

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: P854233

Luminaire Tested: SQ2-PR1-150U-050D-935-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P854233  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PR1-150U-050D-935-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

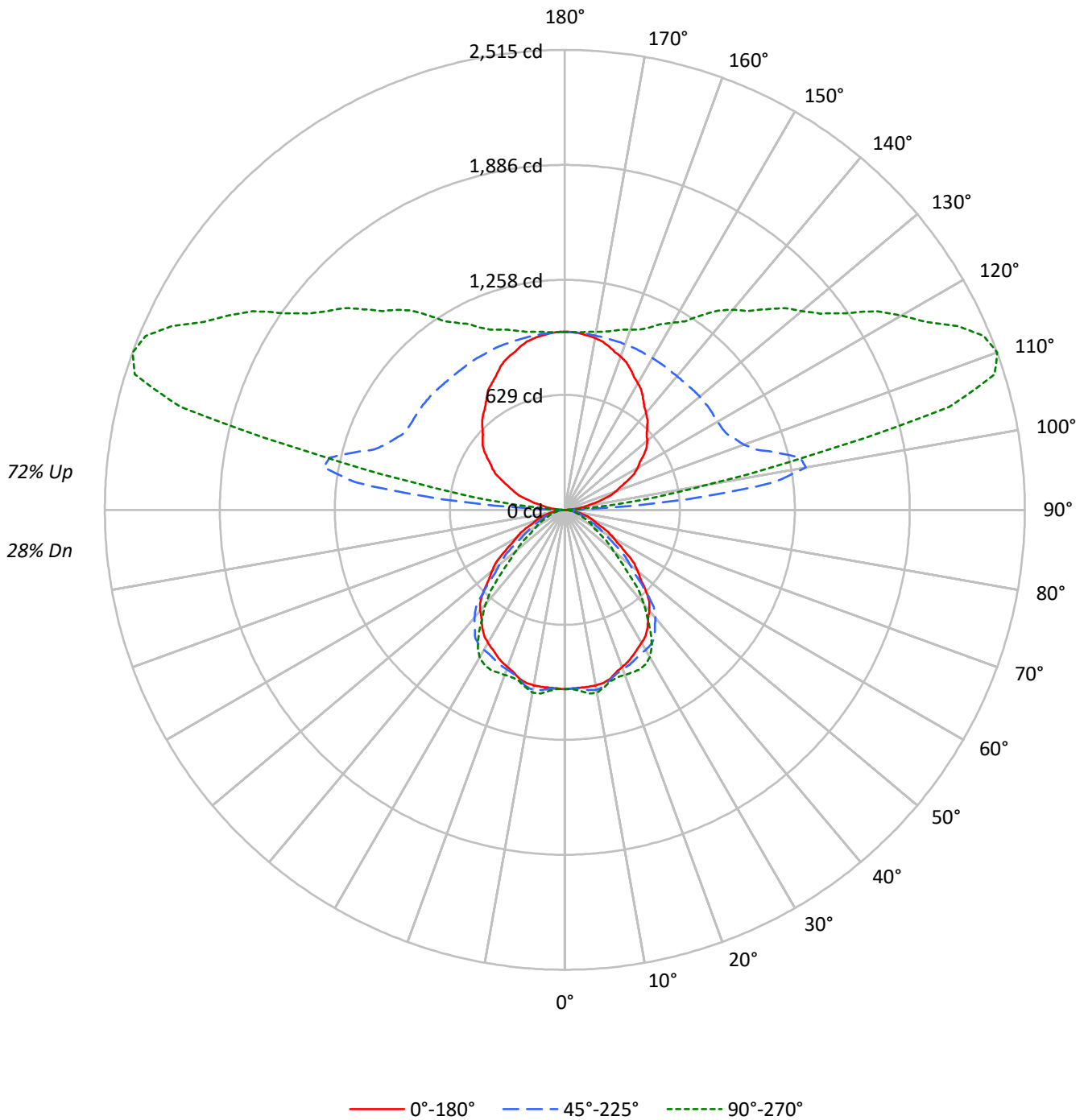
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8366.1 lumens  
Efficiency: N/A  
Efficacy: 112.4 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36  
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

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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 | 0  |   |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 0   | 102 | 102 | 102 | 102 | 91 | 91 | 91 | 91 | 71 | 71 | 71 | 53 | 53 | 53 | 36 | 36 | 36 | 28 |    |    |    |   |
| 1   | 93  | 89  | 86  | 82  | 83 | 80 | 77 | 74 | 63 | 61 | 59 | 47 | 46 | 45 | 32 | 32 | 31 | 24 |    |    |    |   |
| 2   | 85  | 78  | 73  | 68  | 76 | 70 | 66 | 61 | 55 | 52 | 49 | 42 | 40 | 38 | 29 | 28 | 27 | 21 |    |    |    |   |
| 3   | 78  | 69  | 62  | 57  | 69 | 62 | 56 | 52 | 49 | 45 | 42 | 37 | 34 | 32 | 26 | 24 | 23 | 18 |    |    |    |   |
| 4   | 71  | 61  | 54  | 48  | 64 | 55 | 49 | 44 | 44 | 39 | 36 | 33 | 30 | 28 | 23 | 22 | 20 | 16 |    |    |    |   |
| 5   | 65  | 54  | 47  | 41  | 58 | 49 | 43 | 38 | 39 | 34 | 31 | 30 | 27 | 24 | 21 | 19 | 18 | 14 |    |    |    |   |
| 6   | 60  | 49  | 41  | 36  | 54 | 44 | 38 | 33 | 35 | 30 | 27 | 27 | 24 | 21 | 19 | 17 | 16 | 12 |    |    |    |   |
| 7   | 56  | 44  | 36  | 31  | 50 | 40 | 33 | 29 | 32 | 27 | 24 | 25 | 21 | 19 | 18 | 16 | 14 | 11 |    |    |    |   |
| 8   | 51  | 40  | 32  | 27  | 46 | 36 | 30 | 25 | 29 | 24 | 21 | 22 | 19 | 17 | 16 | 14 | 13 | 10 |    |    |    |   |
| 9   | 48  | 36  | 29  | 24  | 43 | 33 | 27 | 22 | 27 | 22 | 19 | 21 | 17 | 15 | 15 | 13 | 11 | 9  |    |    |    |   |
| 10  | 45  | 33  | 26  | 22  | 40 | 30 | 24 | 20 | 24 | 20 | 17 | 19 | 16 | 13 | 14 | 12 | 10 | 8  |    |    |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15839 | 15839 | 15839 |
| 5°  | 15819 | 15916 | 16110 |
| 10° | 15985 | 16395 | 16641 |
| 15° | 15980 | 16064 | 16197 |
| 20° | 15722 | 15962 | 16495 |
| 25° | 15677 | 16123 | 17174 |
| 30° | 15661 | 16481 | 17339 |
