

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: P855204

Luminaire Tested: SQ2-F-050U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855204
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-050U-100D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

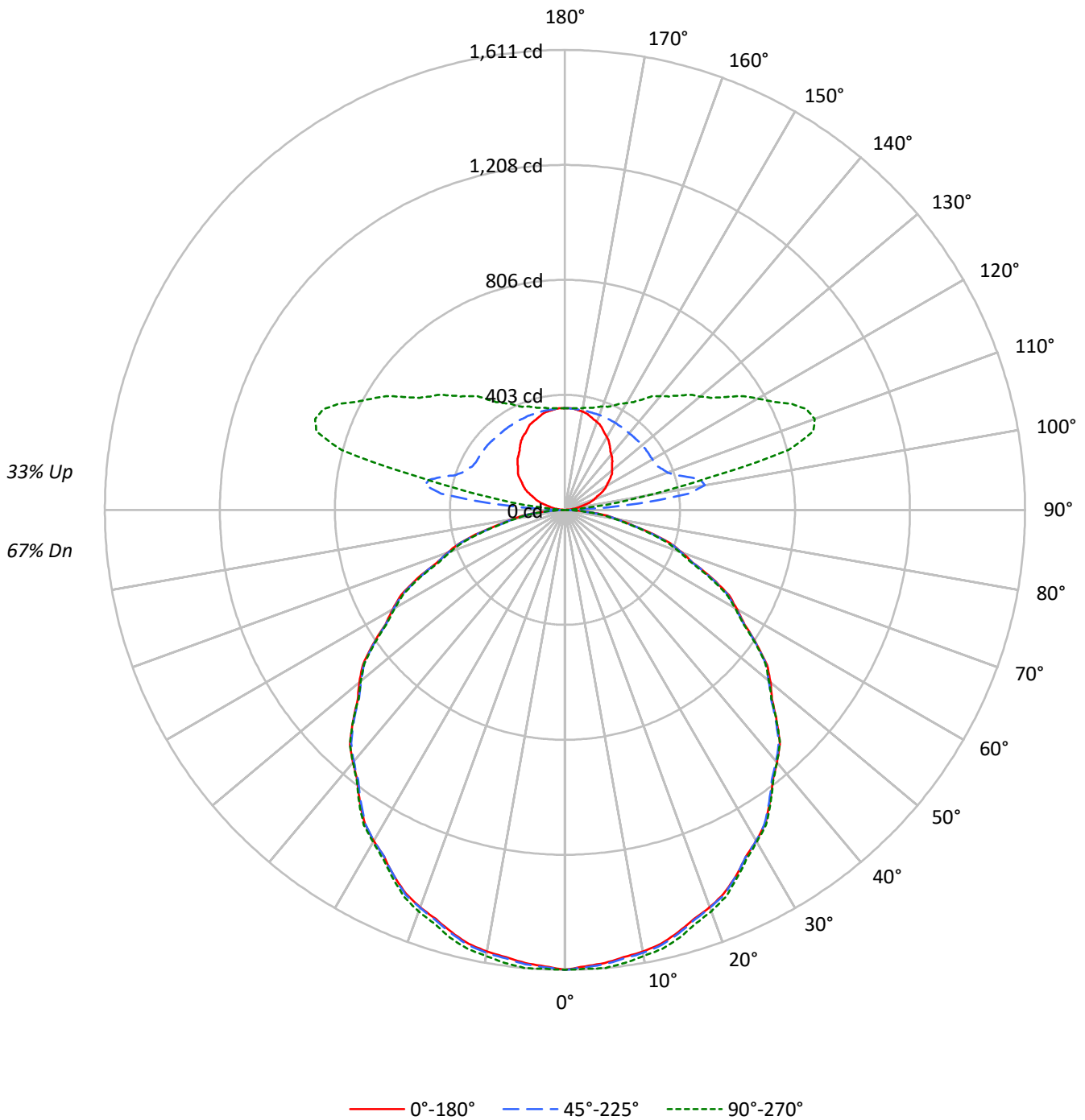
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6737.4 lumens
Efficiency: N/A
Efficacy: 128.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.25 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.4
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

