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Radeon RX 6800 Series Linux Benchmarks

Benchmarks for a future article.

Automated Executive Summary

RTX 3080 had the most wins, coming in first place for 70% of the tests.

Based on the geometric mean of all complete results, the fastest (RTX 3080) was 1.719x the speed of the slowest (RTX 2080). RX 6800 XT - Mesa New was 0.989x the speed of RTX 3080, RX 6800 XT - Mesa was 0.929x the speed of RX 6800 XT - Mesa New, RX 6800 - Mesa New was 0.957x the speed of RX 6800 XT - Mesa, RX 6800 XT - PRO was 0.953x the speed of RX 6800 - Mesa New, TITAN RTX was 0.952x the speed of RX 6800 XT - PRO, RTX 2080 Ti was 0.999x the speed of TITAN RTX, RX 6800 - PRO was 0.93x the speed of RTX 2080 Ti, RX 6800 - Mesa was 0.934x the speed of RX 6800 - PRO, RTX 2080 SUPER was 0.923x the speed of RX 6800 - Mesa, RTX 2080 was 0.909x the speed of RTX 2080 SUPER.

The results with the greatest spread from best to worst included:

Total War: Three Kingdoms (Resolution: 3840 x 2160 - Graphics Preset: Low - Scenario: Battle Benchmark - Total Frame Time) at 336.385x
Total War: Three Kingdoms (Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark - Total Frame Time) at 118.52x
HITMAN 2 (Resolution: 3840 x 2160 - Quality Level: Low - Total Frame Time) at 19.135x

Unigine Heaven (Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL) at 2.325x
Unigine Valley (Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL) at 2.042x
Basemark GPU (Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High) at 1.918x
VkFFT at 1.913x
Unigine Superposition (Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Low - Renderer: OpenGL) at 1.912x
Strange Brigade (Resolution: 3840 x 2160 - Graphics Setting: High) at 1.903x
Strange Brigade (Resolution: 3840 x 2160 - Graphics Setting: Ultra) at 1.891x.

Test Systems:

RX 6800 - PRO

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD Radeon 16GB (2475/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6.14756, Vulkan: 1.2.152, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Graphics Notes: GLAMOR
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RX 6800 XT - PRO

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD Radeon 16GB (2575/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6.14756, Vulkan: 1.2.152, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Graphics Notes: GLAMOR
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RX 6800 - Mesa

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD SIENNA_CICHLID 16GB (2475/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-051000rc3daily20201111-generic (x86_64) 20201110, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.3.0-devel (git-442f48f 2020-10-15 focal-oibaf-ppa) (LLVM 11.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RX 6800 XT - Mesa

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD SIENNA_CICHLID 16GB (2575/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-051000rc3daily20201111-generic (x86_64) 20201110, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.3.0-devel (git-442f48f 2020-10-15 focal-oibaf-ppa) (LLVM 11.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RX 6800 - Mesa New

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD SIENNA_CICHLID 16GB (2475/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-051000rc4daily20201119-generic (x86_64) 20201118, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 21.0.0-devel (git-745f0b8 2020-11-19 focal-oibaf-ppa) (LLVM 11.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin

--enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RX 6800 XT - Mesa New

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD SIENNA_CICHLID 16GB (2575/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-051000rc4daily20201119-generic (x86_64) 20201118, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 21.0.0-devel (git-745f0b8 2020-11-19 focal-oibaf-ppa) (LLVM 11.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 2080

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: Zotac NVIDIA GeForce RTX 2080 8GB (630/810MHz), Audio: NVIDIA TU104 HD Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 455.38, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.1.110, Vulkan: 1.2.142, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: RADV_PERFTEST=aco
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 2080 SUPER

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: NVIDIA GeForce RTX 2080 SUPER 8GB (615/810MHz), Audio: NVIDIA TU104 HD Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 455.38, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.1.110, Vulkan: 1.2.142, Compiler: GCC

9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: RADV_PERFTEST=aco
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 2080 Ti

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: NVIDIA GeForce RTX 2080 Ti 11GB (1350/7000MHz), Audio: NVIDIA TU102 HD Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 455.38, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.1.110, Vulkan: 1.2.142, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: RADV_PERFTEST=aco
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

TITAN RTX

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: NVIDIA TITAN RTX 24GB (1350/7000MHz), Audio: NVIDIA TU102 HD Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 455.38, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.1.110, Vulkan: 1.2.142, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: RADV_PERFTEST=aco
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3080

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: NVIDIA GeForce RTX 3080 10GB (540/810MHz), Audio: NVIDIA Device 1aef, Monitor: ASUS

Radeon RX 6800 Series Linux Benchmarks

MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 455.38, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.1.110, Vulkan: 1.2.142, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: RADV_PERFTEST=aco
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	RX 6800 - PRO	RX 6800 XT - PRO	RX 6800 - Mesa	RX 6800 XT - Mesa	RX 6800 - Mesa New	RX 6800 XT - Mesa New	RTX 2080	RTX 2080 SUPER	RTX 2080 Ti	TITAN RTX	RTX 3080
Dota 2 - 3840 x 2160 - Vulkan (FPS)	**114.5**	161.7	164.3	173.3	176.5	174.1	150.9	160.4	166.8	170.9	**184.6**
Normalized	62.03%	87.59%	89%	93.88%	95.61%	94.31%	81.74%	86.89%	90.36%	92.58%	100%
Standard Deviation	0.2%	0.7%	0.9%	2.9%	2.8%	0.6%	2.9%	2.9%	2.9%	2.9%	2.9%
F1 2017 - 3840 x 2160 - High - Off (FPS)	124	140	135	168	161	169	**111**	122	147	152	**183**
Normalized	67.76%	76.5%	73.77%	91.8%	87.98%	92.35%	60.66%	66.67%	80.33%	83.06%	100%
Standard Deviation				2.7%		2.4%	1%	0.9%	0.4%	1%	
F1 2017 - 3840 x 2160 - Ultra High - Off (FPS)	106	106	110	135	129	135	**91**	101	120	124	**147**
Normalized	72.11%	72.11%	74.83%	91.84%	87.76%	91.84%	61.9%	68.71%	81.63%	84.35%	100%
Standard Deviation		1.4%	0.5%	1.9%	0.8%	2.9%		1%	1%	1.2%	1.2%
Shadow of the Tomb Raider - 3840 x 2160 - Low - Off (FPS)	99.2	112.8	80.6	98.0	112.5	129.2	**76.3**	84.9	102.5	106.0	**132.9**
Normalized	74.64%	84.88%	60.65%	73.74%	84.65%	97.22%	57.41%	63.88%	77.13%	79.76%	100%
Standard Deviation	0.3%	0.2%	0.1%	0.4%	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%	0.1%
Shadow of the Tomb Raider - 3840 x 2160 - High - Off (FPS)	75.6	85.4	**54.1**	63.9	79.7	89.8	54.7	60.6	76.0	76.6	**97.4**
Normalized	77.62%	87.68%	55.54%	65.61%	81.83%	92.2%	56.16%	62.22%	78.03%	78.64%	100%
Standard Deviation	0.1%	0.1%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	2.5%	0.2%	0.1%

Radeon RX 6800 Series Linux Benchmarks

Shadow of the Tomb Raider - 3840 x 2160 - Highest - Off	69.3	78.5	**48.0**	57.1	72.2	81.4	49.7	55.5	68.9	70.1	**89.8**
Normalized	77.17%	87.42%	53.45%	63.59%	80.4%	90.65%	55.35%	61.8%	76.73%	78.06%	100%
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0%	0%	0.2%	0.1%	2.7%	0.1%	0.1%
Total War: Three Kingdoms - 3840 x 2160 - Low - Battle Benchmark	79.8	79.1	93	132.2	120.3	133.0	**78.3**	85.7	107.8	109.7	**142.7**
Normalized	55.92%	55.43%	65.17%	92.64%	84.3%	93.2%	54.87%	60.06%	75.54%	76.87%	100%
Standard Deviation	2.1%	1.3%	0.6%	0.9%	1%	0.9%	0.7%	0.5%	1.2%	1.2%	0.8%
Total War: Three Kingdoms - 3840 x 2160 - Medium - Battle Benchmark (FPS)	56.6	58.0	56.6	80.2	71.8	81.2	**46.3**	51.9	65.2	65.4	**83.6**
Normalized	67.7%	69.38%	67.7%	95.93%	85.89%	97.13%	55.38%	62.08%	77.99%	78.23%	100%
Standard Deviation	0.9%	1.7%	0.5%	0.8%	0.7%	0.6%	0.2%	1.4%	1.4%	0.4%	0.7%
Unigine Heaven - 3840 x 2160 - Fullscreen - OpenGL (FPS)	100.297	**112.930**	63.5870	96.2063	82.3630	96.7520	**48.5670**	53.2420	74.1948	65.7503	91.7529
Normalized	88.81%	100%	56.31%	85.19%	72.93%	85.67%	43.01%	47.15%	65.7%	58.22%	81.25%
Standard Deviation	0.2%	0.2%	0%	0.1%	0.1%	0.1%	0.3%	0.4%	0.2%	0.4%	0.3%
Unigine Superposition - 3840 x 2160 - Fullscreen - Low - OpenGL (FPS)	102.0	121.6	122.2	190.1	161.0	**192.3**	**100.6**	110.0	141.3	139.8	168.1
Normalized	53.04%	63.23%	63.55%	98.86%	83.72%	100%	52.31%	57.2%	73.48%	72.7%	87.42%
Standard Deviation	0.1%	0%	0%	0.5%	0%	0.2%	0.4%	0.1%	0.2%	0.1%	0%
Unigine Superposition - 3840 x 2160 - Fullscreen - Medium - OpenGL (FPS)	49.5	56.7	50.7	78.2	67.9	**78.8**	**42.7**	46.9	60.3	59.4	74.1
Normalized	62.82%	71.95%	64.34%	99.24%	86.17%	100%	54.19%	59.52%	76.52%	75.38%	94.04%
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	0.1%	0.2%	0.2%	0.1%
Unigine Valley - 3840 x 2160 - Fullscreen - OpenGL (FPS)	85.7705	99.0891	72.8185	**112.804**	95.7828	112.474	**55.2379**	61.3918	78.5576	76.7963	93.4312
Normalized	76.03%	87.84%	64.55%	100%	84.91%	99.71%	48.97%	54.42%	69.64%	68.08%	82.83%
Standard Deviation	0.5%	0.1%	0.1%	0.1%	0.1%	0.1%	0.3%	0.2%	0.1%	0.2%	0.1%

Radeon RX 6800 Series Linux Benchmarks

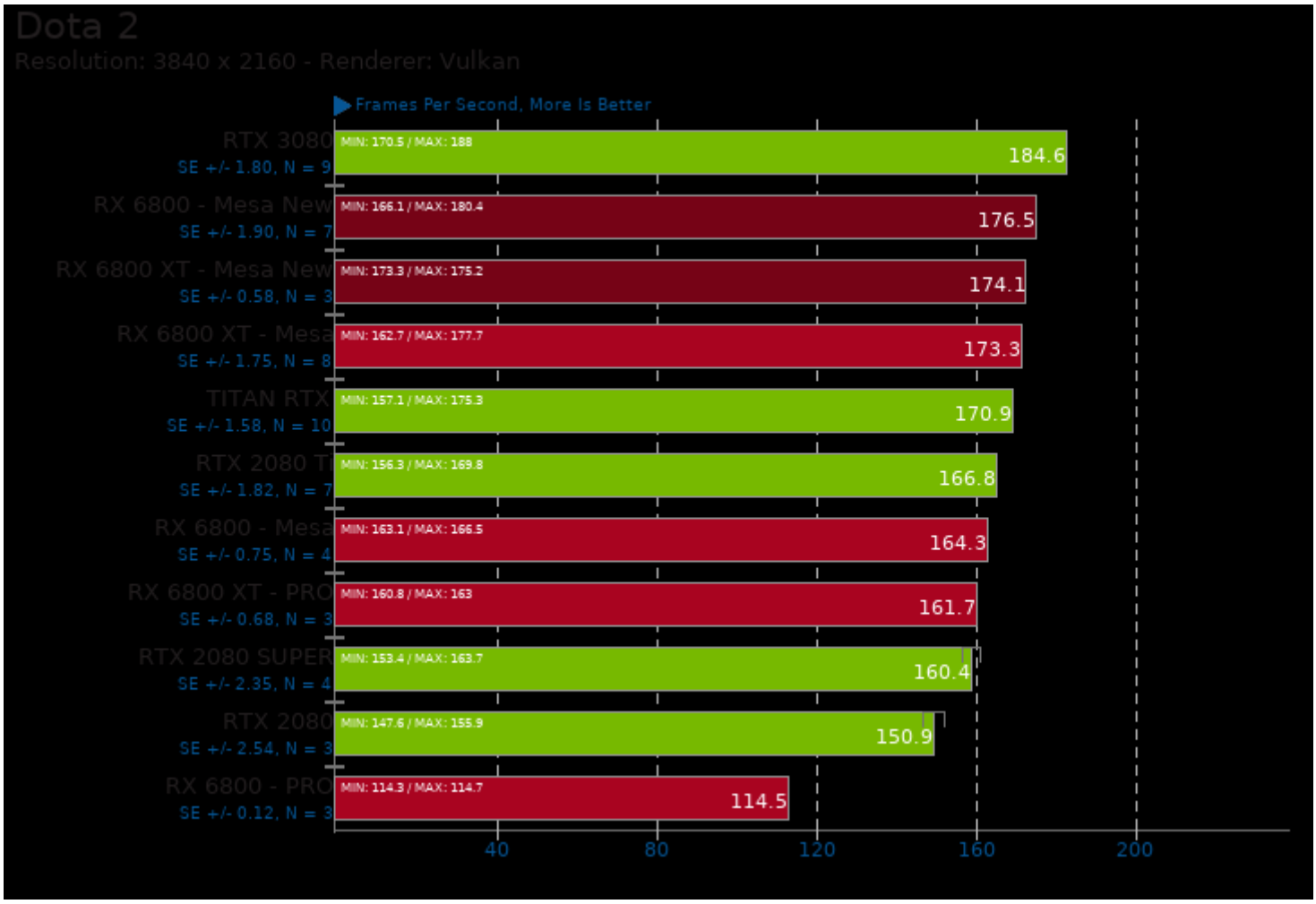
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS)	137.02	155.83	100.55	147.33	125.66	147.80	**85.03**	94.00	122.82	125.33	**163.11**
Normalized	84%	95.54%	61.65%	90.33%	77.04%	90.61%	52.13%	57.63%	75.3%	76.84%	100%
Standard Deviation	0%	0.1%	0%	0.1%	0.7%	0.1%	0.7%	0.2%	0.2%	0.3%	0.2%
VkFFT (Benchmark	44146	51163	46249	52361	45162	**52386**	**27379**	29238	37640	37440	50303
Normalized	84.27%	97.67%	88.29%	99.95%	86.21%	100%	52.26%	55.81%	71.85%	71.47%	96.02%
Standard Deviation	0.2%	0.1%	0.6%	1.5%	1.5%	0.2%	0.4%	0.1%	0.1%	0.1%	0.3%
Dota 2 - 3840 x 2160 - Vulkan (FPS/Watt)	1.52	2.19	**2.25**	2.13			1.39	1.51	1.45	1.36	**1.24**
Normalized	67.56%	97.33%	100%	94.67%			61.78%	67.11%	64.44%	60.44%	55.11%
Shadow of the Tomb Raider - 3840 x 2160 - High - Off (FPS/Watt)	**0.44**	0.38	0.36	0.31			0.30	**0.28**	0.34	0.30	0.34
Normalized	100%	86.36%	81.82%	70.45%			68.18%	63.64%	77.27%	68.18%	77.27%
Shadow of the Tomb Raider - 3840 x 2160 - Highest - Off (FPS/Watt)	**0.40**	0.36	0.33	0.28			0.27	**0.25**	0.30	0.28	0.31
Normalized	100%	90%	82.5%	70%			67.5%	62.5%	75%	70%	77.5%
Unigine Heaven - 3840 x 2160 - Fullscreen - OpenGL (FPS/Watt)	**0.51**	0.46	0.35	0.39			0.25	**0.23**	0.30	0.25	0.30
Normalized	100%	90.2%	68.63%	76.47%			49.02%	45.1%	58.82%	49.02%	58.82%
Unigine Superposition - 3840 x 2160 - Fullscreen - Low - OpenGL (FPS/Watt)	0.60	0.52	0.71	**0.80**			0.54	**0.50**	0.59	0.54	0.57
Normalized	75%	65%	88.75%	100%			67.5%	62.5%	73.75%	67.5%	71.25%
Unigine Superposition - 3840 x 2160 - Fullscreen - Medium - OpenGL (FPS/Watt)	0.26	0.24	0.29	**0.33**			0.23	**0.21**	0.25	0.23	0.25
Normalized	78.79%	72.73%	87.88%	100%			69.7%	63.64%	75.76%	69.7%	75.76%

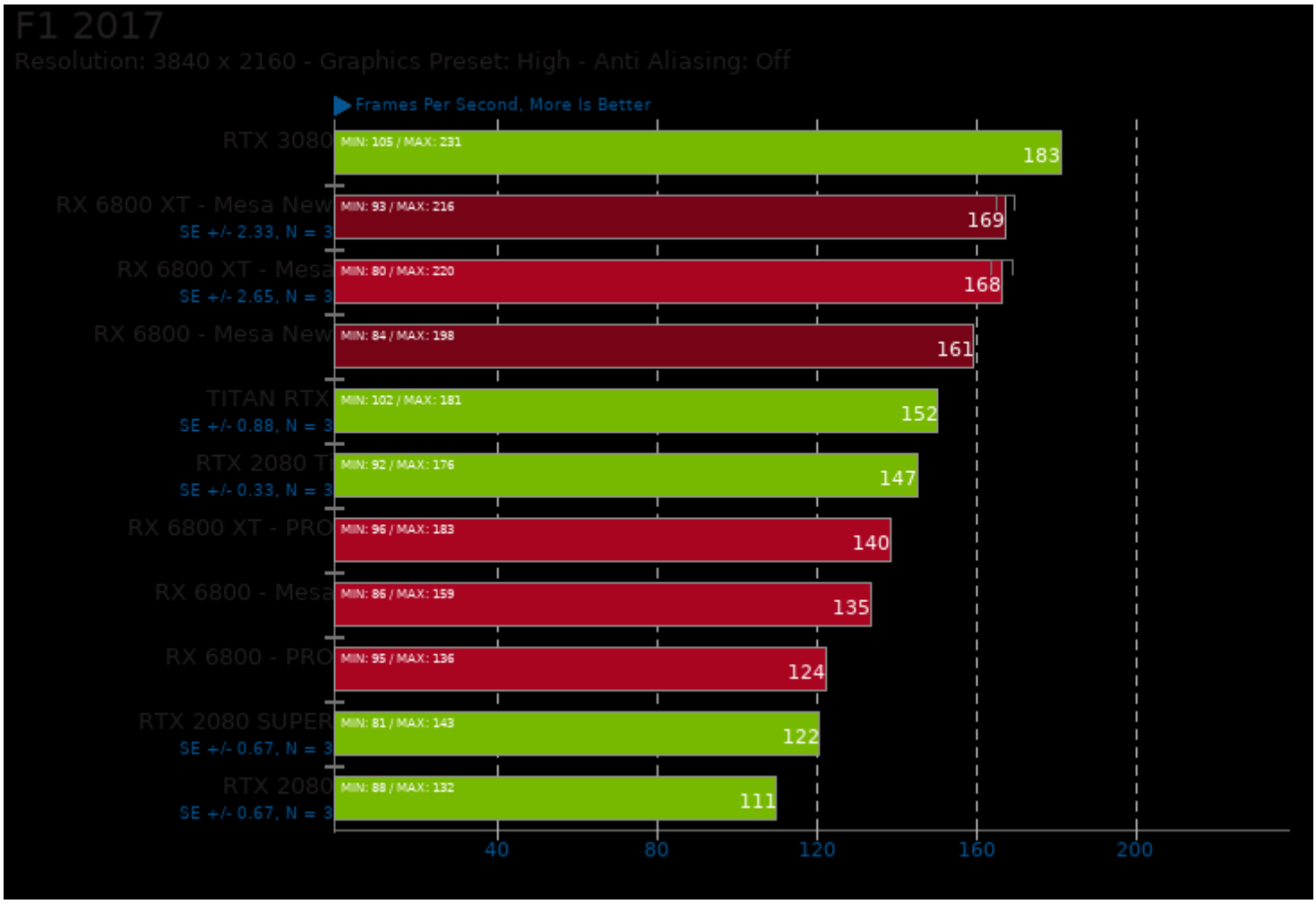
Radeon RX 6800 Series Linux Benchmarks

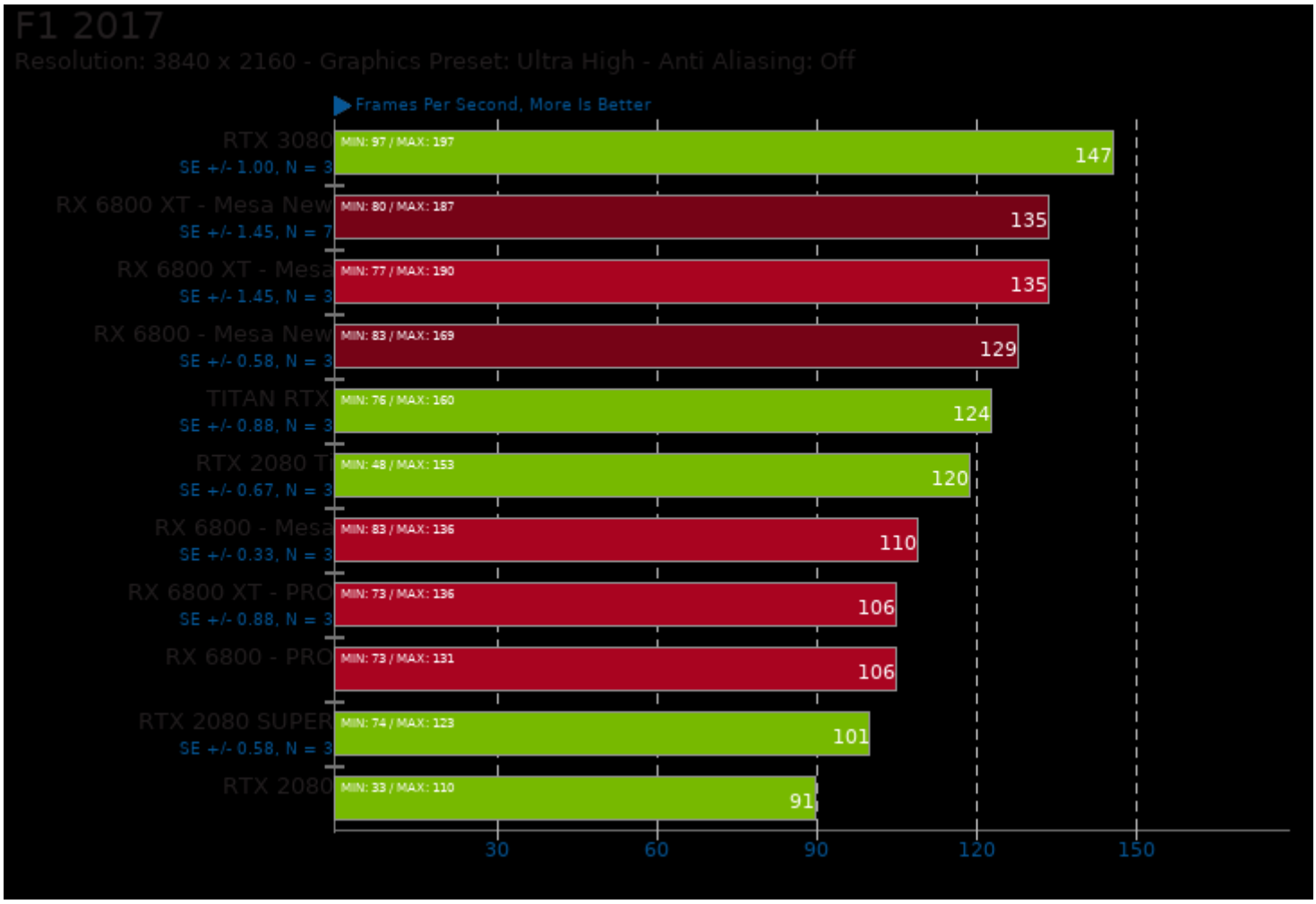
Unigine Valley - 3840 x 2160 - Fullscreen - OpenGL (FPS/Watt)	0.44	0.41	0.38	**0.46**			0.29	**0.26**	0.31	0.29	0.30
Normalized	95.65%	89.13%	82.61%	100%			63.04%	56.52%	67.39%	63.04%	65.22%
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS/Watt)	**0.84**	0.76	0.71	0.71			**0.46**	0.48	0.56	0.53	0.62
Normalized	100%	90.48%	84.52%	84.52%			54.76%	57.14%	66.67%	63.1%	73.81%
VkFFT (Benchmark	670.80	**717.57**	604.29	717.01			**232.71**	262.02	296.04	236.42	346.08
Normalized	93.48%	100%	84.21%	99.92%			32.43%	36.51%	41.26%	32.95%	48.23%
Strange Brigade - 3840 x 2160 - Low (FPS)			153.6	181.7	167.3	180.3	**106.7**	120.2	153.9	156.4	**183.0**
Normalized			83.93%	99.29%	91.42%	98.52%	58.31%	65.68%	84.1%	85.46%	100%
Standard Deviation			0.4%	0.7%	0.4%	1.1%	0.4%	0.8%	0.9%	0.4%	0.1%
Strange Brigade - 3840 x 2160 - Low (FPS/Watt)			**1.13**	1.06			**0.70**	0.73	0.89	0.78	0.94
Normalized			100%	93.81%			61.95%	64.6%	78.76%	69.03%	83.19%
Strange Brigade - 3840 x 2160 - Medium (FPS)			131.7	168.0	147.2	165.9	**95.6**	107.5	138.6	139.9	**175.1**
Normalized			75.21%	95.95%	84.07%	94.75%	54.6%	61.39%	79.15%	79.9%	100%
Standard Deviation			0.6%	0.3%	0.2%	0.7%	0.5%	1.1%	0.3%	0.2%	0.4%
Strange Brigade - 3840 x 2160 - Medium			**0.96**	**0.96**			**0.61**	0.62	0.77	0.68	0.74
Normalized			100%	100%			63.54%	64.58%	80.21%	70.83%	77.08%
Strange Brigade - 3840 x 2160 - High (FPS)			121.4	156.8	136.2	156.3	**90.1**	100.5	130.2	131.2	**171.5**
Normalized			70.79%	91.43%	79.42%	91.14%	52.54%	58.6%	75.92%	76.5%	100%
Standard Deviation			0.5%	0.6%	0.2%	0.3%	0.8%	0.6%	1%	1%	0.2%
Strange Brigade - 3840 x 2160 - High (FPS/Watt)			**0.89**	**0.89**			**0.57**	0.58	0.71	0.64	0.73
Normalized			100%	100%			64.04%	65.17%	79.78%	71.91%	82.02%
Strange Brigade - 3840 x 2160 - Ultra (FPS)			116.0	148.8	129.1	148.6	**87.2**	96.1	122.7	126.0	**164.9**
Normalized			70.35%	90.24%	78.29%	90.12%	52.88%	58.28%	74.41%	76.41%	100%
Standard Deviation			0.4%	0.3%	0.1%	0.3%	1.4%	0.3%	1%	1.1%	0.7%

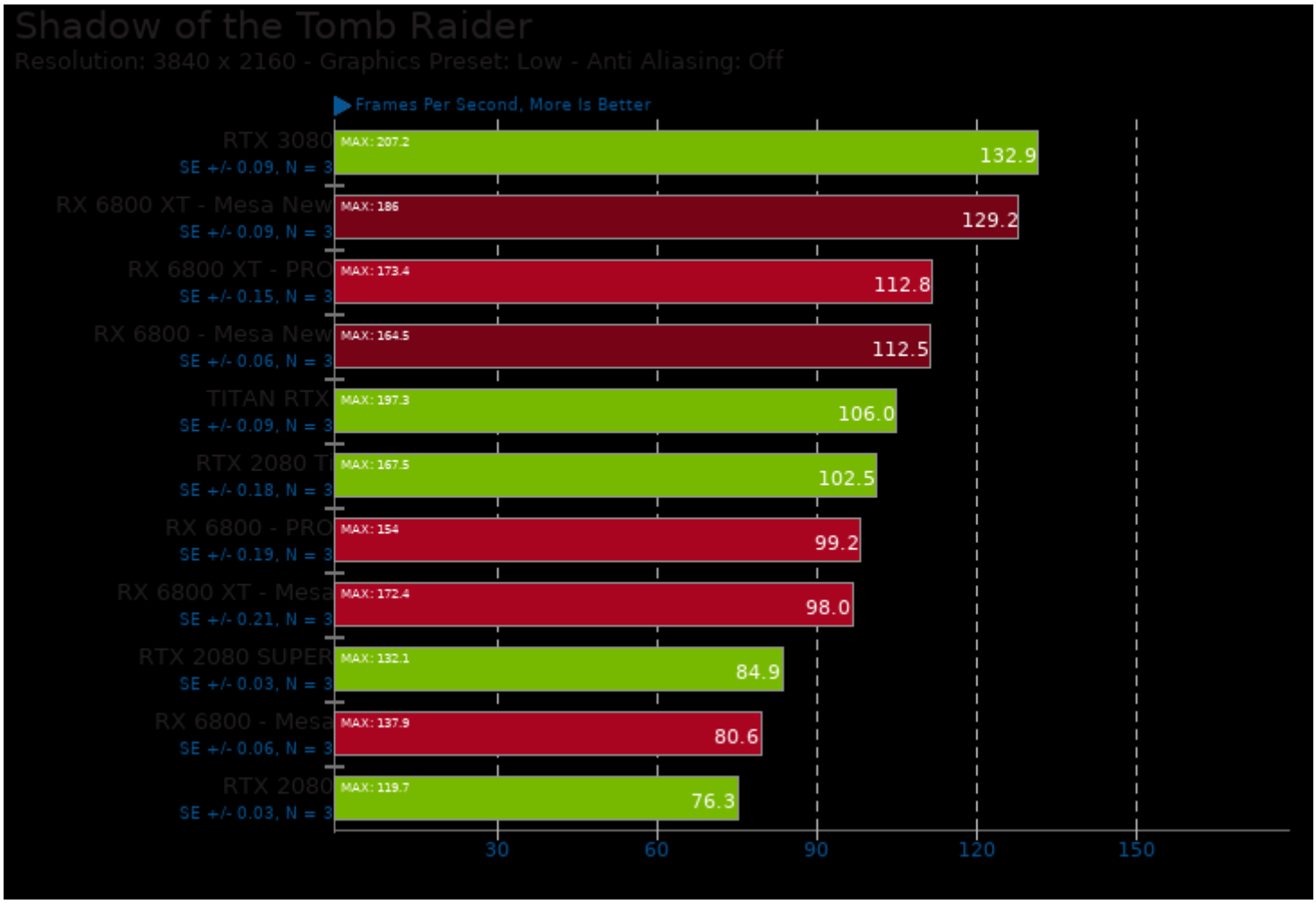
Radeon RX 6800 Series Linux Benchmarks

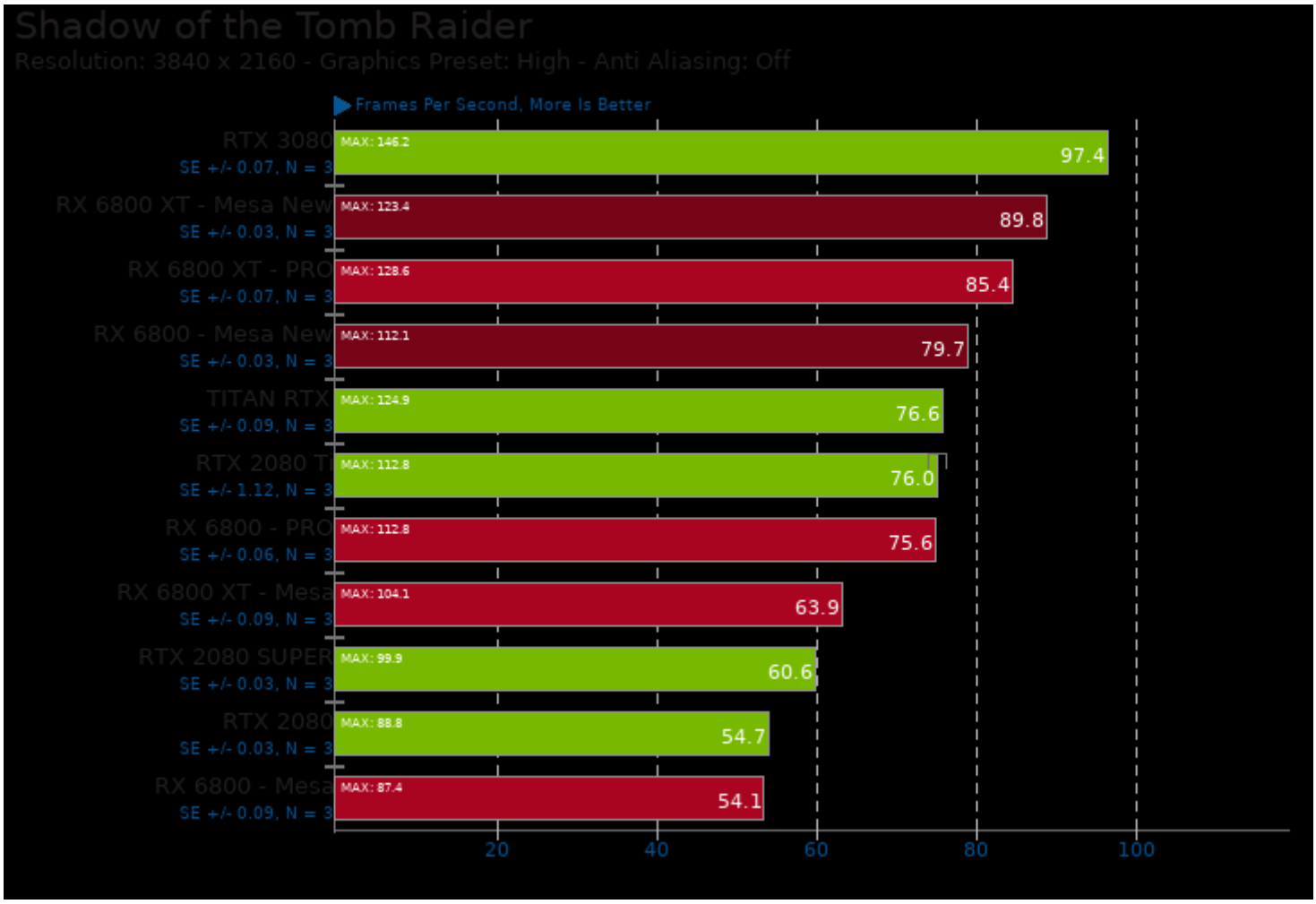
Strange Brigade - 3840 x 2160 - Ultra (FPS/Watt)			**0.86**	0.85			**0.56**	**0.56**	0.70	0.62	0.70
Normalized			100%	98.84%			65.12%	65.12%	81.4%	72.09%	81.4%
Batman: Arkham Knight - 3840 x 2160 - Low (FPS)			108.24	130.83	114.54	131.35		**77.85**	104.37	104.58	**137.33**
Normalized			78.82%	95.27%	83.4%	95.65%		56.69%	76%	76.15%	100%
Standard Deviation			0.9%	1%	0.8%	0.8%		1.3%	0.6%	1%	0.5%
Batman: Arkham Knight - 3840 x 2160 - Low (FPS/Watt)			0.72	**1.01**				**0.43**	0.54	0.47	0.54
Normalized			71.29%	100%				42.57%	53.47%	46.53%	53.47%
HITMAN 2 - 3840 x 2160 - Low (FPS)			75.74	**91.47**	80.93	91.42		**56.77**	72.15	71.64	91.06
Normalized			82.8%	100%	88.48%	99.95%		62.06%	78.88%	78.32%	99.55%
Standard Deviation			0.1%	0.6%	0.1%	0.2%		0.2%	0.2%	0.4%	0.2%
F1 2017 - 3840 x 2160 - High - Off (FPS/Watt)							0.61	**0.60**	**0.67**	0.64	**0.67**
Normalized							91.04%	89.55%	100%	95.52%	100%
F1 2017 - 3840 x 2160 - Ultra High - Off (FPS/Watt)							0.51	**0.50**	**0.54**	0.52	**0.54**
Normalized							94.44%	92.59%	100%	96.3%	100%
Shadow of the Tomb Raider - 3840 x 2160 - Low - Off (FPS/Watt)							0.42	**0.39**	0.44	0.43	**0.47**
Normalized							89.36%	82.98%	93.62%	91.49%	100%
Geometric Mean Of All Test Results - Result Composite - R.R.6.S.L.B	138.212	156.144	129.135	171.177	163.827	184.189	**108.355**	119.158	148.551	148.715	**186.226**
Normalized	74.22%	83.85%	69.34%	91.92%	87.97%	98.91%	58.18%	63.99%	79.77%	79.86%	100%

