

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: P854900

Luminaire Tested: SQ2-PR1-075U-125D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854900
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-11, G2-2308-131-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PR1-075U-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

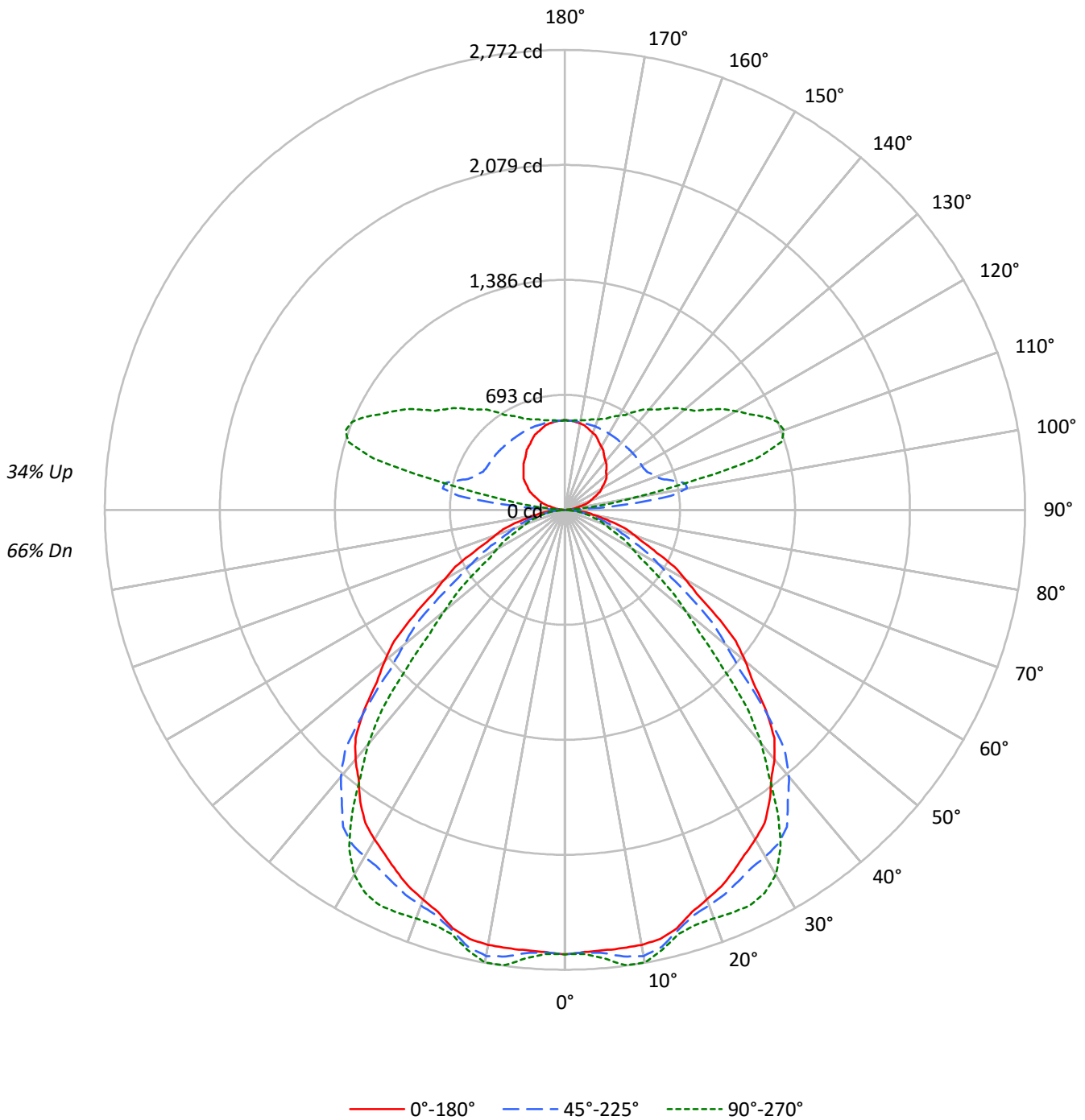
Lumens per Lamp: N/A
Luminaire Lumens: 9783.0 lumens
Efficiency: N/A
Efficacy: 134.9 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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





TEST NUMBER: P854900

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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 | 111 | 111 | 111 | 111 | 104 | 104 | 104 | 104 | 92 | 92 | 92 | 81 | 81 | 81 | 71 | 71 | 71 | 66 | | | | |
| 1 | 102 | 98 | 94 | 91 | 96 | 93 | 89 | 86 | 82 | 80 | 78 | 73 | 71 | 69 | 64 | 63 | 61 | 57 | | | | |
| 2 | 94 | 87 | 81 | 76 | 88 | 82 | 77 | 72 | 73 | 69 | 66 | 65 | 62 | 59 | 57 | 55 | 53 | 49 | | | | |
| 3 | 86 | 77 | 70 | 64 | 81 | 73 | 66 | 61 | 65 | 60 | 56 | 58 | 54 | 51 | 51 | 48 | 46 | 43 | | | | |
| 4 | 79 | 69 | 61 | 55 | 74 | 65 | 58 | 53 | 58 | 53 | 48 | 52 | 48 | 44 | 46 | 43 | 40 | 37 | | | | |
| 5 | 73 | 61 | 54 | 48 | 69 | 58 | 51 | 46 | 53 | 47 | 42 | 47 | 42 | 39 | 42 | 38 | 35 | 33 | | | | |
| 6 | 67 | 55 | 47 | 42 | 63 | 53 | 45 | 40 | 48 | 42 | 37 | 43 | 38 | 34 | 38 | 34 | 31 | 29 | | | | |
| 7 | 62 | 50 | 42 | 37 | 59 | 48 | 41 | 36 | 43 | 37 | 33 | 39 | 34 | 31 | 35 | 31 | 28 | 26 | | | | |
| 8 | 58 | 46 | 38 | 33 | 55 | 44 | 37 | 32 | 40 | 34 | 30 | 36 | 31 | 27 | 32 | 28 | 25 | 23 | | | | |
| 9 | 54 | 42 | 35 | 30 | 51 | 40 | 33 | 29 | 37 | 31 | 27 | 33 | 28 | 25 | 30 | 26 | 23 | 21 | | | | |
| 10 | 51 | 39 | 31 | 27 | 48 | 37 | 30 | 26 | 34 | 28 | 24 | 31 | 26 | 23 | 28 | 24 | 21 | 19 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 43250 | 43250 | 43250 |
