

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: P854893

Luminaire Tested: SQ2-PR1-100U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854893
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-100U-100D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1000 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

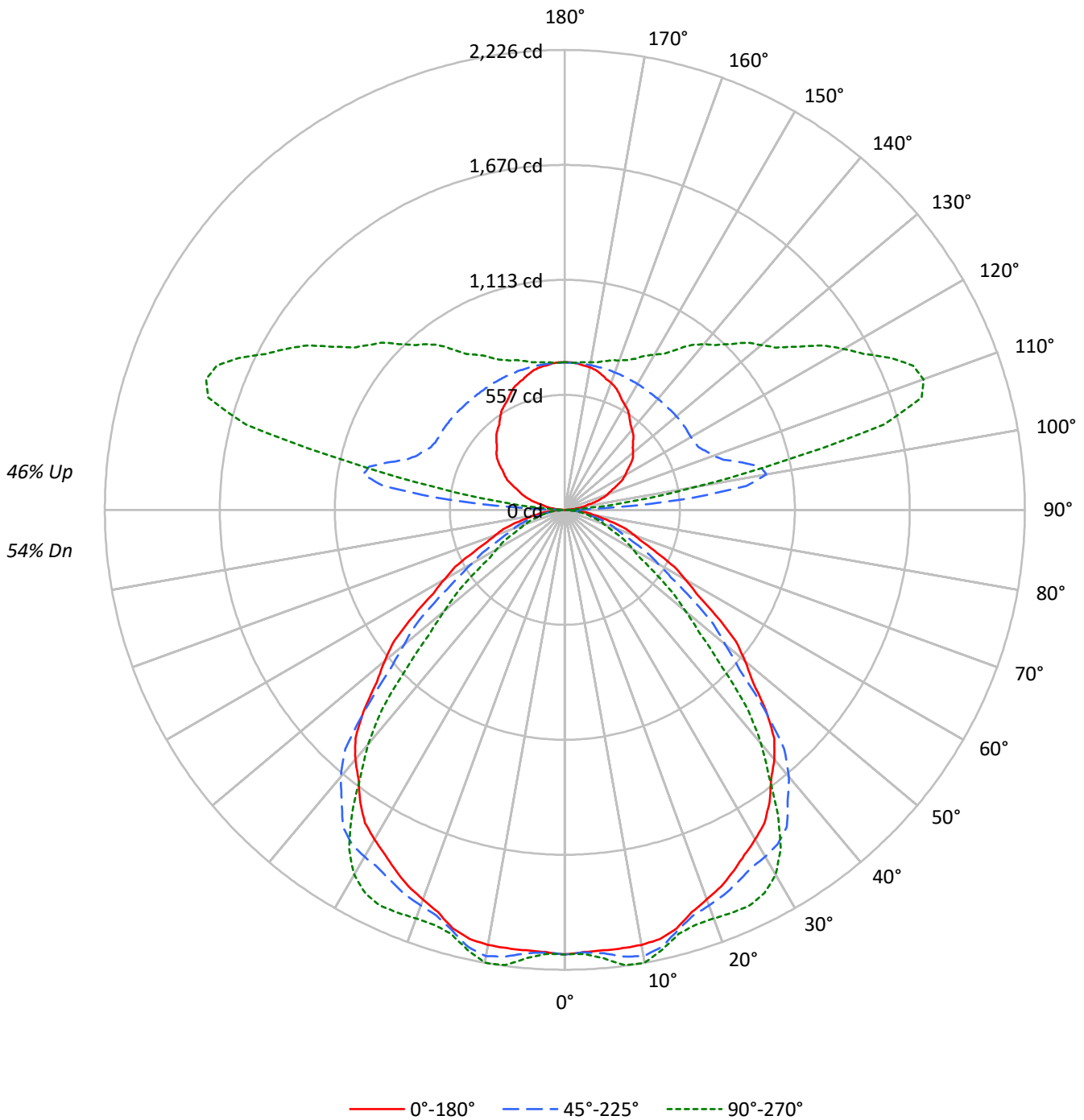
Lumens per Lamp: N/A
Luminaire Lumens: 9617.1 lumens
Efficiency: N/A
Efficacy: 137.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 70.2
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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CATALOG NUMBER: SQ2-PR1-100U-100D-830-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P854893

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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 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 72 | 72 | 72 | 60 | 60 | 60 | 54 | 54 | 54 | 54 | |
| 1 | 99 | 95 | 92 | 88 | 92 | 89 | 85 | 83 | 76 | 74 | 72 | 64 | 63 | 61 | 54 | 53 | 52 | 47 | 47 | 47 | 47 | |
| 2 | 91 | 84 | 78 | 73 | 84 | 78 | 73 | 69 | 67 | 64 | 60 | 57 | 55 | 52 | 48 | 46 | 45 | 40 | 40 | 40 | 40 | |
| 3 | 83 | 74 | 67 | 62 | 77 | 69 | 63 | 58 | 60 | 55 | 51 | 51 | 48 | 45 | 43 | 41 | 39 | 35 | 35 | 35 | 35 | |
| 4 | 77 | 66 | 59 | 53 | 71 | 62 | 55 | 50 | 54 | 48 | 44 | 46 | 42 | 39 | 39 | 36 | 34 | 30 | 30 | 30 | 30 | |
| 5 | 70 | 59 | 51 | 46 | 65 | 55 | 48 | 43 | 48 | 43 | 39 | 42 | 37 | 34 | 35 | 32 | 30 | 27 | 27 | 27 | 27 | |
| 6 | 65 | 53 | 45 | 40 | 60 | 50 | 43 | 38 | 44 | 38 | 34 | 38 | 33 | 30 | 32 | 29 | 26 | 24 | 24 | 24 | 24 | |
| 7 | 60 | 48 | 41 | 35 | 56 | 45 | 38 | 33 | 40 | 34 | 30 | 34 | 30 | 27 | 30 | 26 | 24 | 21 | 21 | 21 | 21 | |
| 8 | 56 | 44 | 36 | 31 | 52 | 41 | 34 | 30 | 36 | 31 | 27 | 32 | 27 | 24 | 27 | 24 | 21 | 19 | 19 | 19 | 19 | |
| 9 | 52 | 40 | 33 | 28 | 49 | 38 | 31 | 27 | 33 | 28 | 24 | 29 | 25 | 22 | 25 | 22 | 19 | 17 | 17 | 17 | 17 | |
