

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: P854072

Luminaire Tested: SQ2-PH1-150U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

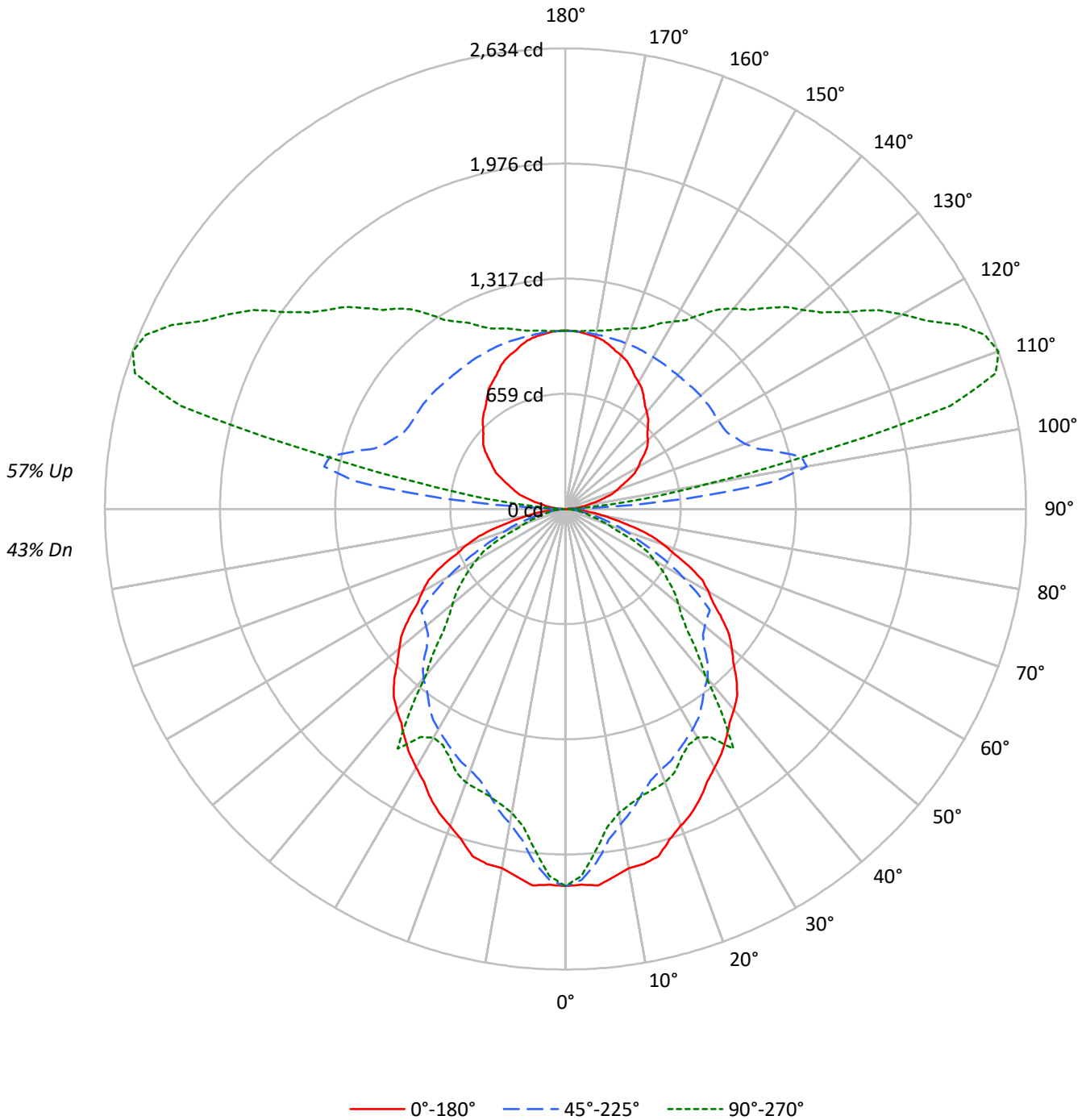
Test Method: LM-79-2019  
Report Number: P854072  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-PH1-150U-100D-940-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11059.9 lumens  
Efficiency: N/A  
Efficacy: 117.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 94.2  
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: P854072  
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### Luminous Intensity Polar Plot





TEST NUMBER: P854072

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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   | 106 | 106 | 106 | 106 | 96 | 96 | 96 | 96 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 | 43 |    |    |    |   |
| 1   | 96  | 92  | 88  | 85  | 88 | 84 | 81 | 78 | 70 | 68 | 66 | 57 | 55 | 54 | 44 | 43 | 42 | 37 |    |    |    |   |
| 2   | 88  | 81  | 75  | 70  | 80 | 74 | 69 | 65 | 61 | 58 | 55 | 50 | 47 | 45 | 39 | 37 | 36 | 31 |    |    |    |   |
| 3   | 80  | 71  | 64  | 58  | 73 | 65 | 59 | 54 | 54 | 50 | 46 | 44 | 41 | 38 | 35 | 33 | 31 | 26 |    |    |    |   |
| 4   | 73  | 63  | 55  | 49  | 67 | 58 | 51 | 46 | 48 | 43 | 39 | 39 | 36 | 33 | 31 | 29 | 26 | 23 |    |    |    |   |
| 5   | 67  | 56  | 48  | 42  | 61 | 52 | 45 | 39 | 43 | 38 | 34 | 35 | 31 | 28 | 28 | 25 | 23 | 20 |    |    |    |   |
| 6   | 62  | 50  | 42  | 36  | 57 | 46 | 39 | 34 | 39 | 33 | 29 | 32 | 28 | 25 | 25 | 23 | 20 | 17 |    |    |    |   |
| 7   | 57  | 45  | 37  | 32  | 52 | 42 | 35 | 30 | 35 | 30 | 26 | 29 | 25 | 22 | 23 | 20 | 18 | 15 |    |    |    |   |
| 8   | 53  | 41  | 33  | 28  | 49 | 38 | 31 | 26 | 32 | 27 | 23 | 27 | 22 | 20 | 21 | 18 | 16 | 14 |    |    |    |   |
| 9   | 49  | 37  | 30  | 25  | 45 | 35 | 28 | 24 | 29 | 24 | 21 | 24 | 20 | 18 | 20 | 17 | 15 | 12 |    |    |    |   |
| 10  | 46  | 34  | 27  | 22  | 42 | 32 | 25 | 21 | 27 | 22 | 18 | 22 | 19 | 16 | 18 | 15 | 13 | 11 |    |    |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 34814 | 34814 | 34814 |
| 5°  | 35013 | 32919 | 31822 |
| 10° | 34208 | 29970 | 28927 |
| 15° | 34362 | 28189 | 28361 |
| 20° | 33136 | 27319 | 28589 |
| 25° | 32528 | 27193 | 27923 |
