

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: P854956

Luminaire Tested: SQ2-PH1-075U-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854956
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-075U-125D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1250 LUMENS PER FOOT
UPLIGHT 750 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

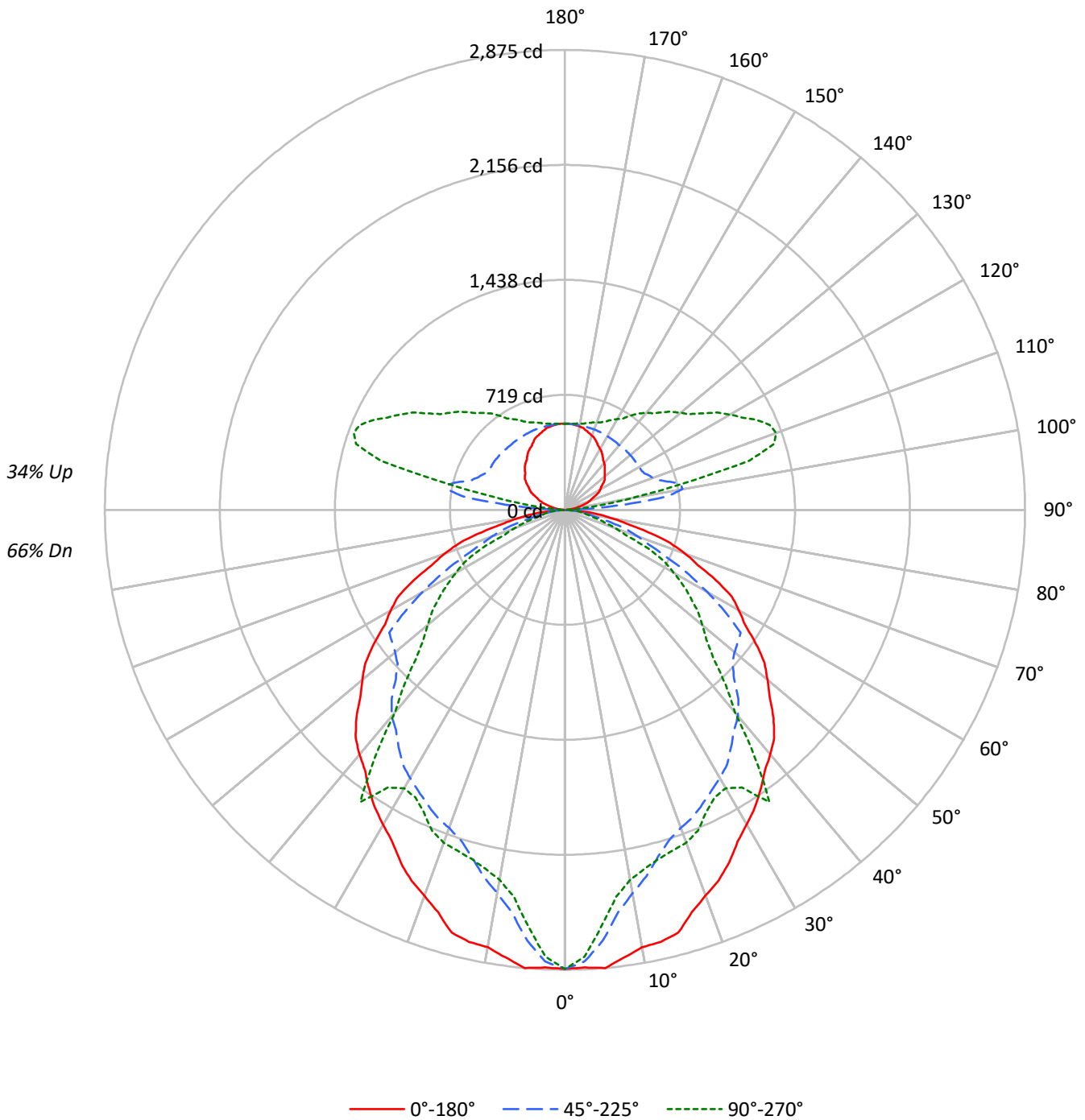
Lumens per Lamp: N/A
Luminaire Lumens: 9686.9 lumens
Efficiency: N/A
Efficacy: 133.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 72.5
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 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 92 | 92 | 92 | 81 | 81 | 81 | 70 | 70 | 70 | 66 |
| 1 | 102 | 97 | 93 | 90 | 95 | 92 | 88 | 85 | 81 | 79 | 76 | 72 | 70 | 68 | 63 | 61 | 60 | 56 |
| 2 | 93 | 85 | 79 | 74 | 87 | 80 | 75 | 70 | 71 | 67 | 64 | 63 | 60 | 57 | 55 | 53 | 51 | 47 |
| 3 | 85 | 75 | 68 | 62 | 79 | 71 | 64 | 59 | 63 | 58 | 54 | 56 | 52 | 48 | 49 | 46 | 44 | 40 |
| 4 | 78 | 67 | 59 | 52 | 73 | 63 | 56 | 50 | 56 | 50 | 46 | 50 | 45 | 42 | 44 | 41 | 38 | 34 |
| 5 | 71 | 59 | 51 | 45 | 67 | 56 | 49 | 43 | 50 | 44 | 40 | 45 | 40 | 36 | 40 | 36 | 33 | 30 |
| 6 | 66 | 53 | 45 | 39 | 62 | 51 | 43 | 38 | 46 | 39 | 35 | 41 | 36 | 32 | 36 | 32 | 29 | 26 |
| 7 | 61 | 48 | 40 | 35 | 57 | 46 | 39 | 33 | 41 | 35 | 31 | 37 | 32 | 28 | 33 | 29 | 26 | 23 |
| 8 | 57 | 44 | 36 | 31 | 53 | 42 | 35 | 30 | 38 | 32 | 27 | 34 | 29 | 25 | 30 | 26 | 23 | 21 |
| 9 | 53 | 40 | 33 | 27 | 50 | 38 | 31 | 27 | 35 | 29 | 25 | 31 | 26 | 23 | 28 | 24 | 21 | 19 |
| 10 | 49 | 37 | 30 | 25 | 46 | 35 | 29 | 24 | 32 | 26 | 22 | 29 | 24 | 21 | 26 | 22 | 19 | 17 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 46335 | 46335 | 46335 |
| 5° | 46601 | 43814 | 42352 |
| 10° | 45529 | 39887 | 38499 |
| 15° | 45733 | 37519 | 37747 |
| 20° | 44103 | 36361 | 38050 |
| 25° | 43294 | 36191 | 37164 |
| 30° | 42355 | 36094 | 37468 |
