

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: P892469

Luminaire Tested: 2MB-2SL-A-UNV-L830

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P892469  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-2SL-A-UNV-L830  
Description: 2000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

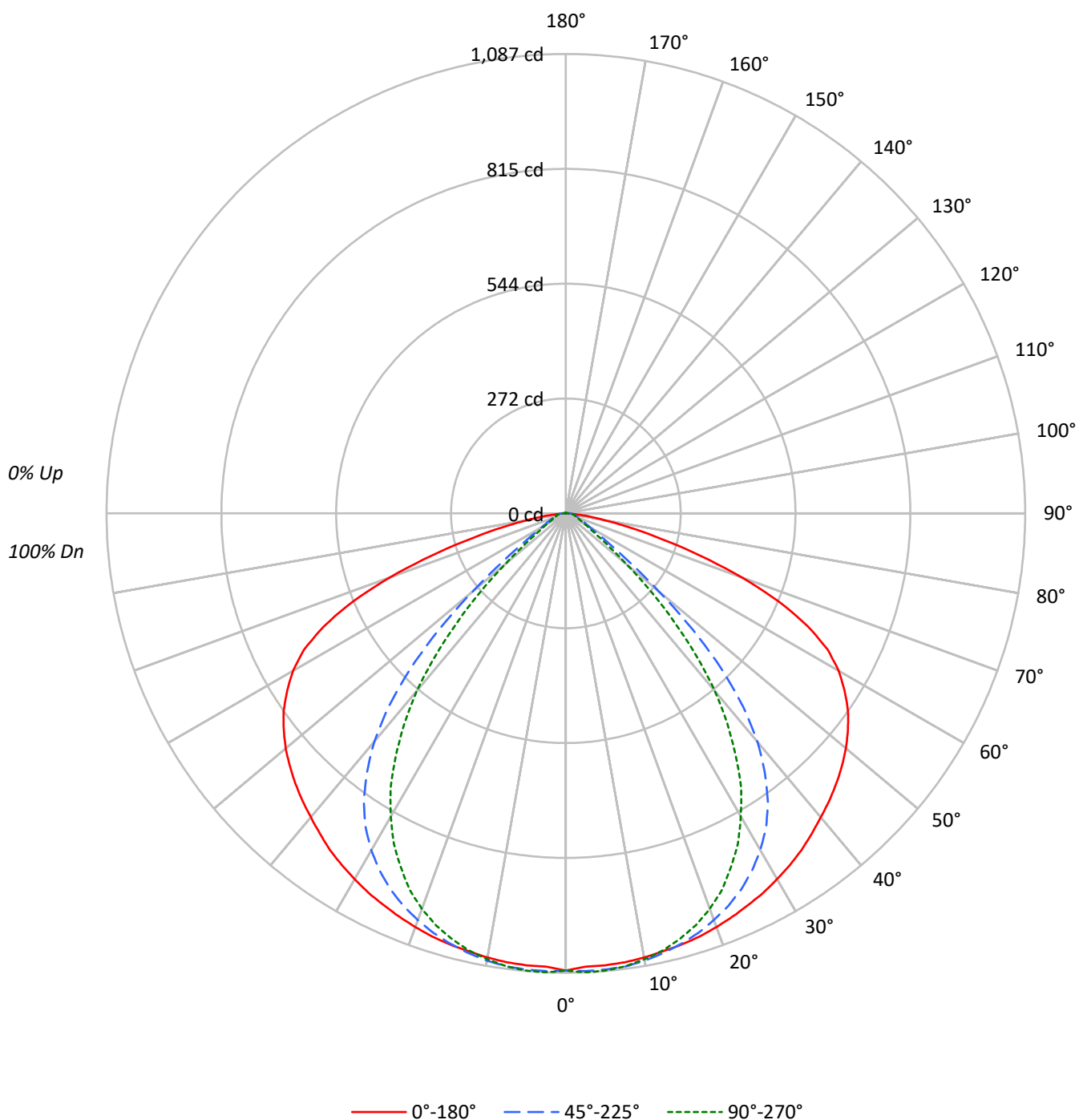
Lumens per Lamp: N/A  
Luminaire Lumens: 2269.0 lumens  
Efficiency: N/A  
Efficacy: 152.3 lumens/watt  
Spacing Criteria (0/90/45): 1.39 / 1.15 / 1.25  
Luminous Opening: Rectangular (W 0.27' x L: 1.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.92  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

