

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: P853898

Luminaire Tested: SQ2-FB-150U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

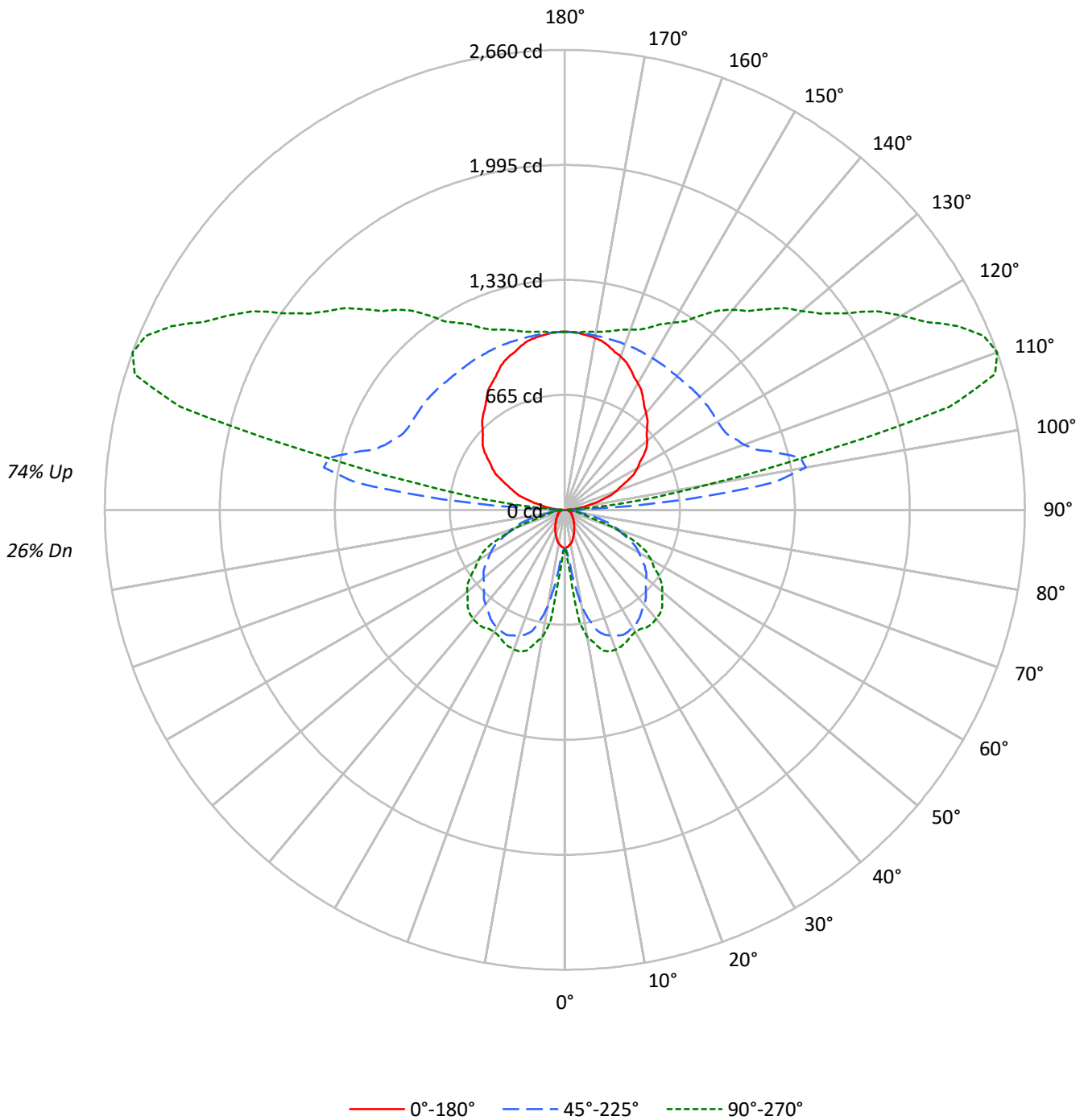
Test Method: LM-79-2019  
Report Number: P853898  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FB-150U-050D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8527.2 lumens  
Efficiency: N/A  
Efficacy: 114.6 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: Semi-Indirect  
  
Input Watts (W): 74.4  
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

TEST NUMBER: P853898  
CATALOG NUMBER: SQ2-FB-150U-050D-940-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P853898

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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   | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 70 | 70 | 70 | 51 | 51 | 51 | 34 | 34 | 34 | 26 |
| 1   | 92  | 88  | 84  | 81  | 82 | 79 | 75 | 73 | 61 | 59 | 57 | 45 | 43 | 42 | 30 | 29 | 28 | 21 |
| 2   | 84  | 77  | 71  | 66  | 74 | 68 | 63 | 59 | 53 | 50 | 47 | 39 | 37 | 35 | 26 | 24 | 23 | 18 |
| 3   | 76  | 67  | 60  | 54  | 68 | 60 | 54 | 49 | 46 | 42 | 39 | 34 | 31 | 29 | 23 | 21 | 20 | 15 |
| 4   | 69  | 59  | 51  | 45  | 62 | 53 | 46 | 41 | 41 | 36 | 33 | 30 | 27 | 25 | 20 | 18 | 17 | 12 |
| 5   | 63  | 52  | 44  | 39  | 56 | 47 | 40 | 35 | 36 | 32 | 28 | 27 | 24 | 21 | 18 | 16 | 14 | 10 |
| 6   | 58  | 47  | 39  | 33  | 52 | 42 | 35 | 30 | 33 | 28 | 24 | 24 | 21 | 18 | 16 | 14 | 12 | 9  |
| 7   | 54  | 42  | 34  | 29  | 48 | 37 | 31 | 26 | 29 | 24 | 21 | 22 | 18 | 16 | 14 | 12 | 11 | 8  |
| 8   | 50  | 38  | 30  | 25  | 44 | 34 | 27 | 23 | 26 | 22 | 18 | 20 | 16 | 14 | 13 | 11 | 9  | 7  |
| 9   | 46  | 34  | 27  | 22  | 41 | 31 | 24 | 20 | 24 | 19 | 16 | 18 | 15 | 12 | 12 | 10 | 8  | 6  |
| 10  | 43  | 31  | 24  | 19  | 38 | 28 | 22 | 18 | 22 | 17 | 14 | 16 | 13 | 11 | 11 | 9  | 8  | 5  |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 3552 | 3552  | 3552  |
| 5°  | 3464 | 4801  | 6292  |
| 10° | 3243 | 9296  | 12244 |
| 15° | 2935 | 12094 | 14091 |
| 20° | 2600 | 13304 | 14758 |
| 25° | 2298 | 14227 | 15000 |
| 30° | 2032 | 14652 | 15185 |
| 35° | 1813 | 14907 | 16324 |
| 40° | 1650 | 15049 | 17344 |
| 45° | 1521 | 15120 | 18162 |
