

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: P855271

Luminaire Tested: SQ2-PW1-150U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855271
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PW1-150U-100D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

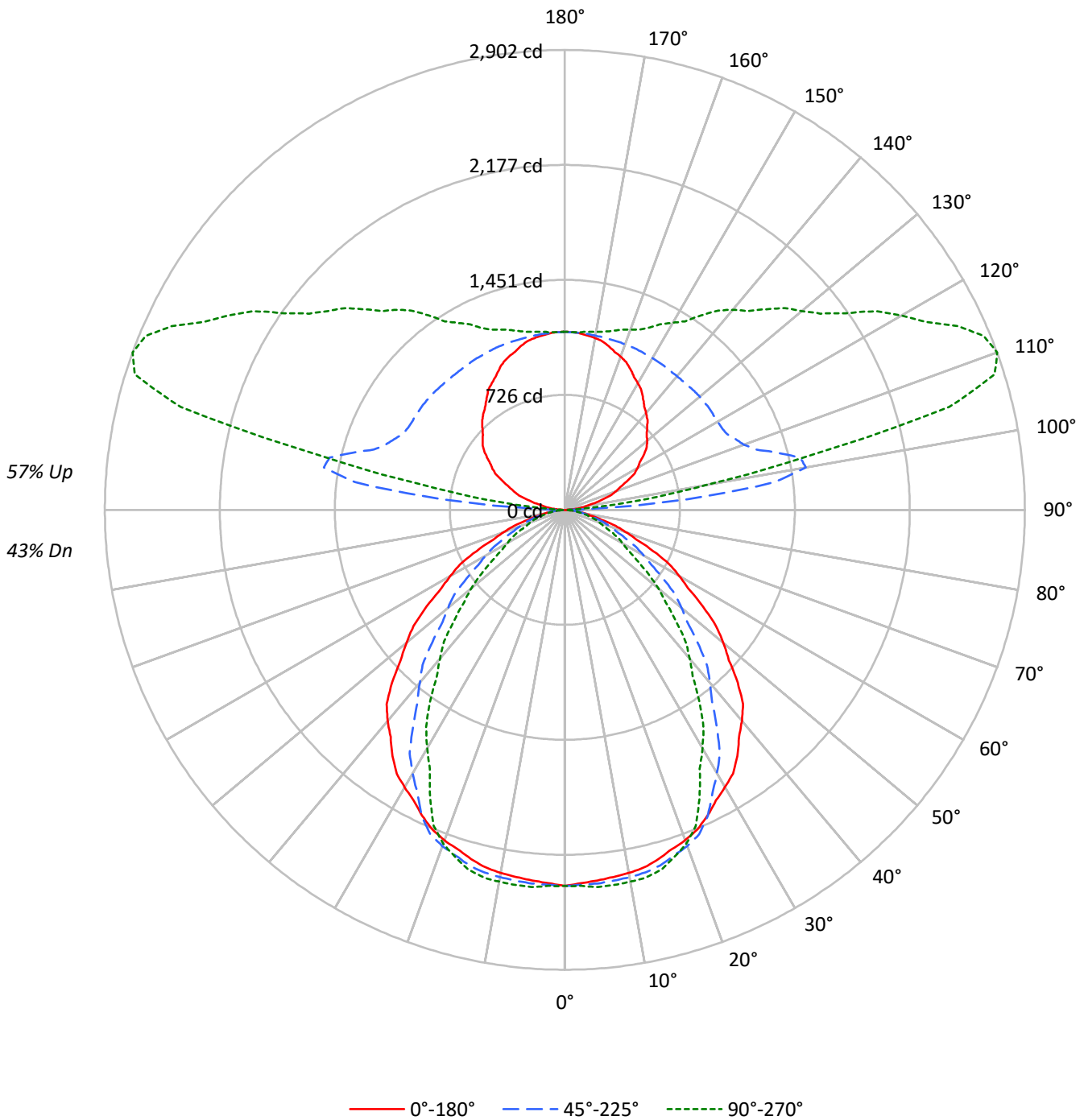
Lumens per Lamp: N/A
Luminaire Lumens: 12196.7 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.11 / 1.22
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 94.2
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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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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 106 | 106 | 106 | 106 | 96 | 96 | 96 | 96 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 | 43 | | |
| 1 | 97 | 93 | 89 | 86 | 88 | 85 | 82 | 79 | 70 | 68 | 66 | 57 | 56 | 54 | 45 | 44 | 43 | 37 | | |
| 2 | 88 | 81 | 76 | 71 | 81 | 75 | 70 | 66 | 62 | 59 | 56 | 51 | 48 | 46 | 40 | 38 | 37 | 32 | | |
| 3 | 81 | 72 | 65 | 60 | 74 | 66 | 60 | 55 | 55 | 51 | 47 | 45 | 42 | 40 | 36 | 34 | 32 | 28 | | |
| 4 | 74 | 64 | 56 | 51 | 68 | 59 | 52 | 47 | 49 | 45 | 41 | 41 | 37 | 34 | 32 | 30 | 28 | 24 | | |
| 5 | 68 | 57 | 49 | 44 | 62 | 53 | 46 | 41 | 44 | 39 | 35 | 37 | 33 | 30 | 29 | 27 | 25 | 21 | | |
| 6 | 63 | 51 | 44 | 38 | 58 | 48 | 41 | 36 | 40 | 35 | 31 | 33 | 29 | 26 | 27 | 24 | 22 | 19 | | |
| 7 | 58 | 47 | 39 | 33 | 53 | 43 | 36 | 31 | 37 | 31 | 27 | 30 | 26 | 24 | 25 | 22 | 20 | 17 | | |
| 8 | 54 | 42 | 35 | 30 | 50 | 39 | 33 | 28 | 33 | 28 | 24 | 28 | 24 | 21 | 23 | 20 | 18 | 15 | | |
| 9 | 50 | 39 | 31 | 27 | 46 | 36 | 29 | 25 | 31 | 26 | 22 | 26 | 22 | 19 | 21 | 18 | 16 | 14 | | |
| 10 | 47 | 35 | 28 | 24 | 43 | 33 | 27 | 22 | 28 | 23 | 20 | 24 | 20 | 17 | 19 | 17 | 15 | 13 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 38319 | 38319 | 38319 |
| 5° | 38063 | 38357 | 38723 |
| 10° | 38133 | 38579 | 39059 |
| 15° | 38123 | 38842 | 39295 |
