

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: P845498

Luminaire Tested: SQ2R-FA-050D-940-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845498
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-FA-050D-940-UNV-STD-W-4
Description: CONTINUA SQ2 RECESSED, ASYMMETRIC LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

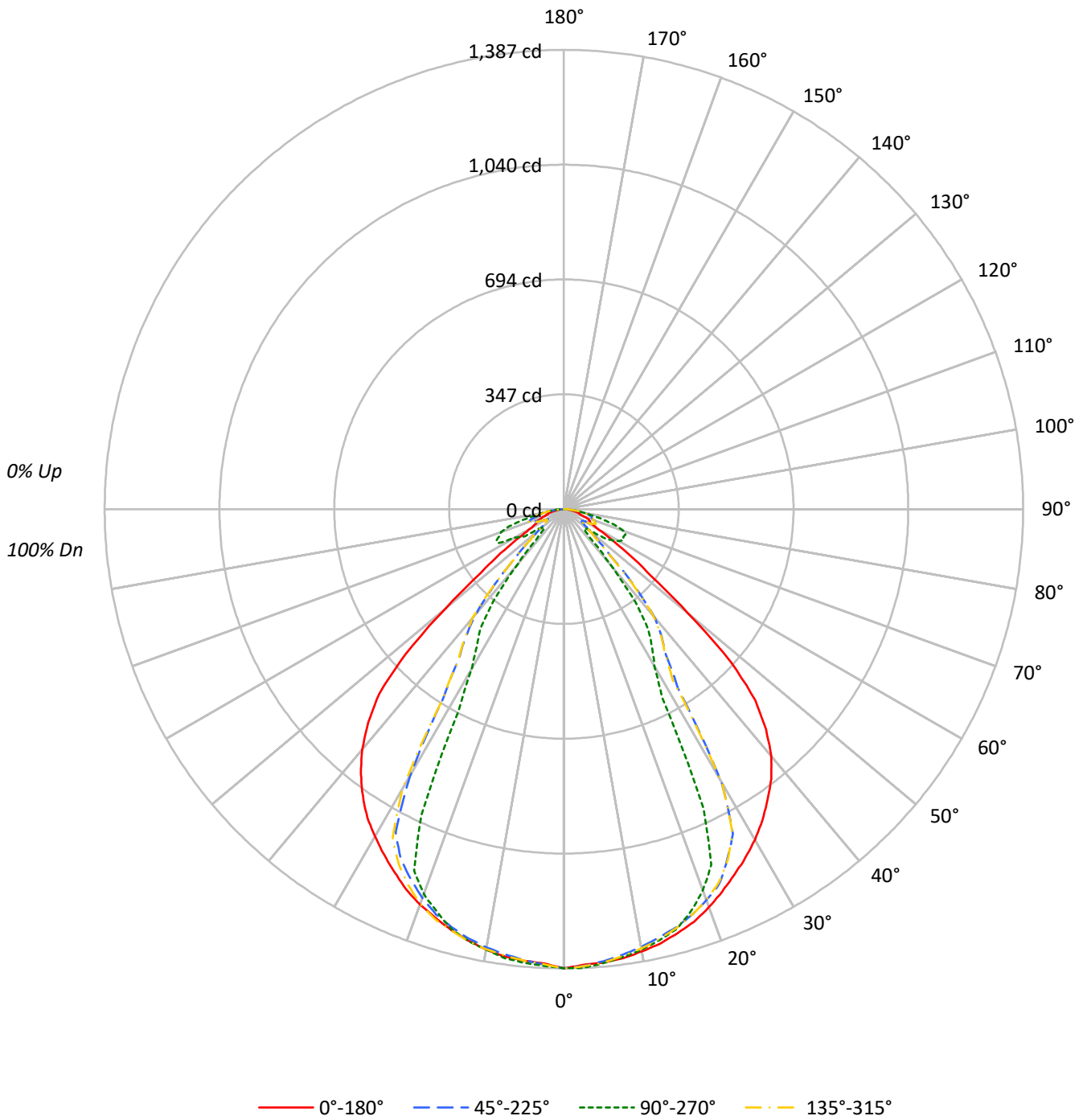
Lumens per Lamp: N/A
Luminaire Lumens: 2023.2 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 0.95 / 0.93
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9973
Total Harmonic Distortion (THDi): 0.0531
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





TEST NUMBER: P845498

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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | | 88 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 86 | 83 | 80 | 78 | | | | 78 |
| 3 | 96 | 88 | 81 | 76 | 94 | 86 | 80 | 75 | 84 | 78 | 74 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | | | 70 |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 72 | 67 | 77 | 71 | 66 | 75 | 70 | 66 | 73 | 68 | 65 | 63 | | | | 63 |
| 5 | 84 | 74 | 66 | 61 | 82 | 73 | 66 | 61 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 63 | 59 | 57 | | | | 57 |
| 6 | 79 | 68 | 61 | 55 | 77 | 67 | 60 | 55 | 65 | 59 | 55 | 64 | 58 | 54 | 62 | 58 | 54 | 52 | | | | 52 |
| 7 | 74 | 63 | 56 | 50 | 73 | 62 | 55 | 50 | 61 | 55 | 50 | 60 | 54 | 50 | 58 | 53 | 49 | 48 | | | | 48 |
| 8 | 70 | 59 | 51 | 46 | 69 | 58 | 51 | 46 | 57 | 50 | 46 | 56 | 50 | 46 | 55 | 49 | 46 | 44 | | | | 44 |
| 9 | 66 | 55 | 48 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 51 | 46 | 42 | 41 | | | | 41 |
| 10 | 63 | 51 | 44 | 40 | 61 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | | 38 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 22391 | 22391 | 22391 | 22391 |
| 5° | 22272 | 22306 | 22188 | 22290 |
| 10° | 22240 | 22153 | 22153 | 22153 |
| 15° | 22166 | 21939 | 21992 | 21939 |
| 20° | 21995 | 21060 | 21833 | 21258 |
| 25° | 21706 | 17774 | 21556 | 18148 |
| 30° | 21507 | 10198 | 21272 | 10334 |
| 35° | 21130 | 8761 | 20862 | 8637 |
| 40° | 20544 | 4607 | 19970 | 4563 |
