

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: P855415

Luminaire Tested: SQ2-FB-125U-100D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

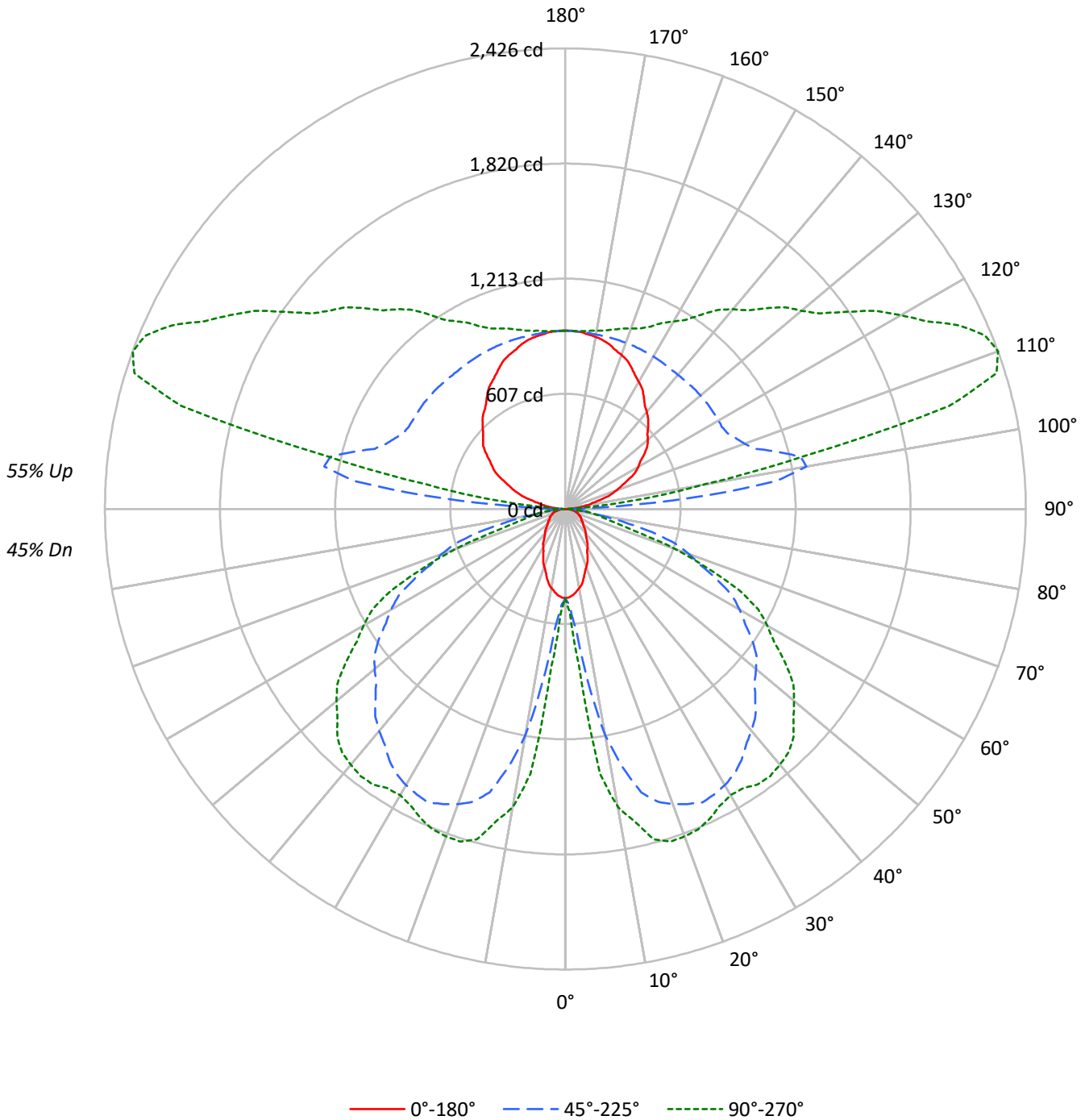
Test Method: LM-79-2019  
Report Number: P855415  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-125U-100D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10439.0 lumens  
Efficiency: N/A  
Efficacy: 128.1 lumens/watt  
Spacing Criteria (0/90/45): 0.84 / 2.98 / 2.56  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 81.5  
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   | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 80 | 80 | 80 | 65 | 65 | 65 | 51 | 51 | 51 | 45 |
| 1   | 96  | 92  | 88  | 85  | 88 | 84 | 81 | 78 | 70 | 68 | 66 | 57 | 55 | 54 | 45 | 44 | 43 | 37 |
| 2   | 87  | 80  | 74  | 69  | 80 | 73 | 68 | 63 | 61 | 57 | 54 | 50 | 47 | 44 | 39 | 37 | 36 | 31 |
| 3   | 80  | 70  | 62  | 57  | 72 | 64 | 58 | 52 | 53 | 49 | 45 | 43 | 40 | 37 | 34 | 32 | 30 | 25 |
| 4   | 72  | 61  | 53  | 47  | 66 | 57 | 49 | 44 | 47 | 42 | 38 | 38 | 34 | 31 | 30 | 27 | 25 | 21 |
| 5   | 66  | 54  | 46  | 40  | 60 | 50 | 43 | 37 | 42 | 36 | 32 | 34 | 30 | 27 | 27 | 24 | 22 | 18 |
| 6   | 61  | 49  | 40  | 34  | 55 | 45 | 37 | 32 | 37 | 32 | 28 | 31 | 26 | 23 | 24 | 21 | 19 | 16 |
| 7   | 56  | 44  | 35  | 30  | 51 | 40 | 33 | 28 | 34 | 28 | 24 | 28 | 23 | 20 | 22 | 19 | 16 | 14 |
| 8   | 52  | 39  | 31  | 26  | 47 | 36 | 29 | 24 | 30 | 25 | 21 | 25 | 21 | 18 | 20 | 17 | 14 | 12 |
| 9   | 48  | 36  | 28  | 23  | 44 | 33 | 26 | 22 | 28 | 22 | 19 | 23 | 19 | 16 | 18 | 15 | 13 | 11 |
| 10  | 45  | 33  | 25  | 20  | 41 | 30 | 24 | 19 | 25 | 20 | 17 | 21 | 17 | 14 | 17 | 14 | 11 | 9  |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 7590 | 7590  | 7590  |
| 5°  | 7400 | 10258 | 13444 |
| 10° | 6930 | 19864 | 26163 |
| 15° | 6273 | 25844 | 30113 |
| 20° | 5555 | 28429 | 31536 |
| 25° | 4912 | 30403 | 32054 |
| 30° | 4340 | 31312 | 32449 |
| 35° | 3875 | 31856 | 34885 |
| 40° | 3524 | 32157 | 37066 |
| 45° | 3252 | 32310 | 38815 |
| 50° | 3064 | 32930 | 39516 |
| 55° | 2992 | 33785 | 39831 |
| 60° | 3068 | 34236 | 39635 |
| 65° | 3198 | 33765 | 38514 |
| 70° | 3305 | 32653 | 29132 |