### Luminous Intensity Polar Plot



TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

**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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 | 100 |
| 1   | 111 | 107 | 103 | 100 | 108 | 105 | 101 | 99  | 100 | 98  | 95  |  | 97  | 94  | 93  |  | 93  | 91  | 90  | 88  |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 84  | 90  | 86  | 82  |  | 87  | 84  | 80  |  | 84  | 81  | 79  | 77  |
| 3   | 95  | 86  | 79  | 74  | 93  | 84  | 78  | 73  | 82  | 76  | 72  |  | 79  | 74  | 70  |  | 76  | 73  | 69  | 67  |
| 4   | 88  | 78  | 70  | 64  | 86  | 76  | 69  | 64  | 74  | 68  | 63  |  | 72  | 66  | 62  |  | 70  | 65  | 61  | 59  |
| 5   | 82  | 70  | 62  | 57  | 80  | 69  | 62  | 56  | 67  | 61  | 56  |  | 65  | 60  | 55  |  | 63  | 59  | 55  | 53  |
| 6   | 76  | 64  | 56  | 50  | 74  | 63  | 56  | 50  | 61  | 55  | 50  |  | 60  | 54  | 49  |  | 58  | 53  | 49  | 47  |
| 7   | 71  | 59  | 51  | 45  | 69  | 58  | 50  | 45  | 56  | 50  | 45  |  | 55  | 49  | 44  |  | 54  | 48  | 44  | 42  |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 45  | 40  |  | 51  | 45  | 40  |  | 50  | 44  | 40  | 38  |
| 9   | 62  | 50  | 42  | 37  | 61  | 49  | 42  | 37  | 48  | 41  | 37  |  | 47  | 41  | 37  |  | 46  | 40  | 36  | 35  |
| 10  | 58  | 46  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 38  | 34  |  | 44  | 38  | 33  |  | 43  | 37  | 33  | 32  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 22154 | 22154 | 22154 |
| 5°  | 22063 | 22267 | 22324 |
| 10° | 22188 | 22348 | 22275 |
| 15° | 22397 | 22352 | 22098 |
| 20° | 22699 | 22316 | 21699 |
| 25° | 23088 | 22180 | 20874 |
| 30° | 23630 | 21762 | 19577 |
| 35° | 24312 | 20838 | 17541 |
| 40° | 25092 | 18853 | 14667 |
| 45° | 26204 | 15113 | 10457 |
| 50° | 27568 | 9190  | 5998  |
| 55° | 29106 | 4430  | 3224  |
| 60° | 30530 | 2715  | 2195  |
| 65° | 30583 | 2185  | 1812  |
| 70° | 26474 | 1982  | 1688  |
| 75° | 18640 | 2010  | 1843  |
| 80° | 10978 | 2417  | 2323  |
| 85° | 5145  | 3642  | 3477  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 62.5°

