

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: P854042

Luminaire Tested: SQ2-PH1-100U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854042
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-100U-050D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

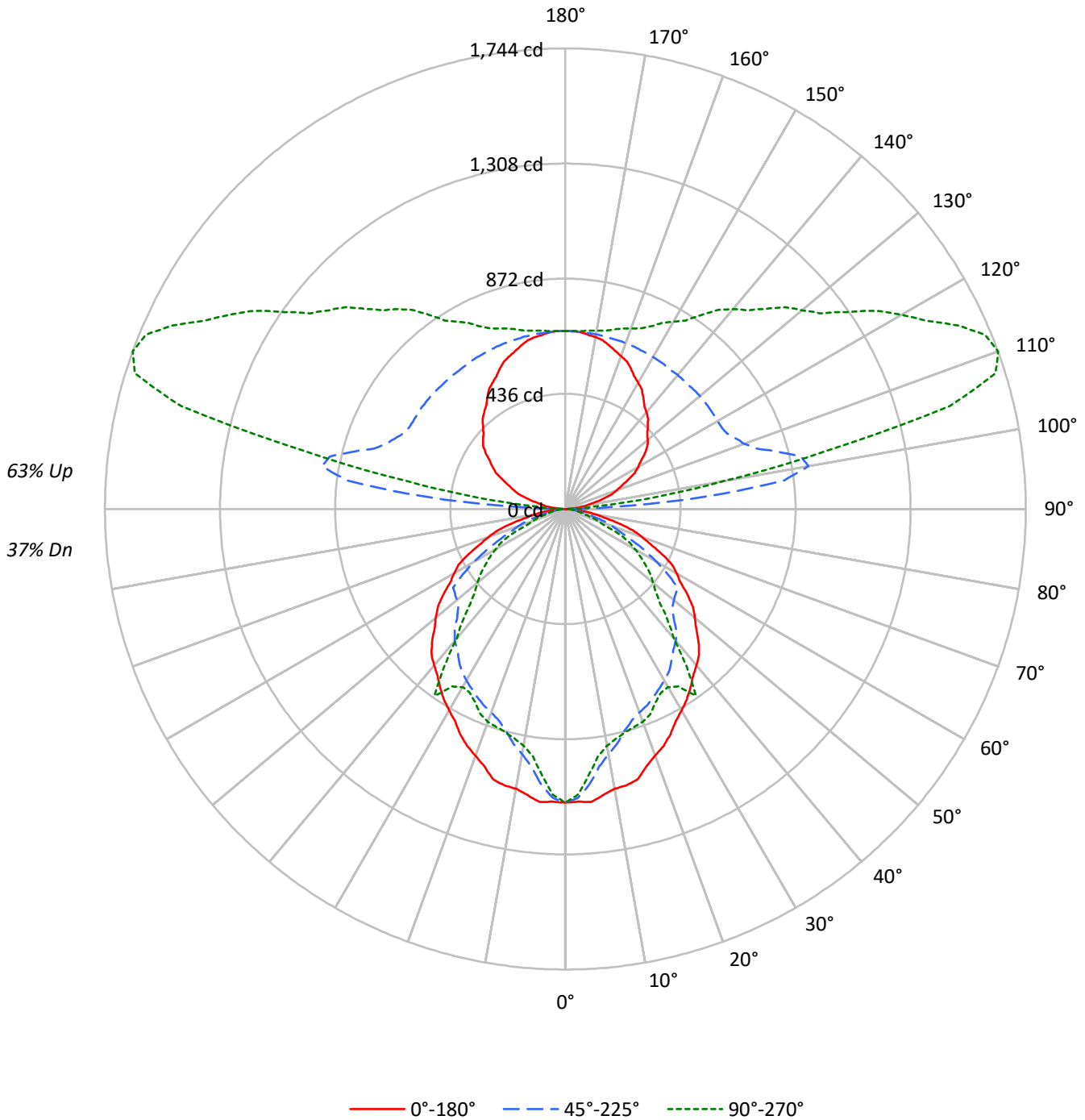
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6652.6 lumens
Efficiency: N/A
Efficacy: 132.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 50.4
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





TEST NUMBER: P854042

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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 76 | 76 | 76 | 59 | 59 | 59 | 44 | 44 | 44 | 37 |
| 1 | 95 | 91 | 87 | 84 | 86 | 83 | 79 | 77 | 67 | 65 | 63 | 53 | 51 | 50 | 39 | 38 | 38 | 32 |
| 2 | 87 | 79 | 74 | 69 | 78 | 72 | 67 | 63 | 59 | 55 | 52 | 46 | 44 | 42 | 35 | 33 | 32 | 27 |
| 3 | 79 | 70 | 63 | 57 | 71 | 64 | 58 | 53 | 52 | 47 | 44 | 41 | 38 | 35 | 31 | 29 | 27 | 23 |
| 4 | 72 | 62 | 54 | 48 | 65 | 56 | 50 | 45 | 46 | 41 | 37 | 36 | 33 | 30 | 28 | 25 | 23 | 19 |
| 5 | 66 | 55 | 47 | 41 | 60 | 50 | 43 | 38 | 41 | 36 | 32 | 33 | 29 | 26 | 25 | 22 | 20 | 17 |
| 6 | 61 | 49 | 41 | 36 | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 29 | 26 | 23 | 22 | 20 | 18 | 15 |
| 7 | 56 | 44 | 37 | 31 | 51 | 41 | 34 | 29 | 33 | 28 | 25 | 27 | 23 | 20 | 21 | 18 | 16 | 13 |
| 8 | 52 | 40 | 33 | 27 | 47 | 37 | 30 | 26 | 30 | 25 | 22 | 24 | 21 | 18 | 19 | 16 | 14 | 12 |
| 9 | 49 | 37 | 29 | 24 | 44 | 34 | 27 | 23 | 28 | 23 | 19 | 22 | 19 | 16 | 17 | 15 | 13 | 11 |
| 10 | 45 | 34 | 26 | 22 | 41 | 31 | 25 | 20 | 26 | 21 | 17 | 21 | 17 | 15 | 16 | 14 | 12 | 10 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 17949 | 17949 | 17949 |
| 5° | 18052 | 16973 | 16407 |
| 10° | 17638 | 15452 | 14914 |
| 15° | 17717 | 14534 | 14623 |
| 20° | 17084 | 14086 | 14740 |
| 25° | 16771 | 14020 | 14396 |