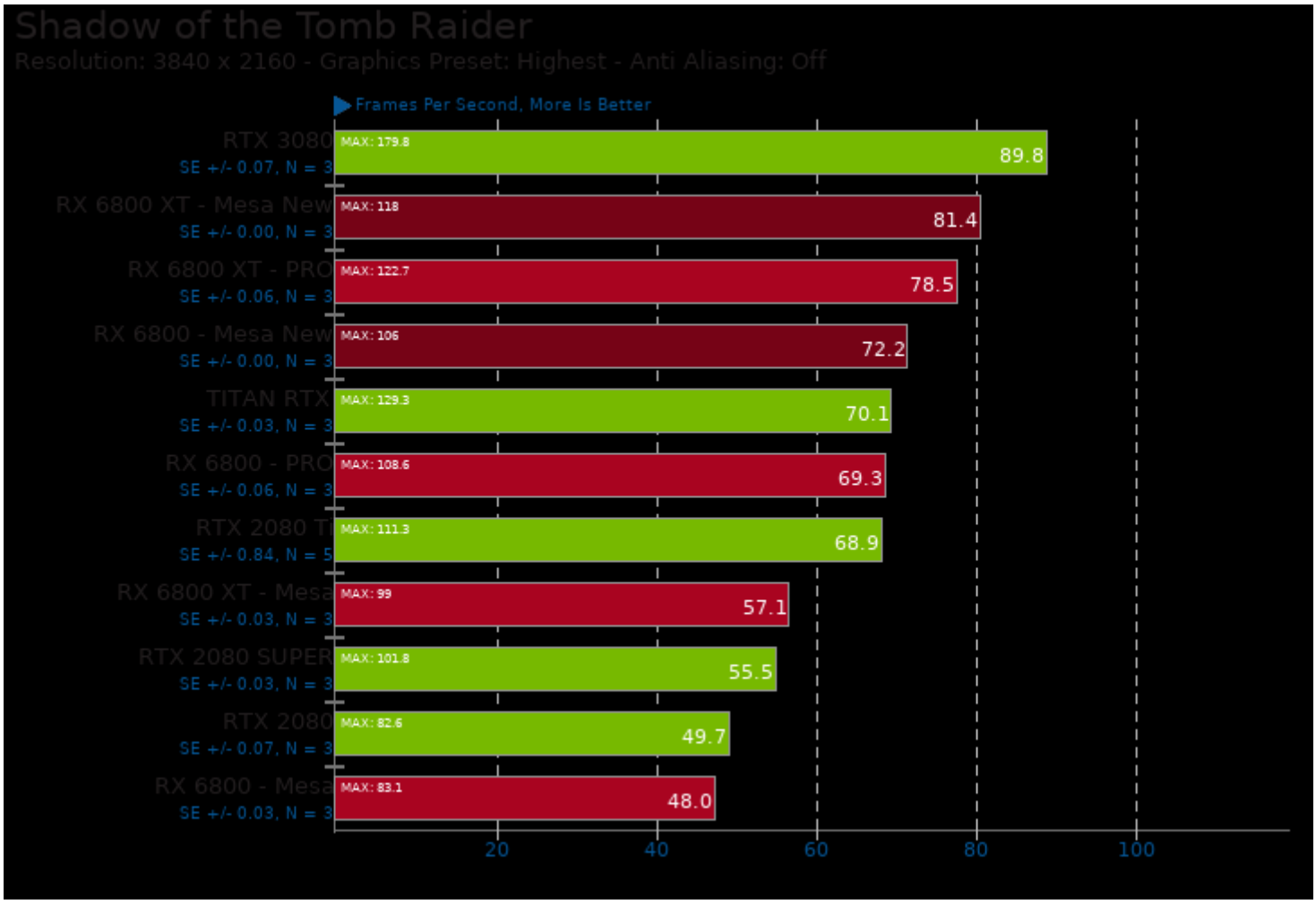

Dota 2
Resolution: 3840 x 2160 - Renderer: Vulkan
Frames Per Second, More Is Better
RTX 3080
SE +/- 1.80, N = 9
MIN: 170.5 / MAX: 188
184.6
RX 6800 - Mesa New
SE +/- 1.90, N = 7
MIN: 166.1 / MAX: 180.4
176.5
RX 6800 XT - Mesa New
SE +/- 0.58, N = 3
MIN: 173.3 / MAX: 175.2
174.1
RX 6800 XT - Mesa
SE +/- 1.75, N = 8
MIN: 162.7 / MAX: 177.7
173.3
TITAN RTX
SE +/- 1.58, N = 10
MIN: 157.1 / MAX: 175.3
170.9
RTX 2080 T
SE +/- 1.82, N = 7
MIN: 156.3 / MAX: 169.8
166.8
RX 6800 - Mesa
SE +/- 0.75, N = 4
MIN: 163.1 / MAX: 166.5
164.3
RX 6800 XT - PRO
SE +/- 0.68, N = 3
MIN: 160.8 / MAX: 163
161.7
RTX 2080 SUPER
SE +/- 2.35, N = 4
MIN: 153.4 / MAX: 163.7
160.4
RTX 2080
SE +/- 2.54, N = 3
MIN: 147.6 / MAX: 155.9
150.9
RX 6800 - PRO
SE +/- 0.12, N = 3
MIN: 114.3 / MAX: 114.7
114.5
40
80
120
160
200

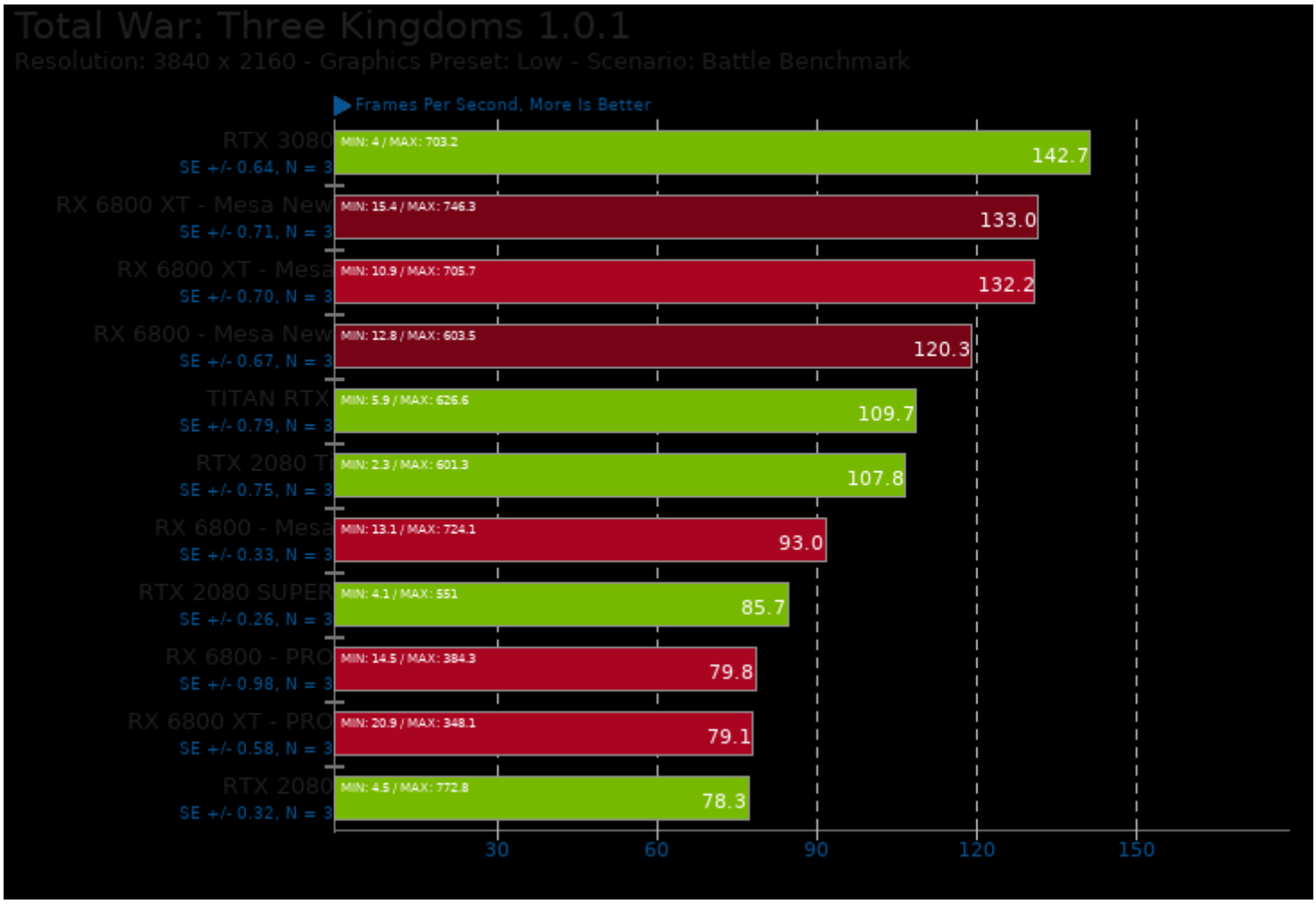

F1 2017
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second, More Is Better
RTX 3080
MIN: 105 / MAX: 231
183
RX 6800 XT - Mesa New
SE +/- 2.33, N = 3
MIN: 93 / MAX: 216
169
RX 6800 XT - Mesa
SE +/- 2.65, N = 3
MIN: 80 / MAX: 220
168
RX 6800 - Mesa New
MIN: 84 / MAX: 198
161
TITAN RTX
SE +/- 0.88, N = 3
MIN: 102 / MAX: 181
152
RTX 2080 T
SE +/- 0.33, N = 3
MIN: 92 / MAX: 176
147
RX 6800 XT - PRO
MIN: 96 / MAX: 183
140
RX 6800 - Mesa
MIN: 86 / MAX: 159
135
RX 6800 - PRO
MIN: 95 / MAX: 136
124
RTX 2080 SUPER
SE +/- 0.67, N = 3
MIN: 81 / MAX: 143
122
RTX 2080
SE +/- 0.67, N = 3
MIN: 88 / MAX: 132
111
40
80
120
160
200

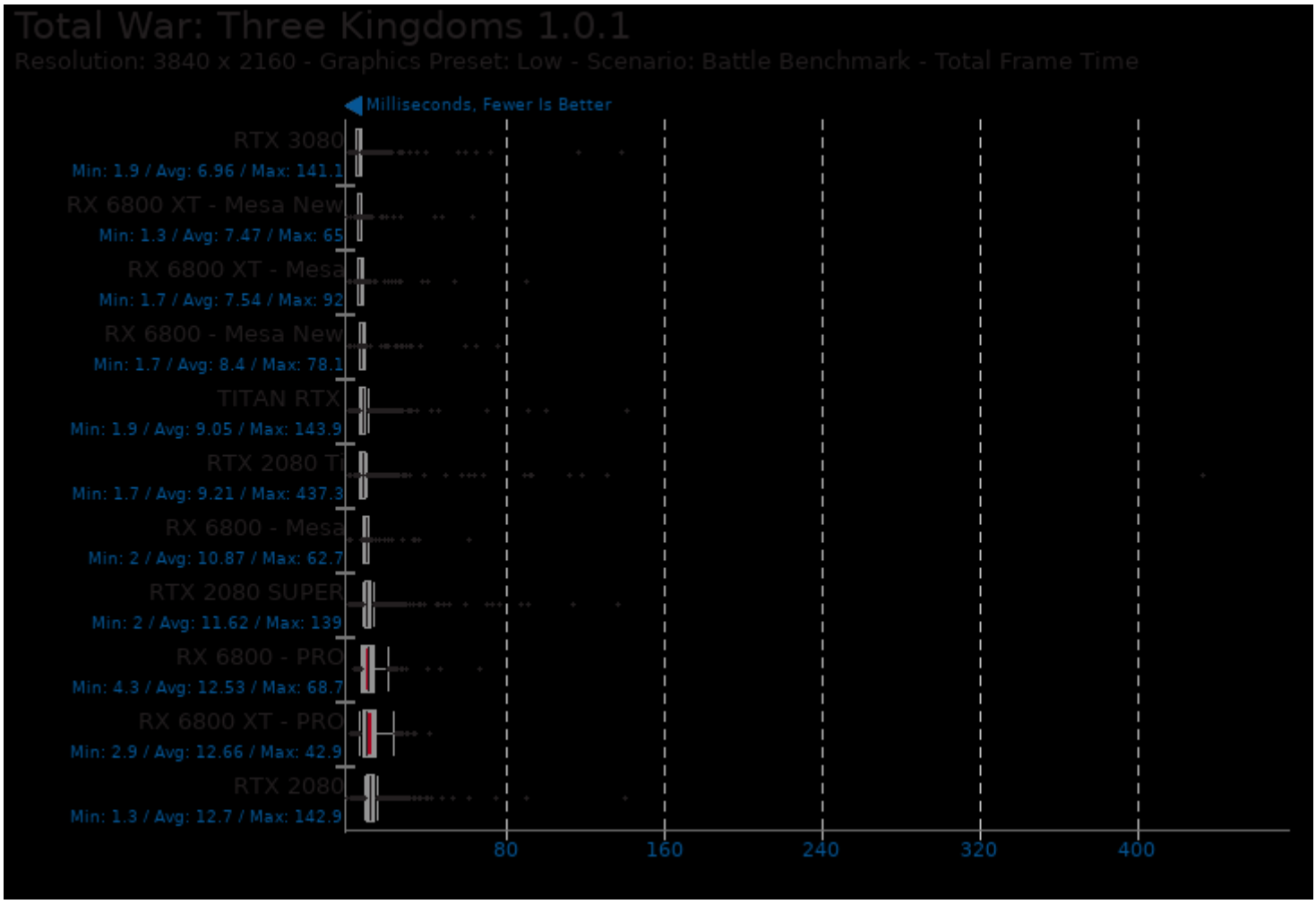

F1 2017
Resolution: 3840 x 2160 - Graphics Preset: Ultra High - Anti Aliasing: Off
Frames Per Second, More Is Better
RTX 3080
SE +/- 1.00, N = 3
MIN: 97 / MAX: 197
147
RX 6800 XT - Mesa New
SE +/- 1.45, N = 7
MIN: 80 / MAX: 187
135
RX 6800 XT - Mesa
SE +/- 1.45, N = 3
MIN: 77 / MAX: 190
135
RX 6800 - Mesa New
SE +/- 0.58, N = 3
MIN: 83 / MAX: 169
129
TITAN RTX
SE +/- 0.88, N = 3
MIN: 76 / MAX: 160
124
RTX 2080 T
SE +/- 0.67, N = 3
MIN: 48 / MAX: 153
120
RX 6800 - Mesa
SE +/- 0.33, N = 3
MIN: 83 / MAX: 136
110
RX 6800 XT - PRO
SE +/- 0.88, N = 3
MIN: 73 / MAX: 136
106
RX 6800 - PRO
MIN: 73 / MAX: 131
106
RTX 2080 SUPER
SE +/- 0.58, N = 3
MIN: 74 / MAX: 123
101
RTX 2080
MIN: 33 / MAX: 110
91
30
60
90
120
150

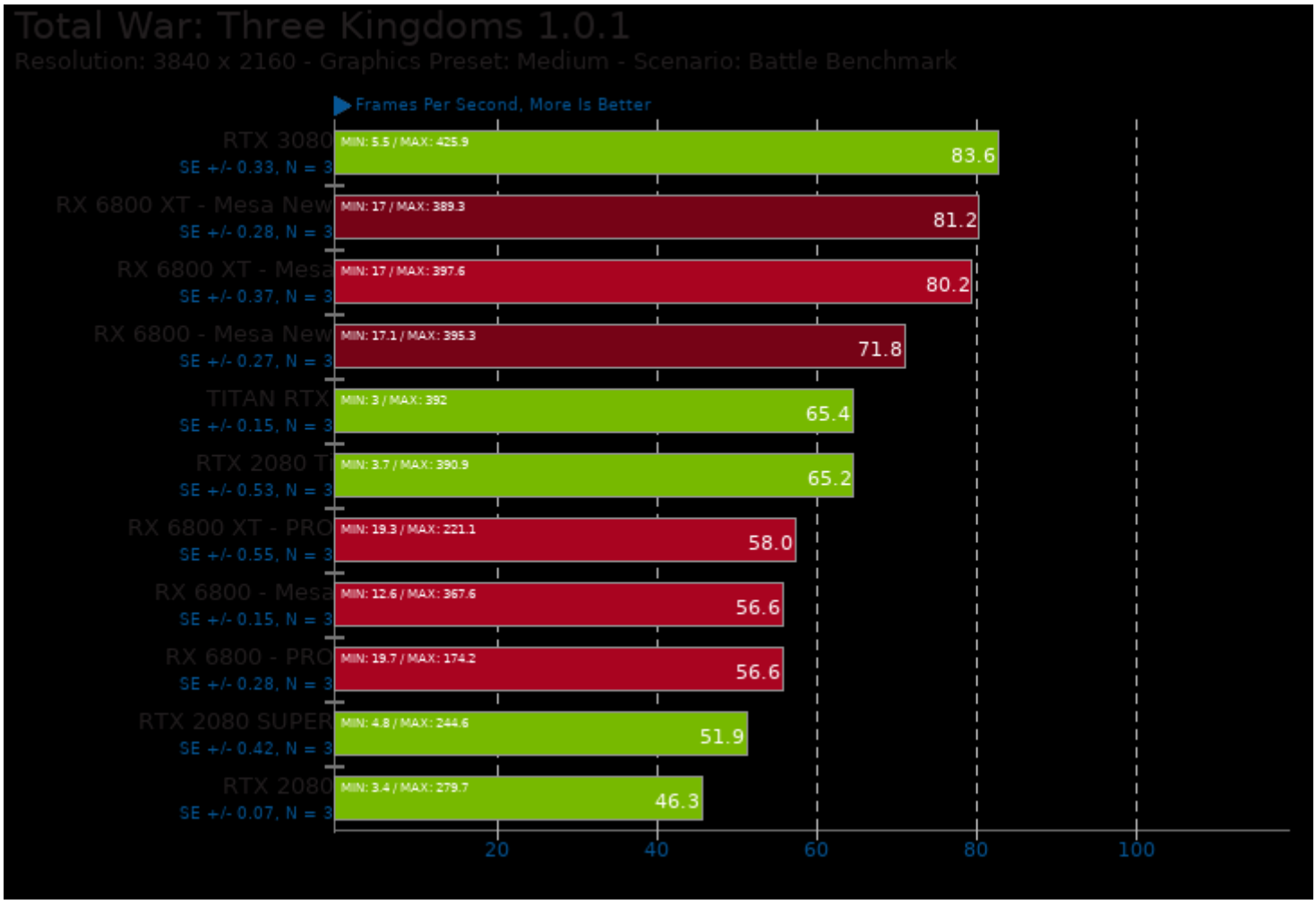

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Low - Anti Aliasing: Off
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.09, N = 3
MAX: 207.2
132.9
RX 6800 XT - Mesa New
SE +/- 0.09, N = 3
MAX: 186
129.2
RX 6800 XT - PRO
SE +/- 0.15, N = 3
MAX: 173.4
112.8
RX 6800 - Mesa New
SE +/- 0.06, N = 3
MAX: 164.5
112.5
TITAN RTX
SE +/- 0.09, N = 3
MAX: 197.3
106.0
RTX 2080 T
SE +/- 0.18, N = 3
MAX: 167.5
102.5
RX 6800 - PRO
SE +/- 0.19, N = 3
MAX: 154
99.2
RX 6800 XT - Mesa
SE +/- 0.21, N = 3
MAX: 172.4
98.0
RTX 2080 SUPER
SE +/- 0.03, N = 3
MAX: 132.1
84.9
RX 6800 - Mesa
SE +/- 0.06, N = 3
MAX: 137.9
80.6
RTX 2080
SE +/- 0.03, N = 3
MAX: 119.7
76.3
30
60
90
120
150

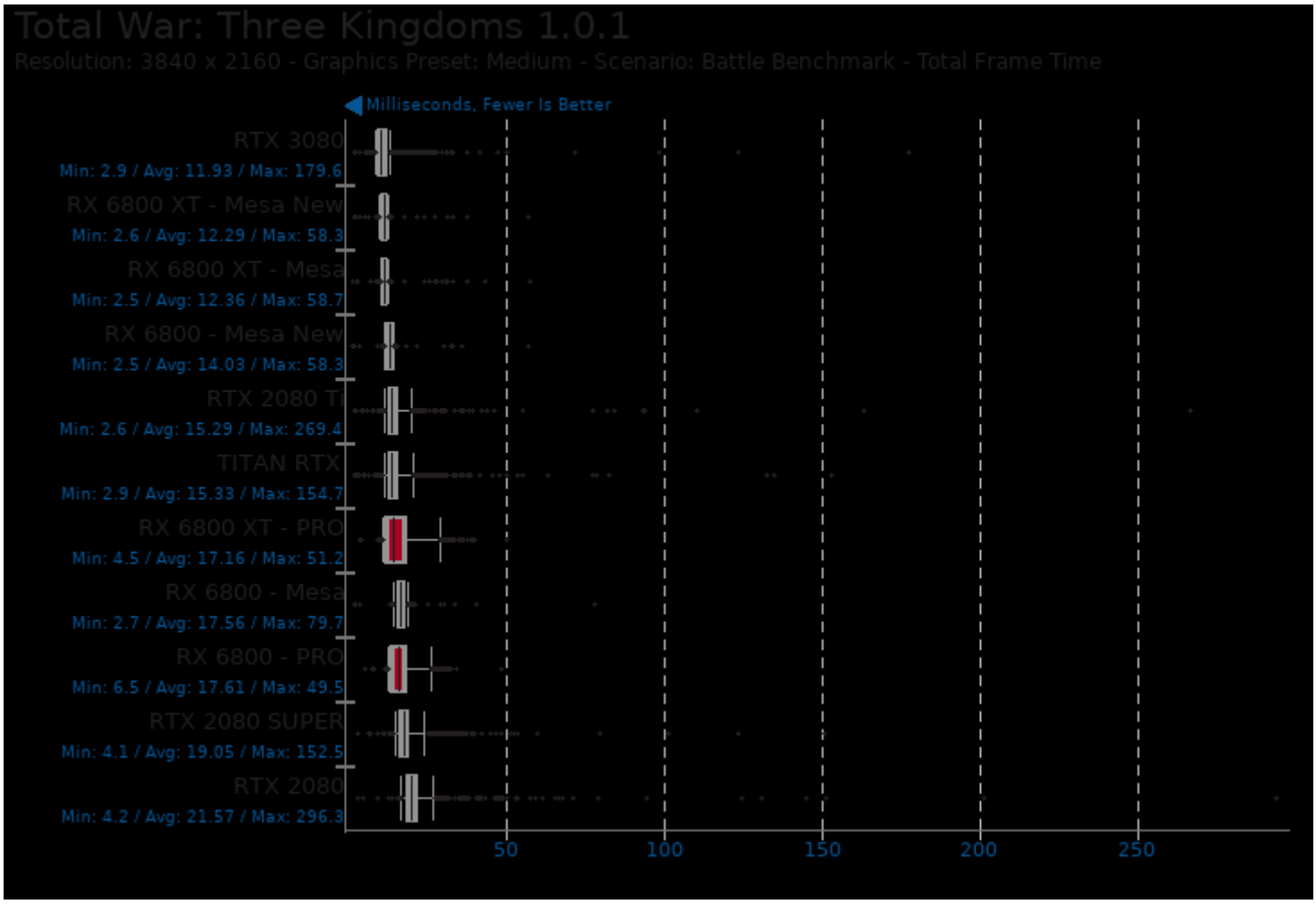

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.07, N = 3
MAX: 146.2
97.4
RX 6800 XT - Mesa New
SE +/- 0.03, N = 3
MAX: 123.4
89.8
RX 6800 XT - PRO
SE +/- 0.07, N = 3
MAX: 128.6
85.4
RX 6800 - Mesa New
SE +/- 0.03, N = 3
MAX: 112.1
79.7
TITAN RTX
SE +/- 0.09, N = 3
MAX: 124.9
76.6
RTX 2080 T
SE +/- 1.12, N = 3
MAX: 112.8
76.0
RX 6800 - PRO
SE +/- 0.06, N = 3
MAX: 112.8
75.6
RX 6800 XT - Mesa
SE +/- 0.09, N = 3
MAX: 104.1
63.9
RTX 2080 SUPER
SE +/- 0.03, N = 3
MAX: 99.9
60.6
RTX 2080
SE +/- 0.03, N = 3
MAX: 88.8
54.7
RX 6800 - Mesa
SE +/- 0.09, N = 3
MAX: 87.4
54.1
20
40
60
80
100

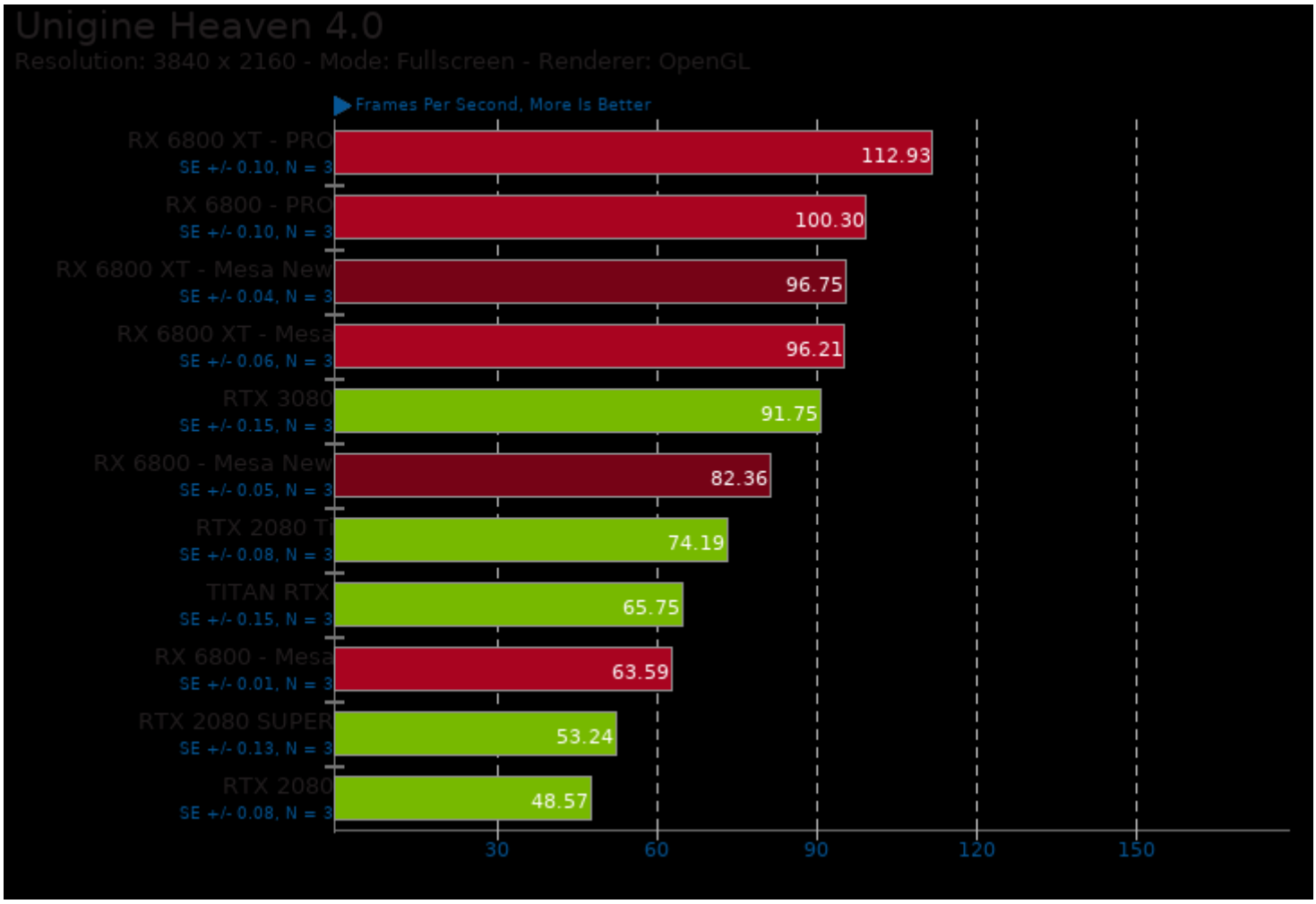

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.07, N = 3
MAX: 179.8
89.8
RX 6800 XT - Mesa New
SE +/- 0.00, N = 3
MAX: 118
81.4
RX 6800 XT - PRO
SE +/- 0.06, N = 3
MAX: 122.7
78.5
RX 6800 - Mesa New
SE +/- 0.00, N = 3
MAX: 106
72.2
TITAN RTX
SE +/- 0.03, N = 3
MAX: 129.3
70.1
RX 6800 - PRO
SE +/- 0.06, N = 3
MAX: 108.6
69.3
RTX 2080 T
SE +/- 0.84, N = 5
MAX: 111.3
68.9
RX 6800 XT - Mesa
SE +/- 0.03, N = 3
MAX: 99
57.1
RTX 2080 SUPER
SE +/- 0.03, N = 3
MAX: 101.8
55.5
RTX 2080
SE +/- 0.07, N = 3
MAX: 82.6
49.7
RX 6800 - Mesa
SE +/- 0.03, N = 3
MAX: 83.1
48.0
20
40
60
80
100

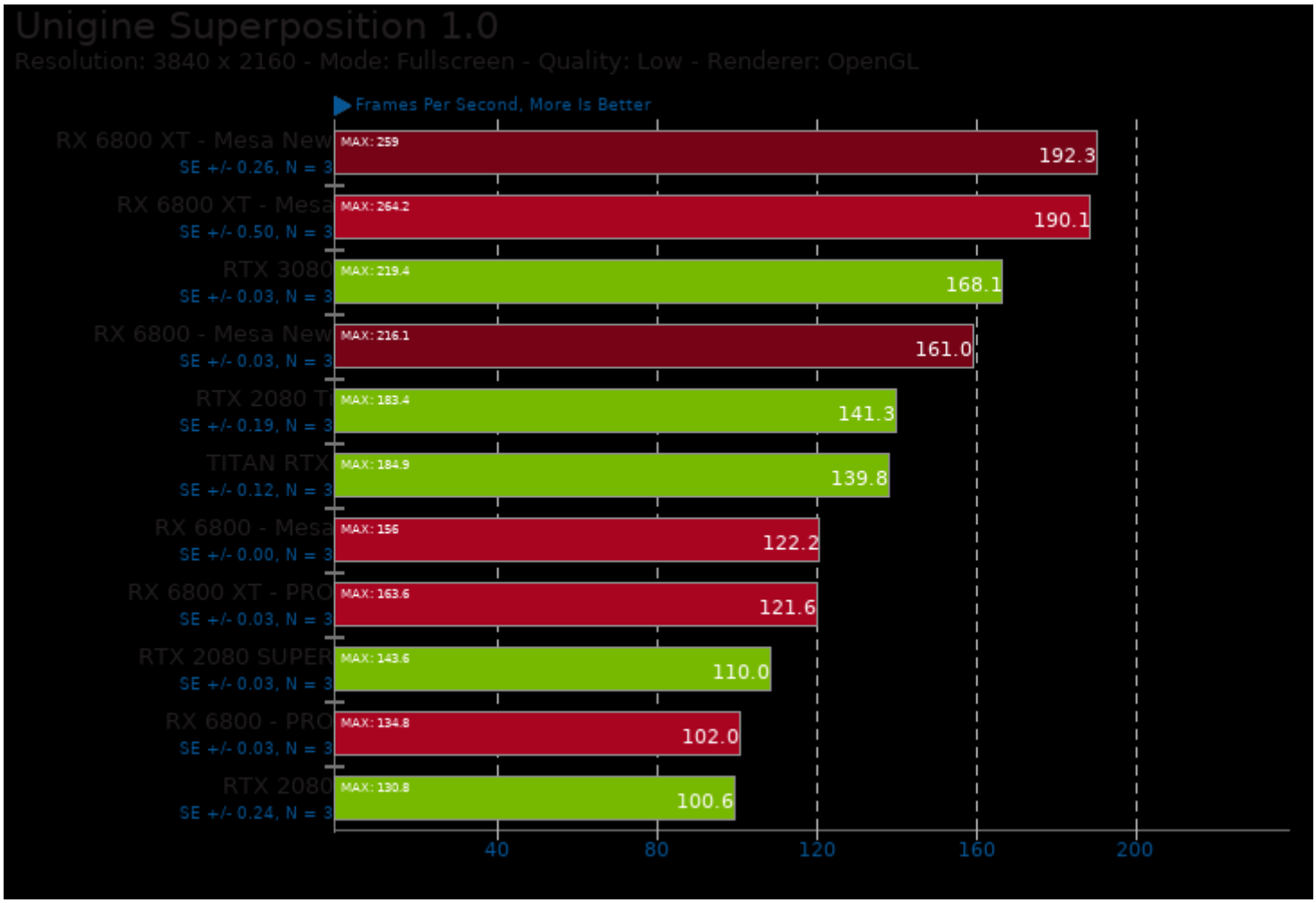

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Low - Scenario: Battle Benchmark
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.64, N = 3
MIN: 4 / MAX: 703.2
142.7
RX 6800 XT - Mesa New
SE +/- 0.71, N = 3
MIN: 15.4 / MAX: 746.3
133.0
RX 6800 XT - Mesa
SE +/- 0.70, N = 3
MIN: 10.9 / MAX: 705.7
132.2
RX 6800 - Mesa New
SE +/- 0.67, N = 3
MIN: 12.8 / MAX: 603.5
120.3
TITAN RTX
SE +/- 0.79, N = 3
MIN: 5.9 / MAX: 626.6
109.7
RTX 2080 T
SE +/- 0.75, N = 3
MIN: 2.3 / MAX: 601.3
107.8
RX 6800 - Mesa
SE +/- 0.33, N = 3
MIN: 13.1 / MAX: 724.1
93.0
RTX 2080 SUPER
SE +/- 0.26, N = 3
MIN: 4.1 / MAX: 551
85.7
RX 6800 - PRO
SE +/- 0.98, N = 3
MIN: 14.5 / MAX: 384.3
79.8
RX 6800 XT - PRO
SE +/- 0.58, N = 3
MIN: 20.9 / MAX: 348.1
79.1
RTX 2080
SE +/- 0.32, N = 3
MIN: 4.5 / MAX: 772.8
78.3
30
60
90
120
150

