

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: METALUX

Report Number: P894843

Luminaire Tested: 8TMB-18HL-RNDU-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894843
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 8TMB-18HL-RNDU-UNV-L940
Description: 18000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, CCT
Light Source: -
Ballast/Driver: -

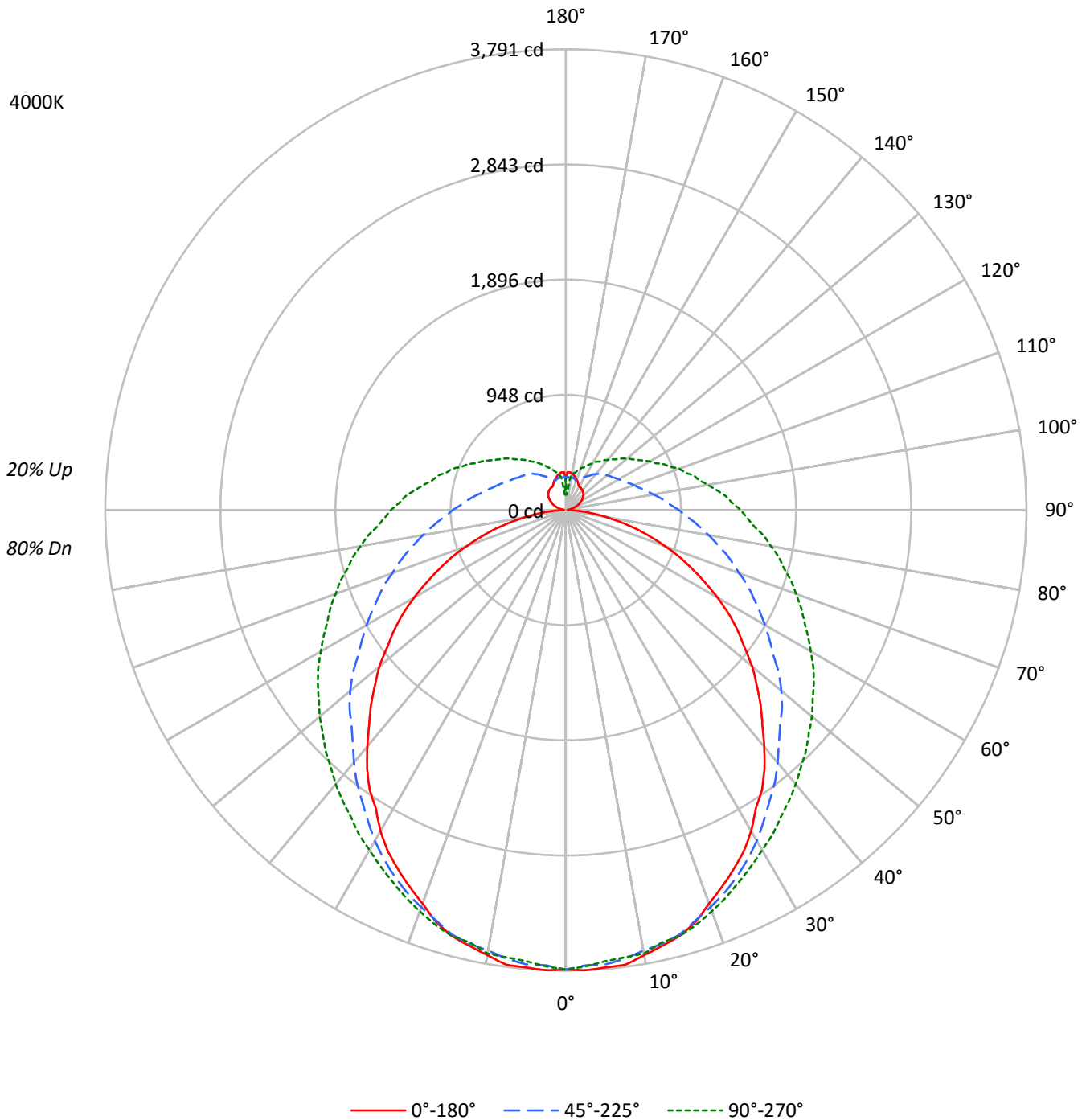
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15900.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 134.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.62
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: P894843
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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 | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 100 | 100 | 100 | 91 | 91 | 91 | 83 | 83 | 83 | 83 | 83 | 83 | 80 |
| 1 | 102 | 96 | 91 | 86 | 97 | 92 | 87 | 83 | 84 | 80 | 77 | 76 | 73 | 71 | 69 | 67 | 65 | 65 | 65 | 65 | 61 |
| 2 | 92 | 82 | 75 | 68 | 87 | 79 | 72 | 66 | 72 | 66 | 61 | 66 | 61 | 57 | 60 | 56 | 53 | 53 | 53 | 53 | 49 |
| 3 | 83 | 72 | 63 | 56 | 79 | 69 | 61 | 54 | 63 | 56 | 51 | 57 | 52 | 47 | 52 | 48 | 44 | 44 | 44 | 44 | 41 |
| 4 | 76 | 63 | 54 | 47 | 72 | 60 | 52 | 45 | 55 | 48 | 43 | 51 | 45 | 40 | 46 | 41 | 37 | 37 | 37 | 37 | 34 |
| 5 | 69 | 56 | 47 | 40 | 66 | 54 | 45 | 39 | 49 | 42 | 37 | 45 | 39 | 34 | 41 | 36 | 32 | 32 | 32 | 32 | 29 |
| 6 | 64 | 50 | 41 | 35 | 61 | 48 | 40 | 34 | 44 | 37 | 32 | 41 | 35 | 30 | 38 | 32 | 28 | 28 | 28 | 28 | 26 |
| 7 | 59 | 46 | 37 | 30 | 56 | 44 | 35 | 30 | 40 | 33 | 28 | 37 | 31 | 26 | 34 | 29 | 25 | 25 | 25 | 25 | 23 |
| 8 | 55 | 41 | 33 | 27 | 52 | 40 | 32 | 26 | 37 | 30 | 25 | 34 | 28 | 24 | 31 | 26 | 22 | 22 | 22 | 22 | 20 |
| 9 | 51 | 38 | 30 | 24 | 49 | 37 | 29 | 23 | 34 | 27 | 22 | 31 | 25 | 21 | 29 | 24 | 20 | 20 | 20 | 20 | 18 |
| 10 | 48 | 35 | 27 | 22 | 46 | 34 | 26 | 21 | 31 | 25 | 20 | 29 | 23 | 19 | 27 | 22 | 18 | 18 | 18 | 18 | 16 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13420 | 13420 | 13420 |
| 5° | 13425 | 12907 | 12668 |
| 10° | 13337 | 12375 | 12176 |
| 15° | 13233 | 11984 | 11627 |
| 20° | 12889 | 11441 | 11061 |
