

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: P853784

Luminaire Tested: SQ2-FA-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853784
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SURFACE LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
DIRECT ONLY
Light Source: -
Ballast/Driver: -

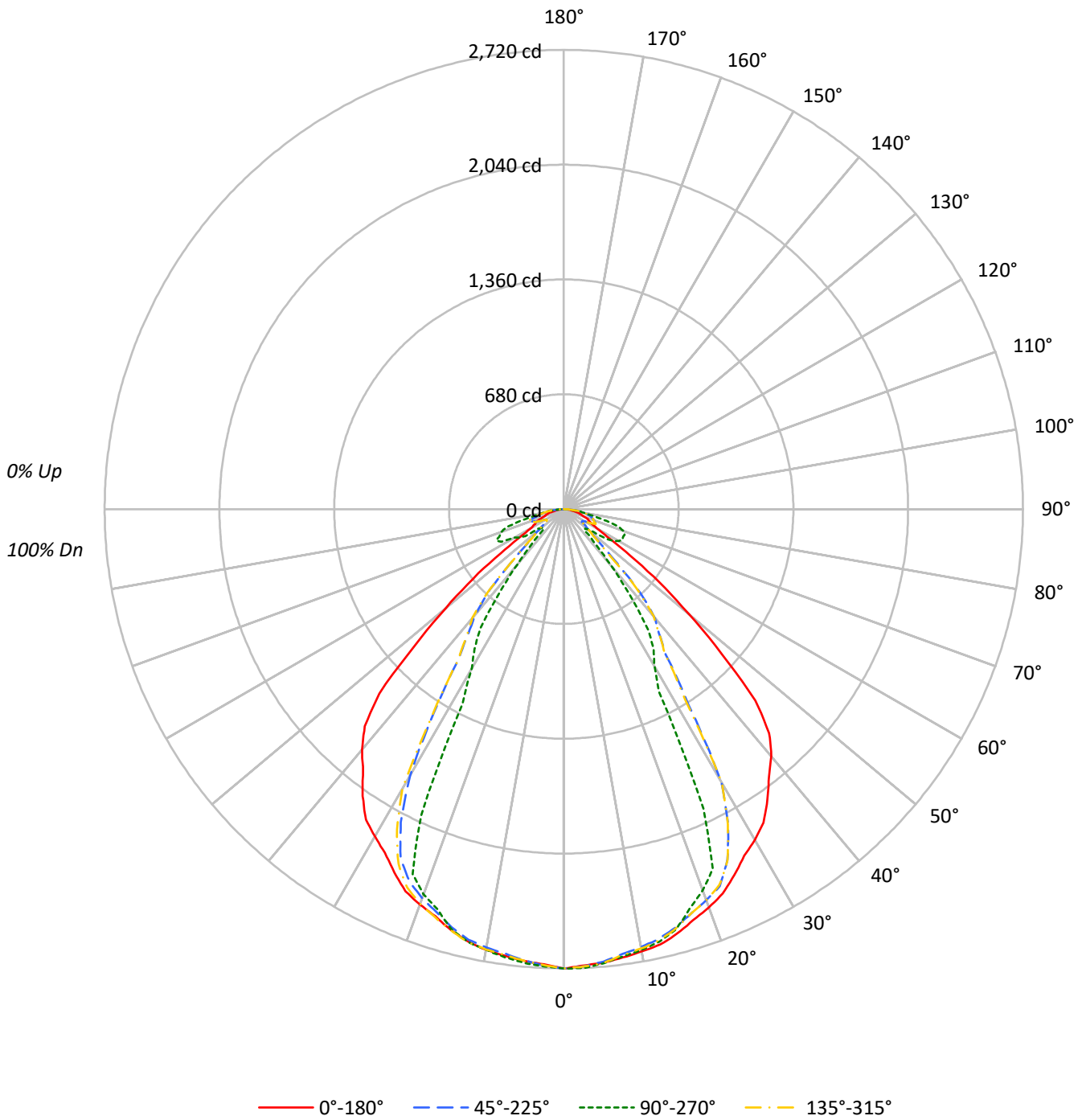
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3972.9 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 37.6
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

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Luminous Intensity Polar Plot





TEST NUMBER: P853784

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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 | 93 | 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 | 74 | 70 | 65 | 72 | 68 | 65 | 63 | | | 63 | |
| 5 | 84 | 74 | 66 | 61 | 82 | 73 | 66 | 60 | 71 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 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 | 59 | 54 | 50 | 58 | 53 | 49 | 48 | | | 48 | |
| 8 | 70 | 59 | 51 | 46 | 69 | 58 | 51 | 46 | 57 | 50 | 46 | 56 | 50 | 46 | 54 | 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 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 38 | | | 38 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 43923 | 43923 | 43923 | 43923 |
| 5° | 43692 | 43759 | 43527 | 43726 |
| 10° | 43625 | 43458 | 43458 | 43458 |
| 15° | 43483 | 43039 | 43141 | 43039 |
| 20° | 43148 | 41314 | 42830 | 41701 |
| 25° | 42580 | 34867 | 42287 | 35600 |
| 30° | 42189 | 20005 | 41730 | 20273 |
| 35° | 41449 | 17186 | 40923 | 16943 |
| 40° | 40301 | 9038 | 39178 | 8951 |
| 45° | 36634 | 3889 | 35321 | 3889 |
| 50° | 24169 | 4690 | 22933 | 4381 |
| 55° | 13515 | 8662 | 12822 | 7854 |
| 60° | 7288 | 12190 | 7156 | 10931 |
| 65° | 6426 | 14816 | 6739 | 16852 |
| 70° | 6005 | 17722 | 5712 | 18694 |
| 75° | 5633 | 15228 | 5758 | 15739 |
| 80° | 4770 | 10869 | 4770 | 11446 |
| 85° | 4187 | 6076 | 3798 | 7225 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36634 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 256.0 | 6.4 |
