

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: P854404

Luminaire Tested: SQ2-WBM-150U-075D-935-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854404
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G3-2104-222-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-WBM-150U-075D-935-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

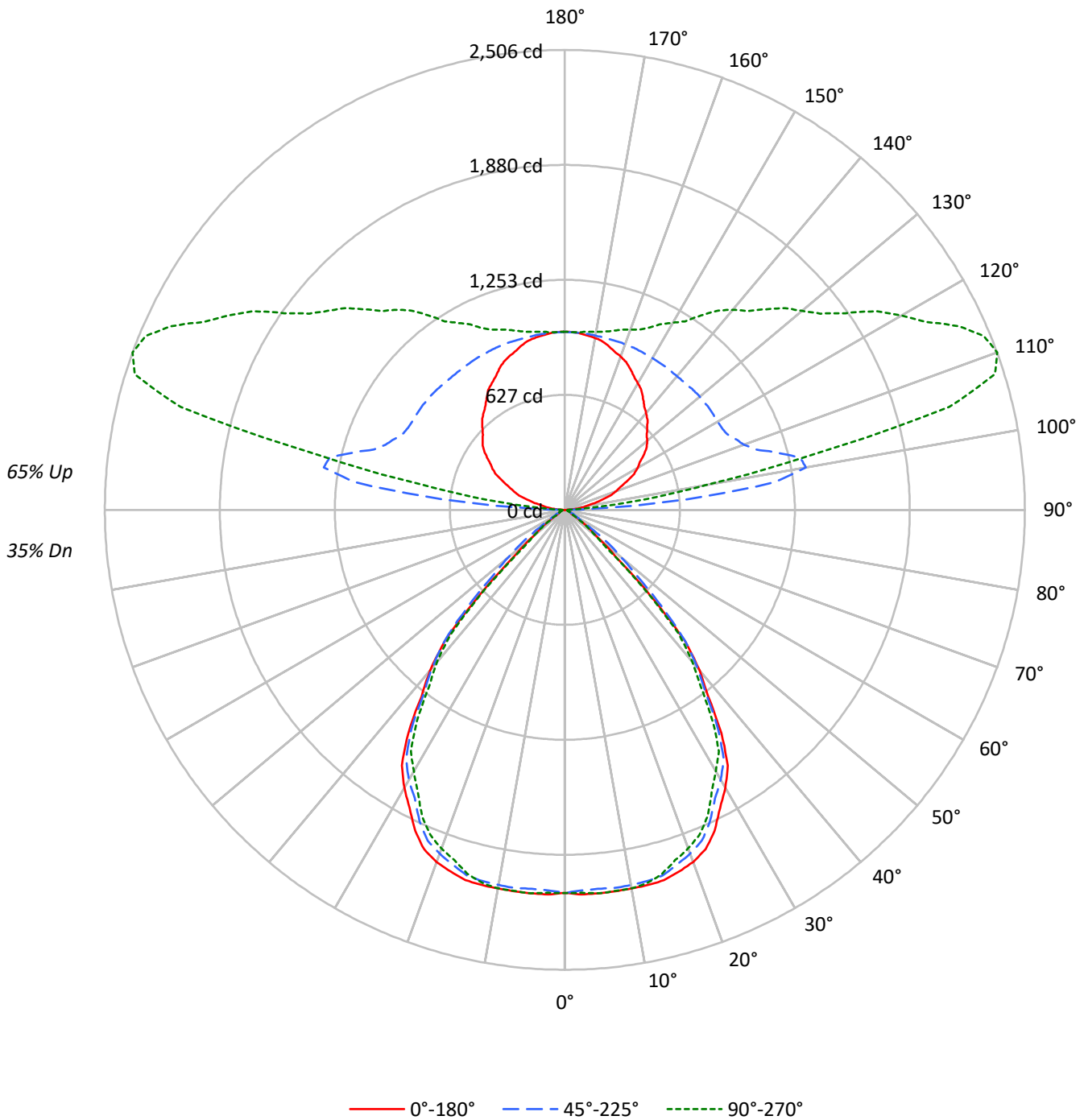
Lumens per Lamp: N/A
Luminaire Lumens: 9250.7 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.18 / 1.17
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 84.2
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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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 75 | 75 | 75 | 58 | 58 | 58 | 43 | 43 | 43 | 35 |
| 1 | 96 | 92 | 89 | 86 | 87 | 84 | 81 | 78 | 68 | 66 | 64 | 53 | 52 | 51 | 40 | 39 | 38 | 32 |
| 2 | 88 | 82 | 77 | 72 | 80 | 75 | 70 | 66 | 61 | 58 | 55 | 48 | 46 | 45 | 36 | 35 | 34 | 29 |
| 3 | 81 | 73 | 67 | 62 | 74 | 67 | 61 | 57 | 55 | 51 | 48 | 44 | 41 | 39 | 34 | 32 | 31 | 26 |
| 4 | 75 | 66 | 59 | 53 | 68 | 60 | 54 | 50 | 50 | 45 | 42 | 40 | 37 | 35 | 31 | 29 | 28 | 24 |
| 5 | 69 | 59 | 52 | 47 | 63 | 54 | 48 | 43 | 45 | 41 | 37 | 37 | 34 | 31 | 29 | 27 | 25 | 22 |
| 6 | 64 | 54 | 46 | 41 | 58 | 49 | 43 | 38 | 41 | 37 | 33 | 34 | 30 | 28 | 26 | 24 | 23 | 20 |
| 7 | 60 | 49 | 41 | 36 | 54 | 45 | 39 | 34 | 38 | 33 | 30 | 31 | 28 | 25 | 24 | 22 | 21 | 18 |
| 8 | 56 | 44 | 37 | 33 | 51 | 41 | 35 | 31 | 35 | 30 | 27 | 28 | 25 | 23 | 23 | 21 | 19 | 17 |
| 9 | 52 | 41 | 34 | 29 | 47 | 38 | 32 | 28 | 32 | 27 | 24 | 26 | 23 | 21 | 21 | 19 | 17 | 15 |
| 10 | 49 | 37 | 31 | 26 | 44 | 35 | 29 | 25 | 29 | 25 | 22 | 24 | 21 | 19 | 20 | 18 | 16 | 14 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 33700 | 33700 | 33700 |
| 5° | 34007 | 33585 | 33990 |
| 10° | 34351 | 34023 | 34334 |
| 15° | 34922 | 34471 | 34302 |
