

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: CORELITE

Report Number: P855055

Luminaire Tested: SQ2-F-150U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

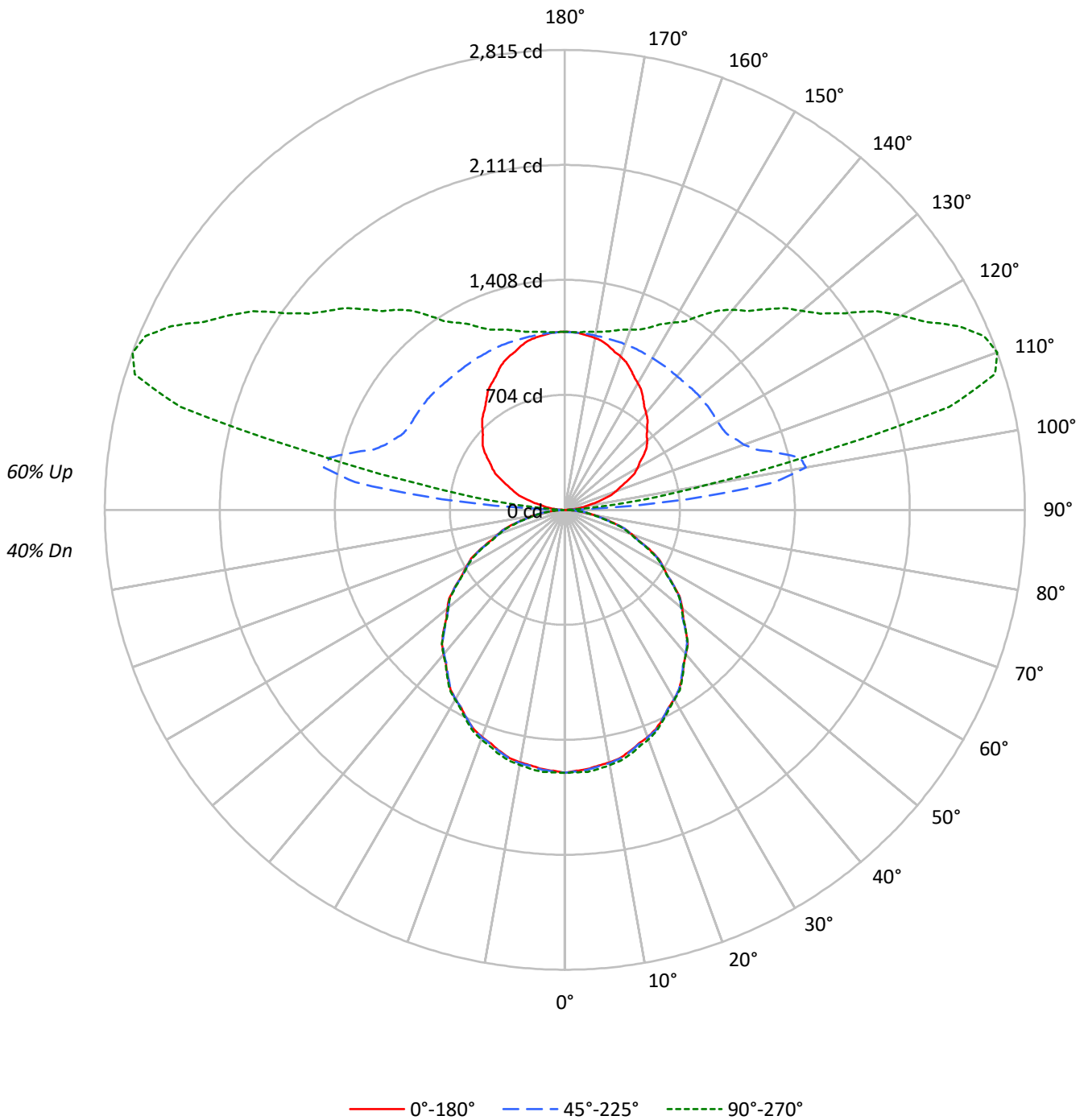
Test Method: LM-79-2019  
Report Number: P855055  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-F-150U-100D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11242.4 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 94.2  
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: P855055  
CATALOG NUMBER: SQ2-F-150U-100D-830-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P855055

