

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: P854073

Luminaire Tested: SQ2-PH1-150U-125D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854073
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-150U-125D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

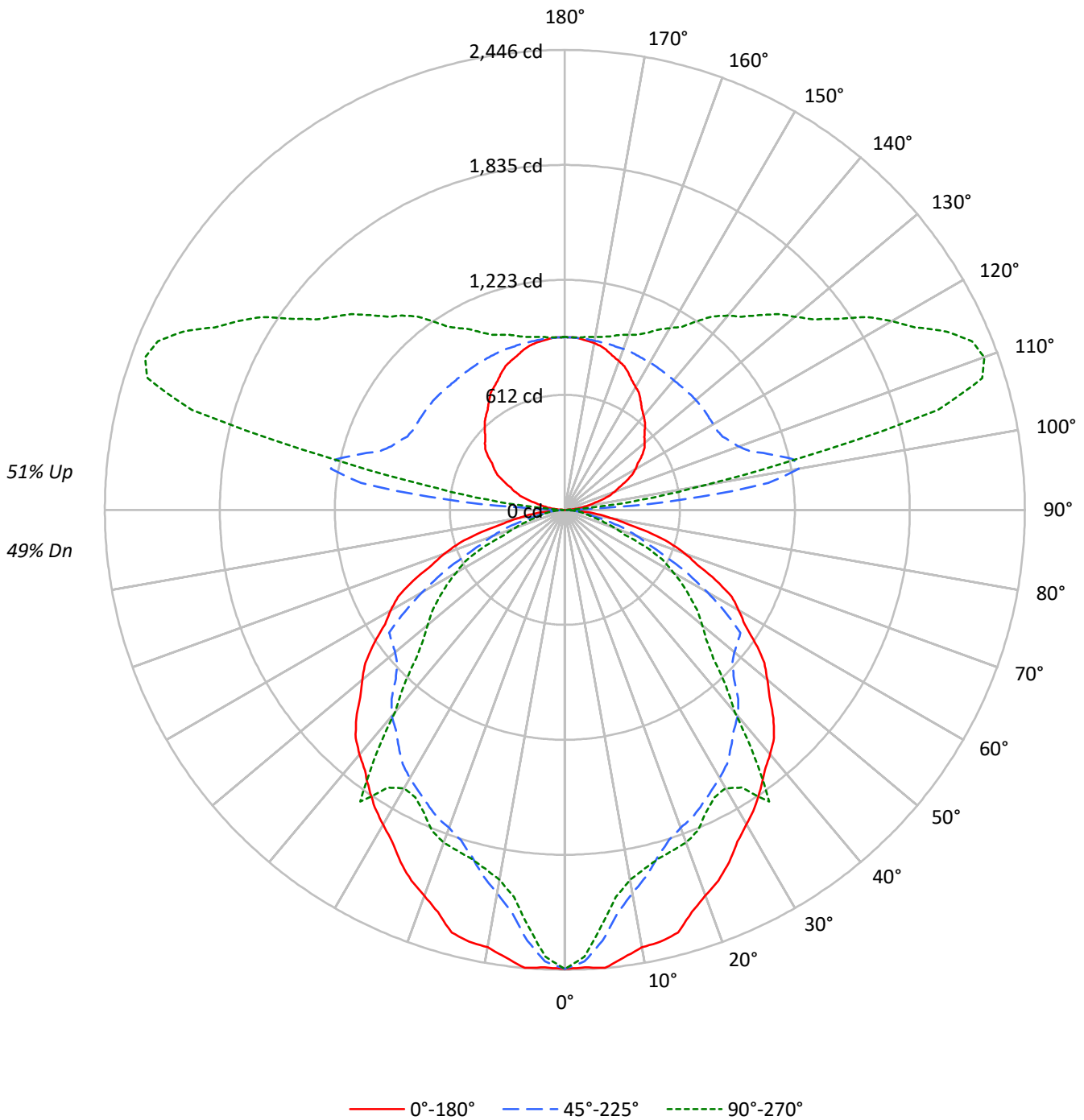
Lumens per Lamp: N/A
Luminaire Lumens: 11070.3 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 105.8
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 83 | 83 | 83 | 68 | 68 | 68 | 55 | 55 | 55 | 49 |
| 1 | 98 | 94 | 90 | 86 | 90 | 86 | 83 | 80 | 73 | 70 | 68 | 60 | 59 | 57 | 49 | 48 | 47 | 42 |
| 2 | 89 | 82 | 76 | 71 | 82 | 76 | 70 | 66 | 64 | 60 | 57 | 53 | 50 | 48 | 43 | 41 | 40 | 35 |
| 3 | 81 | 72 | 65 | 59 | 75 | 67 | 60 | 55 | 57 | 52 | 48 | 47 | 44 | 41 | 38 | 36 | 34 | 30 |
| 4 | 74 | 64 | 56 | 50 | 68 | 59 | 52 | 47 | 50 | 45 | 41 | 42 | 38 | 35 | 34 | 32 | 29 | 26 |
| 5 | 68 | 57 | 49 | 43 | 63 | 53 | 46 | 40 | 45 | 39 | 35 | 38 | 34 | 30 | 31 | 28 | 26 | 22 |
| 6 | 63 | 51 | 43 | 37 | 58 | 47 | 40 | 35 | 41 | 35 | 31 | 34 | 30 | 27 | 28 | 25 | 23 | 20 |
| 7 | 58 | 46 | 38 | 33 | 54 | 43 | 36 | 31 | 37 | 31 | 27 | 31 | 27 | 24 | 26 | 22 | 20 | 17 |
| 8 | 54 | 42 | 34 | 29 | 50 | 39 | 32 | 27 | 33 | 28 | 24 | 28 | 24 | 21 | 24 | 20 | 18 | 16 |
| 9 | 50 | 38 | 31 | 26 | 46 | 36 | 29 | 24 | 31 | 25 | 22 | 26 | 22 | 19 | 22 | 19 | 16 | 14 |
| 10 | 47 | 35 | 28 | 23 | 43 | 33 | 26 | 22 | 28 | 23 | 19 | 24 | 20 | 17 | 20 | 17 | 15 | 13 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 39417 | 39417 | 39417 |
| 5° | 39642 | 37271 | 36028 |
| 10° | 38730 | 33931 | 32750 |
| 15° | 38903 | 31915 | 32110 |
| 20° | 37515 | 30931 | 32368 |
| 25° | 36829 | 30788 | 31614 |
| 30° | 36031 | 30704 | 31873 |
| 35° | 35757 | 30354 | 37359 |
| 40° | 35789 | 30157 | 29619 |
| 45° | 35801 | 29012 | 25512 |
| 50° | 35299 | 29582 | 23920 |
| 55° | 34849 | 32104 | 22950 |
