

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: P854252

Luminaire Tested: SQ2-PW1-025U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854252  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PW1-025U-100D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

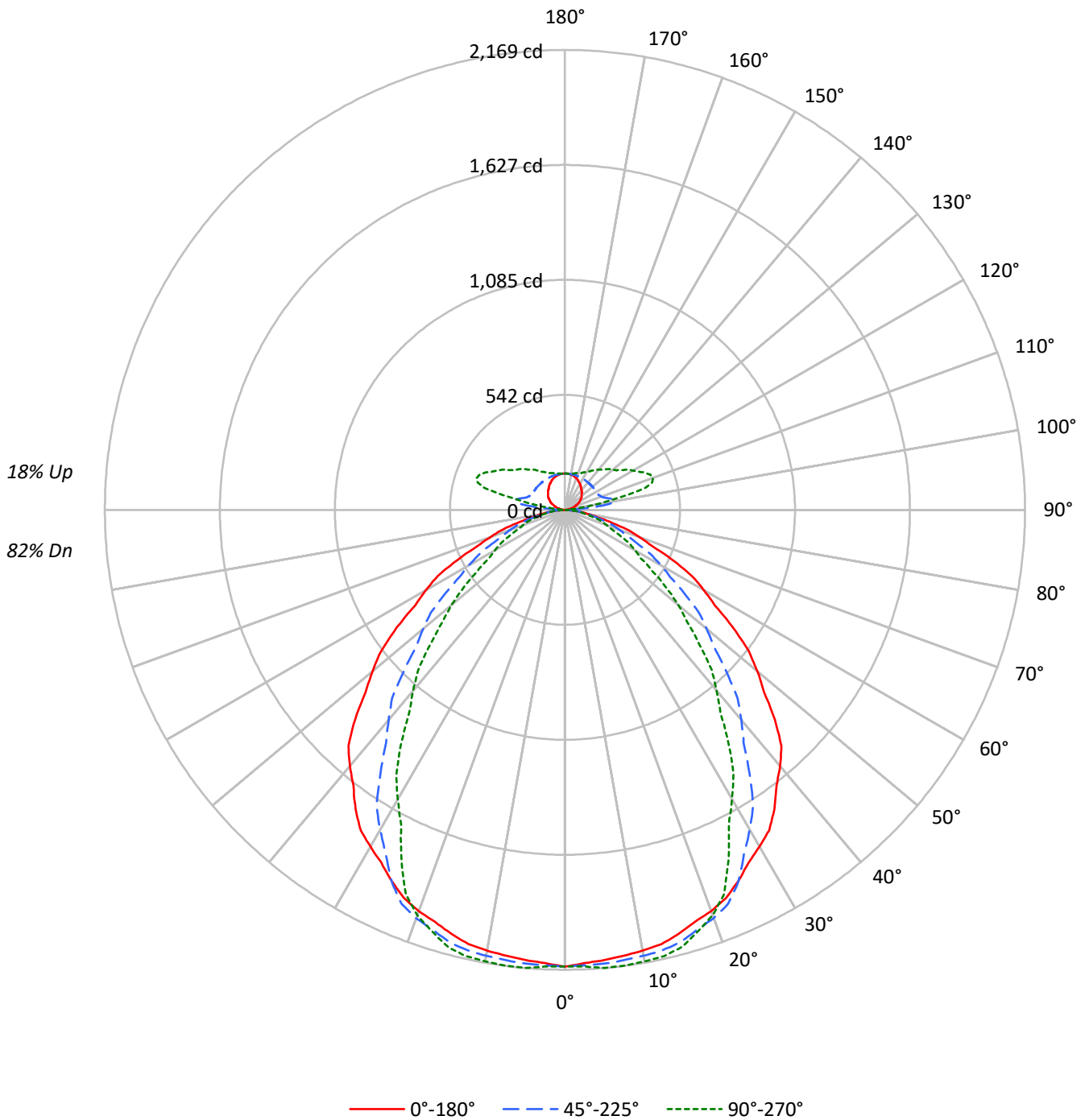
Lumens per Lamp: N/A  
Luminaire Lumens: 5841.1 lumens  
Efficiency: N/A  
Efficacy: 129.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.11 / 1.22  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 45  
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   | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 110 | 101 | 101 | 101 | 93 | 93 | 93 | 85 | 85 | 85 | 82 |    |    |
| 1   | 106 | 102 | 98  | 95  | 101 | 98  | 94  | 91  | 90  | 88  | 85  | 83 | 81 | 80 | 77 | 75 | 74 | 71 |    |    |
| 2   | 97  | 90  | 84  | 79  | 93  | 87  | 81  | 77  | 80  | 76  | 72  | 74 | 71 | 68 | 69 | 66 | 64 | 61 |    |    |
| 3   | 89  | 80  | 73  | 67  | 85  | 77  | 71  | 65  | 72  | 66  | 62  | 67 | 62 | 59 | 62 | 58 | 55 | 53 |    |    |
| 4   | 82  | 72  | 64  | 58  | 79  | 69  | 62  | 56  | 64  | 58  | 54  | 60 | 55 | 51 | 56 | 52 | 49 | 46 |    |    |
| 5   | 76  | 64  | 56  | 50  | 73  | 62  | 55  | 49  | 58  | 52  | 47  | 54 | 49 | 45 | 51 | 46 | 43 | 40 |    |    |
| 6   | 70  | 58  | 50  | 44  | 67  | 56  | 49  | 43  | 53  | 46  | 42  | 50 | 44 | 40 | 46 | 42 | 38 | 36 |    |    |
| 7   | 65  | 53  | 45  | 39  | 63  | 51  | 44  | 39  | 48  | 42  | 37  | 45 | 40 | 36 | 43 | 38 | 34 | 32 |    |    |
| 8   | 61  | 49  | 41  | 35  | 59  | 47  | 40  | 35  | 44  | 38  | 33  | 42 | 36 | 32 | 39 | 35 | 31 | 29 |    |    |
| 9   | 57  | 45  | 37  | 32  | 55  | 43  | 36  | 31  | 41  | 35  | 30  | 39 | 33 | 29 | 37 | 32 | 28 | 26 |    |    |
| 10  | 54  | 41  | 34  | 29  | 51  | 40  | 33  | 29  | 38  | 32  | 28  | 36 | 31 | 27 | 34 | 29 | 26 | 24 |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 34781 | 34781 | 34781 |
| 5°  | 34548 | 34814 | 35148 |
| 10° | 34611 | 35015 | 35452 |
| 15° | 34603 | 35254 | 35666 |
| 20° | 34617 | 35216 | 34969 |
| 25° | 34429 | 34467 | 32493 |
| 30° | 34194 | 32473 | 29375 |
| 35° | 33928 | 29883 | 26528 |
| 40° | 33253 | 27242 | 23438 |
