

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: P855358

Luminaire Tested: SQ2-PH1-125U-125D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855358
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-125U-125D-840-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 1250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

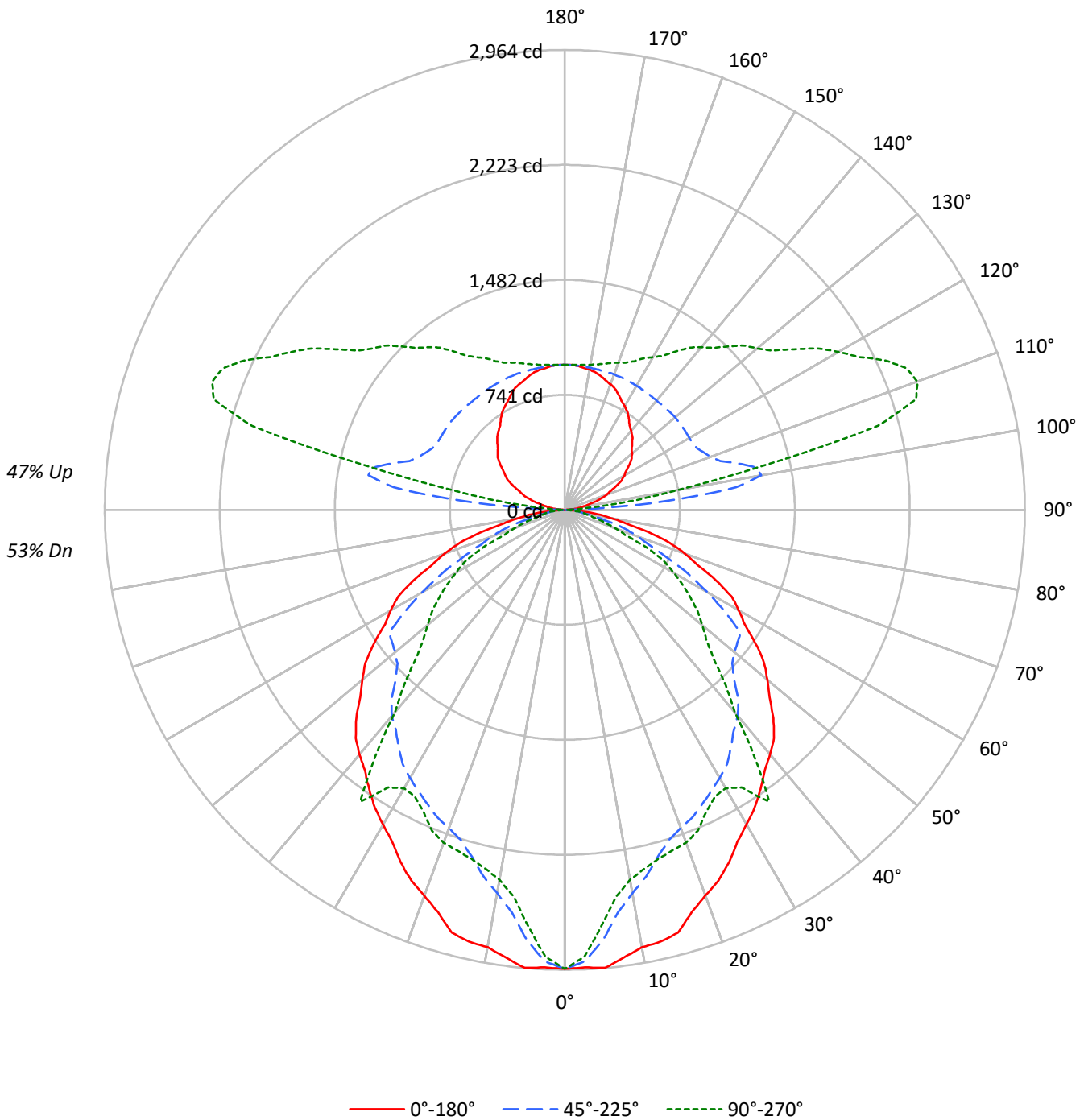
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12316.1 lumens
Efficiency: N/A
Efficacy: 132.3 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): 93.1
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 | 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 | 53 | 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 | 66 | 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 | 44 | 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 | 22 | 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 | 30 | 25 | 32 | 26 | 22 | 27 | 23 | 20 | 23 | 20 | 17 | 15 |
| 10 | 48 | 36 | 28 | 23 | 44 | 33 | 27 | 22 | 29 | 24 | 20 | 25 | 21 | 18 | 22 | 18 | 16 | 14 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 47759 | 47759 | 47759 |
| 5° | 48034 | 45161 | 43655 |
| 10° | 46927 | 41114 | 39682 |
| 15° | 47141 | 38673 | 38908 |
| 20° | 45459 | 37479 | 39220 |
| 25° | 44625 | 37305 | 38308 |
| 30° | 43656 | 37203 | 38620 |
| 35° | 43327 | 36780 | 45269 |
| 40° | 43364 | 36543 | 35890 |
| 45° | 43379 | 35152 | 30910 |
| 50° | 42772 | 35842 | 28987 |
| 55° | 42227 | 38900 | 27809 |
| 60° | 41805 | 34081 | 26082 |
| 65° | 41077 | 27637 | 22690 |
| 70° | 38795 | 23519 | 16206 |
| 75° | 34591 | 17729 | 12296 |
| 80° | 28257 | 11520 | 11520 |
| 85° | 17729 | 10430 | 7818 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 43379 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 260.3 | 2.1 |
| 10°-20° | 684.6 | 5.6 |
| 20°-30° | 1003.9 | 8.2 |
| 30°-40° | 1215.7 | 9.9 |
| 40°-50° | 1195.5 | 9.7 |
| 50°-60° | 1040.7 | 8.4 |
| 60°-70° | 723.5 | 5.9 |
| 70°-80° | 343.0 | 2.8 |
| 80°-90° | 76.6 | 0.6 |
| 90°-100° | 357.9 | 2.9 |
| 100°-110° | 1165.1 | 9.5 |
| 110°-120° | 1152.5 | 9.4 |
| 120°-130° | 941.8 | 7.6 |
| 130°-140° | 769.8 | 6.3 |
| 140°-150° | 599.6 | 4.9 |
| 150°-160° | 432.2 | 3.5 |
| 160°-170° | 264.1 | 2.1 |
| 170°-180° | 89.1 | 0.7 |
| 0°-30° | 1948.8 | 15.8 |