| 30° | 16408 | 13983 | 14514 |
| 35° | 16283 | 13823 | 17012 |
| 40° | 16297 | 13734 | 13489 |
| 45° | 16303 | 13212 | 11618 |
| 50° | 16076 | 13471 | 10894 |
| 55° | 15871 | 14621 | 10452 |
| 60° | 15713 | 12810 | 9804 |
| 65° | 15438 | 10384 | 8527 |
| 70° | 14582 | 8837 | 6090 |
| 75° | 13001 | 6662 | 4616 |
| 80° | 10618 | 4324 | 4324 |
| 85° | 6669 | 3927 | 2946 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16303 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.8 | 1.5 |
| 10°-20° | 257.3 | 3.9 |
| 20°-30° | 377.3 | 5.7 |
| 30°-40° | 456.9 | 6.9 |
| 40°-50° | 449.3 | 6.8 |
| 50°-60° | 391.1 | 5.9 |
| 60°-70° | 271.9 | 4.1 |
| 70°-80° | 128.9 | 1.9 |
| 80°-90° | 29.6 | 0.4 |
| 90°-100° | 281.3 | 4.2 |
| 100°-110° | 850.9 | 12.8 |
| 110°-120° | 830.6 | 12.5 |
| 120°-130° | 678.7 | 10.2 |
| 130°-140° | 554.0 | 8.3 |
| 140°-150° | 431.3 | 6.5 |
| 150°-160° | 310.9 | 4.7 |
| 160°-170° | 190.3 | 2.9 |
| 170°-180° | 64.3 | 1.0 |
| 0°-30° | 732.4 | 11.0 |
| 0°-40° | 1189.3 | 17.9 |
| 0°-60° | 2029.8 | 30.5 |
| 0°-90° | 2460.2 | 37.0 |
| 90°-120° | 1962.8 | 29.5 |
| 90°-150° | 3626.9 | 54.5 |
| 90°-180° | 4192.0 | 63.0 |
| 0°-180° | 6652.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1112 | 1112 | 1112 | 1112 | 1112 | |
| 5° | 1114 | 1113 | 1047 | 1014 | 1012 | 105 |
| 15° | 1060 | 944 | 870 | 863 | 875 | 295 |
| 25° | 941 | 801 | 787 | 811 | 808 | 433 |
| 35° | 826 | 668 | 701 | 762 | 863 | 517 |
| 45° | 714 | 529 | 579 | 599 | 509 | 549 |
| 55° | 564 | 412 | 519 | 374 | 371 | 504 |
| 65° | 404 | 283 | 272 | 223 | 223 | 397 |
| 75° | 208 | 144 | 107 | 76 | 74 | 221 |
| 85° | 36 | 24 | 21 | 17 | 16 | 48 |
| 90° | 0 | 2 | 13 | 7 | 6 | 3 |
| 95° | 35 | 110 | 531 | 196 | 124 | 41 |
| 105° | 148 | 208 | 835 | 1587 | 1508 | 155 |
| 115° | 263 | 314 | 676 | 1398 | 1642 | 260 |
| 125° | 368 | 408 | 666 | 1104 | 1300 | 327 |
| 135° | 441 | 488 | 662 | 952 | 1071 | 341 |