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|----|
| RF  | 20  |     |     |     |    |    |    |    |    | 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 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 0   | 105 | 105 | 105 | 105 | 95 | 95 | 95 | 95 | 78 | 78 | 78 | 62 | 62 | 62 | 47 | 47 | 47 | 40 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 1   | 95  | 91  | 87  | 84  | 87 | 83 | 80 | 77 | 68 | 66 | 64 | 54 | 53 | 51 | 41 | 40 | 40 | 34 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 2   | 87  | 79  | 73  | 68  | 79 | 72 | 67 | 63 | 59 | 56 | 52 | 47 | 45 | 43 | 36 | 35 | 33 | 28 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 3   | 79  | 70  | 62  | 57  | 72 | 64 | 57 | 52 | 52 | 48 | 44 | 42 | 39 | 36 | 32 | 30 | 28 | 24 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 4   | 72  | 62  | 54  | 48  | 65 | 56 | 49 | 44 | 46 | 41 | 37 | 37 | 33 | 31 | 29 | 26 | 24 | 20 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 5   | 66  | 55  | 47  | 41  | 60 | 50 | 43 | 38 | 41 | 36 | 32 | 33 | 29 | 26 | 26 | 23 | 21 | 17 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 6   | 61  | 49  | 41  | 35  | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 30 | 26 | 23 | 23 | 20 | 18 | 15 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 7   | 56  | 44  | 36  | 31  | 51 | 40 | 33 | 29 | 34 | 28 | 24 | 27 | 23 | 20 | 21 | 18 | 16 | 13 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 8   | 52  | 40  | 32  | 27  | 47 | 37 | 30 | 25 | 31 | 25 | 22 | 25 | 21 | 18 | 19 | 17 | 14 | 12 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 9   | 48  | 36  | 29  | 24  | 44 | 33 | 27 | 22 | 28 | 23 | 19 | 23 | 19 | 16 | 18 | 15 | 13 | 11 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |
| 10  | 45  | 33  | 26  | 21  | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 21 | 17 | 14 | 17 | 14 | 12 | 10 |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25988 | 25988 | 25988 |
| 5°  | 25804 | 25875 | 26088 |
| 10° | 25742 | 25814 | 25994 |
| 15° | 25586 | 25660 | 25917 |
| 20° | 25433 | 25471 | 25697 |
| 25° | 25197 | 25197 | 25356 |
| 30° | 24940 | 24940 | 25022 |
| 35° | 24636 | 24551 | 24723 |
| 40° | 24312 | 24219 | 24312 |
| 45° | 23934 | 23834 | 23934 |
| 50° | 23574 | 23355 | 23410 |
| 55° | 23026 | 22964 | 22838 |
| 60° | 22446 | 22307 | 22165 |
| 65° | 21784 | 21532 | 21280 |
| 70° | 20497 | 20394 | 19978 |
| 75° | 19289 | 18883 | 18334 |
| 80° | 17127 | 16718 | 16104 |
| 85° | 13801 | 12597 | 11764 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 24083 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 152.2   | 1.4       |
| 10°-20°   | 434.7   | 3.9       |
| 20°-30°   | 654.1   | 5.8       |
| 30°-40°   | 782.6   | 7.0       |
| 40°-50°   | 807.5   | 7.2       |
| 50°-60°   | 728.5   | 6.5       |
| 60°-70°   | 555.9   | 4.9       |
| 70°-80°   | 319.6   | 2.8       |
| 80°-90°   | 84.6    | 0.8       |
| 90°-100°  | 415.0   | 3.7       |
| 100°-110° | 1358.9  | 12.1      |
| 110°-120° | 1343.5  | 12.0      |
| 120°-130° | 1098.3  | 9.8       |
| 130°-140° | 896.2   | 8.0       |
| 140°-150° | 697.5   | 6.2       |
| 150°-160° | 502.2   | 4.5       |
| 160°-170° | 307.2   | 2.7       |
| 170°-180° | 103.8   | 0.9       |
| 0°-30°    | 1241.0  | 11.0      |
| 0°-40°    | 2023.6  | 18.0      |
| 0°-60°    | 3559.6  | 31.7      |
| 0°-90°    | 4519.7  | 40.2      |
| 90°-120°  | 3117.5  | 27.7      |
| 90°-150°  | 5809.4  | 51.7      |
| 90°-180°  | 6723.0  | 59.8      |
| 0°-180°   | 11242.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1610 | 1610  | 1610 | 1610  | 1610 |      |
| 5°   | 1592 | 1614  | 1596 | 1599  | 1610 | 151  |
| 15°  | 1531 | 1550  | 1535 | 1542  | 1550 | 432  |
| 25°  | 1414 | 1430  | 1414 | 1417  | 1423 | 651  |
| 35°  | 1250 | 1258  | 1246 | 1250  | 1254 | 782  |
| 45°  | 1048 | 1055  | 1044 | 1046  | 1048 | 809  |
| 55°  | 818  | 822   | 816  | 811   | 811  | 731  |
| 65°  | 570  | 568   | 564  | 559   | 557  | 560  |
| 75°  | 309  | 307   | 303  | 296   | 294  | 326  |
| 85°  | 74   | 70    | 68   | 62    | 64   | 86   |
| 90°  | 1    | 3     | 9    | 8     | 9    | 6    |
| 95°  | 58   | 169   | 754  | 269   | 175  | 66   |
| 105° | 236  | 337   | 1349 | 2563  | 2435 | 249  |
| 115° | 425  | 509   | 1096 | 2265  | 2659 | 420  |
| 125° | 592  | 660   | 1080 | 1786  | 2098 | 527  |
| 135° | 713  | 789   | 1071 | 1540  | 1736 | 552  |
| 145° | 834  | 895   | 1069 | 1325  | 1452 | 523  |
| 155° | 950  | 982   | 1076 | 1185  | 1231 | 438  |
| 165° | 1038 | 1048  | 1080 | 1122  | 1134 | 292  |
| 175° | 1085 | 1085  | 1086 | 1094  | 1091 | 103  |
| 180° | 1089 | 1089  | 1089 | 1089  | 1089 |      |