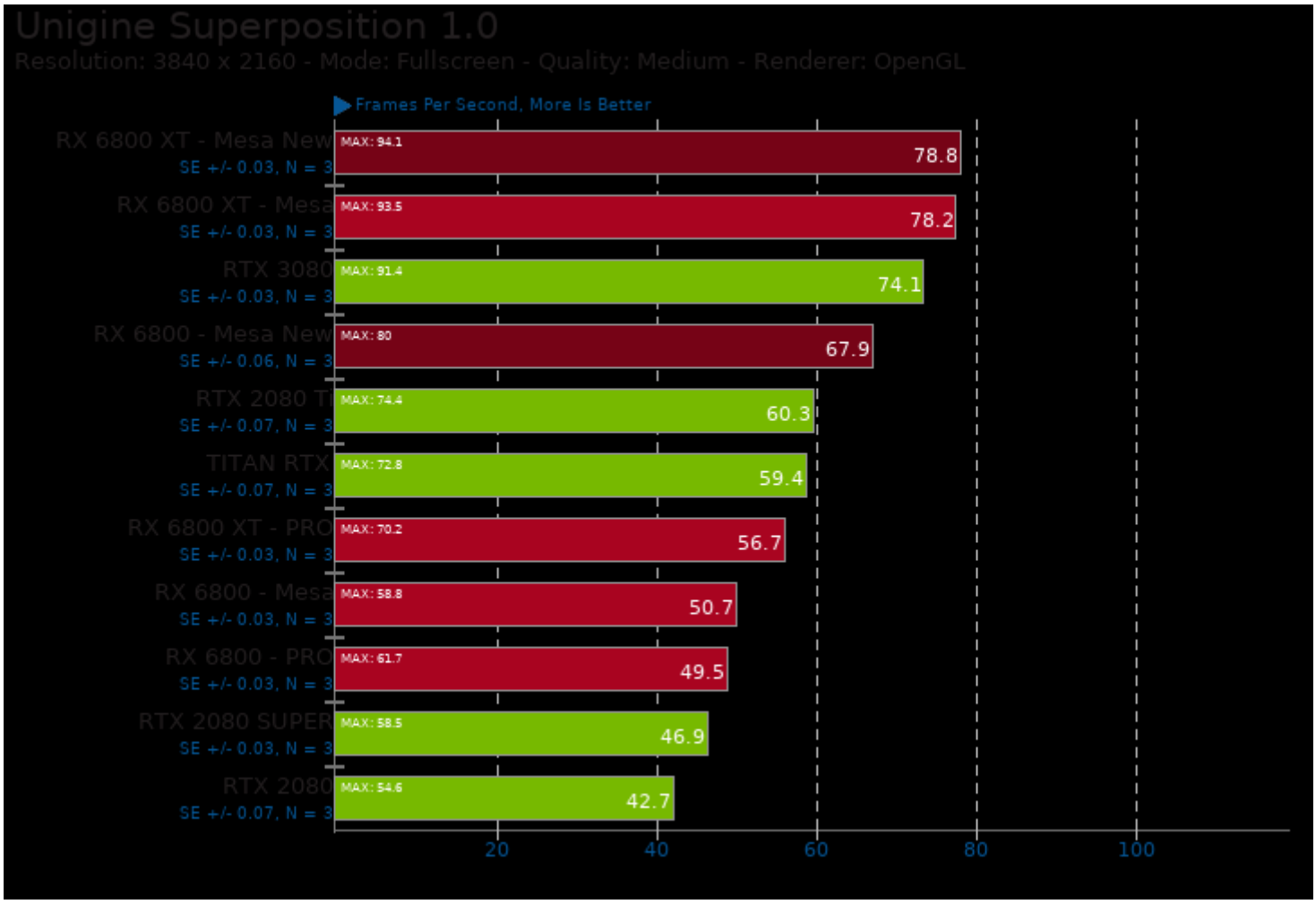

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Low - Scenario: Battle Benchmark - Total Frame Time
Milliseconds, Fewer Is Better
RTX 3080
Min: 1.9 / Avg: 6.96 / Max: 141.1
RX 6800 XT - Mesa New
Min: 1.3 / Avg: 7.47 / Max: 65
RX 6800 XT - Mesa
Min: 1.7 / Avg: 7.54 / Max: 92
RX 6800 - Mesa New
Min: 1.7 / Avg: 8.4 / Max: 78.1
TITAN RTX
Min: 1.9 / Avg: 9.05 / Max: 143.9
RTX 2080 Ti
Min: 1.7 / Avg: 9.21 / Max: 437.3
RX 6800 - Mesa
Min: 2 / Avg: 10.87 / Max: 62.7
RTX 2080 SUPER
Min: 2 / Avg: 11.62 / Max: 139
RX 6800 - PRO
Min: 4.3 / Avg: 12.53 / Max: 68.7
RX 6800 XT - PRO
Min: 2.9 / Avg: 12.66 / Max: 42.9
RTX 2080
Min: 1.3 / Avg: 12.7 / Max: 142.9
80
160
240
320
400

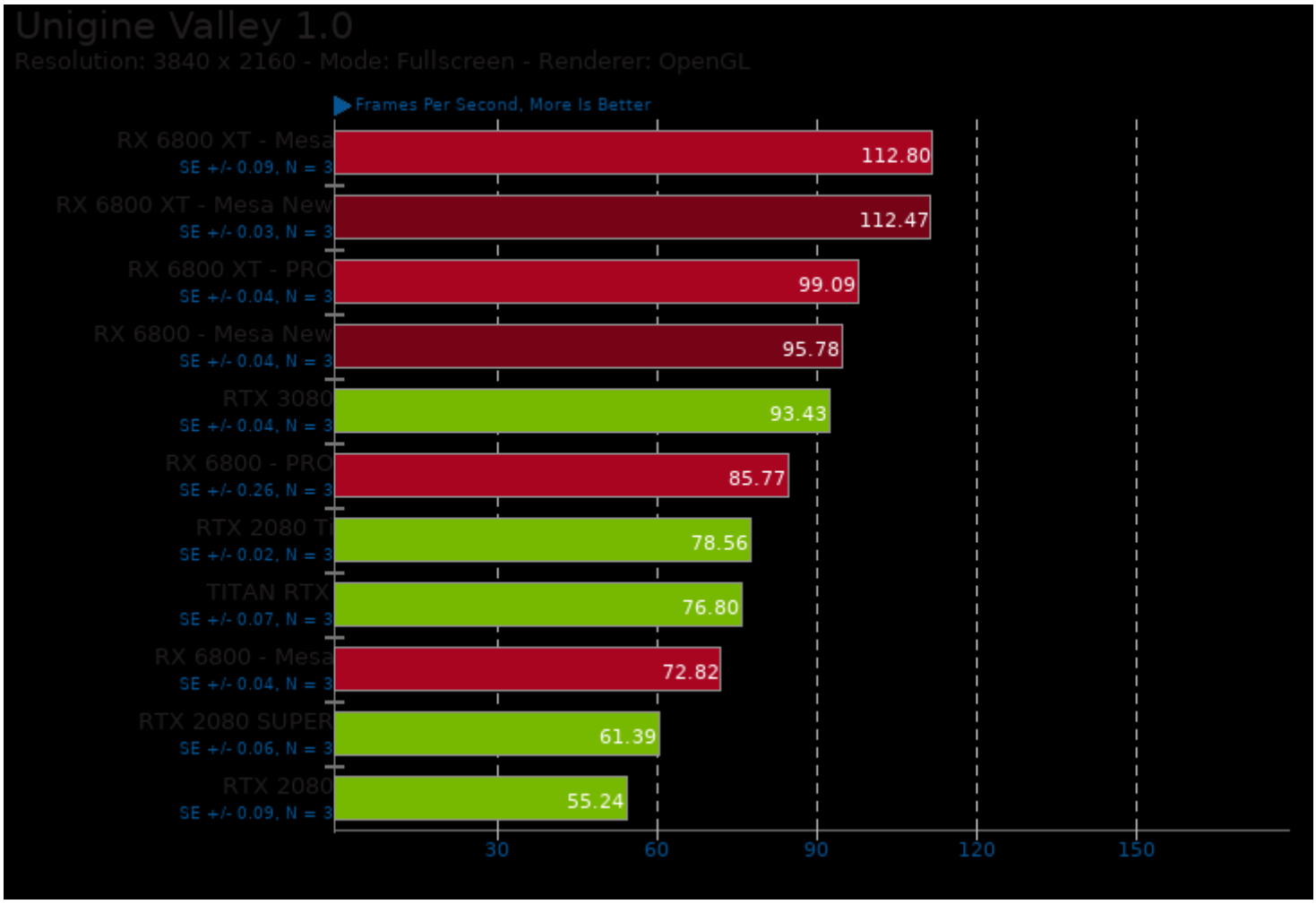

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.33, N = 3
MIN: 5.5 / MAX: 425.9
83.6
RX 6800 XT - Mesa New
SE +/- 0.28, N = 3
MIN: 17 / MAX: 389.3
81.2
RX 6800 XT - Mesa
SE +/- 0.37, N = 3
MIN: 17 / MAX: 397.6
80.2
RX 6800 - Mesa New
SE +/- 0.27, N = 3
MIN: 17.1 / MAX: 395.3
71.8
TITAN RTX
SE +/- 0.15, N = 3
MIN: 3 / MAX: 392
65.4
RTX 2080 T
SE +/- 0.53, N = 3
MIN: 3.7 / MAX: 390.9
65.2
RX 6800 XT - PRO
SE +/- 0.55, N = 3
MIN: 19.3 / MAX: 221.1
58.0
RX 6800 - Mesa
SE +/- 0.15, N = 3
MIN: 12.6 / MAX: 367.6
56.6
RX 6800 - PRO
SE +/- 0.28, N = 3
MIN: 19.7 / MAX: 174.2
56.6
RTX 2080 SUPER
SE +/- 0.42, N = 3
MIN: 4.8 / MAX: 244.6
51.9
RTX 2080
SE +/- 0.07, N = 3
MIN: 3.4 / MAX: 279.7
46.3
20
40
60
80
100

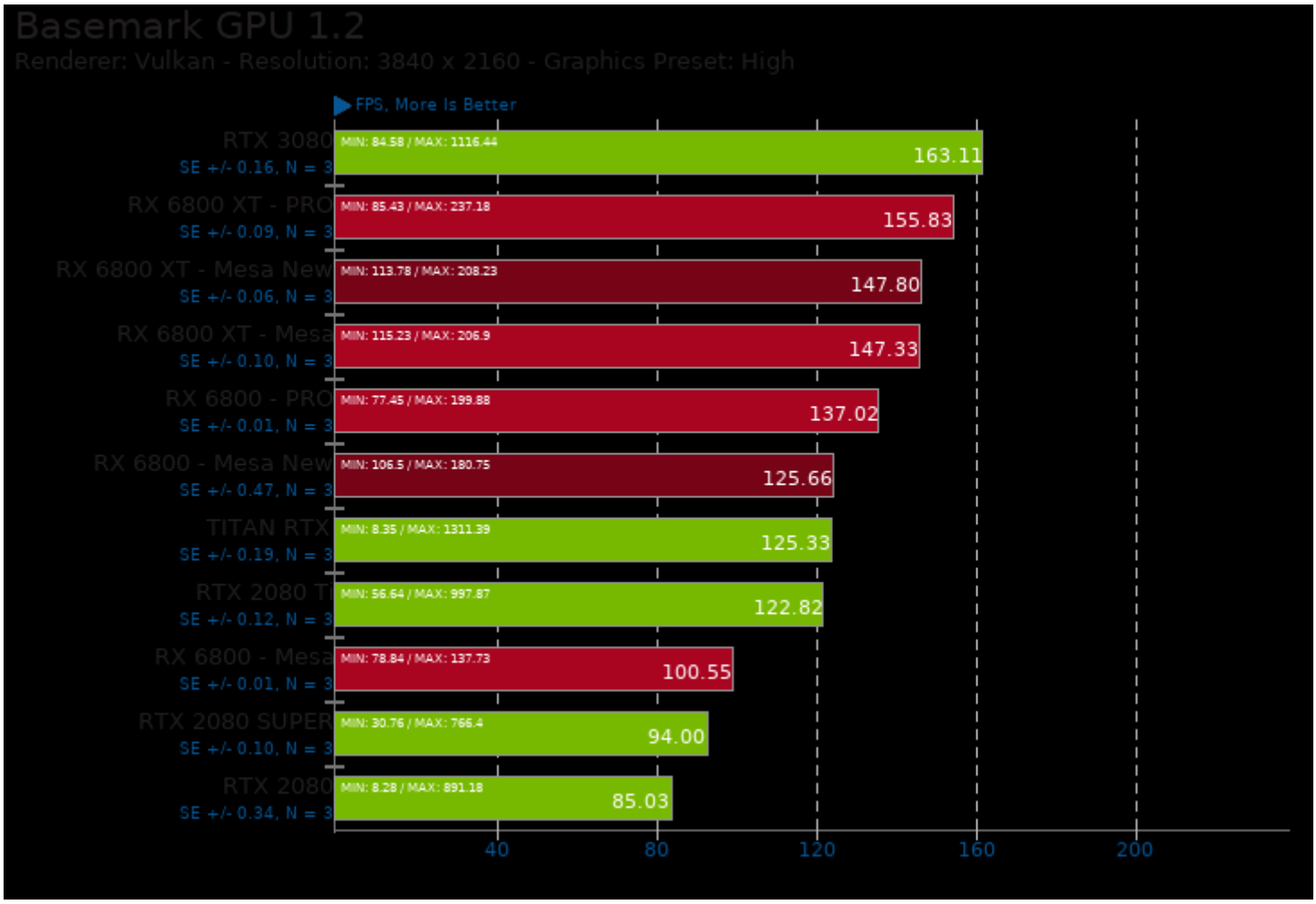

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark - Total Frame Time
Milliseconds, Fewer Is Better
RTX 3080
Min: 2.9 / Avg: 11.93 / Max: 179.6
RX 6800 XT - Mesa New
Min: 2.6 / Avg: 12.29 / Max: 58.3
RX 6800 XT - Mesa
Min: 2.5 / Avg: 12.36 / Max: 58.7
RX 6800 - Mesa New
Min: 2.5 / Avg: 14.03 / Max: 58.3
RTX 2080 Ti
Min: 2.6 / Avg: 15.29 / Max: 269.4
TITAN RTX
Min: 2.9 / Avg: 15.33 / Max: 154.7
RX 6800 XT - PRO
Min: 4.5 / Avg: 17.16 / Max: 51.2
RX 6800 - Mesa
Min: 2.7 / Avg: 17.56 / Max: 79.7
RX 6800 - PRO
Min: 6.5 / Avg: 17.61 / Max: 49.5
RTX 2080 SUPER
Min: 4.1 / Avg: 19.05 / Max: 152.5
RTX 2080
Min: 4.2 / Avg: 21.57 / Max: 296.3
50
100
150
200
250


Unigine Heaven 4.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.10, N = 3
112.93
RX 6800 - PRO
SE +/- 0.10, N = 3
100.30
RX 6800 XT - Mesa New
SE +/- 0.04, N = 3
96.75
RX 6800 XT - Mesa
SE +/- 0.06, N = 3
96.21
RTX 3080
SE +/- 0.15, N = 3
91.75
RX 6800 - Mesa New
SE +/- 0.05, N = 3
82.36
RTX 2080 Ti
SE +/- 0.08, N = 3
74.19
TITAN RTX
SE +/- 0.15, N = 3
65.75
RX 6800 - Mesa
SE +/- 0.01, N = 3
63.59
RTX 2080 SUPER
SE +/- 0.13, N = 3
53.24
RTX 2080
SE +/- 0.08, N = 3
48.57
30
60
90
120
150

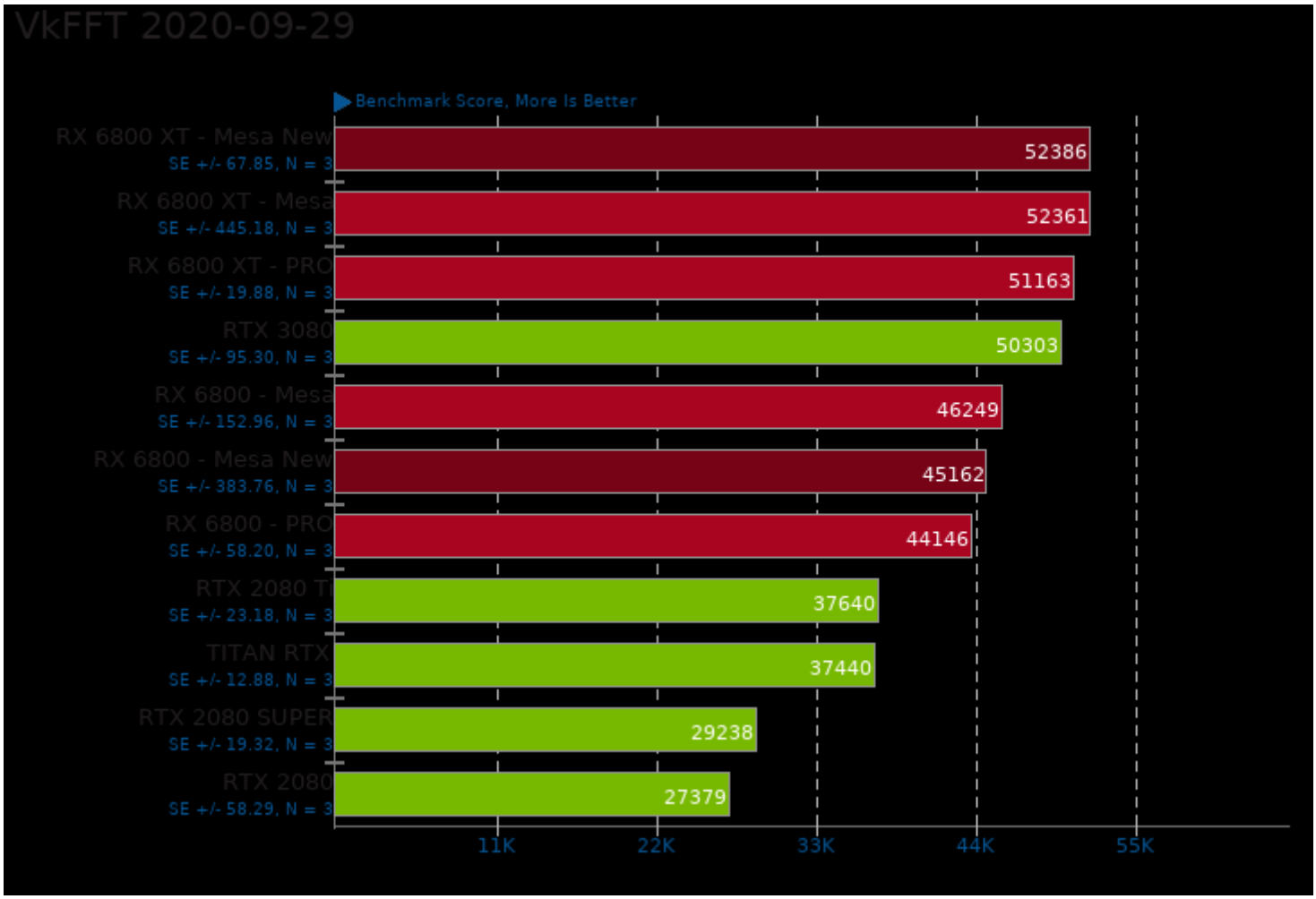

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Low - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - Mesa New
SE +/- 0.26, N = 3
MAX: 259
192.3
RX 6800 XT - Mesa
SE +/- 0.50, N = 3
MAX: 264.2
190.1
RTX 3080
SE +/- 0.03, N = 3
MAX: 219.4
168.1
RX 6800 - Mesa New
SE +/- 0.03, N = 3
MAX: 216.1
161.0
RTX 2080 T
SE +/- 0.19, N = 3
MAX: 183.4
141.3
TITAN RTX
SE +/- 0.12, N = 3
MAX: 184.9
139.8
RX 6800 - Mesa
SE +/- 0.00, N = 3
MAX: 156
122.2
RX 6800 XT - PRO
SE +/- 0.03, N = 3
MAX: 163.6
121.6
RTX 2080 SUPER
SE +/- 0.03, N = 3
MAX: 143.6
110.0
RX 6800 - PRO
SE +/- 0.03, N = 3
MAX: 134.8
102.0
RTX 2080
SE +/- 0.24, N = 3
MAX: 130.8
100.6
40
80
120
160
200

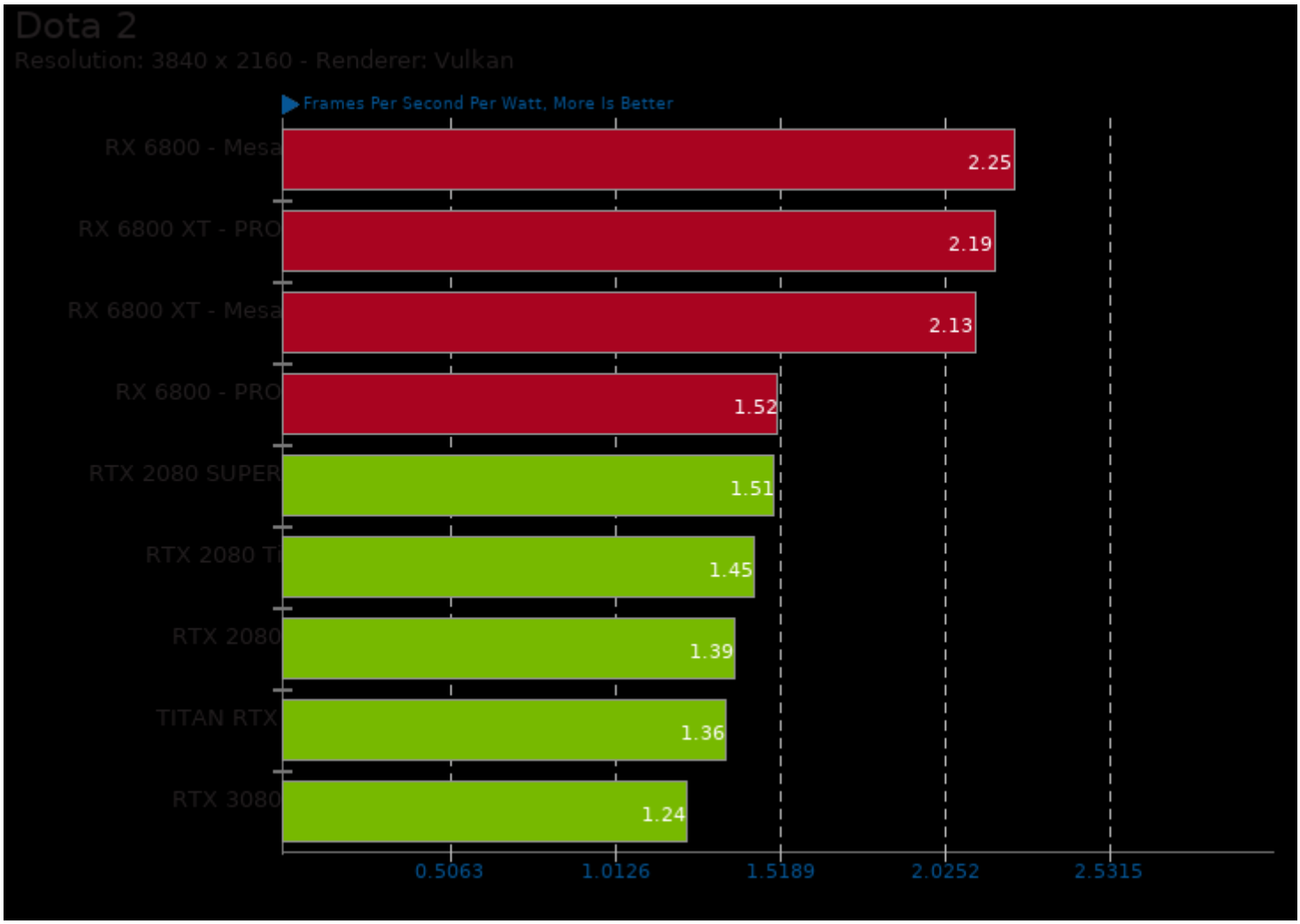

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Medium - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - Mesa New
SE +/- 0.03, N = 3
MAX: 94.1
78.8
RX 6800 XT - Mesa
SE +/- 0.03, N = 3
MAX: 93.5
78.2
RTX 3080
SE +/- 0.03, N = 3
MAX: 91.4
74.1
RX 6800 - Mesa New
SE +/- 0.06, N = 3
MAX: 80
67.9
RTX 2080 T
SE +/- 0.07, N = 3
MAX: 74.4
60.3
TITAN RTX
SE +/- 0.07, N = 3
MAX: 72.8
59.4
RX 6800 XT - PRO
SE +/- 0.03, N = 3
MAX: 70.2
56.7
RX 6800 - Mesa
SE +/- 0.03, N = 3
MAX: 58.8
50.7
RX 6800 - PRO
SE +/- 0.03, N = 3
MAX: 61.7
49.5
RTX 2080 SUPER
SE +/- 0.03, N = 3
MAX: 58.5
46.9
RTX 2080
SE +/- 0.07, N = 3
MAX: 54.6
42.7
20
40
60
80
100

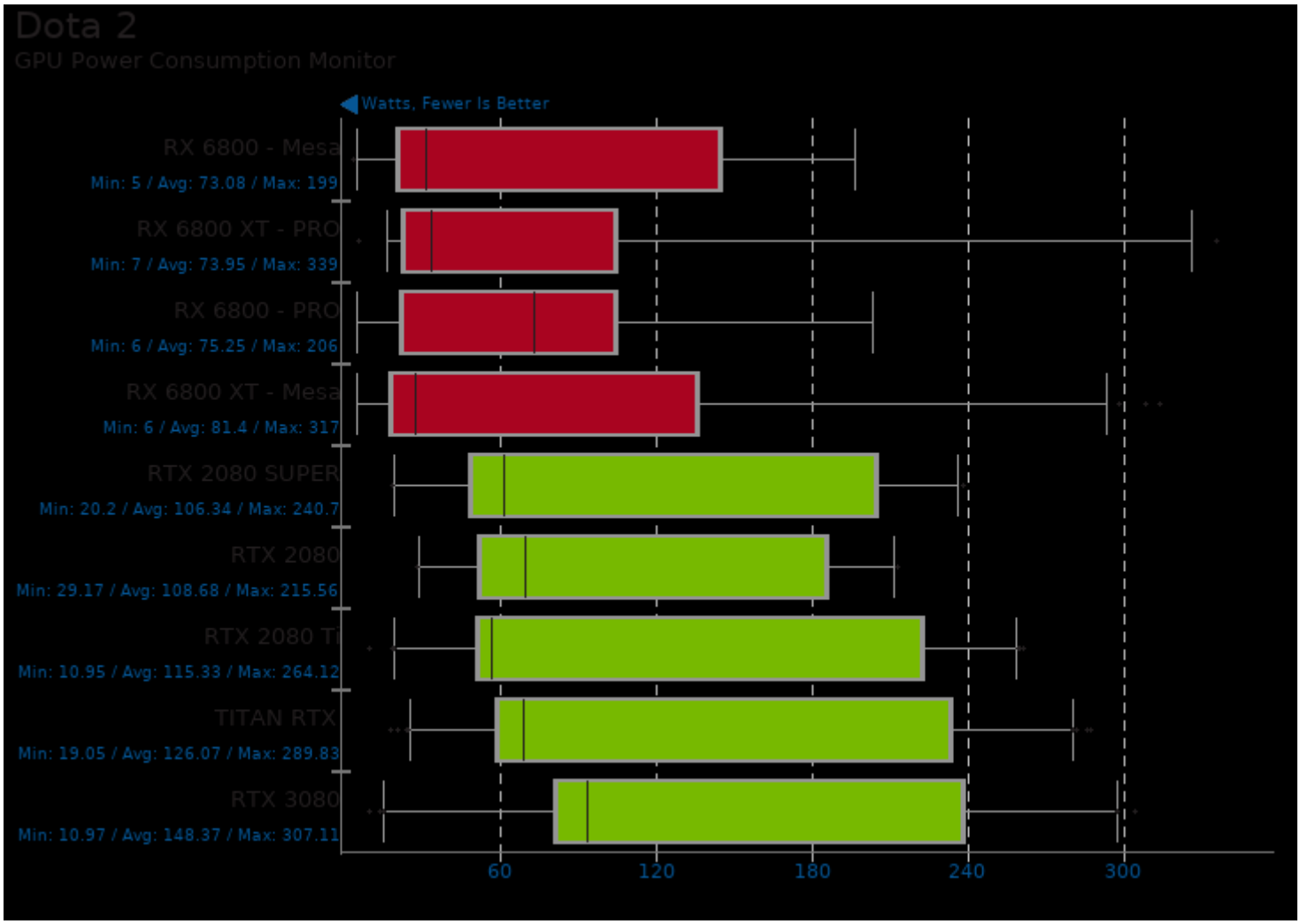

Unigine Valley 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.09, N = 3
112.80
RX 6800 XT - Mesa New
SE +/- 0.03, N = 3
112.47
RX 6800 XT - PRO
SE +/- 0.04, N = 3
99.09
RX 6800 - Mesa New
SE +/- 0.04, N = 3
95.78
RTX 3080
SE +/- 0.04, N = 3
93.43
RX 6800 - PRO
SE +/- 0.26, N = 3
85.77
RTX 2080 Ti
SE +/- 0.02, N = 3
78.56
TITAN RTX
SE +/- 0.07, N = 3
76.80
RX 6800 - Mesa
SE +/- 0.04, N = 3
72.82
RTX 2080 SUPER
SE +/- 0.06, N = 3
61.39
RTX 2080
SE +/- 0.09, N = 3
55.24
30
60
90
120
150

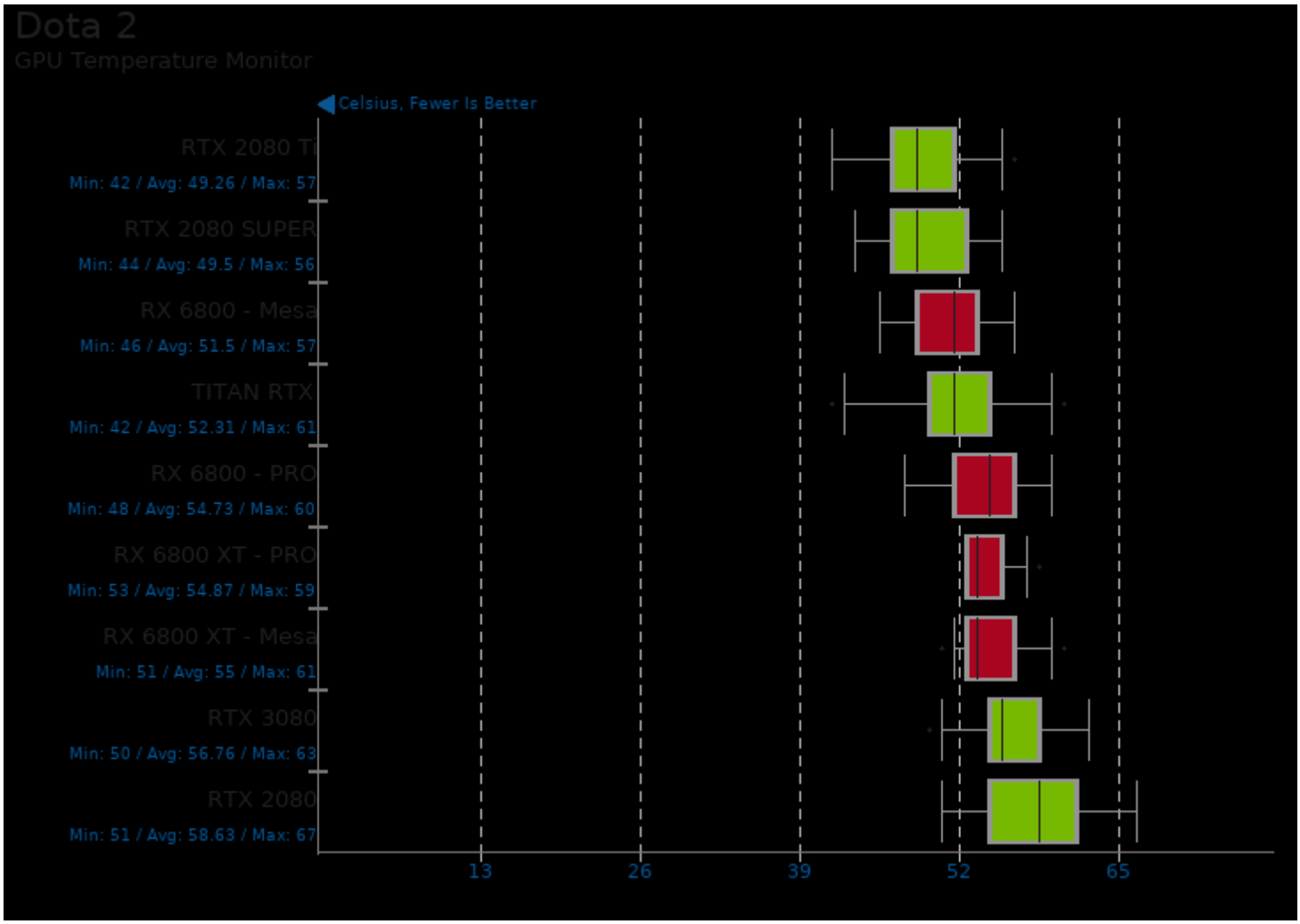

Basemark GPU 1.2
Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High
FPS, More Is Better
RTX 3080
SE +/- 0.16, N = 3
MIN: 84.58 / MAX: 1116.44
163.11
RX 6800 XT - PRO
SE +/- 0.09, N = 3
MIN: 85.43 / MAX: 237.18
155.83
RX 6800 XT - Mesa New
SE +/- 0.06, N = 3
MIN: 113.78 / MAX: 208.23
147.80
RX 6800 XT - Mesa
SE +/- 0.10, N = 3
MIN: 115.23 / MAX: 206.9
147.33
RX 6800 - PRO
SE +/- 0.01, N = 3
MIN: 77.45 / MAX: 199.88
137.02
RX 6800 - Mesa New
SE +/- 0.47, N = 3
MIN: 106.5 / MAX: 180.75
125.66
TITAN RTX
SE +/- 0.19, N = 3
MIN: 8.35 / MAX: 1311.39
125.33
RTX 2080 Ti
SE +/- 0.12, N = 3
MIN: 56.64 / MAX: 997.87
122.82
RX 6800 - Mesa
SE +/- 0.01, N = 3
MIN: 78.84 / MAX: 137.73
100.55
RTX 2080 SUPER
SE +/- 0.10, N = 3
MIN: 30.76 / MAX: 766.4
94.00
RTX 2080
SE +/- 0.34, N = 3
MIN: 8.28 / MAX: 891.18
85.03
40
80
120
160
200