TEST NUMBER: P855204
CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855204

CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 82 | 82 | 82 | 72 | 72 | 72 | 67 | | |
| 1 | 101 | 97 | 93 | 89 | 95 | 91 | 88 | 85 | 81 | 79 | 76 | 72 | 70 | 68 | 63 | 62 | 60 | 56 | | |
| 2 | 92 | 84 | 78 | 73 | 87 | 80 | 74 | 69 | 71 | 67 | 63 | 63 | 59 | 56 | 55 | 53 | 50 | 47 | | |
| 3 | 84 | 74 | 66 | 60 | 79 | 70 | 63 | 58 | 62 | 57 | 52 | 55 | 51 | 48 | 49 | 46 | 43 | 39 | | |
| 4 | 77 | 65 | 57 | 51 | 72 | 62 | 55 | 49 | 55 | 49 | 45 | 49 | 44 | 41 | 44 | 40 | 37 | 34 | | |
| 5 | 70 | 58 | 50 | 44 | 66 | 55 | 48 | 42 | 50 | 43 | 38 | 44 | 39 | 35 | 39 | 35 | 32 | 29 | | |
| 6 | 65 | 52 | 44 | 38 | 61 | 50 | 42 | 36 | 45 | 38 | 34 | 40 | 35 | 31 | 35 | 31 | 28 | 25 | | |
| 7 | 60 | 47 | 39 | 33 | 56 | 45 | 37 | 32 | 40 | 34 | 30 | 36 | 31 | 27 | 32 | 28 | 25 | 22 | | |
| 8 | 56 | 43 | 35 | 29 | 52 | 41 | 33 | 28 | 37 | 31 | 26 | 33 | 28 | 24 | 30 | 25 | 22 | 20 | | |
| 9 | 52 | 39 | 32 | 26 | 49 | 37 | 30 | 25 | 34 | 28 | 24 | 31 | 25 | 22 | 27 | 23 | 20 | 18 | | |
| 10 | 49 | 36 | 29 | 24 | 46 | 34 | 28 | 23 | 31 | 25 | 21 | 28 | 23 | 20 | 25 | 21 | 18 | 16 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 26011 | 26011 | 26011 |
| 5° | 25827 | 25898 | 26110 |
| 10° | 25765 | 25838 | 26017 |
| 15° | 25608 | 25683 | 25941 |
| 20° | 25457 | 25493 | 25722 |
| 25° | 25221 | 25221 | 25377 |
| 30° | 24962 | 24962 | 25044 |
| 35° | 24660 | 24575 | 24746 |
| 40° | 24333 | 24241 | 24333 |
| 45° | 23957 | 23857 | 23957 |
| 50° | 23596 | 23378 | 23431 |
| 55° | 23049 | 22984 | 22860 |
| 60° | 22465 | 22326 | 22184 |
| 65° | 21803 | 21551 | 21299 |
| 70° | 20516 | 20412 | 19997 |
| 75° | 19307 | 18896 | 18347 |
| 80° | 17136 | 16727 | 16123 |
| 85° | 13820 | 12597 | 11782 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 24103 cd/sqm



