

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: P854958

Luminaire Tested: SQ2-PH1-075U-075D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854958
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-075U-075D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 750 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

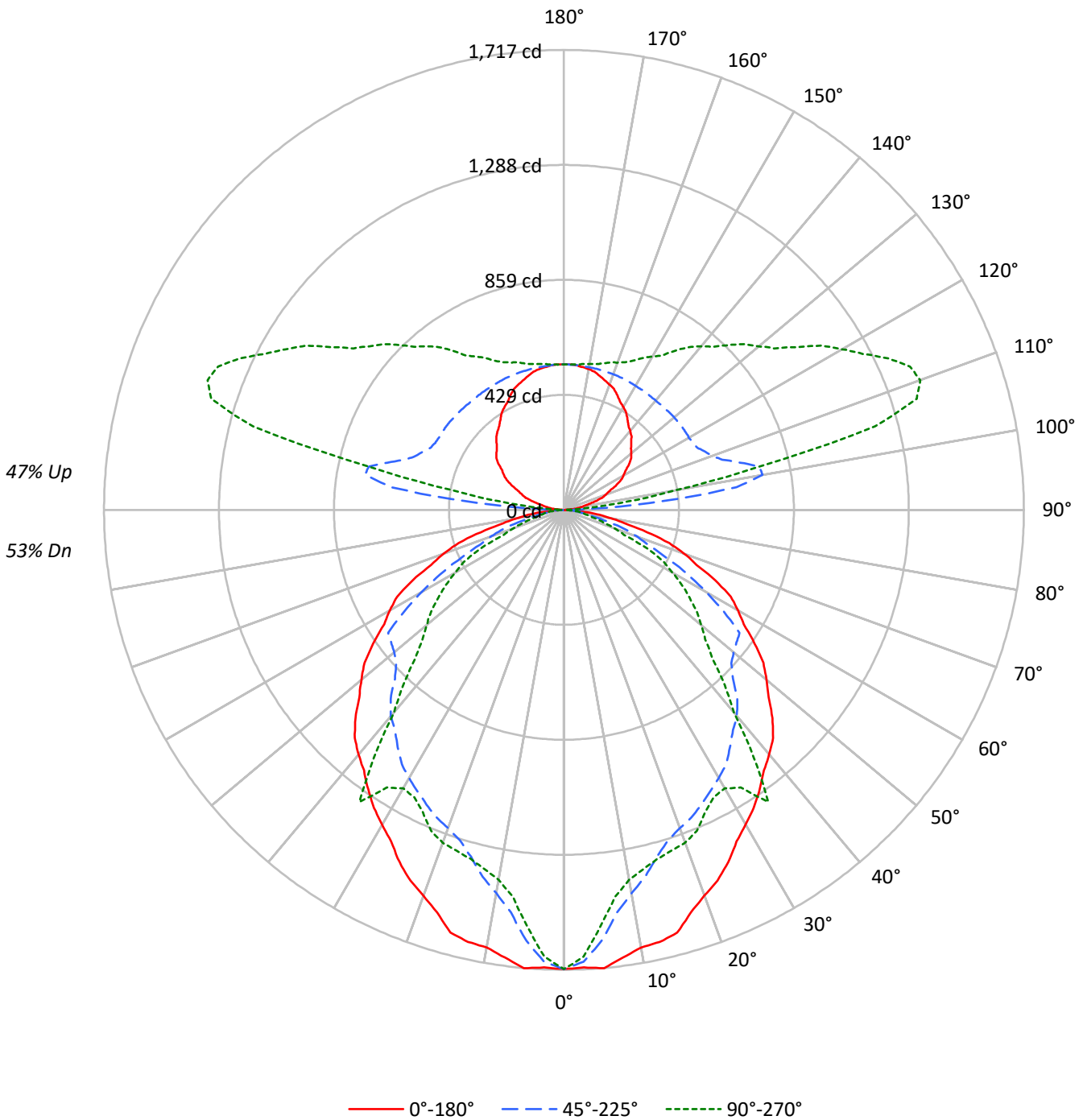
Lumens per Lamp: N/A
Luminaire Lumens: 7157.6 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 50
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 | | | | |
| RC | 80 | | | | | 70 | | | | | 50 | | | | | 30 | | | | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 | | |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 71 | 71 | 71 | 59 | 59 | 59 | 53 | | |
| 1 | 99 | 94 | 91 | 87 | 91 | 88 | 84 | 81 | 75 | 73 | 70 | 63 | 62 | 60 | 52 | 51 | 50 | 45 | | |
| 2 | 90 | 83 | 77 | 72 | 83 | 77 | 72 | 67 | 66 | 62 | 59 | 56 | 53 | 50 | 46 | 44 | 43 | 38 | | |
| 3 | 82 | 73 | 65 | 60 | 76 | 68 | 61 | 56 | 58 | 53 | 49 | 49 | 46 | 43 | 41 | 39 | 36 | 32 | | |
| 4 | 75 | 64 | 57 | 51 | 69 | 60 | 53 | 48 | 52 | 46 | 42 | 44 | 40 | 37 | 37 | 34 | 31 | 28 | | |
| 5 | 69 | 57 | 49 | 43 | 64 | 54 | 46 | 41 | 46 | 41 | 36 | 40 | 35 | 32 | 33 | 30 | 27 | 24 | | |
| 6 | 64 | 52 | 43 | 38 | 59 | 48 | 41 | 36 | 42 | 36 | 32 | 36 | 31 | 28 | 30 | 27 | 24 | 21 | | |
| 7 | 59 | 47 | 39 | 33 | 54 | 44 | 36 | 31 | 38 | 32 | 28 | 33 | 28 | 25 | 28 | 24 | 21 | 19 | | |
| 8 | 55 | 42 | 35 | 29 | 51 | 40 | 33 | 28 | 35 | 29 | 25 | 30 | 25 | 22 | 25 | 22 | 19 | 17 | | |
| 9 | 51 | 39 | 31 | 26 | 47 | 36 | 29 | 25 | 32 | 26 | 22 | 27 | 23 | 20 | 23 | 20 | 17 | 15 | | |
| 10 | 48 | 35 | 28 | 23 | 44 | 33 | 27 | 22 | 29 | 24 | 20 | 25 | 21 | 18 | 22 | 18 | 16 | 14 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 27679 | 27679 | 27679 |
| 5° | 27835 | 26172 | 25298 |
| 10° | 27196 | 23825 | 22997 |
| 15° | 27318 | 22410 | 22547 |