| 75° | 3662 | 29326 | 16076 |
| 80° | 3784 | 15128 | 14923 |
| 85° | 3779 | 10467 | 6280  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 40192 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 78.8    | 0.8       |
| 10°-20°   | 359.6   | 3.4       |
| 20°-30°   | 632.6   | 6.1       |
| 30°-40°   | 818.8   | 7.8       |
| 40°-50°   | 903.1   | 8.7       |
| 50°-60°   | 843.2   | 8.1       |
| 60°-70°   | 651.7   | 6.2       |
| 70°-80°   | 300.6   | 2.9       |
| 80°-90°   | 58.4    | 0.6       |
| 90°-100°  | 359.1   | 3.4       |
| 100°-110° | 1169.2  | 11.2      |
| 110°-120° | 1156.5  | 11.1      |
| 120°-130° | 945.1   | 9.1       |
| 130°-140° | 772.4   | 7.4       |
| 140°-150° | 601.7   | 5.8       |
| 150°-160° | 433.7   | 4.2       |
| 160°-170° | 265.1   | 2.5       |
| 170°-180° | 89.4    | 0.9       |
| 0°-30°    | 1070.9  | 10.3      |
| 0°-40°    | 1889.8  | 18.1      |
| 0°-60°    | 3636.1  | 34.8      |
| 0°-90°    | 4646.8  | 44.5      |
| 90°-120°  | 2684.8  | 25.7      |
| 90°-150°  | 5004.0  | 47.9      |
| 90°-180°  | 5792.0  | 55.5      |
| 0°-180°   | 10439.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|-----|-------|------|-------|------|------|
| 0°   | 470 | 470   | 470  | 470   | 470  |      |
| 5°   | 457 | 523   | 633  | 772   | 830  | 42   |
| 15°  | 375 | 740   | 1546 | 1731  | 1802 | 105  |
| 25°  | 276 | 994   | 1707 | 1782  | 1799 | 127  |
| 35°  | 197 | 959   | 1616 | 1673  | 1770 | 124  |
| 45°  | 142 | 735   | 1415 | 1625  | 1700 | 110  |
| 55°  | 106 | 438   | 1200 | 1380  | 1415 | 96   |
| 65°  | 84  | 247   | 884  | 990   | 1008 | 82   |
| 75°  | 59  | 152   | 470  | 253   | 258  | 60   |
| 85°  | 20  | 45    | 56   | 38    | 34   | 21   |
| 90°  | 0   | 3     | 8    | 7     | 7    | 3    |
| 95°  | 48  | 148   | 658  | 235   | 144  | 56   |
| 105° | 199 | 287   | 1158 | 2212  | 2095 | 212  |
| 115° | 367 | 438   | 943  | 1944  | 2288 | 363  |
| 125° | 510 | 569   | 931  | 1535  | 1810 | 454  |
| 135° | 617 | 681   | 926  | 1325  | 1494 | 476  |
| 145° | 721 | 774   | 924  | 1141  | 1249 | 451  |
| 155° | 822 | 849   | 930  | 1022  | 1060 | 379  |
| 165° | 897 | 905   | 932  | 967   | 978  | 253  |