| 60° | 34504 | 28126 | 21526 |
| 65° | 33899 | 22808 | 18724 |
| 70° | 32021 | 19407 | 13379 |
| 75° | 28546 | 14635 | 10143 |
| 80° | 23329 | 9503 | 9503 |
| 85° | 14635 | 8614 | 6447 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35801 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 214.8 | 1.9 |
| 10°-20° | 565.0 | 5.1 |
| 20°-30° | 828.5 | 7.5 |
| 30°-40° | 1003.3 | 9.1 |
| 40°-50° | 986.7 | 8.9 |
| 50°-60° | 858.9 | 7.8 |
| 60°-70° | 597.1 | 5.4 |
| 70°-80° | 283.1 | 2.6 |
| 80°-90° | 63.4 | 0.6 |
| 90°-100° | 350.0 | 3.2 |
| 100°-110° | 1146.0 | 10.4 |
| 110°-120° | 1133.0 | 10.2 |
| 120°-130° | 926.2 | 8.4 |
| 130°-140° | 755.8 | 6.8 |
| 140°-150° | 588.2 | 5.3 |
| 150°-160° | 423.5 | 3.8 |
| 160°-170° | 259.1 | 2.3 |
| 170°-180° | 87.5 | 0.8 |
| 0°-30° | 1608.3 | 14.5 |
| 0°-40° | 2611.7 | 23.6 |
| 0°-60° | 4457.2 | 40.3 |
| 0°-90° | 5400.8 | 48.8 |
| 90°-120° | 2629.1 | 23.7 |
| 90°-150° | 4899.3 | 44.3 |
| 90°-180° | 5670.0 | 51.2 |
| 0°-180° | 11070.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2441 | 2441 | 2441 | 2441 | 2441 | |
| 5° | 2446 | 2444 | 2300 | 2228 | 2223 | 230 |
| 15° | 2327 | 2073 | 1909 | 1896 | 1921 | 649 |
| 25° | 2067 | 1758 | 1728 | 1781 | 1775 | 951 |
| 35° | 1814 | 1467 | 1540 | 1673 | 1895 | 1136 |
| 45° | 1568 | 1161 | 1271 | 1315 | 1117 | 1205 |
| 55° | 1238 | 904 | 1140 | 822 | 815 | 1106 |
| 65° | 887 | 622 | 597 | 490 | 490 | 872 |
| 75° | 458 | 317 | 235 | 167 | 163 | 485 |
| 85° | 79 | 52 | 46 | 37 | 35 | 106 |
| 90° | 1 | 3 | 8 | 7 | 8 | 5 |
| 95° | 49 | 142 | 636 | 227 | 147 | 56 |
| 105° | 199 | 284 | 1138 | 2161 | 2053 | 210 |
| 115° | 359 | 429 | 924 | 1910 | 2242 | 354 |
| 125° | 499 | 557 | 911 | 1506 | 1769 | 444 |
| 135° | 601 | 665 | 904 | 1299 | 1464 | 465 |
| 145° | 703 | 755 | 902 | 1117 | 1224 | 441 |
| 155° | 802 | 828 | 907 | 1000 | 1038 | 369 |
| 165° | 875 | 883 | 911 | 946 | 956 | 247 |