| 45° | 18676 | 1982 | 18007 | 1982 |
| 50° | 12321 | 2391 | 11690 | 2233 |
| 55° | 6888 | 4417 | 6536 | 4003 |
| 60° | 3714 | 6213 | 3649 | 5574 |
| 65° | 3278 | 7553 | 3435 | 8592 |
| 70° | 3059 | 9035 | 2913 | 9526 |
| 75° | 2870 | 7767 | 2938 | 8022 |
| 80° | 2427 | 5542 | 2427 | 5839 |
| 85° | 2130 | 3094 | 1945 | 3687 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18676 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 130.6 | 6.5 |
| 10°-20° | 370.6 | 18.3 |
| 20°-30° | 507.0 | 25.1 |
| 30°-40° | 424.6 | 21.0 |
| 40°-50° | 238.0 | 11.8 |
| 50°-60° | 126.2 | 6.2 |
| 60°-70° | 117.7 | 5.8 |
| 70°-80° | 86.5 | 4.3 |
| 80°-90° | 22.1 | 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° | 1008.2 | 49.8 |
| 0°-40° | 1432.7 | 70.8 |
| 0°-60° | 1796.9 | 88.8 |
| 0°-90° | 2023.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2023.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1387 | 1387 | 1387 | 1387 | 1387 | |
| 5° | 1374 | 1376 | 1369 | 1375 | 1374 | 131 |
| 15° | 1326 | 1312 | 1316 | 1312 | 1326 | 374 |
| 25° | 1218 | 998 | 1210 | 1019 | 1218 | 562 |
| 35° | 1072 | 444 | 1058 | 438 | 1072 | 670 |
| 45° | 818 | 87 | 789 | 87 | 818 | 603 |
| 55° | 245 | 157 | 232 | 142 | 245 | 231 |
| 65° | 86 | 198 | 90 | 225 | 86 | 86 |
| 75° | 46 | 124 | 47 | 129 | 46 | 47 |
| 85° | 12 | 17 | 10 | 20 | 12 | 13 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 |
| 2.5° | 1377.4 | 1403.5 | 1380.5 | 1377.4 | 1386.8 | 1384.7 | 1381.6 | 1394.1 | 1373.2 | 1394.1 | 1377.4 |
| 5° | 1374.2 | 1398.3 | 1371.1 | 1363.8 | 1376.3 | 1368.0 | 1375.3 | 1389.9 | 1369.0 | 1387.8 | 1366.9 |
| 7.5° | 1368.0 | 1389.9 | 1357.5 | 1352.3 | 1364.8 | 1357.5 | 1360.6 | 1380.5 | 1362.7 | 1375.3 | 1356.5 |
| 10° | 1356.5 | 1375.3 | 1342.9 | 1339.7 | 1351.2 | 1343.9 | 1347.1 | 1368.0 | 1351.2 | 1362.7 | 1343.9 |
| 12.5° | 1343.9 | 1357.5 | 1325.1 | 1324.0 | 1333.5 | 1329.3 | 1330.3 | 1347.1 | 1334.5 | 1346.0 | 1328.2 |
| 15° | 1326.1 | 1339.7 | 1307.3 | 1302.1 | 1312.5 | 1308.4 | 1310.4 | 1326.1 | 1315.7 | 1323.0 | 1307.3 |
| 17.5° | 1306.3 | 1316.7 | 1285.3 | 1273.8 | 1274.9 | 1280.1 | 1285.3 | 1304.2 | 1293.7 | 1303.1 | 1283.3 |