Luminance: 30962 cd/sqm

TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 103.1  | 4.5       |
| 10°-20°   | 297.5  | 13.1      |
| 20°-30°   | 450.2  | 19.8      |
| 30°-40°   | 520.0  | 22.9      |
| 40°-50°   | 444.6  | 19.6      |
| 50°-60°   | 242.9  | 10.7      |
| 60°-70°   | 122.7  | 5.4       |
| 70°-80°   | 59.6   | 2.6       |
| 80°-90°   | 20.5   | 0.9       |
| 90°-100°  | 4.9    | 0.2       |
| 100°-110° | 0.8    | 0.0       |
| 110°-120° | 0.3    | 0.0       |
| 120°-130° | 0.3    | 0.0       |
| 130°-140° | 0.5    | 0.0       |
| 140°-150° | 0.4    | 0.0       |
| 150°-160° | 0.4    | 0.0       |
| 160°-170° | 0.3    | 0.0       |
| 170°-180° | 0.1    | 0.0       |
| <hr/>     |        |           |
| 0°-30°    | 850.8  | 37.5      |
| 0°-40°    | 1370.7 | 60.4      |
| 0°-60°    | 2058.2 | 90.7      |
| 0°-90°    | 2260.9 | 99.6      |
| 90°-120°  | 6.0    | 0.3       |
| 90°-150°  | 7.2    | 0.3       |
| 90°-180°  | 8.0    | 0.4       |
| 0°-180°   | 2269.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1082 | 1082  | 1082 | 1082  | 1082 |      |
| 5°   | 1073 | 1082  | 1083 | 1088  | 1086 | 102  |
| 15°  | 1056 | 1063  | 1054 | 1049  | 1042 | 299  |
| 25°  | 1022 | 1016  | 982  | 944   | 924  | 472  |
| 35°  | 973  | 939   | 834  | 736   | 702  | 609  |
| 45°  | 905  | 790   | 522  | 388   | 361  | 699  |
| 55°  | 815  | 374   | 124  | 97    | 90   | 727  |
| 65°  | 631  | 70    | 45   | 40    | 37   | 611  |
| 75°  | 236  | 39    | 25   | 25    | 23   | 261  |
| 85°  | 22   | 22    | 16   | 16    | 15   | 34   |
| 90°  | 0    | 13    | 10   | 10    | 9    | 1    |
| 95°  | 0    | 1     | 4    | 6     | 6    | 0    |
| 105° | 0    | 0     | 1    | 1     | 1    | 0    |
| 115° | 0    | 0     | 0    | 1     | 1    | 0    |
| 125° | 0    | 0     | 1    | 1     | 0    | 0    |
| 135° | 1    | 1     | 1    | 1     | 1    | 0    |
| 145° | 1    | 1     | 1    | 1     | 1    | 0    |
| 155° | 1    | 1     | 1    | 1     | 1    | 0    |
| 165° | 1    | 1     | 1    | 1     | 1    | 0    |
| 175° | 1    | 1     | 1    | 1     | 1    | 0    |
| 180° | 1    | 1     | 1    | 1     | 1    |      |

TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1081.9 | 1081.9 | 1081.9 | 1081.9 | 1081.9 |
| 2.5°   | 1073.4 | 1081.2 | 1084.0 | 1088.9 | 1086.8 |
| 5°     | 1073.4 | 1081.9 | 1083.3 | 1087.5 | 1086.1 |
| 7.5°   | 1071.3 | 1079.1 | 1081.2 | 1083.3 | 1080.5 |
| 10°    | 1067.1 | 1074.8 | 1074.8 | 1074.8 | 1071.3 |
| 12.5°  | 1061.4 | 1069.9 | 1065.7 | 1062.9 | 1059.3 |
| 15°    | 1056.5 | 1062.9 | 1054.4 | 1049.4 | 1042.4 |
| 17.5°  | 1050.2 | 1055.1 | 1041.0 | 1031.1 | 1021.9 |
| 20°    | 1041.7 | 1043.8 | 1024.1 | 1005.7 | 995.8  |
| 22.5°  | 1032.5 | 1030.4 | 1005.0 | 978.2  | 964.8  |
| 25°    | 1021.9 | 1016.3 | 981.7  | 943.7  | 923.9  |
| 27.5°  | 1012.1 | 1000.1 | 953.5  | 902.0  | 881.6  |
| 30°    | 999.4  | 983.2  | 920.4  | 855.5  | 828.0  |
| 32.5°  | 986.7  | 962.7  | 881.6  | 802.6  | 772.3  |
| 35°    | 972.6  | 939.4  | 833.6  | 736.3  | 701.7  |
| 37.5°  | 955.6  | 910.5  | 773.7  | 664.4  | 627.7  |
| 40°    | 938.7  | 876.7  | 705.3  | 581.1  | 548.7  |
| 42.5°  | 922.5  | 838.6  | 621.3  | 488.1  | 456.3  |
| 45°    | 904.9  | 789.9  | 521.9  | 387.9  | 361.1  |
| 47.5°  | 885.8  | 722.9  | 406.9  | 294.1  | 271.5  |
| 50°    | 865.4  | 636.2  | 288.5  | 205.9  | 188.3  |
| 52.5°  | 841.4  | 516.3  | 190.4  | 138.9  | 127.7  |
| 55°    | 815.3  | 374.5  | 124.1  | 96.6   | 90.3   |
| 57.5°  | 782.2  | 244.0  | 87.5   | 71.9   | 67.0   |
| 60°    | 745.5  | 146.0  | 66.3   | 57.1   | 53.6   |
| 62.5°  | 698.2  | 94.5   | 53.6   | 48.0   | 43.7   |
| 65°    | 631.2  | 69.8   | 45.1   | 40.2   | 37.4   |
| 67.5°  | 546.6  | 57.8   | 38.1   | 34.6   | 31.7   |
| 70°    | 442.2  | 50.8   | 33.1   | 30.3   | 28.2   |
| 72.5°  | 334.3  | 44.4   | 28.9   | 26.8   | 25.4   |
| 75°    | 235.6  | 38.8   | 25.4   | 24.7   | 23.3   |
| 77.5°  | 154.5  | 33.9   | 23.3   | 22.6   | 21.9   |
| 80°    | 93.1   | 28.9   | 20.5   | 20.5   | 19.7   |
| 82.5°  | 52.2   | 25.4   | 18.3   | 18.3   | 16.9   |
| 85°    | 21.9   | 21.9   | 15.5   | 15.5   | 14.8   |
| 87.5°  | 6.3    | 16.9   | 12.7   | 12.7   | 11.3   |
| 90°    | 0.0    | 12.7   | 9.9    | 9.9    | 9.2    |
| 92.5°  | 0.0    | 7.1    | 7.1    | 7.8    | 7.1    |
| 95°    | 0.0    | 1.4    | 4.2    | 6.3    | 5.6    |
| 97.5°  | 0.0    | 0.7    | 2.8    | 4.9    | 4.2    |
| 100°   | 0.0    | 0.0    | 1.4    | 3.5    | 2.8    |
| 102.5° | 0.0    | 0.0    | 0.7    | 2.1    | 2.1    |
| 105°   | 0.0    | 0.0    | 0.7    | 1.4    | 0.7    |
| 107.5° | 0.0    | 0.0    | 0.7    | 0.7    | 0.7    |
| 110°   | 0.0    | 0.0    | 0.7    | 0.7    | 0.7    |



TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.0   | 0.7 | 0.7   | 0.7 |
| 115°   | 0.0 | 0.0   | 0.0 | 0.7   | 0.7 |
| 117.5° | 0.0 | 0.0   | 0.0 | 0.7   | 0.0 |
| 120°   | 0.0 | 0.0   | 0.0 | 0.7   | 0.0 |
| 122.5° | 0.0 | 0.0   | 0.0 | 0.7   | 0.0 |
| 125°   | 0.0 | 0.0   | 0.7 | 0.7   | 0.0 |
| 127.5° | 0.0 | 0.0   | 0.7 | 0.7   | 0.7 |
| 130°   | 0.0 | 0.0   | 0.7 | 0.7   | 0.7 |
| 132.5° | 0.7 | 0.0   | 0.7 | 0.7   | 0.7 |
| 135°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 137.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 140°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 142.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 145°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 147.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 150°   | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 152.5° | 0.7 | 0.7   | 0.7 | 0.7   | 0.7 |
| 155°   | 0.7 | 0.7   | 0.7 | 1.4   | 0.7 |
| 157.5° | 0.7 | 0.7   | 0.7 | 1.4   | 0.7 |
| 160°   | 0.7 | 0.7   | 0.7 | 1.4   | 0.7 |
| 162.5° | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 165°   | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 167.5° | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 170°   | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 172.5° | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 175°   | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 177.5° | 0.7 | 0.7   | 1.4 | 1.4   | 1.4 |
| 180°   | 1.4 | 1.4   | 1.4 | 1.4   | 1.4 |

