| Image  | Kernel Size,     | Time  | Upper-bound |            | Lower-bound |            |
|--------|------------------|-------|-------------|------------|-------------|------------|
|        | Connectivity     |       | SDBC        | MPLP-CP-v2 | SDBC        | MPLP-CP-v2 |
| "1234" | $3 \times 3, 23$ | 20min | -601.31     | -601.31    | -601.42     | -601.31    |
|        |                  | 1hr   | -601.31     | -601.31    | -601.32     | -601.31    |
|        |                  | 24hr  | -601.31     | -601.31    | -601.31     | -601.31    |
| "1234" | $5 \times 5, 70$ | 20min | -550.99     | -550.81    | -551.84     | -551.87    |
|        |                  | 1hr   | -551.02     | -550.95    | -551.26     | -551.30    |
|        |                  | 24hr  | -551.02     | -551.02    | -551.02     | -551.06    |
| "1234" | 7× 7, 136        | 20min | -478.07     | -474.19    | -479.82     | -500.90    |
|        |                  | 1hr   | -478.15     | -477.47    | -478.74     | -487.26    |
|        |                  | 24hr  | -478.16     | -477.84    | -478.16     | -480.46    |
| "ABCD" | $3 \times 3, 23$ | 20min | -524.60     | -524.60    | -524.74     | -524.60    |
|        |                  | 1hr   | -524.60     | -524.60    | -524.63     | -524.60    |
|        |                  | 24hr  | -524.60     | -524.60    | -524.60     | -524.60    |
| "ABCD" | $5 \times 5, 70$ | 20min | -452.60     | -452.33    | -453.63     | -456.18    |
|        |                  | 1hr   | -452.64     | -452.48    | -452.99     | -453.60    |
|        |                  | 24hr  | -452.64     | -452.64    | -452.64     | -452.69    |
| "ABCD" | 7× 7, 136        | 20min | -416.63     | -410.82    | -418.73     | -452.00    |
|        |                  | 1hr   | -416.74     | -414.77    | -417.75     | -432.34    |
|        |                  | 24hr  | -416.77     | -416.29    | -416.78     | -422.12    |