| 50° | 1434 | 15410 | 18492 |
| 55° | 1399 | 15812 | 18641 |
| 60° | 1434 | 16020 | 18548 |
| 65° | 1494 | 15801 | 18025 |
| 70° | 1548 | 15281 | 13633 |
| 75° | 1716 | 13724 | 7523  |
| 80° | 1767 | 7085  | 6983  |
| 85° | 1760 | 4891  | 2946  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 18807 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 36.9   | 0.4       |
| 10°-20°   | 168.3  | 2.0       |
| 20°-30°   | 296.0  | 3.5       |
| 30°-40°   | 383.2  | 4.5       |
| 40°-50°   | 422.6  | 5.0       |
| 50°-60°   | 394.6  | 4.6       |
| 60°-70°   | 305.0  | 3.6       |
| 70°-80°   | 140.7  | 1.6       |
| 80°-90°   | 28.0   | 0.3       |
| 90°-100°  | 392.1  | 4.6       |
| 100°-110° | 1284.0 | 15.1      |
| 110°-120° | 1269.4 | 14.9      |
| 120°-130° | 1037.7 | 12.2      |
| 130°-140° | 846.8  | 9.9       |
| 140°-150° | 659.0  | 7.7       |
| 150°-160° | 474.5  | 5.6       |
| 160°-170° | 290.3  | 3.4       |
| 170°-180° | 98.1   | 1.2       |
| 0°-30°    | 501.2  | 5.9       |
| 0°-40°    | 884.3  | 10.4      |
| 0°-60°    | 1701.6 | 20.0      |
| 0°-90°    | 2175.2 | 25.5      |
| 90°-120°  | 2945.6 | 34.5      |
| 90°-150°  | 5489.1 | 64.4      |
| 90°-180°  | 6352.0 | 74.5      |
| 0°-180°   | 8527.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 220  | 220   | 220  | 220   | 220  |      |
| 5°   | 214  | 245   | 296  | 361   | 388  | 20   |
| 15°  | 176  | 346   | 724  | 810   | 843  | 49   |
| 25°  | 129  | 465   | 799  | 834   | 842  | 59   |
| 35°  | 92   | 449   | 756  | 783   | 828  | 58   |
| 45°  | 67   | 344   | 662  | 760   | 795  | 52   |
| 55°  | 50   | 205   | 562  | 646   | 662  | 45   |
| 65°  | 39   | 116   | 414  | 464   | 472  | 38   |
| 75°  | 28   | 71    | 220  | 118   | 121  | 28   |
| 85°  | 10   | 21    | 26   | 18    | 16   | 10   |
| 90°  | 1    | 3     | 8    | 7     | 8    | 3    |
| 95°  | 55   | 160   | 713  | 254   | 165  | 62   |
| 105° | 223  | 318   | 1274 | 2422  | 2300 | 235  |
| 115° | 402  | 480   | 1036 | 2140  | 2512 | 397  |
| 125° | 560  | 624   | 1021 | 1687  | 1982 | 498  |
| 135° | 674  | 745   | 1012 | 1455  | 1640 | 521  |
| 145° | 788  | 846   | 1010 | 1252  | 1372 | 494  |
| 155° | 898  | 928   | 1016 | 1120  | 1164 | 413  |
