

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: P855469

Luminaire Tested: SQ2-F-150U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855469
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-050D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

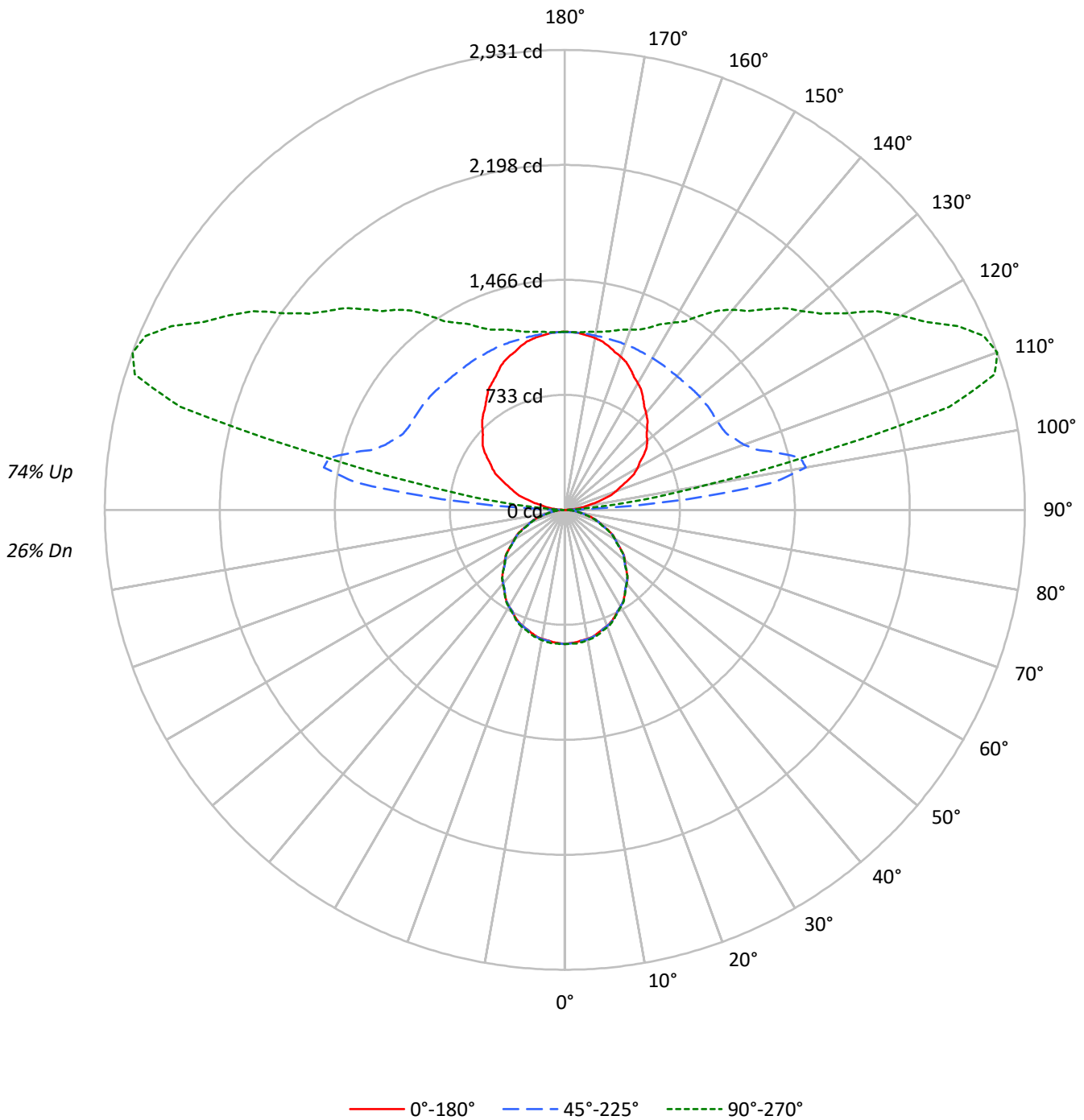
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9400.8 lumens
Efficiency: N/A
Efficacy: 126.4 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: Semi-Indirect

Input Watts (W): 74.4
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





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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 | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 70 | 70 | 70 | 51 | 51 | 51 | 34 | 34 | 34 | 26 | | | | 26 |
| 1 | 92 | 88 | 84 | 81 | 82 | 79 | 75 | 73 | 61 | 59 | 57 | 45 | 43 | 42 | 30 | 29 | 28 | 21 | | | | 21 |
| 2 | 84 | 77 | 71 | 66 | 74 | 69 | 64 | 59 | 53 | 50 | 47 | 39 | 37 | 35 | 26 | 25 | 24 | 18 | | | | 18 |
| 3 | 76 | 67 | 60 | 55 | 68 | 60 | 54 | 49 | 47 | 43 | 39 | 34 | 32 | 29 | 23 | 21 | 20 | 15 | | | | 15 |
| 4 | 70 | 59 | 52 | 46 | 62 | 53 | 47 | 42 | 41 | 37 | 33 | 31 | 28 | 25 | 20 | 19 | 17 | 13 | | | | 13 |
| 5 | 64 | 53 | 45 | 39 | 57 | 47 | 41 | 36 | 37 | 32 | 28 | 27 | 24 | 22 | 18 | 16 | 15 | 11 | | | | 11 |
| 6 | 59 | 47 | 39 | 34 | 52 | 42 | 36 | 31 | 33 | 28 | 25 | 25 | 21 | 19 | 17 | 15 | 13 | 10 | | | | 10 |
| 7 | 54 | 42 | 35 | 29 | 48 | 38 | 31 | 27 | 30 | 25 | 22 | 22 | 19 | 16 | 15 | 13 | 11 | 9 | | | | 9 |
| 8 | 50 | 38 | 31 | 26 | 44 | 34 | 28 | 23 | 27 | 22 | 19 | 20 | 17 | 15 | 14 | 12 | 10 | 8 | | | | 8 |
| 9 | 46 | 35 | 28 | 23 | 41 | 31 | 25 | 21 | 25 | 20 | 17 | 19 | 15 | 13 | 13 | 11 | 9 | 7 | | | | 7 |
| 10 | 43 | 32 | 25 | 20 | 39 | 29 | 22 | 18 | 23 | 18 | 15 | 17 | 14 | 12 | 12 | 10 | 8 | 6 | | | | 6 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13811 | 13811 | 13811 |
| 5° | 13713 | 13750 | 13864 |