| 175° | 915 | 915 | 916 | 922 | 920 | 87 |
| 180° | 919 | 919 | 919 | 919 | 919 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2441.3 | 2441.3 | 2441.3 | 2441.3 | 2441.3 |
| 2.5° | 2435.7 | 2461.1 | 2404.1 | 2381.7 | 2378.1 |
| 5° | 2445.9 | 2443.6 | 2299.6 | 2227.5 | 2222.9 |
| 7.5° | 2401.3 | 2330.9 | 2158.8 | 2079.3 | 2075.6 |
| 10° | 2362.3 | 2255.5 | 2069.6 | 1997.6 | 1997.6 |
| 12.5° | 2353.0 | 2184.5 | 1997.1 | 1944.0 | 1954.9 |
| 15° | 2327.4 | 2073.1 | 1909.3 | 1896.0 | 1921.0 |
| 17.5° | 2242.9 | 1969.0 | 1841.0 | 1871.4 | 1900.5 |
| 20° | 2183.4 | 1913.2 | 1800.2 | 1856.5 | 1883.8 |
| 22.5° | 2133.3 | 1859.4 | 1770.4 | 1832.1 | 1846.6 |
| 25° | 2067.3 | 1758.4 | 1728.2 | 1781.4 | 1774.6 |
| 27.5° | 1988.3 | 1665.8 | 1685.9 | 1718.5 | 1722.6 |
| 30° | 1932.6 | 1610.1 | 1646.9 | 1680.1 | 1709.6 |
| 32.5° | 1878.7 | 1545.3 | 1604.1 | 1682.8 | 1750.5 |
| 35° | 1814.1 | 1466.6 | 1540.0 | 1672.8 | 1895.4 |
| 37.5° | 1746.3 | 1373.8 | 1475.4 | 1587.2 | 1658.0 |
| 40° | 1698.0 | 1307.3 | 1430.8 | 1568.8 | 1405.3 |
| 42.5° | 1645.9 | 1255.3 | 1363.9 | 1542.1 | 1265.9 |
| 45° | 1567.9 | 1161.3 | 1270.6 | 1314.9 | 1117.3 |
| 47.5° | 1475.9 | 1088.4 | 1207.4 | 1096.5 | 1019.2 |
| 50° | 1405.3 | 1039.6 | 1177.7 | 1002.3 | 952.3 |
| 52.5° | 1336.5 | 989.0 | 1157.2 | 924.6 | 891.0 |
| 55° | 1238.0 | 904.2 | 1140.5 | 822.1 | 815.3 |
| 57.5° | 1133.5 | 817.8 | 1008.6 | 732.9 | 744.7 |
| 60° | 1068.5 | 761.9 | 871.0 | 680.3 | 666.6 |
| 62.5° | 999.7 | 707.7 | 742.8 | 613.4 | 599.7 |
| 65° | 887.3 | 621.6 | 597.0 | 490.1 | 490.1 |
| 67.5° | 763.7 | 532.1 | 483.6 | 401.1 | 346.6 |
| 70° | 678.3 | 473.9 | 411.1 | 319.7 | 283.4 |
| 72.5° | 587.2 | 411.9 | 336.8 | 262.0 | 220.2 |
| 75° | 457.6 | 316.8 | 234.6 | 167.1 | 162.6 |
| 77.5° | 330.8 | 228.1 | 158.0 | 124.0 | 124.5 |
| 80° | 250.9 | 173.6 | 102.2 | 99.9 | 102.2 |
| 82.5° | 176.5 | 119.3 | 76.2 | 79.4 | 79.9 |
