

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: P854267

Luminaire Tested: SQ2-PW1-050U-125D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854267  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PW1-050U-125D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1250 LUMENS PER FOOT  
UPLIGHT 500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

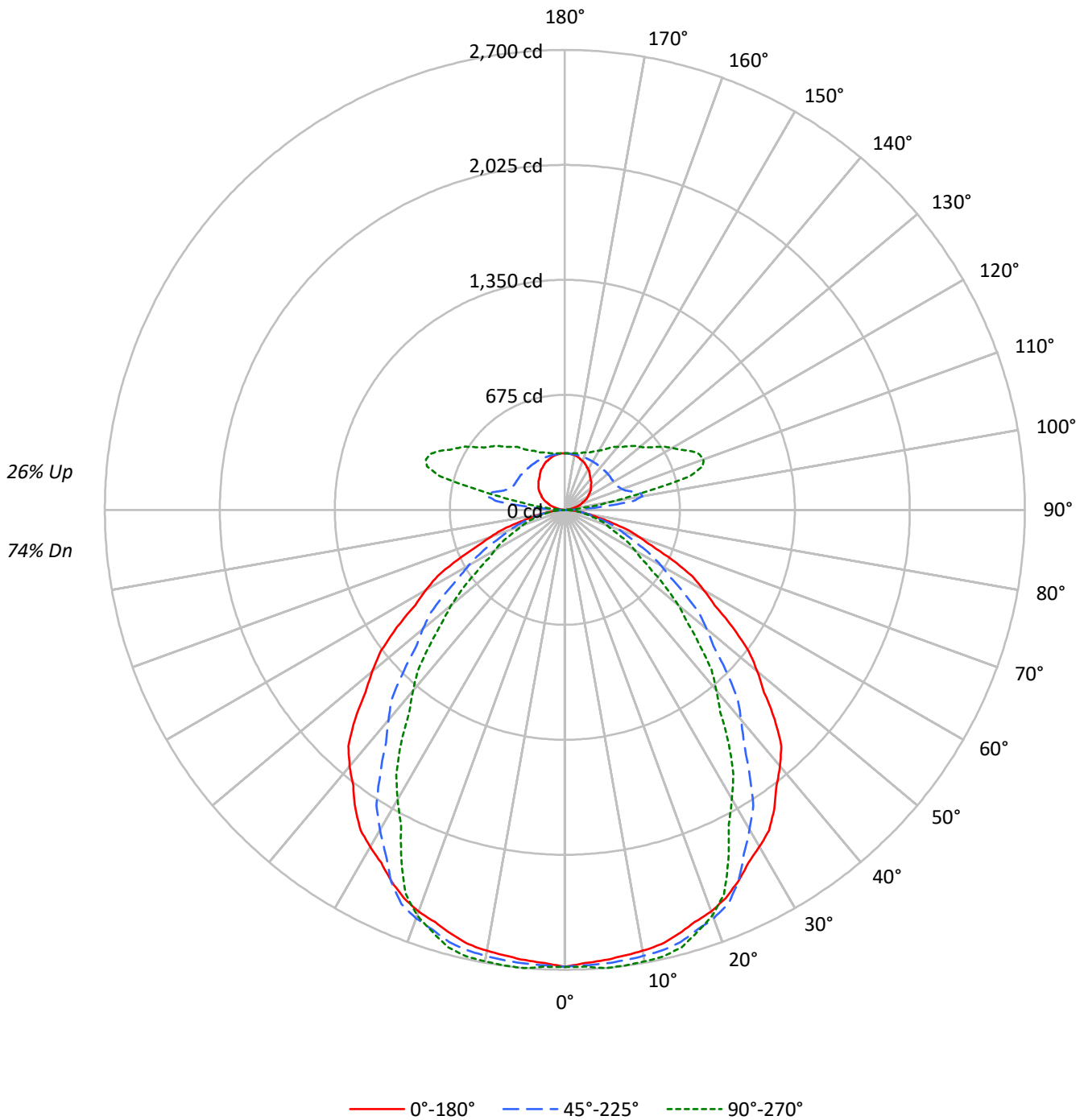
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8014.6 lumens  
Efficiency: N/A  
Efficacy: 125.2 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: Semi-Direct  
  
Input Watts (W): 64  
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   | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | 87 | 87 | 87 | 78 | 78 | 78 | 74 |
| 1   | 104 | 100 | 96  | 93  | 99  | 95  | 92  | 89  | 86 | 84 | 82 | 78 | 76 | 75 | 71 | 69 | 68 | 64 |
| 2   | 96  | 88  | 82  | 77  | 91  | 84  | 79  | 74  | 77 | 73 | 69 | 70 | 66 | 64 | 63 | 61 | 59 | 55 |
| 3   | 88  | 78  | 71  | 66  | 83  | 75  | 69  | 63  | 68 | 63 | 59 | 62 | 58 | 55 | 57 | 54 | 51 | 48 |
| 4   | 81  | 70  | 62  | 56  | 77  | 67  | 60  | 55  | 61 | 56 | 51 | 56 | 52 | 48 | 51 | 48 | 44 | 42 |
| 5   | 75  | 63  | 55  | 49  | 71  | 60  | 53  | 48  | 55 | 49 | 45 | 51 | 46 | 42 | 47 | 43 | 39 | 37 |
| 6   | 69  | 57  | 49  | 43  | 66  | 55  | 47  | 42  | 50 | 44 | 40 | 46 | 41 | 37 | 43 | 38 | 35 | 33 |
| 7   | 64  | 52  | 44  | 38  | 61  | 50  | 42  | 37  | 46 | 40 | 35 | 42 | 37 | 33 | 39 | 35 | 31 | 29 |
| 8   | 60  | 47  | 40  | 34  | 57  | 46  | 38  | 33  | 42 | 36 | 32 | 39 | 34 | 30 | 36 | 32 | 28 | 26 |
| 9   | 56  | 44  | 36  | 31  | 53  | 42  | 35  | 30  | 39 | 33 | 29 | 36 | 31 | 27 | 33 | 29 | 26 | 24 |
| 10  | 52  | 40  | 33  | 28  | 50  | 39  | 32  | 27  | 36 | 30 | 26 | 34 | 28 | 25 | 31 | 27 | 24 | 22 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 43308 | 43308 | 43308 |
| 5°  | 43018 | 43349 | 43764 |
| 10° | 43097 | 43599 | 44143 |
| 15° | 43086 | 43896 | 44409 |
| 20° | 43103 | 43849 | 43541 |
| 25° | 42870 | 42916 | 40458 |
| 30° | 42578 | 40434 | 36577 |
| 35° | 42245 | 37209 | 33031 |
| 40° | 41406 | 33921 | 29183 |
| 45° | 39781 | 30506 | 25489 |
| 50° | 37025 | 27271 | 21818 |