| 20° | 38139 | 38799 | 38527 |
| 25° | 37933 | 37973 | 35799 |
| 30° | 37675 | 35779 | 32365 |
| 35° | 37381 | 32924 | 29229 |
| 40° | 36636 | 30014 | 25821 |
| 45° | 35200 | 26994 | 22555 |
| 50° | 32760 | 24129 | 19306 |
| 55° | 29968 | 21318 | 15651 |
| 60° | 26863 | 18542 | 13501 |
| 65° | 23492 | 15973 | 12004 |
| 70° | 19204 | 14195 | 10881 |
| 75° | 14947 | 12264 | 10012 |
| 80° | 11139 | 10507 | 8833 |
| 85° | 7540 | 7966 | 5039 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35200 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 226.0 | 1.9 |
| 10°-20° | 654.8 | 5.4 |
| 20°-30° | 963.6 | 7.9 |
| 30°-40° | 1053.6 | 8.6 |
| 40°-50° | 945.1 | 7.7 |
| 50°-60° | 705.0 | 5.8 |
| 60°-70° | 445.5 | 3.7 |
| 70°-80° | 220.7 | 1.8 |
| 80°-90° | 52.9 | 0.4 |
| 90°-100° | 427.8 | 3.5 |
| 100°-110° | 1400.7 | 11.5 |
| 110°-120° | 1384.8 | 11.4 |
| 120°-130° | 1132.0 | 9.3 |
| 130°-140° | 923.8 | 7.6 |
| 140°-150° | 718.9 | 5.9 |
| 150°-160° | 517.6 | 4.2 |
| 160°-170° | 316.7 | 2.6 |
| 170°-180° | 107.0 | 0.9 |
| 0°-30° | 1844.4 | 15.1 |
| 0°-40° | 2898.0 | 23.8 |
| 0°-60° | 4548.2 | 37.3 |
| 0°-90° | 5267.4 | 43.2 |
| 90°-120° | 3213.3 | 26.3 |
| 90°-150° | 5988.0 | 49.1 |
| 90°-180° | 6929.0 | 56.8 |
| 0°-180° | 12196.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2373 | 2373 | 2373 | 2373 | 2373 | |
| 5° | 2348 | 2386 | 2367 | 2369 | 2389 | 223 |
| 15° | 2281 | 2325 | 2324 | 2340 | 2351 | 644 |
| 25° | 2129 | 2176 | 2132 | 2043 | 2010 | 981 |
| 35° | 1896 | 1876 | 1670 | 1525 | 1483 | 1183 |
| 45° | 1542 | 1418 | 1182 | 1034 | 988 | 1182 |
| 55° | 1065 | 963 | 757 | 594 | 556 | 951 |
| 65° | 615 | 564 | 418 | 336 | 314 | 609 |
| 75° | 240 | 257 | 197 | 165 | 160 | 264 |
| 85° | 41 | 52 | 43 | 29 | 27 | 52 |
| 90° | 1 | 3 | 9 | 8 | 9 | 5 |
| 95° | 60 | 174 | 778 | 277 | 180 | 68 |
| 105° | 244 | 347 | 1390 | 2642 | 2510 | 256 |
| 115° | 438 | 524 | 1130 | 2334 | 2740 | 433 |
| 125° | 610 | 680 | 1113 | 1841 | 2162 | 543 |