| 85° | 79.0 | 51.7 | 46.5 | 37.1 | 34.8 |
| 87.5° | 16.9 | 15.5 | 10.8 | 10.6 | 10.8 |
| 90° | 0.9 | 2.8 | 7.6 | 6.6 | 7.6 |
| 92.5° | 16.0 | 58.5 | 179.7 | 58.5 | 46.8 |
| 95° | 49.1 | 142.3 | 636.3 | 226.7 | 147.3 |
| 97.5° | 89.1 | 187.7 | 1091.7 | 660.4 | 409.3 |
| 100° | 117.1 | 211.2 | 1263.1 | 1128.0 | 747.7 |
| 102.5° | 148.8 | 240.7 | 1244.3 | 1662.1 | 1288.4 |
| 105° | 199.2 | 284.1 | 1137.6 | 2161.3 | 2053.3 |
| 107.5° | 248.9 | 326.8 | 1033.5 | 2208.0 | 2326.7 |
| 110° | 281.3 | 357.0 | 983.7 | 2153.7 | 2374.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 312.3 | 385.8 | 953.5 | 2059.2 | 2341.8 |
| 115° | 358.7 | 428.9 | 924.2 | 1909.8 | 2242.1 |
| 117.5° | 403.9 | 469.4 | 913.1 | 1763.0 | 2100.5 |
| 120° | 433.3 | 495.2 | 910.1 | 1677.5 | 2006.1 |
| 122.5° | 459.8 | 520.1 | 910.1 | 1603.7 | 1908.7 |
| 125° | 499.4 | 556.6 | 911.0 | 1506.1 | 1769.2 |
| 127.5° | 533.0 | 591.4 | 909.9 | 1434.1 | 1663.0 |
| 130° | 554.2 | 613.2 | 909.1 | 1390.6 | 1597.3 |
| 132.5° | 573.0 | 633.6 | 906.9 | 1353.1 | 1540.7 |
| 135° | 601.4 | 665.1 | 903.5 | 1299.0 | 1464.2 |
| 137.5° | 631.2 | 694.3 | 901.4 | 1242.6 | 1391.9 |
| 140° | 652.3 | 713.3 | 900.6 | 1206.9 | 1348.1 |
| 142.5° | 673.5 | 730.7 | 900.6 | 1168.8 | 1296.8 |
| 145° | 703.3 | 755.0 | 901.6 | 1117.4 | 1224.4 |
| 147.5° | 734.7 | 777.7 | 902.9 | 1072.6 | 1153.4 |
| 150° | 754.3 | 792.1 | 904.4 | 1046.6 | 1114.9 |
| 152.5° | 773.9 | 807.3 | 905.2 | 1025.2 | 1081.7 |
| 155° | 801.5 | 828.3 | 907.2 | 999.7 | 1038.5 |
| 157.5° | 826.2 | 845.6 | 909.3 | 979.6 | 1007.7 |
| 160° | 842.1 | 857.8 | 910.1 | 968.2 | 990.3 |
| 162.5° | 855.7 | 868.4 | 910.1 | 959.0 | 975.2 |
| 165° | 875.1 | 883.4 | 911.0 | 946.2 | 956.3 |
| 167.5° | 891.6 | 895.6 | 912.1 | 936.2 | 941.8 |
| 170° | 900.6 | 902.5 | 912.9 | 930.9 | 932.7 |
| 172.5° | 907.4 | 908.5 | 915.2 | 927.1 | 927.4 |
| 175° | 914.8 | 914.8 | 915.7 | 922.3 | 920.5 |