| 20° | 35087 | 34263 | 33747 |
| 25° | 34367 | 33350 | 32797 |
| 30° | 32608 | 31674 | 30667 |
| 35° | 29325 | 28714 | 27670 |
| 40° | 24040 | 23682 | 22776 |
| 45° | 15034 | 17112 | 14118 |
| 50° | 5880 | 9977 | 5378 |
| 55° | 2902 | 4647 | 2874 |
| 60° | 1356 | 2228 | 1227 |
| 65° | 1223 | 1299 | 1146 |
| 70° | 1180 | 1227 | 1133 |
| 75° | 1185 | 1185 | 1061 |
| 80° | 1116 | 1116 | 1023 |
| 85° | 1112 | 926 | 926 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17112 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 199.6 | 2.2 |
| 10°-20° | 583.5 | 6.3 |
| 20°-30° | 862.7 | 9.3 |
| 30°-40° | 892.7 | 9.6 |
| 40°-50° | 536.9 | 5.8 |
| 50°-60° | 128.5 | 1.4 |
| 60°-70° | 35.1 | 0.4 |
| 70°-80° | 19.6 | 0.2 |
| 80°-90° | 7.3 | 0.1 |
| 90°-100° | 369.5 | 4.0 |
| 100°-110° | 1209.8 | 13.1 |
| 110°-120° | 1196.0 | 12.9 |
| 120°-130° | 977.7 | 10.6 |
| 130°-140° | 797.9 | 8.6 |
| 140°-150° | 620.9 | 6.7 |
| 150°-160° | 447.1 | 4.8 |
| 160°-170° | 273.5 | 3.0 |
| 170°-180° | 92.4 | 1.0 |
| 0°-30° | 1645.8 | 17.8 |
| 0°-40° | 2538.4 | 27.4 |
| 0°-60° | 3203.9 | 34.6 |
| 0°-90° | 3265.9 | 35.3 |
| 90°-120° | 2775.3 | 30.0 |
| 90°-150° | 5171.8 | 55.9 |
| 90°-180° | 5985.0 | 64.7 |
| 0°-180° | 9250.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2087 | 2087 | 2087 | 2087 | 2087 | |
| 5° | 2098 | 2091 | 2072 | 2100 | 2097 | 200 |
| 15° | 2089 | 2105 | 2062 | 2062 | 2052 | 589 |
| 25° | 1929 | 1945 | 1872 | 1852 | 1841 | 882 |
| 35° | 1488 | 1486 | 1457 | 1423 | 1404 | 913 |
| 45° | 658 | 747 | 749 | 712 | 618 | 509 |
| 55° | 103 | 116 | 165 | 110 | 102 | 103 |
| 65° | 32 | 33 | 34 | 32 | 30 | 32 |
| 75° | 19 | 19 | 19 | 18 | 17 | 20 |
| 85° | 6 | 6 | 5 | 5 | 5 | 6 |
| 90° | 1 | 3 | 8 | 7 | 8 | 3 |
| 95° | 52 | 150 | 672 | 239 | 156 | 59 |
| 105° | 210 | 300 | 1201 | 2282 | 2168 | 222 |
| 115° | 379 | 453 | 976 | 2016 | 2367 | 374 |
