

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: P894118

Luminaire Tested: 4MB-SC3-AOL-UNV-CC83-HI-4000K

Issue Date: 11/11/2024

**Test Information**

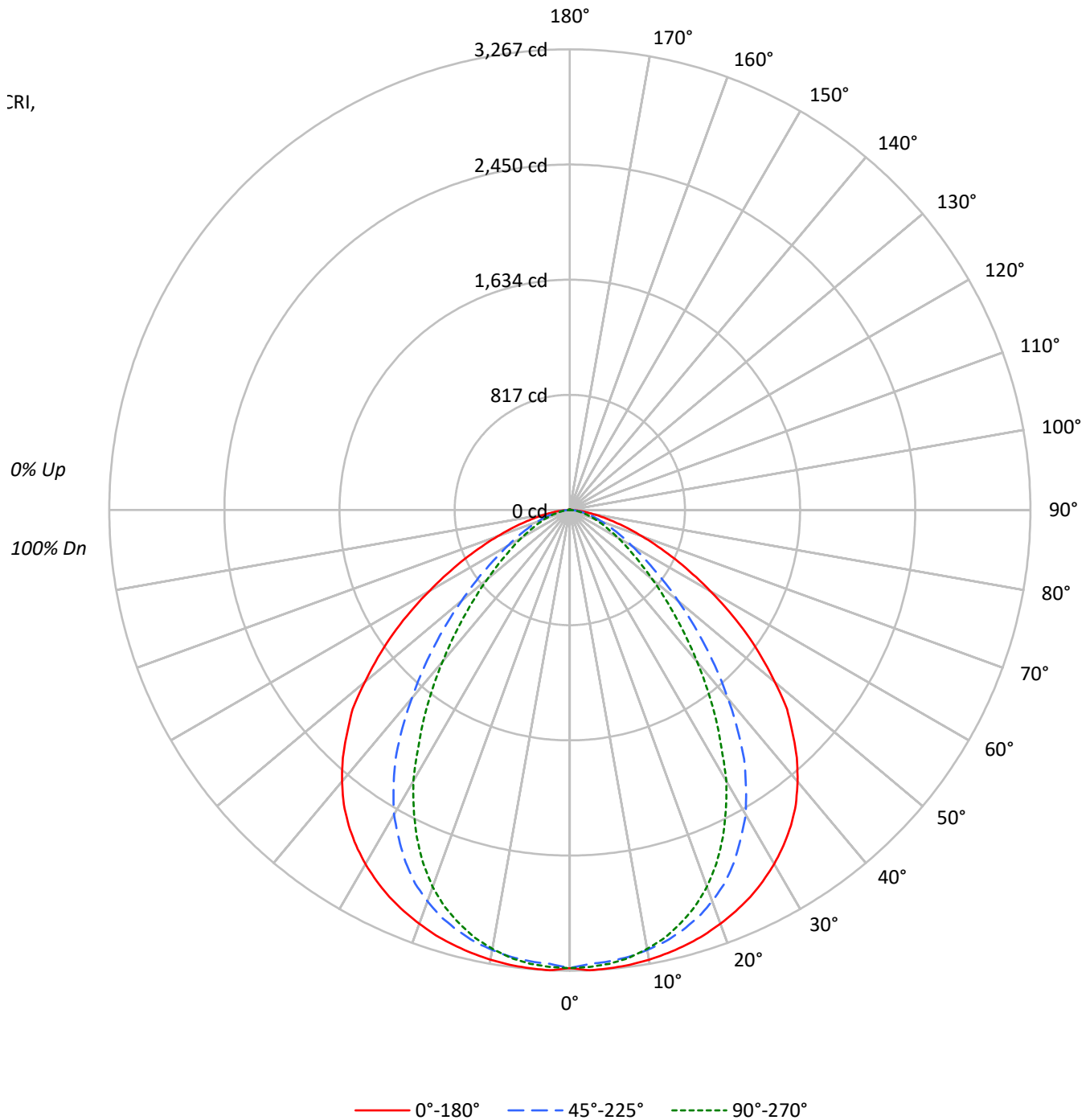
Test Method: LM-79-2019  
Report Number: P894118  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-AOL-UNV-CC83-HI-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 800  
4000K CCT, HI lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6489.1 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16  
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 50.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.39961257980444  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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CATALOG NUMBER: 4MB-SC3-AOL-UNV-CC83-HI-4000K

### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 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   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 89  | 89  | 89  | 87  |
| 2   | 102 | 95  | 89  | 85  | 100 | 93  | 88  | 84  | 90  | 85  | 82  | 87  | 83  | 80  | 84  | 81  | 78  | 78  | 78  | 78  | 76  |
| 3   | 94  | 85  | 78  | 73  | 92  | 84  | 77  | 72  | 81  | 75  | 71  | 78  | 73  | 70  | 76  | 72  | 68  | 68  | 68  | 68  | 66  |
| 4   | 87  | 77  | 69  | 63  | 85  | 76  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 60  | 60  | 60  | 58  |
| 5   | 81  | 70  | 62  | 56  | 79  | 69  | 61  | 55  | 66  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 54  | 54  | 54  | 54  | 52  |
| 6   | 75  | 63  | 55  | 50  | 74  | 63  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 48  | 48  | 48  | 46  |
| 7   | 70  | 58  | 50  | 45  | 69  | 57  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 43  | 43  | 43  | 43  | 42  |
| 8   | 66  | 53  | 46  | 40  | 64  | 53  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 49  | 44  | 39  | 39  | 39  | 39  | 38  |
| 9   | 62  | 49  | 42  | 37  | 60  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 36  | 36  | 36  | 34  |
| 10  | 58  | 46  | 38  | 34  | 57  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 43  | 37  | 33  | 33  | 33  | 33  | 31  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 33082 | 33082 | 33082 |
| 5°  | 33352 | 32847 | 33019 |
| 10° | 33486 | 32764 | 32678 |
| 15° | 33660 | 32530 | 31990 |
| 20° | 33842 | 32004 | 30823 |
| 25° | 34031 | 30964 | 28827 |
| 30° | 34091 | 29335 | 26102 |
| 35° | 33980 | 26796 | 22452 |
| 40° | 33412 | 23191 | 18658 |
| 45° | 32170 | 19487 | 15098 |
| 50° | 30103 | 15871 | 12092 |
| 55° | 27200 | 12756 | 9696  |
| 60° | 23460 | 10382 | 8029  |
| 65° | 19849 | 8646  | 6603  |
| 70° | 16204 | 7352  | 5604  |
| 75° | 12981 | 6197  | 4765  |
| 80° | 10111 | 5302  | 4100  |
| 85° | 7841  | 4686  | 3704  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 32170 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 307.6  | 4.7       |
| 10°-20°   | 875.4  | 13.5      |
| 20°-30°   | 1275.9 | 19.7      |
| 30°-40°   | 1375.3 | 21.2      |
| 40°-50°   | 1152.9 | 17.8      |
| 50°-60°   | 780.5  | 12.0      |
| 60°-70°   | 445.1  | 6.9       |
| 70°-80°   | 203.6  | 3.1       |
| 80°-90°   | 53.3   | 0.8       |
| 90°-100°  | 6.6    | 0.1       |
| 100°-110° | 4.5    | 0.1       |
| 110°-120° | 2.4    | 0.0       |
| 120°-130° | 1.4    | 0.0       |
| 130°-140° | 1.4    | 0.0       |
| 140°-150° | 1.2    | 0.0       |
| 150°-160° | 1.0    | 0.0       |
| 160°-170° | 0.7    | 0.0       |
| 170°-180° | 0.3    | 0.0       |
| 0°-30°    | 2458.9 | 37.9      |
| 0°-40°    | 3834.1 | 59.1      |
| 0°-60°    | 5767.6 | 88.9      |
| 0°-90°    | 6469.5 | 99.7      |
| 90°-120°  | 13.5   | 0.2       |
| 90°-150°  | 17.5   | 0.3       |
| 90°-180°  | 20.0   | 0.3       |
| 0°-180°   | 6489.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 3248 | 3248  | 3248 | 3248  | 3248 |      |
| 5°   | 3262 | 3252  | 3213 | 3239  | 3230 | 311  |
| 15°  | 3192 | 3164  | 3085 | 3065  | 3034 | 902  |
| 25°  | 3028 | 2948  | 2756 | 2629  | 2565 | 1395 |
| 35°  | 2733 | 2527  | 2155 | 1892  | 1806 | 1706 |
| 45°  | 2234 | 1864  | 1353 | 1115  | 1048 | 1719 |
| 55°  | 1532 | 1121  | 718  | 582   | 546  | 1364 |
| 65°  | 824  | 573   | 359  | 291   | 274  | 822  |
| 75°  | 330  | 242   | 158  | 129   | 121  | 360  |
| 85°  | 67   | 57    | 40   | 34    | 32   | 78   |
| 90°  | 9    | 9     | 6    | 5     | 4    | 9    |
| 95°  | 14   | 8     | 5    | 3     | 3    | 11   |
| 105° | 9    | 6     | 3    | 2     | 1    | 10   |
| 115° | 5    | 4     | 2    | 1     | 1    | 5    |
| 125° | 2    | 2     | 2    | 1     | 1    | 2    |
| 135° | 1    | 2     | 2    | 2     | 1    | 1    |
| 145° | 2    | 2     | 2    | 2     | 2    | 1    |
| 155° | 2    | 2     | 2    | 3     | 3    | 1    |
| 165° | 2    | 3     | 3    | 3     | 3    | 1    |
| 175° | 3    | 3     | 3    | 4     | 4    | 0    |
| 180° | 3    | 3     | 3    | 3     | 3    |      |