| 25° | 12625 | 10961 | 10527 |
| 30° | 12312 | 10433 | 10060 |
| 35° | 11967 | 9860 | 9655 |
| 40° | 11515 | 9370 | 9343 |
| 45° | 11089 | 8901 | 9065 |
| 50° | 10724 | 8617 | 8830 |
| 55° | 10294 | 8167 | 8648 |
| 60° | 9781 | 7889 | 8480 |
| 65° | 9132 | 7643 | 8353 |
| 70° | 8416 | 7449 | 8347 |
| 75° | 7478 | 7391 | 8371 |
| 80° | 6099 | 7383 | 8534 |
| 85° | 4377 | 7589 | 8727 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11089 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 358.1 | 2.3 |
| 10°-20° | 1023.1 | 6.4 |
| 20°-30° | 1536.3 | 9.7 |
| 30°-40° | 1844.9 | 11.6 |
| 40°-50° | 1951.4 | 12.3 |
| 50°-60° | 1880.5 | 11.8 |
| 60°-70° | 1668.4 | 10.5 |
| 70°-80° | 1368.2 | 8.6 |
| 80°-90° | 1059.0 | 6.7 |
| 90°-100° | 826.2 | 5.2 |
| 100°-110° | 657.7 | 4.1 |
| 110°-120° | 525.6 | 3.3 |
| 120°-130° | 414.6 | 2.6 |
| 130°-140° | 316.4 | 2.0 |
| 140°-150° | 222.5 | 1.4 |
| 150°-160° | 142.2 | 0.9 |
| 160°-170° | 79.7 | 0.5 |
| 170°-180° | 25.3 | 0.2 |
| 0°-30° | 2917.5 | 18.3 |
| 0°-40° | 4762.3 | 30.0 |
| 0°-60° | 8594.2 | 54.1 |
| 0°-90° | 12689.8 | 79.8 |
| 90°-120° | 2009.6 | 12.6 |
| 90°-150° | 2963.0 | 18.6 |
| 90°-180° | 3210.0 | 20.2 |
| 0°-180° | 15900.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3782 | 3782 | 3782 | 3782 | 3782 | |
| 5° | 3778 | 3789 | 3753 | 3780 | 3727 | 359 |
| 15° | 3628 | 3630 | 3617 | 3640 | 3630 | 1019 |
| 25° | 3264 | 3317 | 3330 | 3387 | 3376 | 1503 |
| 35° | 2813 | 2856 | 2923 | 3044 | 3084 | 1754 |
| 45° | 2268 | 2335 | 2494 | 2731 | 2796 | 1749 |
| 55° | 1726 | 1813 | 2086 | 2369 | 2492 | 1540 |
| 65° | 1149 | 1307 | 1703 | 2056 | 2164 | 1142 |
| 75° | 599 | 861 | 1356 | 1722 | 1859 | 633 |
| 85° | 140 | 525 | 1051 | 1430 | 1557 | 158 |
| 90° | 15 | 417 | 931 | 1295 | 1438 | 15 |
| 95° | 19 | 345 | 823 | 1182 | 1322 | 19 |
| 105° | 64 | 279 | 658 | 967 | 1092 | 67 |
| 115° | 123 | 273 | 546 | 789 | 891 | 119 |
| 125° | 171 | 277 | 470 | 647 | 717 | 151 |
| 135° | 201 | 269 | 421 | 548 | 590 | 156 |
| 145° | 218 | 248 | 347 | 459 | 486 | 137 |
| 155° | 241 | 254 | 286 | 360 | 402 | 111 |
| 165° | 286 | 279 | 269 | 262 | 326 | 80 |
| 175° | 313 | 302 | 269 | 220 | 140 | 29 |
| 180° | 256 | 256 | 256 | 256 | 256 | |