| 135° | 735 | 813 | 1104 | 1588 | 1790 | 569 |
| 145° | 860 | 923 | 1102 | 1366 | 1496 | 539 |
| 155° | 980 | 1012 | 1109 | 1222 | 1269 | 451 |
| 165° | 1070 | 1080 | 1113 | 1156 | 1169 | 301 |
| 175° | 1118 | 1118 | 1119 | 1127 | 1125 | 106 |
| 180° | 1123 | 1123 | 1123 | 1123 | 1123 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2373.3 | 2373.3 | 2373.3 | 2373.3 | 2373.3 |
| 2.5° | 2357.1 | 2387.2 | 2368.0 | 2370.0 | 2375.2 |
| 5° | 2348.5 | 2386.2 | 2366.6 | 2369.4 | 2389.2 |
| 7.5° | 2336.7 | 2374.7 | 2360.3 | 2368.4 | 2387.9 |
| 10° | 2325.9 | 2365.8 | 2353.1 | 2364.7 | 2382.4 |
| 12.5° | 2311.5 | 2353.1 | 2344.0 | 2357.5 | 2375.2 |
| 15° | 2280.7 | 2325.0 | 2323.7 | 2339.8 | 2350.8 |
| 17.5° | 2245.0 | 2289.2 | 2287.1 | 2291.3 | 2296.5 |
| 20° | 2219.7 | 2263.9 | 2258.1 | 2242.3 | 2242.3 |
| 22.5° | 2183.5 | 2231.3 | 2216.5 | 2173.2 | 2159.1 |
| 25° | 2129.3 | 2175.7 | 2131.5 | 2042.6 | 2009.5 |
| 27.5° | 2066.0 | 2103.5 | 2014.9 | 1888.6 | 1842.6 |
| 30° | 2020.8 | 2049.5 | 1919.1 | 1780.2 | 1736.0 |
| 32.5° | 1973.7 | 1984.8 | 1821.4 | 1677.0 | 1629.2 |
| 35° | 1896.5 | 1876.5 | 1670.4 | 1524.8 | 1482.9 |
| 37.5° | 1805.1 | 1745.9 | 1525.3 | 1372.8 | 1326.3 |
| 40° | 1738.2 | 1654.3 | 1424.0 | 1271.6 | 1225.1 |
| 42.5° | 1664.1 | 1558.8 | 1328.2 | 1175.7 | 1127.5 |
| 45° | 1541.6 | 1417.8 | 1182.2 | 1034.2 | 987.8 |
| 47.5° | 1403.7 | 1280.8 | 1045.6 | 902.4 | 862.5 |
| 50° | 1304.2 | 1184.9 | 960.6 | 817.2 | 768.6 |
| 52.5° | 1202.9 | 1096.1 | 877.4 | 730.0 | 663.7 |
| 55° | 1064.6 | 963.0 | 757.3 | 593.7 | 556.0 |
| 57.5° | 922.2 | 834.3 | 648.3 | 499.7 | 468.8 |
| 60° | 831.9 | 754.5 | 574.2 | 449.1 | 418.1 |
| 62.5° | 745.0 | 676.5 | 501.8 | 402.2 | 376.5 |
| 65° | 614.9 | 563.9 | 418.1 | 336.3 | 314.2 |
| 67.5° | 488.2 | 460.0 | 347.6 | 275.9 | 261.3 |
| 70° | 406.8 | 398.0 | 300.7 | 241.6 | 230.5 |
| 72.5° | 336.3 | 339.8 | 255.5 | 209.2 | 201.6 |
| 75° | 239.6 | 257.3 | 196.6 | 164.9 | 160.5 |
| 77.5° | 163.2 | 189.7 | 145.6 | 122.0 | 118.4 |