TEST NUMBER: P892469

CATALOG NUMBER: 2MB-2SL-A-UNV-L830

**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 | 20.93            | 22.35 | 21.30 | 22.67 | 22.99 | 10.05          | 11.46 | 10.42 | 11.78 | 12.11 |
|                 | 3H   | 23.71            | 24.97 | 24.10 | 25.31 | 25.68 | 11.06          | 12.31 | 11.44 | 12.65 | 13.02 |
|                 | 4H   | 24.54            | 25.72 | 24.95 | 26.08 | 26.47 | 11.61          | 12.79 | 12.02 | 13.14 | 13.53 |
|                 | 6H   | 24.94            | 26.02 | 25.36 | 26.40 | 26.80 | 12.31          | 13.39 | 12.73 | 13.77 | 14.17 |
|                 | 8H   | 25.01            | 26.04 | 25.45 | 26.44 | 26.85 | 12.68          | 13.71 | 13.12 | 14.11 | 14.52 |
|                 | 12H  | 25.03            | 26.01 | 25.47 | 26.40 | 26.84 | 13.10          | 14.08 | 13.54 | 14.47 | 14.91 |
| 4H              | 2H   | 20.75            | 21.93 | 21.16 | 22.28 | 22.67 | 10.48          | 11.66 | 10.89 | 12.01 | 12.40 |
|                 | 3H   | 23.55            | 24.51 | 23.96 | 24.92 | 25.33 | 11.76          | 12.72 | 12.18 | 13.13 | 13.54 |
|                 | 4H   | 24.38            | 25.24 | 24.82 | 25.67 | 26.12 | 12.49          | 13.36 | 12.93 | 13.78 | 14.23 |
|                 | 6H   | 24.85            | 25.60 | 25.32 | 26.05 | 26.52 | 13.41          | 14.16 | 13.88 | 14.61 | 15.08 |
|                 | 8H   | 24.96            | 25.66 | 25.44 | 26.11 | 26.59 | 13.89          | 14.59 | 14.37 | 15.04 | 15.52 |
|                 | 12H  | 25.02            | 25.64 | 25.51 | 26.12 | 26.61 | 14.44          | 15.06 | 14.93 | 15.55 | 16.03 |
| 8H              | 4H   | 24.27            | 24.97 | 24.75 | 25.42 | 25.90 | 12.94          | 13.63 | 13.41 | 14.09 | 14.56 |
|                 | 6H   | 24.75            | 25.32 | 25.25 | 25.82 | 26.31 | 14.05          | 14.63 | 14.56 | 15.13 | 15.62 |
|                 | 8H   | 24.88            | 25.40 | 25.40 | 25.92 | 26.41 | 14.70          | 15.21 | 15.22 | 15.73 | 16.23 |
|                 | 12H  | 24.97            | 25.44 | 25.49 | 25.94 | 26.51 | 15.43          | 15.90 | 15.95 | 16.40 | 16.97 |
| 12H             | 4H   | 24.24            | 24.86 | 24.73 | 25.34 | 25.83 | 13.10          | 13.72 | 13.59 | 14.21 | 14.69 |
|                 | 6H   | 24.70            | 25.22 | 25.22 | 25.73 | 26.23 | 14.27          | 14.79 | 14.79 | 15.30 | 15.80 |
|                 | 8H   | 24.86            | 25.32 | 25.37 | 25.82 | 26.39 | 15.00          | 15.46 | 15.52 | 15.96 | 16.54 |