| 10°-20° | 726.3 | 18.3 |
| 20°-30° | 990.3 | 24.9 |
| 30°-40° | 832.2 | 20.9 |
| 40°-50° | 472.7 | 11.9 |
| 50°-60° | 250.8 | 6.3 |
| 60°-70° | 230.9 | 5.8 |
| 70°-80° | 169.5 | 4.3 |
| 80°-90° | 44.3 | 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° | 1972.6 | 49.7 |
| 0°-40° | 2804.8 | 70.6 |
| 0°-60° | 3528.2 | 88.8 |
| 0°-90° | 3972.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3972.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 2720 | 2720 | 2720 | 2720 | 2720 | |
| 5° | 2696 | 2700 | 2686 | 2698 | 2696 | 256 |
| 15° | 2601 | 2575 | 2581 | 2575 | 2601 | 733 |
| 25° | 2390 | 1957 | 2374 | 1998 | 2390 | 1102 |
| 35° | 2103 | 872 | 2076 | 860 | 2103 | 1313 |
| 45° | 1604 | 170 | 1547 | 170 | 1604 | 1173 |
| 55° | 480 | 308 | 456 | 279 | 480 | 462 |
| 65° | 168 | 388 | 176 | 441 | 168 | 169 |
| 75° | 90 | 244 | 92 | 252 | 90 | 93 |
| 85° | 23 | 33 | 20 | 39 | 23 | 26 |
| 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° | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 |
| 2.5° | 2705.7 | 2745.8 | 2710.6 | 2706.0 | 2720.4 | 2717.2 | 2712.2 | 2731.2 | 2699.1 | 2731.2 | 2705.7 |
| 5° | 2695.8 | 2741.9 | 2689.7 | 2675.8 | 2699.9 | 2683.9 | 2697.9 | 2725.7 | 2685.6 | 2721.7 | 2681.4 |
| 7.5° | 2679.0 | 2719.9 | 2657.2 | 2648.3 | 2672.0 | 2658.0 | 2663.8 | 2702.4 | 2668.7 | 2692.4 | 2656.0 |
| 10° | 2660.9 | 2697.0 | 2634.3 | 2628.6 | 2650.7 | 2636.6 | 2642.5 | 2682.8 | 2650.7 | 2672.7 | 2636.3 |
| 12.5° | 2641.2 | 2669.3 | 2606.4 | 2603.9 | 2622.8 | 2613.5 | 2616.2 | 2650.1 | 2624.4 | 2646.5 | 2611.7 |
| 15° | 2601.4 | 2627.5 | 2564.5 | 2554.7 | 2574.8 | 2566.7 | 2570.7 | 2601.0 | 2580.9 | 2595.0 | 2564.5 |
| 17.5° | 2552.2 | 2573.1 | 2510.3 | 2480.8 | 2481.6 | 2491.7 | 2510.3 | 2546.9 | 2528.8 | 2547.3 | 2504.2 |
| 20° | 2511.2 | 2535.2 | 2466.0 | 2408.5 | 2404.5 | 2414.5 | 2466.0 | 2502.7 | 2492.7 | 2512.8 | 2451.7 |
| 22.5° | 2463.6 | 2479.6 | 2416.8 | 2319.6 | 2306.0 | 2316.0 | 2410.2 | 2453.6 | 2450.0 | 2463.7 | 2387.7 |
| 25° | 2390.1 | 2406.2 | 2291.6 | 2151.8 | 1957.2 | 2139.8 | 2295.7 | 2373.7 | 2373.7 | 2385.7 | 2285.5 |