| 20° | 26344 | 21720 | 22727 |
| 25° | 25860 | 21618 | 22199 |
| 30° | 25299 | 21559 | 22380 |
| 35° | 25109 | 21313 | 26233 |
| 40° | 25130 | 21176 | 20799 |
| 45° | 25138 | 20372 | 17915 |
| 50° | 24787 | 20773 | 16799 |
| 55° | 24473 | 22542 | 16113 |
| 60° | 24228 | 19753 | 15116 |
| 65° | 23805 | 16011 | 13150 |
| 70° | 22480 | 13629 | 9394 |
| 75° | 20044 | 10274 | 7124 |
| 80° | 16383 | 6676 | 6676 |
| 85° | 10263 | 6058 | 4520 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25138 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 150.8 | 2.1 |
| 10°-20° | 396.8 | 5.5 |
| 20°-30° | 581.8 | 8.1 |
| 30°-40° | 704.5 | 9.8 |
| 40°-50° | 692.8 | 9.7 |
| 50°-60° | 603.1 | 8.4 |
| 60°-70° | 419.3 | 5.9 |
| 70°-80° | 198.8 | 2.8 |
| 80°-90° | 44.4 | 0.6 |
| 90°-100° | 205.6 | 2.9 |
| 100°-110° | 681.5 | 9.5 |
| 110°-120° | 676.3 | 9.4 |
| 120°-130° | 550.9 | 7.7 |
| 130°-140° | 447.7 | 6.3 |
| 140°-150° | 347.7 | 4.9 |
| 150°-160° | 250.5 | 3.5 |
| 160°-170° | 153.4 | 2.1 |
| 170°-180° | 51.8 | 0.7 |
| 0°-30° | 1129.3 | 15.8 |
| 0°-40° | 1833.9 | 25.6 |
| 0°-60° | 3129.8 | 43.7 |
| 0°-90° | 3792.2 | 53.0 |
| 90°-120° | 1563.3 | 21.8 |
| 90°-150° | 2909.7 | 40.7 |
| 90°-180° | 3365.0 | 47.0 |
| 0°-180° | 7157.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1714 | 1714 | 1714 | 1714 | 1714 | |
| 5° | 1717 | 1716 | 1615 | 1564 | 1561 | 161 |
| 15° | 1634 | 1456 | 1341 | 1331 | 1349 | 456 |
| 25° | 1452 | 1235 | 1214 | 1251 | 1246 | 668 |
| 35° | 1274 | 1030 | 1081 | 1175 | 1331 | 798 |
| 45° | 1101 | 816 | 892 | 923 | 785 | 846 |
| 55° | 869 | 635 | 801 | 577 | 572 | 777 |
| 65° | 623 | 436 | 419 | 344 | 344 | 612 |
| 75° | 321 | 222 | 165 | 117 | 114 | 340 |
| 85° | 55 | 36 | 33 | 26 | 24 | 74 |
| 90° | 0 | 1 | 3 | 4 | 4 | 3 |
| 95° | 29 | 86 | 372 | 133 | 89 | 33 |
| 105° | 119 | 170 | 682 | 1287 | 1203 | 126 |
| 115° | 213 | 254 | 549 | 1143 | 1337 | 210 |
| 125° | 297 | 330 | 539 | 898 | 1059 | 264 |