| 145° | 515 | 553 | 662 | 819 | 896 | 323 |
| 155° | 587 | 606 | 666 | 734 | 762 | 270 |
| 165° | 642 | 649 | 669 | 695 | 703 | 181 |
| 175° | 672 | 672 | 673 | 678 | 676 | 64 |
| 180° | 674 | 674 | 674 | 674 | 674 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1111.7 | 1111.7 | 1111.7 | 1111.7 | 1111.7 |
| 2.5° | 1109.2 | 1120.8 | 1094.8 | 1084.6 | 1083.0 |
| 5° | 1113.8 | 1112.8 | 1047.2 | 1014.4 | 1012.3 |
| 7.5° | 1093.5 | 1061.5 | 983.1 | 946.9 | 945.2 |
| 10° | 1075.8 | 1027.1 | 942.5 | 909.7 | 909.7 |
| 12.5° | 1071.5 | 994.8 | 909.5 | 885.3 | 890.2 |
| 15° | 1059.9 | 944.1 | 869.5 | 863.4 | 874.8 |
| 17.5° | 1021.4 | 896.7 | 838.4 | 852.2 | 865.5 |
| 20° | 994.3 | 871.2 | 819.8 | 845.4 | 857.9 |
| 22.5° | 971.5 | 846.7 | 806.2 | 834.3 | 840.9 |
| 25° | 941.4 | 800.8 | 787.0 | 811.2 | 808.1 |
| 27.5° | 905.5 | 758.6 | 767.7 | 782.6 | 784.4 |
| 30° | 880.1 | 733.2 | 750.0 | 765.1 | 778.5 |
| 32.5° | 855.5 | 703.7 | 730.5 | 766.3 | 797.1 |
| 35° | 826.1 | 667.9 | 701.3 | 761.8 | 863.1 |
| 37.5° | 795.2 | 625.6 | 671.9 | 722.8 | 755.0 |
| 40° | 773.2 | 595.3 | 651.6 | 714.4 | 640.0 |
| 42.5° | 749.5 | 571.6 | 621.1 | 702.3 | 576.5 |
| 45° | 714.0 | 528.9 | 578.6 | 598.8 | 508.8 |
| 47.5° | 672.1 | 495.7 | 549.8 | 499.3 | 464.2 |
| 50° | 640.0 | 473.4 | 536.3 | 456.4 | 433.7 |
| 52.5° | 608.6 | 450.4 | 527.0 | 421.1 | 405.8 |
| 55° | 563.8 | 411.8 | 519.4 | 374.4 | 371.3 |
| 57.5° | 516.2 | 372.4 | 459.3 | 333.7 | 339.1 |
| 60° | 486.6 | 347.0 | 396.7 | 309.8 | 303.6 |
| 62.5° | 455.3 | 322.3 | 338.3 | 279.3 | 273.1 |
| 65° | 404.1 | 283.1 | 271.8 | 223.2 | 223.2 |
| 67.5° | 347.8 | 242.3 | 220.2 | 182.6 | 157.8 |
| 70° | 308.9 | 215.8 | 187.2 | 145.6 | 129.0 |
| 72.5° | 267.4 | 187.6 | 153.4 | 119.3 | 100.3 |
| 75° | 208.4 | 144.3 | 106.8 | 76.1 | 74.0 |
| 77.5° | 150.6 | 103.9 | 71.9 | 56.5 | 56.7 |
| 80° | 114.2 | 79.1 | 46.5 | 45.5 | 46.5 |
