

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: P845543

Luminaire Tested: SQ2R-PC3-050D-840-UNV-STD-W-4

Issue Date: 6/14/2024

Test Information

Test Method: LM-79-2019
Report Number: P845543
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-6)
Test Lab: INNOVATION CENTER
Issue Date: 6/14/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2R-PC3-050D-840-UNV-STD-W-4
Description: CORELITE SQ2R RECESSED LED LUMINAIRE WITH PERCEIVE PYRAMID CONTINUOUS LENS
500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

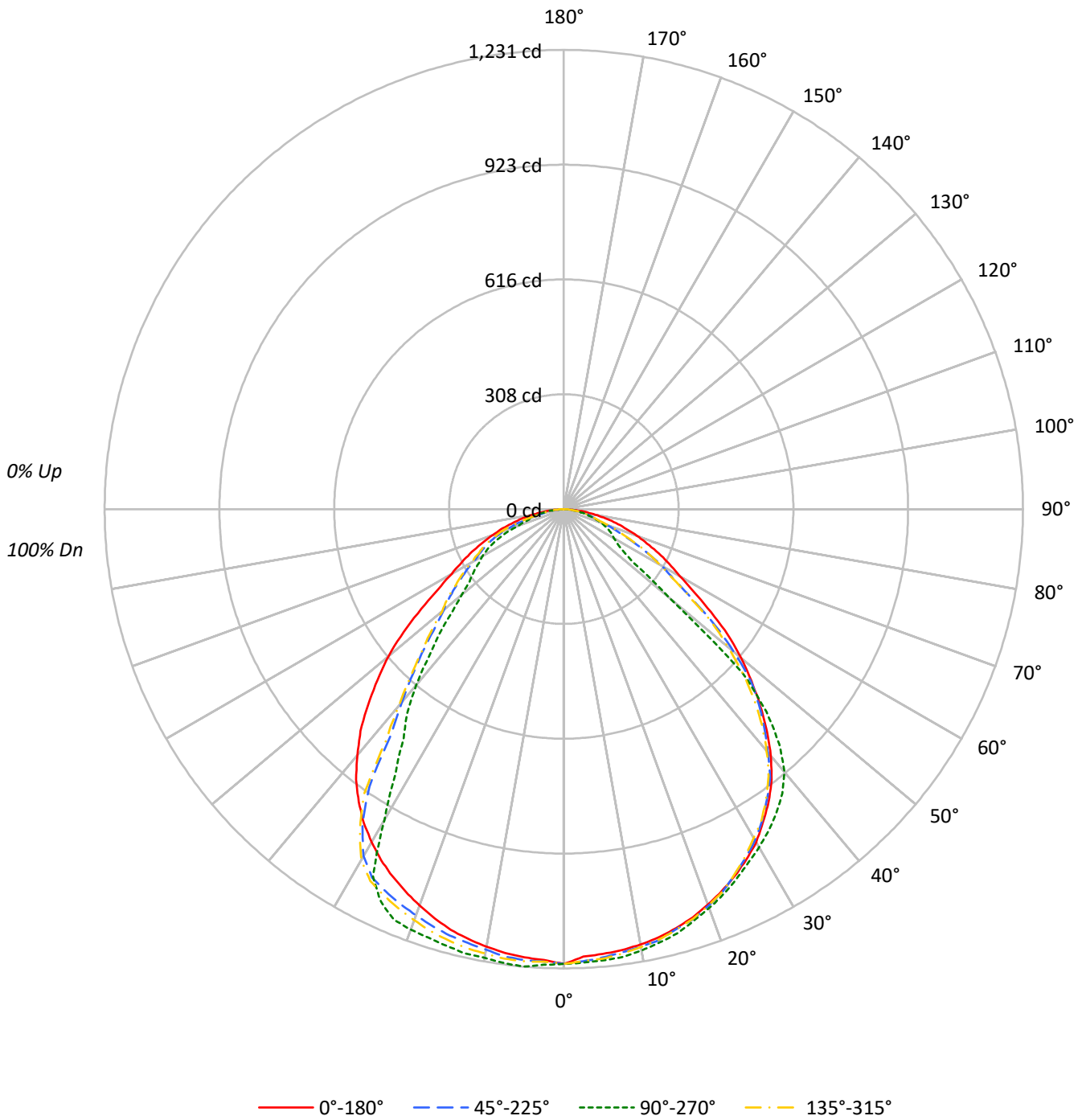
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2732.9 lumens
Efficiency: N/A
Efficacy: 153.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.21 / 1.25
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: P845543

CATALOG NUMBER: SQ2R-PC3-050D-840-UNV-STD-W-4

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 | | | | |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 100 | 97 | 100 | 97 | 94 | 96 | 94 | 91 | 92 | 90 | 89 | 87 | | | | |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 86 | 82 | 78 | 83 | 80 | 77 | 75 | | | | |
| 3 | 93 | 84 | 77 | 71 | 91 | 83 | 76 | 70 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 65 | | | | |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 63 | 59 | 57 | | | | |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 54 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 50 | | | | |
| 6 | 74 | 62 | 54 | 48 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 46 | 44 | | | | |
| 7 | 69 | 57 | 48 | 43 | 67 | 56 | 48 | 42 | 54 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 40 | | | | |
| 8 | 65 | 52 | 44 | 38 | 63 | 51 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 38 | 36 | | | | |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 39 | 35 | 45 | 39 | 34 | 44 | 38 | 34 | 33 | | | | |
| 10 | 57 | 44 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 31 | 41 | 35 | 31 | 30 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 19682 | 19682 | 19682 | 19682 |
| 5° | 19399 | 19681 | 19550 | 19947 |
| 10° | 19431 | 19698 | 19526 | 20023 |
| 15° | 19442 | 19676 | 19519 | 20259 |
| 20° | 19383 | 19563 | 19423 | 20605 |
| 25° | 19329 | 19495 | 19351 | 20678 |