TEST NUMBER: P894843

CATALOG NUMBER: 8TMB-18HL-RNDU-UNV-L940

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3782.2 | 3782.2 | 3782.2 | 3782.2 | 3782.2 |
| 2.5° | 3790.7 | 3803.4 | 3750.5 | 3782.2 | 3759.0 |
| 5° | 3778.0 | 3788.6 | 3752.6 | 3780.1 | 3727.2 |
| 7.5° | 3773.8 | 3769.5 | 3725.1 | 3761.1 | 3712.4 |
| 10° | 3718.8 | 3733.6 | 3680.7 | 3729.4 | 3706.1 |
| 12.5° | 3672.2 | 3701.9 | 3655.3 | 3693.4 | 3644.7 |
| 15° | 3627.8 | 3629.9 | 3617.2 | 3640.5 | 3629.9 |
| 17.5° | 3553.8 | 3572.8 | 3543.2 | 3596.1 | 3577.1 |
| 20° | 3445.9 | 3505.1 | 3477.6 | 3526.3 | 3513.6 |
| 22.5° | 3357.1 | 3386.7 | 3409.9 | 3464.9 | 3448.0 |
| 25° | 3264.0 | 3316.9 | 3329.6 | 3386.7 | 3376.1 |
| 27.5° | 3168.8 | 3192.1 | 3240.7 | 3302.1 | 3304.2 |
| 30° | 3050.3 | 3075.7 | 3143.4 | 3213.2 | 3232.2 |
| 32.5° | 2910.7 | 2991.1 | 3031.3 | 3137.1 | 3166.7 |
| 35° | 2813.4 | 2855.7 | 2923.4 | 3044.0 | 3084.2 |
| 37.5° | 2686.5 | 2735.1 | 2826.1 | 2967.8 | 3016.5 |
| 40° | 2540.5 | 2612.5 | 2711.9 | 2887.4 | 2944.6 |
| 42.5° | 2394.6 | 2479.2 | 2595.5 | 2800.7 | 2866.3 |
| 45° | 2267.7 | 2335.3 | 2494.0 | 2730.9 | 2796.5 |
| 47.5° | 2130.2 | 2212.7 | 2413.6 | 2640.0 | 2714.0 |
| 50° | 2003.2 | 2087.8 | 2316.3 | 2555.3 | 2644.2 |
| 52.5° | 1850.9 | 1948.2 | 2210.5 | 2458.0 | 2561.7 |
| 55° | 1726.1 | 1812.9 | 2085.7 | 2369.2 | 2491.9 |
| 57.5° | 1588.6 | 1685.9 | 1988.4 | 2303.6 | 2415.7 |
| 60° | 1440.6 | 1563.2 | 1893.2 | 2221.1 | 2329.0 |
| 62.5° | 1294.6 | 1440.6 | 1795.9 | 2140.7 | 2246.5 |
| 65° | 1148.6 | 1307.3 | 1702.9 | 2056.1 | 2164.0 |
| 67.5° | 1017.5 | 1188.8 | 1618.2 | 1963.0 | 2096.3 |
| 70° | 869.4 | 1074.6 | 1518.8 | 1876.3 | 2015.9 |
| 72.5° | 729.8 | 970.9 | 1438.4 | 1806.5 | 1946.1 |
| 75° | 598.6 | 860.9 | 1355.9 | 1721.9 | 1859.4 |
| 77.5° | 467.5 | 757.3 | 1269.2 | 1645.7 | 1795.9 |
| 80° | 342.7 | 672.7 | 1193.1 | 1571.7 | 1715.5 |
| 82.5° | 236.9 | 598.6 | 1119.0 | 1510.4 | 1645.7 |
| 85° | 139.6 | 524.6 | 1051.3 | 1430.0 | 1556.9 |