| 35° | 15512 | 16833 | 16143 |
| 40° | 15154 | 16208 | 14206 |
| 45° | 14340 | 14225 | 11234 |
| 50° | 13036 | 11630 | 8716  |
| 55° | 11457 | 9571  | 6784  |
| 60° | 9914  | 7653  | 5586  |
| 65° | 8558  | 6342  | 4890  |
| 70° | 7695  | 5618  | 4343  |
| 75° | 7049  | 4866  | 3992  |
| 80° | 6137  | 3905  | 3905  |
| 85° | 4446  | 3520  | 1853  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 15502 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 94.7   | 1.1       |
| 10°-20°   | 274.2  | 3.3       |
| 20°-30°   | 423.9  | 5.1       |
| 30°-40°   | 509.9  | 6.1       |
| 40°-50°   | 457.8  | 5.5       |
| 50°-60°   | 306.7  | 3.7       |
| 60°-70°   | 178.4  | 2.1       |
| 70°-80°   | 91.6   | 1.1       |
| 80°-90°   | 23.7   | 0.3       |
| 90°-100°  | 370.7  | 4.4       |
| 100°-110° | 1213.9 | 14.5      |
| 110°-120° | 1200.1 | 14.3      |
| 120°-130° | 981.0  | 11.7      |
| 130°-140° | 800.6  | 9.6       |
| 140°-150° | 623.0  | 7.4       |
| 150°-160° | 448.6  | 5.4       |
| 160°-170° | 274.4  | 3.3       |
| 170°-180° | 92.7   | 1.1       |
| 0°-30°    | 792.9  | 9.5       |
| 0°-40°    | 1302.8 | 15.6      |
| 0°-60°    | 2067.3 | 24.7      |
| 0°-90°    | 2361.0 | 28.2      |
| 90°-120°  | 2784.7 | 33.3      |
| 90°-150°  | 5189.3 | 62.0      |
| 90°-180°  | 6005.0 | 71.8      |
| 0°-180°   | 8366.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|-----|-------|------|-------|------|------|
| 0°   | 981 | 981   | 981  | 981   | 981  |      |
| 5°   | 976 | 993   | 982  | 984   | 994  | 93   |
| 15°  | 956 | 995   | 961  | 964   | 969  | 268  |
| 25°  | 880 | 915   | 905  | 939   | 964  | 406  |
| 35°  | 787 | 794   | 854  | 838   | 819  | 491  |
| 45°  | 628 | 679   | 623  | 525   | 492  | 480  |
| 55°  | 407 | 423   | 340  | 262   | 241  | 366  |
| 65°  | 224 | 229   | 166  | 135   | 128  | 227  |
| 75°  | 113 | 110   | 78   | 66    | 64   | 120  |
| 85°  | 24  | 19    | 19   | 13    | 10   | 30   |
| 90°  | 1   | 3     | 8    | 7     | 8    | 4    |
| 95°  | 52  | 151   | 674  | 240   | 156  | 59   |
| 105° | 211 | 301   | 1205 | 2289  | 2175 | 222  |
| 115° | 380 | 454   | 979  | 2023  | 2375 | 375  |
| 125° | 529 | 590   | 965  | 1595  | 1874 | 471  |
| 135° | 637 | 704   | 957  | 1376  | 1551 | 493  |
| 145° | 745 | 800   | 955  | 1184  | 1297 | 467  |