| 30° | 19229 | 19511 | 19207 | 17946 |
| 35° | 18883 | 19594 | 18883 | 14747 |
| 40° | 18202 | 19405 | 18128 | 12969 |
| 45° | 17004 | 17536 | 16952 | 10725 |
| 50° | 15604 | 9251 | 15398 | 8927 |
| 55° | 13582 | 5348 | 13123 | 8298 |
| 60° | 11589 | 5005 | 11215 | 8128 |
| 65° | 10732 | 5119 | 10372 | 7702 |
| 70° | 9847 | 5009 | 9574 | 6109 |
| 75° | 9014 | 4510 | 8721 | 5527 |
| 80° | 8015 | 4007 | 7587 | 5523 |
| 85° | 6039 | 2167 | 5613 | 2816 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17536 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 115.6 | 4.2 |
| 10°-20° | 333.9 | 12.2 |
| 20°-30° | 510.2 | 18.7 |
| 30°-40° | 576.7 | 21.1 |
| 40°-50° | 504.1 | 18.4 |
| 50°-60° | 333.5 | 12.2 |
| 60°-70° | 217.9 | 8.0 |
| 70°-80° | 114.1 | 4.2 |
| 80°-90° | 26.9 | 1.0 |
| 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° | 959.8 | 35.1 |
| 0°-40° | 1536.5 | 56.2 |
| 0°-60° | 2374.1 | 86.9 |
| 0°-90° | 2732.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2732.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1219 | 1219 | 1219 | 1219 | 1219 | |
| 5° | 1197 | 1214 | 1206 | 1231 | 1197 | 114 |
| 15° | 1163 | 1177 | 1168 | 1212 | 1163 | 328 |
| 25° | 1085 | 1094 | 1086 | 1161 | 1085 | 500 |
| 35° | 958 | 994 | 958 | 748 | 958 | 597 |
| 45° | 745 | 768 | 742 | 470 | 745 | 573 |
| 55° | 482 | 190 | 466 | 295 | 482 | 433 |
| 65° | 281 | 134 | 272 | 202 | 281 | 278 |
| 75° | 144 | 72 | 140 | 89 | 144 | 153 |
| 85° | 33 | 12 | 30 | 15 | 33 | 40 |
| 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° | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 |
| 2.5° | 1200.4 | 1230.7 | 1213.2 | 1212.0 | 1216.7 | 1217.8 | 1212.0 | 1224.8 | 1209.7 | 1226.0 | 1214.3 |
| 5° | 1196.9 | 1227.2 | 1206.2 | 1203.9 | 1214.3 | 1210.9 | 1209.7 | 1221.3 | 1206.2 | 1219.0 | 1213.2 |
| 7.5° | 1192.2 | 1220.2 | 1198.0 | 1196.9 | 1210.9 | 1206.2 | 1201.5 | 1215.5 | 1200.4 | 1214.3 | 1209.7 |
| 10° | 1185.2 | 1209.7 | 1191.0 | 1192.2 | 1201.5 | 1196.9 | 1192.2 | 1203.9 | 1191.0 | 1208.5 | 1199.2 |
| 12.5° | 1175.9 | 1200.4 | 1182.9 | 1179.4 | 1189.9 | 1181.7 | 1181.7 | 1191.0 | 1180.6 | 1199.2 | 1191.0 |
| 15° | 1163.1 | 1187.5 | 1165.4 | 1167.7 | 1177.1 | 1168.9 | 1166.6 | 1178.2 | 1167.7 | 1186.4 | 1182.9 |