| 135° | 356 | 392 | 535 | 771 | 870 | 275 |
| 145° | 413 | 444 | 533 | 663 | 726 | 259 |
| 155° | 472 | 488 | 537 | 592 | 614 | 217 |
| 165° | 518 | 523 | 539 | 561 | 566 | 146 |
| 175° | 541 | 541 | 542 | 546 | 545 | 51 |
| 180° | 544 | 544 | 544 | 544 | 544 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1714.3 | 1714.3 | 1714.3 | 1714.3 | 1714.3 |
| 2.5° | 1710.3 | 1728.2 | 1688.2 | 1672.4 | 1669.8 |
| 5° | 1717.4 | 1715.9 | 1614.8 | 1564.1 | 1560.9 |
| 7.5° | 1686.1 | 1636.7 | 1515.9 | 1460.0 | 1457.5 |
| 10° | 1658.8 | 1583.8 | 1453.2 | 1402.7 | 1402.7 |
| 12.5° | 1652.2 | 1533.9 | 1402.3 | 1365.0 | 1372.7 |
| 15° | 1634.3 | 1455.7 | 1340.7 | 1331.3 | 1348.9 |
| 17.5° | 1575.0 | 1382.6 | 1292.8 | 1314.1 | 1334.5 |
| 20° | 1533.2 | 1343.4 | 1264.1 | 1303.6 | 1322.7 |
| 22.5° | 1498.0 | 1305.7 | 1243.1 | 1286.4 | 1296.7 |
| 25° | 1451.6 | 1234.8 | 1213.5 | 1250.9 | 1246.1 |
| 27.5° | 1396.1 | 1169.8 | 1183.8 | 1206.7 | 1209.6 |
| 30° | 1357.0 | 1130.5 | 1156.4 | 1179.7 | 1200.4 |
| 32.5° | 1319.2 | 1085.1 | 1126.3 | 1181.6 | 1229.1 |
| 35° | 1273.9 | 1029.8 | 1081.3 | 1174.6 | 1330.9 |
| 37.5° | 1226.2 | 964.7 | 1036.0 | 1114.5 | 1164.2 |
| 40° | 1192.3 | 918.0 | 1004.7 | 1101.6 | 986.8 |
| 42.5° | 1155.7 | 881.4 | 957.8 | 1082.8 | 888.9 |
| 45° | 1100.9 | 815.5 | 892.2 | 923.3 | 784.6 |
| 47.5° | 1036.3 | 764.3 | 847.9 | 770.0 | 715.7 |
| 50° | 986.8 | 730.1 | 827.0 | 703.8 | 668.8 |
| 52.5° | 938.5 | 694.6 | 812.6 | 649.2 | 625.7 |
| 55° | 869.4 | 634.9 | 800.8 | 577.3 | 572.4 |
| 57.5° | 796.0 | 574.3 | 708.2 | 514.7 | 522.9 |
| 60° | 750.3 | 535.0 | 611.7 | 477.7 | 468.1 |
| 62.5° | 702.0 | 496.9 | 521.6 | 430.7 | 421.2 |
| 65° | 623.1 | 436.4 | 419.1 | 344.2 | 344.2 |
| 67.5° | 536.3 | 373.6 | 339.5 | 281.6 | 243.3 |
| 70° | 476.2 | 332.7 | 288.7 | 224.5 | 199.0 |
| 72.5° | 412.3 | 289.2 | 236.5 | 184.0 | 154.7 |
| 75° | 321.3 | 222.4 | 164.7 | 117.4 | 114.2 |
| 77.5° | 232.2 | 160.2 | 110.9 | 87.1 | 87.4 |