| 87.5° | 63.5 | 465.4 | 981.5 | 1368.6 | 1493.4 |
| 90° | 14.8 | 416.7 | 930.8 | 1294.6 | 1438.4 |
| 92.5° | 14.8 | 378.6 | 869.4 | 1239.6 | 1370.7 |
| 95° | 19.0 | 344.8 | 822.9 | 1182.5 | 1322.1 |
| 97.5° | 25.4 | 319.4 | 780.6 | 1129.6 | 1252.3 |
| 100° | 36.0 | 302.5 | 734.0 | 1068.3 | 1188.8 |
| 102.5° | 48.7 | 289.8 | 691.7 | 1013.3 | 1125.4 |
| 105° | 63.5 | 279.2 | 657.9 | 966.7 | 1091.5 |
| 107.5° | 78.3 | 275.0 | 624.0 | 922.3 | 1028.1 |
| 110° | 93.1 | 272.9 | 598.6 | 875.8 | 994.2 |



TEST NUMBER: P894843
 CATALOG NUMBER: 8TMB-18HL-RNDU-UNV-L940

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 107.9 | 270.8 | 571.1 | 833.4 | 928.6 |
| 115° | 122.7 | 272.9 | 545.8 | 789.0 | 890.6 |
| 117.5° | 131.2 | 272.9 | 522.5 | 750.9 | 835.6 |
| 120° | 143.8 | 275.0 | 505.6 | 710.8 | 799.6 |
| 122.5° | 156.5 | 275.0 | 488.6 | 681.1 | 759.4 |
| 125° | 171.3 | 277.1 | 469.6 | 647.3 | 717.1 |
| 127.5° | 179.8 | 277.1 | 459.0 | 624.0 | 687.5 |
| 130° | 188.3 | 275.0 | 444.2 | 594.4 | 660.0 |
| 132.5° | 196.7 | 270.8 | 435.8 | 566.9 | 628.3 |
| 135° | 201.0 | 268.6 | 421.0 | 547.9 | 590.2 |
| 137.5° | 207.3 | 262.3 | 406.1 | 520.4 | 566.9 |
| 140° | 213.7 | 260.2 | 385.0 | 499.2 | 539.4 |
| 142.5° | 213.7 | 253.8 | 370.2 | 480.2 | 516.1 |
| 145° | 217.9 | 247.5 | 346.9 | 459.0 | 486.5 |
| 147.5° | 222.1 | 245.4 | 330.0 | 437.9 | 471.7 |
| 150° | 222.1 | 243.3 | 315.2 | 414.6 | 446.3 |
| 152.5° | 226.3 | 245.4 | 300.4 | 393.5 | 423.1 |
| 155° | 241.1 | 253.8 | 285.6 | 359.6 | 401.9 |
| 157.5° | 253.8 | 262.3 | 270.8 | 334.2 | 378.6 |
| 160° | 264.4 | 268.6 | 258.1 | 308.8 | 368.1 |
| 162.5° | 272.9 | 275.0 | 260.2 | 285.6 | 344.8 |
| 165° | 285.6 | 279.2 | 268.6 | 262.3 | 325.8 |
| 167.5° | 296.1 | 283.5 | 272.9 | 256.0 | 311.0 |
| 170° | 304.6 | 291.9 | 268.6 | 241.1 | 304.6 |
| 172.5° | 311.0 | 294.0 | 270.8 | 226.3 | 256.0 |
| 175° | 313.1 | 302.5 | 268.6 | 220.0 | 139.6 |
| 177.5° | 311.0 | 304.6 | 277.1 | 217.9 | 124.8 |
| 180° | 256.0 | 256.0 | 256.0 | 256.0 | 256.0 |