| 125° | 527 | 588 | 962 | 1590 | 1868 | 469 |
| 135° | 635 | 702 | 954 | 1371 | 1546 | 491 |
| 145° | 742 | 797 | 952 | 1180 | 1292 | 465 |
| 155° | 846 | 874 | 958 | 1055 | 1096 | 390 |
| 165° | 924 | 933 | 962 | 999 | 1010 | 260 |
| 175° | 966 | 966 | 967 | 974 | 972 | 92 |
| 180° | 970 | 970 | 970 | 970 | 970 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2087.2 | 2087.2 | 2087.2 | 2087.2 | 2087.2 |
| 2.5° | 2097.6 | 2092.1 | 2075.2 | 2092.7 | 2088.8 |
| 5° | 2098.2 | 2091.3 | 2072.2 | 2100.1 | 2097.2 |
| 7.5° | 2096.0 | 2093.0 | 2078.4 | 2099.5 | 2095.0 |
| 10° | 2095.2 | 2096.1 | 2075.2 | 2097.1 | 2094.2 |
| 12.5° | 2094.4 | 2102.4 | 2072.0 | 2089.0 | 2082.2 |
| 15° | 2089.2 | 2104.8 | 2062.2 | 2061.9 | 2052.1 |
| 17.5° | 2067.0 | 2085.5 | 2028.5 | 2012.9 | 2000.9 |
| 20° | 2042.1 | 2060.7 | 1994.1 | 1969.0 | 1964.1 |
| 22.5° | 2002.9 | 2023.1 | 1951.7 | 1924.1 | 1916.1 |
| 25° | 1929.1 | 1944.7 | 1872.0 | 1851.8 | 1841.0 |
| 27.5° | 1830.6 | 1839.2 | 1771.0 | 1747.8 | 1733.0 |
| 30° | 1749.0 | 1752.9 | 1698.9 | 1668.4 | 1644.9 |
| 32.5° | 1652.1 | 1656.0 | 1608.5 | 1579.7 | 1560.9 |
| 35° | 1487.8 | 1485.9 | 1456.8 | 1423.4 | 1403.8 |
| 37.5° | 1282.3 | 1285.1 | 1262.1 | 1235.6 | 1215.9 |
| 40° | 1140.6 | 1142.6 | 1123.6 | 1085.5 | 1080.6 |
| 42.5° | 967.7 | 997.1 | 971.5 | 941.8 | 918.9 |
| 45° | 658.4 | 747.4 | 749.4 | 712.3 | 618.3 |
| 47.5° | 371.8 | 473.2 | 531.7 | 425.0 | 311.0 |
| 50° | 234.1 | 302.6 | 397.2 | 252.3 | 214.1 |
| 52.5° | 166.1 | 200.9 | 299.6 | 177.4 | 157.3 |
| 55° | 103.1 | 115.8 | 165.1 | 109.9 | 102.1 |
| 57.5° | 61.2 | 74.3 | 93.9 | 74.4 | 62.0 |
| 60° | 42.0 | 52.8 | 69.0 | 48.8 | 38.0 |
| 62.5° | 36.4 | 40.9 | 54.6 | 38.5 | 34.8 |
| 65° | 32.0 | 33.0 | 34.0 | 32.0 | 30.0 |
| 67.5° | 28.2 | 29.2 | 28.4 | 28.2 | 26.4 |
| 70° | 25.0 | 26.0 | 26.0 | 25.0 | 24.0 |
| 72.5° | 22.6 | 23.6 | 22.8 | 22.6 | 20.8 |
| 75° | 19.0 | 19.0 | 19.0 | 18.0 | 17.0 |