| 27.5° | 2315.4 | 2315.8 | 2108.6 | 1382.0 | 1219.1 | 1332.2 | 2105.8 | 2274.8 | 2294.1 | 2288.1 | 2091.0 |
| 30° | 2262.9 | 2248.9 | 1869.0 | 1117.1 | 1073.0 | 1101.1 | 1871.1 | 2206.2 | 2238.3 | 2216.2 | 1821.8 |
| 32.5° | 2202.2 | 2162.5 | 1379.9 | 1027.0 | 990.9 | 1015.8 | 1334.4 | 2124.7 | 2180.9 | 2133.1 | 1432.8 |
| 35° | 2102.9 | 1998.6 | 1052.5 | 908.0 | 871.9 | 904.0 | 1044.3 | 1963.9 | 2076.2 | 1947.8 | 1087.4 |
| 37.5° | 1995.8 | 1588.6 | 926.5 | 723.3 | 645.4 | 707.6 | 922.0 | 1571.6 | 1952.3 | 1535.1 | 925.7 |
| 40° | 1912.1 | 1248.1 | 833.0 | 529.1 | 428.8 | 499.0 | 826.8 | 1190.8 | 1858.8 | 1281.0 | 812.4 |
| 42.5° | 1800.5 | 1096.4 | 668.8 | 336.0 | 263.0 | 307.5 | 641.3 | 1071.0 | 1743.9 | 1110.0 | 646.7 |
| 45° | 1604.4 | 942.4 | 396.0 | 184.3 | 170.3 | 178.3 | 365.2 | 925.0 | 1546.9 | 905.0 | 404.2 |
| 47.5° | 1270.8 | 718.7 | 254.4 | 156.7 | 171.9 | 156.7 | 246.6 | 695.9 | 1200.2 | 694.7 | 254.0 |
| 50° | 962.2 | 561.0 | 197.0 | 158.6 | 186.7 | 158.6 | 190.8 | 541.9 | 913.0 | 592.0 | 194.9 |
| 52.5° | 712.7 | 468.8 | 160.8 | 173.9 | 224.4 | 177.1 | 156.3 | 456.4 | 676.6 | 477.6 | 152.2 |
| 55° | 480.1 | 367.7 | 129.3 | 229.5 | 307.7 | 235.5 | 129.3 | 357.2 | 455.5 | 353.1 | 125.1 |
| 57.5° | 304.5 | 273.6 | 130.9 | 295.1 | 351.2 | 300.7 | 132.9 | 263.7 | 292.1 | 264.9 | 114.9 |
| 60° | 225.7 | 215.6 | 145.7 | 313.3 | 377.5 | 317.3 | 147.7 | 207.5 | 221.6 | 205.5 | 123.1 |
| 62.5° | 186.3 | 169.8 | 175.2 | 339.3 | 392.3 | 330.5 | 178.9 | 162.0 | 193.7 | 155.2 | 136.2 |
| 65° | 168.2 | 110.1 | 207.2 | 343.6 | 387.8 | 343.6 | 209.3 | 104.2 | 176.4 | 112.2 | 184.6 |
| 67.5° | 151.8 | 81.6 | 200.2 | 341.3 | 390.2 | 342.1 | 195.3 | 77.9 | 145.7 | 75.9 | 188.7 |
| 70° | 127.2 | 73.0 | 188.7 | 347.4 | 375.4 | 335.3 | 188.7 | 70.9 | 121.0 | 68.9 | 221.6 |
| 72.5° | 105.9 | 69.4 | 175.6 | 320.7 | 332.8 | 308.7 | 177.3 | 69.0 | 106.3 | 62.1 | 208.4 |
| 75° | 90.3 | 68.2 | 168.2 | 256.2 | 244.1 | 244.1 | 164.1 | 66.2 | 92.3 | 62.2 | 162.1 |
| 77.5° | 67.7 | 60.5 | 139.5 | 167.2 | 158.0 | 158.0 | 137.0 | 58.4 | 64.4 | 54.8 | 131.7 |
| 80° | 51.3 | 55.3 | 114.9 | 123.0 | 116.9 | 116.9 | 110.8 | 53.3 | 51.3 | 51.3 | 108.7 |