TEST NUMBER: P855055

CATALOG NUMBER: SQ2-F-150U-100D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1609.6 | 1609.6 | 1609.6 | 1609.6 | 1609.6 |
| 2.5°   | 1599.1 | 1618.0 | 1602.6 | 1606.2 | 1607.9 |
| 5°     | 1592.1 | 1613.5 | 1596.5 | 1598.8 | 1609.6 |
| 7.5°   | 1578.9 | 1602.1 | 1583.4 | 1587.5 | 1599.5 |
| 10°    | 1570.1 | 1591.6 | 1574.5 | 1576.9 | 1585.5 |
| 12.5°  | 1556.1 | 1577.6 | 1560.5 | 1564.6 | 1573.2 |
| 15°    | 1530.7 | 1550.0 | 1535.1 | 1541.9 | 1550.5 |
| 17.5°  | 1501.3 | 1521.8 | 1505.2 | 1511.1 | 1518.3 |
| 20°    | 1480.2 | 1497.4 | 1482.4 | 1484.9 | 1495.6 |
| 22.5°  | 1453.9 | 1471.1 | 1457.9 | 1458.5 | 1467.5 |
| 25°    | 1414.4 | 1429.5 | 1414.4 | 1416.8 | 1423.3 |
| 27.5°  | 1369.3 | 1382.1 | 1369.3 | 1371.6 | 1377.1 |
| 30°    | 1337.7 | 1350.6 | 1337.7 | 1339.9 | 1342.1 |
| 32.5°  | 1302.6 | 1313.8 | 1300.8 | 1303.2 | 1308.7 |
| 35°    | 1249.9 | 1258.5 | 1245.6 | 1250.0 | 1254.3 |
| 37.5°  | 1193.8 | 1200.3 | 1189.4 | 1191.7 | 1195.5 |
| 40°    | 1153.5 | 1159.9 | 1149.1 | 1151.3 | 1153.5 |
| 42.5°  | 1113.1 | 1117.9 | 1107.0 | 1109.3 | 1113.1 |
| 45°    | 1048.2 | 1054.7 | 1043.8 | 1046.1 | 1048.2 |
| 47.5°  | 982.4  | 986.3  | 977.2  | 975.5  | 979.4  |
| 50°    | 938.5  | 940.7  | 929.8  | 929.8  | 932.0  |
| 52.5°  | 891.2  | 893.3  | 886.0  | 882.5  | 884.6  |
| 55°    | 818.0  | 822.2  | 815.8  | 811.3  | 811.3  |
| 57.5°  | 744.3  | 748.1  | 739.9  | 737.7  | 737.3  |
| 60°    | 695.1  | 697.3  | 690.8  | 688.6  | 686.4  |
| 62.5°  | 646.0  | 646.5  | 639.9  | 637.7  | 635.5  |
| 65°    | 570.2  | 568.0  | 563.6  | 559.1  | 557.0  |
| 67.5°  | 485.0  | 487.2  | 482.9  | 475.9  | 475.9  |
| 70°    | 434.2  | 436.3  | 432.0  | 423.2  | 423.2  |
| 72.5°  | 385.1  | 383.7  | 381.1  | 374.0  | 370.6  |
| 75°    | 309.2  | 307.1  | 302.7  | 296.0  | 293.9  |
| 77.5°  | 233.4  | 231.2  | 229.0  | 220.7  | 222.4  |
| 80°    | 184.2  | 182.0  | 179.8  | 173.2  | 173.2  |
| 82.5°  | 140.3  | 136.5  | 134.2  | 127.6  | 127.6  |
| 85°    | 74.5   | 70.3   | 68.0   | 61.5   | 63.5   |
| 87.5°  | 21.3   | 20.0   | 19.3   | 15.6   | 15.8   |
| 90°    | 1.1    | 3.3    | 8.9    | 7.9    | 8.9    |
| 92.5°  | 19.0   | 69.4   | 213.1  | 69.3   | 55.5   |
| 95°    | 58.2   | 168.8  | 754.5  | 268.8  | 174.7  |
| 97.5°  | 105.7  | 222.6  | 1294.5 | 783.1  | 485.4  |
| 100°   | 138.8  | 250.4  | 1497.8 | 1337.6 | 886.5  |
| 102.5° | 176.4  | 285.5  | 1475.4 | 1970.8 | 1527.8 |
| 105°   | 236.2  | 336.9  | 1348.9 | 2562.8 | 2434.7 |
| 107.5° | 295.1  | 387.5  | 1225.5 | 2618.1 | 2758.9 |
| 110°   | 333.5  | 423.3  | 1166.5 | 2553.8 | 2815.3 |



