

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: P854965

Luminaire Tested: SQ2-PH1-025U-100D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P854965
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-PH1-025U-100D-830-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

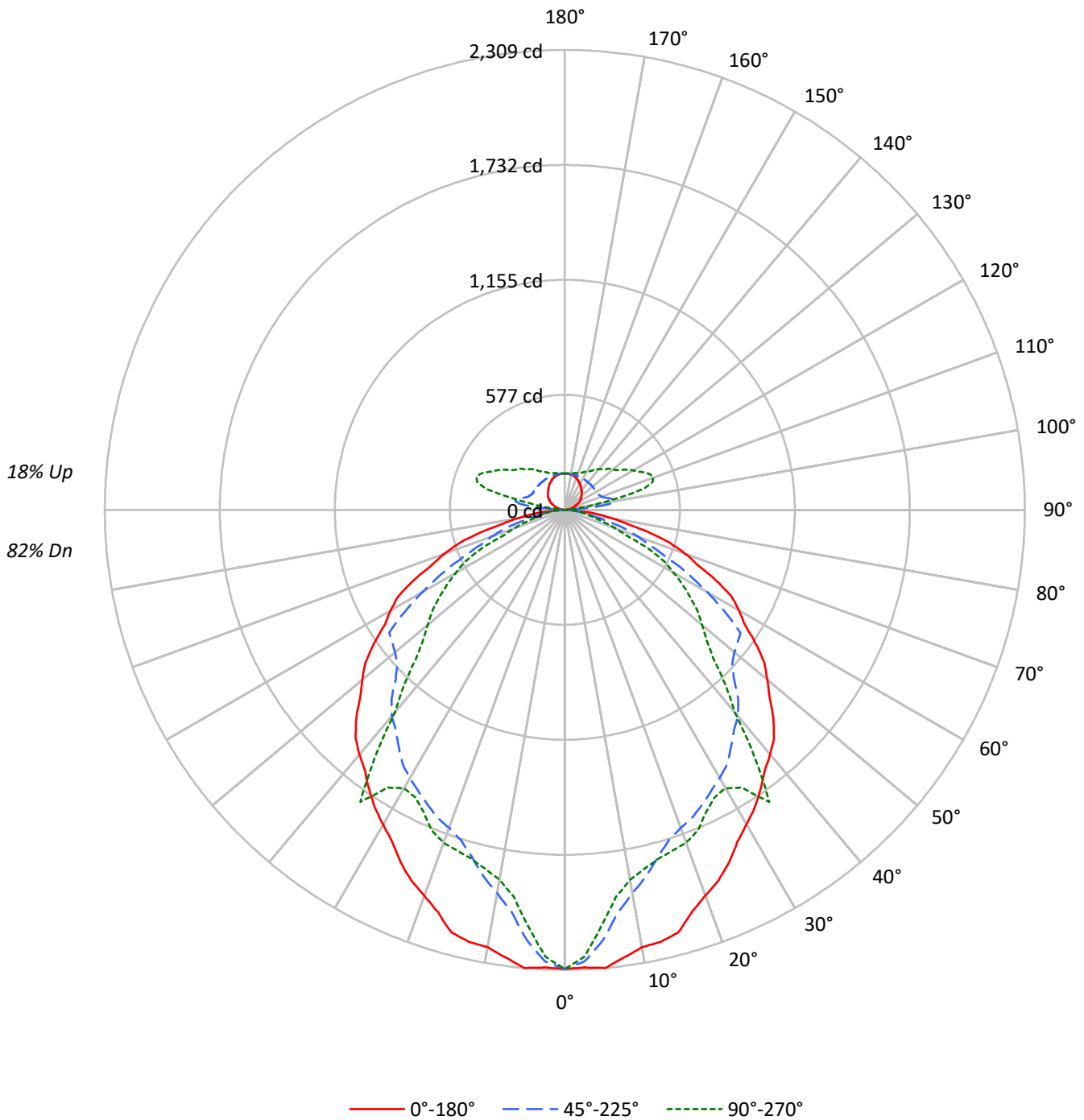
Lumens per Lamp: N/A
Luminaire Lumens: 6232.5 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.02 / 1.23
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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





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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 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 110 | 101 | 101 | 101 | 93 | 93 | 93 | 85 | 85 | 85 | 82 | | | | |
| 1 | 105 | 101 | 97 | 93 | 101 | 97 | 93 | 90 | 89 | 87 | 84 | 82 | 80 | 78 | 76 | 74 | 73 | 70 | | | | |
| 2 | 96 | 88 | 82 | 77 | 92 | 85 | 79 | 75 | 79 | 74 | 70 | 73 | 69 | 66 | 67 | 64 | 62 | 59 | | | | |
| 3 | 88 | 78 | 70 | 64 | 84 | 75 | 68 | 63 | 70 | 64 | 59 | 64 | 60 | 56 | 60 | 56 | 53 | 50 | | | | |
| 4 | 81 | 69 | 61 | 55 | 77 | 67 | 59 | 53 | 62 | 56 | 51 | 58 | 52 | 48 | 54 | 49 | 46 | 43 | | | | |
| 5 | 74 | 62 | 53 | 47 | 71 | 60 | 52 | 46 | 56 | 49 | 44 | 52 | 46 | 42 | 48 | 44 | 40 | 37 | | | | |
| 6 | 68 | 56 | 47 | 41 | 65 | 54 | 46 | 40 | 50 | 44 | 39 | 47 | 41 | 37 | 44 | 39 | 35 | 33 | | | | |
| 7 | 63 | 51 | 42 | 36 | 61 | 49 | 41 | 36 | 46 | 39 | 34 | 43 | 37 | 33 | 40 | 35 | 31 | 29 | | | | |
| 8 | 59 | 46 | 38 | 32 | 57 | 45 | 37 | 32 | 42 | 35 | 31 | 39 | 34 | 29 | 37 | 32 | 28 | 26 | | | | |
| 9 | 55 | 42 | 35 | 29 | 53 | 41 | 34 | 29 | 39 | 32 | 28 | 36 | 31 | 27 | 34 | 29 | 25 | 24 | | | | |
| 10 | 52 | 39 | 31 | 26 | 50 | 38 | 31 | 26 | 36 | 29 | 25 | 34 | 28 | 24 | 32 | 27 | 23 | 21 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 37213 | 37213 | 37213 |
| 5° | 37426 | 35188 | 34015 |
| 10° | 36564 | 32036 | 30919 |