| 35° | 42034 | 35684 | 43919 |
| 40° | 42069 | 35453 | 34819 |
| 45° | 42087 | 34104 | 29990 |
| 50° | 41496 | 34774 | 28123 |
| 55° | 40969 | 37740 | 26978 |
| 60° | 40558 | 33063 | 25304 |
| 65° | 39851 | 26812 | 22013 |
| 70° | 37638 | 22815 | 15725 |
| 75° | 33562 | 17205 | 11928 |
| 80° | 27420 | 11176 | 11176 |
| 85° | 17191 | 10115 | 7577 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 42087 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 252.5 | 2.6 |
| 10°-20° | 664.2 | 6.9 |
| 20°-30° | 973.9 | 10.1 |
| 30°-40° | 1179.5 | 12.2 |
| 40°-50° | 1159.9 | 12.0 |
| 50°-60° | 1009.7 | 10.4 |
| 60°-70° | 701.9 | 7.2 |
| 70°-80° | 332.8 | 3.4 |
| 80°-90° | 73.9 | 0.8 |
| 90°-100° | 203.9 | 2.1 |
| 100°-110° | 676.0 | 7.0 |
| 110°-120° | 670.9 | 6.9 |
| 120°-130° | 546.5 | 5.6 |
| 130°-140° | 444.1 | 4.6 |
| 140°-150° | 344.9 | 3.6 |
| 150°-160° | 248.5 | 2.6 |
| 160°-170° | 152.2 | 1.6 |
| 170°-180° | 51.4 | 0.5 |
| 0°-30° | 1890.7 | 19.5 |
| 0°-40° | 3070.1 | 31.7 |
| 0°-60° | 5239.7 | 54.1 |
| 0°-90° | 6348.3 | 65.5 |
| 90°-120° | 1550.9 | 16.0 |
| 90°-150° | 2886.4 | 29.8 |
| 90°-180° | 3339.0 | 34.5 |
| 0°-180° | 9686.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2870 | 2870 | 2870 | 2870 | 2870 | |
| 5° | 2875 | 2873 | 2703 | 2618 | 2613 | 270 |
| 15° | 2736 | 2437 | 2245 | 2229 | 2258 | 763 |
| 25° | 2430 | 2067 | 2032 | 2094 | 2086 | 1118 |
| 35° | 2133 | 1724 | 1810 | 1966 | 2228 | 1336 |
| 45° | 1843 | 1365 | 1494 | 1546 | 1313 | 1417 |
| 55° | 1455 | 1063 | 1341 | 966 | 958 | 1300 |
| 65° | 1043 | 731 | 702 | 576 | 576 | 1025 |
| 75° | 538 | 372 | 276 | 196 | 191 | 570 |
| 85° | 93 | 61 | 55 | 44 | 41 | 124 |
| 90° | 0 | 1 | 3 | 4 | 4 | 4 |
| 95° | 29 | 86 | 370 | 132 | 88 | 33 |
| 105° | 118 | 169 | 677 | 1276 | 1193 | 125 |
| 115° | 211 | 252 | 545 | 1134 | 1326 | 209 |
| 125° | 295 | 327 | 535 | 891 | 1050 | 262 |
| 135° | 353 | 389 | 530 | 765 | 863 | 273 |