| 55° | 33869 | 24090 | 17689 |
| 60° | 30357 | 20954 | 15261 |
| 65° | 26544 | 18055 | 13566 |
| 70° | 21706 | 16041 | 12302 |
| 75° | 16893 | 13861 | 11316 |
| 80° | 12590 | 11874 | 9977  |
| 85° | 8522  | 8985  | 5687  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 39781 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 255.4  | 3.2       |
| 10°-20°   | 740.0  | 9.2       |
| 20°-30°   | 1089.1 | 13.6      |
| 30°-40°   | 1190.7 | 14.9      |
| 40°-50°   | 1068.2 | 13.3      |
| 50°-60°   | 796.8  | 9.9       |
| 60°-70°   | 503.6  | 6.3       |
| 70°-80°   | 249.5  | 3.1       |
| 80°-90°   | 58.8   | 0.7       |
| 90°-100°  | 132.3  | 1.7       |
| 100°-110° | 419.6  | 5.2       |
| 110°-120° | 411.4  | 5.1       |
| 120°-130° | 334.8  | 4.2       |
| 130°-140° | 273.0  | 3.4       |
| 140°-150° | 212.8  | 2.7       |
| 150°-160° | 153.3  | 1.9       |
| 160°-170° | 93.7   | 1.2       |
| 170°-180° | 31.6   | 0.4       |
| 0°-30°    | 2084.5 | 26.0      |
| 0°-40°    | 3275.2 | 40.9      |
| 0°-60°    | 5140.2 | 64.1      |
| 0°-90°    | 5952.0 | 74.3      |
| 90°-120°  | 963.3  | 12.0      |
| 90°-150°  | 1783.9 | 22.3      |
| 90°-180°  | 2063.0 | 25.7      |
| 0°-180°   | 8014.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2682 | 2682  | 2682 | 2682  | 2682 |      |
| 5°   | 2654 | 2697  | 2675 | 2678  | 2700 | 253  |
| 15°  | 2578 | 2628  | 2626 | 2644  | 2657 | 728  |
| 25°  | 2406 | 2459  | 2409 | 2308  | 2271 | 1108 |
| 35°  | 2143 | 2121  | 1888 | 1723  | 1676 | 1337 |
| 45°  | 1742 | 1602  | 1336 | 1169  | 1116 | 1336 |
| 55°  | 1203 | 1088  | 856  | 671   | 628  | 1074 |
| 65°  | 695  | 637   | 473  | 380   | 355  | 689  |
| 75°  | 271  | 291   | 222  | 186   | 181  | 298  |
| 85°  | 46   | 58    | 48   | 33    | 31   | 58   |
| 90°  | 0    | 1     | 3    | 3     | 3    | 2    |
| 95°  | 18   | 54    | 240  | 89    | 57   | 21   |
| 105° | 73   | 103   | 414  | 788   | 755  | 77   |
| 115° | 131  | 155   | 334  | 694   | 817  | 129  |
| 125° | 181  | 202   | 329  | 544   | 641  | 161  |
| 135° | 218  | 240   | 327  | 468   | 528  | 169  |
| 145° | 255  | 274   | 327  | 404   | 440  | 160  |
| 155° | 290  | 301   | 328  | 361   | 375  | 134  |
