

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: P855413

Luminaire Tested: SQ2-FB-150U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855413  
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-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

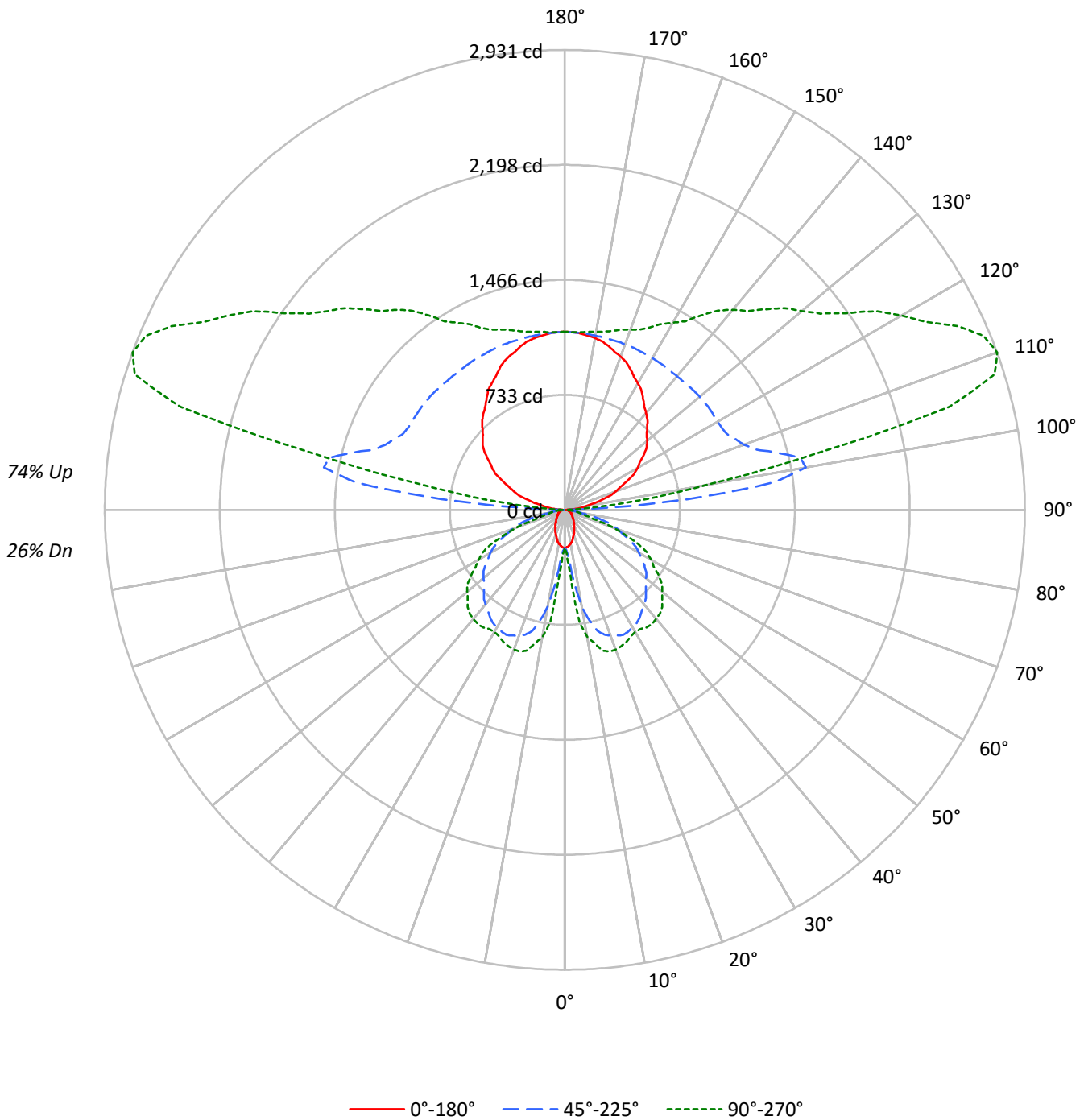
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9394.9 lumens  
Efficiency: N/A  
Efficacy: 126.3 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: P855413