| 155° | 849 | 877   | 961  | 1059  | 1100 | 391  |
| 165° | 927 | 936   | 965  | 1002  | 1013 | 261  |
| 175° | 969 | 969   | 970  | 977   | 975  | 92   |
| 180° | 973 | 973   | 973  | 973   | 973  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|-------|--------|--------|--------|--------|
| 0°     | 981.0 | 981.0  | 981.0  | 981.0  | 981.0  |
| 2.5°   | 977.0 | 988.7  | 977.8  | 978.7  | 981.0  |
| 5°     | 976.0 | 992.6  | 982.0  | 984.2  | 994.0  |
| 7.5°   | 975.8 | 999.5  | 994.4  | 1000.5 | 1013.4 |
| 10°    | 975.0 | 1003.4 | 1000.0 | 1001.3 | 1015.0 |
| 12.5°  | 970.2 | 1003.3 | 988.0  | 986.8  | 994.2  |
| 15°    | 956.0 | 995.1  | 961.0  | 964.1  | 969.0  |
| 17.5°  | 931.0 | 971.9  | 939.4  | 950.4  | 960.0  |
| 20°    | 915.0 | 955.1  | 929.0  | 943.4  | 960.0  |
| 22.5°  | 900.6 | 940.7  | 919.4  | 939.5  | 962.4  |
| 25°    | 880.0 | 915.2  | 905.0  | 938.6  | 964.0  |
| 27.5°  | 858.4 | 879.1  | 891.2  | 936.2  | 954.0  |
| 30°    | 840.0 | 853.7  | 884.0  | 923.2  | 930.0  |
| 32.5°  | 820.0 | 828.2  | 874.4  | 894.8  | 886.0  |
| 35°    | 787.0 | 793.9  | 854.0  | 837.6  | 819.0  |
| 37.5°  | 747.8 | 761.9  | 808.2  | 760.9  | 739.6  |
| 40°    | 719.0 | 742.5  | 769.0  | 698.5  | 674.0  |
| 42.5°  | 683.8 | 721.4  | 717.0  | 627.1  | 597.2  |
| 45°    | 628.0 | 678.9  | 623.0  | 525.2  | 492.0  |
| 47.5°  | 562.2 | 614.4  | 523.0  | 435.7  | 404.6  |
| 50°    | 519.0 | 561.0  | 463.0  | 381.2  | 347.0  |
| 52.5°  | 475.0 | 505.3  | 411.8  | 330.1  | 299.0  |
| 55°    | 407.0 | 422.6  | 340.0  | 262.5  | 241.0  |
| 57.5°  | 344.6 | 354.6  | 277.8  | 212.0  | 196.2  |
| 60°    | 307.0 | 313.8  | 237.0  | 185.7  | 173.0  |
| 62.5°  | 272.6 | 277.9  | 204.2  | 163.4  | 153.8  |
| 65°    | 224.0 | 228.9  | 166.0  | 134.8  | 128.0  |
| 67.5°  | 185.4 | 187.9  | 136.6  | 112.1  | 105.6  |
| 70°    | 163.0 | 164.0  | 119.0  | 96.9   | 92.0   |
| 72.5°  | 143.0 | 141.6  | 102.2  | 84.1   | 80.8   |
| 75°    | 113.0 | 110.1  | 78.0   | 66.0   | 64.0   |
| 77.5°  | 84.4  | 81.3   | 54.8   | 50.8   | 50.8   |
| 80°    | 66.0  | 62.1   | 42.0   | 42.0   | 42.0   |
| 82.5°  | 49.2  | 43.7   | 32.4   | 32.4   | 31.6   |
| 85°    | 24.0  | 19.1   | 19.0   | 12.9   | 10.0   |
| 87.5°  | 6.6   | 7.0    | 4.0    | 3.8    | 4.0    |