| 17.5° | 1147.9 | 1168.9 | 1152.6 | 1153.7 | 1157.2 | 1153.7 | 1151.4 | 1160.7 | 1150.3 | 1170.1 | 1172.4 |
| 20° | 1128.1 | 1152.6 | 1131.6 | 1131.6 | 1138.6 | 1129.3 | 1131.6 | 1139.8 | 1130.4 | 1153.7 | 1158.4 |
| 22.5° | 1108.3 | 1131.6 | 1111.8 | 1111.8 | 1117.6 | 1104.8 | 1110.6 | 1116.5 | 1109.5 | 1135.1 | 1145.6 |
| 25° | 1085.0 | 1103.6 | 1081.5 | 1088.5 | 1094.3 | 1082.7 | 1081.5 | 1090.8 | 1086.2 | 1111.8 | 1130.4 |
| 27.5° | 1059.3 | 1075.7 | 1054.7 | 1064.0 | 1069.8 | 1061.7 | 1051.2 | 1062.8 | 1060.5 | 1089.6 | 1113.0 |
| 30° | 1031.4 | 1046.5 | 1025.6 | 1038.4 | 1046.5 | 1034.9 | 1018.6 | 1029.0 | 1030.2 | 1064.0 | 1073.3 |
| 32.5° | 994.1 | 1009.2 | 989.4 | 1010.4 | 1022.1 | 1005.7 | 987.1 | 992.9 | 997.6 | 1031.4 | 1004.6 |
| 35° | 958.0 | 965.0 | 949.8 | 976.6 | 994.1 | 974.3 | 946.3 | 953.3 | 958.0 | 996.4 | 909.0 |
| 37.5° | 914.8 | 914.8 | 909.0 | 938.1 | 961.5 | 932.3 | 902.0 | 905.5 | 914.8 | 947.5 | 757.5 |
| 40° | 863.6 | 856.6 | 850.7 | 889.2 | 920.7 | 882.2 | 846.1 | 847.2 | 860.1 | 868.2 | 674.8 |
| 42.5° | 806.5 | 798.3 | 796.0 | 836.8 | 855.4 | 823.9 | 786.6 | 787.8 | 806.5 | 758.7 | 597.9 |
| 45° | 744.7 | 741.2 | 738.9 | 766.8 | 768.0 | 748.2 | 721.4 | 727.2 | 742.4 | 655.0 | 529.1 |
| 47.5° | 681.8 | 679.4 | 678.3 | 656.1 | 651.5 | 637.5 | 651.5 | 664.3 | 677.1 | 546.6 | 466.2 |
| 50° | 621.2 | 604.8 | 595.5 | 513.9 | 368.3 | 505.8 | 573.4 | 595.5 | 613.0 | 476.6 | 419.5 |
| 52.5° | 554.7 | 540.7 | 511.6 | 392.7 | 233.1 | 390.4 | 502.3 | 530.3 | 540.7 | 433.5 | 384.6 |
| 55° | 482.5 | 482.5 | 419.5 | 251.7 | 190.0 | 264.5 | 412.6 | 474.3 | 466.2 | 388.1 | 345.0 |
| 57.5° | 413.7 | 427.7 | 348.5 | 169.0 | 167.8 | 169.0 | 346.1 | 421.9 | 398.6 | 352.0 | 312.3 |
| 60° | 358.9 | 379.9 | 301.8 | 150.3 | 155.0 | 148.0 | 296.0 | 375.3 | 347.3 | 313.5 | 276.2 |
| 62.5° | 318.2 | 335.6 | 249.4 | 137.5 | 145.7 | 135.2 | 250.6 | 334.5 | 307.7 | 285.5 | 251.7 |
| 65° | 280.9 | 298.3 | 197.0 | 125.9 | 134.0 | 123.5 | 202.8 | 296.0 | 271.5 | 254.1 | 229.6 |
| 67.5° | 241.2 | 257.6 | 156.2 | 114.2 | 120.0 | 113.0 | 163.2 | 257.6 | 235.4 | 223.8 | 200.4 |
| 70° | 208.6 | 227.3 | 118.9 | 102.6 | 106.1 | 101.4 | 127.0 | 222.6 | 202.8 | 198.1 | 171.3 |