| 0°-40° | 3164.5 | 25.7 |
| 0°-60° | 5400.7 | 43.9 |
| 0°-90° | 6543.9 | 53.1 |
| 90°-120° | 2675.5 | 21.7 |
| 90°-150° | 4986.7 | 40.5 |
| 90°-180° | 5772.0 | 46.9 |
| 0°-180° | 12316.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2958 | 2958 | 2958 | 2958 | 2958 | |
| 5° | 2964 | 2961 | 2786 | 2699 | 2694 | 279 |
| 15° | 2820 | 2512 | 2314 | 2297 | 2328 | 786 |
| 25° | 2505 | 2131 | 2094 | 2159 | 2150 | 1152 |
| 35° | 2198 | 1777 | 1866 | 2027 | 2297 | 1377 |
| 45° | 1900 | 1407 | 1540 | 1593 | 1354 | 1460 |
| 55° | 1500 | 1096 | 1382 | 996 | 988 | 1340 |
| 65° | 1075 | 753 | 723 | 594 | 594 | 1056 |
| 75° | 554 | 384 | 284 | 202 | 197 | 588 |
| 85° | 96 | 63 | 56 | 45 | 42 | 128 |
| 90° | 0 | 3 | 8 | 7 | 7 | 5 |
| 95° | 48 | 147 | 656 | 234 | 144 | 56 |
| 105° | 198 | 286 | 1154 | 2204 | 2088 | 211 |
| 115° | 366 | 437 | 940 | 1938 | 2280 | 362 |
| 125° | 509 | 567 | 928 | 1530 | 1803 | 453 |
| 135° | 614 | 679 | 923 | 1320 | 1489 | 475 |
| 145° | 718 | 771 | 921 | 1137 | 1245 | 450 |
| 155° | 819 | 846 | 926 | 1018 | 1056 | 377 |
| 165° | 894 | 902 | 929 | 963 | 975 | 252 |
| 175° | 932 | 932 | 932 | 939 | 937 | 88 |
| 180° | 936 | 936 | 936 | 936 | 936 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2958.0 | 2958.0 | 2958.0 | 2958.0 | 2958.0 |
| 2.5° | 2951.3 | 2982.1 | 2913.0 | 2885.9 | 2881.5 |
| 5° | 2963.7 | 2960.9 | 2786.4 | 2699.0 | 2693.5 |
| 7.5° | 2909.7 | 2824.3 | 2615.9 | 2519.5 | 2515.1 |
| 10° | 2862.3 | 2733.0 | 2507.7 | 2420.4 | 2420.4 |
| 12.5° | 2851.2 | 2646.9 | 2420.0 | 2355.5 | 2368.7 |
| 15° | 2820.2 | 2511.9 | 2313.6 | 2297.4 | 2327.7 |
| 17.5° | 2717.7 | 2385.8 | 2230.8 | 2267.6 | 2302.8 |
| 20° | 2645.7 | 2318.1 | 2181.3 | 2249.6 | 2282.6 |
| 22.5° | 2584.9 | 2253.0 | 2145.3 | 2220.0 | 2237.6 |
| 25° | 2504.9 | 2130.7 | 2094.0 | 2158.6 | 2150.3 |
| 27.5° | 2409.2 | 2018.5 | 2042.7 | 2082.3 | 2087.2 |
| 30° | 2341.6 | 1950.9 | 1995.5 | 2035.7 | 2071.5 |
| 32.5° | 2276.4 | 1872.3 | 1943.7 | 2039.0 | 2121.0 |
| 35° | 2198.2 | 1777.1 | 1866.0 | 2027.0 | 2296.7 |
| 37.5° | 2115.9 | 1664.7 | 1787.7 | 1923.1 | 2009.0 |
| 40° | 2057.4 | 1584.0 | 1733.8 | 1900.9 | 1702.8 |
| 42.5° | 1994.4 | 1521.0 | 1652.7 | 1868.5 | 1533.9 |
| 45° | 1899.8 | 1407.2 | 1539.5 | 1593.2 | 1353.7 |