| 10 | 49 | 37 | 30 | 25 | 45 | 35 | 28 | 24 | 31 | 25 | 22 | 27 | 23 | 20 | 23 | 20 | 18 | 16 | 16 | 16 | 16 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 34735 | 34735 | 34735 |
| 5° | 34689 | 34903 | 35329 |
| 10° | 35056 | 35954 | 36493 |
| 15° | 35042 | 35226 | 35519 |
| 20° | 34477 | 35005 | 36173 |
| 25° | 34379 | 35356 | 37661 |
| 30° | 34342 | 36143 | 38024 |
| 35° | 34016 | 36914 | 35400 |
| 40° | 33232 | 35544 | 31154 |
| 45° | 31444 | 31195 | 24638 |
| 50° | 28587 | 25503 | 19113 |
| 55° | 25123 | 20991 | 14877 |
| 60° | 21739 | 16785 | 12248 |
| 65° | 18770 | 13910 | 10724 |
| 70° | 16872 | 12321 | 9522 |
| 75° | 15458 | 10674 | 8752 |
| 80° | 13454 | 8563 | 8563 |
| 85° | 9744 | 7725 | 4057 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 33992 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 207.8 | 2.2 |
| 10°-20° | 601.4 | 6.3 |
| 20°-30° | 929.6 | 9.7 |
| 30°-40° | 1118.1 | 11.6 |
| 40°-50° | 1004.0 | 10.4 |
| 50°-60° | 672.6 | 7.0 |
| 60°-70° | 391.2 | 4.1 |
| 70°-80° | 200.9 | 2.1 |
| 80°-90° | 50.8 | 0.5 |
| 90°-100° | 298.0 | 3.1 |
| 100°-110° | 901.3 | 9.4 |
| 110°-120° | 879.8 | 9.1 |
| 120°-130° | 718.9 | 7.5 |
| 130°-140° | 586.9 | 6.1 |
| 140°-150° | 456.8 | 4.8 |
| 150°-160° | 329.3 | 3.4 |
| 160°-170° | 201.6 | 2.1 |
| 170°-180° | 68.1 | 0.7 |
| 0°-30° | 1738.8 | 18.1 |
| 0°-40° | 2856.9 | 29.7 |
| 0°-60° | 4533.5 | 47.1 |
| 0°-90° | 5176.5 | 53.8 |
| 90°-120° | 2079.1 | 21.6 |
| 90°-150° | 3841.7 | 39.9 |
| 90°-180° | 4441.0 | 46.2 |
| 0°-180° | 9617.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2151 | 2151 | 2151 | 2151 | 2151 | |
| 5° | 2140 | 2177 | 2154 | 2158 | 2180 | 204 |
| 15° | 2096 | 2182 | 2107 | 2114 | 2125 | 589 |
| 25° | 1930 | 2007 | 1985 | 2058 | 2114 | 890 |
| 35° | 1726 | 1741 | 1873 | 1837 | 1796 | 1076 |
| 45° | 1377 | 1489 | 1366 | 1152 | 1079 | 1053 |
| 55° | 892 | 927 | 746 | 576 | 528 | 802 |
| 65° | 491 | 502 | 364 | 296 | 281 | 497 |
| 75° | 248 | 241 | 171 | 145 | 140 | 263 |
| 85° | 53 | 42 | 42 | 28 | 22 | 65 |
| 90° | 0 | 2 | 14 | 8 | 7 | 4 |