| 175° | 935 | 935   | 935  | 942   | 940  | 89   |
| 180° | 939 | 939   | 939  | 939   | 939  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|-------|--------|--------|--------|--------|
| 0°     | 470.1 | 470.1  | 470.1  | 470.1  | 470.1  |
| 2.5°   | 466.5 | 486.0  | 508.1  | 533.6  | 544.2  |
| 5°     | 456.6 | 522.9  | 632.9  | 772.1  | 829.5  |
| 7.5°   | 439.0 | 573.7  | 920.4  | 1292.8 | 1407.8 |
| 10°    | 422.7 | 610.6  | 1211.6 | 1533.9 | 1595.8 |
| 12.5°  | 404.6 | 659.6  | 1394.2 | 1620.7 | 1684.5 |
| 15°    | 375.3 | 739.9  | 1546.1 | 1730.7 | 1801.5 |
| 17.5°  | 345.0 | 830.2  | 1616.6 | 1798.8 | 1837.3 |
| 20°    | 323.3 | 893.4  | 1654.6 | 1811.2 | 1835.4 |
| 22.5°  | 303.4 | 940.7  | 1681.7 | 1800.3 | 1826.4 |
| 25°    | 275.7 | 994.1  | 1706.6 | 1781.5 | 1799.3 |
| 27.5°  | 249.0 | 1008.1 | 1695.8 | 1745.0 | 1762.2 |
| 30°    | 232.8 | 1004.1 | 1679.5 | 1716.2 | 1740.5 |
| 32.5°  | 218.4 | 993.3  | 1655.9 | 1691.5 | 1744.1 |
| 35°    | 196.6 | 959.1  | 1616.2 | 1672.6 | 1769.9 |
| 37.5°  | 178.1 | 904.4  | 1563.7 | 1679.3 | 1773.0 |
| 40°    | 167.2 | 863.4  | 1525.7 | 1679.0 | 1758.6 |
| 42.5°  | 156.4 | 815.4  | 1482.4 | 1660.9 | 1740.5 |
| 45°    | 142.4 | 734.7  | 1415.0 | 1624.7 | 1699.9 |
| 47.5°  | 129.2 | 643.8  | 1352.6 | 1574.5 | 1629.2 |
| 50°    | 122.0 | 581.8  | 1311.0 | 1529.0 | 1573.2 |
| 52.5°  | 114.8 | 521.5  | 1269.5 | 1474.7 | 1515.4 |
| 55°    | 106.3 | 437.7  | 1200.2 | 1379.6 | 1415.0 |
| 57.5°  | 98.6  | 365.9  | 1121.6 | 1274.6 | 1303.4 |
| 60°    | 95.0  | 327.0  | 1060.2 | 1198.6 | 1227.4 |
| 62.5°  | 89.5  | 291.5  | 991.4  | 1119.0 | 1146.1 |
| 65°    | 83.7  | 247.2  | 883.8  | 990.5  | 1008.1 |
| 67.5°  | 75.5  | 214.3  | 769.4  | 834.7  | 801.6  |
| 70°    | 70.0  | 198.2  | 691.7  | 712.1  | 617.1  |
| 72.5°  | 66.4  | 180.5  | 606.7  | 552.9  | 372.9  |
| 75°    | 58.7  | 151.6  | 470.1  | 253.2  | 257.7  |
| 77.5°  | 47.9  | 117.4  | 309.2  | 194.5  | 198.5  |
| 80°    | 40.7  | 95.9   | 162.7  | 158.3  | 160.5  |
| 82.5°  | 33.4  | 74.6   | 112.1  | 116.5  | 113.5  |
| 85°    | 20.4  | 44.6   | 56.5   | 38.3   | 33.9   |
| 87.5°  | 7.2   | 16.8   | 10.6   | 10.4   | 10.4   |
| 90°    | 0.0   | 3.4    | 8.0    | 6.9    | 6.9    |
