

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: P854240

Luminaire Tested: SQ2-PR1-150U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854240
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-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

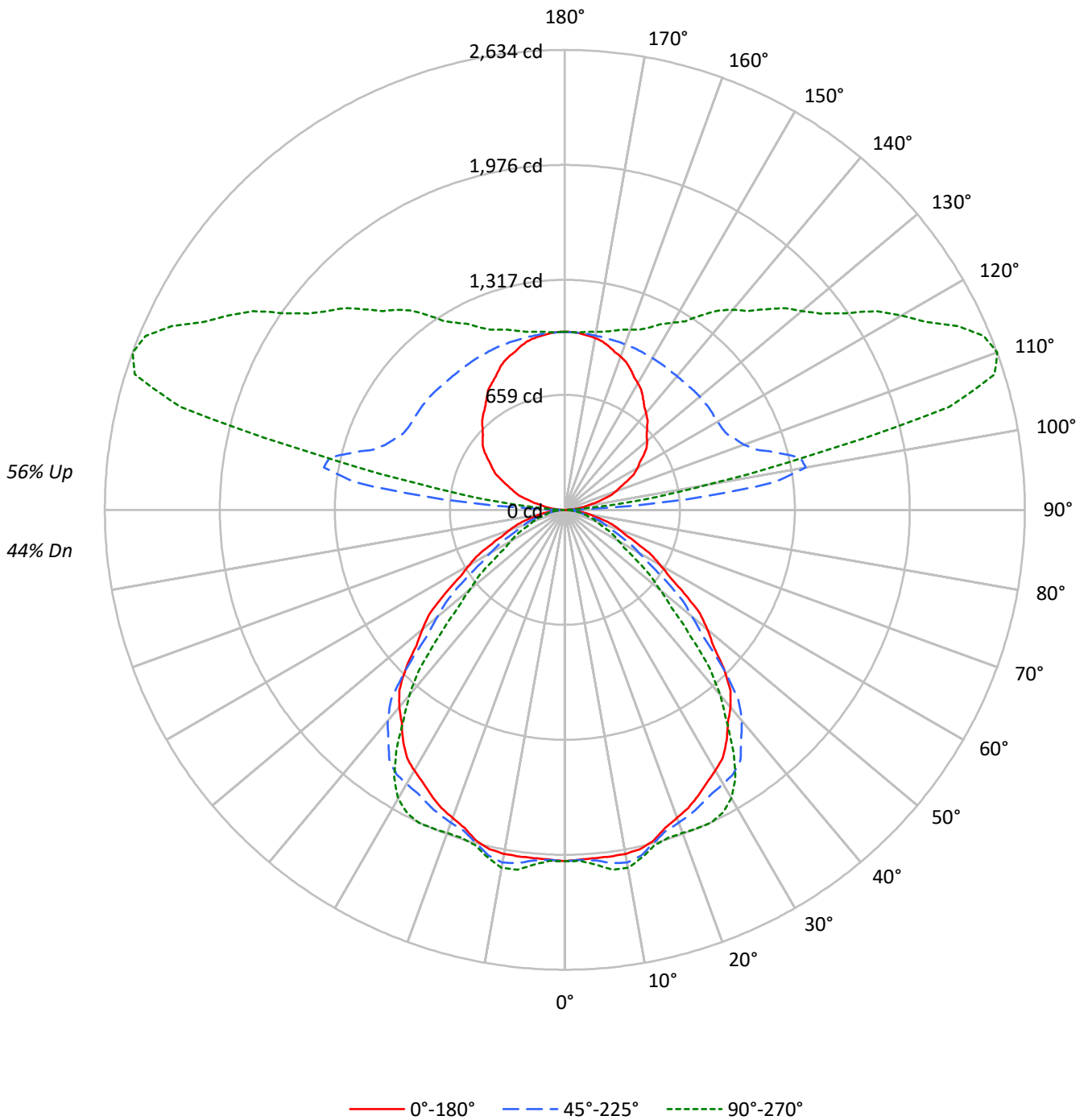
Lumens per Lamp: N/A
Luminaire Lumens: 11132.1 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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