| 45° | 31949 | 24501 | 20473 |
| 50° | 29735 | 21901 | 17520 |
| 55° | 27201 | 19347 | 14207 |
| 60° | 24380 | 16827 | 12255 |
| 65° | 21318 | 14499 | 10896 |
| 70° | 17434 | 12883 | 9880  |
| 75° | 13568 | 11135 | 9089  |
| 80° | 10107 | 9540  | 8015  |
| 85° | 6836  | 7225  | 4557  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 31949 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 205.1  | 3.5       |
| 10°-20°   | 594.3  | 10.2      |
| 20°-30°   | 874.6  | 15.0      |
| 30°-40°   | 956.3  | 16.4      |
| 40°-50°   | 857.9  | 14.7      |
| 50°-60°   | 639.9  | 11.0      |
| 60°-70°   | 404.4  | 6.9       |
| 70°-80°   | 200.3  | 3.4       |
| 80°-90°   | 47.3   | 0.8       |
| 90°-100°  | 69.2   | 1.2       |
| 100°-110° | 215.2  | 3.7       |
| 110°-120° | 210.5  | 3.6       |
| 120°-130° | 171.8  | 2.9       |
| 130°-140° | 140.6  | 2.4       |
| 140°-150° | 109.7  | 1.9       |
| 150°-160° | 79.2   | 1.4       |
| 160°-170° | 48.4   | 0.8       |
| 170°-180° | 16.3   | 0.3       |
| 0°-30°    | 1674.1 | 28.7      |
| 0°-40°    | 2630.4 | 45.0      |
| 0°-60°    | 4128.1 | 70.7      |
| 0°-90°    | 4780.2 | 81.8      |
| 90°-120°  | 494.8  | 8.5       |
| 90°-150°  | 917.0  | 15.7      |
| 90°-180°  | 1061.0 | 18.2      |
| 0°-180°   | 5841.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2154 | 2154  | 2154 | 2154  | 2154 |      |
| 5°   | 2132 | 2166  | 2148 | 2150  | 2169 | 203  |
| 15°  | 2070 | 2110  | 2109 | 2124  | 2134 | 584  |
| 25°  | 1933 | 1975  | 1935 | 1854  | 1824 | 890  |
| 35°  | 1721 | 1703  | 1516 | 1384  | 1346 | 1074 |
| 45°  | 1399 | 1287  | 1073 | 939   | 897  | 1073 |
| 55°  | 966  | 874   | 687  | 539   | 505  | 863  |
| 65°  | 558  | 512   | 380  | 305   | 285  | 553  |
| 75°  | 218  | 234   | 178  | 150   | 146  | 240  |
| 85°  | 37   | 47    | 39   | 27    | 25   | 47   |
| 90°  | 0    | 1     | 3    | 3     | 3    | 2    |
| 95°  | 9    | 28    | 127  | 47    | 30   | 11   |
| 105° | 38   | 53    | 212  | 404   | 386  | 40   |
| 115° | 67   | 79    | 172  | 355   | 415  | 66   |
| 125° | 93   | 104   | 170  | 279   | 327  | 83   |
| 135° | 112  | 124   | 169  | 241   | 271  | 87   |
| 145° | 131  | 141   | 169  | 208   | 226  | 82   |