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CATALOG NUMBER: SQ2-F-150U-100D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 370.3  | 457.5  | 1130.6 | 2441.6 | 2776.9 |
| 115°   | 425.3  | 508.6  | 1095.9 | 2264.6 | 2658.6 |
| 117.5° | 478.9  | 556.6  | 1082.7 | 2090.6 | 2490.7 |
| 120°   | 513.8  | 587.1  | 1079.1 | 1989.1 | 2378.8 |
| 122.5° | 545.2  | 616.8  | 1079.1 | 1901.6 | 2263.2 |
| 125°   | 592.1  | 660.1  | 1080.2 | 1785.9 | 2097.8 |
| 127.5° | 632.0  | 701.2  | 1078.9 | 1700.5 | 1972.0 |
| 130°   | 657.1  | 727.1  | 1078.0 | 1648.9 | 1894.1 |
| 132.5° | 679.5  | 751.3  | 1075.4 | 1604.5 | 1826.9 |
| 135°   | 713.1  | 788.6  | 1071.3 | 1540.3 | 1736.2 |
| 137.5° | 748.5  | 823.3  | 1068.8 | 1473.3 | 1650.5 |
| 140°   | 773.5  | 845.7  | 1067.9 | 1431.1 | 1598.5 |
| 142.5° | 798.6  | 866.4  | 1067.9 | 1385.9 | 1537.7 |
| 145°   | 834.0  | 895.2  | 1069.0 | 1324.9 | 1451.9 |
| 147.5° | 871.2  | 922.2  | 1070.6 | 1271.9 | 1367.7 |
| 150°   | 894.5  | 939.3  | 1072.4 | 1241.0 | 1322.1 |
| 152.5° | 917.7  | 957.3  | 1073.3 | 1215.7 | 1282.6 |
| 155°   | 950.4  | 982.1  | 1075.8 | 1185.4 | 1231.4 |
| 157.5° | 979.7  | 1002.7 | 1078.2 | 1161.6 | 1194.9 |
| 160°   | 998.5  | 1017.1 | 1079.1 | 1148.1 | 1174.3 |
| 162.5° | 1014.6 | 1029.8 | 1079.1 | 1137.1 | 1156.3 |
| 165°   | 1037.7 | 1047.5 | 1080.2 | 1121.9 | 1133.9 |
| 167.5° | 1057.2 | 1062.0 | 1081.6 | 1110.2 | 1116.7 |
| 170°   | 1067.9 | 1070.2 | 1082.5 | 1103.8 | 1106.0 |
| 172.5° | 1076.0 | 1077.3 | 1085.2 | 1099.3 | 1099.7 |
| 175°   | 1084.7 | 1084.7 | 1085.9 | 1093.7 | 1091.4 |
| 177.5° | 1089.1 | 1088.4 | 1087.5 | 1092.7 | 1089.1 |
| 180°   | 1089.1 | 1089.1 | 1089.1 | 1089.1 | 1089.1 |