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CATALOG NUMBER: SQ2-PR1-150U-100D-940-UNV-STD-W-4

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 | 106 | 106 | 106 | 106 | 97 | 97 | 97 | 97 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 | 44 | | | | |
| 1 | 97 | 93 | 89 | 86 | 89 | 85 | 82 | 79 | 71 | 69 | 67 | 57 | 56 | 55 | 45 | 44 | 43 | 38 | | | | |
| 2 | 89 | 82 | 76 | 71 | 81 | 75 | 70 | 66 | 63 | 59 | 56 | 51 | 49 | 46 | 40 | 39 | 37 | 32 | | | | |
| 3 | 81 | 72 | 65 | 60 | 74 | 66 | 60 | 56 | 56 | 51 | 48 | 46 | 42 | 40 | 36 | 34 | 32 | 28 | | | | |
| 4 | 74 | 64 | 57 | 51 | 68 | 59 | 53 | 47 | 50 | 45 | 41 | 41 | 37 | 35 | 33 | 30 | 28 | 25 | | | | |
| 5 | 68 | 57 | 50 | 44 | 62 | 53 | 46 | 41 | 45 | 39 | 36 | 37 | 33 | 30 | 30 | 27 | 25 | 22 | | | | |
| 6 | 63 | 52 | 44 | 38 | 58 | 48 | 41 | 36 | 40 | 35 | 31 | 33 | 30 | 27 | 27 | 24 | 22 | 19 | | | | |
| 7 | 58 | 47 | 39 | 33 | 53 | 43 | 36 | 31 | 37 | 31 | 27 | 30 | 27 | 24 | 25 | 22 | 20 | 17 | | | | |
| 8 | 54 | 42 | 35 | 30 | 50 | 39 | 33 | 28 | 33 | 28 | 24 | 28 | 24 | 21 | 23 | 20 | 18 | 15 | | | | |
| 9 | 50 | 39 | 31 | 26 | 46 | 36 | 29 | 25 | 31 | 25 | 22 | 26 | 22 | 19 | 21 | 18 | 16 | 14 | | | | |
| 10 | 47 | 35 | 28 | 24 | 43 | 33 | 27 | 22 | 28 | 23 | 20 | 24 | 20 | 17 | 19 | 17 | 15 | 13 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 32495 | 32495 | 32495 |
| 5° | 32454 | 32653 | 33052 |
| 10° | 32795 | 33636 | 34141 |
| 15° | 32784 | 32956 | 33230 |
| 20° | 32254 | 32747 | 33840 |
| 25° | 32163 | 33077 | 35234 |
| 30° | 32130 | 33812 | 35572 |
| 35° | 31824 | 34535 | 33119 |
| 40° | 31091 | 33253 | 29145 |
| 45° | 29419 | 29186 | 23048 |
| 50° | 26746 | 23860 | 17882 |
| 55° | 23505 | 19634 | 13917 |
| 60° | 20337 | 15700 | 11460 |
| 65° | 17559 | 13012 | 10032 |
| 70° | 15786 | 11523 | 8908 |
| 75° | 14460 | 9981 | 8191 |
| 80° | 12590 | 8015 | 8015 |
| 85° | 9114 | 7225 | 3798 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 31800 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 194.4 | 1.7 |
| 10°-20° | 562.6 | 5.1 |
| 20°-30° | 869.7 | 7.8 |
| 30°-40° | 1046.1 | 9.4 |
| 40°-50° | 939.3 | 8.4 |
| 50°-60° | 629.2 | 5.7 |
| 60°-70° | 366.0 | 3.3 |
| 70°-80° | 188.0 | 1.7 |
| 80°-90° | 47.5 | 0.4 |
| 90°-100° | 388.3 | 3.5 |
| 100°-110° | 1271.3 | 11.4 |
| 110°-120° | 1256.9 | 11.3 |
| 120°-130° | 1027.5 | 9.2 |
| 130°-140° | 838.5 | 7.5 |
| 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° | 1626.7 | 14.6 |
| 0°-40° | 2672.8 | 24.0 |
| 0°-60° | 4241.3 | 38.1 |
| 0°-90° | 4842.7 | 43.5 |
| 90°-120° | 2916.5 | 26.2 |
| 90°-150° | 5435.0 | 48.8 |
| 90°-180° | 6289.0 | 56.5 |
| 0°-180° | 11132.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2013 | 2013 | 2013 | 2013 | 2013 | |
| 5° | 2002 | 2036 | 2015 | 2019 | 2039 | 191 |
| 15° | 1961 | 2042 | 1972 | 1978 | 1988 | 551 |
| 25° | 1805 | 1878 | 1857 | 1926 | 1978 | 833 |
| 35° | 1615 | 1629 | 1752 | 1718 | 1680 | 1007 |
| 45° | 1288 | 1393 | 1278 | 1078 | 1009 | 986 |
| 55° | 835 | 867 | 698 | 539 | 494 | 750 |
| 65° | 460 | 470 | 341 | 277 | 263 | 465 |
| 75° | 232 | 226 | 160 | 135 | 131 | 246 |
| 85° | 49 | 39 | 39 | 26 | 20 | 61 |
| 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: P854240