| 82.5° | 39.8 | 47.0 | 88.6 | 90.2 | 85.8 | 84.2 | 86.2 | 46.6 | 39.8 | 43.0 | 84.1 |
| 85° | 22.6 | 32.6 | 47.2 | 38.8 | 32.8 | 30.8 | 45.1 | 30.5 | 20.5 | 30.5 | 45.1 |
| 87.5° | 8.2 | 14.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 14.6 | 8.2 | 13.0 | 8.2 |
| 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° | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 | 2720.4 |
| 2.5° | 2699.3 | 2710.6 | 2710.6 | 2704.0 | 2736.1 | 2705.7 |
| 5° | 2671.8 | 2697.9 | 2685.8 | 2685.6 | 2725.9 | 2695.8 |
| 7.5° | 2652.5 | 2676.9 | 2665.7 | 2663.4 | 2703.1 | 2679.0 |
| 10° | 2632.6 | 2650.7 | 2642.7 | 2648.6 | 2685.0 | 2660.9 |
| 12.5° | 2604.8 | 2626.1 | 2618.0 | 2627.3 | 2660.5 | 2641.2 |
| 15° | 2556.7 | 2574.8 | 2578.8 | 2583.0 | 2621.5 | 2601.4 |
| 17.5° | 2477.3 | 2486.1 | 2506.2 | 2534.6 | 2574.7 | 2552.2 |
| 20° | 2415.0 | 2427.0 | 2439.1 | 2488.6 | 2535.2 | 2511.2 |
| 22.5° | 2344.1 | 2340.1 | 2368.1 | 2426.2 | 2484.4 | 2463.6 |
| 25° | 2152.7 | 1998.3 | 2168.8 | 2318.3 | 2396.1 | 2390.1 |
| 27.5° | 1498.9 | 1300.7 | 1476.0 | 2139.8 | 2303.4 | 2315.4 |
| 30° | 1179.6 | 1087.4 | 1177.6 | 1910.0 | 2234.8 | 2262.9 |
| 32.5° | 1047.3 | 984.0 | 1038.9 | 1453.8 | 2148.4 | 2202.2 |
| 35° | 903.8 | 859.6 | 903.8 | 1087.4 | 1978.5 | 2102.9 |
| 37.5° | 723.4 | 633.1 | 721.8 | 939.6 | 1599.4 | 1995.8 |
| 40° | 539.0 | 424.7 | 523.0 | 841.2 | 1278.2 | 1912.1 |
| 42.5° | 359.1 | 273.7 | 339.9 | 662.3 | 1105.6 | 1800.5 |
| 45° | 194.4 | 170.3 | 186.3 | 400.1 | 902.3 | 1604.4 |
| 47.5° | 152.4 | 161.3 | 152.4 | 252.3 | 690.2 | 1270.8 |
| 50° | 146.3 | 174.4 | 146.3 | 194.9 | 571.0 | 962.2 |
| 52.5° | 159.5 | 189.2 | 157.9 | 153.9 | 466.0 | 712.7 |
| 55° | 180.7 | 279.0 | 182.7 | 125.1 | 341.7 | 480.1 |
| 57.5° | 257.3 | 313.9 | 260.1 | 118.6 | 263.1 | 304.5 |
| 60° | 264.3 | 338.5 | 262.3 | 125.1 | 203.6 | 225.7 |
| 62.5° | 312.6 | 418.9 | 312.2 | 143.2 | 151.4 | 186.3 |
| 65° | 401.0 | 441.1 | 405.0 | 182.6 | 108.1 | 168.2 |
| 67.5° | 380.6 | 409.1 | 376.6 | 195.7 | 74.4 | 151.8 |
| 70° | 373.9 | 396.0 | 369.9 | 223.6 | 69.0 | 127.2 |
