

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: P894104

Luminaire Tested: 4MB-SC3-ACL-UNV-CC83-LOW-5000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-SC3-ACL-UNV-CC83-LOW-5000K
Description: Selectable 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K CC
LOW lumen setting
Light Source: -
Ballast/Driver: -

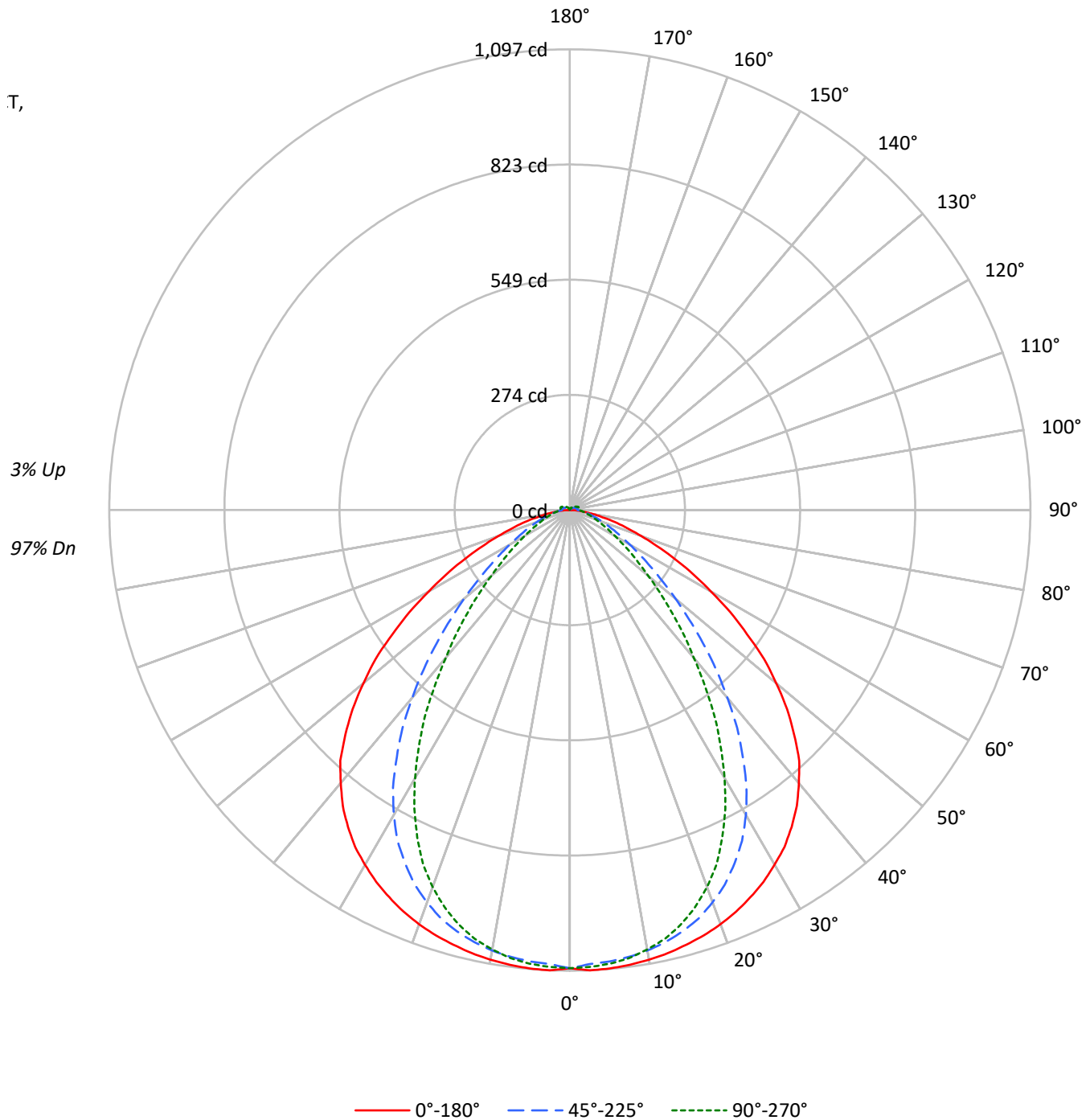
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2238.0 lumens
Efficiency: N/A
Efficacy: 134.0 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 16.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9915
Total Harmonic Distortion (THDi): 6.67573310469889
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 | | | | 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 | 118 | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 104 | 104 | 104 | 100 | 100 | 100 | 97 | | | | 97 |
| 1 | 110 | 106 | 102 | 99 | 107 | 103 | 100 | 97 | 99 | 96 | 93 | 94 | 92 | 90 | 90 | 89 | 87 | 85 | | | | 85 |
| 2 | 101 | 94 | 88 | 84 | 99 | 92 | 87 | 82 | 88 | 84 | 80 | 85 | 81 | 78 | 82 | 79 | 76 | 74 | | | | 74 |
| 3 | 94 | 85 | 77 | 72 | 91 | 83 | 76 | 71 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 | | | | 64 |
| 4 | 87 | 76 | 68 | 62 | 84 | 75 | 67 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 67 | 62 | 59 | 57 | | | | 57 |
| 5 | 80 | 69 | 61 | 55 | 78 | 68 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 61 | 56 | 52 | 50 | | | | 50 |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 49 | 60 | 53 | 48 | 58 | 52 | 47 | 56 | 51 | 47 | 45 | | | | 45 |
| 7 | 70 | 57 | 50 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 40 | | | | 40 |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 49 | 43 | 39 | 48 | 42 | 38 | 37 | | | | 37 |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 33 | | | | 33 |