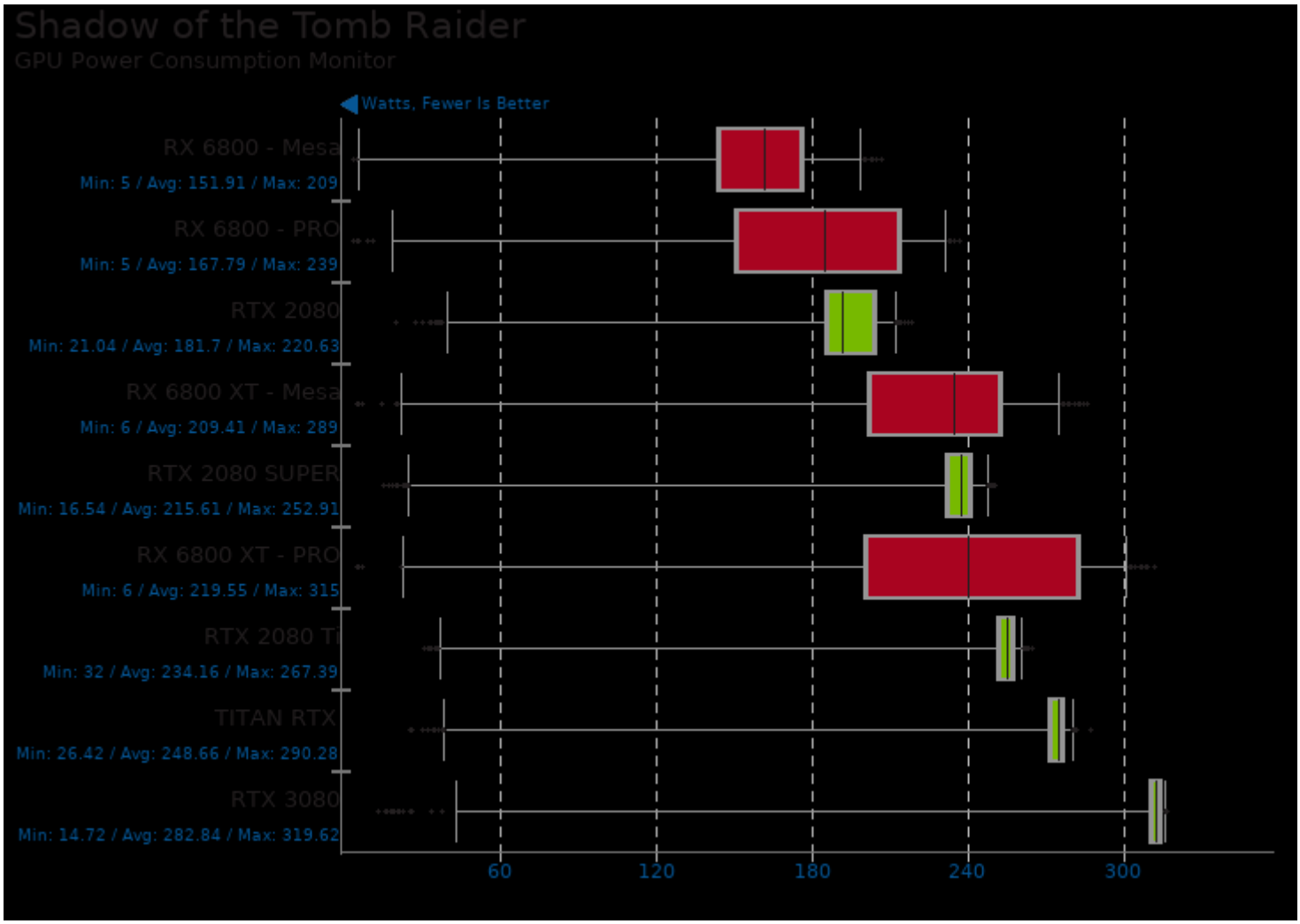
Radeon RX 6800 Series Linux Benchmarks

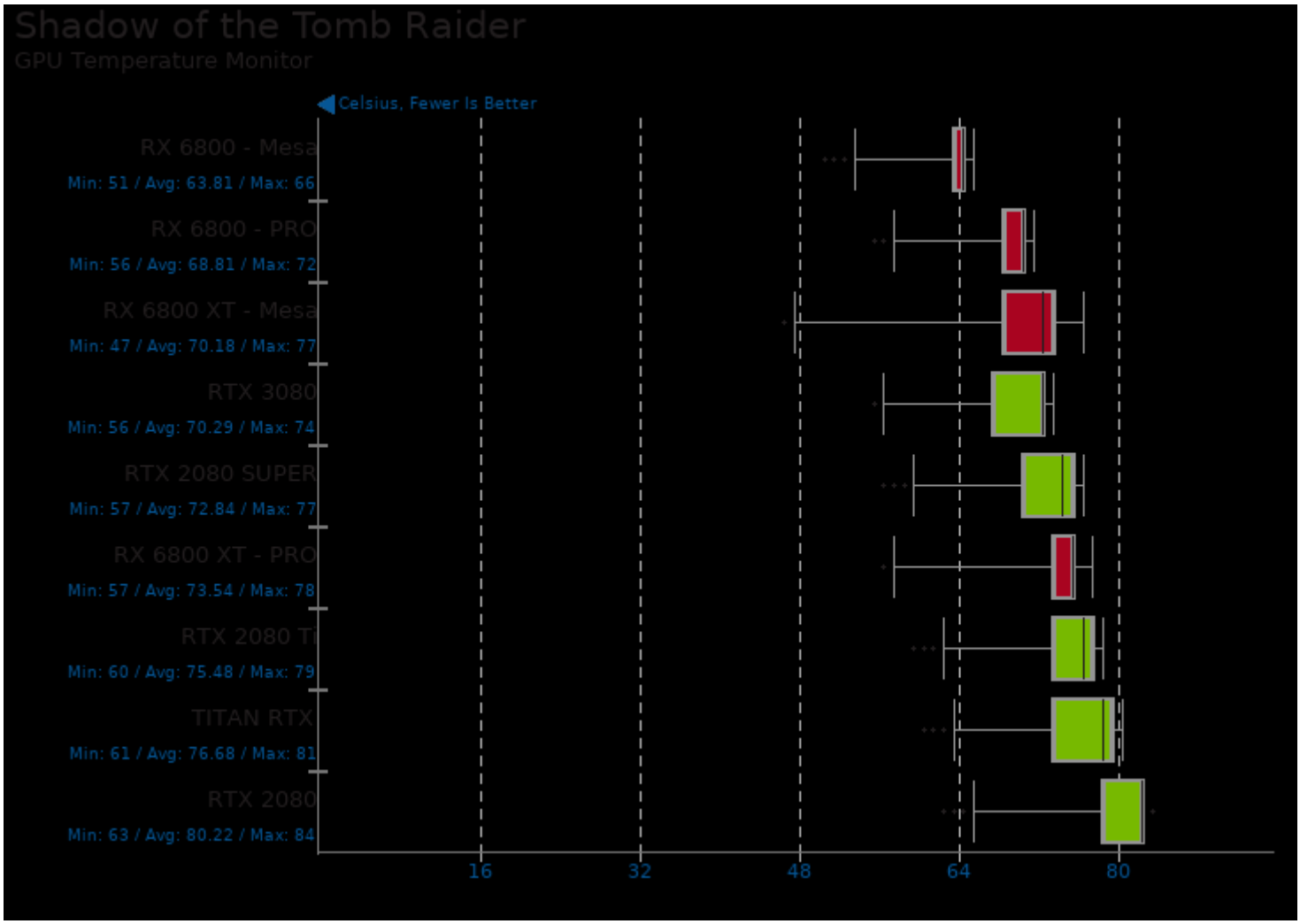


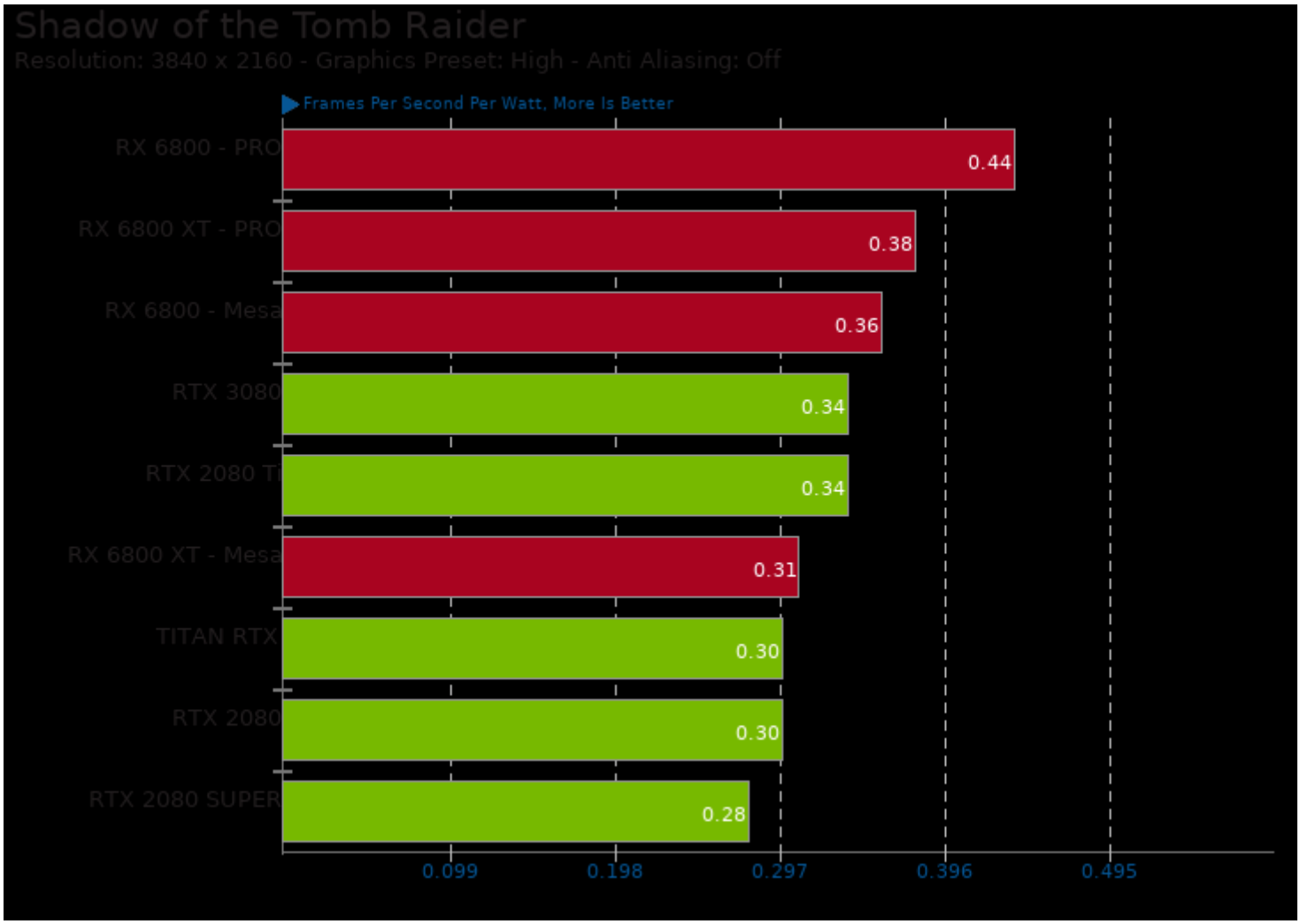

Dota 2
Resolution: 3840 x 2160 - Renderer: Vulkan
Frames Per Second Per Watt, More Is Better
RX 6800 - Mesa
2.25
RX 6800 XT - PRO
2.19
RX 6800 XT - Mesa
2.13
RX 6800 - PRO
1.52
RTX 2080 SUPER
1.51
RTX 2080 Ti
1.45
RTX 2080
1.39
TITAN RTX
1.36
RTX 3080
1.24
0.5063
1.0126
1.5189
2.0252
2.5315

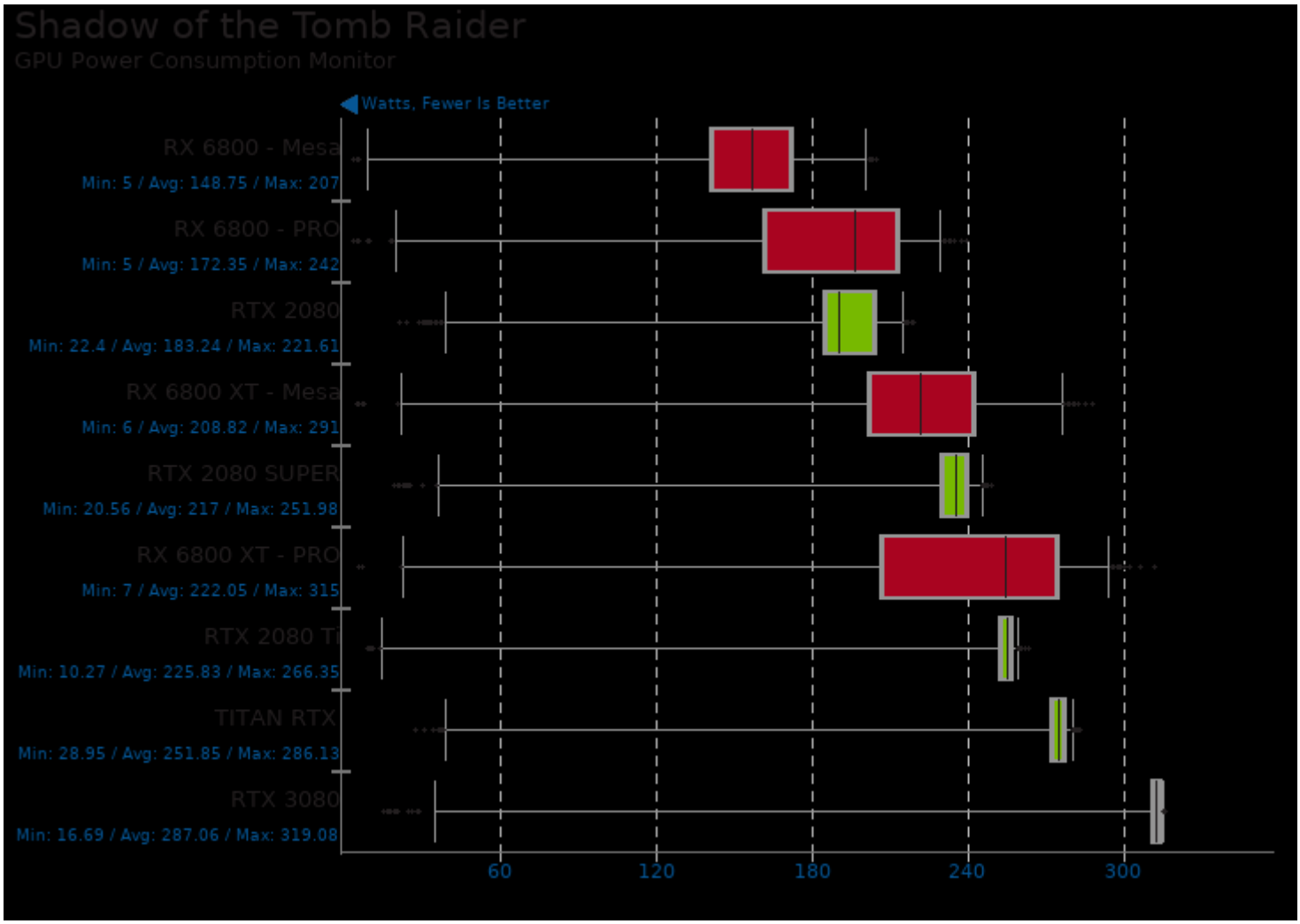

Dota 2
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 73.08 / Max: 199
RX 6800 XT - PRO
Min: 7 / Avg: 73.95 / Max: 339
RX 6800 - PRO
Min: 6 / Avg: 75.25 / Max: 206
RX 6800 XT - Mesa
Min: 6 / Avg: 81.4 / Max: 317
RTX 2080 SUPER
Min: 20.2 / Avg: 106.34 / Max: 240.7
RTX 2080
Min: 29.17 / Avg: 108.68 / Max: 215.56
RTX 2080 Ti
Min: 10.95 / Avg: 115.33 / Max: 264.12
TITAN RTX
Min: 19.05 / Avg: 126.07 / Max: 289.83
RTX 3080
Min: 10.97 / Avg: 148.37 / Max: 307.11
60
120
180
240
300

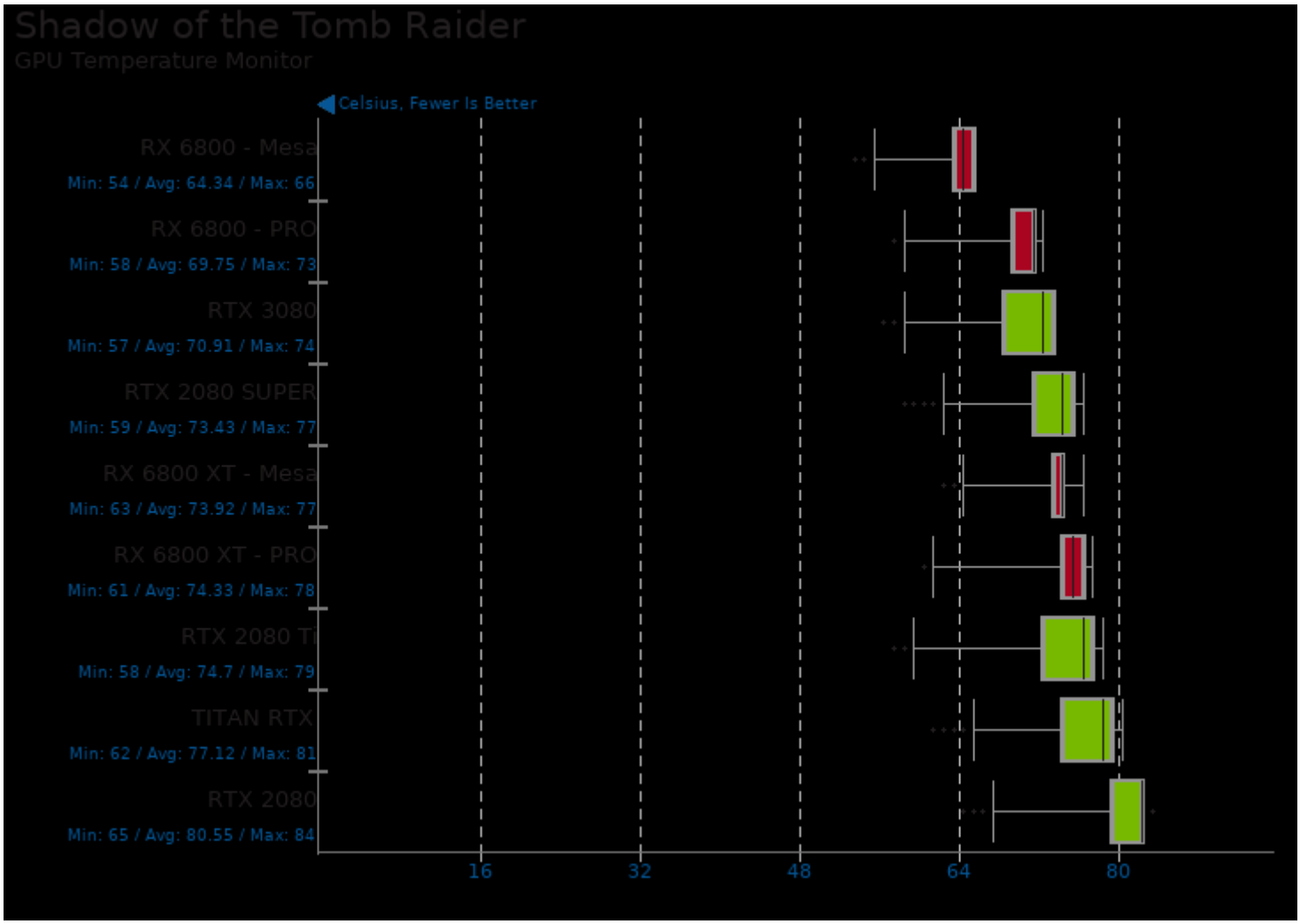

Dota 2
GPU Temperature Monitor
Celsius, Fewer Is Better
RTX 2080 Ti
Min: 42 / Avg: 49.26 / Max: 57
RTX 2080 SUPER
Min: 44 / Avg: 49.5 / Max: 56
RX 6800 - Mesa
Min: 46 / Avg: 51.5 / Max: 57
TITAN RTX
Min: 42 / Avg: 52.31 / Max: 61
RX 6800 - PRO
Min: 48 / Avg: 54.73 / Max: 60
RX 6800 XT - PRO
Min: 53 / Avg: 54.87 / Max: 59
RX 6800 XT - Mesa
Min: 51 / Avg: 55 / Max: 61
RTX 3080
Min: 50 / Avg: 56.76 / Max: 63
RTX 2080
Min: 51 / Avg: 58.63 / Max: 67
13
26
39
52
65

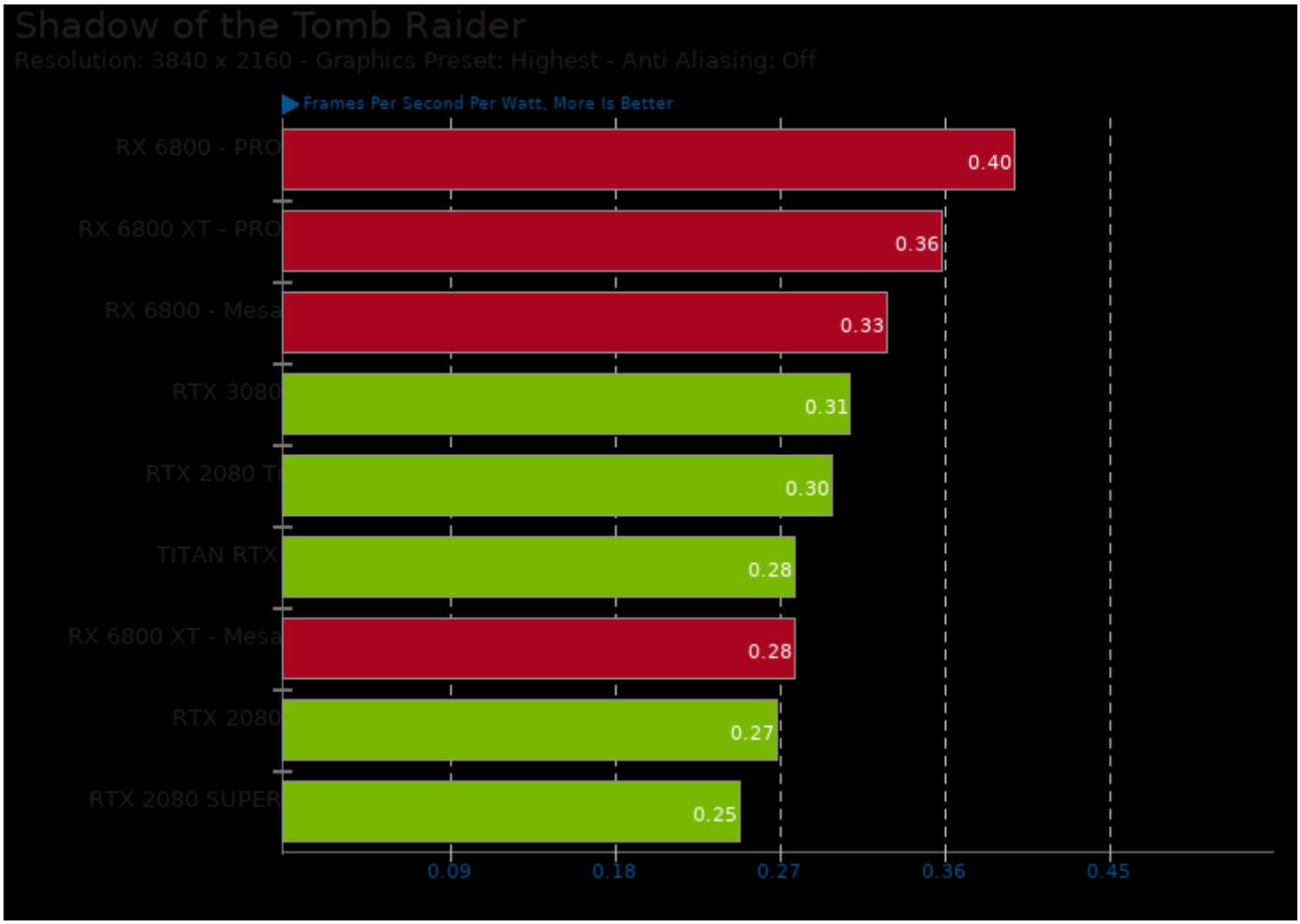

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 151.91 / Max: 209
RX 6800 - PRO
Min: 5 / Avg: 167.79 / Max: 239
RTX 2080
Min: 21.04 / Avg: 181.7 / Max: 220.63
RX 6800 XT - Mesa
Min: 6 / Avg: 209.41 / Max: 289
RTX 2080 SUPER
Min: 16.54 / Avg: 215.61 / Max: 252.91
RX 6800 XT - PRO
Min: 6 / Avg: 219.55 / Max: 315
RTX 2080 Ti
Min: 32 / Avg: 234.16 / Max: 267.39
TITAN RTX
Min: 26.42 / Avg: 248.66 / Max: 290.28
RTX 3080
Min: 14.72 / Avg: 282.84 / Max: 319.62
60
120
180
240
300

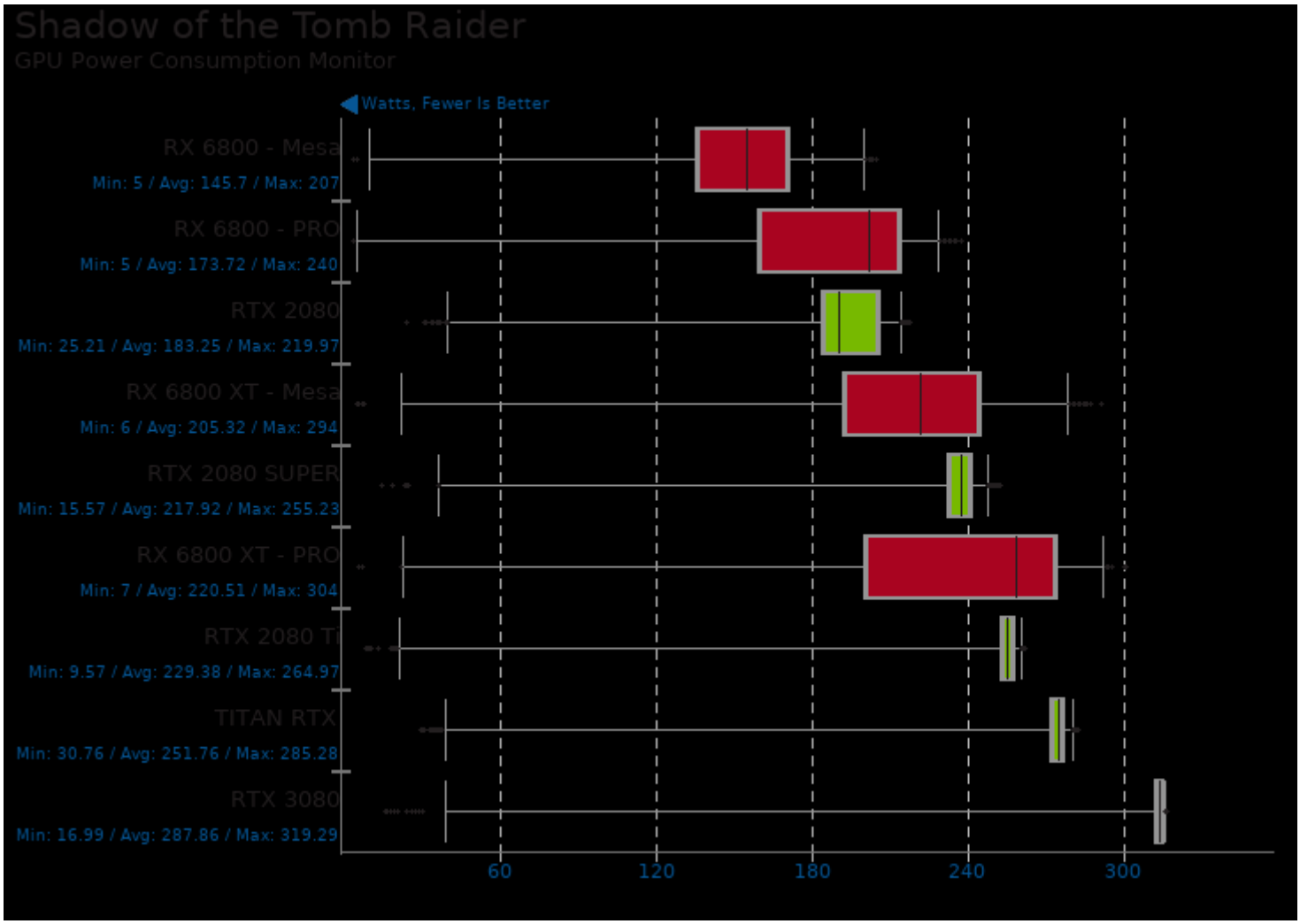

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 51 / Avg: 63.81 / Max: 66
RX 6800 - PRO
Min: 56 / Avg: 68.81 / Max: 72
RX 6800 XT - Mesa
Min: 47 / Avg: 70.18 / Max: 77
RTX 3080
Min: 56 / Avg: 70.29 / Max: 74
RTX 2080 SUPER
Min: 57 / Avg: 72.84 / Max: 77
RX 6800 XT - PRO
Min: 57 / Avg: 73.54 / Max: 78
RTX 2080 Ti
Min: 60 / Avg: 75.48 / Max: 79
TITAN RTX
Min: 61 / Avg: 76.68 / Max: 81
RTX 2080
Min: 63 / Avg: 80.22 / Max: 84
16
32
48
64
80

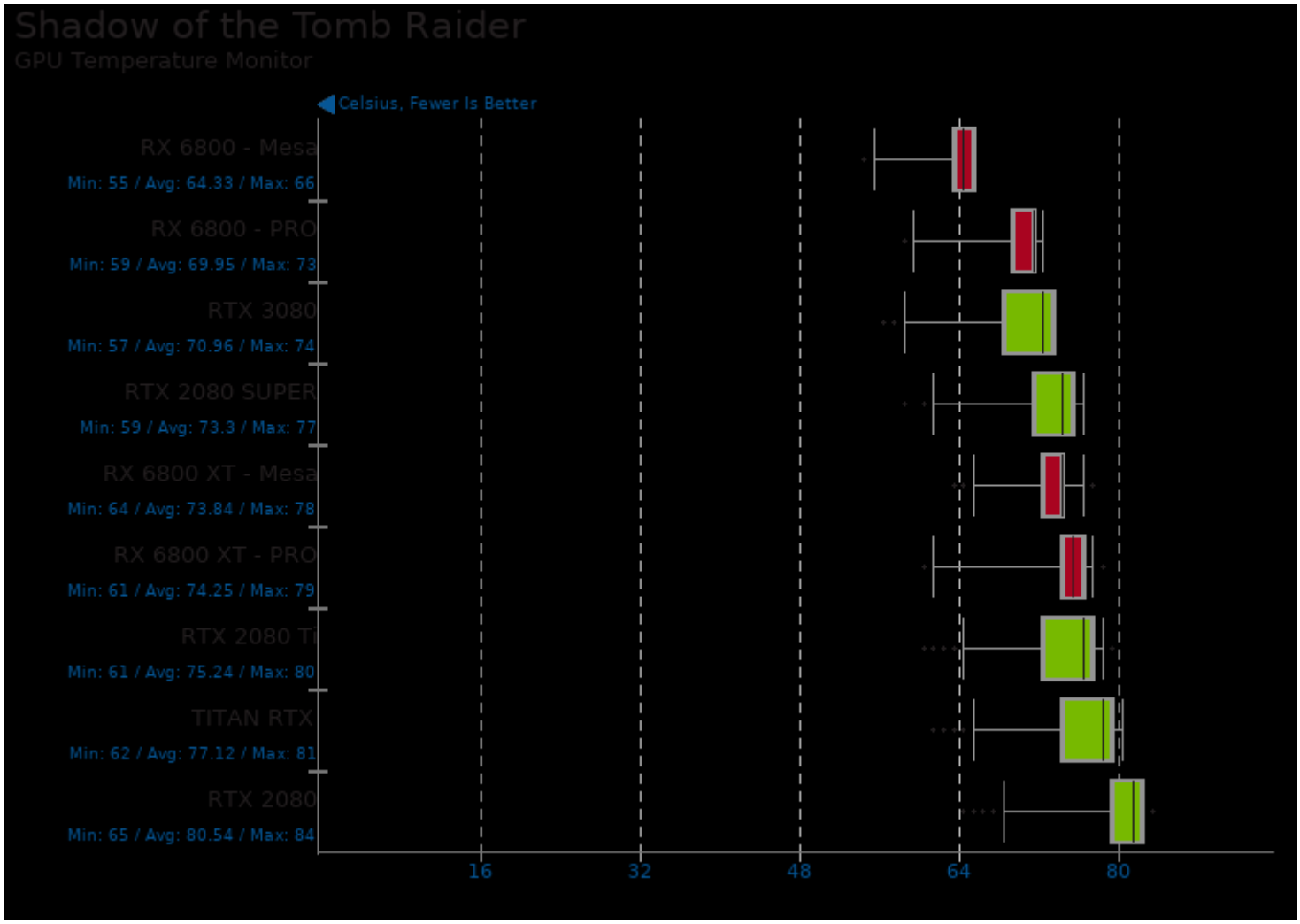

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RX 6800 - PRO
0.44
RX 6800 XT - PRO
0.38
RX 6800 - Mesa
0.36
RTX 3080
0.34
RTX 2080 Ti
0.34
RX 6800 XT - Mesa
0.31
TITAN RTX
0.30
RTX 2080
0.30
RTX 2080 SUPER
0.28
0.099
0.198
0.297
0.396
0.495

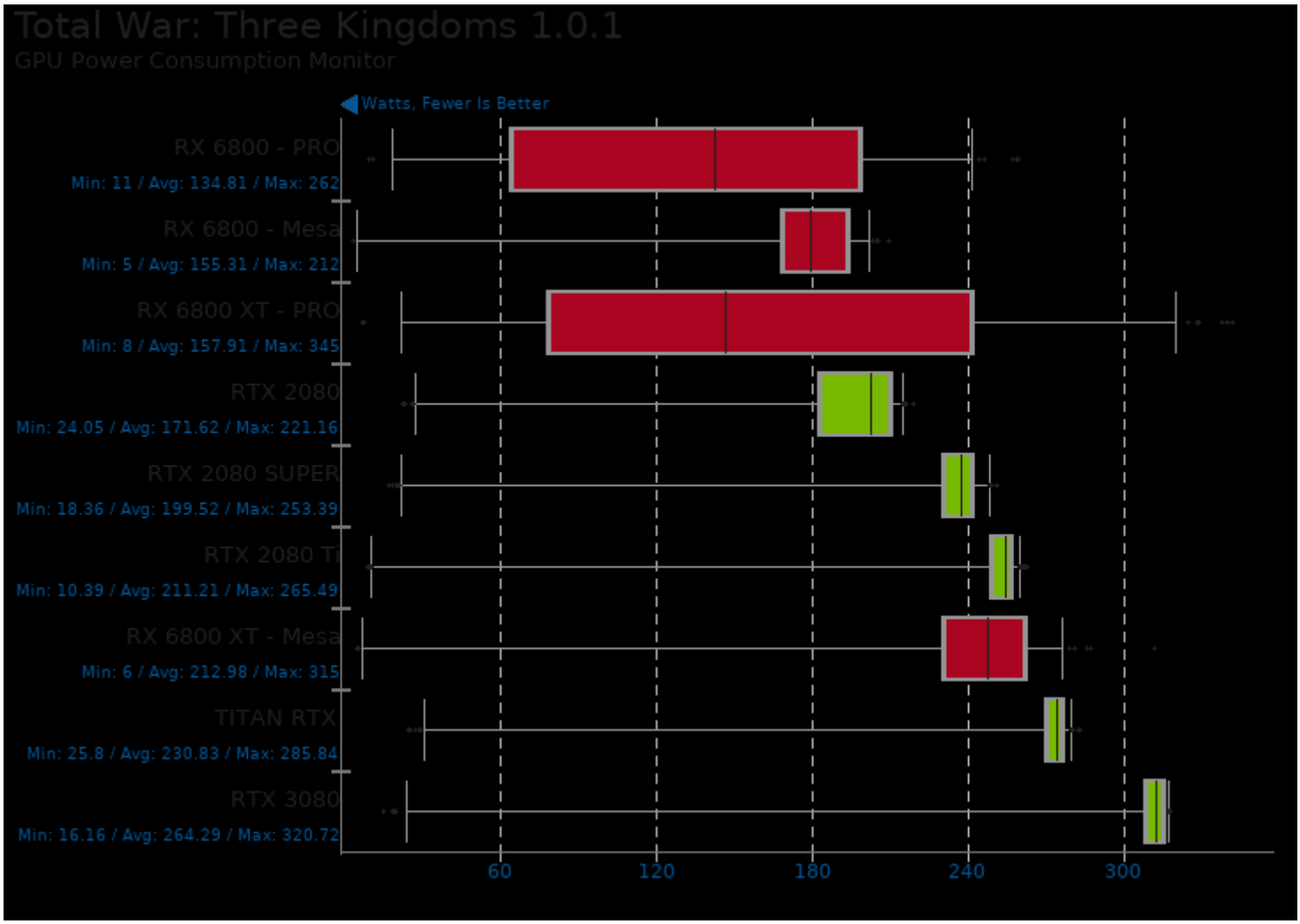

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 148.75 / Max: 207
RX 6800 - PRO
Min: 5 / Avg: 172.35 / Max: 242
RTX 2080
Min: 22.4 / Avg: 183.24 / Max: 221.61
RX 6800 XT - Mesa
Min: 6 / Avg: 208.82 / Max: 291
RTX 2080 SUPER
Min: 20.56 / Avg: 217 / Max: 251.98
RX 6800 XT - PRO
Min: 7 / Avg: 222.05 / Max: 315
RTX 2080 Ti
Min: 10.27 / Avg: 225.83 / Max: 266.35
TITAN RTX
Min: 28.95 / Avg: 251.85 / Max: 286.13
RTX 3080
Min: 16.69 / Avg: 287.06 / Max: 319.08
60
120
180
240
300

