

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: P854902

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854902
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-075D-830-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 750 LUMENS PER FOOT
UPLIGHT 750 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

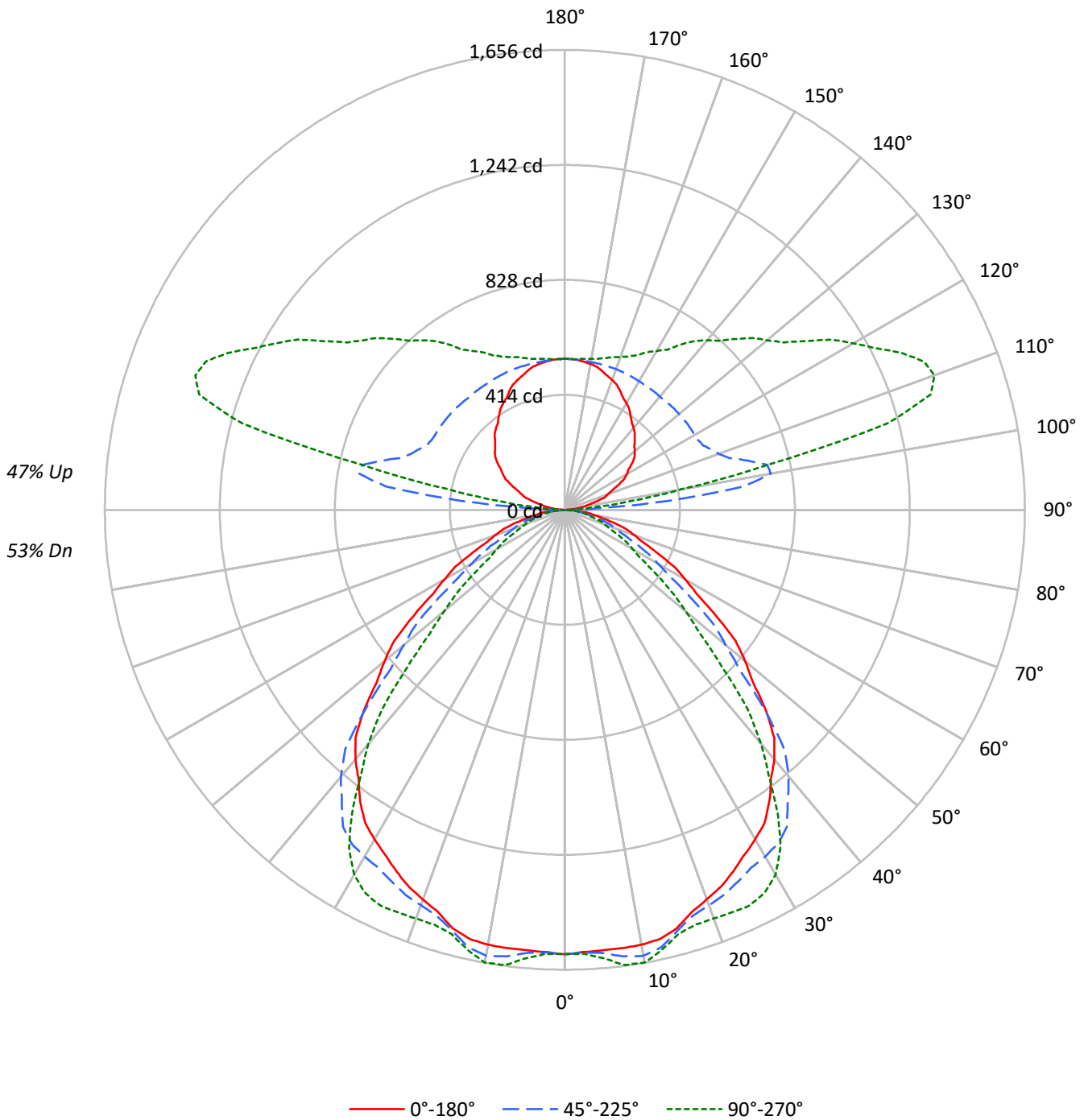
Lumens per Lamp: N/A
Luminaire Lumens: 7215.1 lumens
Efficiency: N/A
Efficacy: 144.3 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.34 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 50
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 | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 72 | 72 | 72 | 59 | 59 | 59 | 53 |
| 1 | 99 | 95 | 91 | 88 | 92 | 88 | 85 | 82 | 76 | 73 | 71 | 64 | 63 | 61 | 53 | 52 | 51 | 46 |
| 2 | 91 | 84 | 78 | 73 | 84 | 78 | 73 | 69 | 67 | 63 | 60 | 57 | 54 | 52 | 48 | 46 | 44 | 40 |
| 3 | 83 | 74 | 67 | 62 | 77 | 69 | 63 | 58 | 60 | 55 | 51 | 51 | 48 | 45 | 43 | 40 | 38 | 34 |
| 4 | 76 | 66 | 58 | 53 | 71 | 62 | 55 | 50 | 53 | 48 | 44 | 46 | 42 | 39 | 39 | 36 | 34 | 30 |
| 5 | 70 | 59 | 51 | 45 | 65 | 55 | 48 | 43 | 48 | 43 | 38 | 41 | 37 | 34 | 35 | 32 | 30 | 26 |
| 6 | 65 | 53 | 45 | 40 | 60 | 50 | 43 | 38 | 44 | 38 | 34 | 38 | 33 | 30 | 32 | 29 | 26 | 23 |
| 7 | 60 | 48 | 40 | 35 | 56 | 45 | 38 | 33 | 40 | 34 | 30 | 34 | 30 | 27 | 29 | 26 | 23 | 21 |
| 8 | 56 | 44 | 36 | 31 | 52 | 41 | 34 | 30 | 36 | 31 | 27 | 31 | 27 | 24 | 27 | 24 | 21 | 19 |
| 9 | 52 | 40 | 33 | 28 | 48 | 38 | 31 | 27 | 33 | 28 | 24 | 29 | 25 | 22 | 25 | 22 | 19 | 17 |
| 10 | 49 | 37 | 30 | 25 | 45 | 35 | 28 | 24 | 31 | 25 | 22 | 27 | 23 | 20 | 23 | 20 | 17 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 25835 | 25835 | 25835 |
| 5° | 25801 | 25960 | 26276 |
| 10° | 26071 | 26742 | 27142 |
| 15° | 26064 | 26200 | 26419 |
| 20° | 25642 | 26036 | 26904 |
| 25° | 25572 | 26297 | 28010 |
| 30° | 25544 | 26880 | 28280 |
