

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: P853664

Luminaire Tested: SQ2-F-025U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853664
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-13)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-F-025U-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

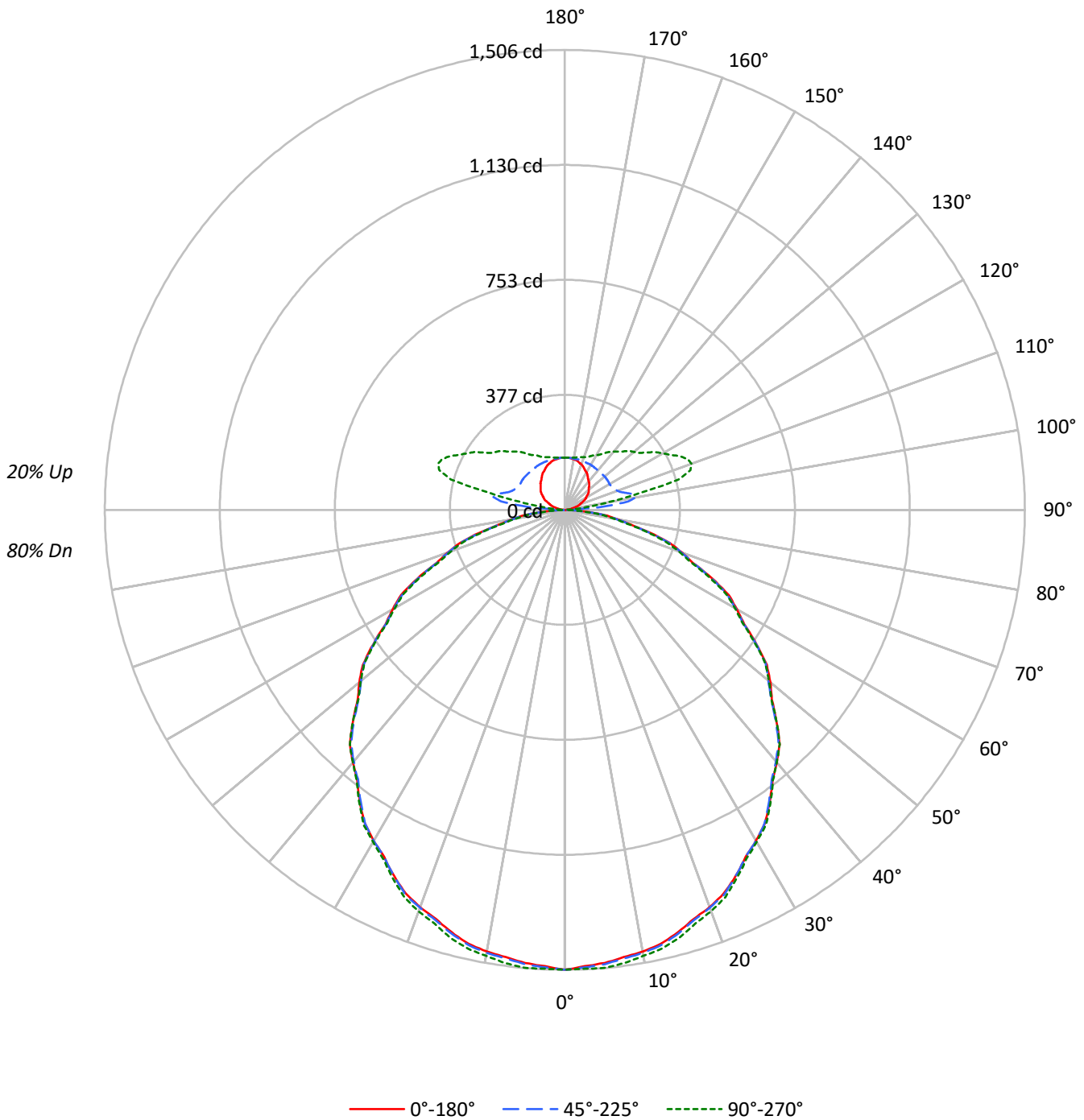
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5288.6 lumens
Efficiency: N/A
Efficacy: 117.5 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): 45
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: P853664

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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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 100 | 100 | 100 | 91 | 91 | 91 | 84 | 84 | 84 | 84 | 80 | |
| 1 | 104 | 100 | 95 | 92 | 100 | 95 | 92 | 88 | 88 | 85 | 82 | 80 | 78 | 76 | 74 | 72 | 70 | 70 | 67 | |
| 2 | 95 | 87 | 80 | 75 | 90 | 83 | 77 | 72 | 76 | 72 | 67 | 70 | 66 | 63 | 64 | 61 | 59 | 59 | 56 | |
| 3 | 86 | 76 | 68 | 62 | 82 | 73 | 66 | 60 | 67 | 61 | 57 | 62 | 57 | 53 | 57 | 53 | 50 | 50 | 47 | |
| 4 | 79 | 67 | 59 | 52 | 75 | 65 | 57 | 51 | 60 | 53 | 48 | 55 | 50 | 45 | 51 | 46 | 43 | 43 | 40 | |
| 5 | 73 | 60 | 51 | 45 | 69 | 58 | 50 | 44 | 53 | 47 | 41 | 49 | 44 | 39 | 46 | 41 | 37 | 37 | 34 | |
| 6 | 67 | 54 | 45 | 39 | 64 | 52 | 44 | 38 | 48 | 41 | 36 | 45 | 39 | 34 | 41 | 36 | 33 | 33 | 30 | |
| 7 | 62 | 49 | 40 | 34 | 59 | 47 | 39 | 34 | 44 | 37 | 32 | 41 | 35 | 30 | 38 | 33 | 29 | 29 | 27 | |
| 8 | 58 | 44 | 36 | 31 | 55 | 43 | 35 | 30 | 40 | 33 | 29 | 37 | 31 | 27 | 35 | 30 | 26 | 26 | 24 | |
| 9 | 54 | 41 | 33 | 27 | 51 | 39 | 32 | 27 | 37 | 30 | 26 | 34 | 29 | 24 | 32 | 27 | 23 | 23 | 21 | |
| 10 | 50 | 37 | 30 | 25 | 48 | 36 | 29 | 24 | 34 | 28 | 23 | 32 | 26 | 22 | 30 | 25 | 21 | 21 | 19 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 24314 | 24314 | 24314 |
| 5° | 24141 | 24208 | 24407 |