| 5° | 43193 | 43459 | 43990 |
| 10° | 43648 | 44768 | 45439 |
| 15° | 43634 | 43863 | 44227 |
| 20° | 42929 | 43586 | 45041 |
| 25° | 42806 | 44023 | 46893 |
| 30° | 42761 | 45002 | 47344 |
| 35° | 42356 | 45965 | 44078 |
| 40° | 41378 | 44257 | 38788 |
| 45° | 39155 | 38845 | 30675 |
| 50° | 35595 | 31757 | 23800 |
| 55° | 31282 | 26134 | 18522 |
| 60° | 27070 | 20899 | 15255 |
| 65° | 23370 | 17318 | 13352 |
| 70° | 21012 | 15338 | 11858 |
| 75° | 19251 | 13288 | 10905 |
| 80° | 16755 | 10656 | 10656 |
| 85° | 12153 | 9615 | 5076 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 42324 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 258.7 | 2.6 |
| 10°-20° | 748.8 | 7.7 |
| 20°-30° | 1157.5 | 11.8 |
| 30°-40° | 1392.3 | 14.2 |
| 40°-50° | 1250.1 | 12.8 |
| 50°-60° | 837.5 | 8.6 |
| 60°-70° | 487.1 | 5.0 |
| 70°-80° | 250.2 | 2.6 |
| 80°-90° | 62.2 | 0.6 |
| 90°-100° | 203.9 | 2.1 |
| 100°-110° | 676.0 | 6.9 |
| 110°-120° | 670.9 | 6.9 |
| 120°-130° | 546.5 | 5.6 |
| 130°-140° | 444.1 | 4.5 |
| 140°-150° | 344.9 | 3.5 |
| 150°-160° | 248.5 | 2.5 |
| 160°-170° | 152.2 | 1.6 |
| 170°-180° | 51.4 | 0.5 |
| 0°-30° | 2165.0 | 22.1 |
| 0°-40° | 3557.3 | 36.4 |
| 0°-60° | 5644.9 | 57.7 |
| 0°-90° | 6444.4 | 65.9 |
| 90°-120° | 1550.9 | 15.9 |
| 90°-150° | 2886.4 | 29.5 |
| 90°-180° | 3339.0 | 34.1 |
| 0°-180° | 9783.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2679 | 2679 | 2679 | 2679 | 2679 | |
| 5° | 2665 | 2710 | 2681 | 2688 | 2714 | 254 |
| 15° | 2610 | 2717 | 2624 | 2633 | 2646 | 733 |
| 25° | 2403 | 2499 | 2471 | 2563 | 2632 | 1108 |
| 35° | 2149 | 2168 | 2332 | 2287 | 2236 | 1340 |
| 45° | 1715 | 1854 | 1701 | 1434 | 1343 | 1312 |
| 55° | 1111 | 1154 | 928 | 717 | 658 | 999 |
| 65° | 612 | 625 | 453 | 368 | 350 | 619 |