| 80° | 119.8 | 146.4 | 113.0 | 95.0 | 95.0 |
| 82.5° | 83.7 | 104.9 | 80.4 | 71.4 | 71.4 |
| 85° | 40.7 | 51.7 | 43.0 | 29.4 | 27.2 |
| 87.5° | 11.1 | 16.8 | 9.1 | 7.0 | 7.2 |
| 90° | 1.2 | 3.4 | 9.2 | 8.2 | 9.2 |
| 92.5° | 19.6 | 71.6 | 219.7 | 71.4 | 57.2 |
| 95° | 60.0 | 174.0 | 777.7 | 277.0 | 180.1 |
| 97.5° | 109.0 | 229.5 | 1334.3 | 807.2 | 500.3 |
| 100° | 143.1 | 258.1 | 1543.8 | 1378.7 | 913.8 |
| 102.5° | 181.8 | 294.3 | 1520.7 | 2031.4 | 1574.8 |
| 105° | 243.5 | 347.3 | 1390.3 | 2641.6 | 2509.6 |
| 107.5° | 304.2 | 399.4 | 1263.2 | 2698.6 | 2843.7 |
| 110° | 343.8 | 436.3 | 1202.3 | 2632.3 | 2901.8 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 381.7 | 471.5 | 1165.4 | 2516.7 | 2862.2 |
| 115° | 438.4 | 524.2 | 1129.6 | 2334.2 | 2740.3 |
| 117.5° | 493.7 | 573.7 | 1116.0 | 2154.8 | 2567.3 |
| 120° | 529.6 | 605.2 | 1112.3 | 2050.3 | 2451.9 |
| 122.5° | 562.0 | 635.7 | 1112.3 | 1960.1 | 2332.8 |
| 125° | 610.3 | 680.4 | 1113.4 | 1840.8 | 2162.3 |
| 127.5° | 651.5 | 722.8 | 1112.0 | 1752.8 | 2032.6 |
| 130° | 677.3 | 749.5 | 1111.1 | 1699.6 | 1952.3 |
| 132.5° | 700.4 | 774.4 | 1108.4 | 1653.8 | 1883.1 |
| 135° | 735.0 | 812.9 | 1104.2 | 1587.6 | 1789.6 |
| 137.5° | 771.5 | 848.6 | 1101.7 | 1518.6 | 1701.3 |
| 140° | 797.3 | 871.7 | 1100.7 | 1475.0 | 1647.6 |
| 142.5° | 823.1 | 893.0 | 1100.7 | 1428.5 | 1584.9 |
| 145° | 859.6 | 922.8 | 1101.9 | 1365.6 | 1496.5 |
| 147.5° | 897.9 | 950.5 | 1103.5 | 1311.0 | 1409.8 |
| 150° | 921.9 | 968.2 | 1105.4 | 1279.1 | 1362.7 |
| 152.5° | 946.0 | 986.7 | 1106.3 | 1253.0 | 1322.0 |
| 155° | 979.6 | 1012.3 | 1108.9 | 1221.8 | 1269.2 |
| 157.5° | 1009.8 | 1033.5 | 1111.3 | 1197.3 | 1231.6 |
| 160° | 1029.2 | 1048.4 | 1112.3 | 1183.3 | 1210.4 |
| 162.5° | 1045.8 | 1061.4 | 1112.3 | 1172.0 | 1191.9 |
| 165° | 1069.6 | 1079.7 | 1113.4 | 1156.4 | 1168.8 |
| 167.5° | 1089.7 | 1094.7 | 1114.8 | 1144.3 | 1151.1 |
| 170° | 1100.7 | 1103.1 | 1115.8 | 1137.8 | 1140.0 |
| 172.5° | 1109.1 | 1110.4 | 1118.6 | 1133.1 | 1133.5 |