| 10° | 24082 | 24150 | 24319 |
| 15° | 23936 | 24005 | 24246 |
| 20° | 23794 | 23830 | 24041 |
| 25° | 23575 | 23575 | 23721 |
| 30° | 23332 | 23332 | 23409 |
| 35° | 23049 | 22969 | 23130 |
| 40° | 22744 | 22658 | 22744 |
| 45° | 22393 | 22299 | 22393 |
| 50° | 22057 | 21851 | 21901 |
| 55° | 21540 | 21484 | 21368 |
| 60° | 21003 | 20870 | 20734 |
| 65° | 20378 | 20145 | 19908 |
| 70° | 19176 | 19081 | 18694 |
| 75° | 18047 | 17661 | 17149 |
| 80° | 16020 | 15639 | 15072 |
| 85° | 12931 | 11782 | 11023 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 22530 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 142.3 | 2.7 |
| 10°-20° | 406.7 | 7.7 |
| 20°-30° | 611.9 | 11.6 |
| 30°-40° | 732.2 | 13.8 |
| 40°-50° | 755.5 | 14.3 |
| 50°-60° | 681.5 | 12.9 |
| 60°-70° | 520.1 | 9.8 |
| 70°-80° | 299.0 | 5.7 |
| 80°-90° | 78.4 | 1.5 |
| 90°-100° | 69.2 | 1.3 |
| 100°-110° | 215.2 | 4.1 |
| 110°-120° | 210.5 | 4.0 |
| 120°-130° | 171.8 | 3.2 |
| 130°-140° | 140.6 | 2.7 |
| 140°-150° | 109.7 | 2.1 |
| 150°-160° | 79.2 | 1.5 |
| 160°-170° | 48.4 | 0.9 |
| 170°-180° | 16.3 | 0.3 |
| 0°-30° | 1161.0 | 22.0 |
| 0°-40° | 1893.2 | 35.8 |
| 0°-60° | 3330.2 | 63.0 |
| 0°-90° | 4227.7 | 79.9 |
| 90°-120° | 494.8 | 9.4 |
| 90°-150° | 917.0 | 17.3 |
| 90°-180° | 1061.0 | 20.1 |
| 0°-180° | 5288.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1506 | 1506 | 1506 | 1506 | 1506 | |
| 5° | 1490 | 1510 | 1494 | 1496 | 1506 | 141 |
| 15° | 1432 | 1450 | 1436 | 1442 | 1450 | 404 |
| 25° | 1323 | 1337 | 1323 | 1326 | 1332 | 609 |
| 35° | 1169 | 1177 | 1165 | 1170 | 1174 | 731 |
| 45° | 981 | 987 | 977 | 979 | 981 | 757 |
| 55° | 765 | 769 | 763 | 759 | 759 | 684 |
| 65° | 533 | 531 | 527 | 523 | 521 | 524 |
| 75° | 289 | 287 | 283 | 277 | 275 | 305 |
| 85° | 70 | 66 | 64 | 58 | 60 | 81 |
| 90° | 0 | 1 | 3 | 3 | 3 | 3 |
| 95° | 9 | 28 | 127 | 47 | 30 | 11 |
| 105° | 38 | 53 | 212 | 404 | 386 | 40 |
| 115° | 67 | 79 | 172 | 355 | 415 | 66 |