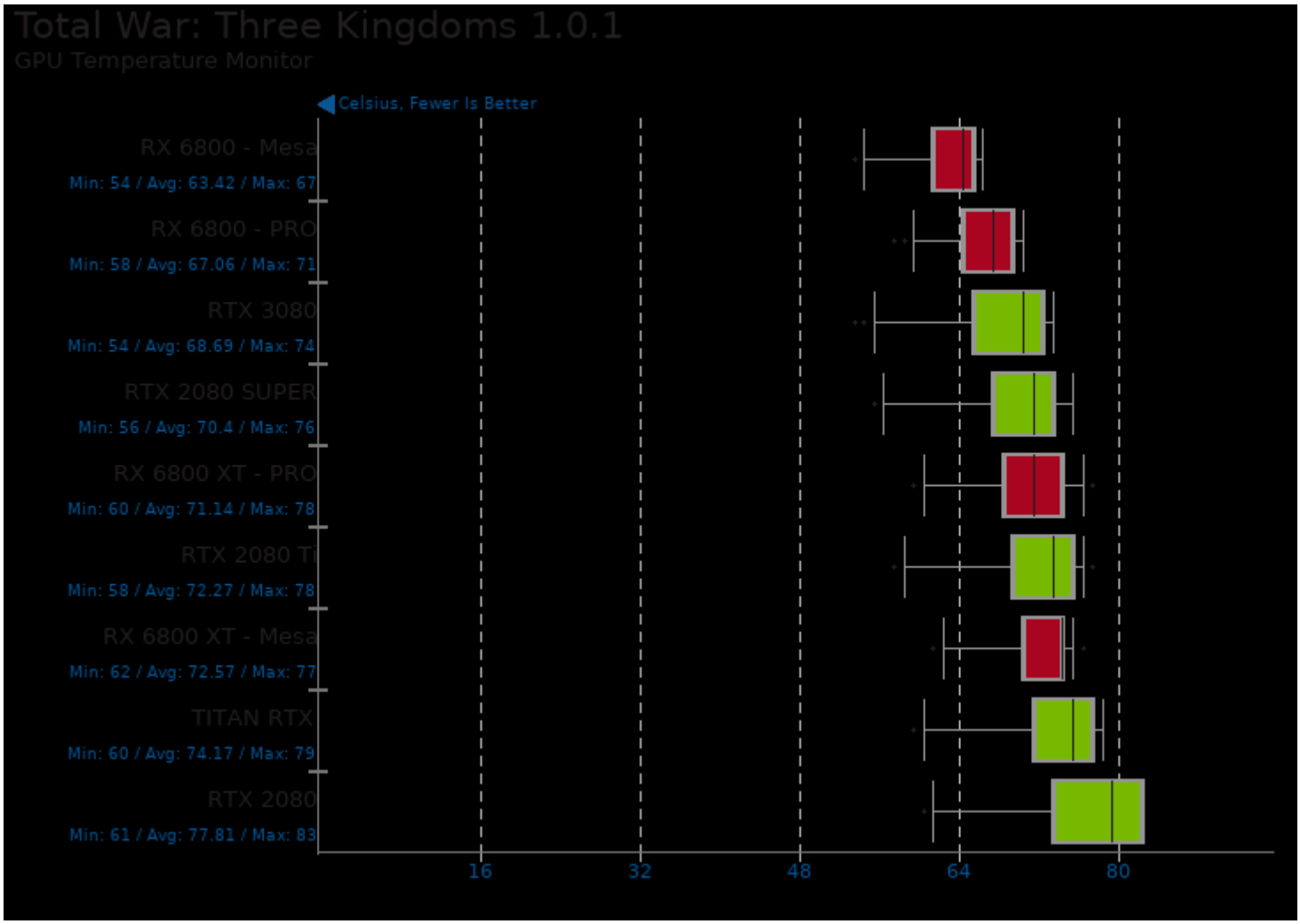

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 54 / Avg: 64.34 / Max: 66
RX 6800 - PRO
Min: 58 / Avg: 69.75 / Max: 73
RTX 3080
Min: 57 / Avg: 70.91 / Max: 74
RTX 2080 SUPER
Min: 59 / Avg: 73.43 / Max: 77
RX 6800 XT - Mesa
Min: 63 / Avg: 73.92 / Max: 77
RX 6800 XT - PRO
Min: 61 / Avg: 74.33 / Max: 78
RTX 2080 Ti
Min: 58 / Avg: 74.7 / Max: 79
TITAN RTX
Min: 62 / Avg: 77.12 / Max: 81
RTX 2080
Min: 65 / Avg: 80.55 / Max: 84
16
32
48
64
80

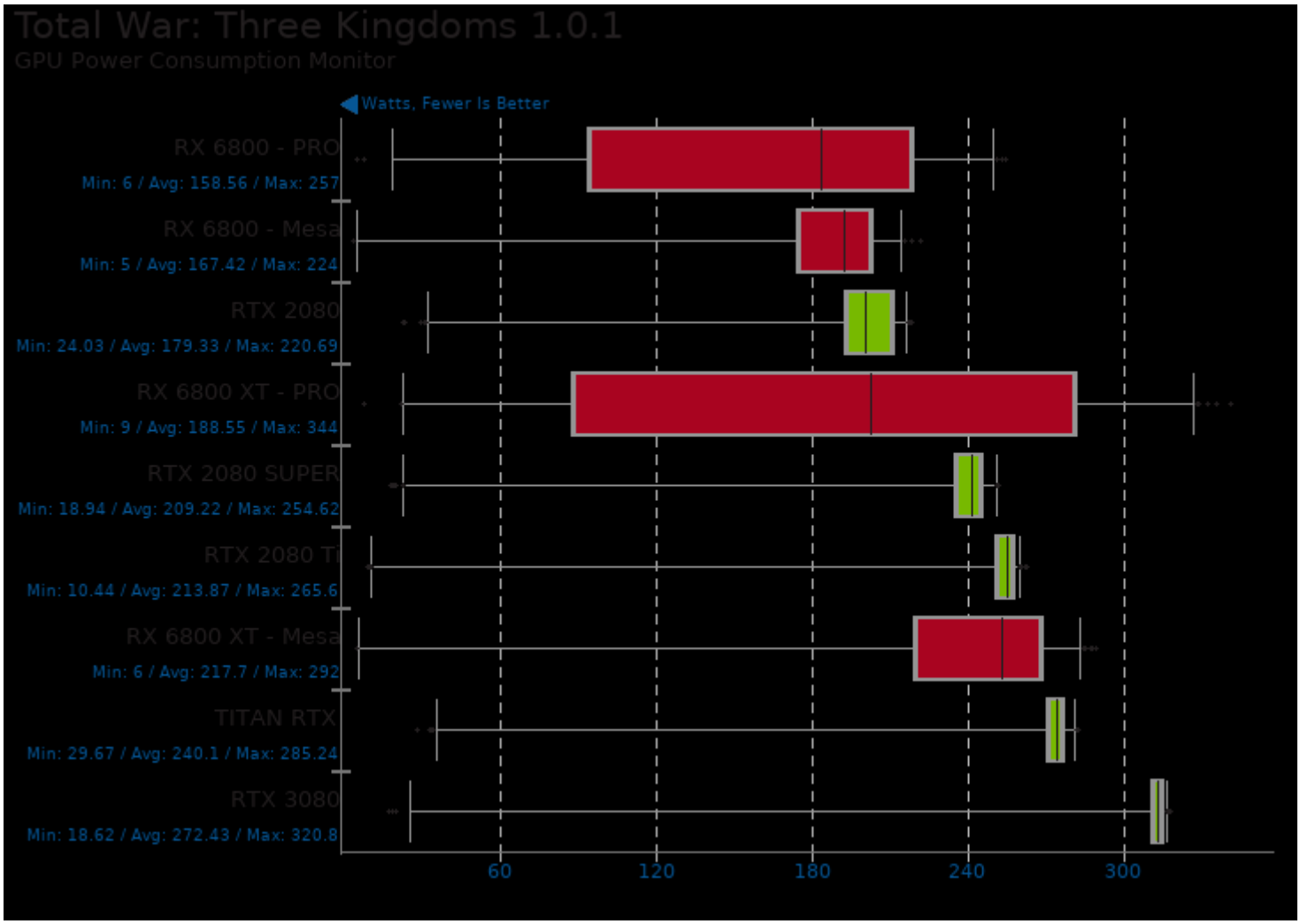

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RX 6800 - PRO
0.40
RX 6800 XT - PRO
0.36
RX 6800 - Mesa
0.33
RTX 3080
0.31
RTX 2080 Ti
0.30
TITAN RTX
0.28
RX 6800 XT - Mesa
0.28
RTX 2080
0.27
RTX 2080 SUPER
0.25
0.09
0.18
0.27
0.36
0.45

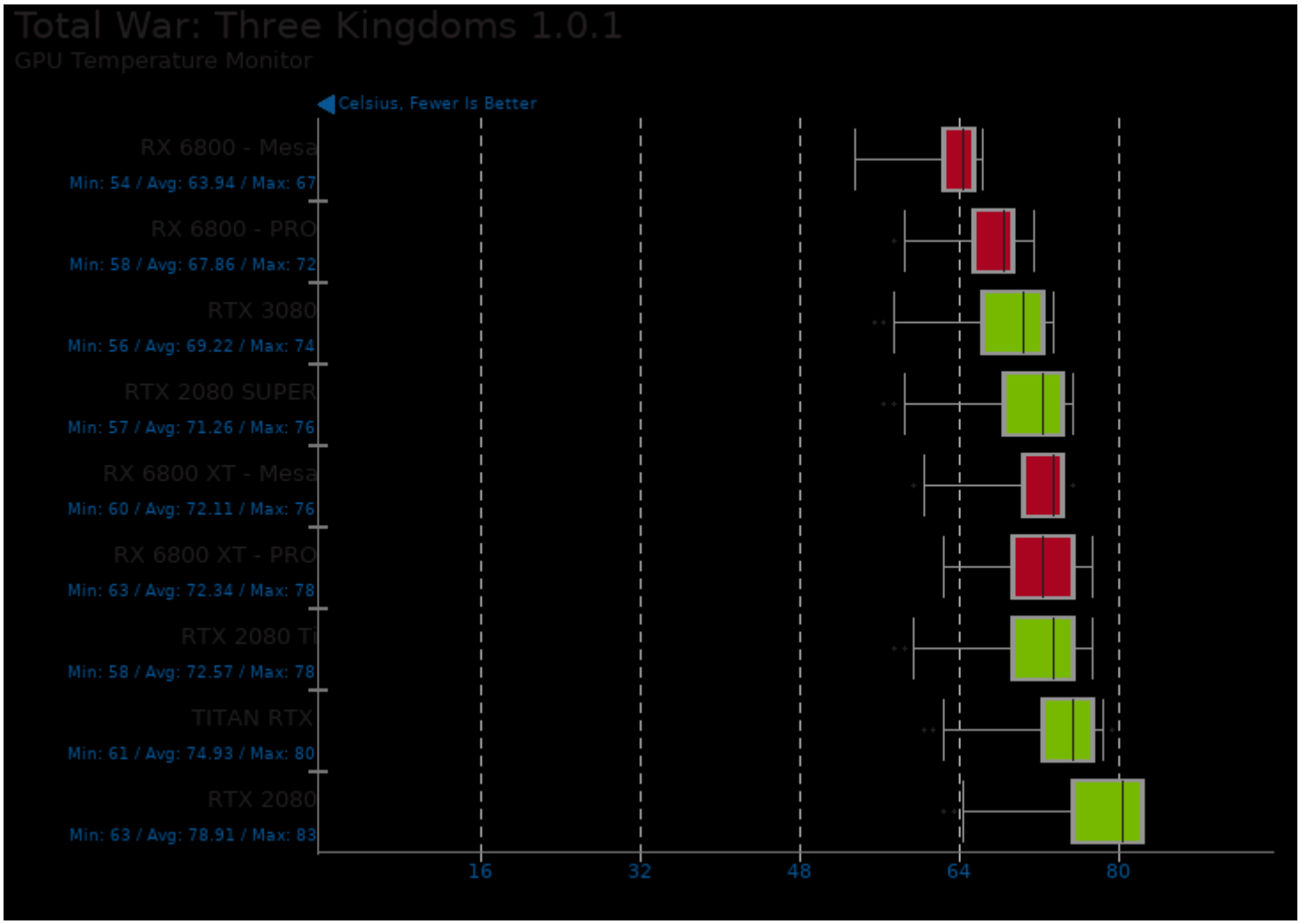

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 145.7 / Max: 207
RX 6800 - PRO
Min: 5 / Avg: 173.72 / Max: 240
RTX 2080
Min: 25.21 / Avg: 183.25 / Max: 219.97
RX 6800 XT - Mesa
Min: 6 / Avg: 205.32 / Max: 294
RTX 2080 SUPER
Min: 15.57 / Avg: 217.92 / Max: 255.23
RX 6800 XT - PRO
Min: 7 / Avg: 220.51 / Max: 304
RTX 2080 Ti
Min: 9.57 / Avg: 229.38 / Max: 264.97
TITAN RTX
Min: 30.76 / Avg: 251.76 / Max: 285.28
RTX 3080
Min: 16.99 / Avg: 287.86 / Max: 319.29
60
120
180
240
300

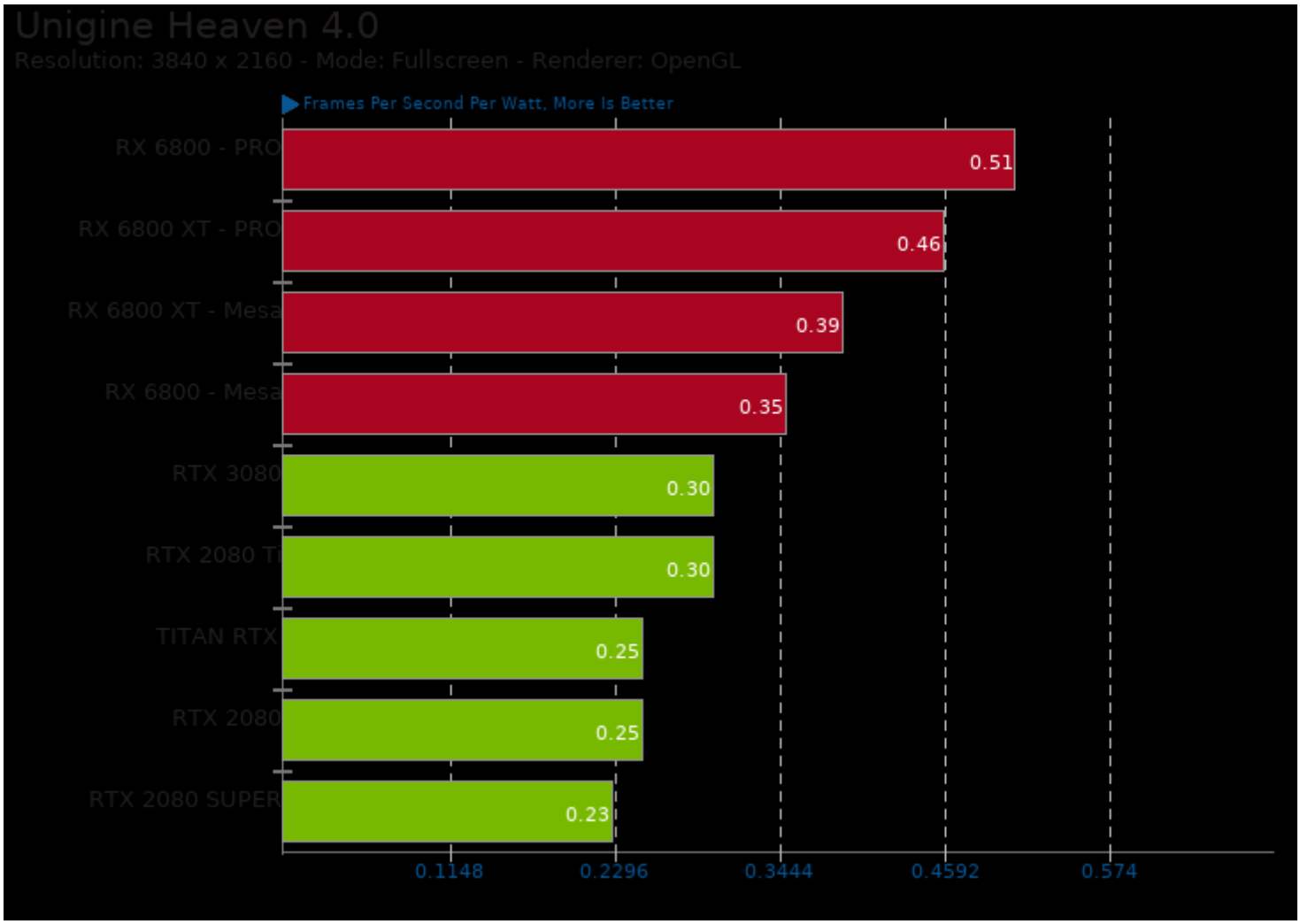

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 55 / Avg: 64.33 / Max: 66
RX 6800 - PRO
Min: 59 / Avg: 69.95 / Max: 73
RTX 3080
Min: 57 / Avg: 70.96 / Max: 74
RTX 2080 SUPER
Min: 59 / Avg: 73.3 / Max: 77
RX 6800 XT - Mesa
Min: 64 / Avg: 73.84 / Max: 78
RX 6800 XT - PRO
Min: 61 / Avg: 74.25 / Max: 79
RTX 2080 Ti
Min: 61 / Avg: 75.24 / Max: 80
TITAN RTX
Min: 62 / Avg: 77.12 / Max: 81
RTX 2080
Min: 65 / Avg: 80.54 / Max: 84
16
32
48
64
80

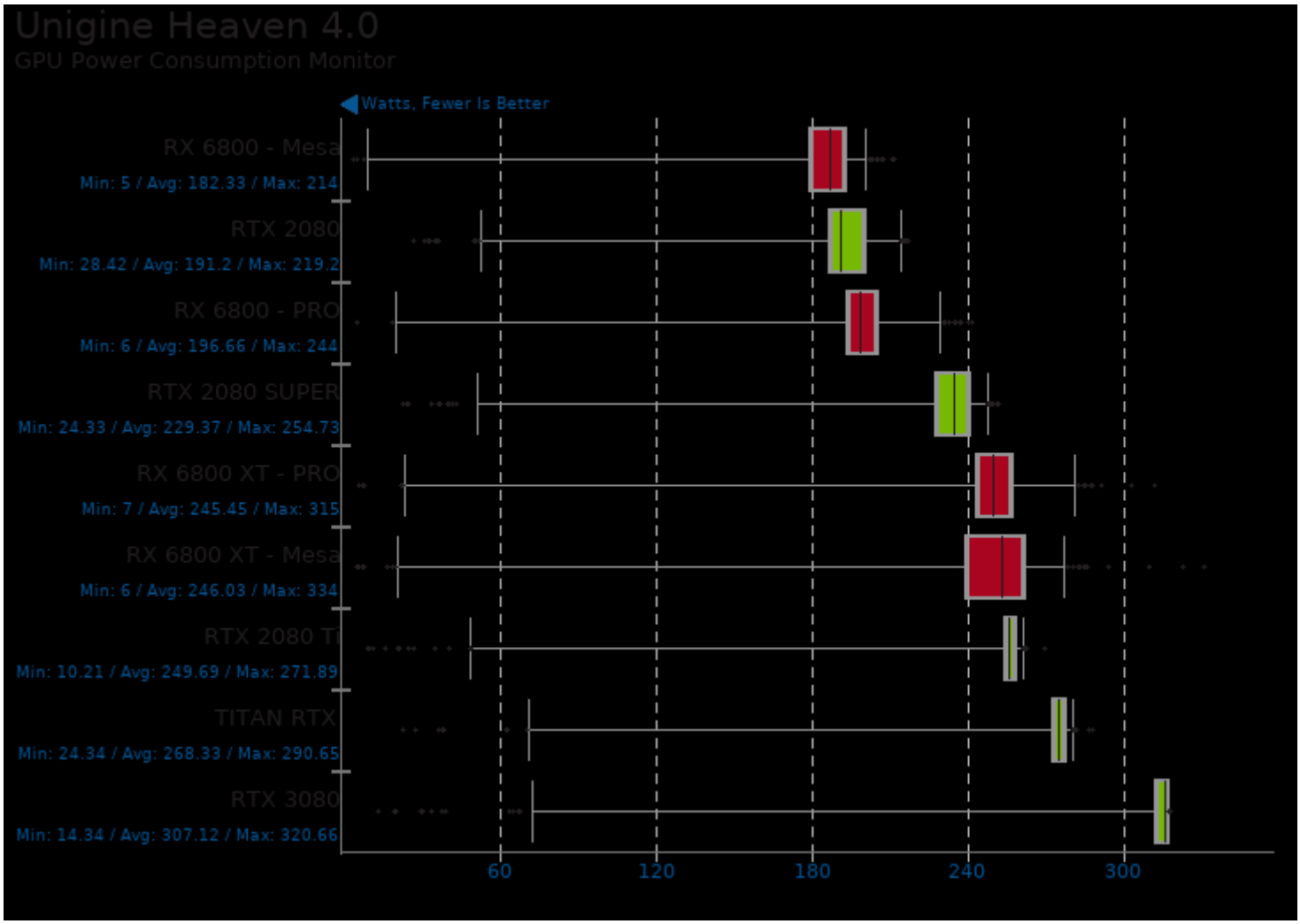

Total War: Three Kingdoms 1.0.1
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - PRO
Min: 11 / Avg: 134.81 / Max: 262
RX 6800 - Mesa
Min: 5 / Avg: 155.31 / Max: 212
RX 6800 XT - PRO
Min: 8 / Avg: 157.91 / Max: 345
RTX 2080
Min: 24.05 / Avg: 171.62 / Max: 221.16
RTX 2080 SUPER
Min: 18.36 / Avg: 199.52 / Max: 253.39
RTX 2080 Ti
Min: 10.39 / Avg: 211.21 / Max: 265.49
RX 6800 XT - Mesa
Min: 6 / Avg: 212.98 / Max: 315
TITAN RTX
Min: 25.8 / Avg: 230.83 / Max: 285.84
RTX 3080
Min: 16.16 / Avg: 264.29 / Max: 320.72
60
120
180
240
300

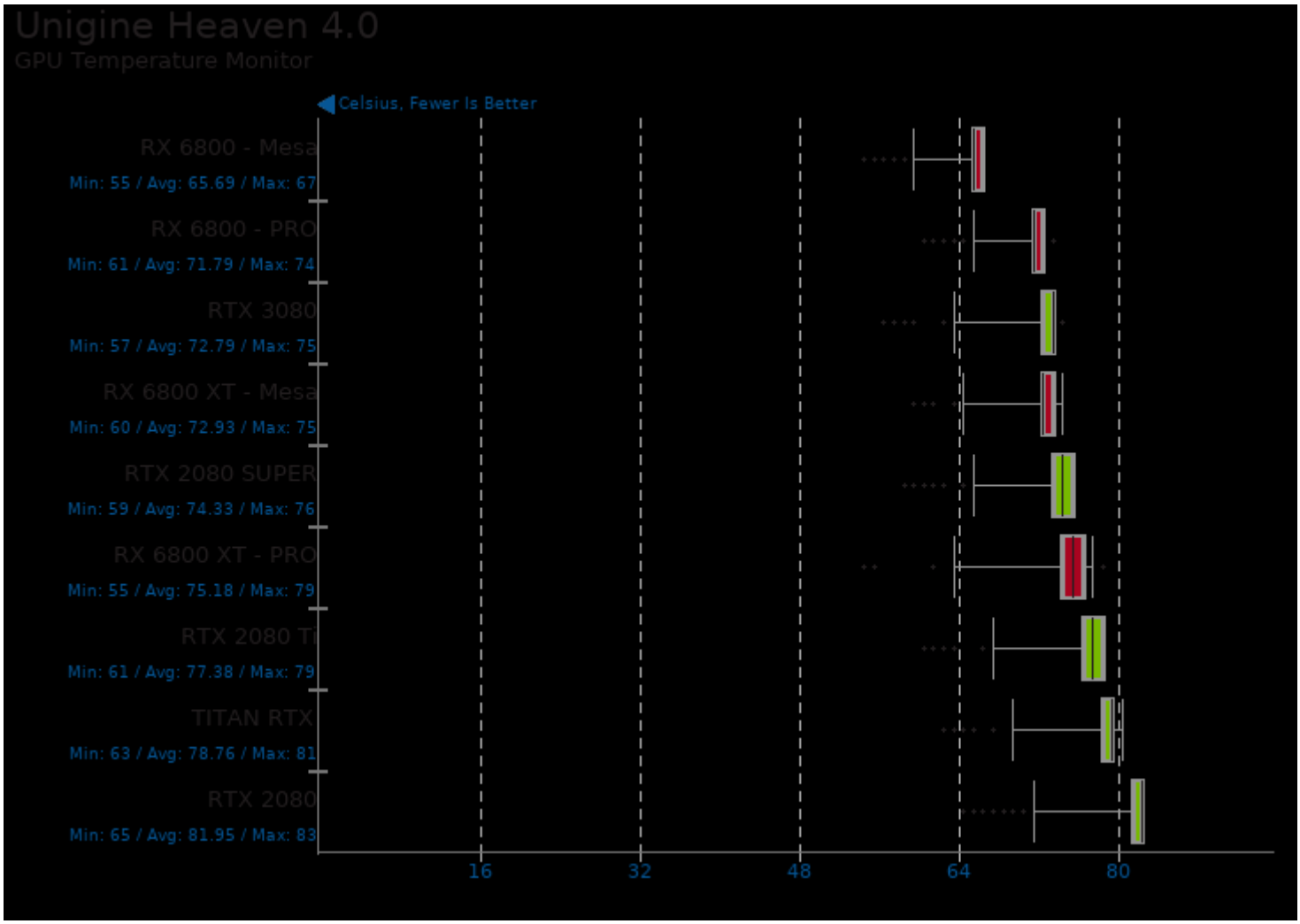

Total War: Three Kingdoms 1.0.1
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 54 / Avg: 63.42 / Max: 67
RX 6800 - PRO
Min: 58 / Avg: 67.06 / Max: 71
RTX 3080
Min: 54 / Avg: 68.69 / Max: 74
RTX 2080 SUPER
Min: 56 / Avg: 70.4 / Max: 76
RX 6800 XT - PRO
Min: 60 / Avg: 71.14 / Max: 78
RTX 2080 Ti
Min: 58 / Avg: 72.27 / Max: 78
RX 6800 XT - Mesa
Min: 62 / Avg: 72.57 / Max: 77
TITAN RTX
Min: 60 / Avg: 74.17 / Max: 79
RTX 2080
Min: 61 / Avg: 77.81 / Max: 83
16
32
48
64
80

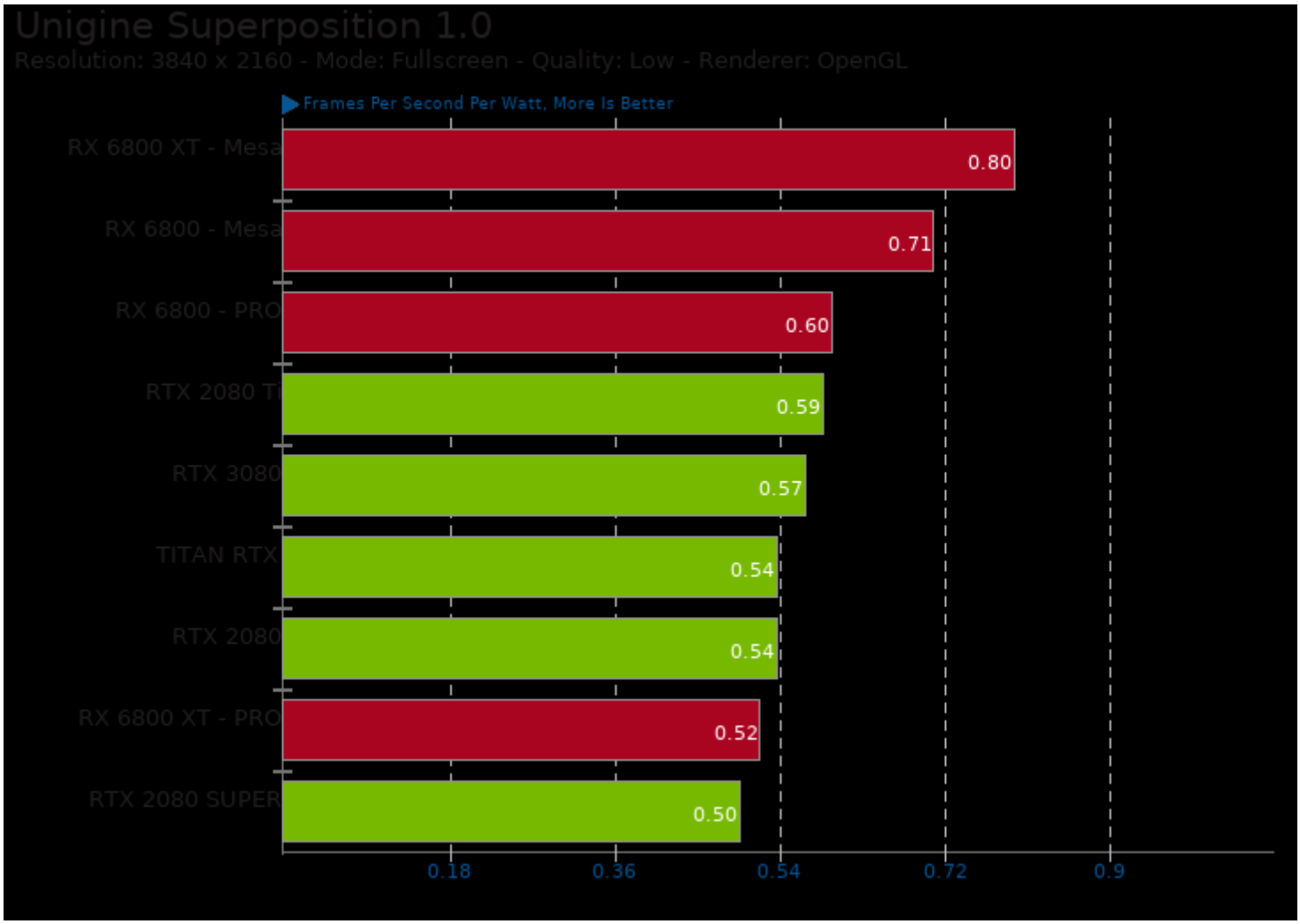

Total War: Three Kingdoms 1.0.1
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - PRO
Min: 6 / Avg: 158.56 / Max: 257
RX 6800 - Mesa
Min: 5 / Avg: 167.42 / Max: 224
RTX 2080
Min: 24.03 / Avg: 179.33 / Max: 220.69
RX 6800 XT - PRO
Min: 9 / Avg: 188.55 / Max: 344
RTX 2080 SUPER
Min: 18.94 / Avg: 209.22 / Max: 254.62
RTX 2080 Ti
Min: 10.44 / Avg: 213.87 / Max: 265.6
RX 6800 XT - Mesa
Min: 6 / Avg: 217.7 / Max: 292
TITAN RTX
Min: 29.67 / Avg: 240.1 / Max: 285.24
RTX 3080
Min: 18.62 / Avg: 272.43 / Max: 320.8
60
120
180
240
300

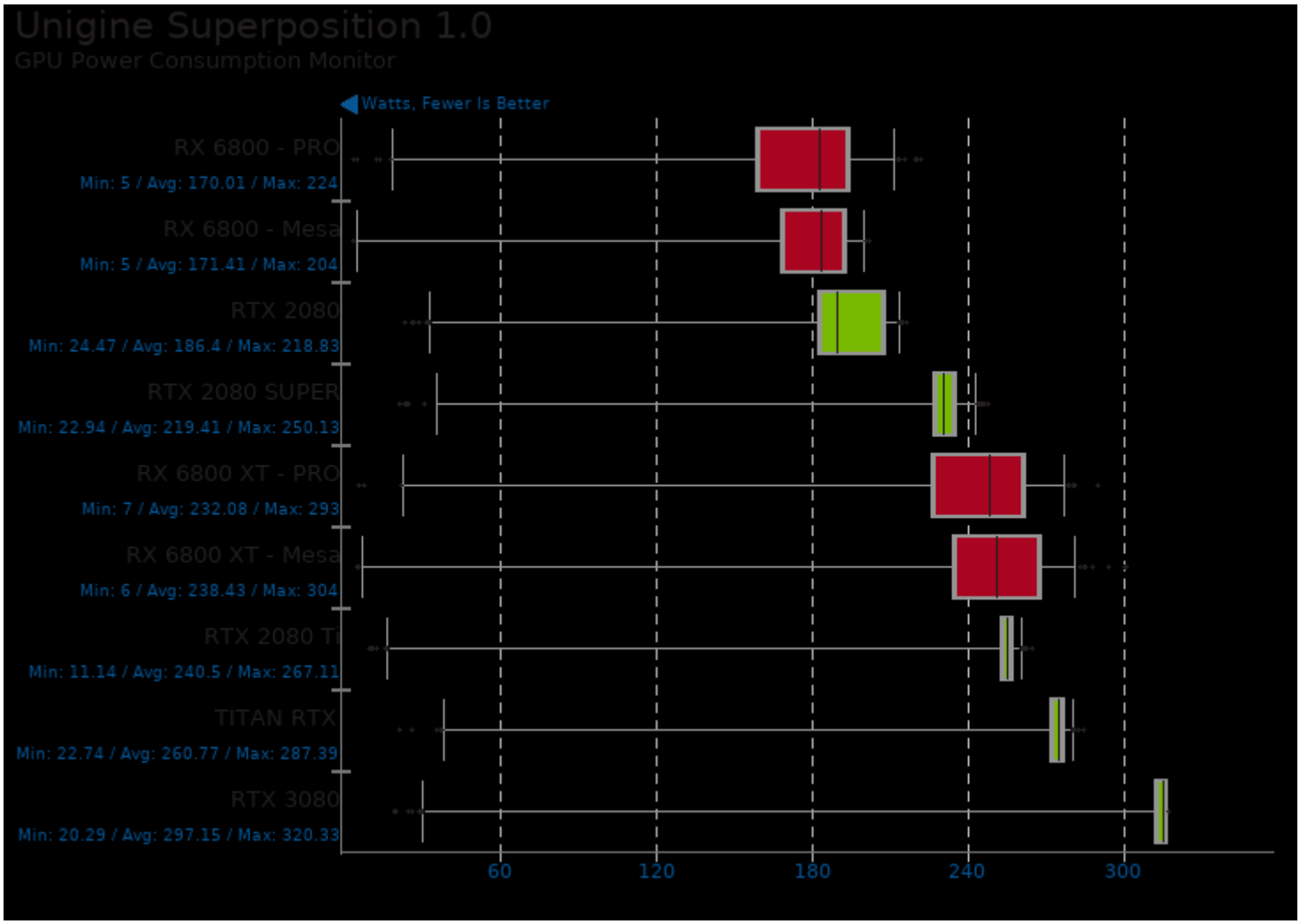

Total War: Three Kingdoms 1.0.1
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 54 / Avg: 63.94 / Max: 67
RX 6800 - PRO
Min: 58 / Avg: 67.86 / Max: 72
RTX 3080
Min: 56 / Avg: 69.22 / Max: 74
RTX 2080 SUPER
Min: 57 / Avg: 71.26 / Max: 76
RX 6800 XT - Mesa
Min: 60 / Avg: 72.11 / Max: 76
RX 6800 XT - PRO
Min: 63 / Avg: 72.34 / Max: 78
RTX 2080 Ti
Min: 58 / Avg: 72.57 / Max: 78
TITAN RTX
Min: 61 / Avg: 74.93 / Max: 80
RTX 2080
Min: 63 / Avg: 78.91 / Max: 83
16
32
48
64
80