TEST NUMBER: P894118

CATALOG NUMBER: 4MB-SC3-AOL-UNV-CC83-HI-4000K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 3248.4 | 3248.4 | 3248.4 | 3248.4 | 3248.4 |
| 2.5°   | 3267.0 | 3258.6 | 3221.4 | 3252.1 | 3242.8 |
| 5°     | 3262.4 | 3252.1 | 3213.0 | 3239.1 | 3229.8 |
| 7.5°   | 3253.1 | 3240.0 | 3196.2 | 3215.8 | 3203.7 |
| 10°    | 3238.1 | 3222.3 | 3168.3 | 3179.4 | 3159.9 |
| 12.5°  | 3217.6 | 3198.1 | 3133.8 | 3131.0 | 3107.7 |
| 15°    | 3192.5 | 3164.5 | 3085.3 | 3064.8 | 3034.1 |
| 17.5°  | 3161.7 | 3126.3 | 3027.6 | 2986.5 | 2949.3 |
| 20°    | 3122.6 | 3076.9 | 2953.0 | 2887.8 | 2844.0 |
| 22.5°  | 3077.9 | 3016.4 | 2866.3 | 2762.0 | 2714.5 |
| 25°    | 3028.5 | 2948.3 | 2755.5 | 2628.7 | 2565.4 |
| 27.5°  | 2967.0 | 2866.3 | 2626.9 | 2462.9 | 2397.6 |
| 30°    | 2899.0 | 2771.3 | 2494.5 | 2284.9 | 2219.6 |
| 32.5°  | 2821.6 | 2662.3 | 2325.9 | 2092.9 | 2001.6 |
| 35°    | 2733.1 | 2527.2 | 2155.3 | 1891.6 | 1805.9 |
| 37.5°  | 2633.4 | 2386.4 | 1951.3 | 1688.5 | 1601.8 |
| 40°    | 2513.2 | 2219.6 | 1744.4 | 1484.4 | 1403.4 |
| 42.5°  | 2383.6 | 2050.0 | 1545.9 | 1290.6 | 1220.7 |
| 45°    | 2233.6 | 1863.7 | 1353.0 | 1115.4 | 1048.3 |
| 47.5°  | 2089.2 | 1675.4 | 1172.3 | 955.1  | 900.2  |
| 50°    | 1900.0 | 1475.1 | 1001.7 | 808.8  | 763.2  |
| 52.5°  | 1715.5 | 1289.7 | 856.4  | 691.4  | 648.6  |
| 55°    | 1531.9 | 1121.0 | 718.4  | 582.4  | 546.1  |
| 57.5°  | 1338.1 | 956.1  | 604.8  | 492.9  | 468.7  |
| 60°    | 1151.8 | 813.5  | 509.7  | 413.7  | 394.2  |
| 62.5°  | 981.2  | 682.1  | 431.4  | 349.4  | 330.8  |
| 65°    | 823.7  | 573.1  | 358.8  | 290.7  | 274.0  |
| 67.5°  | 674.7  | 471.5  | 299.1  | 242.3  | 230.2  |
| 70°    | 544.2  | 382.1  | 246.9  | 199.4  | 188.2  |
| 72.5°  | 431.4  | 305.6  | 197.6  | 163.1  | 151.0  |
| 75°    | 329.9  | 242.3  | 157.5  | 128.6  | 121.1  |
| 77.5°  | 246.0  | 182.6  | 121.1  | 98.8   | 93.2   |
| 80°    | 172.4  | 132.3  | 90.4   | 74.5   | 69.9   |
| 82.5°  | 117.4  | 91.3   | 63.4   | 52.2   | 49.4   |