| 47.5° | 1788.3 | 1318.9 | 1462.9 | 1328.6 | 1235.0 |
| 50° | 1702.8 | 1259.7 | 1426.9 | 1214.5 | 1154.0 |
| 52.5° | 1619.4 | 1198.4 | 1402.2 | 1120.4 | 1079.6 |
| 55° | 1500.1 | 1095.6 | 1381.9 | 996.2 | 987.9 |
| 57.5° | 1373.4 | 990.9 | 1222.0 | 888.0 | 902.4 |
| 60° | 1294.6 | 923.1 | 1055.4 | 824.3 | 807.7 |
| 62.5° | 1211.3 | 857.5 | 900.0 | 743.2 | 726.7 |
| 65° | 1075.2 | 753.2 | 723.4 | 593.9 | 593.9 |
| 67.5° | 925.4 | 644.7 | 586.0 | 486.0 | 419.9 |
| 70° | 821.8 | 574.2 | 498.2 | 387.4 | 343.3 |
| 72.5° | 711.5 | 499.0 | 408.1 | 317.5 | 266.8 |
| 75° | 554.5 | 383.9 | 284.2 | 202.5 | 197.1 |
| 77.5° | 400.8 | 276.4 | 191.4 | 150.3 | 150.8 |
| 80° | 303.9 | 210.4 | 123.9 | 121.1 | 123.9 |
| 82.5° | 213.9 | 144.5 | 92.3 | 96.3 | 96.8 |
| 85° | 95.7 | 62.7 | 56.3 | 45.0 | 42.2 |
| 87.5° | 20.3 | 18.8 | 12.8 | 12.6 | 12.6 |
| 90° | 0.0 | 3.4 | 8.0 | 6.9 | 6.9 |
| 92.5° | 16.5 | 59.6 | 190.3 | 62.7 | 48.4 |
| 95° | 48.4 | 147.3 | 655.9 | 233.9 | 143.8 |
| 97.5° | 90.9 | 191.7 | 1113.2 | 678.0 | 413.8 |
| 100° | 118.5 | 217.6 | 1285.3 | 1146.2 | 743.4 |
| 102.5° | 149.9 | 245.2 | 1264.2 | 1695.7 | 1289.3 |
| 105° | 197.9 | 285.6 | 1154.2 | 2204.5 | 2087.5 |
| 107.5° | 250.0 | 332.5 | 1049.7 | 2248.5 | 2372.5 |
| 110° | 287.7 | 363.0 | 1000.0 | 2193.8 | 2417.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 319.0 | 393.4 | 968.7 | 2094.9 | 2383.6 |
| 115° | 365.9 | 436.8 | 940.1 | 1937.6 | 2279.6 |
| 117.5° | 414.3 | 478.2 | 929.1 | 1793.4 | 2134.0 |
| 120° | 441.9 | 504.9 | 926.4 | 1704.9 | 2034.4 |
| 122.5° | 468.6 | 530.7 | 927.3 | 1627.9 | 1935.0 |
| 125° | 508.6 | 567.1 | 927.5 | 1529.8 | 1803.2 |
| 127.5° | 543.0 | 602.7 | 927.3 | 1456.3 | 1684.2 |
| 130° | 565.0 | 625.8 | 926.4 | 1414.2 | 1617.9 |
| 132.5° | 584.3 | 647.8 | 925.4 | 1375.3 | 1566.4 |
| 135° | 614.5 | 678.6 | 922.9 | 1320.3 | 1489.0 |
| 137.5° | 644.0 | 708.6 | 920.3 | 1264.3 | 1414.2 |
| 140° | 665.1 | 727.0 | 919.4 | 1226.5 | 1368.2 |
| 142.5° | 685.4 | 744.6 | 919.4 | 1190.2 | 1316.7 |
| 145° | 718.0 | 770.9 | 920.6 | 1137.1 | 1245.1 |
| 147.5° | 749.8 | 795.7 | 922.2 | 1091.9 | 1175.3 |
| 150° | 771.0 | 811.5 | 924.0 | 1064.8 | 1135.8 |
| 152.5° | 792.1 | 825.5 | 925.0 | 1044.3 | 1100.8 |
| 155° | 819.3 | 846.3 | 926.4 | 1018.1 | 1056.3 |
| 157.5° | 845.1 | 864.5 | 927.8 | 998.7 | 1025.6 |