| 15° | 36729 | 30131 | 30315 |
| 20° | 35419 | 29203 | 30558 |
| 25° | 34769 | 29065 | 29847 |
| 30° | 34015 | 28989 | 30091 |
| 35° | 33758 | 28657 | 35272 |
| 40° | 33786 | 28473 | 27963 |
| 45° | 33798 | 27389 | 24085 |
| 50° | 33325 | 27929 | 22584 |
| 55° | 32904 | 30308 | 21667 |
| 60° | 32576 | 26553 | 20324 |
| 65° | 32004 | 21532 | 17677 |
| 70° | 30232 | 18321 | 12628 |
| 75° | 26949 | 13818 | 9576 |
| 80° | 22027 | 8963 | 8963 |
| 85° | 13801 | 8133 | 6095 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33798 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 202.8 | 3.3 |
| 10°-20° | 533.4 | 8.6 |
| 20°-30° | 782.2 | 12.5 |
| 30°-40° | 947.2 | 15.2 |
| 40°-50° | 931.5 | 14.9 |
| 50°-60° | 810.9 | 13.0 |
| 60°-70° | 563.7 | 9.0 |
| 70°-80° | 267.3 | 4.3 |
| 80°-90° | 59.4 | 1.0 |
| 90°-100° | 74.0 | 1.2 |
| 100°-110° | 230.0 | 3.7 |
| 110°-120° | 225.0 | 3.6 |
| 120°-130° | 183.7 | 2.9 |
| 130°-140° | 150.3 | 2.4 |
| 140°-150° | 117.3 | 1.9 |
| 150°-160° | 84.6 | 1.4 |
| 160°-170° | 51.8 | 0.8 |
| 170°-180° | 17.4 | 0.3 |
| 0°-30° | 1518.4 | 24.4 |
| 0°-40° | 2465.7 | 39.6 |
| 0°-60° | 4208.0 | 67.5 |
| 0°-90° | 5098.4 | 81.8 |
| 90°-120° | 529.0 | 8.5 |
| 90°-150° | 980.3 | 15.7 |
| 90°-180° | 1134.0 | 18.2 |
| 0°-180° | 6232.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2305 | 2305 | 2305 | 2305 | 2305 | |
| 5° | 2309 | 2307 | 2171 | 2103 | 2099 | 217 |
| 15° | 2197 | 1957 | 1803 | 1790 | 1814 | 613 |
| 25° | 1952 | 1660 | 1632 | 1682 | 1675 | 898 |
| 35° | 1713 | 1385 | 1454 | 1579 | 1790 | 1073 |
| 45° | 1480 | 1096 | 1200 | 1241 | 1055 | 1138 |
| 55° | 1169 | 854 | 1077 | 776 | 770 | 1044 |
| 65° | 838 | 587 | 564 | 463 | 463 | 823 |
| 75° | 432 | 299 | 222 | 158 | 154 | 458 |
| 85° | 74 | 49 | 44 | 35 | 33 | 100 |
| 90° | 0 | 1 | 3 | 3 | 3 | 3 |
| 95° | 10 | 30 | 136 | 50 | 33 | 12 |
| 105° | 40 | 57 | 226 | 432 | 413 | 43 |
| 115° | 72 | 85 | 184 | 379 | 444 | 71 |