| 155° | 150  | 155   | 170  | 187   | 193  | 69   |
| 165° | 165  | 166   | 171  | 176   | 178  | 46   |
| 175° | 171  | 171   | 171  | 172   | 171  | 16   |
| 180° | 171  | 171   | 171  | 171   | 171  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2154.2 | 2154.2 | 2154.2 | 2154.2 | 2154.2 |
| 2.5°   | 2139.4 | 2166.7 | 2149.3 | 2151.0 | 2155.8 |
| 5°     | 2131.6 | 2165.7 | 2148.0 | 2150.5 | 2168.6 |
| 7.5°   | 2121.0 | 2155.5 | 2142.3 | 2149.7 | 2167.3 |
| 10°    | 2111.1 | 2147.2 | 2135.7 | 2146.4 | 2162.4 |
| 12.5°  | 2098.0 | 2135.7 | 2127.5 | 2139.8 | 2155.8 |
| 15°    | 2070.1 | 2110.2 | 2109.1 | 2123.6 | 2133.7 |
| 17.5°  | 2037.7 | 2077.8 | 2075.8 | 2079.6 | 2084.4 |
| 20°    | 2014.7 | 2054.8 | 2049.6 | 2035.2 | 2035.2 |
| 22.5°  | 1981.9 | 2025.2 | 2011.8 | 1972.5 | 1959.7 |
| 25°    | 1932.6 | 1974.7 | 1934.7 | 1854.0 | 1823.9 |
| 27.5°  | 1875.2 | 1909.3 | 1828.8 | 1714.2 | 1672.5 |
| 30°    | 1834.1 | 1860.2 | 1741.8 | 1615.8 | 1575.6 |
| 32.5°  | 1791.5 | 1801.5 | 1653.2 | 1522.1 | 1478.8 |
| 35°    | 1721.3 | 1703.2 | 1516.1 | 1384.0 | 1345.9 |
| 37.5°  | 1638.4 | 1584.7 | 1384.4 | 1246.0 | 1203.9 |
| 40°    | 1577.7 | 1501.5 | 1292.5 | 1154.1 | 1112.0 |
| 42.5°  | 1510.4 | 1414.9 | 1205.5 | 1067.1 | 1023.3 |
| 45°    | 1399.2 | 1286.9 | 1073.0 | 938.7  | 896.6  |
| 47.5°  | 1274.1 | 1162.5 | 949.1  | 819.0  | 782.9  |
| 50°    | 1183.8 | 1075.5 | 871.9  | 741.7  | 697.5  |
| 52.5°  | 1091.9 | 994.8  | 796.4  | 662.5  | 602.4  |
| 55°    | 966.3  | 874.0  | 687.3  | 538.8  | 504.7  |
| 57.5°  | 837.1  | 757.2  | 588.4  | 453.6  | 425.5  |
| 60°    | 755.0  | 684.8  | 521.1  | 407.6  | 379.5  |
| 62.5°  | 676.2  | 614.0  | 455.5  | 365.1  | 341.8  |
| 65°    | 558.0  | 511.9  | 379.5  | 305.2  | 285.2  |
| 67.5°  | 443.1  | 417.5  | 315.5  | 250.4  | 237.2  |
| 70°    | 369.3  | 361.3  | 272.9  | 219.3  | 209.3  |
| 72.5°  | 305.3  | 308.5  | 231.8  | 189.8  | 183.0  |
| 75°    | 217.5  | 233.5  | 178.5  | 149.7  | 145.7  |
| 77.5°  | 148.1  | 172.2  | 132.1  | 110.7  | 107.5  |
| 80°    | 108.7  | 132.8  | 102.6  | 86.2   | 86.2   |
| 82.5°  | 75.9   | 95.2   | 73.0   | 64.8   | 64.8   |
| 85°    | 36.9   | 47.0   | 39.0   | 26.6   | 24.6   |
| 87.5°  | 9.8    | 14.9   | 7.2    | 5.6    | 5.6    |
