 191.8  | 185.1  |
| 65°   | 143.1  | 148.8  | 189.8  | 315.8  | 332.0  | 252.8  | 198.4  | 166.0  | 160.3  |



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CATALOG NUMBER: S122RDRP-S675D950-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 67.5° | 125.0 | 129.7 | 145.0 | 263.3 | 286.2 | 220.4  | 164.1 | 145.0  | 138.3 |
| 70°   | 106.8 | 110.7 | 124.0 | 214.7 | 244.2 | 187.9  | 138.3 | 124.0  | 119.3 |
| 72.5° | 90.6  | 94.4  | 102.1 | 161.2 | 200.3 | 156.5  | 116.4 | 105.9  | 102.1 |
| 75°   | 75.4  | 77.3  | 84.9  | 120.2 | 161.2 | 125.0  | 93.5  | 86.8   | 84.9  |
| 77.5° | 61.1  | 62.0  | 66.8  | 85.9  | 125.0 | 95.4   | 75.4  | 69.6   | 68.7  |
| 80°   | 46.7  | 47.7  | 51.5  | 62.0  | 91.6  | 68.7   | 56.3  | 53.4   | 51.5  |
| 82.5° | 33.4  | 34.3  | 36.3  | 42.0  | 62.0  | 46.7   | 40.1  | 39.1   | 36.3  |
| 85°   | 21.0  | 21.0  | 22.9  | 25.8  | 35.3  | 26.7   | 24.8  | 23.9   | 22.9  |
| 87.5° | 9.5   | 9.5   | 10.5  | 10.5  | 16.2  | 11.4   | 11.4  | 10.5   | 9.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   |

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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 | 18.31            | 19.78 | 18.67 | 20.09 | 20.40 | 21.01          | 22.47 | 21.37 | 22.79 | 23.10 |
|                 | 3H   | 19.42            | 20.74 | 19.80 | 21.07 | 21.43 | 22.44          | 23.76 | 22.82 | 24.09 | 24.45 |
|                 | 4H   | 19.87            | 21.10 | 20.27 | 21.45 | 21.83 | 22.95          | 24.18 | 23.35 | 24.53 | 24.91 |
|                 | 6H   | 20.21            | 21.35 | 20.62 | 21.71 | 22.11 | 23.27          | 24.41 | 23.69 | 24.78 | 25.17 |
|                 | 8H   | 20.33            | 21.41 | 20.75 | 21.80 | 22.20 | 23.36          | 24.44 | 23.79 | 24.83 | 25.24 |
|                 | 12H  | 20.40            | 21.43 | 20.83 | 21.82 | 22.25 | 23.41          | 24.44 | 23.84 | 24.83 | 25.26 |
| 4H              | 2H   | 19.48            | 20.71 | 19.88 | 21.06 | 21.44 | 21.46          | 22.69 | 21.86 | 23.04 | 23.42 |
|                 | 3H   | 20.70            | 21.72 | 21.12 | 22.12 | 22.53 | 23.11          | 24.13 | 23.52 | 24.53 | 24.94 |
|                 | 4H   | 21.18            | 22.10 | 21.62 | 22.52 | 22.96 | 23.75          | 24.67 | 24.19 | 25.09 | 25.53 |
|                 | 6H   | 21.59            | 22.38 | 22.04 | 22.83 | 23.29 | 24.21          | 25.00 | 24.67 | 25.45 | 25.91 |
|                 | 8H   | 21.72            | 22.46 | 22.19 | 22.91 | 23.38 | 24.34          | 25.08 | 24.80 | 25.52 | 25.99 |
|                 | 12H  | 21.82            | 22.48 | 22.30 | 22.96 | 23.43 | 24.42          | 25.08 | 24.90 | 25.56 | 26.03 |
| 8H              | 4H   | 21.59            | 22.33 | 22.05 | 22.77 | 23.24 | 23.87          | 24.61 | 24.33 | 25.05 | 25.52 |
|                 | 6H   | 22.08            | 22.69 | 22.58 | 23.18 | 23.66 | 24.43          | 25.04 | 24.93 | 25.53 | 26.01 |
|                 | 8H   | 22.27            | 22.82 | 22.78 | 23.33 | 23.82 | 24.63          | 25.18 | 25.14 | 25.69 | 26.18 |
|                 | 12H  | 22.43            | 22.91 | 22.94 | 23.40 | 23.97 | 24.77          | 25.26 | 25.29 | 25.75 | 26.32 |
| 12H             | 4H   | 21.63            | 22.30 | 22.12 | 22.78 | 23.25 | 23.86          | 24.52 | 24.34 | 25.00 | 25.47 |
|                 | 6H   | 22.15            | 22.70 | 22.66 | 23.21 | 23.70 | 24.42          | 24.97 | 24.94 | 25.49 | 25.98 |
|                 | 8H   | 22.39            | 22.87 | 22.90 | 23.37 | 23.93 | 24.67          | 25.16 | 25.18 | 25.65 | 26.22 |