| 72.5° | 176.0 | 191.1 | 92.1 | 90.9 | 89.7 | 88.6 | 93.2 | 190.0 | 171.3 | 163.2 | 132.9 |
| 75° | 144.5 | 155.0 | 75.8 | 75.8 | 72.3 | 73.4 | 75.8 | 155.0 | 139.8 | 132.9 | 94.4 |
| 77.5° | 114.2 | 122.4 | 61.8 | 59.4 | 55.9 | 55.9 | 60.6 | 118.9 | 110.7 | 102.6 | 62.9 |
| 80° | 86.2 | 88.6 | 46.6 | 44.3 | 43.1 | 43.1 | 46.6 | 86.2 | 81.6 | 73.4 | 48.9 |
| 82.5° | 58.3 | 48.9 | 31.5 | 32.6 | 31.5 | 31.5 | 30.3 | 50.1 | 54.8 | 37.3 | 36.1 |
| 85° | 32.6 | 22.1 | 19.8 | 15.2 | 11.7 | 12.8 | 18.6 | 21.0 | 30.3 | 19.8 | 23.3 |
| 87.5° | 11.7 | 9.3 | 3.5 | 4.7 | 3.5 | 3.5 | 3.5 | 9.3 | 9.3 | 7.0 | 3.5 |
| 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° | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 | 1219.0 |
| 2.5° | 1215.5 | 1222.5 | 1221.3 | 1214.3 | 1229.5 | 1200.4 |
| 5° | 1216.7 | 1230.7 | 1223.7 | 1216.7 | 1226.0 | 1196.9 |
| 7.5° | 1210.9 | 1227.2 | 1219.0 | 1215.5 | 1224.8 | 1192.2 |
| 10° | 1207.4 | 1221.3 | 1214.3 | 1209.7 | 1219.0 | 1185.2 |
| 12.5° | 1203.9 | 1220.2 | 1210.9 | 1205.0 | 1210.9 | 1175.9 |
| 15° | 1194.5 | 1212.0 | 1206.2 | 1196.9 | 1196.9 | 1163.1 |
| 17.5° | 1187.5 | 1205.0 | 1199.2 | 1186.4 | 1180.6 | 1147.9 |
| 20° | 1182.9 | 1199.2 | 1191.0 | 1172.4 | 1163.1 | 1128.1 |
| 22.5° | 1172.4 | 1191.0 | 1178.2 | 1158.4 | 1145.6 | 1108.3 |
| 25° | 1153.7 | 1160.7 | 1159.6 | 1142.1 | 1121.1 | 1085.0 |
| 27.5° | 1104.8 | 1108.3 | 1111.8 | 1123.4 | 1100.1 | 1059.3 |
| 30° | 1019.7 | 962.6 | 1033.7 | 1086.2 | 1074.5 | 1031.4 |
| 32.5° | 858.9 | 840.3 | 882.2 | 1017.4 | 1040.7 | 994.1 |
| 35° | 770.3 | 748.2 | 783.1 | 933.5 | 1002.2 | 958.0 |
| 37.5° | 689.9 | 689.9 | 699.2 | 784.3 | 959.1 | 914.8 |
| 40° | 632.8 | 615.3 | 641.0 | 687.6 | 893.9 | 863.6 |
| 42.5° | 540.7 | 534.9 | 551.2 | 606.0 | 794.8 | 806.5 |
| 45° | 476.6 | 469.7 | 484.8 | 537.2 | 687.6 | 744.7 |
| 47.5° | 427.7 | 402.1 | 435.9 | 479.0 | 582.7 | 681.8 |
| 50° | 382.3 | 355.4 | 388.1 | 425.4 | 494.1 | 621.2 |
| 52.5° | 342.6 | 318.2 | 350.8 | 391.6 | 448.7 | 554.7 |
| 55° | 301.8 | 294.8 | 310.0 | 353.1 | 404.4 | 482.5 |
| 57.5° | 268.0 | 270.4 | 272.7 | 319.3 | 363.6 | 413.7 |
| 60° | 247.1 | 251.7 | 250.6 | 286.7 | 329.8 | 358.9 |
| 62.5° | 226.1 | 228.4 | 228.4 | 257.6 | 297.2 | 318.2 |
| 65° | 201.6 | 201.6 | 203.9 | 236.6 | 269.2 | 280.9 |