| 95° | 37 | 117 | 562 | 208 | 131 | 44 |
| 105° | 157 | 220 | 885 | 1681 | 1597 | 165 |
| 115° | 279 | 332 | 716 | 1481 | 1740 | 276 |
| 125° | 390 | 432 | 706 | 1170 | 1377 | 346 |
| 135° | 467 | 516 | 701 | 1009 | 1135 | 362 |
| 145° | 546 | 586 | 701 | 868 | 949 | 342 |
| 155° | 622 | 642 | 706 | 778 | 808 | 286 |
| 165° | 680 | 688 | 709 | 736 | 745 | 192 |
| 175° | 711 | 711 | 712 | 718 | 716 | 67 |
| 180° | 714 | 714 | 714 | 714 | 714 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2151.3 | 2151.3 | 2151.3 | 2151.3 | 2151.3 |
| 2.5° | 2142.6 | 2168.2 | 2144.3 | 2146.2 | 2151.3 |
| 5° | 2140.3 | 2176.8 | 2153.5 | 2158.4 | 2179.8 |
| 7.5° | 2139.9 | 2191.8 | 2180.7 | 2194.0 | 2222.4 |
| 10° | 2138.2 | 2200.3 | 2193.0 | 2195.8 | 2225.9 |
| 12.5° | 2127.6 | 2200.1 | 2166.7 | 2163.9 | 2180.2 |
| 15° | 2096.4 | 2182.3 | 2107.4 | 2114.3 | 2124.9 |
| 17.5° | 2041.6 | 2131.3 | 2060.0 | 2084.2 | 2105.3 |
| 20° | 2006.6 | 2094.5 | 2037.3 | 2068.7 | 2105.3 |
| 22.5° | 1975.0 | 2062.9 | 2016.2 | 2060.4 | 2110.5 |
| 25° | 1929.8 | 2007.0 | 1984.6 | 2058.2 | 2114.0 |
| 27.5° | 1882.4 | 1927.9 | 1954.3 | 2053.0 | 2092.0 |
| 30° | 1842.0 | 1872.1 | 1938.6 | 2024.4 | 2039.5 |
| 32.5° | 1798.2 | 1816.3 | 1917.6 | 1962.2 | 1943.0 |
| 35° | 1725.8 | 1740.9 | 1872.8 | 1836.7 | 1796.0 |
| 37.5° | 1639.9 | 1670.8 | 1772.4 | 1668.6 | 1621.9 |
| 40° | 1576.7 | 1628.2 | 1686.4 | 1531.7 | 1478.1 |
| 42.5° | 1499.6 | 1581.9 | 1572.4 | 1375.2 | 1309.6 |
| 45° | 1377.1 | 1488.7 | 1366.2 | 1151.8 | 1079.0 |
| 47.5° | 1232.9 | 1347.4 | 1146.9 | 955.5 | 887.2 |
| 50° | 1138.1 | 1230.4 | 1015.3 | 836.0 | 760.9 |
| 52.5° | 1041.7 | 1108.1 | 903.0 | 723.8 | 655.7 |
| 55° | 892.5 | 926.8 | 745.7 | 575.7 | 528.5 |
| 57.5° | 755.7 | 777.5 | 609.2 | 465.0 | 430.2 |
| 60° | 673.2 | 688.2 | 519.8 | 407.3 | 379.3 |
| 62.5° | 597.8 | 609.4 | 447.8 | 358.3 | 337.3 |
| 65° | 491.3 | 501.9 | 364.1 | 295.7 | 280.7 |
| 67.5° | 406.6 | 412.1 | 299.5 | 245.7 | 231.6 |
| 70° | 357.4 | 359.5 | 261.0 | 212.4 | 201.7 |