| 175° | 1118.1 | 1118.1 | 1119.3 | 1127.3 | 1125.0 |
| 177.5° | 1122.6 | 1121.8 | 1120.9 | 1126.2 | 1122.6 |
| 180° | 1122.6 | 1122.6 | 1122.6 | 1122.6 | 1122.6 |



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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 | 19.05 | 19.82 | 20.07 | 20.85 | 22.21 | 15.54 | 16.31 | 16.56 | 17.33 | 18.70 |
| | 3H | 20.37 | 21.05 | 21.40 | 22.09 | 23.48 | 16.73 | 17.42 | 17.77 | 18.46 | 19.85 |
| | 4H | 20.74 | 21.39 | 21.78 | 22.42 | 23.82 | 17.18 | 17.83 | 18.22 | 18.87 | 20.26 |
| | 6H | 20.93 | 21.53 | 21.99 | 22.57 | 23.98 | 17.49 | 18.09 | 18.54 | 19.13 | 20.54 |
| | 8H | 20.96 | 21.54 | 22.02 | 22.59 | 23.99 | 17.56 | 18.13 | 18.62 | 19.19 | 20.59 |
| | 12H | 20.96 | 21.50 | 22.02 | 22.55 | 23.98 | 17.57 | 18.11 | 18.63 | 19.16 | 20.59 |
| 4H | 2H | 19.14 | 19.80 | 20.19 | 20.83 | 22.23 | 16.21 | 16.86 | 17.26 | 17.90 | 19.29 |
| | 3H | 20.68 | 21.22 | 21.74 | 22.29 | 23.69 | 17.59 | 18.13 | 18.65 | 19.19 | 20.60 |
| | 4H | 21.18 | 21.68 | 22.25 | 22.74 | 24.17 | 18.13 | 18.63 | 19.19 | 19.68 | 21.11 |
| | 6H | 21.51 | 21.94 | 22.58 | 23.02 | 24.44 | 18.53 | 18.96 | 19.60 | 20.03 | 21.46 |
| | 8H | 21.59 | 21.98 | 22.66 | 23.06 | 24.50 | 18.63 | 19.03 | 19.71 | 20.10 | 21.54 |
| | 12H | 21.60 | 21.96 | 22.69 | 23.04 | 24.49 | 18.65 | 19.01 | 19.74 | 20.10 | 21.54 |
| 8H | 4H | 21.22 | 21.61 | 22.29 | 22.68 | 24.12 | 18.45 | 18.85 | 19.52 | 19.92 | 21.36 |
| | 6H | 21.65 | 21.98 | 22.75 | 23.09 | 24.53 | 18.95 | 19.28 | 20.05 | 20.39 | 21.83 |
| | 8H | 21.79 | 22.08 | 22.90 | 23.18 | 24.63 | 19.12 | 19.40 | 20.22 | 20.50 | 21.96 |
| | 12H | 21.86 | 22.11 | 22.96 | 23.20 | 24.70 | 19.17 | 19.43 | 20.28 | 20.52 | 22.02 |
| 12H | 4H | 21.17 | 21.53 | 22.26 | 22.61 | 24.06 | 18.46 | 18.82 | 19.55 | 19.91 | 21.35 |
| | 6H | 21.64 | 21.93 | 22.74 | 23.02 | 24.48 | 19.02 | 19.31 | 20.12 | 20.40 | 21.86 |
| | 8H | 21.80 | 22.05 | 22.90 | 23.14 | 24.64 | 19.20 | 19.45 | 20.31 | 20.54 | 22.04 |