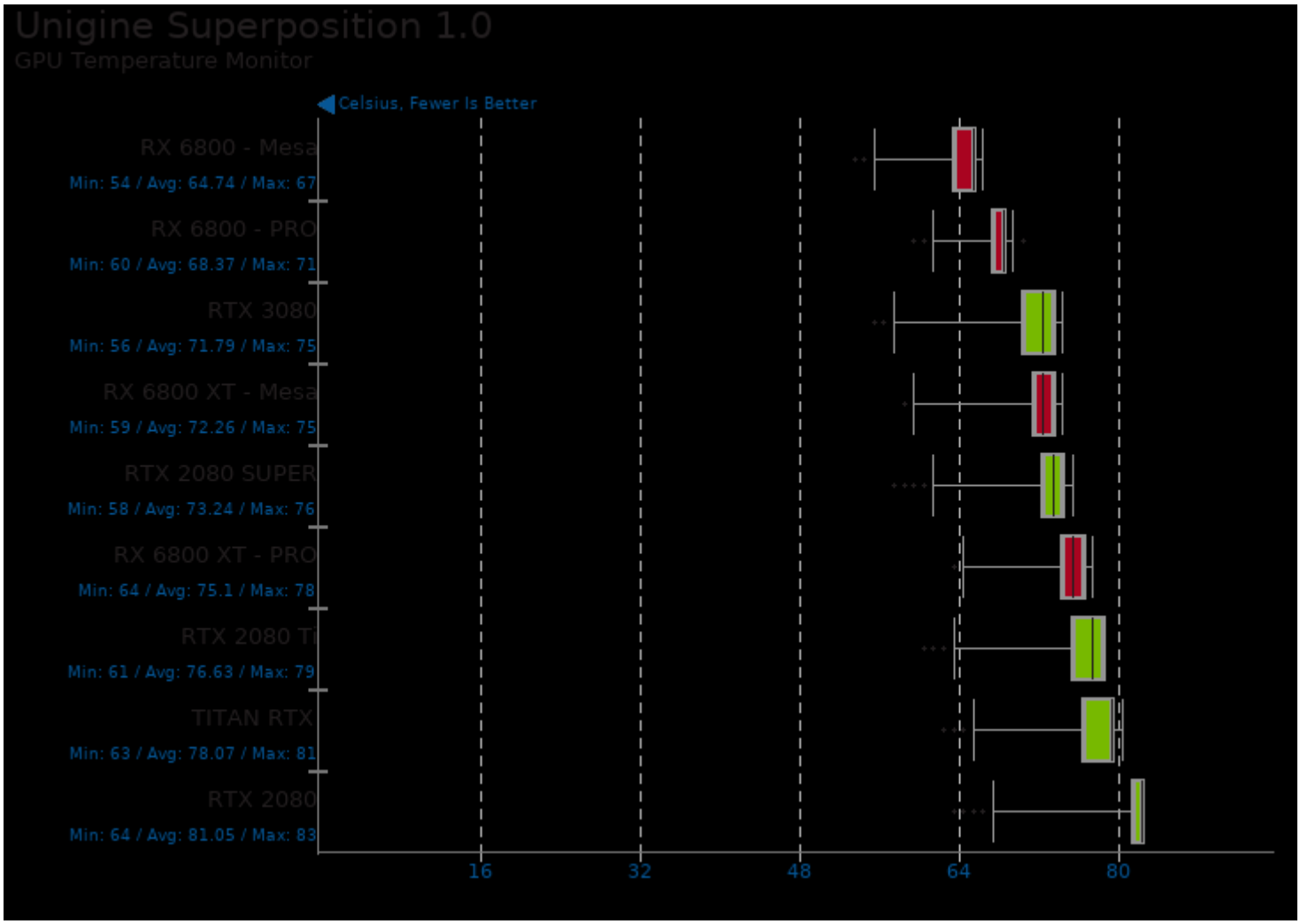

Unigine Heaven 4.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 - PRO
0.51
RX 6800 XT - PRO
0.46
RX 6800 XT - Mesa
0.39
RX 6800 - Mesa
0.35
RTX 3080
0.30
RTX 2080 Ti
0.30
TITAN RTX
0.25
RTX 2080
0.25
RTX 2080 SUPER
0.23
0.1148
0.2296
0.3444
0.4592
0.574

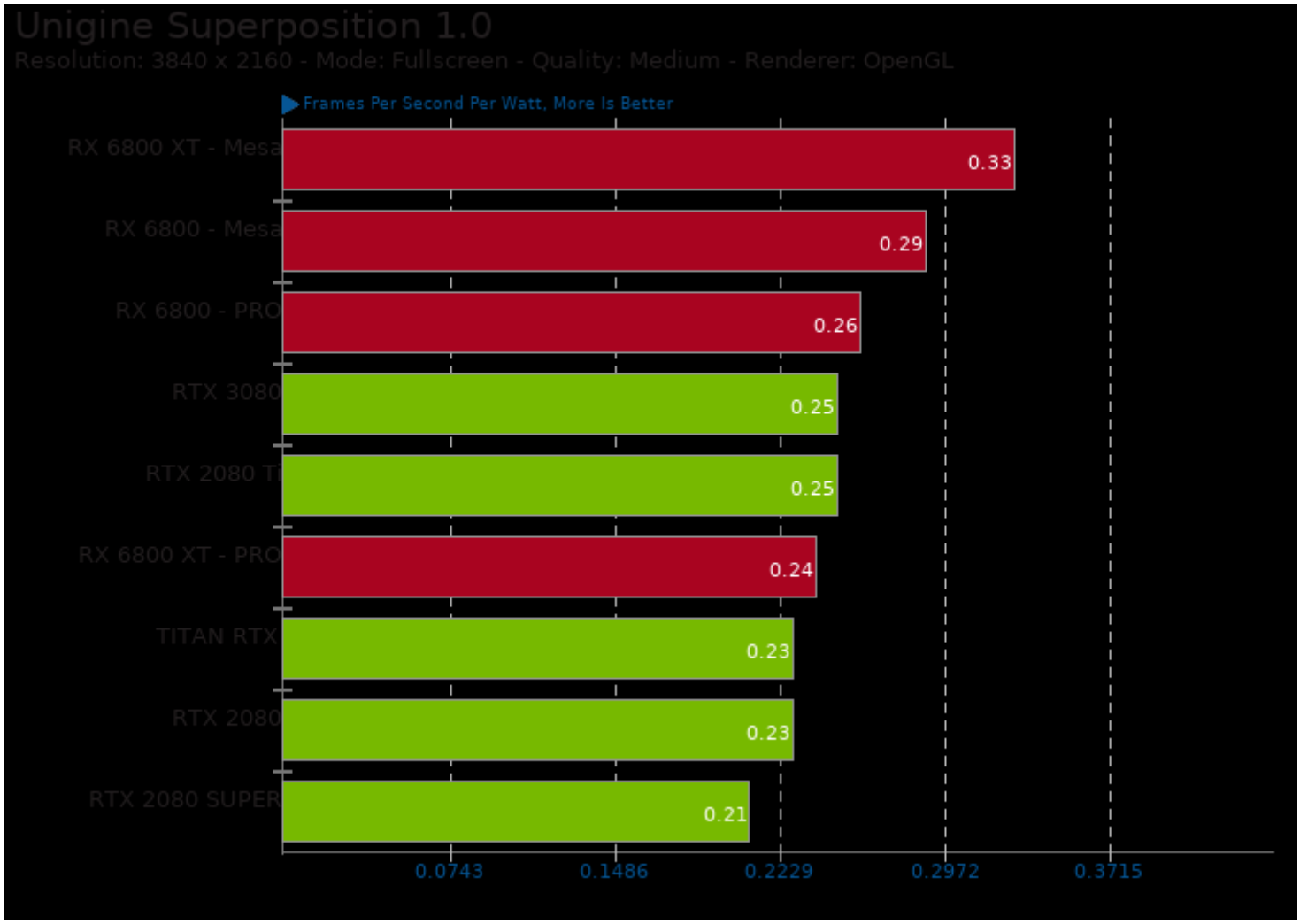

Unigine Heaven 4.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 182.33 / Max: 214
RTX 2080
Min: 28.42 / Avg: 191.2 / Max: 219.2
RX 6800 - PRO
Min: 6 / Avg: 196.66 / Max: 244
RTX 2080 SUPER
Min: 24.33 / Avg: 229.37 / Max: 254.73
RX 6800 XT - PRO
Min: 7 / Avg: 245.45 / Max: 315
RX 6800 XT - Mesa
Min: 6 / Avg: 246.03 / Max: 334
RTX 2080 Ti
Min: 10.21 / Avg: 249.69 / Max: 271.89
TITAN RTX
Min: 24.34 / Avg: 268.33 / Max: 290.65
RTX 3080
Min: 14.34 / Avg: 307.12 / Max: 320.66
60
120
180
240
300

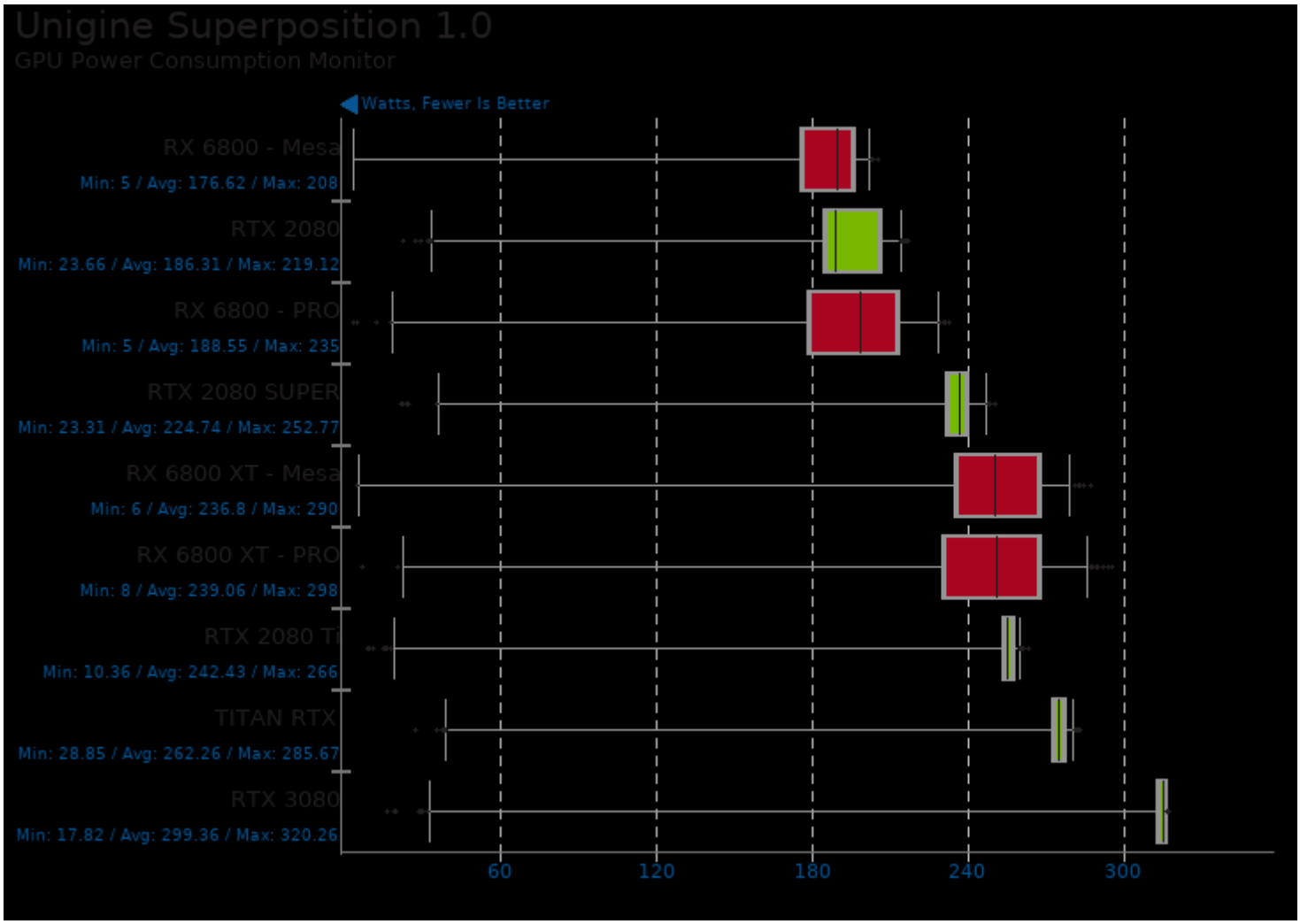

Unigine Heaven 4.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 55 / Avg: 65.69 / Max: 67
RX 6800 - PRO
Min: 61 / Avg: 71.79 / Max: 74
RTX 3080
Min: 57 / Avg: 72.79 / Max: 75
RX 6800 XT - Mesa
Min: 60 / Avg: 72.93 / Max: 75
RTX 2080 SUPER
Min: 59 / Avg: 74.33 / Max: 76
RX 6800 XT - PRO
Min: 55 / Avg: 75.18 / Max: 79
RTX 2080 Ti
Min: 61 / Avg: 77.38 / Max: 79
TITAN RTX
Min: 63 / Avg: 78.76 / Max: 81
RTX 2080
Min: 65 / Avg: 81.95 / Max: 83
16
32
48
64
80

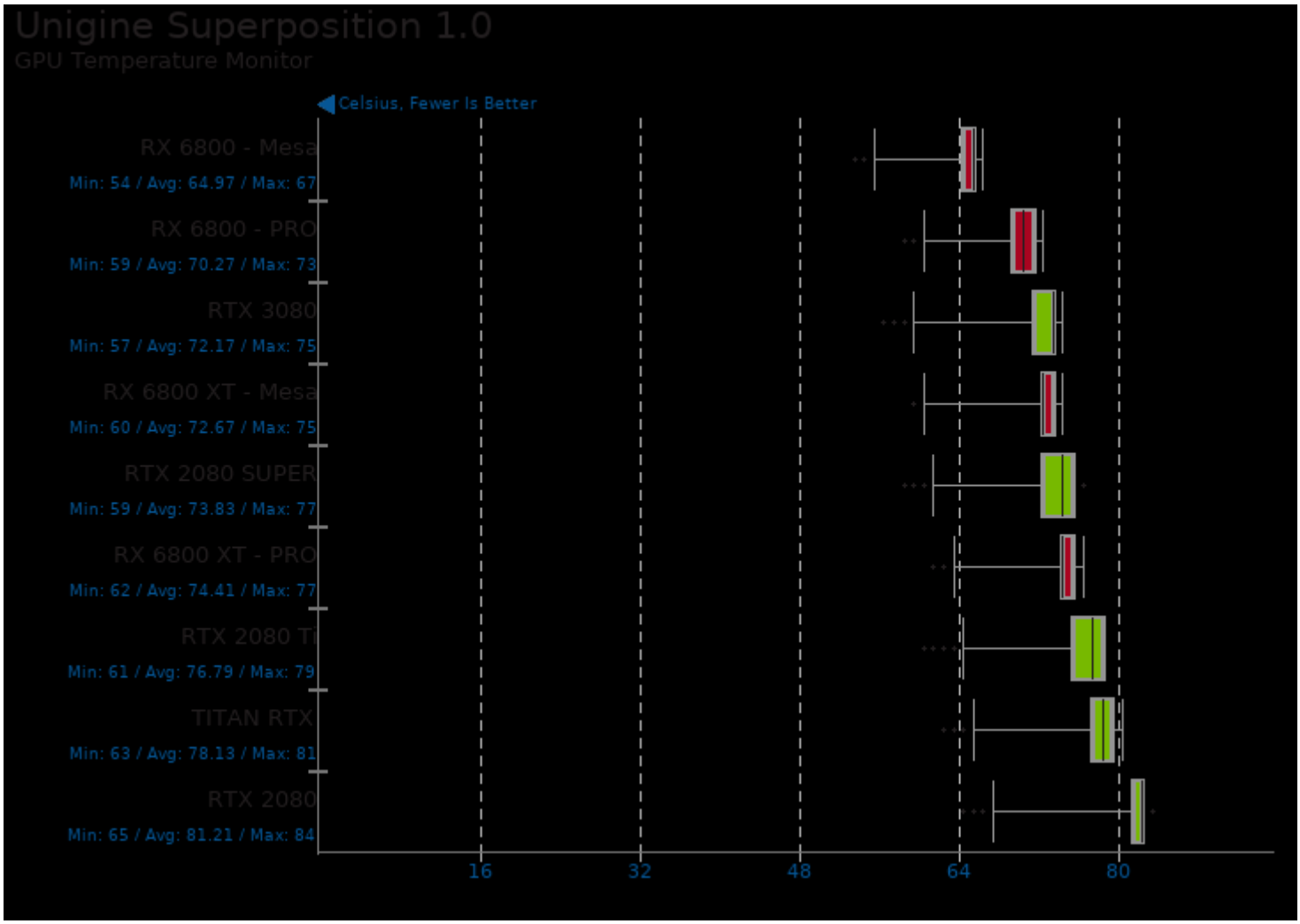

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Low - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.80
RX 6800 - Mesa
0.71
RX 6800 - PRO
0.60
RTX 2080 Ti
0.59
RTX 3080
0.57
TITAN RTX
0.54
RTX 2080
0.54
RX 6800 XT - PRO
0.52
RTX 2080 SUPER
0.50
0.18
0.36
0.54
0.72
0.9

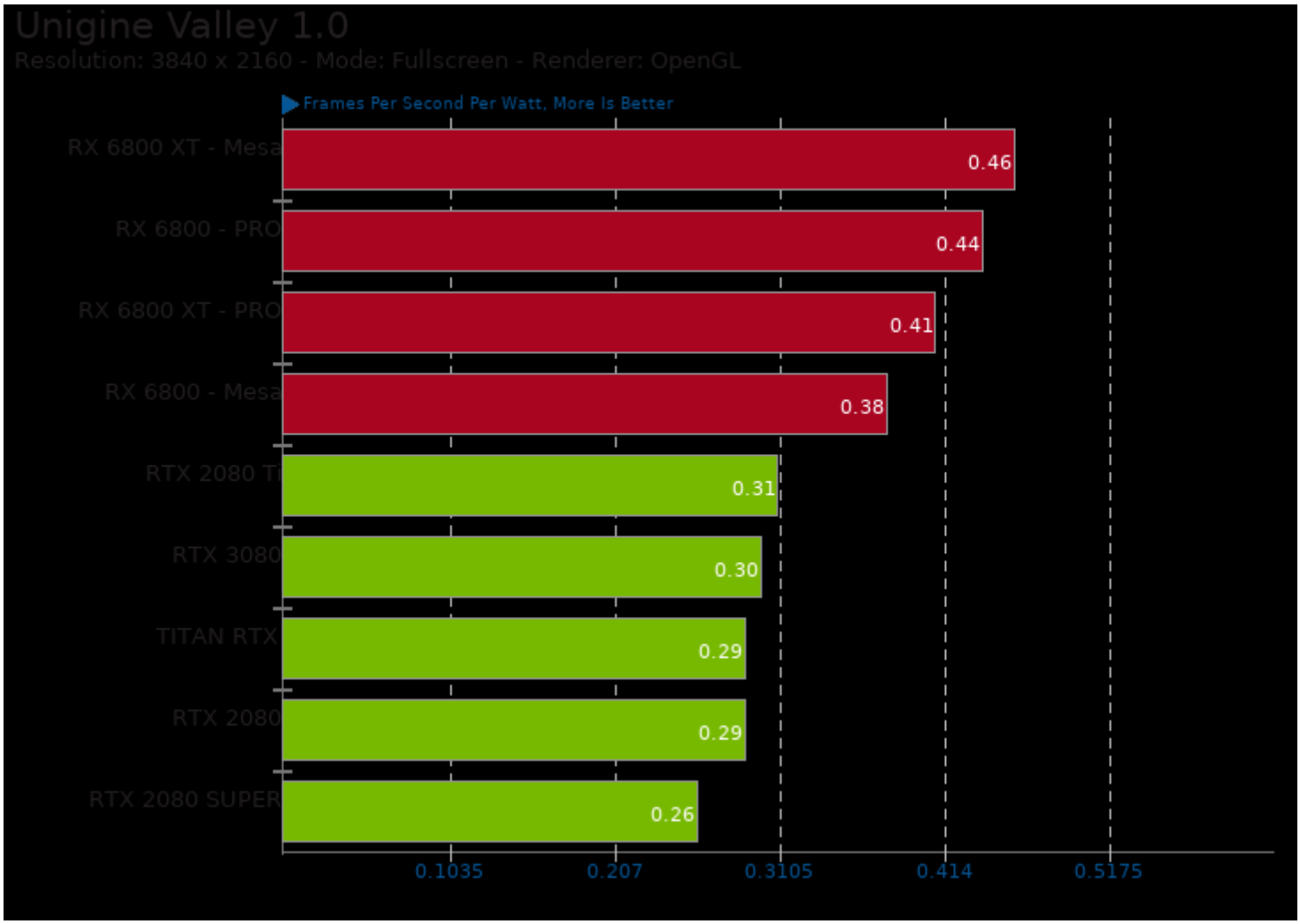

Unigine Superposition 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - PRO
Min: 5 / Avg: 170.01 / Max: 224
RX 6800 - Mesa
Min: 5 / Avg: 171.41 / Max: 204
RTX 2080
Min: 24.47 / Avg: 186.4 / Max: 218.83
RTX 2080 SUPER
Min: 22.94 / Avg: 219.41 / Max: 250.13
RX 6800 XT - PRO
Min: 7 / Avg: 232.08 / Max: 293
RX 6800 XT - Mesa
Min: 6 / Avg: 238.43 / Max: 304
RTX 2080 Ti
Min: 11.14 / Avg: 240.5 / Max: 267.11
TITAN RTX
Min: 22.74 / Avg: 260.77 / Max: 287.39
RTX 3080
Min: 20.29 / Avg: 297.15 / Max: 320.33
60
120
180
240
300

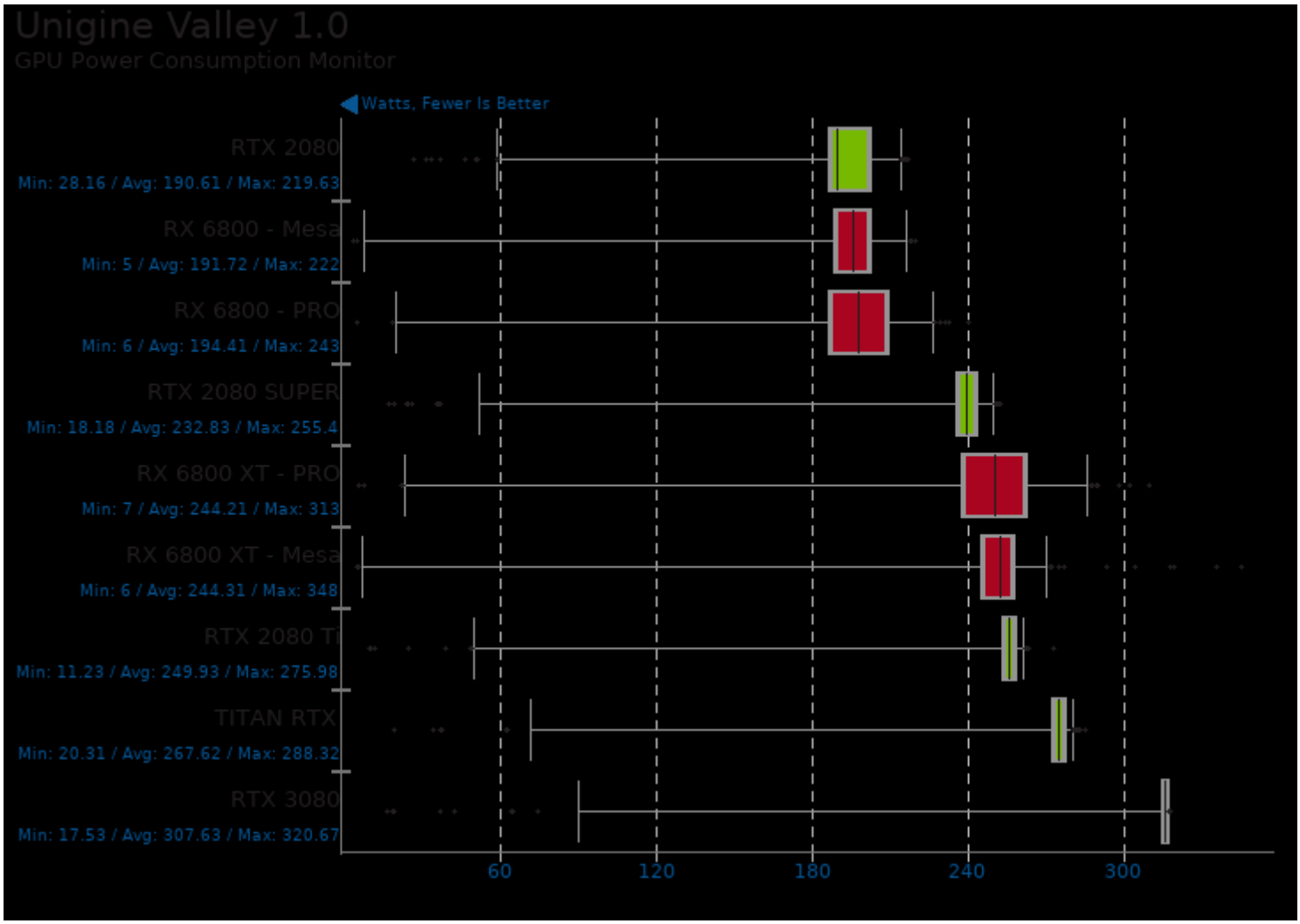

Unigine Superposition 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 54 / Avg: 64.74 / Max: 67
RX 6800 - PRO
Min: 60 / Avg: 68.37 / Max: 71
RTX 3080
Min: 56 / Avg: 71.79 / Max: 75
RX 6800 XT - Mesa
Min: 59 / Avg: 72.26 / Max: 75
RTX 2080 SUPER
Min: 58 / Avg: 73.24 / Max: 76
RX 6800 XT - PRO
Min: 64 / Avg: 75.1 / Max: 78
RTX 2080 Ti
Min: 61 / Avg: 76.63 / Max: 79
TITAN RTX
Min: 63 / Avg: 78.07 / Max: 81
RTX 2080
Min: 64 / Avg: 81.05 / Max: 83
16
32
48
64
80

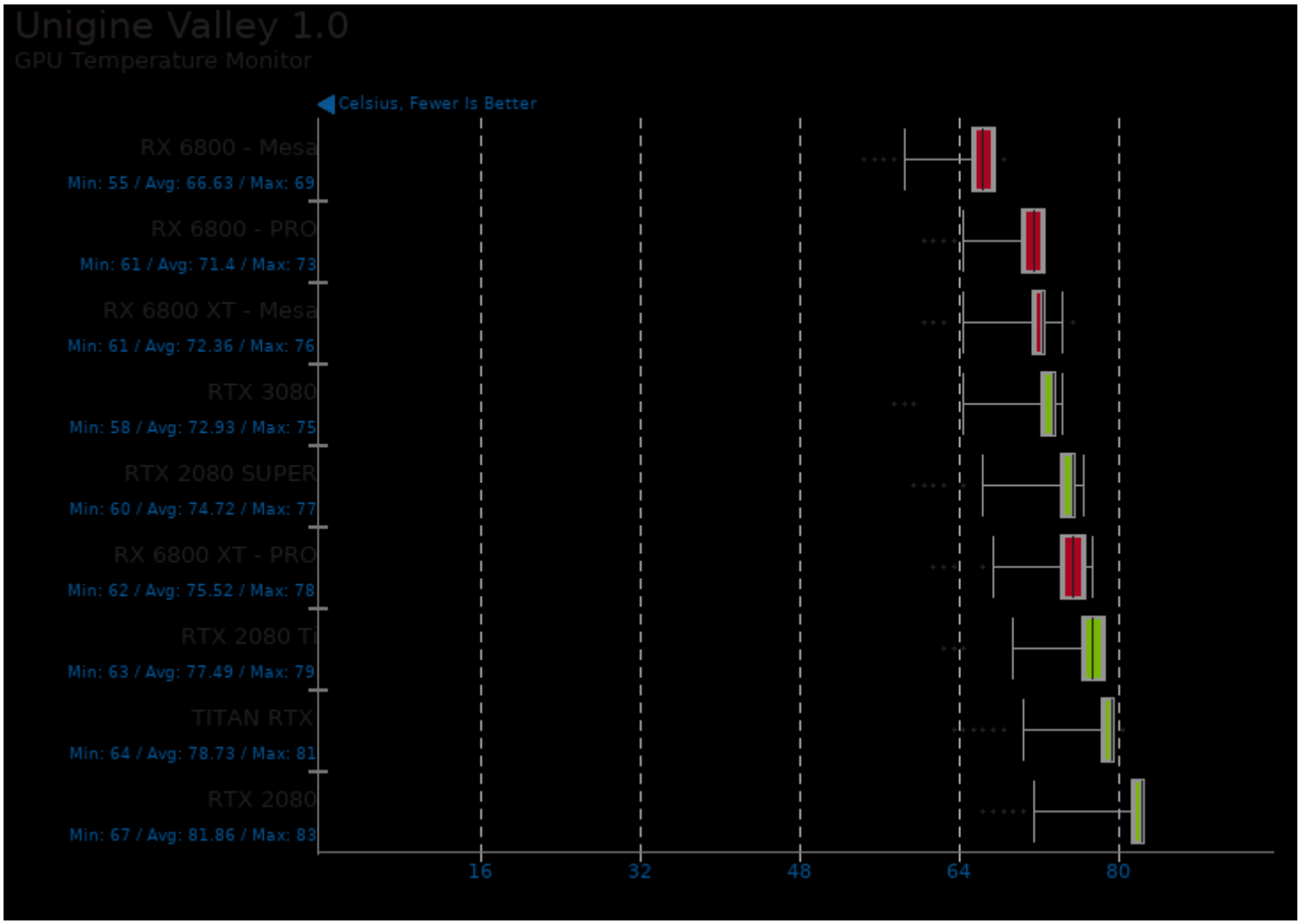

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Medium - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.33
RX 6800 - Mesa
0.29
RX 6800 - PRO
0.26
RTX 3080
0.25
RTX 2080 Ti
0.25
RX 6800 XT - PRO
0.24
TITAN RTX
0.23
RTX 2080
0.23
RTX 2080 SUPER
0.21
0.0743
0.1486
0.2229
0.2972
0.3715

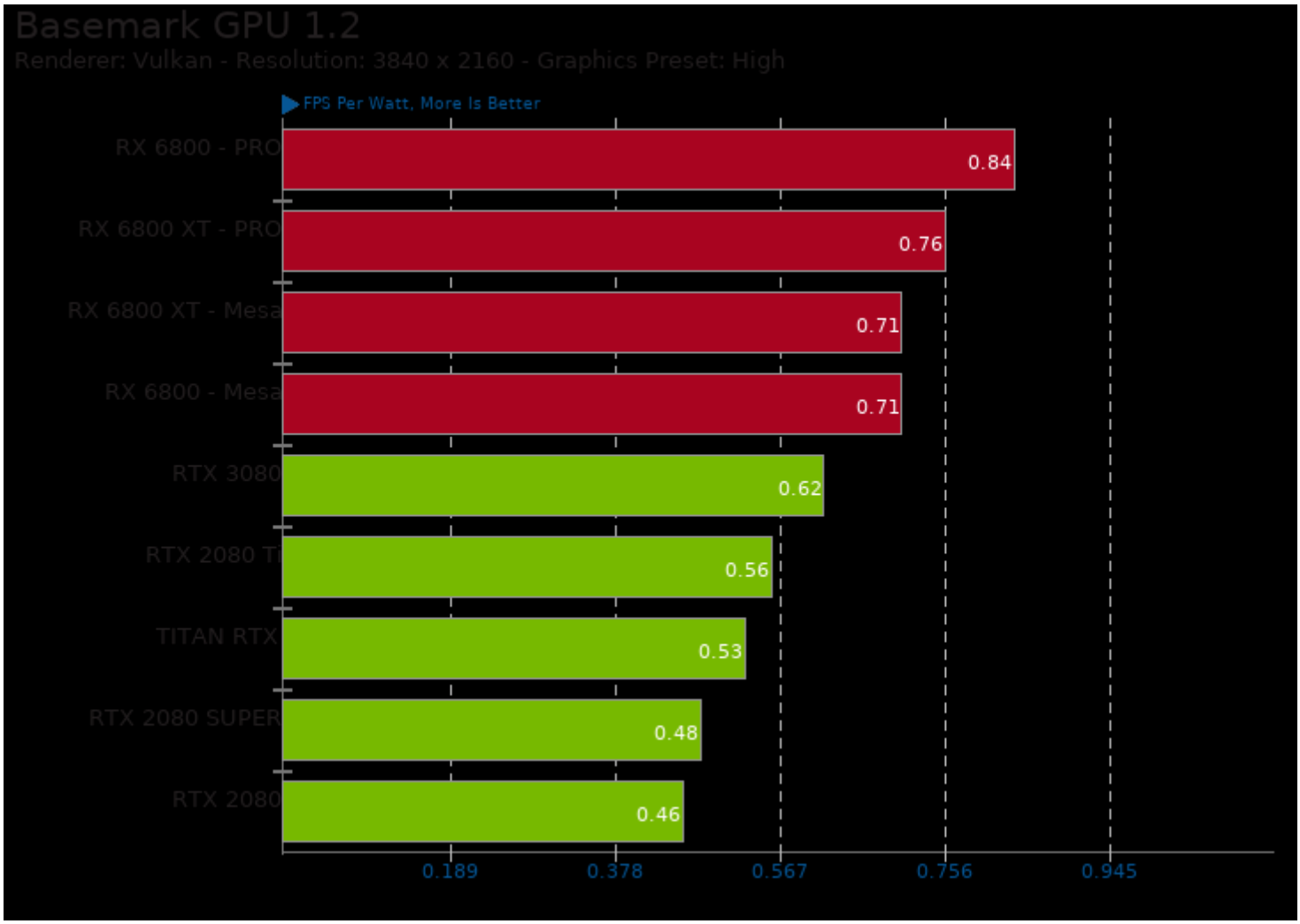

Unigine Superposition 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 176.62 / Max: 208
RTX 2080
Min: 23.66 / Avg: 186.31 / Max: 219.12
RX 6800 - PRO
Min: 5 / Avg: 188.55 / Max: 235
RTX 2080 SUPER
Min: 23.31 / Avg: 224.74 / Max: 252.77
RX 6800 XT - Mesa
Min: 6 / Avg: 236.8 / Max: 290
RX 6800 XT - PRO
Min: 8 / Avg: 239.06 / Max: 298
RTX 2080 Ti
Min: 10.36 / Avg: 242.43 / Max: 266
TITAN RTX
Min: 28.85 / Avg: 262.26 / Max: 285.67
RTX 3080
Min: 17.82 / Avg: 299.36 / Max: 320.26
60
120
180
240
300