| 72.5° | 313.6 | 310.6 | 224.1 | 184.5 | 177.2 |
| 75° | 247.8 | 241.4 | 171.1 | 144.6 | 140.3 |
| 77.5° | 185.1 | 178.2 | 120.2 | 111.4 | 111.4 |
| 80° | 144.7 | 136.1 | 92.1 | 92.1 | 92.1 |
| 82.5° | 107.9 | 95.9 | 71.0 | 71.0 | 69.3 |
| 85° | 52.6 | 41.9 | 41.7 | 28.4 | 21.9 |
| 87.5° | 14.0 | 14.5 | 7.9 | 6.8 | 6.6 |
| 90° | 0.0 | 2.1 | 13.5 | 7.8 | 6.7 |
| 92.5° | 12.6 | 50.7 | 181.9 | 60.4 | 43.4 |
| 95° | 37.0 | 116.9 | 562.3 | 207.7 | 131.0 |
| 97.5° | 71.5 | 148.8 | 886.2 | 586.5 | 357.1 |
| 100° | 92.9 | 168.6 | 990.2 | 957.3 | 643.0 |
| 102.5° | 117.1 | 190.1 | 968.7 | 1342.6 | 1070.4 |
| 105° | 156.8 | 220.4 | 885.0 | 1680.6 | 1597.3 |
| 107.5° | 194.5 | 255.1 | 804.2 | 1713.9 | 1810.4 |
| 110° | 219.6 | 277.6 | 764.0 | 1671.9 | 1847.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 243.8 | 300.1 | 739.8 | 1601.2 | 1822.9 |
| 115° | 278.9 | 332.5 | 715.8 | 1481.0 | 1739.6 |
| 117.5° | 313.9 | 364.6 | 707.2 | 1368.5 | 1633.1 |
| 120° | 337.2 | 385.3 | 704.5 | 1302.8 | 1557.0 |
| 122.5° | 358.6 | 404.2 | 704.5 | 1245.1 | 1479.9 |
| 125° | 389.8 | 432.5 | 705.6 | 1169.7 | 1376.7 |
| 127.5° | 415.2 | 459.4 | 704.5 | 1112.7 | 1289.3 |
| 130° | 431.2 | 477.2 | 704.5 | 1080.1 | 1240.0 |
| 132.5° | 445.6 | 492.5 | 703.7 | 1050.3 | 1197.9 |
| 135° | 467.1 | 516.4 | 701.2 | 1008.8 | 1134.7 |
| 137.5° | 491.0 | 538.0 | 701.2 | 964.4 | 1081.1 |
| 140° | 506.3 | 552.3 | 701.2 | 935.6 | 1046.2 |
| 142.5° | 521.6 | 565.8 | 700.3 | 909.3 | 1005.8 |
| 145° | 545.5 | 586.0 | 701.2 | 867.7 | 948.7 |
| 147.5° | 569.5 | 603.9 | 702.6 | 833.4 | 895.7 |
| 150° | 584.7 | 616.4 | 703.5 | 814.4 | 867.0 |
| 152.5° | 599.0 | 627.3 | 704.3 | 798.0 | 841.0 |
| 155° | 621.6 | 642.4 | 705.6 | 778.0 | 807.6 |
| 157.5° | 641.4 | 658.3 | 707.0 | 763.3 | 783.9 |
| 160° | 653.1 | 667.3 | 707.9 | 754.1 | 769.5 |
| 162.5° | 664.7 | 675.4 | 708.8 | 746.1 | 758.8 |
| 165° | 680.0 | 687.5 | 709.0 | 736.2 | 744.9 |
| 167.5° | 692.9 | 696.8 | 710.4 | 728.4 | 732.1 |
| 170° | 700.1 | 702.2 | 711.3 | 724.7 | 725.9 |