| 67.5° | 174.8 | 170.1 | 178.3 | 208.6 | 238.9 | 241.2 |
| 70° | 137.5 | 129.4 | 143.3 | 180.6 | 213.3 | 208.6 |
| 72.5° | 99.1 | 103.7 | 101.4 | 142.2 | 183.0 | 176.0 |
| 75° | 81.6 | 88.6 | 82.7 | 101.4 | 149.2 | 144.5 |
| 77.5° | 68.8 | 74.6 | 68.8 | 65.3 | 120.0 | 114.2 |
| 80° | 54.8 | 59.4 | 54.8 | 50.1 | 88.6 | 86.2 |
| 82.5° | 39.6 | 40.8 | 39.6 | 37.3 | 58.3 | 58.3 |
| 85° | 18.6 | 15.2 | 21.0 | 24.5 | 23.3 | 32.6 |
| 87.5° | 3.5 | 3.5 | 3.5 | 4.7 | 12.8 | 11.7 |
| 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 | 20.58 | 22.06 | 20.94 | 22.38 | 22.69 | 18.08 | 19.56 | 18.44 | 19.88 | 20.19 |
| | 3H | 22.22 | 23.55 | 22.59 | 23.87 | 24.24 | 19.56 | 20.89 | 19.94 | 21.22 | 21.58 |
| | 4H | 22.82 | 24.06 | 23.22 | 24.41 | 24.79 | 20.01 | 21.26 | 20.41 | 21.61 | 21.99 |
| | 6H | 23.25 | 24.40 | 23.66 | 24.76 | 25.16 | 20.40 | 21.55 | 20.81 | 21.92 | 22.31 |
| | 8H | 23.37 | 24.47 | 23.80 | 24.86 | 25.26 | 20.52 | 21.61 | 20.95 | 22.00 | 22.41 |
| | 12H | 23.44 | 24.48 | 23.87 | 24.87 | 25.30 | 20.56 | 21.61 | 20.99 | 21.99 | 22.42 |
| 4H | 2H | 20.85 | 22.09 | 21.25 | 22.44 | 22.82 | 18.89 | 20.14 | 19.29 | 20.49 | 20.86 |
| | 3H | 22.74 | 23.77 | 23.15 | 24.17 | 24.58 | 20.53 | 21.57 | 20.94 | 21.97 | 22.37 |
| | 4H | 23.49 | 24.42 | 23.92 | 24.83 | 25.27 | 21.04 | 21.97 | 21.48 | 22.39 | 22.82 |
| | 6H | 24.08 | 24.88 | 24.53 | 25.32 | 25.78 | 21.52 | 22.32 | 21.97 | 22.76 | 23.22 |
| | 8H | 24.25 | 25.00 | 24.71 | 25.45 | 25.91 | 21.66 | 22.42 | 22.13 | 22.86 | 23.33 |
| | 12H | 24.35 | 25.02 | 24.83 | 25.50 | 25.97 | 21.73 | 22.40 | 22.21 | 22.88 | 23.35 |
| 8H | 4H | 23.56 | 24.31 | 24.02 | 24.75 | 25.22 | 21.35 | 22.10 | 21.82 | 22.55 | 23.02 |
| | 6H | 24.25 | 24.87 | 24.74 | 25.36 | 25.84 | 21.90 | 22.52 | 22.40 | 23.01 | 23.49 |
| | 8H | 24.48 | 25.04 | 25.00 | 25.55 | 26.04 | 22.10 | 22.66 | 22.62 | 23.17 | 23.66 |
| | 12H | 24.63 | 25.12 | 25.14 | 25.62 | 26.18 | 22.22 | 22.71 | 22.73 | 23.20 | 23.77 |
| 12H | 4H | 23.54 | 24.21 | 24.02 | 24.69 | 25.16 | 21.39 | 22.06 | 21.87 | 22.54 | 23.01 |
| | 6H | 24.23 | 24.79 | 24.74 | 25.30 | 25.79 | 21.95 | 22.51 | 22.46 | 23.02 | 23.51 |
| | 8H | 24.51 | 25.00 | 25.02 | 25.49 | 26.06 | 22.20 | 22.69 | 22.71 | 23.18 | 23.75 |