| 20° | 1280.1 | 1292.7 | 1257.1 | 1227.8 | 1225.7 | 1231.0 | 1257.1 | 1275.9 | 1270.7 | 1281.2 | 1249.8 |
| 22.5° | 1249.8 | 1257.1 | 1225.7 | 1171.3 | 1163.0 | 1168.2 | 1221.5 | 1244.6 | 1243.5 | 1249.8 | 1209.0 |
| 25° | 1218.4 | 1226.8 | 1168.2 | 1099.2 | 997.7 | 1092.9 | 1170.3 | 1210.0 | 1210.0 | 1216.3 | 1165.1 |
| 27.5° | 1187.0 | 1189.1 | 1105.5 | 740.5 | 640.1 | 710.1 | 1103.4 | 1168.2 | 1176.6 | 1175.5 | 1100.2 |
| 30° | 1153.6 | 1146.2 | 952.8 | 570.0 | 547.0 | 561.6 | 953.8 | 1124.3 | 1141.0 | 1129.5 | 928.7 |
| 32.5° | 1114.9 | 1090.8 | 641.1 | 512.5 | 494.7 | 507.2 | 611.8 | 1072.0 | 1104.4 | 1076.2 | 680.8 |
| 35° | 1072.0 | 1017.6 | 536.5 | 463.3 | 444.5 | 461.2 | 532.3 | 999.8 | 1058.4 | 991.5 | 554.3 |
| 37.5° | 1028.1 | 849.2 | 484.2 | 394.3 | 356.6 | 388.0 | 482.1 | 846.1 | 1007.2 | 810.5 | 486.3 |
| 40° | 974.7 | 628.6 | 424.6 | 270.9 | 218.6 | 255.2 | 421.5 | 599.3 | 947.5 | 646.3 | 414.2 |
| 42.5° | 903.6 | 531.3 | 320.0 | 147.5 | 113.0 | 132.8 | 303.3 | 522.9 | 874.3 | 536.5 | 308.5 |
| 45° | 817.9 | 472.7 | 201.8 | 94.1 | 86.8 | 91.0 | 186.2 | 464.4 | 788.6 | 453.9 | 206.0 |
| 47.5° | 687.1 | 379.6 | 137.0 | 79.5 | 85.8 | 79.5 | 132.8 | 368.1 | 648.4 | 360.8 | 137.0 |
| 50° | 490.5 | 281.3 | 100.4 | 80.5 | 95.2 | 80.5 | 97.3 | 271.9 | 465.4 | 298.1 | 99.4 |
| 52.5° | 331.5 | 224.9 | 77.4 | 89.9 | 119.2 | 92.0 | 75.3 | 219.6 | 314.8 | 226.9 | 72.2 |
| 55° | 244.7 | 186.2 | 65.9 | 116.1 | 156.9 | 119.2 | 65.9 | 180.9 | 232.2 | 178.8 | 63.8 |
| 57.5° | 165.2 | 146.4 | 64.8 | 147.5 | 175.7 | 150.6 | 65.9 | 141.2 | 157.9 | 142.2 | 57.5 |
| 60° | 115.0 | 109.8 | 74.3 | 159.0 | 192.4 | 161.1 | 75.3 | 105.6 | 113.0 | 104.6 | 62.8 |
| 62.5° | 89.9 | 80.5 | 93.1 | 175.7 | 201.8 | 169.4 | 95.2 | 76.3 | 95.2 | 72.2 | 71.1 |
| 65° | 85.8 | 55.4 | 105.6 | 174.7 | 197.7 | 174.7 | 106.7 | 52.3 | 89.9 | 56.5 | 94.1 |
| 67.5° | 80.5 | 41.8 | 103.5 | 172.6 | 200.8 | 174.7 | 100.4 | 39.7 | 77.4 | 38.7 | 92.0 |
| 70° | 64.8 | 36.6 | 96.2 | 176.7 | 191.4 | 170.5 | 96.2 | 35.6 | 61.7 | 34.5 | 113.0 |
| 72.5° | 51.2 | 34.5 | 87.9 | 160.0 | 164.2 | 153.7 | 88.9 | 34.5 | 52.3 | 30.3 | 104.6 |