| 90°    | 0.0    | 1.0    | 3.1    | 3.1    | 3.1    |
| 92.5°  | 3.4    | 11.8   | 40.1   | 13.2   | 10.7   |
| 95°    | 9.4    | 27.9   | 126.9  | 46.8   | 30.4   |
| 97.5°  | 17.2   | 36.3   | 210.2  | 130.8  | 82.4   |
| 100°   | 23.1   | 40.5   | 237.0  | 221.7  | 147.9  |
| 102.5° | 28.9   | 45.6   | 232.0  | 316.6  | 248.5  |
| 105°   | 37.8   | 53.1   | 211.8  | 404.4  | 385.9  |
| 107.5° | 46.6   | 60.9   | 192.5  | 411.1  | 431.4  |
| 110°   | 52.4   | 66.8   | 182.5  | 401.5  | 441.5  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 58.3  | 71.8  | 177.4 | 384.1 | 434.8 |
| 115°   | 67.1  | 79.4  | 172.0 | 354.8 | 415.3 |
| 117.5° | 75.7  | 87.0  | 169.7 | 326.7 | 388.7 |
| 120°   | 80.8  | 92.0  | 168.8 | 310.7 | 370.2 |
| 122.5° | 85.8  | 97.1  | 169.7 | 297.2 | 351.7 |
| 125°   | 93.3  | 103.6 | 169.9 | 279.0 | 327.2 |
| 127.5° | 99.4  | 109.9 | 169.9 | 265.4 | 306.4 |
| 130°   | 102.8 | 114.1 | 169.9 | 257.8 | 294.7 |
| 132.5° | 107.0 | 118.2 | 169.1 | 251.0 | 285.5 |
| 135°   | 112.2 | 124.5 | 168.8 | 240.8 | 270.6 |
| 137.5° | 118.3 | 129.6 | 168.8 | 230.7 | 257.8 |
| 140°   | 121.7 | 132.9 | 168.8 | 223.9 | 248.5 |
| 142.5° | 125.8 | 136.3 | 168.8 | 217.2 | 239.3 |
| 145°   | 131.1 | 141.3 | 168.8 | 208.1 | 226.5 |
| 147.5° | 137.4 | 146.2 | 169.9 | 199.6 | 214.1 |
| 150°   | 141.6 | 148.8 | 169.9 | 195.3 | 206.6 |
| 152.5° | 144.9 | 151.3 | 169.9 | 191.1 | 200.7 |
| 155°   | 150.0 | 155.1 | 169.9 | 186.8 | 193.0 |
| 157.5° | 155.0 | 158.9 | 169.9 | 183.0 | 186.9 |
| 160°   | 158.4 | 161.4 | 169.9 | 180.5 | 183.5 |
| 162.5° | 160.9 | 163.1 | 169.9 | 178.8 | 181.0 |
| 165°   | 164.7 | 165.7 | 170.9 | 176.2 | 178.3 |
| 167.5° | 167.0 | 167.2 | 169.9 | 174.7 | 175.8 |
| 170°   | 167.8 | 168.8 | 169.9 | 173.1 | 174.1 |
| 172.5° | 169.5 | 169.7 | 170.7 | 172.2 | 172.4 |
| 175°   | 170.9 | 170.9 | 170.9 | 172.0 | 170.9 |
| 177.5° | 170.9 | 170.9 | 170.9 | 170.9 | 170.9 |
| 180°   | 170.9 | 170.9 | 170.9 | 170.9 | 170.9 |



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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 | 21.98            | 23.15 | 22.61 | 23.79 | 24.52 | 18.46          | 19.63 | 19.10 | 20.27 | 21.01 |