| 30° | 31823 | 27119 | 28152 |
| 35° | 31582 | 26810 | 32997 |
| 40° | 31609 | 26637 | 26161 |
| 45° | 31620 | 25624 | 22532 |
| 50° | 31177 | 26128 | 21130 |
| 55° | 30781 | 28355 | 20270 |
| 60° | 30474 | 24845 | 19013 |
| 65° | 29941 | 20145 | 16539 |
| 70° | 28282 | 17141 | 11816 |
| 75° | 25215 | 12926 | 8958  |
| 80° | 20604 | 8396  | 8396  |
| 85° | 12931 | 7595  | 5706  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 31620 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 189.7   | 1.7       |
| 10°-20°   | 499.1   | 4.5       |
| 20°-30°   | 731.8   | 6.6       |
| 30°-40°   | 886.2   | 8.0       |
| 40°-50°   | 871.5   | 7.9       |
| 50°-60°   | 758.6   | 6.9       |
| 60°-70°   | 527.4   | 4.8       |
| 70°-80°   | 250.1   | 2.3       |
| 80°-90°   | 56.3    | 0.5       |
| 90°-100°  | 388.3   | 3.5       |
| 100°-110° | 1271.3  | 11.5      |
| 110°-120° | 1256.9  | 11.4      |
| 120°-130° | 1027.5  | 9.3       |
| 130°-140° | 838.5   | 7.6       |
| 140°-150° | 652.5   | 5.9       |
| 150°-160° | 469.8   | 4.2       |
| 160°-170° | 287.4   | 2.6       |
| 170°-180° | 97.1    | 0.9       |
| 0°-30°    | 1420.6  | 12.8      |
| 0°-40°    | 2306.7  | 20.9      |
| 0°-60°    | 3936.8  | 35.6      |
| 0°-90°    | 4770.5  | 43.1      |
| 90°-120°  | 2916.5  | 26.4      |
| 90°-150°  | 5435.0  | 49.1      |
| 90°-180°  | 6289.0  | 56.9      |
| 0°-180°   | 11059.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2156 | 2156  | 2156 | 2156  | 2156 |      |
| 5°   | 2160 | 2158  | 2031 | 1967  | 1963 | 203  |
| 15°  | 2056 | 1831  | 1686 | 1675  | 1697 | 573  |
| 25°  | 1826 | 1553  | 1526 | 1573  | 1567 | 840  |
| 35°  | 1602 | 1295  | 1360 | 1478  | 1674 | 1004 |
| 45°  | 1385 | 1026  | 1122 | 1161  | 987  | 1064 |
| 55°  | 1094 | 799   | 1007 | 726   | 720  | 977  |
| 65°  | 784  | 549   | 527  | 433   | 433  | 770  |
| 75°  | 404  | 280   | 207  | 148   | 144  | 428  |
| 85°  | 70   | 46    | 41   | 33    | 31   | 93   |
| 90°  | 1    | 3     | 8    | 7     | 8    | 5    |
| 95°  | 54   | 158   | 706  | 251   | 163  | 62   |
| 105° | 221  | 315   | 1262 | 2398  | 2278 | 233  |
| 115° | 398  | 476   | 1025 | 2119  | 2487 | 393  |
| 125° | 554  | 618   | 1011 | 1671  | 1963 | 493  |
| 135° | 667  | 738   | 1002 | 1441  | 1624 | 516  |