| 177.5° | 918.6 | 917.8 | 917.1 | 921.5 | 918.6 |
| 180° | 918.6 | 918.6 | 918.6 | 918.6 | 918.6 |



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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 | 19.98 | 20.82 | 20.95 | 21.81 | 23.09 | 18.65 | 19.50 | 19.62 | 20.48 | 21.77 |
| | 3H | 22.00 | 22.76 | 22.98 | 23.75 | 25.06 | 19.69 | 20.44 | 20.67 | 21.43 | 22.74 |
| | 4H | 22.73 | 23.45 | 23.73 | 24.44 | 25.76 | 19.90 | 20.61 | 20.89 | 21.61 | 22.93 |
| | 6H | 23.22 | 23.88 | 24.22 | 24.88 | 26.21 | 20.04 | 20.70 | 21.05 | 21.70 | 23.03 |
| | 8H | 23.34 | 23.97 | 24.35 | 24.98 | 26.31 | 20.07 | 20.70 | 21.08 | 21.72 | 23.04 |
| | 12H | 23.39 | 23.98 | 24.40 | 24.99 | 26.34 | 20.07 | 20.67 | 21.09 | 21.68 | 23.03 |
| 4H | 2H | 20.35 | 21.07 | 21.35 | 22.06 | 23.38 | 19.29 | 20.01 | 20.29 | 21.00 | 22.32 |
| | 3H | 22.46 | 23.05 | 23.47 | 24.08 | 25.41 | 20.47 | 21.06 | 21.48 | 22.09 | 23.42 |
| | 4H | 23.27 | 23.81 | 24.29 | 24.83 | 26.19 | 20.74 | 21.29 | 21.76 | 22.30 | 23.66 |
| | 6H | 23.86 | 24.32 | 24.88 | 25.36 | 26.72 | 20.95 | 21.42 | 21.98 | 22.46 | 23.81 |
| | 8H | 24.03 | 24.46 | 25.05 | 25.49 | 26.86 | 21.01 | 21.44 | 22.04 | 22.48 | 23.84 |
| | 12H | 24.09 | 24.49 | 25.14 | 25.53 | 26.91 | 21.01 | 21.41 | 22.06 | 22.46 | 23.83 |
| 8H | 4H | 23.29 | 23.72 | 24.32 | 24.76 | 26.12 | 20.96 | 21.39 | 21.99 | 22.43 | 23.80 |
| | 6H | 23.94 | 24.30 | 24.99 | 25.37 | 26.74 | 21.23 | 21.59 | 22.28 | 22.66 | 24.03 |
| | 8H | 24.16 | 24.48 | 25.23 | 25.54 | 26.92 | 21.33 | 21.65 | 22.39 | 22.71 | 24.09 |
| | 12H | 24.28 | 24.55 | 25.34 | 25.61 | 27.04 | 21.38 | 21.65 | 22.44 | 22.71 | 24.14 |
| 12H | 4H | 23.24 | 23.63 | 24.29 | 24.68 | 26.05 | 20.96 | 21.35 | 22.00 | 22.40 | 23.77 |
| | 6H | 23.91 | 24.23 | 24.97 | 25.29 | 26.67 | 21.26 | 21.58 | 22.32 | 22.64 | 24.02 |
| | 8H | 24.14 | 24.42 | 25.21 | 25.48 | 26.90 | 21.38 | 21.65 | 22.44 | 22.71 | 24.13 |