| 92.5°  | 16.7  | 59.8   | 191.0  | 62.9   | 48.5   |
| 95°    | 48.5  | 147.9  | 658.2  | 234.7  | 144.4  |
| 97.5°  | 91.3  | 192.4  | 1117.0 | 680.4  | 415.2  |
| 100°   | 119.0 | 218.3  | 1289.9 | 1150.1 | 746.0  |
| 102.5° | 150.3 | 246.1  | 1268.5 | 1701.6 | 1293.7 |
| 105°   | 198.6 | 286.7  | 1158.2 | 2212.2 | 2094.7 |
| 107.5° | 250.8 | 333.7  | 1053.4 | 2256.4 | 2380.8 |
| 110°   | 288.7 | 364.3  | 1003.4 | 2201.4 | 2426.1 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 320.1 | 394.8 | 972.1 | 2102.2 | 2391.9 |
| 115°   | 367.2 | 438.3 | 943.4 | 1944.2 | 2287.6 |
| 117.5° | 415.7 | 479.8 | 932.3 | 1799.7 | 2141.3 |
| 120°   | 443.4 | 506.6 | 929.5 | 1710.8 | 2041.5 |
| 122.5° | 470.2 | 532.6 | 930.5 | 1633.5 | 1941.8 |
| 125°   | 510.4 | 569.1 | 930.7 | 1535.1 | 1809.5 |
| 127.5° | 544.8 | 604.8 | 930.5 | 1461.3 | 1690.1 |
| 130°   | 567.0 | 627.9 | 929.5 | 1419.2 | 1623.5 |
| 132.5° | 586.4 | 650.1 | 928.6 | 1380.1 | 1571.8 |
| 135°   | 616.6 | 680.9 | 926.1 | 1324.8 | 1494.3 |
| 137.5° | 646.2 | 711.0 | 923.6 | 1268.8 | 1419.2 |
| 140°   | 667.4 | 729.5 | 922.6 | 1230.7 | 1373.0 |
| 142.5° | 687.7 | 747.1 | 922.6 | 1194.3 | 1321.2 |
| 145°   | 720.6 | 773.6 | 923.8 | 1141.0 | 1249.4 |
| 147.5° | 752.4 | 798.5 | 925.4 | 1095.7 | 1179.5 |
| 150°   | 773.7 | 814.3 | 927.3 | 1068.6 | 1139.8 |
| 152.5° | 794.9 | 828.4 | 928.1 | 1047.9 | 1104.6 |
| 155°   | 822.2 | 849.2 | 929.5 | 1021.7 | 1060.0 |
| 157.5° | 848.1 | 867.4 | 930.9 | 1002.2 | 1029.0 |
| 160°   | 863.8 | 879.5 | 931.9 | 990.1  | 1011.6 |
| 162.5° | 877.5 | 889.8 | 931.9 | 979.8  | 995.8  |
| 165°   | 897.2 | 905.2 | 931.9 | 966.8  | 978.0  |
| 167.5° | 911.1 | 916.0 | 932.1 | 956.9  | 962.9  |
| 170°   | 920.3 | 922.5 | 933.0 | 950.4  | 952.6  |
| 172.5° | 926.8 | 928.1 | 934.9 | 946.7  | 946.2  |
| 175°   | 935.4 | 935.4 | 935.4 | 942.2  | 939.9  |
| 177.5° | 938.8 | 937.9 | 937.0 | 941.5  | 937.9  |
| 180°   | 938.8 | 938.8 | 938.8 | 938.8  | 938.8  |

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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 | 13.58            | 14.42 | 14.58 | 15.43 | 16.78 | 22.32          | 23.15 | 23.31 | 24.17 | 25.51 |