| 125° | 93 | 104 | 170 | 279 | 327 | 83 |
| 135° | 112 | 124 | 169 | 241 | 271 | 87 |
| 145° | 131 | 141 | 169 | 208 | 226 | 82 |
| 155° | 150 | 155 | 170 | 187 | 193 | 69 |
| 165° | 165 | 166 | 171 | 176 | 178 | 46 |
| 175° | 171 | 171 | 171 | 172 | 171 | 16 |
| 180° | 171 | 171 | 171 | 171 | 171 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1505.9 | 1505.9 | 1505.9 | 1505.9 | 1505.9 |
| 2.5° | 1496.0 | 1513.7 | 1499.3 | 1502.6 | 1504.2 |
| 5° | 1489.5 | 1509.5 | 1493.6 | 1495.8 | 1505.9 |
| 7.5° | 1477.1 | 1498.8 | 1481.2 | 1485.2 | 1496.4 |
| 10° | 1468.9 | 1489.0 | 1473.0 | 1475.3 | 1483.3 |
| 12.5° | 1455.8 | 1475.9 | 1459.9 | 1463.8 | 1471.8 |
| 15° | 1432.0 | 1450.1 | 1436.1 | 1442.5 | 1450.5 |
| 17.5° | 1404.5 | 1423.8 | 1408.2 | 1413.7 | 1420.5 |
| 20° | 1384.8 | 1400.9 | 1386.9 | 1389.2 | 1399.2 |
| 22.5° | 1360.2 | 1376.3 | 1363.9 | 1364.5 | 1372.9 |
| 25° | 1323.3 | 1337.3 | 1323.3 | 1325.5 | 1331.5 |
| 27.5° | 1281.0 | 1293.0 | 1281.0 | 1283.2 | 1288.4 |
| 30° | 1251.5 | 1263.5 | 1251.5 | 1253.6 | 1255.6 |
| 32.5° | 1218.6 | 1229.1 | 1217.0 | 1219.2 | 1224.4 |
| 35° | 1169.4 | 1177.4 | 1165.3 | 1169.5 | 1173.5 |
| 37.5° | 1116.9 | 1122.9 | 1112.8 | 1114.9 | 1118.5 |
| 40° | 1079.1 | 1085.2 | 1075.0 | 1077.1 | 1079.1 |
| 42.5° | 1041.4 | 1045.8 | 1035.6 | 1037.8 | 1041.4 |
| 45° | 980.7 | 986.7 | 976.6 | 978.7 | 980.7 |
| 47.5° | 919.1 | 922.7 | 914.2 | 912.6 | 916.2 |
| 50° | 878.1 | 880.1 | 869.9 | 869.9 | 871.9 |
| 52.5° | 833.8 | 835.8 | 828.8 | 825.6 | 827.6 |
| 55° | 765.2 | 769.3 | 763.2 | 759.1 | 759.1 |
| 57.5° | 696.3 | 699.9 | 692.2 | 690.1 | 689.7 |
| 60° | 650.4 | 652.4 | 646.3 | 644.2 | 642.1 |
| 62.5° | 604.4 | 604.8 | 598.7 | 596.6 | 594.6 |
| 65° | 533.4 | 531.4 | 527.3 | 523.1 | 521.1 |
| 67.5° | 453.8 | 455.8 | 451.8 | 445.2 | 445.2 |
| 70° | 406.2 | 408.2 | 404.2 | 396.0 | 396.0 |
| 72.5° | 360.3 | 359.1 | 356.6 | 349.9 | 346.7 |
| 75° | 289.3 | 287.3 | 283.1 | 276.9 | 274.9 |