| 10 | 58 | 45 | 38 | 33 | 56 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 42 | 36 | 32 | 31 | | | | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 11111 | 11111 | 11111 |
| 5° | 11181 | 10809 | 10792 |
| 10° | 11201 | 10575 | 10413 |
| 15° | 11235 | 10300 | 9939 |
| 20° | 11289 | 9921 | 9291 |
| 25° | 11323 | 9395 | 8427 |
| 30° | 11333 | 8674 | 7342 |
| 35° | 11285 | 7665 | 6142 |
| 40° | 11086 | 6475 | 4833 |
| 45° | 10658 | 5226 | 3748 |
| 50° | 9923 | 4055 | 2812 |
| 55° | 8884 | 3104 | 2151 |
| 60° | 7632 | 2387 | 1638 |
| 65° | 6363 | 1883 | 1302 |
| 70° | 5091 | 1511 | 1064 |
| 75° | 4055 | 1216 | 906 |
| 80° | 2967 | 1004 | 794 |
| 85° | 2037 | 855 | 729 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10658 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 103.3 | 4.6 |
| 10°-20° | 294.4 | 13.2 |
| 20°-30° | 429.2 | 19.2 |
| 30°-40° | 461.1 | 20.6 |
| 40°-50° | 383.8 | 17.1 |
| 50°-60° | 256.7 | 11.5 |
| 60°-70° | 146.9 | 6.6 |
| 70°-80° | 73.0 | 3.3 |
| 80°-90° | 29.9 | 1.3 |
| 90°-100° | 17.4 | 0.8 |
| 100°-110° | 15.3 | 0.7 |
| 110°-120° | 11.2 | 0.5 |
| 120°-130° | 7.2 | 0.3 |
| 130°-140° | 4.3 | 0.2 |
| 140°-150° | 2.4 | 0.1 |
| 150°-160° | 1.2 | 0.1 |
| 160°-170° | 0.5 | 0.0 |
| 170°-180° | 0.1 | 0.0 |
| 0°-30° | 826.9 | 36.9 |
| 0°-40° | 1288.0 | 57.6 |
| 0°-60° | 1928.4 | 86.2 |
| 0°-90° | 2178.3 | 97.3 |
| 90°-120° | 43.9 | 2.0 |
| 90°-150° | 57.8 | 2.6 |
| 90°-180° | 60.0 | 2.7 |
| 0°-180° | 2238.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1091 | 1091 | 1091 | 1091 | 1091 | |
| 5° | 1096 | 1092 | 1079 | 1088 | 1085 | 104 |
| 15° | 1072 | 1064 | 1039 | 1031 | 1022 | 303 |
| 25° | 1018 | 993 | 928 | 882 | 860 | 469 |
| 35° | 921 | 854 | 719 | 630 | 602 | 575 |
| 45° | 756 | 628 | 449 | 363 | 342 | 581 |
| 55° | 515 | 372 | 234 | 185 | 175 | 462 |
| 65° | 276 | 187 | 118 | 96 | 90 | 276 |
| 75° | 111 | 81 | 58 | 52 | 50 | 119 |
| 85° | 22 | 24 | 27 | 28 | 29 | 25 |
| 90° | 3 | 10 | 18 | 22 | 23 | 3 |