CATALOG NUMBER: SQ2-PR1-150U-100D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2012.6 | 2012.6 | 2012.6 | 2012.6 | 2012.6 |
| 2.5° | 2004.4 | 2028.5 | 2006.1 | 2007.8 | 2012.6 |
| 5° | 2002.4 | 2036.5 | 2014.7 | 2019.2 | 2039.3 |
| 7.5° | 2002.0 | 2050.5 | 2040.1 | 2052.6 | 2079.1 |
| 10° | 2000.3 | 2058.5 | 2051.6 | 2054.3 | 2082.4 |
| 12.5° | 1990.5 | 2058.3 | 2027.0 | 2024.5 | 2039.7 |
| 15° | 1961.3 | 2041.6 | 1971.6 | 1978.0 | 1988.0 |
| 17.5° | 1910.0 | 1993.9 | 1927.3 | 1949.9 | 1969.5 |
| 20° | 1877.2 | 1959.5 | 1905.9 | 1935.4 | 1969.5 |
| 22.5° | 1847.7 | 1929.9 | 1886.2 | 1927.5 | 1974.5 |
| 25° | 1805.4 | 1877.6 | 1856.7 | 1925.6 | 1977.8 |
| 27.5° | 1761.1 | 1803.6 | 1828.4 | 1920.7 | 1957.2 |
| 30° | 1723.4 | 1751.4 | 1813.6 | 1894.0 | 1908.0 |
| 32.5° | 1682.3 | 1699.2 | 1793.9 | 1835.8 | 1817.7 |
| 35° | 1614.6 | 1628.7 | 1752.1 | 1718.4 | 1680.3 |
| 37.5° | 1534.2 | 1563.1 | 1658.1 | 1561.1 | 1517.4 |
| 40° | 1475.1 | 1523.3 | 1577.7 | 1432.9 | 1382.8 |
| 42.5° | 1402.9 | 1479.9 | 1471.0 | 1286.6 | 1225.2 |
| 45° | 1288.4 | 1392.7 | 1278.2 | 1077.6 | 1009.4 |
| 47.5° | 1153.4 | 1260.5 | 1073.0 | 893.9 | 830.1 |
| 50° | 1064.8 | 1151.0 | 949.9 | 782.1 | 711.9 |
| 52.5° | 974.5 | 1036.7 | 844.9 | 677.2 | 613.4 |
| 55° | 835.0 | 867.1 | 697.5 | 538.6 | 494.4 |
| 57.5° | 707.0 | 727.4 | 569.9 | 435.0 | 402.5 |
| 60° | 629.8 | 643.9 | 486.2 | 381.0 | 354.9 |
| 62.5° | 559.3 | 570.1 | 418.9 | 335.2 | 315.5 |
| 65° | 459.6 | 469.6 | 340.6 | 276.6 | 262.6 |
| 67.5° | 380.4 | 385.6 | 280.2 | 229.9 | 216.6 |
| 70° | 334.4 | 336.4 | 244.1 | 198.8 | 188.7 |
| 72.5° | 293.4 | 290.6 | 209.7 | 172.6 | 165.8 |
| 75° | 231.8 | 225.8 | 160.0 | 135.3 | 131.3 |
| 77.5° | 173.2 | 166.7 | 112.4 | 104.2 | 104.2 |
| 80° | 135.4 | 127.4 | 86.2 | 86.2 | 86.2 |
| 82.5° | 100.9 | 89.7 | 66.5 | 66.4 | 64.8 |
| 85° | 49.2 | 39.2 | 39.0 | 26.5 | 20.5 |
| 87.5° | 13.3 | 13.7 | 6.6 | 6.4 | 6.6 |
| 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 |