| 35° | 25300 | 27457 | 26331 |
| 40° | 24717 | 26435 | 23170 |
| 45° | 23386 | 23201 | 18322 |
| 50° | 21263 | 18969 | 14217 |
| 55° | 18686 | 15612 | 11066 |
| 60° | 16172 | 12484 | 9113 |
| 65° | 13956 | 10346 | 7977 |
| 70° | 12548 | 9163 | 7081 |
| 75° | 11497 | 7935 | 6513 |
| 80° | 10005 | 6369 | 6369 |
| 85° | 7243 | 5743 | 3020 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 25281 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 154.5 | 2.1 |
| 10°-20° | 447.3 | 6.2 |
| 20°-30° | 691.4 | 9.6 |
| 30°-40° | 831.6 | 11.5 |
| 40°-50° | 746.7 | 10.3 |
| 50°-60° | 500.3 | 6.9 |
| 60°-70° | 291.0 | 4.0 |
| 70°-80° | 149.4 | 2.1 |
| 80°-90° | 37.4 | 0.5 |
| 90°-100° | 205.6 | 2.8 |
| 100°-110° | 681.5 | 9.4 |
| 110°-120° | 676.3 | 9.4 |
| 120°-130° | 550.9 | 7.6 |
| 130°-140° | 447.7 | 6.2 |
| 140°-150° | 347.7 | 4.8 |
| 150°-160° | 250.5 | 3.5 |
| 160°-170° | 153.4 | 2.1 |
| 170°-180° | 51.8 | 0.7 |
| 0°-30° | 1293.2 | 17.9 |
| 0°-40° | 2124.9 | 29.5 |
| 0°-60° | 3371.8 | 46.7 |
| 0°-90° | 3849.7 | 53.4 |
| 90°-120° | 1563.3 | 21.7 |
| 90°-150° | 2909.7 | 40.3 |
| 90°-180° | 3365.0 | 46.6 |
| 0°-180° | 7215.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1600 | 1600 | 1600 | 1600 | 1600 | |
| 5° | 1592 | 1619 | 1602 | 1605 | 1621 | 152 |
| 15° | 1559 | 1623 | 1567 | 1572 | 1580 | 438 |
| 25° | 1435 | 1493 | 1476 | 1531 | 1572 | 662 |
| 35° | 1284 | 1295 | 1393 | 1366 | 1336 | 800 |
| 45° | 1024 | 1107 | 1016 | 857 | 802 | 784 |
| 55° | 664 | 689 | 555 | 428 | 393 | 597 |
| 65° | 365 | 373 | 271 | 220 | 209 | 370 |
| 75° | 184 | 180 | 127 | 108 | 104 | 196 |
| 85° | 39 | 31 | 31 | 21 | 16 | 48 |
| 90° | 0 | 1 | 3 | 4 | 4 | 3 |
| 95° | 29 | 86 | 372 | 133 | 89 | 33 |
| 105° | 119 | 170 | 682 | 1287 | 1203 | 126 |
| 115° | 213 | 254 | 549 | 1143 | 1337 | 210 |
| 125° | 297 | 330 | 539 | 898 | 1059 | 264 |
| 135° | 356 | 392 | 535 | 771 | 870 | 275 |