| 145° | 780  | 838   | 1000 | 1240  | 1358 | 489  |
| 155° | 889  | 919   | 1006 | 1109  | 1152 | 409  |
| 165° | 971  | 980   | 1011 | 1050  | 1061 | 274  |
| 175° | 1015 | 1015  | 1016 | 1023  | 1021 | 96   |
| 180° | 1019 | 1019  | 1019 | 1019  | 1019 |      |



TEST NUMBER: P854072

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 2156.2 | 2156.2 | 2156.2 | 2156.2 | 2156.2 |
| 2.5°   | 2151.3 | 2173.8 | 2123.4 | 2103.6 | 2100.4 |
| 5°     | 2160.3 | 2158.3 | 2031.1 | 1967.4 | 1963.4 |
| 7.5°   | 2121.0 | 2058.8 | 1906.8 | 1836.5 | 1833.3 |
| 10°    | 2086.5 | 1992.2 | 1828.0 | 1764.4 | 1764.4 |
| 12.5°  | 2078.3 | 1929.4 | 1764.0 | 1717.0 | 1726.6 |
| 15°    | 2055.7 | 1831.0 | 1686.4 | 1674.6 | 1696.7 |
| 17.5°  | 1981.0 | 1739.1 | 1626.1 | 1652.9 | 1678.6 |
| 20°    | 1928.5 | 1689.8 | 1590.0 | 1639.8 | 1663.9 |
| 22.5°  | 1884.2 | 1642.3 | 1563.7 | 1618.2 | 1631.0 |
| 25°    | 1825.9 | 1553.1 | 1526.4 | 1573.4 | 1567.4 |
| 27.5°  | 1756.2 | 1471.3 | 1489.1 | 1517.9 | 1521.5 |
| 30°    | 1706.9 | 1422.1 | 1454.6 | 1483.9 | 1510.0 |
| 32.5°  | 1659.3 | 1364.9 | 1416.8 | 1486.3 | 1546.1 |
| 35°    | 1602.3 | 1295.4 | 1360.2 | 1477.5 | 1674.1 |
| 37.5°  | 1542.4 | 1213.4 | 1303.2 | 1401.8 | 1464.4 |
| 40°    | 1499.7 | 1154.7 | 1263.8 | 1385.7 | 1241.2 |
| 42.5°  | 1453.8 | 1108.7 | 1204.7 | 1362.1 | 1118.1 |
| 45°    | 1384.8 | 1025.8 | 1122.2 | 1161.3 | 986.8  |
| 47.5°  | 1303.6 | 961.4  | 1066.4 | 968.4  | 900.2  |
| 50°    | 1241.2 | 918.3  | 1040.2 | 885.3  | 841.2  |
| 52.5°  | 1180.5 | 873.6  | 1022.1 | 816.7  | 787.0  |
| 55°    | 1093.5 | 798.6  | 1007.3 | 726.1  | 720.1  |
| 57.5°  | 1001.2 | 722.3  | 890.8  | 647.3  | 657.7  |
| 60°    | 943.7  | 672.9  | 769.4  | 600.8  | 588.8  |
| 62.5°  | 883.0  | 625.0  | 656.1  | 541.8  | 529.7  |
| 65°    | 783.7  | 549.0  | 527.3  | 432.9  | 432.9  |
| 67.5°  | 674.6  | 470.0  | 427.1  | 354.2  | 306.1  |
| 70°    | 599.1  | 418.5  | 363.1  | 282.4  | 250.3  |
| 72.5°  | 518.6  | 363.8  | 297.5  | 231.4  | 194.5  |
| 75°    | 404.2  | 279.8  | 207.2  | 147.6  | 143.6  |
| 77.5°  | 292.1  | 201.5  | 139.5  | 109.6  | 110.0  |
| 80°    | 221.6  | 153.4  | 90.3   | 88.3   | 90.3   |
| 82.5°  | 155.9  | 105.4  | 67.3   | 70.2   | 70.6   |
| 85°    | 69.8   | 45.7   | 41.0   | 32.8   | 30.8   |
| 87.5°  | 15.0   | 13.8   | 9.9    | 9.7    | 9.9    |