TEST NUMBER: P855204

CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 152.3 | 2.3 |
| 10°-20° | 435.1 | 6.5 |
| 20°-30° | 654.7 | 9.7 |
| 30°-40° | 783.4 | 11.6 |
| 40°-50° | 808.2 | 12.0 |
| 50°-60° | 729.1 | 10.8 |
| 60°-70° | 556.4 | 8.3 |
| 70°-80° | 319.9 | 4.7 |
| 80°-90° | 83.9 | 1.2 |
| 90°-100° | 142.0 | 2.1 |
| 100°-110° | 450.5 | 6.7 |
| 110°-120° | 441.7 | 6.6 |
| 120°-130° | 359.4 | 5.3 |
| 130°-140° | 293.1 | 4.3 |
| 140°-150° | 228.5 | 3.4 |
| 150°-160° | 164.6 | 2.4 |
| 160°-170° | 100.6 | 1.5 |
| 170°-180° | 33.9 | 0.5 |
| 0°-30° | 1242.1 | 18.4 |
| 0°-40° | 2025.5 | 30.1 |
| 0°-60° | 3562.9 | 52.9 |
| 0°-90° | 4523.0 | 67.1 |
| 90°-120° | 1034.2 | 15.4 |
| 90°-150° | 1915.2 | 28.4 |
| 90°-180° | 2214.0 | 32.9 |
| 0°-180° | 6737.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1611 | 1611 | 1611 | 1611 | 1611 | |
| 5° | 1594 | 1615 | 1598 | 1600 | 1611 | 151 |
| 15° | 1532 | 1551 | 1536 | 1543 | 1552 | 432 |
| 25° | 1416 | 1431 | 1416 | 1418 | 1424 | 652 |
| 35° | 1251 | 1260 | 1247 | 1251 | 1256 | 782 |
| 45° | 1049 | 1056 | 1045 | 1047 | 1049 | 809 |
| 55° | 819 | 823 | 816 | 812 | 812 | 732 |
| 65° | 571 | 568 | 564 | 560 | 558 | 561 |
| 75° | 310 | 307 | 303 | 296 | 294 | 326 |
| 85° | 75 | 70 | 68 | 62 | 64 | 86 |
| 90° | 0 | 1 | 3 | 3 | 3 | 4 |
| 95° | 19 | 58 | 258 | 96 | 62 | 22 |
| 105° | 78 | 110 | 444 | 846 | 811 | 83 |
| 115° | 140 | 166 | 359 | 745 | 877 | 138 |
| 125° | 194 | 217 | 353 | 584 | 688 | 173 |
| 135° | 234 | 257 | 351 | 503 | 566 | 181 |
| 145° | 274 | 294 | 351 | 434 | 472 | 171 |
| 155° | 312 | 323 | 352 | 387 | 402 | 144 |
| 165° | 340 | 343 | 353 | 367 | 370 | 96 |
| 175° | 356 | 354 | 356 | 358 | 357 | 34 |
| 180° | 357 | 357 | 357 | 357 | 357 | |