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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 | 16.09 | 17.40 | 16.73 | 18.07 | 18.83 | 19.58 | 20.89 | 20.22 | 21.55 | 22.32 |
| | 3H | 17.54 | 18.74 | 18.19 | 19.41 | 20.21 | 22.45 | 23.65 | 23.10 | 24.32 | 25.12 |
| | 4H | 18.01 | 19.15 | 18.68 | 19.84 | 20.65 | 23.93 | 25.07 | 24.60 | 25.76 | 26.57 |
| | 6H | 18.29 | 19.35 | 18.97 | 20.05 | 20.87 | 25.54 | 26.61 | 26.23 | 27.30 | 28.13 |
| | 8H | 18.35 | 19.37 | 19.04 | 20.08 | 20.91 | 26.40 | 27.42 | 27.10 | 28.14 | 28.97 |
| | 12H | 18.37 | 19.34 | 19.07 | 20.05 | 20.91 | 27.35 | 28.33 | 28.05 | 29.04 | 29.90 |
| 4H | 2H | 17.24 | 18.38 | 17.92 | 19.07 | 19.88 | 19.91 | 21.05 | 20.58 | 21.74 | 22.55 |
| | 3H | 18.94 | 19.92 | 19.63 | 20.64 | 21.47 | 23.01 | 23.99 | 23.70 | 24.71 | 25.54 |
| | 4H | 19.54 | 20.44 | 20.24 | 21.17 | 22.03 | 24.68 | 25.58 | 25.38 | 26.30 | 27.16 |
| | 6H | 19.95 | 20.75 | 20.67 | 21.50 | 22.36 | 26.49 | 27.29 | 27.21 | 28.03 | 28.90 |
| | 8H | 20.06 | 20.81 | 20.79 | 21.56 | 22.44 | 27.46 | 28.21 | 28.18 | 28.96 | 29.84 |
| | 12H | 20.12 | 20.81 | 20.86 | 21.57 | 22.46 | 28.53 | 29.22 | 29.28 | 29.99 | 30.87 |
| 8H | 4H | 20.59 | 21.34 | 21.32 | 22.09 | 22.97 | 24.86 | 25.61 | 25.58 | 26.35 | 27.23 |
| | 6H | 21.24 | 21.88 | 21.99 | 22.66 | 23.55 | 26.84 | 27.48 | 27.59 | 28.27 | 29.15 |
| | 8H | 21.46 | 22.04 | 22.23 | 22.83 | 23.72 | 27.96 | 28.54 | 28.72 | 29.32 | 30.22 |
| | 12H | 21.61 | 22.13 | 22.38 | 22.91 | 23.86 | 29.22 | 29.74 | 29.99 | 30.52 | 31.47 |
| 12H | 4H | 20.93 | 21.62 | 21.68 | 22.39 | 23.27 | 24.85 | 25.54 | 25.60 | 26.31 | 27.19 |
| | 6H | 21.74 | 22.32 | 22.50 | 23.11 | 24.00 | 26.87 | 27.45 | 27.64 | 28.24 | 29.13 |
| | 8H | 22.09 | 22.61 | 22.86 | 23.38 | 24.34 | 28.05 | 28.57 | 28.82 | 29.35 | 30.30 |