| 90°    | 1.0    | 3.1    | 8.4    | 7.4    | 8.4    |
| 92.5°  | 17.8   | 64.9   | 199.4  | 64.8   | 51.9   |
| 95°    | 54.5   | 157.9  | 705.9  | 251.4  | 163.4  |
| 97.5°  | 98.9   | 208.2  | 1211.1 | 732.6  | 454.1  |
| 100°   | 129.9  | 234.3  | 1401.2 | 1251.3 | 829.4  |
| 102.5° | 165.0  | 267.0  | 1380.3 | 1843.8 | 1429.3 |
| 105°   | 221.0  | 315.2  | 1262.0 | 2397.6 | 2277.8 |
| 107.5° | 276.1  | 362.5  | 1146.5 | 2449.4 | 2581.1 |
| 110°   | 312.1  | 396.1  | 1091.3 | 2389.1 | 2633.9 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 346.4  | 427.9  | 1057.7 | 2284.3 | 2597.8 |
| 115°   | 398.0  | 475.8  | 1025.3 | 2118.6 | 2487.3 |
| 117.5° | 448.0  | 520.7  | 1012.9 | 1955.8 | 2330.2 |
| 120°   | 480.7  | 549.3  | 1009.6 | 1860.9 | 2225.4 |
| 122.5° | 510.0  | 577.0  | 1009.6 | 1779.0 | 2117.4 |
| 125°   | 554.0  | 617.5  | 1010.6 | 1670.7 | 1962.6 |
| 127.5° | 591.3  | 656.0  | 1009.4 | 1590.9 | 1844.9 |
| 130°   | 614.7  | 680.3  | 1008.5 | 1542.6 | 1772.0 |
| 132.5° | 635.7  | 702.9  | 1006.0 | 1501.1 | 1709.1 |
| 135°   | 667.1  | 737.8  | 1002.2 | 1441.0 | 1624.3 |
| 137.5° | 700.2  | 770.2  | 999.9  | 1378.4 | 1544.1 |
| 140°   | 723.7  | 791.2  | 999.1  | 1338.8 | 1495.5 |
| 142.5° | 747.1  | 810.6  | 999.1  | 1296.6 | 1438.5 |
| 145°   | 780.2  | 837.6  | 1000.1 | 1239.5 | 1358.3 |
| 147.5° | 815.0  | 862.7  | 1001.6 | 1189.8 | 1279.5 |
| 150°   | 836.8  | 878.7  | 1003.3 | 1161.0 | 1236.8 |
| 152.5° | 858.5  | 895.6  | 1004.1 | 1137.3 | 1200.0 |
| 155°   | 889.1  | 918.8  | 1006.4 | 1109.0 | 1152.0 |
| 157.5° | 916.6  | 938.1  | 1008.7 | 1086.7 | 1117.9 |
| 160°   | 934.2  | 951.6  | 1009.6 | 1074.0 | 1098.6 |
| 162.5° | 949.2  | 963.4  | 1009.6 | 1063.8 | 1081.8 |
| 165°   | 970.8  | 980.0  | 1010.6 | 1049.6 | 1060.9 |
| 167.5° | 989.0  | 993.5  | 1011.9 | 1038.6 | 1044.8 |
| 170°   | 999.1  | 1001.1 | 1012.7 | 1032.7 | 1034.7 |
| 172.5° | 1006.6 | 1007.9 | 1015.2 | 1028.4 | 1028.8 |
| 175°   | 1014.8 | 1014.8 | 1015.8 | 1023.1 | 1021.1 |
| 177.5° | 1019.0 | 1018.2 | 1017.3 | 1022.3 | 1019.0 |
| 180°   | 1019.0 | 1019.0 | 1019.0 | 1019.0 | 1019.0 |



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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 | 18.99            | 19.79 | 20.01 | 20.81 | 22.18 | 17.66          | 18.46 | 18.68 | 19.48 | 20.85 |