TEST NUMBER: P855204

CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1611.0 | 1611.0 | 1611.0 | 1611.0 | 1611.0 |
| 2.5° | 1600.5 | 1619.4 | 1604.0 | 1607.6 | 1609.3 |
| 5° | 1593.5 | 1615.0 | 1597.9 | 1600.3 | 1611.0 |
| 7.5° | 1580.4 | 1603.6 | 1584.8 | 1589.0 | 1601.0 |
| 10° | 1571.5 | 1593.0 | 1576.0 | 1578.3 | 1586.9 |
| 12.5° | 1557.5 | 1579.0 | 1561.9 | 1566.0 | 1574.6 |
| 15° | 1532.0 | 1551.4 | 1536.5 | 1543.2 | 1551.9 |
| 17.5° | 1502.6 | 1523.2 | 1506.6 | 1512.5 | 1519.7 |
| 20° | 1481.6 | 1498.8 | 1483.7 | 1486.2 | 1497.0 |
| 22.5° | 1455.2 | 1472.4 | 1459.2 | 1459.8 | 1468.8 |
| 25° | 1415.7 | 1430.8 | 1415.7 | 1418.1 | 1424.5 |
| 27.5° | 1370.6 | 1383.3 | 1370.6 | 1372.8 | 1378.4 |
| 30° | 1338.9 | 1351.8 | 1338.9 | 1341.1 | 1343.3 |
| 32.5° | 1303.8 | 1315.0 | 1302.0 | 1304.4 | 1309.9 |
| 35° | 1251.1 | 1259.7 | 1246.8 | 1251.2 | 1255.5 |
| 37.5° | 1194.9 | 1201.4 | 1190.5 | 1192.8 | 1196.6 |
| 40° | 1154.5 | 1161.0 | 1150.1 | 1152.4 | 1154.5 |
| 42.5° | 1114.1 | 1118.9 | 1108.0 | 1110.3 | 1114.1 |
| 45° | 1049.2 | 1055.6 | 1044.8 | 1047.0 | 1049.2 |
| 47.5° | 983.3 | 987.2 | 978.1 | 976.4 | 980.2 |
| 50° | 939.4 | 941.5 | 930.7 | 930.7 | 932.8 |
| 52.5° | 892.0 | 894.1 | 886.8 | 883.3 | 885.4 |
| 55° | 818.8 | 822.9 | 816.5 | 812.1 | 812.1 |
| 57.5° | 745.0 | 748.8 | 740.6 | 738.4 | 738.0 |
| 60° | 695.7 | 697.9 | 691.4 | 689.2 | 687.0 |
| 62.5° | 646.6 | 647.1 | 640.5 | 638.3 | 636.1 |
| 65° | 570.7 | 568.5 | 564.1 | 559.6 | 557.5 |
| 67.5° | 485.5 | 487.6 | 483.3 | 476.3 | 476.3 |
| 70° | 434.6 | 436.7 | 432.4 | 423.6 | 423.6 |
| 72.5° | 385.4 | 384.1 | 381.5 | 374.4 | 371.0 |
| 75° | 309.5 | 307.4 | 302.9 | 296.3 | 294.1 |
| 77.5° | 233.6 | 231.4 | 229.2 | 220.9 | 222.6 |
| 80° | 184.3 | 182.2 | 179.9 | 173.4 | 173.4 |
| 82.5° | 140.4 | 136.6 | 134.3 | 127.8 | 127.8 |
| 85° | 74.6 | 70.4 | 68.0 | 61.6 | 63.6 |
| 87.5° | 21.0 | 19.6 | 18.2 | 14.7 | 14.7 |
| 90° | 0.0 | 1.1 | 3.4 | 3.4 | 3.4 |
| 92.5° | 6.2 | 24.9 | 79.7 | 26.5 | 18.6 |
| 95° | 19.0 | 57.5 | 257.9 | 95.6 | 61.7 |
| 97.5° | 35.4 | 74.5 | 436.8 | 273.0 | 167.5 |
| 100° | 47.1 | 84.4 | 497.8 | 453.9 | 294.9 |
| 102.5° | 59.6 | 95.2 | 487.1 | 666.5 | 510.2 |
| 105° | 78.5 | 110.3 | 444.1 | 845.8 | 810.7 |
| 107.5° | 97.3 | 126.7 | 403.0 | 864.5 | 911.9 |
| 110° | 109.9 | 138.4 | 382.4 | 843.0 | 930.7 |



TEST NUMBER: P855204

CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 122.4 | 149.2 | 370.7 | 805.9 | 917.2 |
| 115° | 140.2 | 166.5 | 358.9 | 745.3 | 876.9 |
| 117.5° | 157.4 | 182.4 | 354.1 | 687.0 | 819.7 |
| 120° | 168.2 | 192.3 | 353.2 | 651.0 | 779.4 |
| 122.5° | 178.9 | 202.2 | 353.2 | 622.2 | 741.7 |
| 125° | 194.0 | 217.1 | 353.2 | 584.4 | 688.5 |
| 127.5° | 207.2 | 229.4 | 353.2 | 555.1 | 643.9 |
| 130° | 215.2 | 238.3 | 353.2 | 537.8 | 617.9 |
| 132.5° | 223.4 | 246.4 | 352.3 | 524.2 | 596.3 |
| 135° | 234.4 | 257.3 | 350.9 | 502.7 | 566.3 |
| 137.5° | 245.1 | 269.2 | 350.7 | 482.1 | 538.9 |
| 140° | 252.2 | 276.5 | 349.9 | 467.6 | 519.2 |
| 142.5° | 261.3 | 284.5 | 350.7 | 453.2 | 501.2 |
| 145° | 273.6 | 294.5 | 350.9 | 433.7 | 472.1 |
| 147.5° | 286.0 | 303.7 | 351.2 | 416.5 | 447.9 |
| 150° | 294.9 | 309.2 | 352.1 | 406.5 | 431.7 |
| 152.5° | 302.0 | 314.6 | 352.1 | 398.3 | 419.2 |
| 155° | 311.8 | 322.8 | 352.1 | 387.3 | 402.5 |
| 157.5° | 322.1 | 329.5 | 353.2 | 380.4 | 390.9 |
| 160° | 327.4 | 334.0 | 353.2 | 375.8 | 384.7 |
| 162.5° | 332.8 | 337.7 | 353.2 | 372.2 | 378.3 |
| 165° | 339.7 | 343.0 | 353.2 | 366.8 | 370.1 |
| 167.5° | 346.3 | 347.2 | 354.3 | 362.9 | 365.8 |
| 170° | 349.9 | 349.9 | 354.3 | 361.1 | 362.2 |
| 172.5° | 351.6 | 352.5 | 354.3 | 359.3 | 359.5 |
| 175° | 355.5 | 354.3 | 355.5 | 357.7 | 356.6 |
| 177.5° | 356.6 | 355.7 | 355.7 | 357.5 | 355.7 |
| 180° | 356.6 | 356.6 | 356.6 | 356.6 | 356.6 |