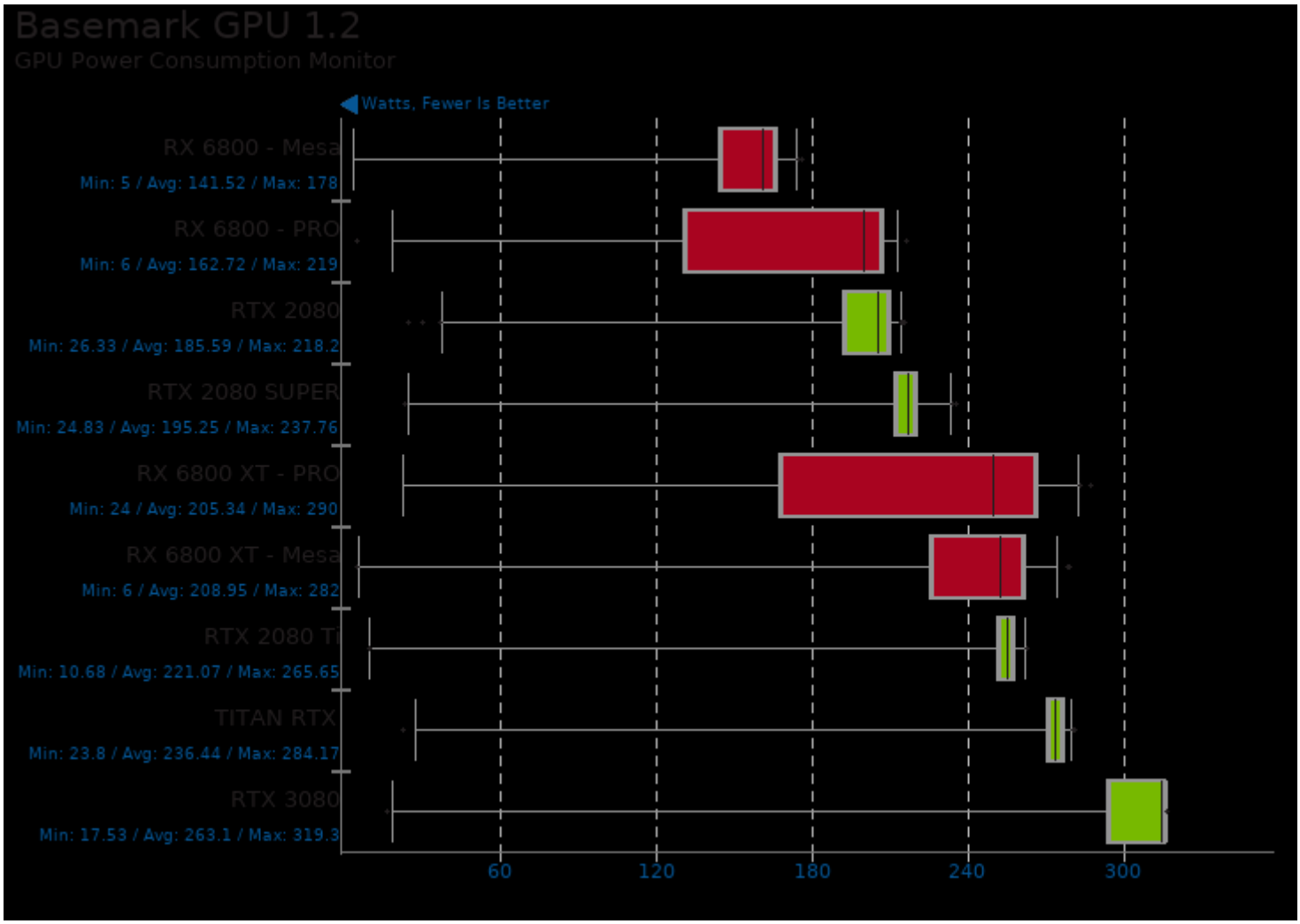

Unigine Superposition 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 54 / Avg: 64.97 / Max: 67
RX 6800 - PRO
Min: 59 / Avg: 70.27 / Max: 73
RTX 3080
Min: 57 / Avg: 72.17 / Max: 75
RX 6800 XT - Mesa
Min: 60 / Avg: 72.67 / Max: 75
RTX 2080 SUPER
Min: 59 / Avg: 73.83 / Max: 77
RX 6800 XT - PRO
Min: 62 / Avg: 74.41 / Max: 77
RTX 2080 Ti
Min: 61 / Avg: 76.79 / Max: 79
TITAN RTX
Min: 63 / Avg: 78.13 / Max: 81
RTX 2080
Min: 65 / Avg: 81.21 / Max: 84
16
32
48
64
80


Unigine Valley 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.46
RX 6800 - PRO
0.44
RX 6800 XT - PRO
0.41
RX 6800 - Mesa
0.38
RTX 2080 Ti
0.31
RTX 3080
0.30
TITAN RTX
0.29
RTX 2080
0.29
RTX 2080 SUPER
0.26
0.1035
0.207
0.3105
0.414
0.5175

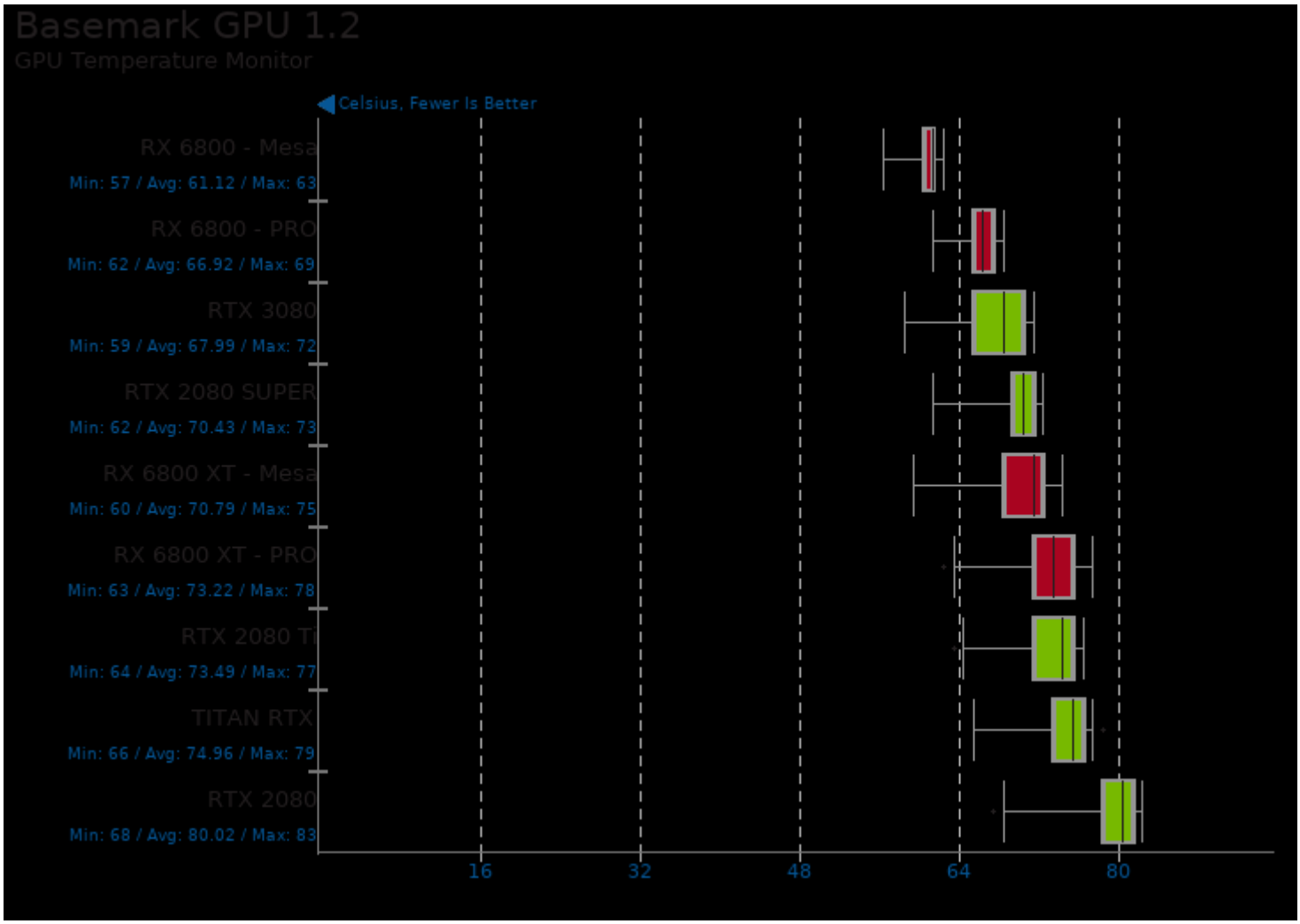

Unigine Valley 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RTX 2080
Min: 28.16 / Avg: 190.61 / Max: 219.63
RX 6800 - Mesa
Min: 5 / Avg: 191.72 / Max: 222
RX 6800 - PRO
Min: 6 / Avg: 194.41 / Max: 243
RTX 2080 SUPER
Min: 18.18 / Avg: 232.83 / Max: 255.4
RX 6800 XT - PRO
Min: 7 / Avg: 244.21 / Max: 313
RX 6800 XT - Mesa
Min: 6 / Avg: 244.31 / Max: 348
RTX 2080 Ti
Min: 11.23 / Avg: 249.93 / Max: 275.98
TITAN RTX
Min: 20.31 / Avg: 267.62 / Max: 288.32
RTX 3080
Min: 17.53 / Avg: 307.63 / Max: 320.67
60
120
180
240
300

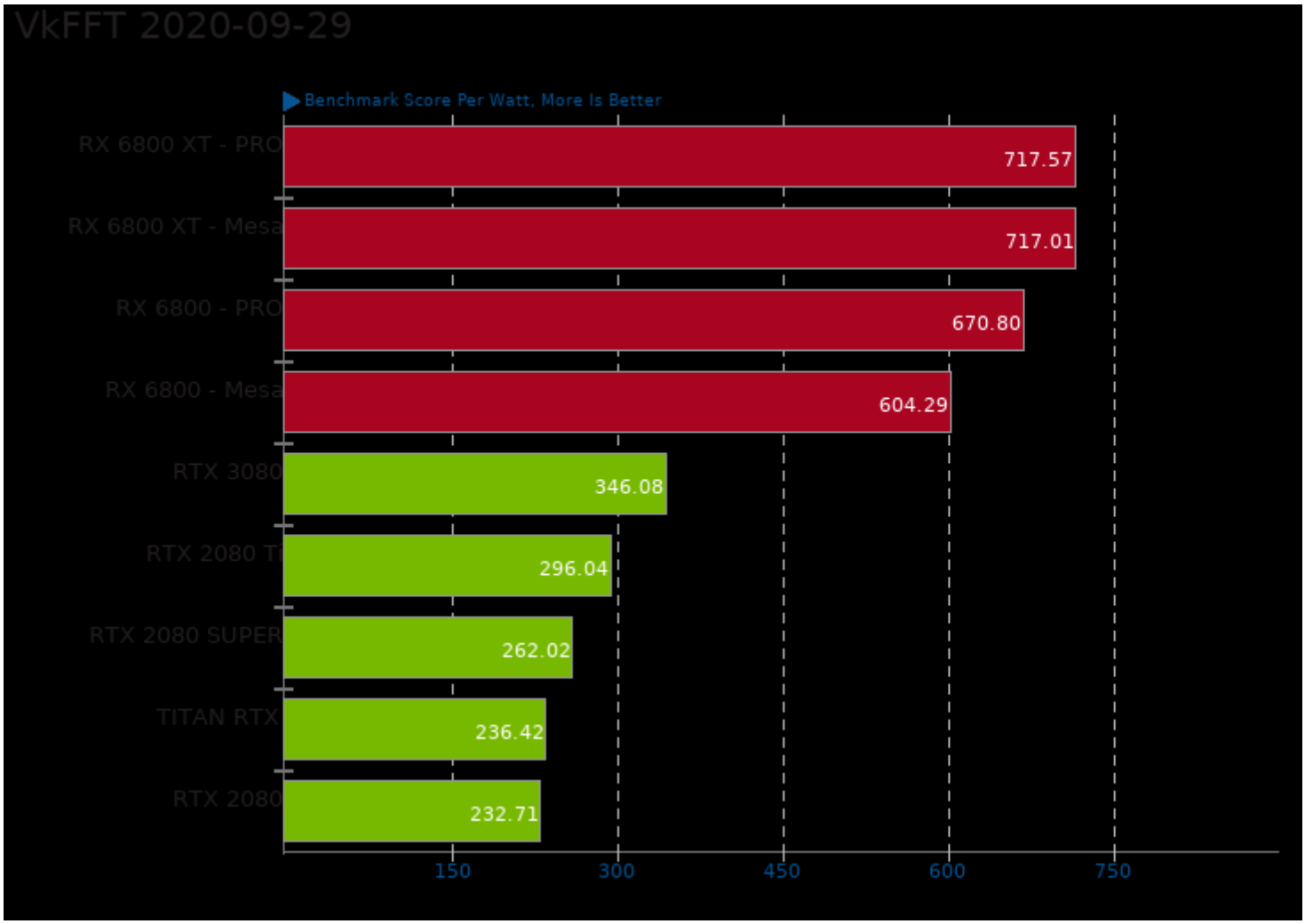

Unigine Valley 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 55 / Avg: 66.63 / Max: 69
RX 6800 - PRO
Min: 61 / Avg: 71.4 / Max: 73
RX 6800 XT - Mesa
Min: 61 / Avg: 72.36 / Max: 76
RTX 3080
Min: 58 / Avg: 72.93 / Max: 75
RTX 2080 SUPER
Min: 60 / Avg: 74.72 / Max: 77
RX 6800 XT - PRO
Min: 62 / Avg: 75.52 / Max: 78
RTX 2080 Ti
Min: 63 / Avg: 77.49 / Max: 79
TITAN RTX
Min: 64 / Avg: 78.73 / Max: 81
RTX 2080
Min: 67 / Avg: 81.86 / Max: 83
16
32
48
64
80

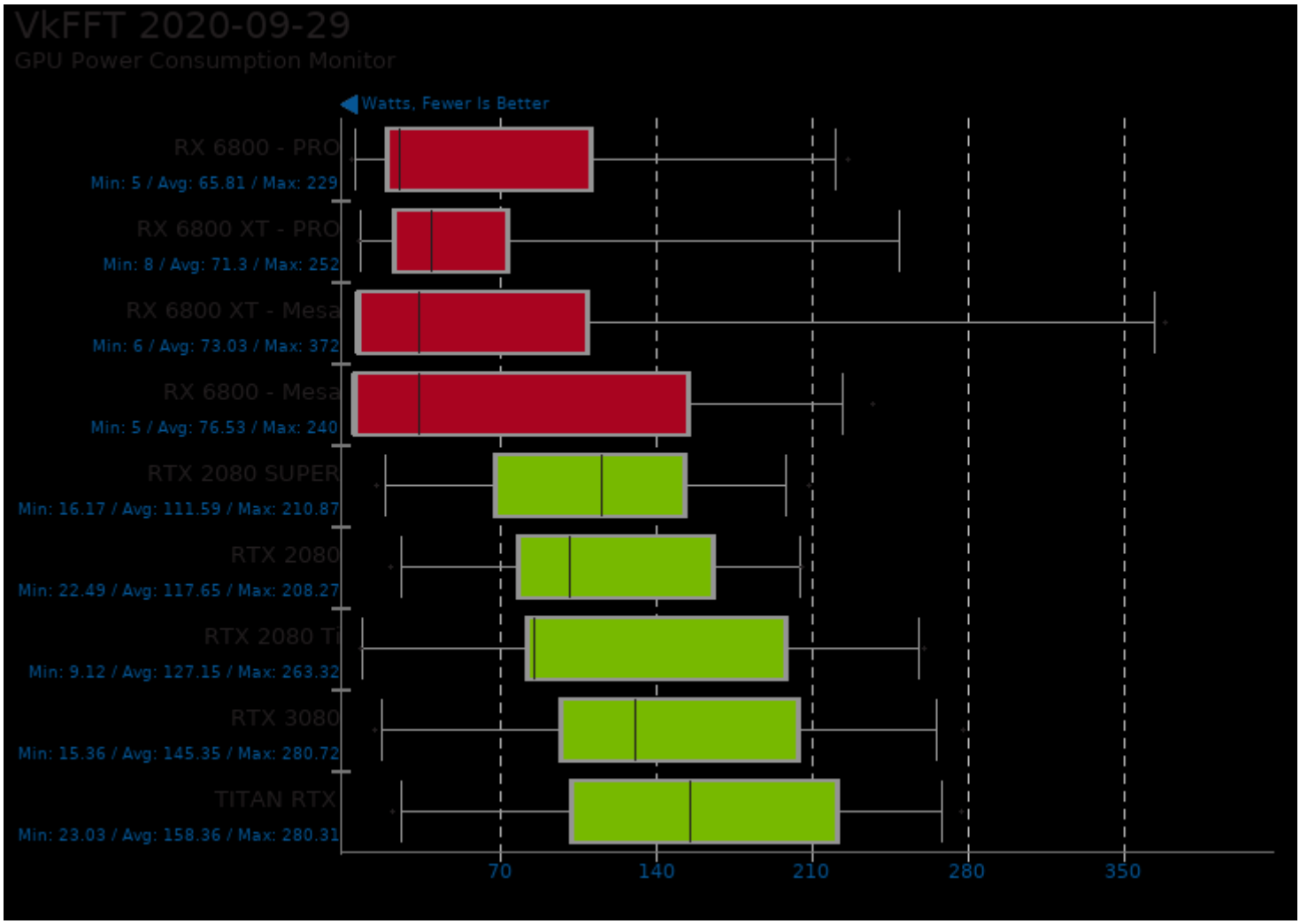

Basemark GPU 1.2
Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High
FPS Per Watt, More Is Better
RX 6800 - PRO
RX 6800 XT - PRO
RX 6800 XT - Mesa
RX 6800 - Mesa
RTX 3080
RTX 2080 Ti
TITAN RTX
RTX 2080 SUPER
RTX 2080
0.84
0.76
0.71
0.71
0.62
0.56
0.53
0.48
0.46
0.189
0.378
0.567
0.756
0.945

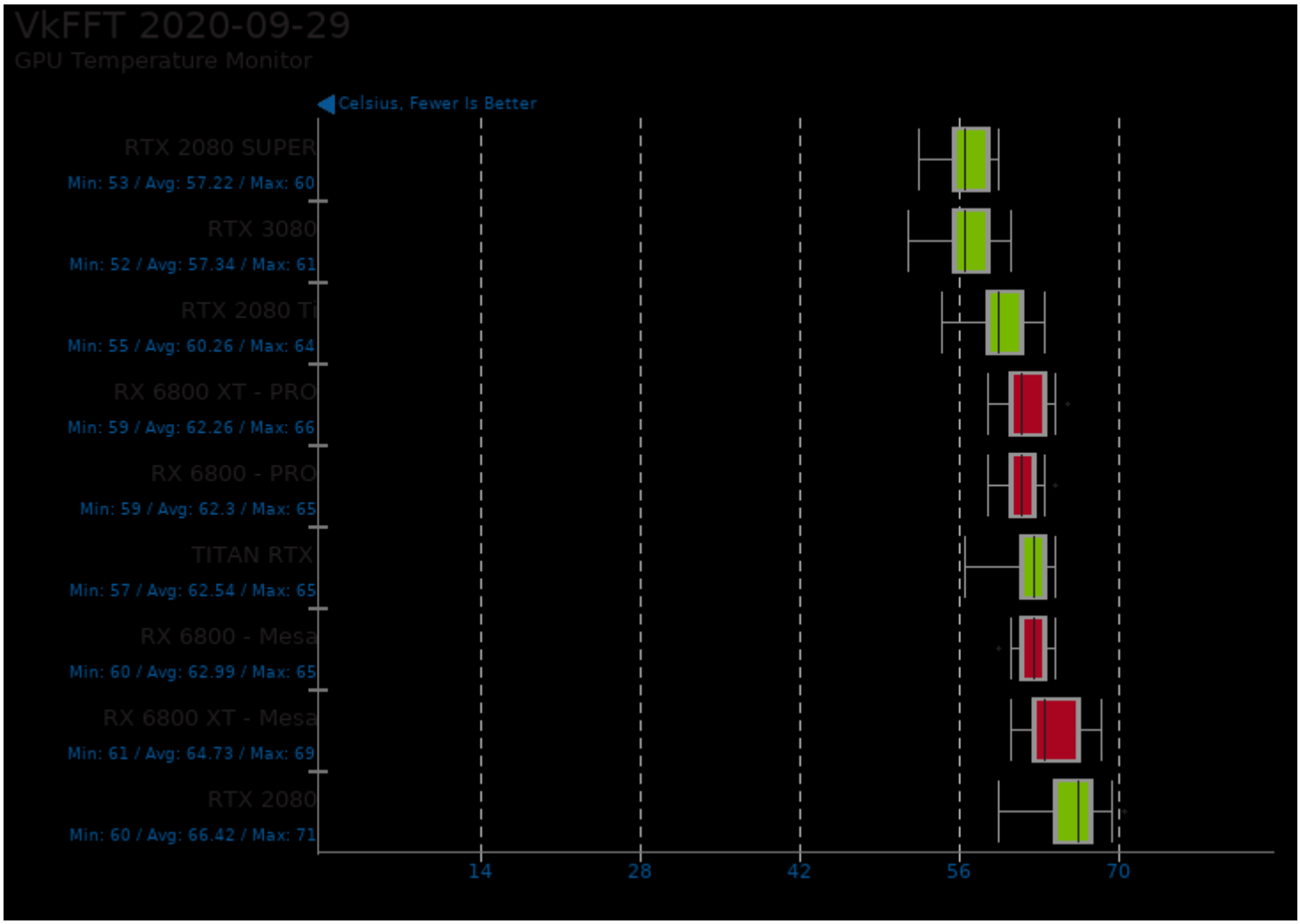

Basemark GPU 1.2
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 141.52 / Max: 178
RX 6800 - PRO
Min: 6 / Avg: 162.72 / Max: 219
RTX 2080
Min: 26.33 / Avg: 185.59 / Max: 218.2
RTX 2080 SUPER
Min: 24.83 / Avg: 195.25 / Max: 237.76
RX 6800 XT - PRO
Min: 24 / Avg: 205.34 / Max: 290
RX 6800 XT - Mesa
Min: 6 / Avg: 208.95 / Max: 282
RTX 2080 Ti
Min: 10.68 / Avg: 221.07 / Max: 265.65
TITAN RTX
Min: 23.8 / Avg: 236.44 / Max: 284.17
RTX 3080
Min: 17.53 / Avg: 263.1 / Max: 319.3
60
120
180
240
300

Radeon RX 6800 Series Linux Benchmarks

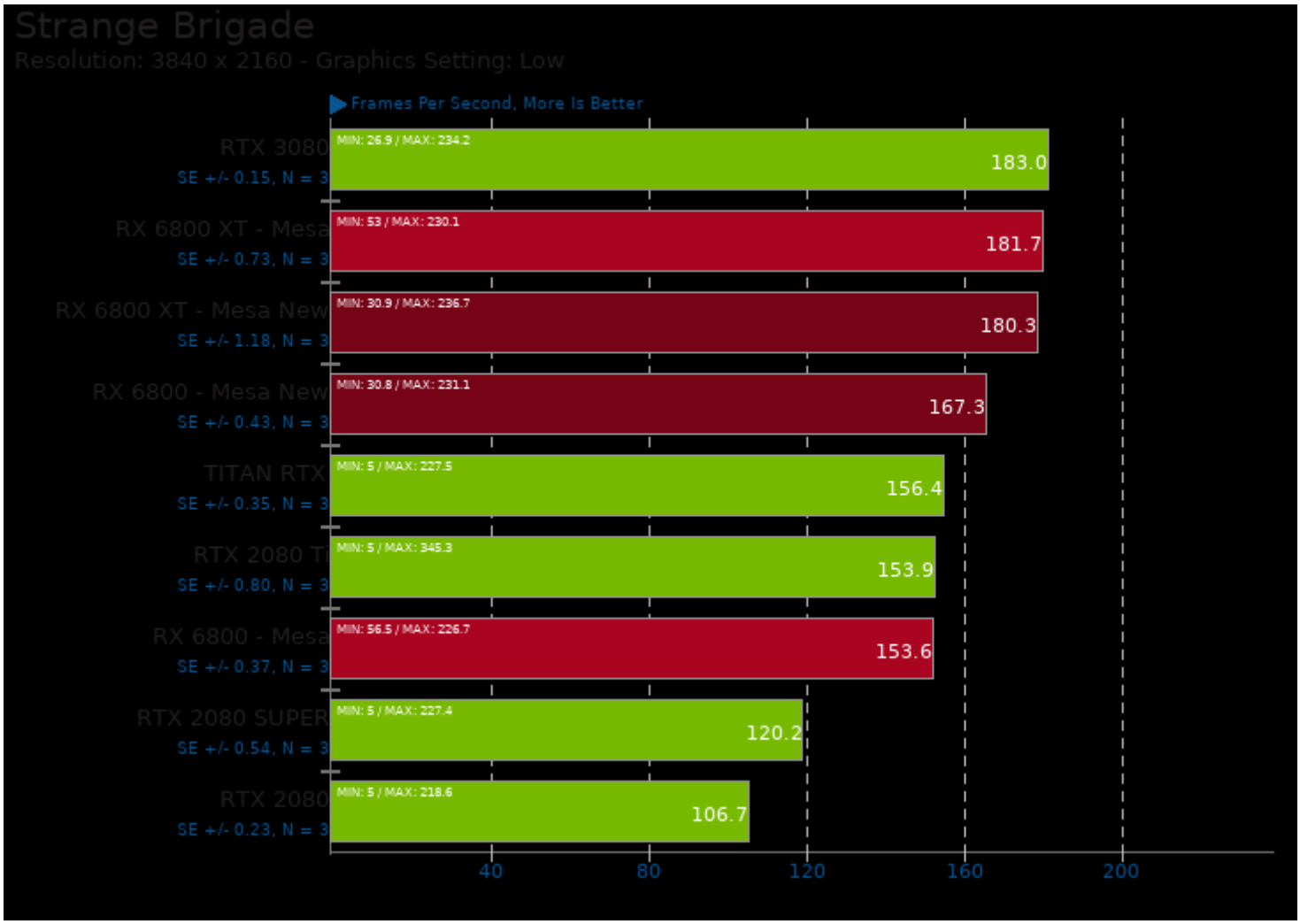


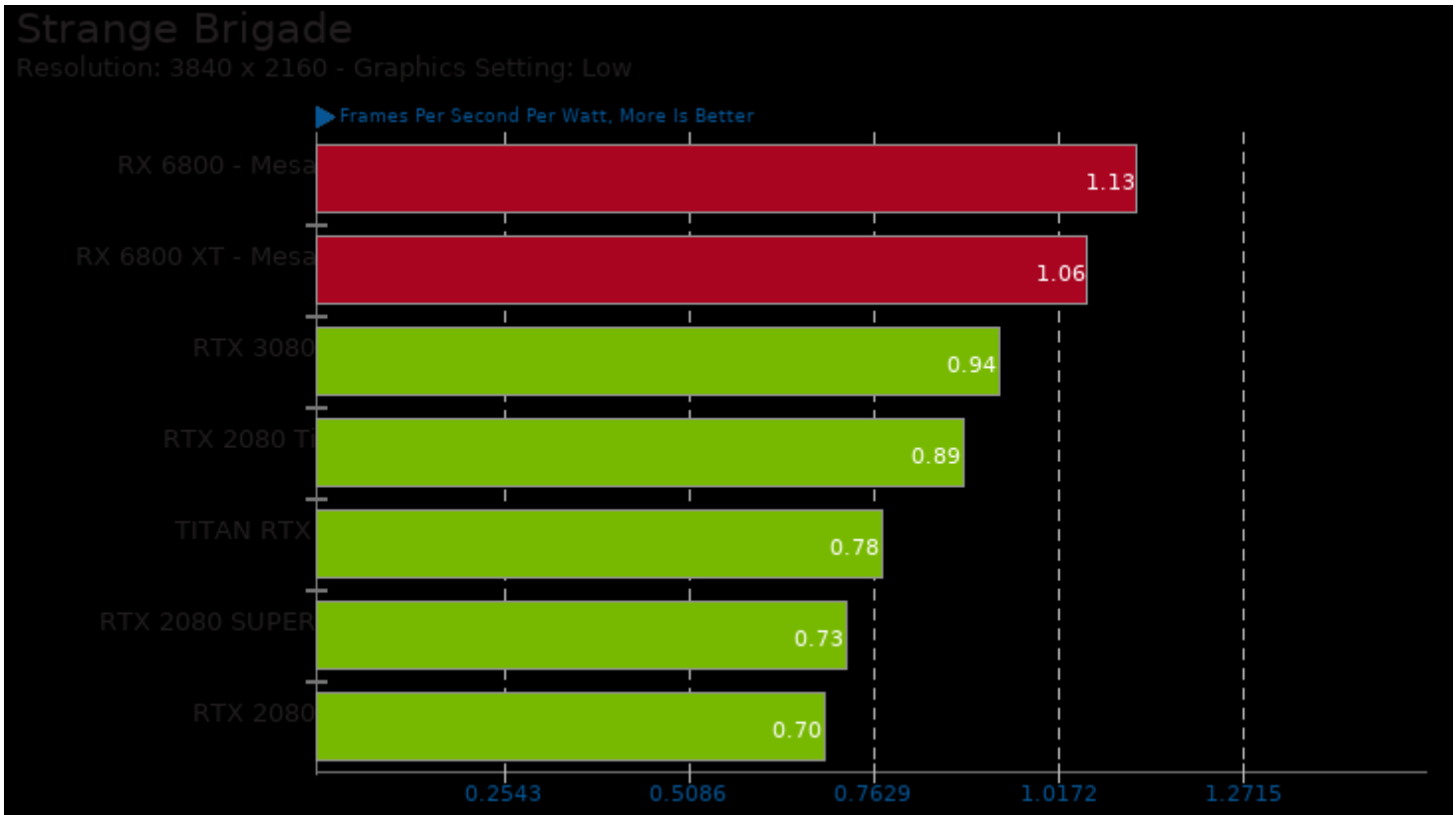

VkFFT 2020-09-29
Benchmark Score Per Watt, More Is Better
RX 6800 XT - PRO
717.57
RX 6800 XT - Mesa
717.01
RX 6800 - PRO
670.80
RX 6800 - Mesa
604.29
RTX 3080
346.08
RTX 2080 Ti
296.04
RTX 2080 SUPER
262.02
TITAN RTX
236.42
RTX 2080
232.71
150
300
450
600
750

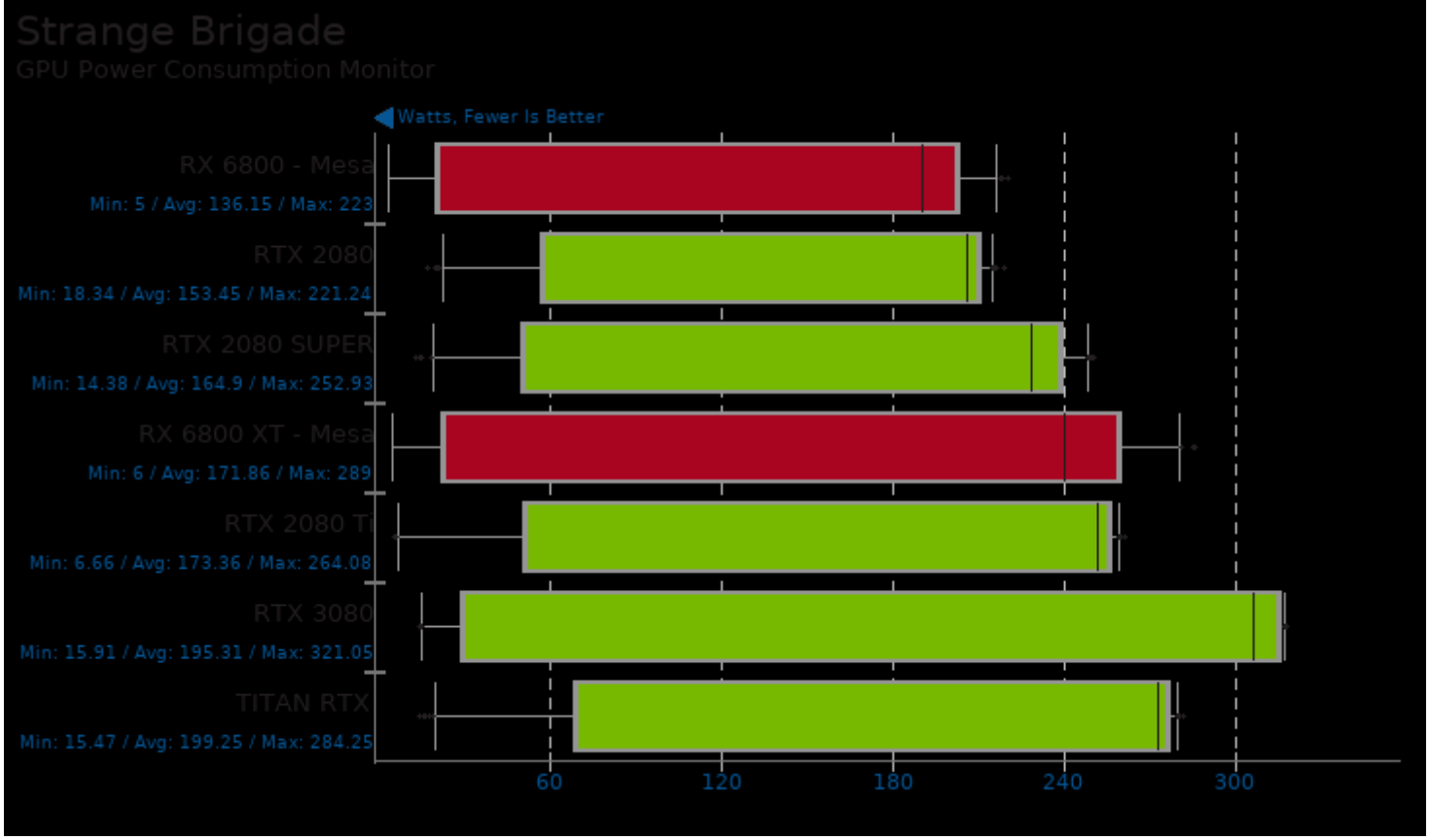

VkFFT 2020-09-29
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - PRO
Min: 5 / Avg: 65.81 / Max: 229
RX 6800 XT - PRO
Min: 8 / Avg: 71.3 / Max: 252
RX 6800 XT - Mesa
Min: 6 / Avg: 73.03 / Max: 372
RX 6800 - Mesa
Min: 5 / Avg: 76.53 / Max: 240
RTX 2080 SUPER
Min: 16.17 / Avg: 111.59 / Max: 210.87
RTX 2080
Min: 22.49 / Avg: 117.65 / Max: 208.27
RTX 2080 Ti
Min: 9.12 / Avg: 127.15 / Max: 263.32
RTX 3080
Min: 15.36 / Avg: 145.35 / Max: 280.72
TITAN RTX
Min: 23.03 / Avg: 158.36 / Max: 280.31
70
140
210
280
350


VkFFT 2020-09-29
GPU Temperature Monitor
Celsius, Fewer Is Better
RTX 2080 SUPER
Min: 53 / Avg: 57.22 / Max: 60
RTX 3080
Min: 52 / Avg: 57.34 / Max: 61
RTX 2080 Ti
Min: 55 / Avg: 60.26 / Max: 64
RX 6800 XT - PRO
Min: 59 / Avg: 62.26 / Max: 66
RX 6800 - PRO
Min: 59 / Avg: 62.3 / Max: 65
TITAN RTX
Min: 57 / Avg: 62.54 / Max: 65
RX 6800 - Mesa
Min: 60 / Avg: 62.99 / Max: 65
RX 6800 XT - Mesa
Min: 61 / Avg: 64.73 / Max: 69
RTX 2080
Min: 60 / Avg: 66.42 / Max: 71
14
28
42
56
70