| 85°    | 67.1   | 56.8   | 40.1   | 33.5   | 31.7   |
| 87.5°  | 34.5   | 29.8   | 21.4   | 15.8   | 14.0   |
| 90°    | 9.3    | 9.3    | 5.6    | 4.7    | 3.7    |
| 92.5°  | 14.9   | 8.4    | 5.6    | 3.7    | 2.8    |
| 95°    | 14.0   | 8.4    | 4.7    | 2.8    | 2.8    |
| 97.5°  | 13.0   | 8.4    | 3.7    | 2.8    | 1.9    |
| 100°   | 12.1   | 7.5    | 3.7    | 1.9    | 1.9    |
| 102.5° | 11.2   | 7.5    | 3.7    | 1.9    | 1.9    |
| 105°   | 9.3    | 6.5    | 2.8    | 1.9    | 0.9    |
| 107.5° | 8.4    | 5.6    | 2.8    | 1.9    | 0.9    |
| 110°   | 6.5    | 4.7    | 2.8    | 1.9    | 0.9    |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 5.6 | 4.7   | 1.9 | 1.9   | 0.9 |
| 115°   | 4.7 | 3.7   | 1.9 | 0.9   | 0.9 |
| 117.5° | 3.7 | 2.8   | 1.9 | 0.9   | 0.9 |
| 120°   | 2.8 | 2.8   | 1.9 | 0.9   | 0.9 |
| 122.5° | 2.8 | 1.9   | 1.9 | 0.9   | 0.9 |
| 125°   | 1.9 | 1.9   | 1.9 | 0.9   | 0.9 |
| 127.5° | 1.9 | 1.9   | 1.9 | 0.9   | 0.9 |
| 130°   | 1.9 | 1.9   | 1.9 | 0.9   | 0.9 |
| 132.5° | 1.9 | 1.9   | 1.9 | 1.9   | 0.9 |
| 135°   | 0.9 | 1.9   | 1.9 | 1.9   | 0.9 |
| 137.5° | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 140°   | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 142.5° | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 145°   | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 147.5° | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 150°   | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 152.5° | 1.9 | 1.9   | 1.9 | 1.9   | 1.9 |
| 155°   | 1.9 | 1.9   | 1.9 | 2.8   | 2.8 |
| 157.5° | 1.9 | 1.9   | 2.8 | 2.8   | 2.8 |
| 160°   | 1.9 | 1.9   | 2.8 | 2.8   | 2.8 |
| 162.5° | 1.9 | 1.9   | 2.8 | 2.8   | 2.8 |
| 165°   | 1.9 | 2.8   | 2.8 | 2.8   | 2.8 |
| 167.5° | 1.9 | 2.8   | 2.8 | 2.8   | 3.7 |
| 170°   | 1.9 | 2.8   | 2.8 | 3.7   | 3.7 |
| 172.5° | 1.9 | 2.8   | 2.8 | 3.7   | 3.7 |
| 175°   | 2.8 | 2.8   | 2.8 | 3.7   | 3.7 |
| 177.5° | 2.8 | 2.8   | 2.8 | 3.7   | 3.7 |
| 180°   | 2.8 | 2.8   | 2.8 | 2.8   | 2.8 |