| 77.5° | 14.4 | 15.4 | 14.4 | 14.4 | 13.4 |
| 80° | 12.0 | 13.0 | 12.0 | 12.0 | 11.0 |
| 82.5° | 9.6 | 9.8 | 9.6 | 9.6 | 8.6 |
| 85° | 6.0 | 6.0 | 5.0 | 5.0 | 5.0 |
| 87.5° | 1.8 | 3.0 | 3.2 | 3.0 | 3.2 |
| 90° | 1.0 | 2.9 | 8.0 | 7.0 | 8.0 |
| 92.5° | 16.9 | 61.8 | 189.7 | 61.7 | 49.4 |
| 95° | 51.8 | 150.2 | 671.7 | 239.3 | 155.5 |
| 97.5° | 94.1 | 198.1 | 1152.4 | 697.1 | 432.1 |
| 100° | 123.6 | 223.0 | 1333.4 | 1190.7 | 789.3 |
| 102.5° | 157.1 | 254.1 | 1313.5 | 1754.5 | 1360.1 |
| 105° | 210.3 | 299.9 | 1200.8 | 2281.5 | 2167.5 |
| 107.5° | 262.7 | 344.9 | 1091.0 | 2330.8 | 2456.1 |
| 110° | 297.0 | 376.9 | 1038.4 | 2273.4 | 2506.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|--------|--------|--------|
| 112.5° | 329.7 | 407.2 | 1006.5 | 2173.7 | 2472.0 |
| 115° | 378.7 | 452.7 | 975.6 | 2016.0 | 2366.8 |
| 117.5° | 426.3 | 495.5 | 963.9 | 1861.1 | 2217.3 |
| 120° | 457.4 | 522.7 | 960.7 | 1770.8 | 2117.7 |
| 122.5° | 485.3 | 549.0 | 960.7 | 1692.9 | 2014.8 |
| 125° | 527.2 | 587.6 | 961.7 | 1589.8 | 1867.5 |
| 127.5° | 562.7 | 624.2 | 960.5 | 1513.9 | 1755.5 |
| 130° | 585.0 | 647.3 | 959.7 | 1467.9 | 1686.2 |
| 132.5° | 604.9 | 668.8 | 957.3 | 1428.4 | 1626.4 |
| 135° | 634.8 | 702.0 | 953.7 | 1371.2 | 1545.6 |
| 137.5° | 666.3 | 732.9 | 951.5 | 1311.7 | 1469.3 |
| 140° | 688.6 | 752.9 | 950.7 | 1274.0 | 1423.1 |
| 142.5° | 710.9 | 771.4 | 950.7 | 1233.8 | 1368.9 |
| 145° | 742.4 | 797.0 | 951.7 | 1179.5 | 1292.5 |
| 147.5° | 775.5 | 820.9 | 953.1 | 1132.2 | 1217.6 |
| 150° | 796.2 | 836.2 | 954.7 | 1104.8 | 1176.9 |
| 152.5° | 817.0 | 852.2 | 955.5 | 1082.2 | 1141.8 |
| 155° | 846.1 | 874.3 | 957.7 | 1055.3 | 1096.2 |
| 157.5° | 872.2 | 892.6 | 959.9 | 1034.1 | 1063.7 |
| 160° | 888.9 | 905.5 | 960.7 | 1022.0 | 1045.4 |
| 162.5° | 903.3 | 916.7 | 960.7 | 1012.3 | 1029.4 |
| 165° | 923.8 | 932.6 | 961.7 | 998.8 | 1009.5 |