| 95° | 5 | 10 | 18 | 22 | 23 | 4 |
| 105° | 3 | 8 | 16 | 21 | 22 | 3 |
| 115° | 2 | 5 | 13 | 18 | 19 | 2 |
| 125° | 1 | 3 | 9 | 13 | 14 | 1 |
| 135° | 1 | 2 | 6 | 9 | 10 | 0 |
| 145° | 1 | 2 | 4 | 6 | 7 | 0 |
| 155° | 1 | 2 | 2 | 4 | 4 | 0 |
| 165° | 1 | 1 | 2 | 2 | 3 | 0 |
| 175° | 1 | 1 | 1 | 1 | 1 | 0 |
| 180° | 1 | 1 | 1 | 1 | 1 | |



TEST NUMBER: P894104

CATALOG NUMBER: 4MB-SC3-ACL-UNV-CC83-LOW-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1091.0 | 1091.0 | 1091.0 | 1091.0 | 1091.0 |
| 2.5° | 1097.3 | 1094.5 | 1082.1 | 1091.9 | 1089.1 |
| 5° | 1095.7 | 1092.2 | 1079.2 | 1088.1 | 1084.6 |
| 7.5° | 1092.2 | 1088.4 | 1073.5 | 1080.5 | 1076.6 |
| 10° | 1087.1 | 1082.4 | 1065.2 | 1068.7 | 1062.6 |
| 12.5° | 1080.8 | 1074.7 | 1053.4 | 1052.5 | 1045.8 |
| 15° | 1071.6 | 1064.2 | 1038.8 | 1031.1 | 1021.9 |
| 17.5° | 1062.0 | 1051.2 | 1020.0 | 1004.4 | 991.7 |
| 20° | 1049.6 | 1035.3 | 994.2 | 971.0 | 955.1 |
| 22.5° | 1035.3 | 1015.9 | 965.3 | 929.6 | 913.1 |
| 25° | 1017.5 | 993.3 | 928.3 | 881.6 | 859.6 |
| 27.5° | 998.4 | 966.2 | 888.2 | 826.8 | 801.7 |
| 30° | 975.4 | 935.7 | 838.3 | 764.4 | 737.4 |
| 32.5° | 951.3 | 896.8 | 783.5 | 698.9 | 669.3 |
| 35° | 921.0 | 854.2 | 718.6 | 630.1 | 602.5 |
| 37.5° | 888.2 | 803.3 | 654.3 | 559.8 | 528.6 |
| 40° | 848.5 | 749.5 | 583.7 | 490.1 | 459.2 |
| 42.5° | 809.0 | 690.9 | 515.9 | 427.1 | 400.4 |
| 45° | 755.5 | 627.9 | 448.7 | 363.1 | 341.8 |
| 47.5° | 701.7 | 560.4 | 384.4 | 311.3 | 290.2 |
| 50° | 641.9 | 494.2 | 328.1 | 261.3 | 243.8 |
| 52.5° | 583.7 | 432.5 | 276.9 | 220.9 | 205.9 |
| 55° | 515.3 | 371.7 | 233.9 | 184.9 | 175.4 |
| 57.5° | 453.5 | 315.4 | 197.3 | 156.6 | 147.7 |
| 60° | 388.3 | 267.3 | 165.2 | 132.4 | 124.1 |
| 62.5° | 331.0 | 224.7 | 139.1 | 112.3 | 106.6 |
| 65° | 275.9 | 187.1 | 117.8 | 95.5 | 90.4 |
| 67.5° | 225.3 | 156.3 | 99.3 | 81.5 | 77.3 |
| 70° | 180.8 | 126.7 | 83.7 | 69.4 | 66.5 |