| 160° | 860.8 | 876.5 | 928.6 | 986.6 | 1008.1 |
| 162.5° | 874.5 | 886.8 | 928.6 | 976.4 | 992.3 |
| 165° | 894.1 | 902.0 | 928.6 | 963.4 | 974.6 |
| 167.5° | 908.0 | 912.9 | 928.8 | 953.6 | 959.5 |
| 170° | 917.2 | 919.4 | 929.8 | 947.1 | 949.3 |
| 172.5° | 923.6 | 925.0 | 931.6 | 943.4 | 942.9 |
| 175° | 932.1 | 932.1 | 932.1 | 939.0 | 936.7 |
| 177.5° | 935.6 | 934.7 | 933.7 | 938.3 | 934.7 |
| 180° | 935.6 | 935.6 | 935.6 | 935.6 | 935.6 |



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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 | 21.05 | 21.93 | 21.98 | 22.88 | 24.10 | 19.72 | 20.60 | 20.65 | 21.55 | 22.78 |
| | 3H | 23.07 | 23.86 | 24.02 | 24.82 | 26.07 | 20.75 | 21.54 | 21.70 | 22.50 | 23.75 |
| | 4H | 23.81 | 24.55 | 24.76 | 25.51 | 26.77 | 20.97 | 21.72 | 21.93 | 22.68 | 23.94 |
| | 6H | 24.29 | 24.98 | 25.26 | 25.95 | 27.22 | 21.12 | 21.80 | 22.08 | 22.77 | 24.04 |
| | 8H | 24.42 | 25.07 | 25.39 | 26.06 | 27.32 | 21.15 | 21.80 | 22.12 | 22.79 | 24.06 |
| | 12H | 24.46 | 25.08 | 25.44 | 26.06 | 27.36 | 21.15 | 21.77 | 22.13 | 22.75 | 24.04 |
| 4H | 2H | 21.42 | 22.17 | 22.39 | 23.13 | 24.39 | 20.36 | 21.11 | 21.33 | 22.07 | 23.33 |
| | 3H | 23.53 | 24.15 | 24.51 | 25.15 | 26.42 | 21.55 | 22.17 | 22.52 | 23.16 | 24.43 |
| | 4H | 24.35 | 24.92 | 25.33 | 25.90 | 27.20 | 21.82 | 22.39 | 22.80 | 23.37 | 24.67 |
| | 6H | 24.94 | 25.42 | 25.93 | 26.43 | 27.73 | 22.03 | 22.52 | 23.03 | 23.53 | 24.82 |
| | 8H | 25.11 | 25.56 | 26.10 | 26.56 | 27.87 | 22.09 | 22.54 | 23.08 | 23.55 | 24.86 |
| | 12H | 25.17 | 25.58 | 26.19 | 26.60 | 27.92 | 22.10 | 22.51 | 23.11 | 23.53 | 24.84 |
| 8H | 4H | 24.37 | 24.82 | 25.36 | 25.82 | 27.13 | 22.04 | 22.49 | 23.04 | 23.50 | 24.81 |
| | 6H | 25.02 | 25.40 | 26.04 | 26.44 | 27.75 | 22.31 | 22.69 | 23.33 | 23.73 | 25.04 |
| | 8H | 25.25 | 25.58 | 26.28 | 26.61 | 27.93 | 22.42 | 22.75 | 23.45 | 23.78 | 25.10 |
| | 12H | 25.36 | 25.65 | 26.39 | 26.68 | 28.05 | 22.46 | 22.75 | 23.49 | 23.78 | 25.15 |
| 12H | 4H | 24.32 | 24.73 | 25.34 | 25.75 | 27.06 | 22.04 | 22.45 | 23.05 | 23.47 | 24.78 |
| | 6H | 24.99 | 25.33 | 26.02 | 26.36 | 27.68 | 22.34 | 22.67 | 23.37 | 23.70 | 25.03 |
| | 8H | 25.23 | 25.52 | 26.26 | 26.54 | 27.91 | 22.46 | 22.75 | 23.49 | 23.77 | 25.15 |