| 75° | 46.0 | 34.5 | 85.8 | 130.7 | 124.5 | 124.5 | 83.7 | 33.5 | 47.1 | 31.4 | 82.6 |
| 77.5° | 36.6 | 31.4 | 74.3 | 91.0 | 85.8 | 85.8 | 73.2 | 30.3 | 34.5 | 28.2 | 70.1 |
| 80° | 26.1 | 28.2 | 58.6 | 62.8 | 59.6 | 59.6 | 56.5 | 27.2 | 26.1 | 26.1 | 55.4 |
| 82.5° | 18.8 | 23.0 | 41.8 | 41.8 | 39.7 | 38.7 | 40.8 | 23.0 | 18.8 | 20.9 | 39.7 |
| 85° | 11.5 | 16.7 | 24.1 | 19.9 | 16.7 | 15.7 | 23.0 | 15.7 | 10.5 | 15.7 | 23.0 |
| 87.5° | 5.2 | 9.4 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 9.4 | 5.2 | 8.4 | 5.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 | 1386.8 |
| 2.5° | 1373.2 | 1380.5 | 1380.5 | 1376.3 | 1397.3 | 1377.4 |
| 5° | 1361.7 | 1375.3 | 1369.0 | 1369.0 | 1389.9 | 1374.2 |
| 7.5° | 1354.4 | 1368.0 | 1361.7 | 1359.6 | 1380.5 | 1368.0 |
| 10° | 1341.8 | 1351.2 | 1347.1 | 1350.2 | 1369.0 | 1356.5 |
| 12.5° | 1324.0 | 1335.5 | 1331.4 | 1336.6 | 1353.3 | 1343.9 |
| 15° | 1303.1 | 1312.5 | 1314.6 | 1316.7 | 1336.6 | 1326.1 |
| 17.5° | 1270.7 | 1274.9 | 1286.4 | 1297.9 | 1317.8 | 1306.3 |
| 20° | 1231.0 | 1237.2 | 1243.5 | 1268.6 | 1292.7 | 1280.1 |
| 22.5° | 1186.0 | 1181.8 | 1198.5 | 1228.9 | 1260.2 | 1249.8 |
| 25° | 1099.2 | 1018.7 | 1107.6 | 1181.8 | 1221.5 | 1218.4 |
| 27.5° | 807.4 | 690.3 | 792.8 | 1120.1 | 1182.9 | 1187.0 |
| 30° | 602.4 | 554.3 | 601.4 | 973.7 | 1138.9 | 1153.6 |
| 32.5° | 517.7 | 488.4 | 512.5 | 682.9 | 1083.5 | 1114.9 |
| 35° | 461.2 | 438.2 | 461.2 | 554.3 | 1007.2 | 1072.0 |
| 37.5° | 393.2 | 349.3 | 394.3 | 491.5 | 852.4 | 1028.1 |
| 40° | 276.1 | 216.5 | 267.7 | 428.8 | 644.2 | 974.7 |
| 42.5° | 161.1 | 120.3 | 150.6 | 314.8 | 533.4 | 903.6 |
| 45° | 99.4 | 86.8 | 95.2 | 203.9 | 451.8 | 817.9 |
| 47.5° | 78.4 | 80.5 | 78.4 | 136.0 | 359.8 | 687.1 |
| 50° | 74.3 | 88.9 | 74.3 | 99.4 | 286.6 | 490.5 |
| 52.5° | 82.6 | 98.3 | 81.6 | 73.2 | 221.7 | 331.5 |
| 55° | 91.0 | 142.2 | 92.0 | 63.8 | 172.6 | 244.7 |
| 57.5° | 129.7 | 156.9 | 131.8 | 59.6 | 141.2 | 165.2 |
| 60° | 133.9 | 172.6 | 132.8 | 63.8 | 103.5 | 115.0 |
| 62.5° | 164.2 | 223.8 | 164.2 | 75.3 | 70.1 | 89.9 |
| 65° | 203.9 | 224.9 | 206.0 | 93.1 | 54.4 | 85.8 |
| 67.5° | 194.5 | 210.2 | 192.4 | 96.2 | 37.7 | 80.5 |