|                 | 3H   | 21.01            | 21.72 | 22.04 | 22.76 | 24.14 | 18.69          | 19.41 | 19.72 | 20.44 | 21.83 |
|                 | 4H   | 21.74            | 22.41 | 22.78 | 23.45 | 24.84 | 18.90          | 19.58 | 19.94 | 20.61 | 22.01 |
|                 | 6H   | 22.22            | 22.84 | 23.27 | 23.88 | 25.29 | 19.04          | 19.67 | 20.09 | 20.71 | 22.11 |
|                 | 8H   | 22.34            | 22.94 | 23.40 | 23.99 | 25.39 | 19.08          | 19.67 | 20.13 | 20.72 | 22.12 |
|                 | 12H  | 22.39            | 22.95 | 23.45 | 24.00 | 25.42 | 19.07          | 19.63 | 20.13 | 20.68 | 22.11 |
| 4H              | 2H   | 19.36            | 20.03 | 20.40 | 21.07 | 22.46 | 18.30          | 18.97 | 19.34 | 20.01 | 21.40 |
|                 | 3H   | 21.46            | 22.02 | 22.51 | 23.08 | 24.49 | 19.47          | 20.03 | 20.52 | 21.10 | 22.50 |
|                 | 4H   | 22.27            | 22.79 | 23.33 | 23.84 | 25.27 | 19.74          | 20.26 | 20.80 | 21.31 | 22.74 |
|                 | 6H   | 22.85            | 23.29 | 23.92 | 24.37 | 25.80 | 19.95          | 20.39 | 21.02 | 21.47 | 22.89 |
|                 | 8H   | 23.02            | 23.43 | 24.09 | 24.50 | 25.94 | 20.00          | 20.42 | 21.07 | 21.49 | 22.93 |
|                 | 12H  | 23.09            | 23.46 | 24.17 | 24.54 | 25.99 | 20.01          | 20.38 | 21.10 | 21.46 | 22.91 |
| 8H              | 4H   | 22.28            | 22.69 | 23.35 | 23.77 | 25.21 | 19.95          | 20.37 | 21.02 | 21.44 | 22.88 |
|                 | 6H   | 22.93            | 23.27 | 24.03 | 24.38 | 25.82 | 20.22          | 20.56 | 21.32 | 21.68 | 23.11 |
|                 | 8H   | 23.16            | 23.46 | 24.26 | 24.55 | 26.01 | 20.33          | 20.62 | 21.43 | 21.72 | 23.18 |
|                 | 12H  | 23.27            | 23.53 | 24.37 | 24.62 | 26.12 | 20.37          | 20.63 | 21.47 | 21.72 | 23.22 |
| 12H             | 4H   | 22.23            | 22.60 | 23.32 | 23.69 | 25.13 | 19.95          | 20.32 | 21.04 | 21.40 | 22.85 |
|                 | 6H   | 22.91            | 23.20 | 24.01 | 24.30 | 25.76 | 20.25          | 20.55 | 21.35 | 21.65 | 23.10 |
|                 | 8H   | 23.14            | 23.40 | 24.24 | 24.49 | 25.98 | 20.37          | 20.63 | 21.47 | 21.72 | 23.22 |