CATALOG NUMBER: SQ2-FB-150U-050D-840-UNV-STD-W-4

### Luminous Intensity Polar Plot





TEST NUMBER: P855413

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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   | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 70 | 70 | 70 | 51 | 51 | 51 | 34 | 34 | 34 | 26 |    |    |    | 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°  | 3914 | 3914  | 3914  |
| 5°  | 3815 | 5289  | 6932  |
| 10° | 3572 | 10242 | 13490 |
| 15° | 3234 | 13324 | 15525 |
| 20° | 2864 | 14658 | 16259 |
| 25° | 2533 | 15675 | 16527 |
| 30° | 2237 | 16144 | 16731 |
| 35° | 1999 | 16425 | 17986 |
| 40° | 1817 | 16579 | 19110 |
| 45° | 1676 | 16657 | 20011 |
| 50° | 1580 | 16978 | 20374 |
| 55° | 1543 | 17419 | 20535 |
| 60° | 1579 | 17651 | 20434 |
| 65° | 1647 | 17410 | 19859 |
| 70° | 1704 | 16834 | 15021 |
| 75° | 1890 | 15122 | 8291  |
| 80° | 1953 | 7801  | 7689  |
| 85° | 1945 | 5391  | 3242  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 52.5°  
 Luminance: 20722 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 40.6   | 0.4       |
| 10°-20°   | 185.4  | 2.0       |
| 20°-30°   | 326.2  | 3.5       |
| 30°-40°   | 422.2  | 4.5       |
| 40°-50°   | 465.6  | 5.0       |
| 50°-60°   | 434.8  | 4.6       |
| 60°-70°   | 336.0  | 3.6       |
| 70°-80°   | 155.0  | 1.6       |
| 80°-90°   | 30.9   | 0.3       |
| 90°-100°  | 432.0  | 4.6       |
| 100°-110° | 1414.7 | 15.1      |
| 110°-120° | 1398.6 | 14.9      |
| 120°-130° | 1143.3 | 12.2      |
| 130°-140° | 933.0  | 9.9       |
| 140°-150° | 726.1  | 7.7       |
| 150°-160° | 522.8  | 5.6       |
| 160°-170° | 319.8  | 3.4       |
| 170°-180° | 108.1  | 1.2       |
| 0°-30°    | 552.2  | 5.9       |
| 0°-40°    | 974.3  | 10.4      |
| 0°-60°    | 1874.7 | 20.0      |
| 0°-90°    | 2396.6 | 25.5      |
| 90°-120°  | 3245.3 | 34.5      |
| 90°-150°  | 6047.6 | 64.4      |
| 90°-180°  | 6998.0 | 74.5      |
| 0°-180°   | 9394.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 242  | 242   | 242  | 242   | 242  |      |
| 5°   | 235  | 270   | 326  | 398   | 428  | 22   |
| 15°  | 194  | 381   | 797  | 892   | 929  | 54   |
| 25°  | 142  | 512   | 880  | 919   | 928  | 65   |
| 35°  | 101  | 494   | 833  | 862   | 912  | 64   |
| 45°  | 73   | 379   | 730  | 838   | 876  | 57   |
| 55°  | 55   | 226   | 619  | 711   | 730  | 49   |
| 65°  | 43   | 128   | 456  | 511   | 520  | 42   |
| 75°  | 30   | 78    | 242  | 130   | 133  | 31   |
| 85°  | 10   | 23    | 29   | 20    | 18   | 11   |
| 90°  | 1    | 4     | 9    | 8     | 9    | 4    |
| 95°  | 61   | 176   | 786  | 280   | 182  | 69   |
| 105° | 246  | 351   | 1404 | 2668  | 2534 | 259  |
| 115° | 443  | 529   | 1141 | 2358  | 2768 | 437  |
| 125° | 616  | 687   | 1124 | 1859  | 2184 | 548  |
| 135° | 742  | 821   | 1115 | 1604  | 1807 | 574  |
| 145° | 868  | 932   | 1113 | 1379  | 1511 | 544  |
| 155° | 989  | 1022  | 1120 | 1234  | 1282 | 455  |
| 165° | 1080 | 1090  | 1124 | 1168  | 1180 | 304  |
| 175° | 1129 | 1129  | 1130 | 1138  | 1136 | 107  |
| 180° | 1134 | 1134  | 1134 | 1134  | 1134 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°    | 67.5°  | 90°    |
|--------|-------|-------|--------|--------|--------|
| 0°     | 242.4 | 242.4 | 242.4  | 242.4  | 242.4  |
| 2.5°   | 240.5 | 250.6 | 262.0  | 275.2  | 280.6  |
| 5°     | 235.4 | 269.6 | 326.3  | 398.1  | 427.7  |
| 7.5°   | 226.3 | 295.8 | 474.6  | 666.6  | 725.8  |
| 10°    | 217.9 | 314.8 | 624.7  | 790.8  | 822.8  |
| 12.5°  | 208.6 | 340.1 | 718.8  | 835.6  | 868.5  |
| 15°    | 193.5 | 381.4 | 797.1  | 892.3  | 928.8  |