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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 | 22.53            | 23.96 | 22.90 | 24.28 | 24.61 | 17.37          | 18.81 | 17.74 | 19.13 | 19.45 |
|                 | 3H   | 23.83            | 25.12 | 24.22 | 25.45 | 25.82 | 18.38          | 19.66 | 18.76 | 20.00 | 20.37 |
|                 | 4H   | 24.26            | 25.46 | 24.66 | 25.81 | 26.20 | 18.72          | 19.91 | 19.12 | 20.27 | 20.66 |
|                 | 6H   | 24.52            | 25.63 | 24.94 | 26.00 | 26.40 | 18.94          | 20.05 | 19.36 | 20.42 | 20.82 |
|                 | 8H   | 24.60            | 25.65 | 25.03 | 26.04 | 26.45 | 19.01          | 20.06 | 19.44 | 20.45 | 20.86 |
|                 | 12H  | 24.63            | 25.64 | 25.07 | 26.03 | 26.46 | 19.05          | 20.06 | 19.49 | 20.44 | 20.88 |
| 4H              | 2H   | 22.52            | 23.72 | 22.93 | 24.08 | 24.47 | 17.99          | 19.19 | 18.40 | 19.55 | 19.93 |
|                 | 3H   | 23.99            | 24.98 | 24.41 | 25.38 | 25.79 | 19.19          | 20.18 | 19.61 | 20.58 | 20.99 |
|                 | 4H   | 24.51            | 25.40 | 24.95 | 25.82 | 26.27 | 19.60          | 20.49 | 20.04 | 20.91 | 21.36 |
|                 | 6H   | 24.89            | 25.66 | 25.36 | 26.11 | 26.58 | 19.91          | 20.68 | 20.38 | 21.13 | 21.60 |
|                 | 8H   | 25.00            | 25.72 | 25.47 | 26.17 | 26.65 | 20.01          | 20.73 | 20.48 | 21.18 | 21.65 |
|                 | 12H  | 25.08            | 25.72 | 25.57 | 26.20 | 26.68 | 20.08          | 20.72 | 20.57 | 21.20 | 21.68 |
| 8H              | 4H   | 24.50            | 25.21 | 24.97 | 25.66 | 26.14 | 19.94          | 20.66 | 20.41 | 21.11 | 21.58 |
|                 | 6H   | 24.93            | 25.52 | 25.43 | 26.02 | 26.50 | 20.33          | 20.92 | 20.84 | 21.42 | 21.91 |
|                 | 8H   | 25.08            | 25.61 | 25.61 | 26.13 | 26.63 | 20.47          | 21.00 | 20.99 | 21.52 | 22.02 |
|                 | 12H  | 25.21            | 25.68 | 25.73 | 26.18 | 26.76 | 20.60          | 21.06 | 21.11 | 21.56 | 22.14 |
| 12H             | 4H   | 24.47            | 25.11 | 24.96 | 25.59 | 26.07 | 19.98          | 20.62 | 20.47 | 21.11 | 21.59 |
|                 | 6H   | 24.89            | 25.42 | 25.42 | 25.94 | 26.44 | 20.40          | 20.93 | 20.92 | 21.45 | 21.94 |
|                 | 8H   | 25.08            | 25.55 | 25.60 | 26.05 | 26.63 | 20.59          | 21.06 | 21.11 | 21.56 | 22.13 |