| 165° | 980  | 990   | 1021 | 1060  | 1071 | 276  |
| 175° | 1025 | 1025  | 1026 | 1033  | 1031 | 97   |
| 180° | 1029 | 1029  | 1029 | 1029  | 1029 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°    | 67.5°  | 90°    |
|--------|-------|-------|--------|--------|--------|
| 0°     | 220.0 | 220.0 | 220.0  | 220.0  | 220.0  |
| 2.5°   | 218.3 | 227.4 | 237.8  | 249.7  | 254.7  |
| 5°     | 213.7 | 244.7 | 296.2  | 361.3  | 388.2  |
| 7.5°   | 205.4 | 268.5 | 430.7  | 605.0  | 658.8  |
| 10°    | 197.8 | 285.7 | 567.0  | 717.8  | 746.8  |
| 12.5°  | 189.3 | 308.7 | 652.4  | 758.5  | 788.3  |
| 15°    | 175.6 | 346.2 | 723.5  | 809.9  | 843.0  |
| 17.5°  | 161.4 | 388.5 | 756.5  | 841.8  | 859.8  |
| 20°    | 151.3 | 418.1 | 774.3  | 847.5  | 858.9  |
| 22.5°  | 142.0 | 440.2 | 787.0  | 842.5  | 854.7  |
| 25°    | 129.0 | 465.2 | 798.6  | 833.7  | 842.0  |
| 27.5°  | 116.6 | 471.7 | 793.5  | 816.6  | 824.6  |
| 30°    | 109.0 | 469.9 | 785.9  | 803.1  | 814.5  |
| 32.5°  | 102.2 | 464.8 | 774.9  | 791.6  | 816.2  |
| 35°    | 92.0  | 448.8 | 756.3  | 782.7  | 828.2  |
| 37.5°  | 83.4  | 423.2 | 731.8  | 785.9  | 829.7  |
| 40°    | 78.3  | 404.1 | 714.0  | 785.7  | 822.9  |
| 42.5°  | 73.2  | 381.6 | 693.7  | 777.3  | 814.5  |
| 45°    | 66.6  | 343.8 | 662.2  | 760.3  | 795.4  |
| 47.5°  | 60.5  | 301.3 | 633.0  | 736.8  | 762.4  |
| 50°    | 57.1  | 272.2 | 613.5  | 715.5  | 736.2  |
| 52.5°  | 53.7  | 244.0 | 594.0  | 690.1  | 709.1  |
| 55°    | 49.7  | 204.9 | 561.7  | 645.6  | 662.2  |
| 57.5°  | 46.1  | 171.3 | 524.9  | 596.5  | 609.9  |
| 60°    | 44.4  | 153.0 | 496.1  | 560.9  | 574.4  |
| 62.5°  | 41.9  | 136.4 | 463.9  | 523.7  | 536.3  |
| 65°    | 39.1  | 115.7 | 413.6  | 463.5  | 471.8  |
| 67.5°  | 35.3  | 100.3 | 360.1  | 390.6  | 375.1  |
| 70°    | 32.8  | 92.8  | 323.7  | 333.2  | 288.8  |
| 72.5°  | 31.1  | 84.5  | 283.9  | 258.7  | 174.5  |
| 75°    | 27.5  | 70.9  | 220.0  | 118.5  | 120.6  |
| 77.5°  | 22.4  | 54.9  | 144.7  | 91.0   | 92.9   |
| 80°    | 19.0  | 44.9  | 76.2   | 74.1   | 75.1   |
| 82.5°  | 15.7  | 34.9  | 52.5   | 54.5   | 53.1   |
| 85°    | 9.5   | 20.9  | 26.4   | 17.9   | 15.9   |
| 87.5°  | 3.6   | 8.1   | 5.9    | 5.7    | 5.9    |
| 90°    | 1.1   | 3.1   | 8.5    | 7.4    | 8.5    |