| 165° | 316  | 320   | 329  | 342   | 345  | 89   |
| 175° | 331  | 330   | 331  | 333   | 332  | 31   |
| 180° | 332  | 332   | 332  | 332   | 332  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2682.3 | 2682.3 | 2682.3 | 2682.3 | 2682.3 |
| 2.5°   | 2663.9 | 2697.9 | 2676.2 | 2678.4 | 2684.3 |
| 5°     | 2654.2 | 2696.7 | 2674.6 | 2677.7 | 2700.2 |
| 7.5°   | 2640.9 | 2683.9 | 2667.5 | 2676.7 | 2698.7 |
| 10°    | 2628.7 | 2673.6 | 2659.3 | 2672.5 | 2692.5 |
| 12.5°  | 2612.3 | 2659.3 | 2649.1 | 2664.4 | 2684.3 |
| 15°    | 2577.6 | 2627.5 | 2626.1 | 2644.3 | 2656.8 |
| 17.5°  | 2537.2 | 2587.2 | 2584.7 | 2589.5 | 2595.4 |
| 20°    | 2508.6 | 2558.5 | 2552.0 | 2534.1 | 2534.1 |
| 22.5°  | 2467.7 | 2521.7 | 2505.0 | 2456.1 | 2440.1 |
| 25°    | 2406.4 | 2458.9 | 2409.0 | 2308.5 | 2271.0 |
| 27.5°  | 2334.9 | 2377.3 | 2277.1 | 2134.4 | 2082.5 |
| 30°    | 2283.8 | 2316.3 | 2168.8 | 2011.9 | 1961.9 |
| 32.5°  | 2230.7 | 2243.1 | 2058.5 | 1895.3 | 1841.3 |
| 35°    | 2143.3 | 2120.8 | 1887.8 | 1723.3 | 1675.8 |
| 37.5°  | 2040.1 | 1973.1 | 1723.8 | 1551.5 | 1499.0 |
| 40°    | 1964.5 | 1869.6 | 1609.4 | 1437.0 | 1384.6 |
| 42.5°  | 1880.7 | 1761.8 | 1501.1 | 1328.7 | 1274.2 |
| 45°    | 1742.2 | 1602.3 | 1336.0 | 1168.8 | 1116.3 |
| 47.5°  | 1586.4 | 1447.5 | 1181.7 | 1019.8 | 974.8  |
| 50°    | 1474.0 | 1339.1 | 1085.7 | 923.5  | 868.6  |
| 52.5°  | 1359.5 | 1238.7 | 991.7  | 825.0  | 750.0  |
| 55°    | 1203.2 | 1088.3 | 855.8  | 670.9  | 628.4  |
| 57.5°  | 1042.3 | 942.9  | 732.7  | 564.8  | 529.8  |
| 60°    | 940.1  | 852.7  | 648.9  | 507.6  | 472.6  |
| 62.5°  | 842.0  | 764.6  | 567.1  | 454.6  | 425.6  |
| 65°    | 694.8  | 637.4  | 472.6  | 380.1  | 355.1  |
| 67.5°  | 551.8  | 519.8  | 392.9  | 311.8  | 295.3  |
| 70°    | 459.8  | 449.8  | 339.8  | 273.1  | 260.6  |
| 72.5°  | 380.1  | 384.1  | 288.7  | 236.4  | 227.9  |
| 75°    | 270.8  | 290.8  | 222.2  | 186.4  | 181.4  |
| 77.5°  | 184.4  | 214.4  | 164.5  | 137.9  | 133.9  |
| 80°    | 135.4  | 165.4  | 127.7  | 107.3  | 107.3  |
| 82.5°  | 94.5   | 118.5  | 90.9   | 80.7   | 80.7   |
| 85°    | 46.0   | 58.5   | 48.5   | 33.2   | 30.7   |
| 87.5°  | 12.3   | 18.5   | 8.8    | 6.8    | 6.8    |