| 70° | 190.3 | 201.8 | 188.3 | 114.0 | 34.5 | 64.8 |
| 72.5° | 174.7 | 173.6 | 170.5 | 103.5 | 30.3 | 51.2 |
| 75° | 138.1 | 128.6 | 132.8 | 91.0 | 31.4 | 46.0 |
| 77.5° | 91.0 | 86.8 | 87.9 | 72.2 | 28.2 | 36.6 |
| 80° | 64.8 | 62.8 | 61.7 | 58.6 | 26.1 | 26.1 |
| 82.5° | 43.9 | 41.8 | 40.8 | 41.8 | 20.9 | 18.8 |
| 85° | 22.0 | 19.9 | 18.8 | 26.1 | 15.7 | 11.5 |
| 87.5° | 5.2 | 5.2 | 4.2 | 5.2 | 7.3 | 5.2 |
| 90° | 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 | 14.78 | 16.09 | 15.15 | 16.40 | 16.72 | 13.63 | 14.94 | 13.99 | 15.25 | 15.56 |
| | 3H | 15.50 | 16.67 | 15.88 | 17.00 | 17.37 | 19.83 | 21.00 | 20.21 | 21.33 | 21.69 |
| | 4H | 15.93 | 17.03 | 16.33 | 17.38 | 17.76 | 21.13 | 22.22 | 21.53 | 22.57 | 22.95 |
| | 6H | 16.31 | 17.31 | 16.72 | 17.69 | 18.08 | 21.75 | 22.76 | 22.17 | 23.13 | 23.53 |
| | 8H | 16.43 | 17.39 | 16.86 | 17.78 | 18.19 | 21.89 | 22.84 | 22.32 | 23.24 | 23.64 |
| | 12H | 16.52 | 17.44 | 16.95 | 17.82 | 18.25 | 21.94 | 22.86 | 22.37 | 23.24 | 23.67 |
| 4H | 2H | 15.22 | 16.32 | 15.63 | 16.67 | 17.05 | 14.21 | 15.30 | 14.61 | 15.65 | 16.04 |
| | 3H | 16.24 | 17.15 | 16.65 | 17.55 | 17.96 | 20.58 | 21.49 | 20.99 | 21.89 | 22.30 |
| | 4H | 16.81 | 17.63 | 17.25 | 18.05 | 18.49 | 22.05 | 22.86 | 22.48 | 23.28 | 23.73 |
| | 6H | 17.31 | 18.02 | 17.77 | 18.47 | 18.93 | 22.80 | 23.51 | 23.26 | 23.96 | 24.42 |
| | 8H | 17.49 | 18.15 | 17.96 | 18.60 | 19.07 | 22.98 | 23.64 | 23.44 | 24.09 | 24.56 |
| | 12H | 17.62 | 18.21 | 18.11 | 18.69 | 19.17 | 23.06 | 23.64 | 23.54 | 24.13 | 24.60 |
| 8H | 4H | 17.94 | 18.61 | 18.41 | 19.06 | 19.53 | 22.19 | 22.86 | 22.66 | 23.30 | 23.77 |
| | 6H | 18.57 | 19.11 | 19.07 | 19.61 | 20.09 | 23.09 | 23.63 | 23.59 | 24.12 | 24.60 |
| | 8H | 18.80 | 19.29 | 19.32 | 19.80 | 20.29 | 23.33 | 23.82 | 23.85 | 24.33 | 24.83 |
| | 12H | 19.00 | 19.42 | 19.51 | 19.92 | 20.49 | 23.48 | 23.90 | 23.99 | 24.40 | 24.97 |
| 12H | 4H | 18.11 | 18.70 | 18.60 | 19.18 | 19.65 | 22.17 | 22.76 | 22.66 | 23.24 | 23.72 |
| | 6H | 18.84 | 19.33 | 19.36 | 19.84 | 20.33 | 23.09 | 23.58 | 23.61 | 24.09 | 24.58 |
| | 8H | 19.16 | 19.59 | 19.68 | 20.08 | 20.65 | 23.40 | 23.82 | 23.91 | 24.32 | 24.89 |