| 92.5°  | 18.0  | 65.6  | 201.4  | 65.5   | 52.5   |
| 95°    | 55.0  | 159.5 | 712.9  | 253.9  | 165.0  |
| 97.5°  | 99.8  | 210.3 | 1223.1 | 739.9  | 458.6  |
| 100°   | 131.2 | 236.6 | 1415.2 | 1263.8 | 837.7  |
| 102.5° | 166.7 | 269.7 | 1394.0 | 1862.2 | 1443.5 |
| 105°   | 223.2 | 318.3 | 1274.5 | 2421.5 | 2300.5 |
| 107.5° | 278.8 | 366.1 | 1158.0 | 2473.8 | 2606.8 |
| 110°   | 315.2 | 400.0 | 1102.1 | 2412.9 | 2660.1 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 349.9  | 432.2  | 1068.3 | 2307.0 | 2623.7 |
| 115°   | 401.9  | 480.5  | 1035.5 | 2139.7 | 2512.0 |
| 117.5° | 452.5  | 525.9  | 1023.0 | 1975.3 | 2353.4 |
| 120°   | 485.5  | 554.8  | 1019.6 | 1879.4 | 2247.6 |
| 122.5° | 515.1  | 582.7  | 1019.6 | 1796.7 | 2138.4 |
| 125°   | 559.5  | 623.6  | 1020.7 | 1687.4 | 1982.1 |
| 127.5° | 597.2  | 662.5  | 1019.4 | 1606.7 | 1863.2 |
| 130°   | 620.9  | 687.1  | 1018.6 | 1558.0 | 1789.6 |
| 132.5° | 642.0  | 709.9  | 1016.0 | 1516.0 | 1726.1 |
| 135°   | 673.7  | 745.1  | 1012.2 | 1455.4 | 1640.5 |
| 137.5° | 707.2  | 777.9  | 1009.9 | 1392.1 | 1559.5 |
| 140°   | 730.9  | 799.1  | 1009.0 | 1352.2 | 1510.4 |
| 142.5° | 754.6  | 818.7  | 1009.0 | 1309.5 | 1452.8 |
| 145°   | 788.0  | 845.9  | 1010.1 | 1251.9 | 1371.8 |
| 147.5° | 823.1  | 871.3  | 1011.6 | 1201.7 | 1292.3 |
| 150°   | 845.1  | 887.5  | 1013.3 | 1172.6 | 1249.1 |
| 152.5° | 867.1  | 904.5  | 1014.1 | 1148.6 | 1211.9 |
| 155°   | 898.0  | 928.0  | 1016.4 | 1120.0 | 1163.5 |
| 157.5° | 925.7  | 947.4  | 1018.8 | 1097.5 | 1129.0 |
| 160°   | 943.5  | 961.0  | 1019.6 | 1084.7 | 1109.5 |
| 162.5° | 958.7  | 973.0  | 1019.6 | 1074.4 | 1092.6 |
| 165°   | 980.5  | 989.8  | 1020.7 | 1060.1 | 1071.4 |
| 167.5° | 998.9  | 1003.4 | 1021.9 | 1048.9 | 1055.2 |
| 170°   | 1009.0 | 1011.1 | 1022.8 | 1042.9 | 1045.0 |
| 172.5° | 1016.7 | 1017.9 | 1025.3 | 1038.7 | 1039.1 |
| 175°   | 1024.9 | 1024.9 | 1026.0 | 1033.3 | 1031.2 |
| 177.5° | 1029.1 | 1028.3 | 1027.4 | 1032.4 | 1029.1 |
| 180°   | 1029.1 | 1029.1 | 1029.1 | 1029.1 | 1029.1 |

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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 | 8.62             | 9.31  | 9.76  | 10.44 | 12.02 | 17.36          | 18.04 | 18.50 | 19.18 | 20.76 |