| 90°    | 0.0    | 1.0    | 3.1    | 3.1    | 3.1    |
| 92.5°  | 5.8    | 23.2   | 74.2   | 24.7   | 17.3   |
| 95°    | 17.8   | 53.5   | 240.2  | 89.1   | 57.4   |
| 97.5°  | 33.0   | 69.4   | 406.9  | 254.3  | 156.0  |
| 100°   | 43.9   | 78.6   | 463.7  | 422.8  | 274.7  |
| 102.5° | 55.6   | 88.7   | 453.7  | 620.9  | 475.2  |
| 105°   | 73.1   | 102.7  | 413.6  | 787.8  | 755.2  |
| 107.5° | 90.7   | 118.0  | 375.4  | 805.2  | 849.4  |
| 110°   | 102.4  | 128.9  | 356.2  | 785.2  | 866.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 114.1 | 139.0 | 345.3 | 750.6 | 854.4 |
| 115°   | 130.6 | 155.1 | 334.2 | 694.2 | 816.8 |
| 117.5° | 146.6 | 169.9 | 329.8 | 639.9 | 763.5 |
| 120°   | 156.7 | 179.1 | 329.0 | 606.4 | 725.9 |
| 122.5° | 166.7 | 188.3 | 329.0 | 579.5 | 690.8 |
| 125°   | 180.7 | 202.1 | 329.0 | 544.3 | 641.3 |
| 127.5° | 193.0 | 213.6 | 329.0 | 517.0 | 599.7 |
| 130°   | 200.5 | 222.0 | 329.0 | 501.0 | 575.5 |
| 132.5° | 208.1 | 229.5 | 328.2 | 488.3 | 555.5 |
| 135°   | 218.3 | 239.7 | 326.9 | 468.2 | 527.5 |
| 137.5° | 228.3 | 250.8 | 326.7 | 449.1 | 502.0 |
| 140°   | 235.0 | 257.5 | 325.9 | 435.6 | 483.6 |
| 142.5° | 243.4 | 265.0 | 326.7 | 422.1 | 466.9 |
| 145°   | 254.9 | 274.3 | 326.9 | 404.0 | 439.7 |
| 147.5° | 266.3 | 282.9 | 327.1 | 388.0 | 417.2 |
| 150°   | 274.7 | 288.0 | 328.0 | 378.6 | 402.1 |
| 152.5° | 281.4 | 293.0 | 328.0 | 371.0 | 390.4 |
| 155°   | 290.4 | 300.6 | 328.0 | 360.7 | 375.0 |
| 157.5° | 300.0 | 306.9 | 329.0 | 354.3 | 364.1 |
| 160°   | 305.0 | 311.1 | 329.0 | 350.1 | 358.3 |
| 162.5° | 310.0 | 314.5 | 329.0 | 346.7 | 352.4 |
| 165°   | 316.5 | 319.5 | 329.0 | 341.6 | 344.7 |
| 167.5° | 322.5 | 323.4 | 330.1 | 338.1 | 340.7 |
| 170°   | 325.9 | 325.9 | 330.1 | 336.3 | 337.4 |
| 172.5° | 327.5 | 328.4 | 330.1 | 334.7 | 334.9 |
| 175°   | 331.1 | 330.1 | 331.1 | 333.2 | 332.1 |
| 177.5° | 332.1 | 331.3 | 331.3 | 332.9 | 331.3 |
| 180°   | 332.1 | 332.1 | 332.1 | 332.1 | 332.1 |



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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 | 22.17            | 23.24 | 22.90 | 23.98 | 24.86 | 18.66          | 19.73 | 19.38 | 20.46 | 21.34 |
|                 | 3H   | 23.51            | 24.46 | 24.25 | 25.21 | 26.13 | 19.88          | 20.83 | 20.62 | 21.58 | 22.49 |