TEST NUMBER: P855204

CATALOG NUMBER: SQ2-F-050U-100D-835-UNV-STD-W-4

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 | 20.73 | 21.79 | 21.52 | 22.60 | 23.60 | 20.65 | 21.71 | 21.44 | 22.52 | 23.53 |
| | 3H | 22.52 | 23.47 | 23.33 | 24.30 | 25.33 | 22.40 | 23.35 | 23.21 | 24.18 | 25.21 |
| | 4H | 23.19 | 24.09 | 24.01 | 24.92 | 25.97 | 23.04 | 23.94 | 23.86 | 24.77 | 25.81 |
| | 6H | 23.67 | 24.50 | 24.51 | 25.34 | 26.40 | 23.49 | 24.31 | 24.32 | 25.16 | 26.21 |
| | 8H | 23.81 | 24.60 | 24.66 | 25.47 | 26.52 | 23.61 | 24.40 | 24.46 | 25.26 | 26.32 |
| | 12H | 23.90 | 24.65 | 24.75 | 25.50 | 26.59 | 23.67 | 24.43 | 24.52 | 25.28 | 26.36 |
| 4H | 2H | 21.30 | 22.20 | 22.13 | 23.03 | 24.08 | 21.24 | 22.14 | 22.07 | 22.97 | 24.02 |
| | 3H | 23.31 | 24.06 | 24.15 | 24.93 | 25.98 | 23.20 | 23.95 | 24.04 | 24.82 | 25.88 |
| | 4H | 24.11 | 24.79 | 24.96 | 25.66 | 26.74 | 23.96 | 24.65 | 24.82 | 25.51 | 26.60 |
| | 6H | 24.71 | 25.30 | 25.57 | 26.19 | 27.28 | 24.53 | 25.12 | 25.39 | 26.01 | 27.10 |
| | 8H | 24.90 | 25.45 | 25.77 | 26.34 | 27.44 | 24.70 | 25.25 | 25.57 | 26.14 | 27.24 |
| | 12H | 25.01 | 25.51 | 25.90 | 26.41 | 27.52 | 24.78 | 25.28 | 25.67 | 26.19 | 27.29 |
| 8H | 4H | 24.37 | 24.92 | 25.24 | 25.81 | 26.91 | 24.24 | 24.80 | 25.11 | 25.68 | 26.78 |
| | 6H | 25.10 | 25.55 | 25.99 | 26.48 | 27.58 | 24.93 | 25.39 | 25.83 | 26.31 | 27.42 |
| | 8H | 25.36 | 25.77 | 26.27 | 26.69 | 27.81 | 25.17 | 25.58 | 26.08 | 26.50 | 27.62 |
| | 12H | 25.54 | 25.90 | 26.45 | 26.81 | 27.98 | 25.31 | 25.67 | 26.23 | 26.58 | 27.76 |
| 12H | 4H | 24.37 | 24.87 | 25.26 | 25.78 | 26.88 | 24.25 | 24.75 | 25.14 | 25.65 | 26.76 |
| | 6H | 25.14 | 25.55 | 26.05 | 26.47 | 27.59 | 24.98 | 25.39 | 25.89 | 26.31 | 27.43 |
| | 8H | 25.44 | 25.80 | 26.36 | 26.71 | 27.88 | 25.26 | 25.62 | 26.17 | 26.53 | 27.70 |