TEST NUMBER: P854240

CATALOG NUMBER: SQ2-PR1-150U-100D-940-UNV-STD-W-4

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 | 18.24 | 19.01 | 19.25 | 20.03 | 21.39 | 14.96 | 15.73 | 15.98 | 16.75 | 18.12 |
| | 3H | 19.46 | 20.15 | 20.49 | 21.18 | 22.57 | 16.02 | 16.71 | 17.05 | 17.74 | 19.12 |
| | 4H | 19.91 | 20.56 | 20.95 | 21.60 | 22.99 | 16.41 | 17.07 | 17.46 | 18.10 | 19.49 |
| | 6H | 20.22 | 20.82 | 21.27 | 21.86 | 23.26 | 16.74 | 17.34 | 17.79 | 18.38 | 19.78 |
| | 8H | 20.30 | 20.87 | 21.36 | 21.93 | 23.32 | 16.82 | 17.39 | 17.88 | 18.45 | 19.85 |
| | 12H | 20.33 | 20.87 | 21.39 | 21.92 | 23.34 | 16.83 | 17.37 | 17.89 | 18.42 | 19.84 |
| 4H | 2H | 18.30 | 18.95 | 19.35 | 19.99 | 21.38 | 15.52 | 16.17 | 16.57 | 17.20 | 18.60 |
| | 3H | 19.77 | 20.31 | 20.82 | 21.37 | 22.77 | 16.78 | 17.32 | 17.83 | 18.38 | 19.78 |
| | 4H | 20.36 | 20.85 | 21.42 | 21.90 | 23.33 | 17.28 | 17.77 | 18.34 | 18.83 | 20.25 |
| | 6H | 20.81 | 21.23 | 21.88 | 22.31 | 23.73 | 17.71 | 18.13 | 18.78 | 19.21 | 20.63 |
| | 8H | 20.94 | 21.33 | 22.01 | 22.40 | 23.84 | 17.83 | 18.23 | 18.90 | 19.30 | 20.73 |
| | 12H | 20.99 | 21.34 | 22.07 | 22.43 | 23.87 | 17.85 | 18.21 | 18.94 | 19.29 | 20.73 |
| 8H | 4H | 20.38 | 20.77 | 21.45 | 21.84 | 23.28 | 17.58 | 17.97 | 18.65 | 19.04 | 20.48 |
| | 6H | 20.92 | 21.25 | 22.02 | 22.36 | 23.80 | 18.11 | 18.44 | 19.20 | 19.55 | 20.98 |
| | 8H | 21.12 | 21.41 | 22.22 | 22.50 | 23.96 | 18.30 | 18.58 | 19.40 | 19.68 | 21.13 |
| | 12H | 21.22 | 21.47 | 22.33 | 22.56 | 24.06 | 18.36 | 18.61 | 19.46 | 19.70 | 21.19 |
| 12H | 4H | 20.33 | 20.69 | 21.42 | 21.77 | 23.21 | 17.59 | 17.95 | 18.68 | 19.03 | 20.47 |
| | 6H | 20.91 | 21.20 | 22.01 | 22.29 | 23.74 | 18.17 | 18.46 | 19.27 | 19.55 | 21.01 |
| | 8H | 21.12 | 21.37 | 22.22 | 22.46 | 23.95 | 18.37 | 18.63 | 19.48 | 19.72 | 21.21 |