| 167.5° | 941.1 | 945.4 | 962.9 | 988.3 | 994.2 |
| 170° | 950.7 | 952.7 | 963.7 | 982.6 | 984.6 |
| 172.5° | 957.9 | 959.1 | 966.1 | 978.6 | 979.0 |
| 175° | 965.7 | 965.7 | 966.7 | 973.6 | 971.6 |
| 177.5° | 969.6 | 968.9 | 968.0 | 972.8 | 969.6 |
| 180° | 969.6 | 969.6 | 969.6 | 969.6 | 969.6 |

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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 | 3.53 | 4.18 | 4.63 | 5.26 | 6.74 | 3.19 | 3.84 | 4.29 | 4.92 | 6.39 |
| | 3H | 4.02 | 4.60 | 5.13 | 5.69 | 7.19 | 3.69 | 4.27 | 4.80 | 5.36 | 6.85 |
| | 4H | 4.28 | 4.83 | 5.40 | 5.92 | 7.42 | 3.93 | 4.48 | 5.04 | 5.56 | 7.07 |
| | 6H | 4.51 | 5.01 | 5.64 | 6.11 | 7.62 | 4.13 | 4.63 | 5.26 | 5.73 | 7.24 |
| | 8H | 4.59 | 5.06 | 5.71 | 6.17 | 7.67 | 4.19 | 4.67 | 5.32 | 5.78 | 7.28 |
| | 12H | 4.63 | 5.09 | 5.76 | 6.19 | 7.71 | 4.22 | 4.68 | 5.35 | 5.78 | 7.30 |
| 4H | 2H | 3.53 | 4.08 | 4.65 | 5.16 | 6.66 | 3.21 | 3.76 | 4.34 | 4.85 | 6.35 |
| | 3H | 4.23 | 4.69 | 5.36 | 5.80 | 7.31 | 3.93 | 4.39 | 5.06 | 5.50 | 7.01 |
| | 4H | 4.63 | 5.05 | 5.76 | 6.15 | 7.68 | 4.31 | 4.72 | 5.44 | 5.83 | 7.36 |
| | 6H | 5.01 | 5.36 | 6.14 | 6.49 | 8.01 | 4.65 | 5.00 | 5.79 | 6.13 | 7.66 |
| | 8H | 5.15 | 5.48 | 6.28 | 6.60 | 8.14 | 4.77 | 5.10 | 5.91 | 6.22 | 7.76 |
| | 12H | 5.24 | 5.54 | 6.39 | 6.67 | 8.21 | 4.83 | 5.13 | 5.98 | 6.26 | 7.81 |
| 8H | 4H | 4.71 | 5.04 | 5.85 | 6.16 | 7.70 | 4.41 | 4.74 | 5.55 | 5.86 | 7.40 |
| | 6H | 5.22 | 5.49 | 6.37 | 6.65 | 8.19 | 4.89 | 5.16 | 6.04 | 6.32 | 7.86 |
| | 8H | 5.45 | 5.68 | 6.61 | 6.83 | 8.38 | 5.09 | 5.32 | 6.25 | 6.47 | 8.02 |
| | 12H | 5.62 | 5.83 | 6.78 | 6.97 | 8.56 | 5.22 | 5.43 | 6.38 | 6.57 | 8.16 |
| 12H | 4H | 4.68 | 4.98 | 5.83 | 6.11 | 7.65 | 4.39 | 4.69 | 5.54 | 5.82 | 7.36 |
| | 6H | 5.24 | 5.48 | 6.40 | 6.62 | 8.17 | 4.92 | 5.15 | 6.08 | 6.30 | 7.85 |
| | 8H | 5.49 | 5.70 | 6.65 | 6.83 | 8.43 | 5.14 | 5.35 | 6.30 | 6.48 | 8.08 |