| 17.5°  | 177.8 | 428.1 | 833.5  | 927.4  | 947.2  |
| 20°    | 166.7 | 460.7 | 853.1  | 933.8  | 946.3  |
| 22.5°  | 156.4 | 485.0 | 867.1  | 928.2  | 941.6  |
| 25°    | 142.2 | 512.5 | 879.9  | 918.6  | 927.7  |
| 27.5°  | 128.4 | 519.8 | 874.3  | 899.7  | 908.5  |
| 30°    | 120.0 | 517.7 | 865.9  | 884.9  | 897.4  |
| 32.5°  | 112.6 | 512.1 | 853.8  | 872.1  | 899.2  |
| 35°    | 101.4 | 494.5 | 833.3  | 862.4  | 912.5  |
| 37.5°  | 91.8  | 466.3 | 806.2  | 865.8  | 914.1  |
| 40°    | 86.2  | 445.2 | 786.6  | 865.7  | 906.7  |
| 42.5°  | 80.6  | 420.5 | 764.3  | 856.3  | 897.4  |
| 45°    | 73.4  | 378.8 | 729.5  | 837.7  | 876.4  |
| 47.5°  | 66.7  | 331.9 | 697.4  | 811.8  | 840.0  |
| 50°    | 62.9  | 300.0 | 675.9  | 788.3  | 811.1  |
| 52.5°  | 59.2  | 268.9 | 654.5  | 760.3  | 781.3  |
| 55°    | 54.8  | 225.7 | 618.8  | 711.4  | 729.5  |
| 57.5°  | 50.8  | 188.7 | 578.3  | 657.2  | 672.0  |
| 60°    | 48.9  | 168.6 | 546.6  | 618.0  | 632.8  |
| 62.5°  | 46.1  | 150.3 | 511.1  | 577.0  | 590.9  |
| 65°    | 43.1  | 127.5 | 455.7  | 510.7  | 519.8  |
| 67.5°  | 38.9  | 110.5 | 396.7  | 430.4  | 413.3  |
| 70°    | 36.1  | 102.2 | 356.6  | 367.1  | 318.2  |
| 72.5°  | 34.3  | 93.1  | 312.8  | 285.1  | 192.3  |
| 75°    | 30.3  | 78.2  | 242.4  | 130.5  | 132.9  |
| 77.5°  | 24.7  | 60.5  | 159.4  | 100.2  | 102.3  |
| 80°    | 21.0  | 49.4  | 83.9   | 81.6   | 82.7   |
| 82.5°  | 17.2  | 38.5  | 57.8   | 60.1   | 58.5   |
| 85°    | 10.5  | 23.1  | 29.1   | 19.8   | 17.5   |
| 87.5°  | 4.0   | 9.0   | 6.5    | 6.3    | 6.5    |
| 90°    | 1.2   | 3.5   | 9.3    | 8.2    | 9.3    |
| 92.5°  | 19.8  | 72.3  | 221.9  | 72.1   | 57.8   |
| 95°    | 60.6  | 175.6 | 785.5  | 279.8  | 181.8  |
| 97.5°  | 110.0 | 231.7 | 1347.6 | 815.2  | 505.3  |
| 100°   | 144.5 | 260.7 | 1559.2 | 1392.4 | 922.9  |
| 102.5° | 183.7 | 297.2 | 1535.9 | 2051.7 | 1590.4 |
| 105°   | 245.9 | 350.7 | 1404.2 | 2667.8 | 2534.5 |
| 107.5° | 307.2 | 403.3 | 1275.8 | 2725.5 | 2872.0 |
| 110°   | 347.3 | 440.8 | 1214.2 | 2658.4 | 2930.8 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 385.5  | 476.2  | 1176.9 | 2541.7 | 2890.7 |
| 115°   | 442.9  | 529.4  | 1140.8 | 2357.5 | 2767.6 |
| 117.5° | 498.6  | 579.4  | 1127.1 | 2176.3 | 2592.8 |
| 120°   | 534.9  | 611.3  | 1123.3 | 2070.7 | 2476.2 |
| 122.5° | 567.6  | 642.0  | 1123.3 | 1979.6 | 2356.1 |
| 125°   | 616.5  | 687.1  | 1124.5 | 1859.0 | 2183.8 |
| 127.5° | 658.0  | 729.9  | 1123.1 | 1770.2 | 2052.9 |
| 130°   | 684.1  | 756.9  | 1122.2 | 1716.5 | 1971.7 |
| 132.5° | 707.4  | 782.1  | 1119.4 | 1670.3 | 1901.8 |
| 135°   | 742.4  | 820.9  | 1115.2 | 1603.5 | 1807.4 |
| 137.5° | 779.2  | 857.0  | 1112.6 | 1533.8 | 1718.2 |
| 140°   | 805.2  | 880.5  | 1111.7 | 1489.7 | 1664.1 |
| 142.5° | 831.3  | 902.0  | 1111.7 | 1442.8 | 1600.7 |
| 145°   | 868.1  | 932.0  | 1112.8 | 1379.3 | 1511.4 |
| 147.5° | 906.8  | 959.9  | 1114.5 | 1324.0 | 1423.8 |
| 150°   | 931.0  | 977.8  | 1116.3 | 1292.0 | 1376.2 |
| 152.5° | 955.3  | 996.5  | 1117.3 | 1265.5 | 1335.2 |
| 155°   | 989.3  | 1022.4 | 1119.8 | 1234.0 | 1281.8 |
| 157.5° | 1019.8 | 1043.8 | 1122.4 | 1209.2 | 1243.8 |
| 160°   | 1039.4 | 1058.9 | 1123.3 | 1195.1 | 1222.4 |
| 162.5° | 1056.2 | 1071.9 | 1123.3 | 1183.7 | 1203.7 |
| 165°   | 1080.2 | 1090.5 | 1124.5 | 1168.0 | 1180.4 |
| 167.5° | 1100.5 | 1105.5 | 1125.9 | 1155.7 | 1162.5 |
| 170°   | 1111.7 | 1114.0 | 1126.8 | 1149.1 | 1151.3 |
| 172.5° | 1120.1 | 1121.5 | 1129.6 | 1144.3 | 1144.8 |
| 175°   | 1129.2 | 1129.2 | 1130.3 | 1138.5 | 1136.1 |
| 177.5° | 1133.8 | 1132.9 | 1132.0 | 1137.5 | 1133.8 |
| 180°   | 1133.8 | 1133.8 | 1133.8 | 1133.8 | 1133.8 |