| 145° | 413 | 444 | 533 | 663 | 726 | 259 |
| 155° | 472 | 488 | 537 | 592 | 614 | 217 |
| 165° | 518 | 523 | 539 | 561 | 566 | 146 |
| 175° | 541 | 541 | 542 | 546 | 545 | 51 |
| 180° | 544 | 544 | 544 | 544 | 544 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1600.1 | 1600.1 | 1600.1 | 1600.1 | 1600.1 |
| 2.5° | 1593.5 | 1612.6 | 1594.9 | 1596.2 | 1600.1 |
| 5° | 1591.9 | 1619.0 | 1601.7 | 1605.3 | 1621.2 |
| 7.5° | 1591.6 | 1630.2 | 1621.9 | 1631.9 | 1652.9 |
| 10° | 1590.2 | 1636.5 | 1631.1 | 1633.2 | 1655.5 |
| 12.5° | 1582.4 | 1636.4 | 1611.5 | 1609.5 | 1621.6 |
| 15° | 1559.3 | 1623.0 | 1567.4 | 1572.5 | 1580.5 |
| 17.5° | 1518.5 | 1585.2 | 1532.2 | 1550.2 | 1565.8 |
| 20° | 1492.4 | 1557.8 | 1515.3 | 1538.7 | 1565.8 |
| 22.5° | 1468.9 | 1534.3 | 1499.6 | 1532.4 | 1569.7 |
| 25° | 1435.4 | 1492.7 | 1476.1 | 1530.9 | 1572.3 |
| 27.5° | 1400.1 | 1433.9 | 1453.6 | 1527.0 | 1556.0 |
| 30° | 1370.1 | 1392.4 | 1441.8 | 1505.7 | 1516.9 |
| 32.5° | 1337.4 | 1350.9 | 1426.2 | 1459.4 | 1445.1 |
| 35° | 1283.6 | 1294.8 | 1393.0 | 1366.2 | 1335.9 |
| 37.5° | 1219.7 | 1242.7 | 1318.2 | 1241.1 | 1206.3 |
| 40° | 1172.7 | 1211.0 | 1254.2 | 1139.2 | 1099.3 |
| 42.5° | 1115.3 | 1176.5 | 1169.4 | 1022.9 | 974.0 |
| 45° | 1024.2 | 1107.2 | 1016.1 | 856.7 | 802.4 |
| 47.5° | 917.0 | 1002.1 | 853.1 | 710.6 | 660.0 |
| 50° | 846.5 | 915.1 | 755.2 | 621.7 | 566.0 |
| 52.5° | 774.7 | 824.2 | 671.7 | 538.4 | 487.6 |
| 55° | 663.8 | 689.4 | 554.6 | 428.2 | 393.1 |
| 57.5° | 562.0 | 578.3 | 453.0 | 345.9 | 320.0 |
| 60° | 500.8 | 511.8 | 386.6 | 302.9 | 282.2 |
| 62.5° | 444.6 | 453.3 | 333.1 | 266.5 | 250.9 |
| 65° | 365.3 | 373.3 | 270.8 | 219.9 | 208.8 |
| 67.5° | 302.4 | 306.5 | 222.8 | 182.7 | 172.2 |
| 70° | 265.8 | 267.5 | 194.1 | 158.1 | 150.0 |
| 72.5° | 233.3 | 231.0 | 166.7 | 137.3 | 131.8 |
| 75° | 184.3 | 179.5 | 127.2 | 107.5 | 104.4 |
| 77.5° | 137.7 | 132.5 | 89.4 | 82.9 | 82.9 |