|                 | 3H   | 9.34             | 9.95  | 10.48 | 11.09 | 12.69 | 18.96          | 19.58 | 20.11 | 20.72 | 22.32 |
|                 | 4H   | 9.63             | 10.21 | 10.78 | 11.35 | 12.96 | 19.14          | 19.72 | 20.29 | 20.86 | 22.46 |
|                 | 6H   | 9.83             | 10.37 | 11.00 | 11.52 | 13.13 | 19.21          | 19.75 | 20.38 | 20.89 | 22.51 |
|                 | 8H   | 9.89             | 10.40 | 11.05 | 11.56 | 13.16 | 19.21          | 19.72 | 20.38 | 20.88 | 22.49 |
|                 | 12H  | 9.91             | 10.39 | 11.08 | 11.55 | 13.17 | 19.18          | 19.66 | 20.35 | 20.81 | 22.44 |
| 4H              | 2H   | 13.00            | 13.58 | 14.16 | 14.72 | 16.32 | 17.78          | 18.36 | 18.94 | 19.50 | 21.10 |
|                 | 3H   | 13.91            | 14.40 | 15.08 | 15.57 | 17.18 | 19.58          | 20.07 | 20.75 | 21.24 | 22.85 |
|                 | 4H   | 14.19            | 14.64 | 15.36 | 15.79 | 17.42 | 19.81          | 20.26 | 20.99 | 21.42 | 23.05 |
|                 | 6H   | 14.31            | 14.69 | 15.48 | 15.87 | 17.49 | 19.95          | 20.33 | 21.13 | 21.51 | 23.13 |
|                 | 8H   | 14.32            | 14.68 | 15.50 | 15.85 | 17.49 | 19.97          | 20.33 | 21.15 | 21.50 | 23.14 |
|                 | 12H  | 14.31            | 14.63 | 15.50 | 15.81 | 17.46 | 19.93          | 20.26 | 21.13 | 21.44 | 23.08 |
| 8H              | 4H   | 15.35            | 15.71 | 16.52 | 16.87 | 18.51 | 19.92          | 20.28 | 21.09 | 21.44 | 23.08 |
|                 | 6H   | 15.57            | 15.87 | 16.77 | 17.08 | 18.72 | 20.11          | 20.41 | 21.31 | 21.62 | 23.26 |
|                 | 8H   | 15.64            | 15.90 | 16.84 | 17.09 | 18.75 | 20.17          | 20.43 | 21.37 | 21.62 | 23.28 |
|                 | 12H  | 15.66            | 15.89 | 16.87 | 17.07 | 18.76 | 20.16          | 20.38 | 21.36 | 21.57 | 23.26 |
| 12H             | 4H   | 15.36            | 15.68 | 16.55 | 16.86 | 18.50 | 19.86          | 20.19 | 21.05 | 21.36 | 23.01 |
|                 | 6H   | 15.67            | 15.92 | 16.87 | 17.11 | 18.77 | 20.09          | 20.35 | 21.30 | 21.54 | 23.20 |
|                 | 8H   | 15.76            | 15.99 | 16.97 | 17.17 | 18.86 | 20.15          | 20.38 | 21.36 | 21.57 | 23.25 |