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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 | 8.96             | 9.64  | 10.09 | 10.78 | 12.36 | 17.69          | 18.38 | 18.83 | 19.51 | 21.09 |
|                 | 3H   | 9.67             | 10.29 | 10.82 | 11.43 | 13.03 | 19.30          | 19.92 | 20.45 | 21.06 | 22.65 |
|                 | 4H   | 9.96             | 10.55 | 11.12 | 11.69 | 13.29 | 19.47          | 20.06 | 20.63 | 21.20 | 22.80 |
|                 | 6H   | 10.17            | 10.71 | 11.34 | 11.85 | 13.47 | 19.55          | 20.09 | 20.71 | 21.23 | 22.84 |
|                 | 8H   | 10.22            | 10.74 | 11.39 | 11.89 | 13.50 | 19.55          | 20.06 | 20.72 | 21.22 | 22.82 |
|                 | 12H  | 10.25            | 10.73 | 11.42 | 11.88 | 13.51 | 19.51          | 20.00 | 20.68 | 21.15 | 22.78 |
| 4H              | 2H   | 13.33            | 13.92 | 14.50 | 15.06 | 16.66 | 18.11          | 18.70 | 19.28 | 19.84 | 21.44 |
|                 | 3H   | 14.25            | 14.74 | 15.42 | 15.90 | 17.52 | 19.92          | 20.41 | 21.09 | 21.58 | 23.19 |
|                 | 4H   | 14.52            | 14.97 | 15.70 | 16.13 | 17.76 | 20.15          | 20.60 | 21.32 | 21.75 | 23.39 |
|                 | 6H   | 14.64            | 15.03 | 15.82 | 16.21 | 17.83 | 20.29          | 20.67 | 21.46 | 21.85 | 23.47 |
|                 | 8H   | 14.66            | 15.02 | 15.84 | 16.19 | 17.83 | 20.31          | 20.67 | 21.48 | 21.83 | 23.47 |
|                 | 12H  | 14.64            | 14.97 | 15.84 | 16.15 | 17.79 | 20.27          | 20.60 | 21.46 | 21.78 | 23.42 |
| 8H              | 4H   | 15.68            | 16.04 | 16.86 | 17.21 | 18.85 | 20.25          | 20.61 | 21.43 | 21.78 | 23.42 |
|                 | 6H   | 15.91            | 16.21 | 17.11 | 17.42 | 19.05 | 20.45          | 20.75 | 21.65 | 21.96 | 23.59 |
|                 | 8H   | 15.98            | 16.24 | 17.18 | 17.43 | 19.08 | 20.51          | 20.77 | 21.71 | 21.95 | 23.61 |
|                 | 12H  | 16.00            | 16.22 | 17.20 | 17.41 | 19.10 | 20.49          | 20.72 | 21.70 | 21.91 | 23.59 |
| 12H             | 4H   | 15.69            | 16.02 | 16.88 | 17.20 | 18.84 | 20.20          | 20.52 | 21.39 | 21.70 | 23.35 |
|                 | 6H   | 16.00            | 16.26 | 17.20 | 17.45 | 19.11 | 20.43          | 20.69 | 21.63 | 21.88 | 23.53 |
|                 | 8H   | 16.10            | 16.33 | 17.30 | 17.51 | 19.20 | 20.49          | 20.72 | 21.70 | 21.90 | 23.59 |