| 10° | 13680 | 13719 | 13814 |
| 15° | 13598 | 13636 | 13772 |
| 20° | 13515 | 13536 | 13656 |
| 25° | 13392 | 13392 | 13473 |
| 30° | 13254 | 13254 | 13297 |
| 35° | 13094 | 13046 | 13139 |
| 40° | 12920 | 12872 | 12920 |
| 45° | 12721 | 12666 | 12721 |
| 50° | 12529 | 12411 | 12441 |
| 55° | 12237 | 12203 | 12138 |
| 60° | 11929 | 11854 | 11780 |
| 65° | 11576 | 11442 | 11308 |
| 70° | 10891 | 10839 | 10617 |
| 75° | 10249 | 10031 | 9744 |
| 80° | 9103 | 8889 | 8563 |
| 85° | 7336 | 6688 | 6262 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 12796 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 80.9 | 0.9 |
| 10°-20° | 231.0 | 2.5 |
| 20°-30° | 347.6 | 3.7 |
| 30°-40° | 415.9 | 4.4 |
| 40°-50° | 429.1 | 4.6 |
| 50°-60° | 387.1 | 4.1 |
| 60°-70° | 295.4 | 3.1 |
| 70°-80° | 169.8 | 1.8 |
| 80°-90° | 45.6 | 0.5 |
| 90°-100° | 432.0 | 4.6 |
| 100°-110° | 1414.7 | 15.0 |
| 110°-120° | 1398.6 | 14.9 |
| 120°-130° | 1143.3 | 12.2 |
| 130°-140° | 933.0 | 9.9 |
| 140°-150° | 726.1 | 7.7 |
| 150°-160° | 522.8 | 5.6 |
| 160°-170° | 319.8 | 3.4 |
| 170°-180° | 108.1 | 1.1 |
| 0°-30° | 659.5 | 7.0 |
| 0°-40° | 1075.4 | 11.4 |
| 0°-60° | 1891.7 | 20.1 |
| 0°-90° | 2402.5 | 25.6 |
| 90°-120° | 3245.3 | 34.5 |
| 90°-150° | 6047.6 | 64.3 |
| 90°-180° | 6998.0 | 74.4 |
| 0°-180° | 9400.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 855 | 855 | 855 | 855 | 855 | |
| 5° | 846 | 858 | 848 | 850 | 855 | 80 |
| 15° | 814 | 824 | 816 | 819 | 824 | 229 |
| 25° | 752 | 760 | 752 | 753 | 756 | 346 |
| 35° | 664 | 669 | 662 | 664 | 667 | 415 |
| 45° | 557 | 560 | 555 | 556 | 557 | 430 |
| 55° | 435 | 437 | 434 | 431 | 431 | 389 |
| 65° | 303 | 302 | 300 | 297 | 296 | 298 |
| 75° | 164 | 163 | 161 | 157 | 156 | 173 |
| 85° | 40 | 37 | 36 | 33 | 34 | 46 |
| 90° | 1 | 4 | 9 | 8 | 9 | 5 |
| 95° | 61 | 176 | 786 | 280 | 182 | 69 |
| 105° | 246 | 351 | 1404 | 2668 | 2534 | 259 |
| 115° | 443 | 529 | 1141 | 2358 | 2768 | 437 |
| 125° | 616 | 687 | 1124 | 1859 | 2184 | 548 |