| 80° | 107.6 | 101.3 | 68.5 | 68.5 | 68.5 |
| 82.5° | 80.3 | 71.3 | 52.8 | 52.8 | 51.6 |
| 85° | 39.1 | 31.2 | 31.0 | 21.1 | 16.3 |
| 87.5° | 10.4 | 10.6 | 4.6 | 4.9 | 4.9 |
| 90° | 0.0 | 1.1 | 3.4 | 4.5 | 4.5 |
| 92.5° | 9.0 | 34.7 | 102.4 | 33.2 | 27.9 |
| 95° | 29.3 | 86.5 | 372.5 | 133.0 | 88.9 |
| 97.5° | 53.8 | 113.6 | 650.2 | 379.2 | 239.7 |
| 100° | 70.9 | 128.1 | 752.9 | 646.6 | 428.7 |
| 102.5° | 89.8 | 145.3 | 746.6 | 988.2 | 746.6 |
| 105° | 119.3 | 169.9 | 682.0 | 1286.7 | 1203.0 |
| 107.5° | 149.5 | 194.6 | 620.0 | 1317.0 | 1380.6 |
| 110° | 166.5 | 211.7 | 588.6 | 1286.9 | 1415.7 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 184.5 | 228.8 | 569.6 | 1233.8 | 1397.7 |
| 115° | 212.7 | 254.5 | 549.2 | 1143.3 | 1336.9 |
| 117.5° | 240.6 | 277.8 | 541.7 | 1056.8 | 1260.0 |
| 120° | 257.7 | 294.0 | 539.1 | 1002.7 | 1199.6 |
| 122.5° | 273.1 | 308.4 | 539.1 | 958.2 | 1140.3 |
| 125° | 297.1 | 330.1 | 539.1 | 898.3 | 1059.0 |
| 127.5° | 316.9 | 349.3 | 537.7 | 853.0 | 990.3 |
| 130° | 328.6 | 362.7 | 536.8 | 826.5 | 949.7 |
| 132.5° | 339.4 | 374.4 | 535.9 | 804.7 | 915.6 |
| 135° | 355.6 | 391.9 | 534.6 | 770.9 | 869.9 |
| 137.5° | 373.1 | 408.2 | 533.2 | 738.2 | 825.6 |
| 140° | 384.9 | 419.0 | 532.3 | 716.4 | 796.8 |
| 142.5° | 395.7 | 428.9 | 533.2 | 694.7 | 766.1 |
| 145° | 413.0 | 443.8 | 533.4 | 663.1 | 725.9 |
| 147.5° | 431.7 | 457.5 | 533.7 | 636.4 | 683.1 |
| 150° | 443.4 | 466.5 | 534.6 | 620.9 | 660.6 |
| 152.5° | 454.2 | 476.5 | 535.5 | 608.2 | 639.8 |
| 155° | 471.5 | 488.0 | 536.8 | 592.5 | 614.4 |
| 157.5° | 488.4 | 501.2 | 538.2 | 581.3 | 596.9 |
| 160° | 497.4 | 508.5 | 539.1 | 573.1 | 585.2 |
| 162.5° | 506.4 | 514.8 | 539.1 | 567.6 | 577.1 |
| 165° | 517.6 | 523.1 | 539.1 | 560.6 | 566.0 |
| 167.5° | 528.0 | 530.8 | 540.2 | 554.2 | 557.1 |
| 170° | 533.4 | 534.6 | 540.2 | 551.4 | 552.5 |
| 172.5° | 537.1 | 538.1 | 541.0 | 548.7 | 548.9 |
| 175° | 541.2 | 541.2 | 542.4 | 545.8 | 544.6 |