| 72.5° | 142.3 | 101.8 | 69.7 | 59.8 | 57.3 |
| 75° | 111.1 | 80.8 | 58.2 | 51.6 | 50.0 |
| 77.5° | 80.2 | 63.0 | 48.7 | 44.2 | 43.3 |
| 80° | 56.6 | 47.7 | 40.1 | 38.2 | 37.6 |
| 82.5° | 37.6 | 34.7 | 33.1 | 33.1 | 32.8 |
| 85° | 21.6 | 24.2 | 27.1 | 28.3 | 28.6 |
| 87.5° | 11.1 | 16.2 | 21.6 | 24.2 | 24.5 |
| 90° | 3.2 | 10.2 | 18.5 | 22.0 | 22.6 |
| 92.5° | 4.8 | 10.2 | 18.1 | 22.0 | 22.6 |
| 95° | 4.8 | 10.2 | 18.1 | 22.0 | 22.6 |
| 97.5° | 4.5 | 9.9 | 18.1 | 22.0 | 22.6 |
| 100° | 4.1 | 9.2 | 17.8 | 22.0 | 22.6 |
| 102.5° | 3.5 | 8.9 | 17.2 | 21.6 | 22.6 |
| 105° | 3.2 | 8.3 | 16.2 | 21.3 | 22.3 |
| 107.5° | 2.9 | 7.0 | 15.3 | 20.4 | 21.6 |
| 110° | 2.2 | 6.0 | 14.6 | 19.4 | 21.0 |



TEST NUMBER: P894104

CATALOG NUMBER: 4MB-SC3-ACL-UNV-CC83-LOW-5000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 1.9 | 5.4 | 13.7 | 18.5 | 20.0 |
| 115° | 1.6 | 4.8 | 12.7 | 17.5 | 19.1 |
| 117.5° | 1.3 | 4.5 | 11.5 | 16.2 | 17.8 |
| 120° | 1.0 | 4.1 | 10.5 | 15.3 | 16.5 |
| 122.5° | 1.0 | 3.8 | 9.2 | 14.0 | 15.3 |
| 125° | 1.0 | 3.2 | 8.6 | 12.7 | 14.0 |
| 127.5° | 0.6 | 2.9 | 7.6 | 11.5 | 12.7 |
| 130° | 0.6 | 2.9 | 7.0 | 10.5 | 11.5 |
| 132.5° | 0.6 | 2.5 | 6.4 | 9.5 | 10.5 |
| 135° | 0.6 | 2.5 | 5.7 | 8.6 | 9.5 |
| 137.5° | 0.6 | 2.2 | 5.1 | 8.0 | 8.9 |
| 140° | 0.6 | 2.2 | 4.8 | 7.0 | 8.0 |
| 142.5° | 0.6 | 1.9 | 4.1 | 6.7 | 7.3 |
| 145° | 0.6 | 1.9 | 3.8 | 5.7 | 6.7 |
| 147.5° | 0.6 | 1.9 | 3.5 | 5.4 | 6.0 |
| 150° | 0.6 | 1.6 | 3.2 | 4.5 | 5.4 |
| 152.5° | 0.6 | 1.6 | 2.9 | 4.1 | 5.1 |
| 155° | 0.6 | 1.6 | 2.5 | 3.5 | 4.5 |
| 157.5° | 0.6 | 1.6 | 2.5 | 3.2 | 3.8 |
| 160° | 1.0 | 1.3 | 2.2 | 2.9 | 3.5 |
| 162.5° | 1.0 | 1.3 | 1.9 | 2.5 | 3.2 |
| 165° | 1.0 | 1.3 | 1.9 | 2.2 | 2.9 |
| 167.5° | 1.0 | 1.3 | 1.6 | 1.9 | 2.2 |
| 170° | 1.0 | 1.0 | 1.6 | 1.6 | 1.6 |
| 172.5° | 1.0 | 1.0 | 1.3 | 1.6 | 1.3 |
| 175° | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 |