| 135° | 742 | 821 | 1115 | 1604 | 1807 | 574 |
| 145° | 868 | 932 | 1113 | 1379 | 1511 | 544 |
| 155° | 989 | 1022 | 1120 | 1234 | 1282 | 455 |
| 165° | 1080 | 1090 | 1124 | 1168 | 1180 | 304 |
| 175° | 1129 | 1129 | 1130 | 1138 | 1136 | 107 |
| 180° | 1134 | 1134 | 1134 | 1134 | 1134 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 0° | 855.4 | 855.4 | 855.4 | 855.4 | 855.4 |
| 2.5° | 849.8 | 859.8 | 851.7 | 853.5 | 854.5 |
| 5° | 846.1 | 857.5 | 848.4 | 849.7 | 855.4 |
| 7.5° | 839.1 | 851.4 | 841.4 | 843.6 | 850.0 |
| 10° | 834.4 | 845.8 | 836.8 | 838.0 | 842.6 |
| 12.5° | 827.0 | 838.4 | 829.3 | 831.5 | 836.1 |
| 15° | 813.5 | 823.7 | 815.8 | 819.4 | 823.9 |
| 17.5° | 797.8 | 808.8 | 799.9 | 803.1 | 806.9 |
| 20° | 786.6 | 795.7 | 787.8 | 789.1 | 794.8 |
| 22.5° | 772.7 | 781.8 | 774.8 | 775.1 | 779.9 |
| 25° | 751.7 | 759.6 | 751.7 | 753.0 | 756.3 |
| 27.5° | 727.7 | 734.6 | 727.7 | 729.0 | 731.9 |
| 30° | 710.9 | 717.8 | 710.9 | 712.1 | 713.2 |
| 32.5° | 692.2 | 698.2 | 691.3 | 692.6 | 695.5 |
| 35° | 664.3 | 668.8 | 661.9 | 664.3 | 666.6 |
| 37.5° | 634.4 | 637.8 | 632.1 | 633.3 | 635.4 |
| 40° | 613.0 | 616.4 | 610.7 | 611.8 | 613.0 |
| 42.5° | 591.6 | 594.1 | 588.3 | 589.5 | 591.6 |
| 45° | 557.1 | 560.4 | 554.7 | 555.9 | 557.1 |
| 47.5° | 522.1 | 524.2 | 519.3 | 518.4 | 520.5 |
| 50° | 498.8 | 500.0 | 494.1 | 494.1 | 495.3 |
| 52.5° | 473.6 | 474.8 | 470.8 | 469.0 | 470.1 |
| 55° | 434.7 | 437.0 | 433.5 | 431.2 | 431.2 |
| 57.5° | 395.5 | 397.6 | 393.2 | 392.0 | 391.8 |
| 60° | 369.4 | 370.6 | 367.1 | 365.9 | 364.8 |
| 62.5° | 343.3 | 343.6 | 340.1 | 338.9 | 337.7 |
| 65° | 303.0 | 301.8 | 299.5 | 297.2 | 296.0 |
| 67.5° | 257.8 | 259.0 | 256.6 | 252.9 | 252.9 |
| 70° | 230.7 | 231.9 | 229.6 | 224.9 | 224.9 |
| 72.5° | 204.6 | 203.9 | 202.5 | 198.8 | 197.0 |
| 75° | 164.3 | 163.2 | 160.8 | 157.3 | 156.2 |
| 77.5° | 124.0 | 122.8 | 121.7 | 117.2 | 118.2 |
| 80° | 97.9 | 96.7 | 95.6 | 92.1 | 92.1 |