| 177.5° | 543.5 | 543.5 | 542.6 | 544.4 | 542.6 |
| 180° | 543.5 | 543.5 | 543.5 | 543.5 | 543.5 |



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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 | 18.39 | 19.24 | 19.32 | 20.18 | 21.41 | 15.11 | 15.96 | 16.05 | 16.91 | 18.13 |
| | 3H | 19.62 | 20.38 | 20.57 | 21.33 | 22.58 | 16.18 | 16.93 | 17.13 | 17.89 | 19.14 |
| | 4H | 20.07 | 20.79 | 21.03 | 21.75 | 23.01 | 16.58 | 17.29 | 17.54 | 18.25 | 19.51 |
| | 6H | 20.39 | 21.04 | 21.36 | 22.01 | 23.28 | 16.91 | 17.56 | 17.88 | 18.53 | 19.80 |
| | 8H | 20.47 | 21.09 | 21.45 | 22.08 | 23.35 | 16.99 | 17.62 | 17.97 | 18.60 | 19.87 |
| | 12H | 20.50 | 21.09 | 21.48 | 22.07 | 23.36 | 17.00 | 17.59 | 17.99 | 18.57 | 19.86 |
| 4H | 2H | 18.46 | 19.18 | 19.43 | 20.14 | 21.40 | 15.68 | 16.39 | 16.65 | 17.36 | 18.61 |
| | 3H | 19.93 | 20.53 | 20.91 | 21.52 | 22.79 | 16.95 | 17.54 | 17.92 | 18.53 | 19.80 |
| | 4H | 20.53 | 21.07 | 21.52 | 22.05 | 23.35 | 17.45 | 17.99 | 18.44 | 18.98 | 20.27 |
| | 6H | 20.98 | 21.44 | 21.98 | 22.45 | 23.75 | 17.89 | 18.35 | 18.88 | 19.36 | 20.65 |
| | 8H | 21.11 | 21.55 | 22.11 | 22.55 | 23.86 | 18.01 | 18.44 | 19.01 | 19.44 | 20.75 |
| | 12H | 21.17 | 21.56 | 22.18 | 22.57 | 23.89 | 18.03 | 18.42 | 19.05 | 19.44 | 20.75 |
| 8H | 4H | 20.55 | 20.99 | 21.55 | 21.99 | 23.30 | 17.76 | 18.19 | 18.76 | 19.19 | 20.50 |
| | 6H | 21.10 | 21.46 | 22.13 | 22.50 | 23.81 | 18.29 | 18.65 | 19.31 | 19.69 | 21.00 |
| | 8H | 21.30 | 21.62 | 22.33 | 22.65 | 23.97 | 18.48 | 18.79 | 19.51 | 19.82 | 21.15 |
| | 12H | 21.40 | 21.68 | 22.44 | 22.71 | 24.08 | 18.54 | 18.82 | 19.57 | 19.84 | 21.21 |
| 12H | 4H | 20.51 | 20.90 | 21.53 | 21.92 | 23.23 | 17.77 | 18.16 | 18.79 | 19.18 | 20.49 |
| | 6H | 21.09 | 21.40 | 22.12 | 22.43 | 23.76 | 18.35 | 18.67 | 19.38 | 19.70 | 21.02 |
| | 8H | 21.30 | 21.58 | 22.34 | 22.60 | 23.97 | 18.56 | 18.84 | 19.59 | 19.86 | 21.23 |