| 82.5° | 80.4 | 54.3 | 34.7 | 36.2 | 36.4 |
| 85° | 36.0 | 23.6 | 21.2 | 16.9 | 15.9 |
| 87.5° | 7.6 | 7.2 | 6.8 | 5.7 | 5.5 |
| 90° | 0.0 | 2.1 | 12.7 | 7.4 | 6.3 |
| 92.5° | 11.8 | 47.8 | 171.7 | 57.0 | 41.0 |
| 95° | 34.9 | 110.4 | 530.9 | 196.1 | 123.7 |
| 97.5° | 67.5 | 140.5 | 836.7 | 553.6 | 337.1 |
| 100° | 87.8 | 159.1 | 934.8 | 903.8 | 607.0 |
| 102.5° | 110.6 | 179.5 | 914.5 | 1267.6 | 1010.5 |
| 105° | 148.0 | 208.0 | 835.4 | 1586.6 | 1508.0 |
| 107.5° | 183.6 | 240.9 | 759.3 | 1618.1 | 1709.1 |
| 110° | 207.3 | 262.1 | 721.2 | 1578.4 | 1743.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 230.1 | 283.3 | 698.4 | 1511.7 | 1721.0 |
| 115° | 263.3 | 314.0 | 675.7 | 1398.3 | 1642.3 |
| 117.5° | 296.3 | 344.3 | 667.7 | 1292.0 | 1541.8 |
| 120° | 318.3 | 363.8 | 665.2 | 1230.0 | 1469.9 |
| 122.5° | 338.6 | 381.6 | 665.2 | 1175.5 | 1397.1 |
| 125° | 368.0 | 408.3 | 666.2 | 1104.2 | 1299.6 |
| 127.5° | 391.9 | 433.7 | 665.2 | 1050.5 | 1217.2 |
| 130° | 407.1 | 450.6 | 665.2 | 1019.7 | 1170.6 |
| 132.5° | 420.7 | 464.9 | 664.3 | 991.5 | 1130.9 |
| 135° | 441.0 | 487.5 | 662.0 | 952.3 | 1071.2 |
| 137.5° | 463.6 | 507.9 | 662.0 | 910.5 | 1020.7 |
| 140° | 478.0 | 521.4 | 662.0 | 883.3 | 987.7 |
| 142.5° | 492.4 | 534.1 | 661.1 | 858.4 | 949.6 |
| 145° | 515.0 | 553.3 | 662.0 | 819.2 | 895.7 |
| 147.5° | 537.6 | 570.1 | 663.3 | 786.8 | 845.6 |
| 150° | 552.0 | 582.0 | 664.1 | 768.9 | 818.5 |
| 152.5° | 565.5 | 592.2 | 664.9 | 753.4 | 794.0 |
| 155° | 586.9 | 606.5 | 666.2 | 734.5 | 762.4 |
| 157.5° | 605.5 | 621.4 | 667.5 | 720.6 | 740.0 |
| 160° | 616.5 | 630.0 | 668.3 | 712.0 | 726.5 |
| 162.5° | 627.5 | 637.6 | 669.2 | 704.3 | 716.3 |
| 165° | 641.9 | 649.1 | 669.4 | 695.0 | 703.2 |
| 167.5° | 654.2 | 657.9 | 670.7 | 687.7 | 691.2 |
| 170° | 660.9 | 663.0 | 671.5 | 684.2 | 685.3 |
| 172.5° | 665.2 | 666.4 | 671.5 | 680.8 | 681.0 |
| 175° | 671.5 | 671.5 | 672.6 | 677.8 | 675.7 |