| 82.5° | 74.6 | 72.5 | 71.3 | 67.8 | 67.8 |
| 85° | 39.6 | 37.3 | 36.1 | 32.6 | 33.8 |
| 87.5° | 11.4 | 11.0 | 11.2 | 9.1 | 9.3 |
| 90° | 1.2 | 3.5 | 9.3 | 8.2 | 9.3 |
| 92.5° | 19.8 | 72.3 | 221.9 | 72.1 | 57.8 |
| 95° | 60.6 | 175.6 | 785.5 | 279.8 | 181.8 |
| 97.5° | 110.0 | 231.7 | 1347.6 | 815.2 | 505.3 |
| 100° | 144.5 | 260.7 | 1559.2 | 1392.4 | 922.9 |
| 102.5° | 183.7 | 297.2 | 1535.9 | 2051.7 | 1590.4 |
| 105° | 245.9 | 350.7 | 1404.2 | 2667.8 | 2534.5 |
| 107.5° | 307.2 | 403.3 | 1275.8 | 2725.5 | 2872.0 |
| 110° | 347.3 | 440.8 | 1214.2 | 2658.4 | 2930.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 385.5 | 476.2 | 1176.9 | 2541.7 | 2890.7 |
| 115° | 442.9 | 529.4 | 1140.8 | 2357.5 | 2767.6 |
| 117.5° | 498.6 | 579.4 | 1127.1 | 2176.3 | 2592.8 |
| 120° | 534.9 | 611.3 | 1123.3 | 2070.7 | 2476.2 |
| 122.5° | 567.6 | 642.0 | 1123.3 | 1979.6 | 2356.1 |
| 125° | 616.5 | 687.1 | 1124.5 | 1859.0 | 2183.8 |
| 127.5° | 658.0 | 729.9 | 1123.1 | 1770.2 | 2052.9 |
| 130° | 684.1 | 756.9 | 1122.2 | 1716.5 | 1971.7 |
| 132.5° | 707.4 | 782.1 | 1119.4 | 1670.3 | 1901.8 |
| 135° | 742.4 | 820.9 | 1115.2 | 1603.5 | 1807.4 |
| 137.5° | 779.2 | 857.0 | 1112.6 | 1533.8 | 1718.2 |
| 140° | 805.2 | 880.5 | 1111.7 | 1489.7 | 1664.1 |
| 142.5° | 831.3 | 902.0 | 1111.7 | 1442.8 | 1600.7 |
| 145° | 868.1 | 932.0 | 1112.8 | 1379.3 | 1511.4 |
| 147.5° | 906.8 | 959.9 | 1114.5 | 1324.0 | 1423.8 |
| 150° | 931.0 | 977.8 | 1116.3 | 1292.0 | 1376.2 |
| 152.5° | 955.3 | 996.5 | 1117.3 | 1265.5 | 1335.2 |
| 155° | 989.3 | 1022.4 | 1119.8 | 1234.0 | 1281.8 |
| 157.5° | 1019.8 | 1043.8 | 1122.4 | 1209.2 | 1243.8 |
| 160° | 1039.4 | 1058.9 | 1123.3 | 1195.1 | 1222.4 |
| 162.5° | 1056.2 | 1071.9 | 1123.3 | 1183.7 | 1203.7 |
| 165° | 1080.2 | 1090.5 | 1124.5 | 1168.0 | 1180.4 |
| 167.5° | 1100.5 | 1105.5 | 1125.9 | 1155.7 | 1162.5 |
| 170° | 1111.7 | 1114.0 | 1126.8 | 1149.1 | 1151.3 |
| 172.5° | 1120.1 | 1121.5 | 1129.6 | 1144.3 | 1144.8 |