| 77.5° | 218.3 | 216.3 | 214.2 | 206.4 | 208.0 |
| 80° | 172.3 | 170.3 | 168.2 | 162.1 | 162.1 |
| 82.5° | 131.3 | 127.7 | 125.6 | 119.4 | 119.4 |
| 85° | 69.8 | 65.7 | 63.6 | 57.5 | 59.5 |
| 87.5° | 19.7 | 18.3 | 17.0 | 13.8 | 13.8 |
| 90° | 0.0 | 1.0 | 3.1 | 3.1 | 3.1 |
| 92.5° | 3.4 | 11.8 | 40.1 | 13.2 | 10.7 |
| 95° | 9.4 | 27.9 | 126.9 | 46.8 | 30.4 |
| 97.5° | 17.2 | 36.3 | 210.2 | 130.8 | 82.4 |
| 100° | 23.1 | 40.5 | 237.0 | 221.7 | 147.9 |
| 102.5° | 28.9 | 45.6 | 232.0 | 316.6 | 248.5 |
| 105° | 37.8 | 53.1 | 211.8 | 404.4 | 385.9 |
| 107.5° | 46.6 | 60.9 | 192.5 | 411.1 | 431.4 |
| 110° | 52.4 | 66.8 | 182.5 | 401.5 | 441.5 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 58.3 | 71.8 | 177.4 | 384.1 | 434.8 |
| 115° | 67.1 | 79.4 | 172.0 | 354.8 | 415.3 |
| 117.5° | 75.7 | 87.0 | 169.7 | 326.7 | 388.7 |
| 120° | 80.8 | 92.0 | 168.8 | 310.7 | 370.2 |
| 122.5° | 85.8 | 97.1 | 169.7 | 297.2 | 351.7 |
| 125° | 93.3 | 103.6 | 169.9 | 279.0 | 327.2 |
| 127.5° | 99.4 | 109.9 | 169.9 | 265.4 | 306.4 |
| 130° | 102.8 | 114.1 | 169.9 | 257.8 | 294.7 |
| 132.5° | 107.0 | 118.2 | 169.1 | 251.0 | 285.5 |
| 135° | 112.2 | 124.5 | 168.8 | 240.8 | 270.6 |
| 137.5° | 118.3 | 129.6 | 168.8 | 230.7 | 257.8 |
| 140° | 121.7 | 132.9 | 168.8 | 223.9 | 248.5 |
| 142.5° | 125.8 | 136.3 | 168.8 | 217.2 | 239.3 |
| 145° | 131.1 | 141.3 | 168.8 | 208.1 | 226.5 |
| 147.5° | 137.4 | 146.2 | 169.9 | 199.6 | 214.1 |
| 150° | 141.6 | 148.8 | 169.9 | 195.3 | 206.6 |
| 152.5° | 144.9 | 151.3 | 169.9 | 191.1 | 200.7 |
| 155° | 150.0 | 155.1 | 169.9 | 186.8 | 193.0 |
| 157.5° | 155.0 | 158.9 | 169.9 | 183.0 | 186.9 |
| 160° | 158.4 | 161.4 | 169.9 | 180.5 | 183.5 |
| 162.5° | 160.9 | 163.1 | 169.9 | 178.8 | 181.0 |
| 165° | 164.7 | 165.7 | 170.9 | 176.2 | 178.3 |
| 167.5° | 167.0 | 167.2 | 169.9 | 174.7 | 175.8 |
| 170° | 167.8 | 168.8 | 169.9 | 173.1 | 174.1 |
| 172.5° | 169.5 | 169.7 | 170.7 | 172.2 | 172.4 |