|                 | 4H   | 23.89            | 24.79 | 24.65 | 25.55 | 26.47 | 20.34          | 21.23 | 21.09 | 21.99 | 22.92 |
|                 | 6H   | 24.11            | 24.93 | 24.88 | 25.70 | 26.64 | 20.66          | 21.49 | 21.43 | 22.26 | 23.20 |
|                 | 8H   | 24.15            | 24.93 | 24.93 | 25.72 | 26.66 | 20.75          | 21.53 | 21.53 | 22.32 | 23.26 |
|                 | 12H  | 24.15            | 24.90 | 24.93 | 25.68 | 26.64 | 20.76          | 21.51 | 21.55 | 22.29 | 23.26 |
| 4H              | 2H   | 22.30            | 23.20 | 23.06 | 23.96 | 24.88 | 19.37          | 20.26 | 20.13 | 21.02 | 21.95 |
|                 | 3H   | 23.86            | 24.61 | 24.64 | 25.40 | 26.34 | 20.77          | 21.52 | 21.55 | 22.31 | 23.25 |
|                 | 4H   | 24.38            | 25.05 | 25.17 | 25.85 | 26.82 | 21.33          | 22.00 | 22.12 | 22.80 | 23.77 |
|                 | 6H   | 24.72            | 25.30 | 25.53 | 26.12 | 27.10 | 21.74          | 22.32 | 22.55 | 23.14 | 24.12 |
|                 | 8H   | 24.81            | 25.35 | 25.61 | 26.16 | 27.15 | 21.85          | 22.39 | 22.66 | 23.21 | 24.20 |
|                 | 12H  | 24.83            | 25.32 | 25.66 | 26.15 | 27.15 | 21.88          | 22.37 | 22.71 | 23.21 | 24.20 |
| 8H              | 4H   | 24.43            | 24.98 | 25.24 | 25.79 | 26.78 | 21.67          | 22.21 | 22.48 | 23.03 | 24.01 |
|                 | 6H   | 24.88            | 25.32 | 25.72 | 26.18 | 27.17 | 22.18          | 22.63 | 23.02 | 23.49 | 24.48 |
|                 | 8H   | 25.02            | 25.42 | 25.87 | 26.28 | 27.28 | 22.35          | 22.74 | 23.20 | 23.60 | 24.60 |
|                 | 12H  | 25.10            | 25.45 | 25.95 | 26.29 | 27.36 | 22.41          | 22.77 | 23.27 | 23.61 | 24.67 |
| 12H             | 4H   | 24.40            | 24.89 | 25.23 | 25.73 | 26.72 | 21.69          | 22.18 | 22.52 | 23.02 | 24.01 |
|                 | 6H   | 24.87            | 25.27 | 25.72 | 26.12 | 27.13 | 22.25          | 22.65 | 23.10 | 23.50 | 24.51 |
|                 | 8H   | 25.04            | 25.39 | 25.89 | 26.24 | 27.30 | 22.44          | 22.79 | 23.29 | 23.64 | 24.70 |