| 75° | 309 | 300 | 213 | 180 | 175 | 327 |
| 85° | 66 | 52 | 52 | 35 | 27 | 81 |
| 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° | 2678.7 | 2678.7 | 2678.7 | 2678.7 | 2678.7 |
| 2.5° | 2667.8 | 2699.7 | 2669.9 | 2672.3 | 2678.7 |
| 5° | 2665.0 | 2710.4 | 2681.4 | 2687.5 | 2714.2 |
| 7.5° | 2664.5 | 2729.1 | 2715.2 | 2731.9 | 2767.1 |
| 10° | 2662.3 | 2739.8 | 2730.6 | 2734.1 | 2771.5 |
| 12.5° | 2649.2 | 2739.4 | 2697.8 | 2694.4 | 2714.7 |
| 15° | 2610.4 | 2717.2 | 2624.1 | 2632.6 | 2645.9 |
| 17.5° | 2542.1 | 2653.7 | 2565.1 | 2595.2 | 2621.4 |
| 20° | 2498.5 | 2607.9 | 2536.7 | 2575.9 | 2621.4 |
| 22.5° | 2459.1 | 2568.6 | 2510.5 | 2565.4 | 2628.0 |
| 25° | 2402.8 | 2499.1 | 2471.1 | 2562.8 | 2632.2 |
| 27.5° | 2343.9 | 2400.5 | 2433.5 | 2556.4 | 2605.0 |
| 30° | 2293.6 | 2331.0 | 2413.8 | 2520.8 | 2539.4 |
| 32.5° | 2239.0 | 2261.5 | 2387.6 | 2443.3 | 2419.2 |
| 35° | 2148.9 | 2167.7 | 2332.0 | 2287.1 | 2236.3 |
| 37.5° | 2041.9 | 2080.4 | 2206.8 | 2077.8 | 2019.6 |
| 40° | 1963.2 | 2027.4 | 2099.8 | 1907.2 | 1840.3 |
| 42.5° | 1867.1 | 1969.7 | 1957.8 | 1712.4 | 1630.7 |
| 45° | 1714.8 | 1853.6 | 1701.2 | 1434.2 | 1343.4 |
| 47.5° | 1535.1 | 1677.6 | 1428.1 | 1189.7 | 1104.8 |
| 50° | 1417.1 | 1532.0 | 1264.3 | 1041.0 | 947.5 |
| 52.5° | 1297.1 | 1379.8 | 1124.4 | 901.3 | 816.4 |
| 55° | 1111.3 | 1154.0 | 928.4 | 716.8 | 658.0 |
| 57.5° | 940.9 | 968.2 | 758.5 | 579.0 | 535.7 |
| 60° | 838.3 | 857.0 | 647.2 | 507.1 | 472.4 |
| 62.5° | 744.3 | 758.8 | 557.6 | 446.2 | 419.9 |
| 65° | 611.7 | 625.0 | 453.3 | 368.3 | 349.5 |
| 67.5° | 506.3 | 513.2 | 373.0 | 306.0 | 288.3 |
| 70° | 445.1 | 447.7 | 324.9 | 264.6 | 251.2 |
| 72.5° | 390.5 | 386.7 | 279.0 | 229.7 | 220.6 |
| 75° | 308.6 | 300.5 | 213.0 | 180.1 | 174.8 |
| 77.5° | 230.4 | 221.9 | 149.6 | 138.7 | 138.7 |
| 80° | 180.2 | 169.5 | 114.6 | 114.6 | 114.6 |
| 82.5° | 134.3 | 119.4 | 88.4 | 88.4 | 86.3 |