| 175° | 1129.2 | 1129.2 | 1130.3 | 1138.5 | 1136.1 |
| 177.5° | 1133.8 | 1132.9 | 1132.0 | 1137.5 | 1133.8 |
| 180° | 1133.8 | 1133.8 | 1133.8 | 1133.8 | 1133.8 |



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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 | 14.24 | 14.92 | 15.38 | 16.05 | 17.63 | 14.16 | 14.84 | 15.30 | 15.97 | 17.56 |
| | 3H | 16.01 | 16.62 | 17.15 | 17.76 | 19.35 | 15.89 | 16.50 | 17.03 | 17.64 | 19.23 |
| | 4H | 16.66 | 17.24 | 17.81 | 18.38 | 19.98 | 16.50 | 17.08 | 17.66 | 18.22 | 19.83 |
| | 6H | 17.12 | 17.65 | 18.28 | 18.79 | 20.40 | 16.93 | 17.47 | 18.10 | 18.61 | 20.22 |
| | 8H | 17.25 | 17.76 | 18.42 | 18.91 | 20.52 | 17.05 | 17.55 | 18.21 | 18.71 | 20.32 |
| | 12H | 17.32 | 17.80 | 18.49 | 18.95 | 20.58 | 17.09 | 17.58 | 18.27 | 18.73 | 20.36 |
| 4H | 2H | 14.77 | 15.35 | 15.93 | 16.49 | 18.09 | 14.71 | 15.29 | 15.87 | 16.43 | 18.03 |
| | 3H | 16.74 | 17.22 | 17.91 | 18.39 | 20.00 | 16.63 | 17.11 | 17.80 | 18.28 | 19.89 |
| | 4H | 17.52 | 17.97 | 18.69 | 19.12 | 20.75 | 17.38 | 17.82 | 18.55 | 18.98 | 20.61 |
| | 6H | 18.10 | 18.48 | 19.28 | 19.66 | 21.28 | 17.92 | 18.30 | 19.10 | 19.48 | 21.10 |
| | 8H | 18.28 | 18.64 | 19.46 | 19.81 | 21.45 | 18.08 | 18.44 | 19.26 | 19.61 | 21.25 |
| | 12H | 18.38 | 18.70 | 19.57 | 19.88 | 21.52 | 18.15 | 18.47 | 19.34 | 19.65 | 21.30 |
| 8H | 4H | 17.75 | 18.11 | 18.93 | 19.28 | 20.92 | 17.63 | 17.98 | 18.80 | 19.15 | 20.79 |
| | 6H | 18.46 | 18.76 | 19.66 | 19.97 | 21.60 | 18.30 | 18.59 | 19.49 | 19.80 | 21.44 |
| | 8H | 18.73 | 18.98 | 19.93 | 20.17 | 21.83 | 18.54 | 18.79 | 19.74 | 19.98 | 21.64 |
| | 12H | 18.89 | 19.11 | 20.09 | 20.30 | 21.99 | 18.66 | 18.88 | 19.86 | 20.07 | 21.76 |
| 12H | 4H | 17.74 | 18.06 | 18.93 | 19.24 | 20.88 | 17.62 | 17.94 | 18.81 | 19.12 | 20.76 |
| | 6H | 18.50 | 18.76 | 19.70 | 19.95 | 21.60 | 18.35 | 18.60 | 19.55 | 19.79 | 21.45 |
| | 8H | 18.79 | 19.01 | 19.99 | 20.20 | 21.89 | 18.60 | 18.83 | 19.81 | 20.01 | 21.70 |