| 145° | 410 | 440 | 529 | 658 | 720 | 257 |
| 155° | 468 | 484 | 532 | 588 | 610 | 216 |
| 165° | 514 | 519 | 535 | 556 | 562 | 145 |
| 175° | 537 | 537 | 538 | 542 | 540 | 51 |
| 180° | 539 | 539 | 539 | 539 | 539 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2869.8 | 2869.8 | 2869.8 | 2869.8 | 2869.8 |
| 2.5° | 2863.2 | 2893.2 | 2826.2 | 2799.8 | 2795.5 |
| 5° | 2875.3 | 2872.6 | 2703.3 | 2618.5 | 2613.1 |
| 7.5° | 2822.9 | 2740.1 | 2537.8 | 2444.3 | 2440.0 |
| 10° | 2777.0 | 2651.5 | 2432.9 | 2348.2 | 2348.2 |
| 12.5° | 2766.1 | 2567.9 | 2347.8 | 2285.3 | 2298.0 |
| 15° | 2736.0 | 2437.0 | 2244.6 | 2228.8 | 2258.2 |
| 17.5° | 2636.7 | 2314.7 | 2164.3 | 2200.0 | 2234.2 |
| 20° | 2566.8 | 2249.0 | 2116.2 | 2182.5 | 2214.5 |
| 22.5° | 2507.8 | 2185.8 | 2081.3 | 2153.8 | 2170.8 |
| 25° | 2430.2 | 2067.2 | 2031.5 | 2094.2 | 2086.1 |
| 27.5° | 2337.4 | 1958.3 | 1981.8 | 2020.2 | 2025.0 |
| 30° | 2271.8 | 1892.7 | 1936.0 | 1975.0 | 2009.7 |
| 32.5° | 2208.5 | 1816.5 | 1885.7 | 1978.2 | 2057.8 |
| 35° | 2132.6 | 1724.1 | 1810.4 | 1966.5 | 2228.2 |
| 37.5° | 2052.8 | 1615.0 | 1734.4 | 1865.8 | 1949.1 |
| 40° | 1996.0 | 1536.8 | 1682.1 | 1844.2 | 1652.0 |
| 42.5° | 1934.9 | 1475.6 | 1603.4 | 1812.8 | 1488.2 |
| 45° | 1843.2 | 1365.3 | 1493.6 | 1545.7 | 1313.4 |
| 47.5° | 1735.0 | 1279.5 | 1419.3 | 1288.9 | 1198.1 |
| 50° | 1652.0 | 1222.1 | 1384.4 | 1178.2 | 1119.6 |
| 52.5° | 1571.1 | 1162.6 | 1360.4 | 1087.0 | 1047.4 |
| 55° | 1455.4 | 1062.9 | 1340.7 | 966.5 | 958.4 |
| 57.5° | 1332.5 | 961.4 | 1185.6 | 861.5 | 875.5 |
| 60° | 1256.0 | 895.6 | 1023.9 | 799.7 | 783.6 |
| 62.5° | 1175.2 | 831.9 | 873.2 | 721.0 | 705.1 |
| 65° | 1043.1 | 730.7 | 701.8 | 576.2 | 576.2 |
| 67.5° | 897.8 | 625.5 | 568.5 | 471.5 | 407.4 |
| 70° | 797.3 | 557.1 | 483.3 | 375.8 | 333.1 |
| 72.5° | 690.3 | 484.1 | 396.0 | 308.0 | 258.8 |
| 75° | 538.0 | 372.4 | 275.8 | 196.5 | 191.2 |
| 77.5° | 388.8 | 268.2 | 185.7 | 145.9 | 146.3 |