| 177.5° | 674.5 | 673.6 | 672.8 | 675.3 | 673.6 |
| 180° | 673.6 | 673.6 | 673.6 | 673.6 | 673.6 |



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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 | 16.02 | 16.77 | 17.08 | 17.83 | 19.28 | 14.69 | 15.44 | 15.76 | 16.51 | 17.95 |
| | 3H | 18.04 | 18.71 | 19.11 | 19.78 | 21.24 | 15.72 | 16.39 | 16.79 | 17.46 | 18.93 |
| | 4H | 18.76 | 19.40 | 19.85 | 20.47 | 21.94 | 15.93 | 16.56 | 17.01 | 17.64 | 19.11 |
| | 6H | 19.24 | 19.83 | 20.33 | 20.90 | 22.39 | 16.06 | 16.65 | 17.16 | 17.73 | 19.21 |
| | 8H | 19.36 | 19.92 | 20.46 | 21.01 | 22.49 | 16.09 | 16.65 | 17.19 | 17.74 | 19.22 |
| | 12H | 19.40 | 19.93 | 20.50 | 21.02 | 22.52 | 16.09 | 16.62 | 17.19 | 17.70 | 19.20 |
| 4H | 2H | 16.38 | 17.02 | 17.47 | 18.09 | 19.56 | 15.32 | 15.96 | 16.41 | 17.03 | 18.50 |
| | 3H | 18.48 | 19.01 | 19.57 | 20.11 | 21.59 | 16.49 | 17.02 | 17.59 | 18.12 | 19.60 |
| | 4H | 19.29 | 19.77 | 20.39 | 20.86 | 22.37 | 16.76 | 17.24 | 17.86 | 18.34 | 19.84 |
| | 6H | 19.87 | 20.28 | 20.98 | 21.40 | 22.89 | 16.96 | 17.38 | 18.07 | 18.49 | 19.99 |
| | 8H | 20.03 | 20.42 | 21.14 | 21.53 | 23.04 | 17.01 | 17.40 | 18.12 | 18.51 | 20.02 |
| | 12H | 20.09 | 20.45 | 21.22 | 21.57 | 23.09 | 17.02 | 17.37 | 18.14 | 18.49 | 20.01 |
| 8H | 4H | 19.30 | 19.68 | 20.41 | 20.79 | 22.30 | 16.97 | 17.35 | 18.08 | 18.46 | 19.97 |
| | 6H | 19.94 | 20.26 | 21.07 | 21.41 | 22.92 | 17.23 | 17.55 | 18.36 | 18.70 | 20.21 |
| | 8H | 20.17 | 20.45 | 21.31 | 21.58 | 23.11 | 17.33 | 17.61 | 18.47 | 18.74 | 20.28 |
| | 12H | 20.28 | 20.52 | 21.42 | 21.65 | 23.22 | 17.37 | 17.62 | 18.52 | 18.75 | 20.31 |
| 12H | 4H | 19.24 | 19.59 | 20.37 | 20.71 | 22.23 | 16.96 | 17.31 | 18.08 | 18.43 | 19.95 |
| | 6H | 19.92 | 20.20 | 21.05 | 21.33 | 22.86 | 17.26 | 17.54 | 18.40 | 18.67 | 20.20 |
| | 8H | 20.14 | 20.39 | 21.28 | 21.52 | 23.08 | 17.37 | 17.62 | 18.51 | 18.75 | 20.31 |