| 172.5° | 704.5 | 705.9 | 711.3 | 721.1 | 721.4 |
| 175° | 711.3 | 711.3 | 712.4 | 718.0 | 715.8 |
| 177.5° | 714.5 | 713.5 | 712.6 | 715.2 | 713.5 |
| 180° | 713.5 | 713.5 | 713.5 | 713.5 | 713.5 |



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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 | 19.46 | 20.31 | 20.39 | 21.25 | 22.47 | 16.18 | 17.03 | 17.11 | 17.98 | 19.20 |
| | 3H | 20.69 | 21.45 | 21.63 | 22.40 | 23.65 | 17.25 | 18.01 | 18.19 | 18.96 | 20.20 |
| | 4H | 21.14 | 21.86 | 22.10 | 22.82 | 24.07 | 17.65 | 18.36 | 18.61 | 19.32 | 20.57 |
| | 6H | 21.46 | 22.12 | 22.43 | 23.08 | 24.35 | 17.98 | 18.64 | 18.95 | 19.60 | 20.87 |
| | 8H | 21.54 | 22.17 | 22.52 | 23.15 | 24.41 | 18.06 | 18.69 | 19.04 | 19.67 | 20.93 |
| | 12H | 21.57 | 22.17 | 22.55 | 23.14 | 24.43 | 18.07 | 18.67 | 19.05 | 19.64 | 20.93 |
| 4H | 2H | 19.53 | 20.25 | 20.50 | 21.21 | 22.46 | 16.75 | 17.47 | 17.72 | 18.43 | 19.68 |
| | 3H | 21.01 | 21.60 | 21.98 | 22.59 | 23.85 | 18.02 | 18.61 | 18.99 | 19.60 | 20.86 |
| | 4H | 21.60 | 22.14 | 22.58 | 23.12 | 24.41 | 18.52 | 19.06 | 19.50 | 20.05 | 21.34 |
| | 6H | 22.05 | 22.52 | 23.05 | 23.52 | 24.81 | 18.96 | 19.42 | 19.95 | 20.43 | 21.72 |
| | 8H | 22.18 | 22.62 | 23.18 | 23.62 | 24.92 | 19.08 | 19.51 | 20.08 | 20.51 | 21.81 |
| | 12H | 22.24 | 22.63 | 23.25 | 23.64 | 24.95 | 19.10 | 19.49 | 20.11 | 20.51 | 21.81 |
| 8H | 4H | 21.63 | 22.06 | 22.62 | 23.06 | 24.36 | 18.83 | 19.26 | 19.82 | 20.26 | 21.56 |
| | 6H | 22.17 | 22.53 | 23.20 | 23.57 | 24.87 | 19.36 | 19.72 | 20.38 | 20.76 | 22.06 |
| | 8H | 22.37 | 22.69 | 23.40 | 23.72 | 25.04 | 19.55 | 19.86 | 20.58 | 20.89 | 22.21 |
| | 12H | 22.48 | 22.76 | 23.51 | 23.78 | 25.14 | 19.61 | 19.89 | 20.64 | 20.91 | 22.27 |
| 12H | 4H | 21.58 | 21.98 | 22.60 | 22.99 | 24.30 | 18.84 | 19.23 | 19.86 | 20.25 | 21.56 |
| | 6H | 22.16 | 22.48 | 23.19 | 23.50 | 24.82 | 19.42 | 19.74 | 20.45 | 20.77 | 22.09 |
| | 8H | 22.37 | 22.65 | 23.40 | 23.67 | 25.04 | 19.63 | 19.91 | 20.66 | 20.93 | 22.29 |