| 80° | 176.2 | 121.9 | 71.8 | 70.2 | 71.8 |
| 82.5° | 123.9 | 83.8 | 53.5 | 55.7 | 56.1 |
| 85° | 55.4 | 36.3 | 32.7 | 26.0 | 24.4 |
| 87.5° | 11.8 | 10.7 | 7.2 | 7.5 | 7.5 |
| 90° | 0.0 | 1.1 | 3.4 | 4.5 | 4.5 |
| 92.5° | 9.0 | 34.7 | 102.4 | 33.2 | 27.9 |
| 95° | 29.3 | 86.5 | 372.5 | 133.0 | 88.9 |
| 97.5° | 53.8 | 113.6 | 650.2 | 379.2 | 239.7 |
| 100° | 70.9 | 128.1 | 752.9 | 646.6 | 428.7 |
| 102.5° | 89.8 | 145.3 | 746.6 | 988.2 | 746.6 |
| 105° | 119.3 | 169.9 | 682.0 | 1286.7 | 1203.0 |
| 107.5° | 149.5 | 194.6 | 620.0 | 1317.0 | 1380.6 |
| 110° | 166.5 | 211.7 | 588.6 | 1286.9 | 1415.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 184.5 | 228.8 | 569.6 | 1233.8 | 1397.7 |
| 115° | 212.7 | 254.5 | 549.2 | 1143.3 | 1336.9 |
| 117.5° | 240.6 | 277.8 | 541.7 | 1056.8 | 1260.0 |
| 120° | 257.7 | 294.0 | 539.1 | 1002.7 | 1199.6 |
| 122.5° | 273.1 | 308.4 | 539.1 | 958.2 | 1140.3 |
| 125° | 297.1 | 330.1 | 539.1 | 898.3 | 1059.0 |
| 127.5° | 316.9 | 349.3 | 537.7 | 853.0 | 990.3 |
| 130° | 328.6 | 362.7 | 536.8 | 826.5 | 949.7 |
| 132.5° | 339.4 | 374.4 | 535.9 | 804.7 | 915.6 |
| 135° | 355.6 | 391.9 | 534.6 | 770.9 | 869.9 |
| 137.5° | 373.1 | 408.2 | 533.2 | 738.2 | 825.6 |
| 140° | 384.9 | 419.0 | 532.3 | 716.4 | 796.8 |
| 142.5° | 395.7 | 428.9 | 533.2 | 694.7 | 766.1 |
| 145° | 413.0 | 443.8 | 533.4 | 663.1 | 725.9 |
| 147.5° | 431.7 | 457.5 | 533.7 | 636.4 | 683.1 |
| 150° | 443.4 | 466.5 | 534.6 | 620.9 | 660.6 |
| 152.5° | 454.2 | 476.5 | 535.5 | 608.2 | 639.8 |
| 155° | 471.5 | 488.0 | 536.8 | 592.5 | 614.4 |
| 157.5° | 488.4 | 501.2 | 538.2 | 581.3 | 596.9 |
| 160° | 497.4 | 508.5 | 539.1 | 573.1 | 585.2 |
| 162.5° | 506.4 | 514.8 | 539.1 | 567.6 | 577.1 |
| 165° | 517.6 | 523.1 | 539.1 | 560.6 | 566.0 |
| 167.5° | 528.0 | 530.8 | 540.2 | 554.2 | 557.1 |
| 170° | 533.4 | 534.6 | 540.2 | 551.4 | 552.5 |
| 172.5° | 537.1 | 538.1 | 541.0 | 548.7 | 548.9 |