| 90°    | 1.0   | 3.0    | 8.0    | 7.0    | 8.0    |
| 92.5°  | 17.0  | 62.0   | 190.4  | 61.9   | 49.6   |
| 95°    | 52.0  | 150.7  | 674.0  | 240.1  | 156.0  |
| 97.5°  | 94.4  | 198.8  | 1156.3 | 699.5  | 433.6  |
| 100°   | 124.0 | 223.7  | 1337.9 | 1194.8 | 791.9  |
| 102.5° | 157.6 | 255.0  | 1317.9 | 1760.5 | 1364.7 |
| 105°   | 211.0 | 300.9  | 1204.9 | 2289.2 | 2174.8 |
| 107.5° | 263.6 | 346.1  | 1094.7 | 2338.7 | 2464.4 |
| 110°   | 298.0 | 378.2  | 1041.9 | 2281.1 | 2514.8 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°    | 67.5°  | 90°    |
|--------|-------|-------|--------|--------|--------|
| 112.5° | 330.8 | 408.6 | 1009.9 | 2181.0 | 2480.4 |
| 115°   | 380.0 | 454.3 | 978.9  | 2022.9 | 2374.8 |
| 117.5° | 427.8 | 497.2 | 967.1  | 1867.4 | 2224.8 |
| 120°   | 459.0 | 524.5 | 963.9  | 1776.8 | 2124.8 |
| 122.5° | 487.0 | 550.9 | 963.9  | 1698.6 | 2021.7 |
| 125°   | 529.0 | 589.6 | 964.9  | 1595.2 | 1873.9 |
| 127.5° | 564.6 | 626.3 | 963.7  | 1519.0 | 1761.5 |
| 130°   | 587.0 | 649.5 | 962.9  | 1472.9 | 1691.9 |
| 132.5° | 607.0 | 671.1 | 960.5  | 1433.2 | 1631.9 |
| 135°   | 637.0 | 704.4 | 956.9  | 1375.9 | 1550.9 |
| 137.5° | 668.6 | 735.4 | 954.7  | 1316.1 | 1474.3 |
| 140°   | 690.9 | 755.5 | 953.9  | 1278.3 | 1427.9 |
| 142.5° | 713.3 | 774.0 | 953.9  | 1238.0 | 1373.5 |
| 145°   | 744.9 | 799.7 | 954.9  | 1183.5 | 1296.9 |
| 147.5° | 778.1 | 823.7 | 956.3  | 1136.1 | 1221.7 |
| 150°   | 798.9 | 839.0 | 957.9  | 1108.6 | 1180.9 |
| 152.5° | 819.7 | 855.1 | 958.7  | 1085.9 | 1145.7 |
| 155°   | 848.9 | 877.3 | 960.9  | 1058.9 | 1099.9 |
| 157.5° | 875.1 | 895.7 | 963.1  | 1037.6 | 1067.3 |
| 160°   | 891.9 | 908.6 | 963.9  | 1025.5 | 1048.9 |
| 162.5° | 906.3 | 919.8 | 963.9  | 1015.7 | 1032.9 |
| 165°   | 926.9 | 935.7 | 964.9  | 1002.2 | 1012.9 |
| 167.5° | 944.3 | 948.6 | 966.1  | 991.7  | 997.5  |
| 170°   | 953.9 | 955.9 | 966.9  | 986.0  | 987.9  |
| 172.5° | 961.1 | 962.3 | 969.3  | 981.9  | 982.3  |
| 175°   | 968.9 | 968.9 | 969.9  | 976.9  | 974.9  |
| 177.5° | 972.9 | 972.1 | 971.3  | 976.1  | 972.9  |
| 180°   | 972.9 | 972.9 | 972.9  | 972.9  | 972.9  |



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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 | 13.89            | 14.57 | 15.02 | 15.68 | 17.24 | 10.62          | 11.29 | 11.75 | 12.41 | 13.96 |