|                 | 3H   | 23.32            | 24.37 | 23.97 | 25.02 | 25.79 | 19.69          | 20.74 | 20.34 | 21.39 | 22.16 |
|                 | 4H   | 23.71            | 24.69 | 24.38 | 25.36 | 26.14 | 20.15          | 21.14 | 20.82 | 21.80 | 22.58 |
|                 | 6H   | 23.93            | 24.84 | 24.61 | 25.51 | 26.30 | 20.49          | 21.39 | 21.17 | 22.07 | 22.86 |
|                 | 8H   | 23.97            | 24.83 | 24.66 | 25.53 | 26.33 | 20.57          | 21.43 | 21.26 | 22.13 | 22.92 |
|                 | 12H  | 23.98            | 24.80 | 24.67 | 25.49 | 26.31 | 20.59          | 21.41 | 21.29 | 22.10 | 22.93 |
| 4H              | 2H   | 22.12            | 23.10 | 22.79 | 23.76 | 24.55 | 19.19          | 20.17 | 19.86 | 20.83 | 21.61 |
|                 | 3H   | 23.69            | 24.51 | 24.37 | 25.21 | 26.01 | 20.60          | 21.41 | 21.28 | 22.12 | 22.92 |
|                 | 4H   | 24.21            | 24.95 | 24.91 | 25.65 | 26.48 | 21.16          | 21.89 | 21.86 | 22.60 | 23.43 |
|                 | 6H   | 24.56            | 25.20 | 25.28 | 25.93 | 26.77 | 21.58          | 22.21 | 22.30 | 22.94 | 23.79 |
|                 | 8H   | 24.64            | 25.24 | 25.37 | 25.96 | 26.82 | 21.69          | 22.28 | 22.41 | 23.01 | 23.86 |
|                 | 12H  | 24.67            | 25.20 | 25.42 | 25.96 | 26.81 | 21.73          | 22.26 | 22.47 | 23.01 | 23.87 |
| 8H              | 4H   | 24.27            | 24.87 | 25.00 | 25.59 | 26.45 | 21.51          | 22.10 | 22.23 | 22.83 | 23.68 |
|                 | 6H   | 24.72            | 25.21 | 25.47 | 25.98 | 26.84 | 22.02          | 22.51 | 22.78 | 23.28 | 24.14 |
|                 | 8H   | 24.86            | 25.30 | 25.63 | 26.07 | 26.94 | 22.19          | 22.62 | 22.95 | 23.40 | 24.27 |
|                 | 12H  | 24.94            | 25.33 | 25.71 | 26.09 | 27.02 | 22.26          | 22.65 | 23.03 | 23.41 | 24.34 |
| 12H             | 4H   | 24.25            | 24.78 | 24.99 | 25.53 | 26.39 | 21.54          | 22.07 | 22.28 | 22.82 | 23.68 |
|                 | 6H   | 24.71            | 25.15 | 25.48 | 25.92 | 26.79 | 22.09          | 22.53 | 22.86 | 23.30 | 24.17 |
|                 | 8H   | 24.89            | 25.27 | 25.65 | 26.03 | 26.96 | 22.29          | 22.67 | 23.06 | 23.43 | 24.37 |