| 80° | 294.9 | 204.1 | 120.2 | 117.5 | 120.2 |
| 82.5° | 207.5 | 140.2 | 89.5 | 93.4 | 94.0 |
| 85° | 92.8 | 60.8 | 54.6 | 43.6 | 40.9 |
| 87.5° | 19.7 | 17.8 | 11.6 | 11.9 | 11.9 |
| 90° | 0.0 | 1.1 | 3.4 | 4.4 | 4.4 |
| 92.5° | 8.9 | 34.5 | 101.6 | 32.9 | 27.7 |
| 95° | 29.1 | 85.8 | 369.5 | 131.8 | 88.2 |
| 97.5° | 53.4 | 112.7 | 645.0 | 376.2 | 237.8 |
| 100° | 70.3 | 127.1 | 746.9 | 641.5 | 425.3 |
| 102.5° | 89.1 | 144.2 | 740.6 | 980.4 | 740.6 |
| 105° | 118.4 | 168.6 | 676.6 | 1276.4 | 1193.4 |
| 107.5° | 148.2 | 193.0 | 615.2 | 1306.5 | 1369.5 |
| 110° | 165.2 | 210.0 | 583.9 | 1276.7 | 1404.4 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 183.1 | 226.9 | 565.1 | 1223.9 | 1386.6 |
| 115° | 211.0 | 252.5 | 544.9 | 1134.1 | 1326.2 |
| 117.5° | 238.7 | 275.5 | 537.4 | 1048.4 | 1249.9 |
| 120° | 255.6 | 291.7 | 534.8 | 994.7 | 1190.1 |
| 122.5° | 270.8 | 306.0 | 534.8 | 950.5 | 1131.1 |
| 125° | 294.8 | 327.4 | 534.8 | 891.2 | 1050.5 |
| 127.5° | 314.4 | 346.4 | 533.4 | 846.2 | 982.4 |
| 130° | 326.0 | 359.9 | 532.5 | 819.9 | 942.3 |
| 132.5° | 336.7 | 371.4 | 531.6 | 798.2 | 908.2 |
| 135° | 352.8 | 388.8 | 530.3 | 764.8 | 863.0 |
| 137.5° | 370.2 | 404.9 | 528.9 | 732.3 | 819.0 |
| 140° | 381.8 | 415.6 | 528.0 | 710.7 | 790.4 |
| 142.5° | 392.6 | 425.5 | 528.9 | 689.1 | 760.0 |
| 145° | 409.7 | 440.3 | 529.1 | 657.8 | 720.1 |
| 147.5° | 428.3 | 453.8 | 529.4 | 631.4 | 677.7 |
| 150° | 439.8 | 462.8 | 530.3 | 616.0 | 655.3 |
| 152.5° | 450.6 | 472.6 | 531.2 | 603.3 | 634.7 |
| 155° | 467.7 | 484.1 | 532.5 | 587.7 | 609.5 |
| 157.5° | 484.5 | 497.1 | 533.9 | 576.6 | 592.1 |
| 160° | 493.4 | 504.4 | 534.8 | 568.5 | 580.5 |
| 162.5° | 502.3 | 510.7 | 534.8 | 563.1 | 572.4 |
| 165° | 513.5 | 519.0 | 534.8 | 556.1 | 561.6 |
| 167.5° | 523.8 | 526.7 | 535.9 | 549.8 | 552.7 |
| 170° | 529.1 | 530.3 | 535.9 | 547.0 | 548.1 |
| 172.5° | 532.8 | 533.9 | 536.7 | 544.4 | 544.6 |