|                 | 3H   | 14.31            | 15.06 | 15.32 | 16.08 | 17.45 | 23.94          | 24.69 | 24.95 | 25.71 | 27.08 |
|                 | 4H   | 14.61            | 15.32 | 15.63 | 16.34 | 17.72 | 24.12          | 24.83 | 25.14 | 25.85 | 27.23 |
|                 | 6H   | 14.82            | 15.48 | 15.86 | 16.51 | 17.89 | 24.20          | 24.86 | 25.23 | 25.89 | 27.27 |
|                 | 8H   | 14.88            | 15.50 | 15.92 | 16.55 | 17.93 | 24.21          | 24.83 | 25.24 | 25.87 | 27.26 |
|                 | 12H  | 14.91            | 15.50 | 15.95 | 16.54 | 17.95 | 24.18          | 24.77 | 25.22 | 25.81 | 27.22 |
| 4H              | 2H   | 17.98            | 18.69 | 19.00 | 19.71 | 21.09 | 22.76          | 23.47 | 23.79 | 24.49 | 25.87 |
|                 | 3H   | 18.91            | 19.50 | 19.94 | 20.55 | 21.94 | 24.58          | 25.17 | 25.62 | 26.23 | 27.61 |
|                 | 4H   | 19.19            | 19.73 | 20.23 | 20.78 | 22.19 | 24.82          | 25.36 | 25.86 | 26.40 | 27.81 |
|                 | 6H   | 19.32            | 19.79 | 20.37 | 20.85 | 22.26 | 24.96          | 25.43 | 26.02 | 26.50 | 27.90 |
|                 | 8H   | 19.34            | 19.77 | 20.40 | 20.84 | 22.26 | 24.99          | 25.42 | 26.04 | 26.48 | 27.90 |
|                 | 12H  | 19.33            | 19.72 | 20.40 | 20.80 | 22.22 | 24.96          | 25.35 | 26.03 | 26.43 | 27.85 |
| 8H              | 4H   | 20.36            | 20.80 | 21.42 | 21.86 | 23.28 | 24.93          | 25.37 | 25.99 | 26.43 | 27.85 |
|                 | 6H   | 20.60            | 20.96 | 21.68 | 22.06 | 23.48 | 25.14          | 25.50 | 26.22 | 26.60 | 28.02 |
|                 | 8H   | 20.67            | 20.98 | 21.76 | 22.07 | 23.51 | 25.20          | 25.51 | 26.29 | 26.60 | 28.04 |
|                 | 12H  | 20.69            | 20.97 | 21.79 | 22.05 | 23.53 | 25.19          | 25.47 | 26.28 | 26.55 | 28.03 |
| 12H             | 4H   | 20.38            | 20.77 | 21.45 | 21.85 | 23.27 | 24.88          | 25.28 | 25.96 | 26.35 | 27.78 |
|                 | 6H   | 20.69            | 21.01 | 21.78 | 22.09 | 23.53 | 25.12          | 25.44 | 26.21 | 26.52 | 27.96 |
|                 | 8H   | 20.80            | 21.07 | 21.89 | 22.15 | 23.63 | 25.19          | 25.46 | 26.28 | 26.54 | 28.02 |