| 125° | 100 | 111 | 182 | 298 | 350 | 89 |
| 135° | 120 | 133 | 180 | 257 | 289 | 93 |
| 145° | 140 | 151 | 180 | 222 | 242 | 88 |
| 155° | 160 | 166 | 182 | 200 | 206 | 74 |
| 165° | 176 | 177 | 183 | 188 | 190 | 49 |
| 175° | 183 | 183 | 183 | 184 | 183 | 17 |
| 180° | 183 | 183 | 183 | 183 | 183 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2304.8 | 2304.8 | 2304.8 | 2304.8 | 2304.8 |
| 2.5° | 2299.5 | 2323.6 | 2269.7 | 2248.6 | 2245.1 |
| 5° | 2309.2 | 2307.1 | 2171.1 | 2103.0 | 2098.7 |
| 7.5° | 2267.1 | 2200.6 | 2038.1 | 1963.0 | 1959.6 |
| 10° | 2230.2 | 2129.5 | 1954.0 | 1885.9 | 1885.9 |
| 12.5° | 2221.5 | 2062.4 | 1885.5 | 1835.3 | 1845.5 |
| 15° | 2197.3 | 1957.1 | 1802.6 | 1790.0 | 1813.6 |
| 17.5° | 2117.5 | 1858.9 | 1738.1 | 1766.9 | 1794.3 |
| 20° | 2061.4 | 1806.2 | 1699.6 | 1752.7 | 1778.5 |
| 22.5° | 2014.0 | 1755.4 | 1671.4 | 1729.7 | 1743.5 |
| 25° | 1951.7 | 1660.1 | 1631.5 | 1681.8 | 1675.4 |
| 27.5° | 1877.2 | 1572.7 | 1591.6 | 1622.5 | 1626.3 |
| 30° | 1824.5 | 1520.0 | 1554.9 | 1586.2 | 1614.0 |
| 32.5° | 1773.6 | 1458.9 | 1514.5 | 1588.7 | 1652.7 |
| 35° | 1712.7 | 1384.6 | 1453.9 | 1579.3 | 1789.5 |
| 37.5° | 1648.7 | 1297.0 | 1393.0 | 1498.4 | 1565.4 |
| 40° | 1603.0 | 1234.2 | 1350.9 | 1481.1 | 1326.7 |
| 42.5° | 1554.0 | 1185.1 | 1287.7 | 1455.9 | 1195.2 |
| 45° | 1480.2 | 1096.4 | 1199.5 | 1241.3 | 1054.8 |
| 47.5° | 1393.4 | 1027.6 | 1139.9 | 1035.2 | 962.3 |
| 50° | 1326.7 | 981.5 | 1111.9 | 946.2 | 899.1 |
| 52.5° | 1261.8 | 933.8 | 1092.5 | 873.0 | 841.2 |
| 55° | 1168.9 | 853.6 | 1076.7 | 776.2 | 769.7 |
| 57.5° | 1070.2 | 772.1 | 952.2 | 692.0 | 703.0 |
| 60° | 1008.8 | 719.3 | 822.3 | 642.2 | 629.4 |
| 62.5° | 943.9 | 668.1 | 701.3 | 579.1 | 566.2 |
| 65° | 837.7 | 586.8 | 563.6 | 462.7 | 462.7 |
| 67.5° | 721.0 | 502.3 | 456.6 | 378.7 | 327.2 |
| 70° | 640.4 | 447.4 | 388.1 | 301.9 | 267.5 |
| 72.5° | 554.4 | 388.8 | 317.9 | 247.4 | 207.9 |
| 75° | 432.0 | 299.1 | 221.5 | 157.8 | 153.5 |