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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            | 19.10 | 19.35 | 20.14 | 21.55 | 18.23          | 19.02 | 19.27 | 20.06 | 21.47 |
|                 | 3H   | 20.09            | 20.79 | 21.13 | 21.84 | 23.27 | 19.97          | 20.67 | 21.01 | 21.72 | 23.15 |
|                 | 4H   | 20.74            | 21.41 | 21.80 | 22.47 | 23.90 | 20.59          | 21.26 | 21.65 | 22.31 | 23.74 |
|                 | 6H   | 21.21            | 21.82 | 22.27 | 22.88 | 24.32 | 21.02          | 21.64 | 22.09 | 22.70 | 24.14 |
|                 | 8H   | 21.34            | 21.93 | 22.41 | 23.00 | 24.44 | 21.14          | 21.73 | 22.21 | 22.80 | 24.24 |
|                 | 12H  | 21.41            | 21.97 | 22.49 | 23.04 | 24.50 | 21.19          | 21.75 | 22.27 | 22.82 | 24.28 |
| 4H              | 2H   | 18.85            | 19.52 | 19.92 | 20.58 | 22.01 | 18.79          | 19.46 | 19.85 | 20.52 | 21.95 |
|                 | 3H   | 20.83            | 21.39 | 21.91 | 22.47 | 23.92 | 20.73          | 21.29 | 21.80 | 22.37 | 23.81 |
|                 | 4H   | 21.62            | 22.13 | 22.70 | 23.21 | 24.67 | 21.48          | 21.99 | 22.55 | 23.06 | 24.53 |
|                 | 6H   | 22.21            | 22.65 | 23.29 | 23.74 | 25.20 | 22.03          | 22.47 | 23.11 | 23.56 | 25.02 |
|                 | 8H   | 22.39            | 22.80 | 23.48 | 23.89 | 25.37 | 22.19          | 22.60 | 23.28 | 23.69 | 25.16 |
|                 | 12H  | 22.49            | 22.86 | 23.59 | 23.96 | 25.44 | 22.26          | 22.64 | 23.37 | 23.74 | 25.22 |
| 8H              | 4H   | 21.86            | 22.27 | 22.95 | 23.36 | 24.84 | 21.74          | 22.15 | 22.82 | 23.23 | 24.71 |
|                 | 6H   | 22.58            | 22.92 | 23.68 | 24.05 | 25.52 | 22.41          | 22.75 | 23.52 | 23.88 | 25.35 |
|                 | 8H   | 22.84            | 23.14 | 23.96 | 24.25 | 25.74 | 22.65          | 22.95 | 23.76 | 24.06 | 25.55 |
|                 | 12H  | 23.01            | 23.27 | 24.13 | 24.38 | 25.91 | 22.78          | 23.04 | 23.90 | 24.15 | 25.68 |
| 12H             | 4H   | 21.85            | 22.22 | 22.96 | 23.33 | 24.81 | 21.73          | 22.10 | 22.83 | 23.20 | 24.68 |
|                 | 6H   | 22.62            | 22.92 | 23.73 | 24.03 | 25.52 | 22.46          | 22.76 | 23.57 | 23.87 | 25.36 |
|                 | 8H   | 22.91            | 23.17 | 24.03 | 24.28 | 25.81 | 22.72          | 22.98 | 23.84 | 24.09 | 25.62 |