| 72.5° | 348.8 | 351.6 | 341.6 | 207.2 | 62.1 | 105.9 |
| 75° | 270.4 | 252.3 | 260.4 | 178.5 | 62.2 | 90.3 |
| 77.5° | 168.1 | 160.8 | 162.0 | 136.2 | 54.9 | 67.7 |
| 80° | 127.1 | 123.1 | 121.1 | 114.9 | 51.3 | 51.3 |
| 82.5° | 94.3 | 90.3 | 88.3 | 88.6 | 43.0 | 39.8 |
| 85° | 43.0 | 39.0 | 37.0 | 51.3 | 30.6 | 22.6 |
| 87.5° | 8.2 | 8.2 | 6.6 | 8.2 | 11.4 | 8.2 |
| 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 | 17.14 | 18.45 | 17.51 | 18.77 | 19.08 | 16.00 | 17.31 | 16.36 | 17.62 | 17.94 |
| | 3H | 17.87 | 19.04 | 18.25 | 19.37 | 19.73 | 22.17 | 23.35 | 22.55 | 23.68 | 24.04 |
| | 4H | 18.29 | 19.39 | 18.70 | 19.74 | 20.12 | 23.47 | 24.57 | 23.87 | 24.92 | 25.30 |
| | 6H | 18.67 | 19.68 | 19.08 | 20.05 | 20.44 | 24.09 | 25.10 | 24.51 | 25.47 | 25.87 |
| | 8H | 18.79 | 19.75 | 19.22 | 20.15 | 20.55 | 24.23 | 25.19 | 24.66 | 25.58 | 25.98 |
| | 12H | 18.88 | 19.80 | 19.31 | 20.18 | 20.61 | 24.28 | 25.20 | 24.71 | 25.58 | 26.01 |
| 4H | 2H | 17.58 | 18.68 | 17.98 | 19.03 | 19.41 | 16.57 | 17.67 | 16.97 | 18.02 | 18.40 |
| | 3H | 18.60 | 19.51 | 19.02 | 19.92 | 20.32 | 22.93 | 23.84 | 23.34 | 24.24 | 24.64 |
| | 4H | 19.17 | 20.00 | 19.61 | 20.41 | 20.86 | 24.39 | 25.21 | 24.82 | 25.63 | 26.07 |
| | 6H | 19.67 | 20.38 | 20.13 | 20.83 | 21.29 | 25.14 | 25.85 | 25.60 | 26.30 | 26.77 |
| | 8H | 19.85 | 20.51 | 20.31 | 20.96 | 21.43 | 25.31 | 25.98 | 25.78 | 26.43 | 26.90 |
| | 12H | 19.98 | 20.57 | 20.47 | 21.05 | 21.53 | 25.40 | 25.98 | 25.88 | 26.47 | 26.94 |
| 8H | 4H | 20.30 | 20.96 | 20.77 | 21.41 | 21.88 | 24.53 | 25.20 | 25.00 | 25.65 | 26.12 |
| | 6H | 20.92 | 21.46 | 21.42 | 21.96 | 22.44 | 25.42 | 25.97 | 25.93 | 26.46 | 26.95 |
| | 8H | 21.15 | 21.64 | 21.67 | 22.15 | 22.65 | 25.67 | 26.16 | 26.19 | 26.67 | 27.17 |
| | 12H | 21.35 | 21.77 | 21.86 | 22.27 | 22.84 | 25.82 | 26.24 | 26.33 | 26.74 | 27.31 |
| 12H | 4H | 20.46 | 21.05 | 20.95 | 21.54 | 22.01 | 24.51 | 25.10 | 25.00 | 25.59 | 26.06 |
| | 6H | 21.19 | 21.68 | 21.71 | 22.19 | 22.69 | 25.43 | 25.92 | 25.95 | 26.43 | 26.92 |
| | 8H | 21.51 | 21.94 | 22.03 | 22.43 | 23.00 | 25.73 | 26.16 | 26.25 | 26.66 | 27.23 |