| 177.5° | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 |
| 180° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |



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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 | 17.10 | 18.49 | 17.51 | 18.86 | 19.25 | 12.40 | 13.79 | 12.81 | 14.16 | 14.54 |
| | 3H | 18.19 | 19.44 | 18.62 | 19.82 | 20.25 | 13.54 | 14.78 | 13.96 | 15.17 | 15.60 |
| | 4H | 18.50 | 19.66 | 18.95 | 20.07 | 20.52 | 14.04 | 15.20 | 14.48 | 15.61 | 16.05 |
| | 6H | 18.65 | 19.72 | 19.11 | 20.14 | 20.60 | 14.54 | 15.61 | 15.00 | 16.03 | 16.49 |
| | 8H | 18.66 | 19.68 | 19.14 | 20.13 | 20.60 | 14.80 | 15.82 | 15.27 | 16.26 | 16.73 |
| | 12H | 18.66 | 19.63 | 19.13 | 20.07 | 20.56 | 15.09 | 16.07 | 15.57 | 16.50 | 17.00 |
| 4H | 2H | 17.08 | 18.25 | 17.53 | 18.65 | 19.10 | 12.89 | 14.06 | 13.34 | 14.46 | 14.91 |
| | 3H | 18.32 | 19.28 | 18.78 | 19.74 | 20.20 | 14.21 | 15.17 | 14.67 | 15.62 | 16.09 |
| | 4H | 18.70 | 19.57 | 19.18 | 20.04 | 20.54 | 14.80 | 15.67 | 15.28 | 16.13 | 16.64 |
| | 6H | 18.94 | 19.69 | 19.44 | 20.18 | 20.70 | 15.42 | 16.17 | 15.93 | 16.67 | 17.19 |
| | 8H | 18.98 | 19.68 | 19.49 | 20.17 | 20.70 | 15.74 | 16.45 | 16.25 | 16.94 | 17.47 |
| | 12H | 18.99 | 19.61 | 19.52 | 20.14 | 20.68 | 16.12 | 16.74 | 16.65 | 17.27 | 17.81 |
| 8H | 4H | 18.69 | 19.39 | 19.20 | 19.89 | 20.42 | 15.04 | 15.74 | 15.55 | 16.24 | 16.77 |
| | 6H | 18.97 | 19.55 | 19.51 | 20.09 | 20.63 | 15.77 | 16.34 | 16.31 | 16.89 | 17.43 |
| | 8H | 19.04 | 19.56 | 19.60 | 20.12 | 20.67 | 16.17 | 16.69 | 16.73 | 17.25 | 17.80 |
| | 12H | 19.09 | 19.55 | 19.64 | 20.09 | 20.71 | 16.66 | 17.12 | 17.22 | 17.66 | 18.29 |
| 12H | 4H | 18.67 | 19.29 | 19.20 | 19.82 | 20.36 | 15.06 | 15.68 | 15.58 | 16.21 | 16.74 |
| | 6H | 18.95 | 19.47 | 19.51 | 20.03 | 20.58 | 15.80 | 16.32 | 16.36 | 16.88 | 17.43 |
| | 8H | 19.05 | 19.52 | 19.61 | 20.06 | 20.68 | 16.26 | 16.72 | 16.82 | 17.26 | 17.89 |