|                 | 3H   | 15.11            | 15.71 | 16.25 | 16.84 | 18.41 | 11.67          | 12.27 | 12.81 | 13.40 | 14.97 |
|                 | 4H   | 15.55            | 16.13 | 16.70 | 17.25 | 18.83 | 12.06          | 12.63 | 13.21 | 13.76 | 15.33 |
|                 | 6H   | 15.86            | 16.39 | 17.02 | 17.52 | 19.10 | 12.38          | 12.91 | 13.54 | 14.04 | 15.62 |
|                 | 8H   | 15.94            | 16.44 | 17.10 | 17.58 | 19.16 | 12.46          | 12.96 | 13.62 | 14.11 | 15.68 |
|                 | 12H  | 15.96            | 16.44 | 17.12 | 17.57 | 19.17 | 12.46          | 12.94 | 13.63 | 14.08 | 15.68 |
| 4H              | 2H   | 13.95            | 14.52 | 15.10 | 15.64 | 17.22 | 11.16          | 11.73 | 12.32 | 12.86 | 14.44 |
|                 | 3H   | 15.40            | 15.88 | 16.56 | 17.03 | 18.62 | 12.41          | 12.89 | 13.57 | 14.04 | 15.63 |
|                 | 4H   | 15.99            | 16.43 | 17.15 | 17.57 | 19.17 | 12.91          | 13.35 | 14.07 | 14.49 | 16.10 |
|                 | 6H   | 16.43            | 16.81 | 17.60 | 17.97 | 19.57 | 13.34          | 13.71 | 14.50 | 14.87 | 16.47 |
|                 | 8H   | 16.56            | 16.91 | 17.73 | 18.06 | 19.68 | 13.46          | 13.80 | 14.62 | 14.96 | 16.57 |
|                 | 12H  | 16.61            | 16.92 | 17.79 | 18.09 | 19.71 | 13.47          | 13.78 | 14.65 | 14.95 | 16.57 |
| 8H              | 4H   | 16.00            | 16.35 | 17.17 | 17.51 | 19.12 | 13.20          | 13.55 | 14.37 | 14.71 | 16.32 |
|                 | 6H   | 16.55            | 16.83 | 17.73 | 18.03 | 19.64 | 13.73          | 14.02 | 14.92 | 15.22 | 16.83 |
|                 | 8H   | 16.74            | 16.99 | 17.93 | 18.17 | 19.80 | 13.92          | 14.17 | 15.11 | 15.34 | 16.97 |
|                 | 12H  | 16.84            | 17.06 | 18.03 | 18.23 | 19.90 | 13.97          | 14.19 | 15.17 | 15.37 | 17.03 |
| 12H             | 4H   | 15.95            | 16.27 | 17.13 | 17.43 | 19.05 | 13.21          | 13.53 | 14.39 | 14.69 | 16.31 |
|                 | 6H   | 16.53            | 16.78 | 17.72 | 17.96 | 19.59 | 13.79          | 14.04 | 14.98 | 15.22 | 16.85 |
|                 | 8H   | 16.74            | 16.96 | 17.93 | 18.13 | 19.79 | 13.99          | 14.21 | 15.19 | 15.39 | 17.05 |