| 175° | 536.9 | 536.9 | 538.1 | 541.5 | 540.3 |
| 177.5° | 539.2 | 539.2 | 538.3 | 540.1 | 538.3 |
| 180° | 539.2 | 539.2 | 539.2 | 539.2 | 539.2 |

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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 | 21.98 | 22.99 | 22.79 | 23.83 | 24.86 | 20.65 | 21.66 | 21.47 | 22.50 | 23.53 |
| | 3H | 24.02 | 24.92 | 24.84 | 25.77 | 26.83 | 21.70 | 22.60 | 22.53 | 23.45 | 24.51 |
| | 4H | 24.76 | 25.61 | 25.60 | 26.46 | 27.53 | 21.92 | 22.77 | 22.76 | 23.63 | 24.70 |
| | 6H | 25.25 | 26.04 | 26.10 | 26.89 | 27.98 | 22.07 | 22.86 | 22.93 | 23.72 | 24.80 |
| | 8H | 25.38 | 26.13 | 26.24 | 27.00 | 28.09 | 22.11 | 22.86 | 22.97 | 23.74 | 24.82 |
| | 12H | 25.43 | 26.14 | 26.30 | 27.01 | 28.12 | 22.11 | 22.83 | 22.98 | 23.70 | 24.81 |
| 4H | 2H | 22.38 | 23.23 | 23.22 | 24.08 | 25.15 | 21.31 | 22.17 | 22.16 | 23.02 | 24.09 |
| | 3H | 24.50 | 25.21 | 25.35 | 26.09 | 27.18 | 22.51 | 23.22 | 23.37 | 24.10 | 25.19 |
| | 4H | 25.32 | 25.96 | 26.19 | 26.84 | 27.96 | 22.79 | 23.44 | 23.66 | 24.32 | 25.43 |
| | 6H | 25.91 | 26.47 | 26.80 | 27.37 | 28.49 | 23.01 | 23.56 | 23.89 | 24.47 | 25.58 |
| | 8H | 26.08 | 26.60 | 26.97 | 27.50 | 28.63 | 23.07 | 23.59 | 23.96 | 24.49 | 25.62 |
| | 12H | 26.16 | 26.63 | 27.07 | 27.55 | 28.68 | 23.08 | 23.55 | 23.99 | 24.47 | 25.60 |
| 8H | 4H | 25.35 | 25.87 | 26.24 | 26.77 | 27.90 | 23.02 | 23.54 | 23.91 | 24.44 | 25.57 |
| | 6H | 26.00 | 26.43 | 26.92 | 27.38 | 28.50 | 23.30 | 23.73 | 24.21 | 24.67 | 25.80 |
| | 8H | 26.23 | 26.61 | 27.16 | 27.55 | 28.69 | 23.40 | 23.78 | 24.33 | 24.71 | 25.86 |
| | 12H | 26.35 | 26.69 | 27.28 | 27.61 | 28.81 | 23.45 | 23.78 | 24.38 | 24.71 | 25.91 |
| 12H | 4H | 25.31 | 25.77 | 26.22 | 26.69 | 27.83 | 23.02 | 23.49 | 23.93 | 24.41 | 25.54 |
| | 6H | 25.98 | 26.36 | 26.91 | 27.29 | 28.44 | 23.33 | 23.71 | 24.25 | 24.64 | 25.79 |
| | 8H | 26.22 | 26.55 | 27.15 | 27.48 | 28.68 | 23.45 | 23.78 | 24.38 | 24.71 | 25.91 |