| 175° | 170.9 | 170.9 | 170.9 | 172.0 | 170.9 |
| 177.5° | 170.9 | 170.9 | 170.9 | 170.9 | 170.9 |
| 180° | 170.9 | 170.9 | 170.9 | 170.9 | 170.9 |



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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 | 21.45 | 22.68 | 22.10 | 23.35 | 24.12 | 21.37 | 22.61 | 22.02 | 23.27 | 24.04 |
| | 3H | 23.26 | 24.37 | 23.92 | 25.04 | 25.84 | 23.14 | 24.25 | 23.80 | 24.92 | 25.73 |
| | 4H | 23.93 | 24.98 | 24.61 | 25.67 | 26.48 | 23.78 | 24.83 | 24.46 | 25.52 | 26.33 |
| | 6H | 24.42 | 25.39 | 25.11 | 26.09 | 26.92 | 24.23 | 25.21 | 24.93 | 25.90 | 26.73 |
| | 8H | 24.57 | 25.50 | 25.27 | 26.21 | 27.04 | 24.37 | 25.29 | 25.07 | 26.01 | 26.84 |
| | 12H | 24.65 | 25.54 | 25.37 | 26.25 | 27.11 | 24.43 | 25.32 | 25.14 | 26.03 | 26.89 |
| 4H | 2H | 22.04 | 23.09 | 22.73 | 23.78 | 24.59 | 21.98 | 23.03 | 22.66 | 23.72 | 24.53 |
| | 3H | 24.06 | 24.94 | 24.76 | 25.67 | 26.50 | 23.96 | 24.84 | 24.65 | 25.56 | 26.39 |
| | 4H | 24.87 | 25.67 | 25.58 | 26.39 | 27.26 | 24.73 | 25.53 | 25.44 | 26.25 | 27.11 |
| | 6H | 25.48 | 26.17 | 26.21 | 26.93 | 27.80 | 25.30 | 25.99 | 26.03 | 26.75 | 27.62 |
| | 8H | 25.68 | 26.33 | 26.41 | 27.07 | 27.96 | 25.47 | 26.12 | 26.21 | 26.87 | 27.76 |
| | 12H | 25.80 | 26.38 | 26.55 | 27.15 | 28.04 | 25.57 | 26.15 | 26.33 | 26.93 | 27.82 |
| 8H | 4H | 25.15 | 25.80 | 25.88 | 26.54 | 27.43 | 25.02 | 25.67 | 25.76 | 26.42 | 27.30 |
| | 6H | 25.88 | 26.42 | 26.65 | 27.21 | 28.10 | 25.71 | 26.25 | 26.48 | 27.04 | 27.93 |
| | 8H | 26.15 | 26.63 | 26.93 | 27.42 | 28.32 | 25.96 | 26.44 | 26.74 | 27.23 | 28.13 |
| | 12H | 26.34 | 26.76 | 27.12 | 27.54 | 28.50 | 26.11 | 26.53 | 26.89 | 27.31 | 28.28 |
| 12H | 4H | 25.16 | 25.74 | 25.92 | 26.51 | 27.40 | 25.04 | 25.62 | 25.79 | 26.39 | 27.28 |
| | 6H | 25.93 | 26.41 | 26.71 | 27.20 | 28.10 | 25.77 | 26.25 | 26.55 | 27.04 | 27.94 |
| | 8H | 26.24 | 26.66 | 27.02 | 27.44 | 28.40 | 26.05 | 26.48 | 26.83 | 27.26 | 28.22 |