| 77.5° | 312.3 | 215.4 | 149.1 | 117.1 | 117.6 |
| 80° | 236.9 | 163.9 | 96.4 | 94.3 | 96.4 |
| 82.5° | 166.7 | 112.6 | 71.9 | 75.0 | 75.4 |
| 85° | 74.5 | 48.8 | 43.9 | 35.0 | 32.9 |
| 87.5° | 15.8 | 14.2 | 9.5 | 9.5 | 9.5 |
| 90° | 0.0 | 1.1 | 3.4 | 3.4 | 3.4 |
| 92.5° | 3.6 | 12.6 | 42.9 | 14.0 | 11.4 |
| 95° | 10.1 | 29.8 | 135.7 | 50.1 | 32.6 |
| 97.5° | 18.4 | 38.8 | 224.7 | 139.9 | 88.1 |
| 100° | 24.6 | 43.3 | 253.4 | 237.0 | 158.1 |
| 102.5° | 31.0 | 48.7 | 248.0 | 338.4 | 265.7 |
| 105° | 40.4 | 56.8 | 226.5 | 432.2 | 412.6 |
| 107.5° | 49.7 | 65.1 | 205.8 | 439.5 | 461.2 |
| 110° | 56.1 | 71.3 | 195.0 | 429.2 | 471.9 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 62.3 | 76.8 | 189.7 | 410.6 | 464.8 |
| 115° | 71.8 | 84.9 | 183.8 | 379.2 | 443.9 |
| 117.5° | 81.0 | 92.9 | 181.4 | 349.3 | 415.4 |
| 120° | 86.3 | 98.4 | 180.5 | 332.2 | 395.7 |
| 122.5° | 91.7 | 103.8 | 181.4 | 317.7 | 375.9 |
| 125° | 99.7 | 110.7 | 181.6 | 298.3 | 349.7 |
| 127.5° | 106.3 | 117.5 | 181.6 | 283.7 | 327.5 |
| 130° | 109.9 | 121.9 | 181.6 | 275.5 | 315.0 |
| 132.5° | 114.3 | 126.4 | 180.7 | 268.3 | 305.2 |
| 135° | 120.0 | 133.1 | 180.5 | 257.4 | 289.2 |
| 137.5° | 126.4 | 138.5 | 180.5 | 246.6 | 275.5 |
| 140° | 130.0 | 142.1 | 180.5 | 239.4 | 265.7 |
| 142.5° | 134.5 | 145.7 | 180.5 | 232.1 | 255.8 |
| 145° | 140.1 | 151.1 | 180.5 | 222.4 | 242.2 |
| 147.5° | 146.9 | 156.3 | 181.6 | 213.4 | 229.0 |
| 150° | 151.3 | 159.0 | 181.6 | 208.8 | 220.8 |
| 152.5° | 154.9 | 161.7 | 181.6 | 204.3 | 214.6 |
| 155° | 160.3 | 165.8 | 181.6 | 199.7 | 206.2 |
| 157.5° | 165.6 | 169.8 | 181.6 | 195.6 | 199.8 |
| 160° | 169.3 | 172.5 | 181.6 | 192.9 | 196.2 |
| 162.5° | 172.0 | 174.3 | 181.6 | 191.1 | 193.5 |
| 165° | 176.0 | 177.1 | 182.7 | 188.4 | 190.5 |
| 167.5° | 178.4 | 178.6 | 181.6 | 186.8 | 187.9 |
| 170° | 179.3 | 180.5 | 181.6 | 185.0 | 186.1 |
| 172.5° | 181.1 | 181.4 | 182.5 | 184.1 | 184.3 |