| 85° | 65.6 | 52.2 | 51.9 | 35.3 | 27.4 |
| 87.5° | 17.5 | 17.6 | 7.2 | 7.5 | 7.5 |
| 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 | 21.24 | 22.21 | 22.06 | 23.04 | 24.07 | 17.96 | 18.93 | 18.78 | 19.76 | 20.79 |
| | 3H | 22.48 | 23.34 | 23.31 | 24.19 | 25.24 | 19.04 | 19.90 | 19.87 | 20.74 | 21.80 |
| | 4H | 22.94 | 23.75 | 23.79 | 24.60 | 25.67 | 19.44 | 20.26 | 20.29 | 21.11 | 22.17 |
| | 6H | 23.26 | 24.01 | 24.12 | 24.87 | 25.95 | 19.78 | 20.53 | 20.64 | 21.39 | 22.47 |
| | 8H | 23.35 | 24.06 | 24.21 | 24.93 | 26.01 | 19.87 | 20.58 | 20.74 | 21.45 | 22.54 |
| | 12H | 23.38 | 24.05 | 24.25 | 24.92 | 26.03 | 19.88 | 20.56 | 20.75 | 21.43 | 22.53 |
| 4H | 2H | 21.33 | 22.14 | 22.18 | 22.99 | 24.06 | 18.55 | 19.36 | 19.40 | 20.21 | 21.28 |
| | 3H | 22.81 | 23.48 | 23.68 | 24.37 | 25.45 | 19.82 | 20.49 | 20.69 | 21.38 | 22.46 |
| | 4H | 23.41 | 24.02 | 24.29 | 24.90 | 26.01 | 20.33 | 20.94 | 21.21 | 21.82 | 22.93 |
| | 6H | 23.87 | 24.40 | 24.76 | 25.30 | 26.41 | 20.77 | 21.30 | 21.67 | 22.20 | 23.32 |
| | 8H | 24.00 | 24.49 | 24.90 | 25.39 | 26.52 | 20.90 | 21.39 | 21.79 | 22.29 | 23.41 |
| | 12H | 24.06 | 24.50 | 24.97 | 25.42 | 26.55 | 20.92 | 21.37 | 21.84 | 22.28 | 23.41 |
| 8H | 4H | 23.45 | 23.94 | 24.34 | 24.83 | 25.96 | 20.65 | 21.14 | 21.54 | 22.04 | 23.16 |
| | 6H | 24.00 | 24.40 | 24.92 | 25.34 | 26.47 | 21.18 | 21.59 | 22.10 | 22.53 | 23.66 |
| | 8H | 24.20 | 24.55 | 25.13 | 25.49 | 26.63 | 21.37 | 21.73 | 22.30 | 22.66 | 23.81 |
| | 12H | 24.30 | 24.62 | 25.24 | 25.55 | 26.74 | 21.44 | 21.75 | 22.37 | 22.68 | 23.87 |
| 12H | 4H | 23.41 | 23.85 | 24.32 | 24.77 | 25.90 | 20.67 | 21.11 | 21.58 | 22.03 | 23.16 |
| | 6H | 23.98 | 24.34 | 24.91 | 25.28 | 26.42 | 21.24 | 21.60 | 22.17 | 22.54 | 23.68 |
| | 8H | 24.20 | 24.52 | 25.13 | 25.44 | 26.64 | 21.46 | 21.77 | 22.39 | 22.70 | 23.89 |