| 175° | 541.2 | 541.2 | 542.4 | 545.8 | 544.6 |
| 177.5° | 543.5 | 543.5 | 542.6 | 544.4 | 542.6 |
| 180° | 543.5 | 543.5 | 543.5 | 543.5 | 543.5 |



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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 | 19.14 | 20.02 | 20.07 | 20.97 | 22.20 | 17.81 | 18.69 | 18.74 | 19.64 | 20.87 |
| | 3H | 21.16 | 21.95 | 22.11 | 22.91 | 24.16 | 18.85 | 19.63 | 19.79 | 20.59 | 21.84 |
| | 4H | 21.90 | 22.64 | 22.85 | 23.60 | 24.87 | 19.06 | 19.81 | 20.02 | 20.77 | 22.03 |
| | 6H | 22.38 | 23.07 | 23.35 | 24.04 | 25.31 | 19.21 | 19.89 | 20.18 | 20.86 | 22.14 |
| | 8H | 22.51 | 23.16 | 23.48 | 24.15 | 25.42 | 19.24 | 19.89 | 20.22 | 20.88 | 22.15 |
| | 12H | 22.55 | 23.17 | 23.54 | 24.15 | 25.45 | 19.24 | 19.86 | 20.22 | 20.84 | 22.13 |
| 4H | 2H | 19.52 | 20.26 | 20.48 | 21.22 | 22.48 | 18.45 | 19.20 | 19.42 | 20.16 | 21.42 |
| | 3H | 21.62 | 22.24 | 22.60 | 23.24 | 24.51 | 19.64 | 20.26 | 20.61 | 21.25 | 22.52 |
| | 4H | 22.44 | 23.00 | 23.42 | 23.99 | 25.29 | 19.91 | 20.48 | 20.90 | 21.46 | 22.76 |
| | 6H | 23.03 | 23.51 | 24.02 | 24.52 | 25.82 | 20.12 | 20.61 | 21.12 | 21.62 | 22.92 |
| | 8H | 23.20 | 23.65 | 24.19 | 24.65 | 25.96 | 20.18 | 20.63 | 21.18 | 21.64 | 22.95 |
| | 12H | 23.26 | 23.67 | 24.28 | 24.69 | 26.01 | 20.19 | 20.60 | 21.20 | 21.62 | 22.93 |
| 8H | 4H | 22.46 | 22.91 | 23.46 | 23.92 | 25.23 | 20.13 | 20.58 | 21.13 | 21.59 | 22.90 |
| | 6H | 23.11 | 23.49 | 24.13 | 24.53 | 25.84 | 20.40 | 20.78 | 21.43 | 21.82 | 23.13 |
| | 8H | 23.34 | 23.67 | 24.37 | 24.70 | 26.03 | 20.51 | 20.84 | 21.54 | 21.87 | 23.20 |
| | 12H | 23.45 | 23.74 | 24.48 | 24.77 | 26.14 | 20.55 | 20.84 | 21.58 | 21.87 | 23.24 |
| 12H | 4H | 22.41 | 22.82 | 23.43 | 23.84 | 25.16 | 20.13 | 20.54 | 21.14 | 21.56 | 22.87 |
| | 6H | 23.08 | 23.42 | 24.12 | 24.45 | 25.78 | 20.43 | 20.76 | 21.46 | 21.80 | 23.12 |
| | 8H | 23.32 | 23.61 | 24.35 | 24.63 | 26.01 | 20.55 | 20.84 | 21.58 | 21.87 | 23.24 |