| 175° | 182.7 | 182.7 | 182.7 | 183.8 | 182.7 |
| 177.5° | 182.7 | 182.7 | 182.7 | 182.7 | 182.7 |
| 180° | 182.7 | 182.7 | 182.7 | 182.7 | 182.7 |



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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 | 22.45 | 23.67 | 23.07 | 24.31 | 25.04 | 21.12 | 22.35 | 21.75 | 22.99 | 23.72 |
| | 3H | 24.50 | 25.60 | 25.14 | 26.25 | 27.02 | 22.18 | 23.28 | 22.82 | 23.93 | 24.70 |
| | 4H | 25.25 | 26.28 | 25.91 | 26.95 | 27.73 | 22.41 | 23.45 | 23.07 | 24.11 | 24.89 |
| | 6H | 25.75 | 26.71 | 26.42 | 27.38 | 28.18 | 22.57 | 23.53 | 23.25 | 24.20 | 25.00 |
| | 8H | 25.89 | 26.80 | 26.57 | 27.49 | 28.29 | 22.62 | 23.53 | 23.30 | 24.22 | 25.02 |
| | 12H | 25.94 | 26.81 | 26.63 | 27.50 | 28.33 | 22.63 | 23.50 | 23.32 | 24.18 | 25.01 |
| 4H | 2H | 22.86 | 23.90 | 23.53 | 24.57 | 25.35 | 21.80 | 22.84 | 22.47 | 23.50 | 24.28 |
| | 3H | 25.01 | 25.87 | 25.68 | 26.57 | 27.37 | 23.02 | 23.88 | 23.69 | 24.58 | 25.38 |
| | 4H | 25.84 | 26.62 | 26.53 | 27.32 | 28.15 | 23.31 | 24.09 | 24.00 | 24.79 | 25.62 |
| | 6H | 26.44 | 27.12 | 27.16 | 27.85 | 28.69 | 23.54 | 24.21 | 24.25 | 24.94 | 25.78 |
| | 8H | 26.62 | 27.25 | 27.34 | 27.98 | 28.83 | 23.60 | 24.23 | 24.32 | 24.96 | 25.81 |
| | 12H | 26.70 | 27.27 | 27.44 | 28.02 | 28.88 | 23.63 | 24.19 | 24.37 | 24.94 | 25.80 |
| 8H | 4H | 25.88 | 26.51 | 26.60 | 27.24 | 28.09 | 23.55 | 24.19 | 24.27 | 24.91 | 25.76 |
| | 6H | 26.55 | 27.07 | 27.30 | 27.84 | 28.69 | 23.84 | 24.36 | 24.59 | 25.13 | 25.99 |
| | 8H | 26.78 | 27.24 | 27.54 | 28.01 | 28.88 | 23.95 | 24.41 | 24.71 | 25.18 | 26.05 |
| | 12H | 26.91 | 27.32 | 27.67 | 28.08 | 29.01 | 24.01 | 24.42 | 24.77 | 25.18 | 26.11 |
| 12H | 4H | 25.85 | 26.42 | 26.59 | 27.17 | 28.03 | 23.57 | 24.13 | 24.31 | 24.89 | 25.74 |
| | 6H | 26.52 | 26.99 | 27.29 | 27.76 | 28.63 | 23.87 | 24.34 | 24.63 | 25.11 | 25.98 |
| | 8H | 26.77 | 27.19 | 27.54 | 27.94 | 28.88 | 24.00 | 24.42 | 24.77 | 25.18 | 26.11 |