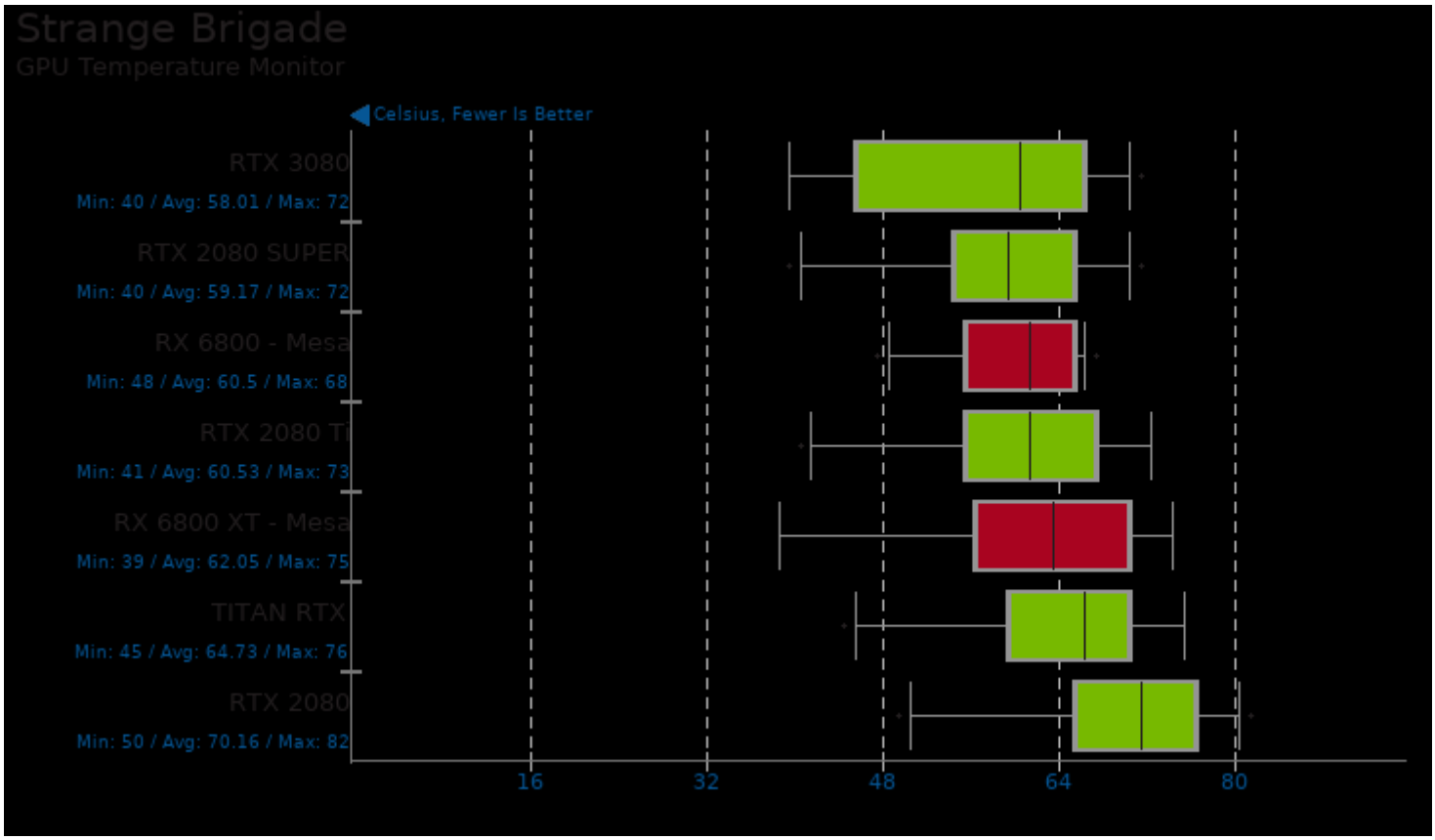
Radeon RX 6800 Series Linux Benchmarks

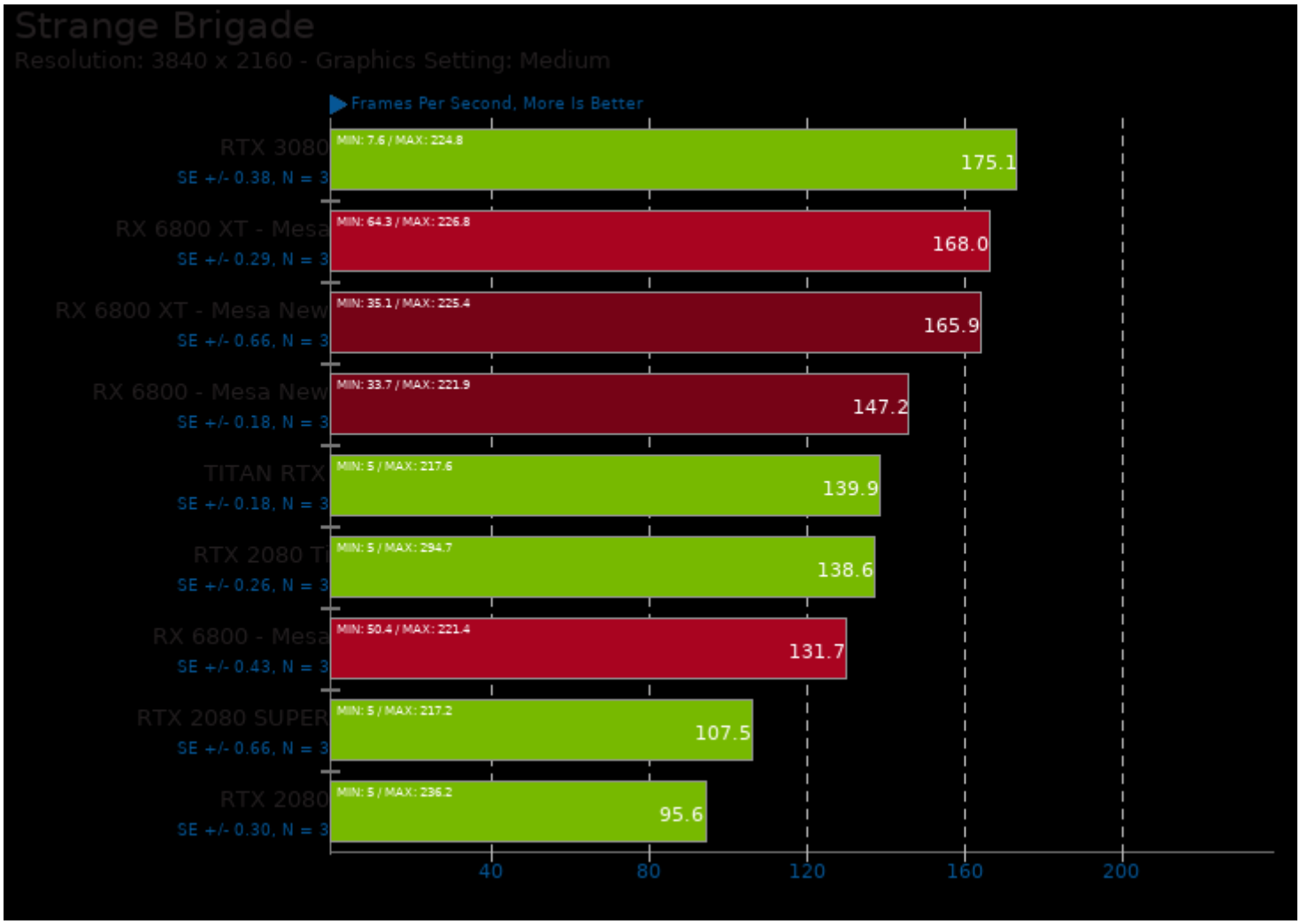


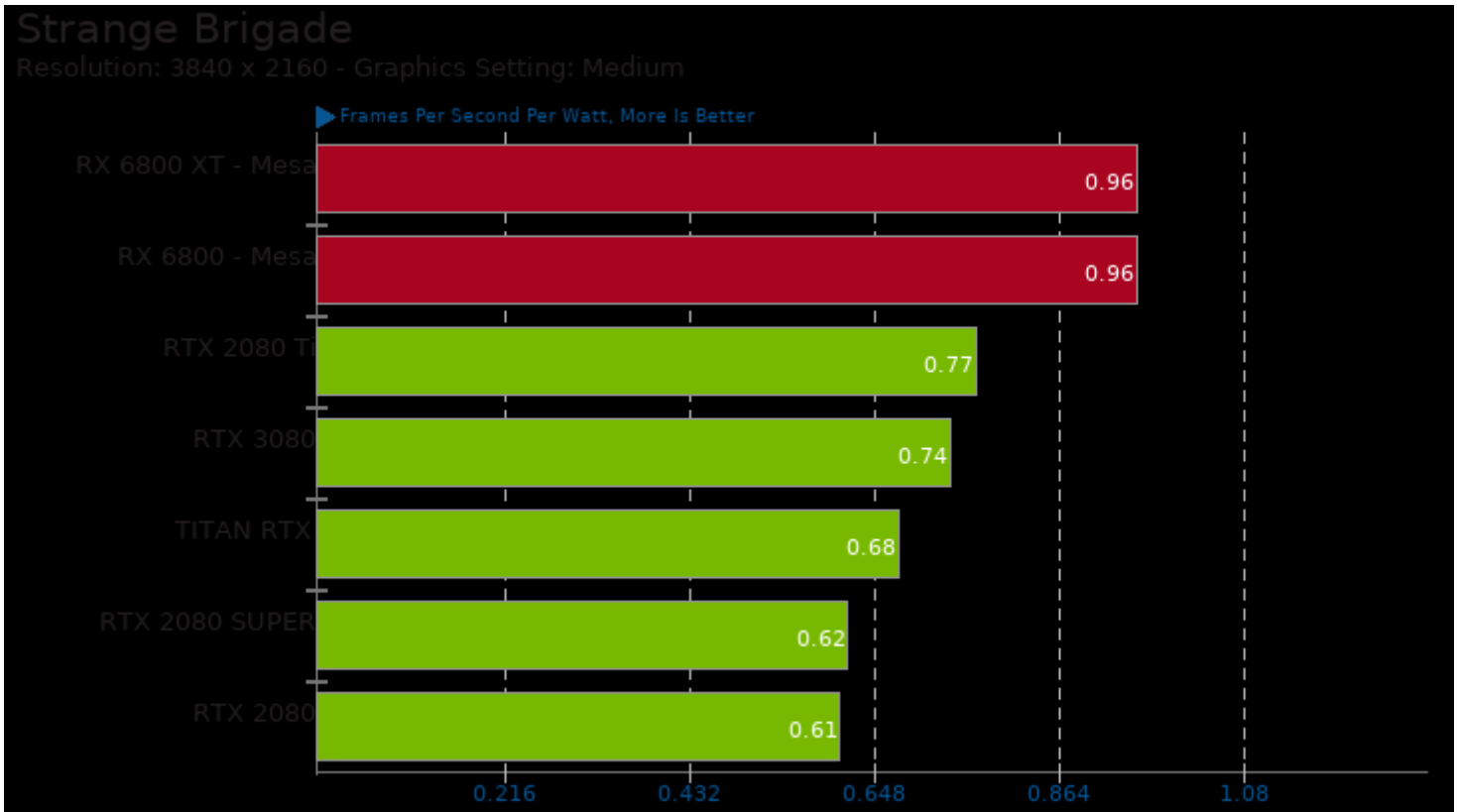

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Low
Frames Per Second Per Watt, More Is Better
RX 6800 - Mesa
1.13
RX 6800 XT - Mesa
1.06
RTX 3080
0.94
RTX 2080 Ti
0.89
TITAN RTX
0.78
RTX 2080 SUPER
0.73
RTX 2080
0.70
0.2543
0.5086
0.7629
1.0172
1.2715

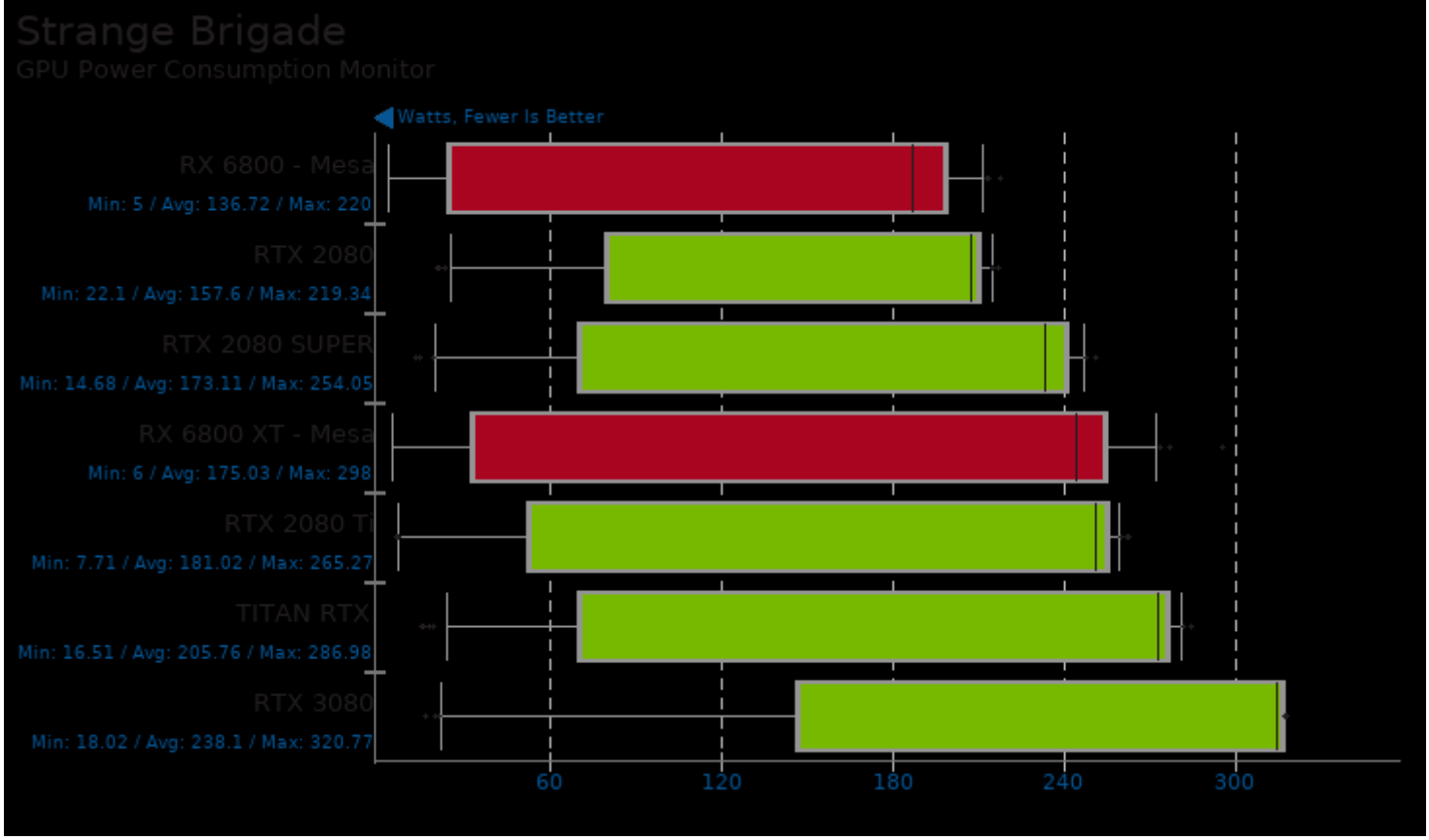

Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 136.15 / Max: 223
RTX 2080
Min: 18.34 / Avg: 153.45 / Max: 221.24
RTX 2080 SUPER
Min: 14.38 / Avg: 164.9 / Max: 252.93
RX 6800 XT - Mesa
Min: 6 / Avg: 171.86 / Max: 289
RTX 2080 Ti
Min: 6.66 / Avg: 173.36 / Max: 264.08
RTX 3080
Min: 15.91 / Avg: 195.31 / Max: 321.05
TITAN RTX
Min: 15.47 / Avg: 199.25 / Max: 284.25
60
120
180
240
300

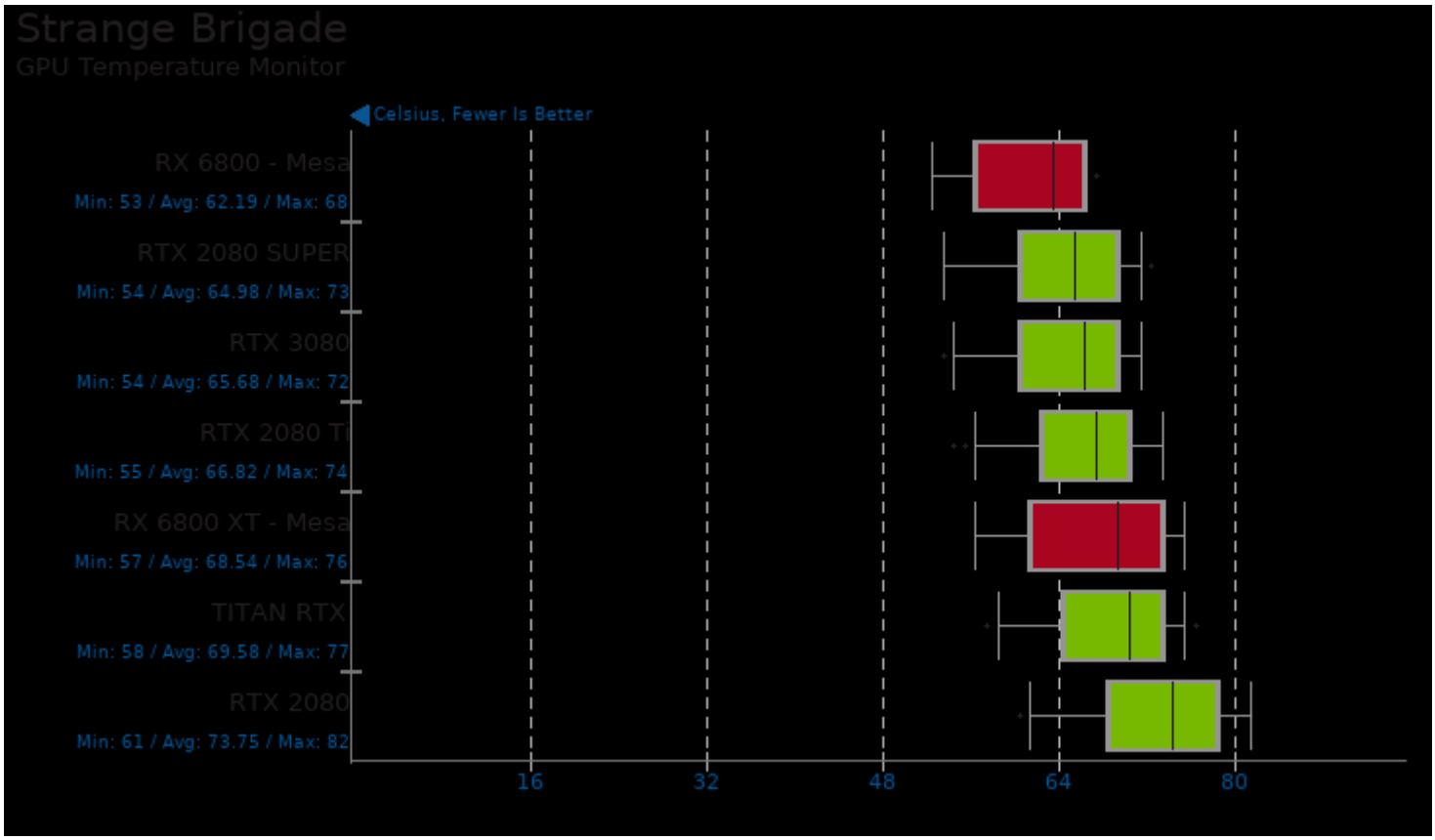
Radeon RX 6800 Series Linux Benchmarks

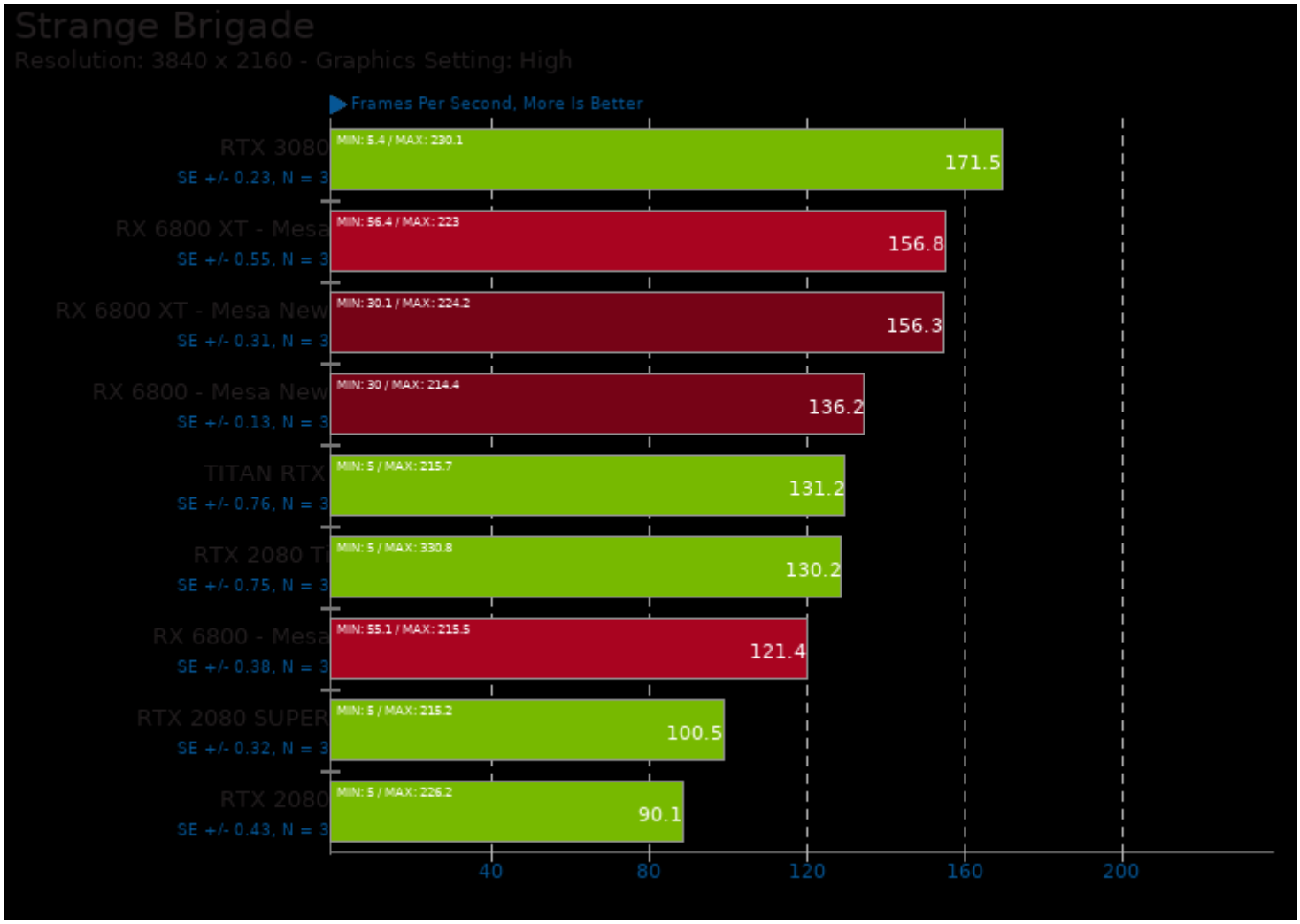


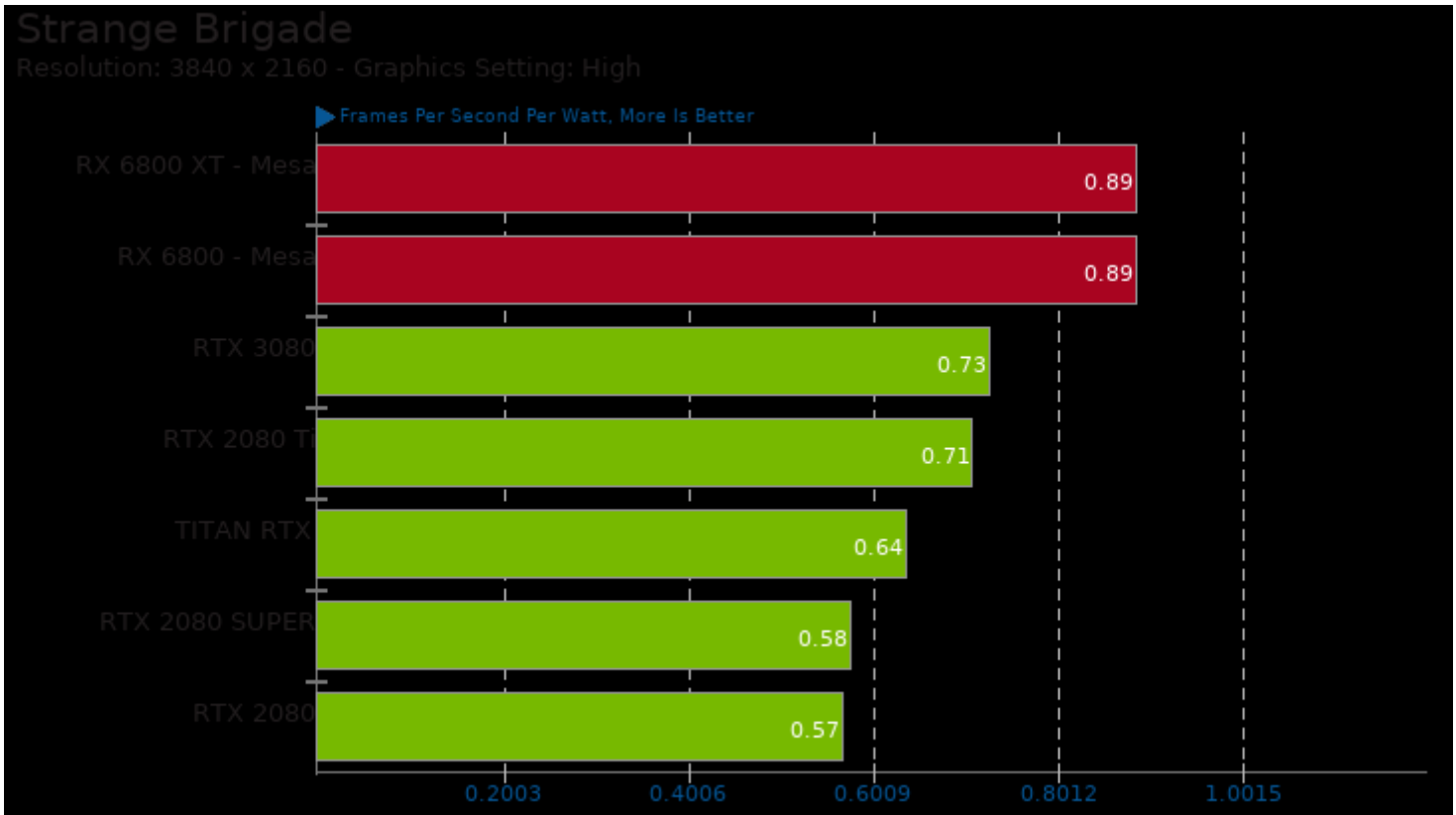

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Medium
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.38, N = 3
MIN: 7.6 / MAX: 224.8
175.1
RX 6800 XT - Mesa
SE +/- 0.29, N = 3
MIN: 64.3 / MAX: 226.8
168.0
RX 6800 XT - Mesa New
SE +/- 0.66, N = 3
MIN: 35.1 / MAX: 225.4
165.9
RX 6800 - Mesa New
SE +/- 0.18, N = 3
MIN: 33.7 / MAX: 221.9
147.2
TITAN RTX
SE +/- 0.18, N = 3
MIN: 5 / MAX: 217.6
139.9
RTX 2080 Ti
SE +/- 0.26, N = 3
MIN: 5 / MAX: 294.7
138.6
RX 6800 - Mesa
SE +/- 0.43, N = 3
MIN: 50.4 / MAX: 221.4
131.7
RTX 2080 SUPER
SE +/- 0.66, N = 3
MIN: 5 / MAX: 217.2
107.5
RTX 2080
SE +/- 0.30, N = 3
MIN: 5 / MAX: 236.2
95.6
40
80
120
160
200

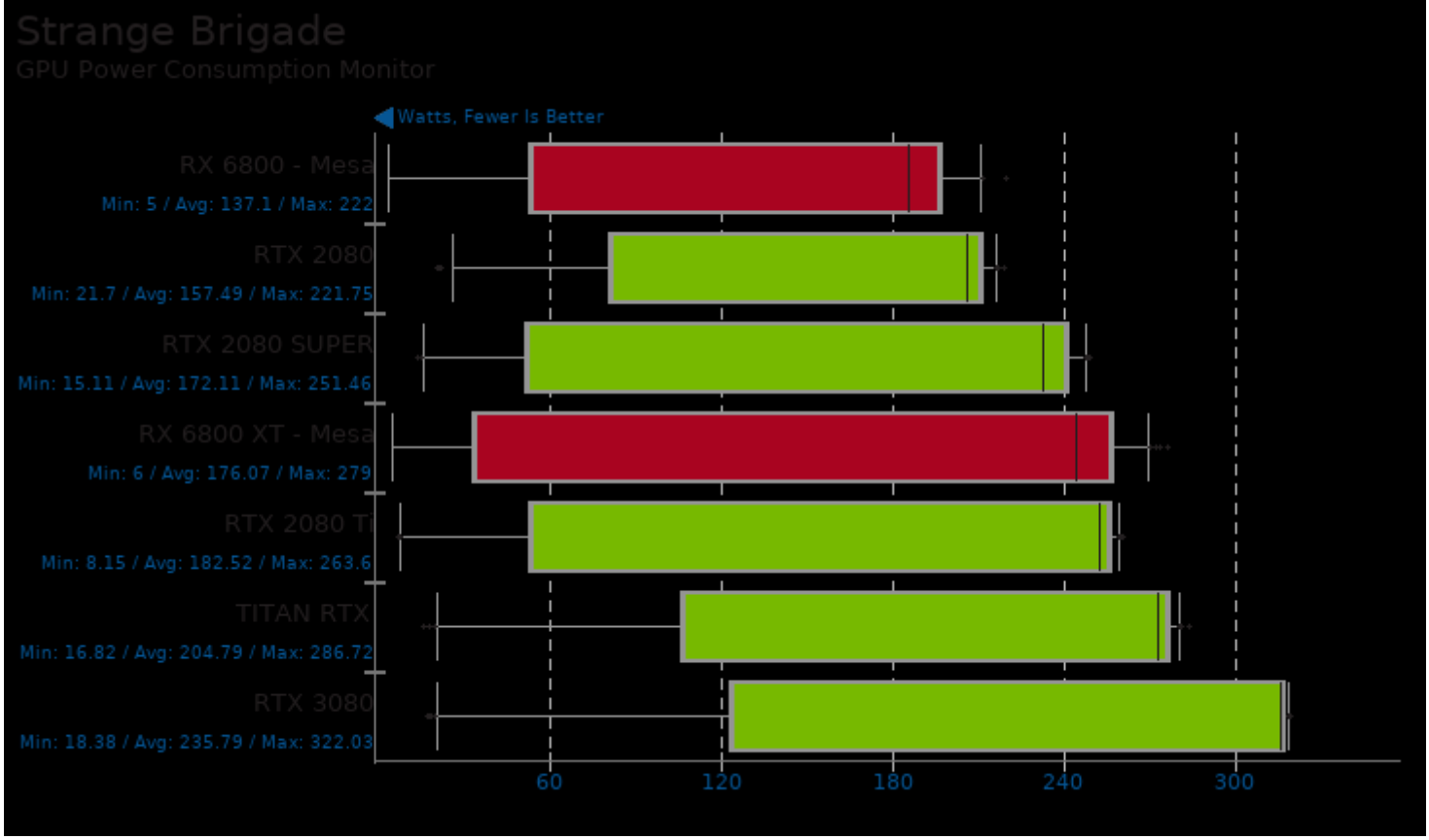

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Medium
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
RX 6800 - Mesa
RTX 2080 Ti
RTX 3080
TITAN RTX
RTX 2080 SUPER
RTX 2080
0.96
0.96
0.77
0.74
0.68
0.62
0.61
0.216
0.432
0.648
0.864
1.08

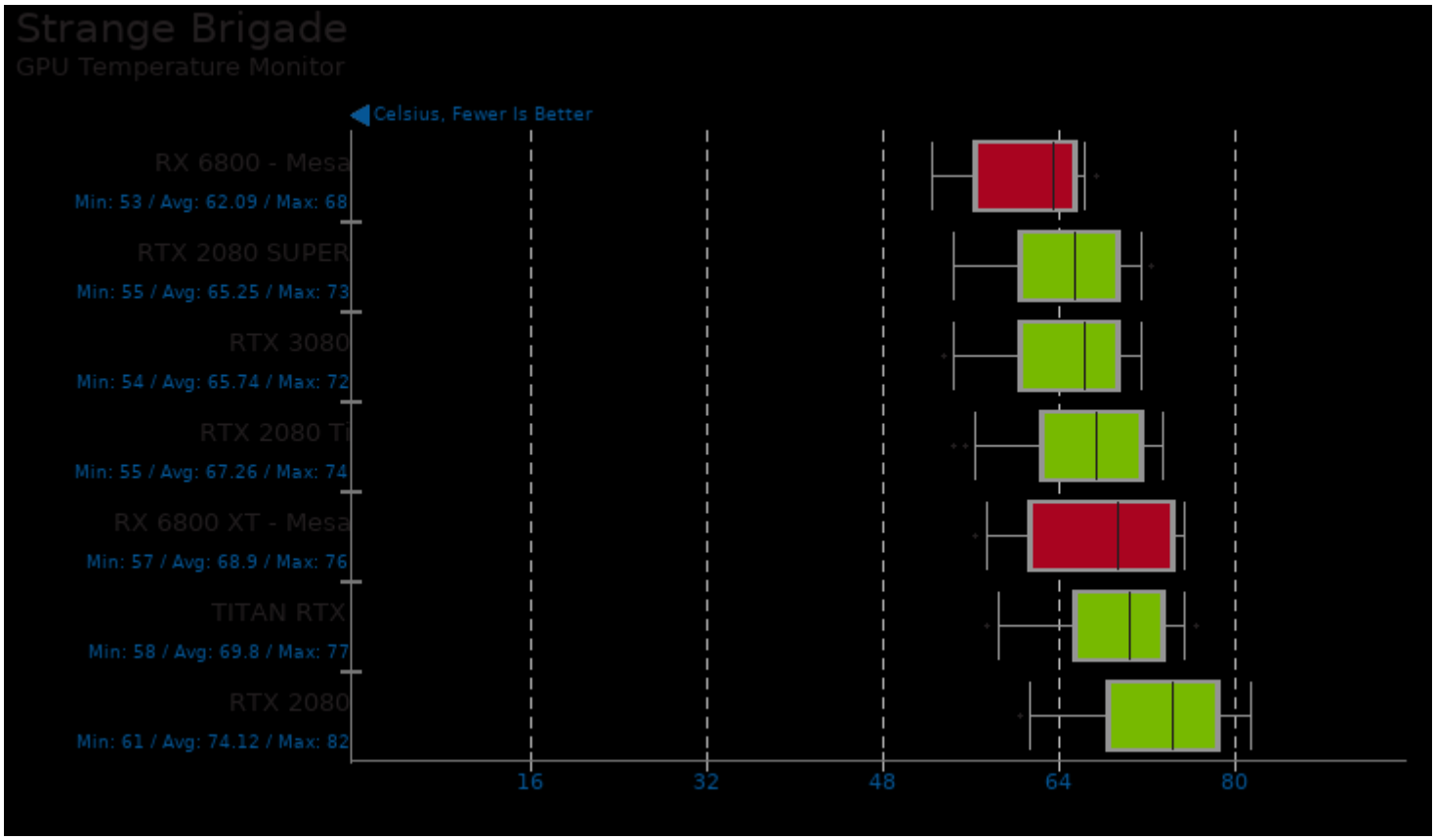

Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 136.72 / Max: 220
RTX 2080
Min: 22.1 / Avg: 157.6 / Max: 219.34
RTX 2080 SUPER
Min: 14.68 / Avg: 173.11 / Max: 254.05
RX 6800 XT - Mesa
Min: 6 / Avg: 175.03 / Max: 298
RTX 2080 Ti
Min: 7.71 / Avg: 181.02 / Max: 265.27
TITAN RTX
Min: 16.51 / Avg: 205.76 / Max: 286.98
RTX 3080
Min: 18.02 / Avg: 238.1 / Max: 320.77
60
120
180
240
300


Strange Brigade
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 53 / Avg: 62.19 / Max: 68
RTX 2080 SUPER
Min: 54 / Avg: 64.98 / Max: 73
RTX 3080
Min: 54 / Avg: 65.68 / Max: 72
RTX 2080 Ti
Min: 55 / Avg: 66.82 / Max: 74
RX 6800 XT - Mesa
Min: 57 / Avg: 68.54 / Max: 76
TITAN RTX
Min: 58 / Avg: 69.58 / Max: 77
RTX 2080
Min: 61 / Avg: 73.75 / Max: 82
16
32
48
64
80

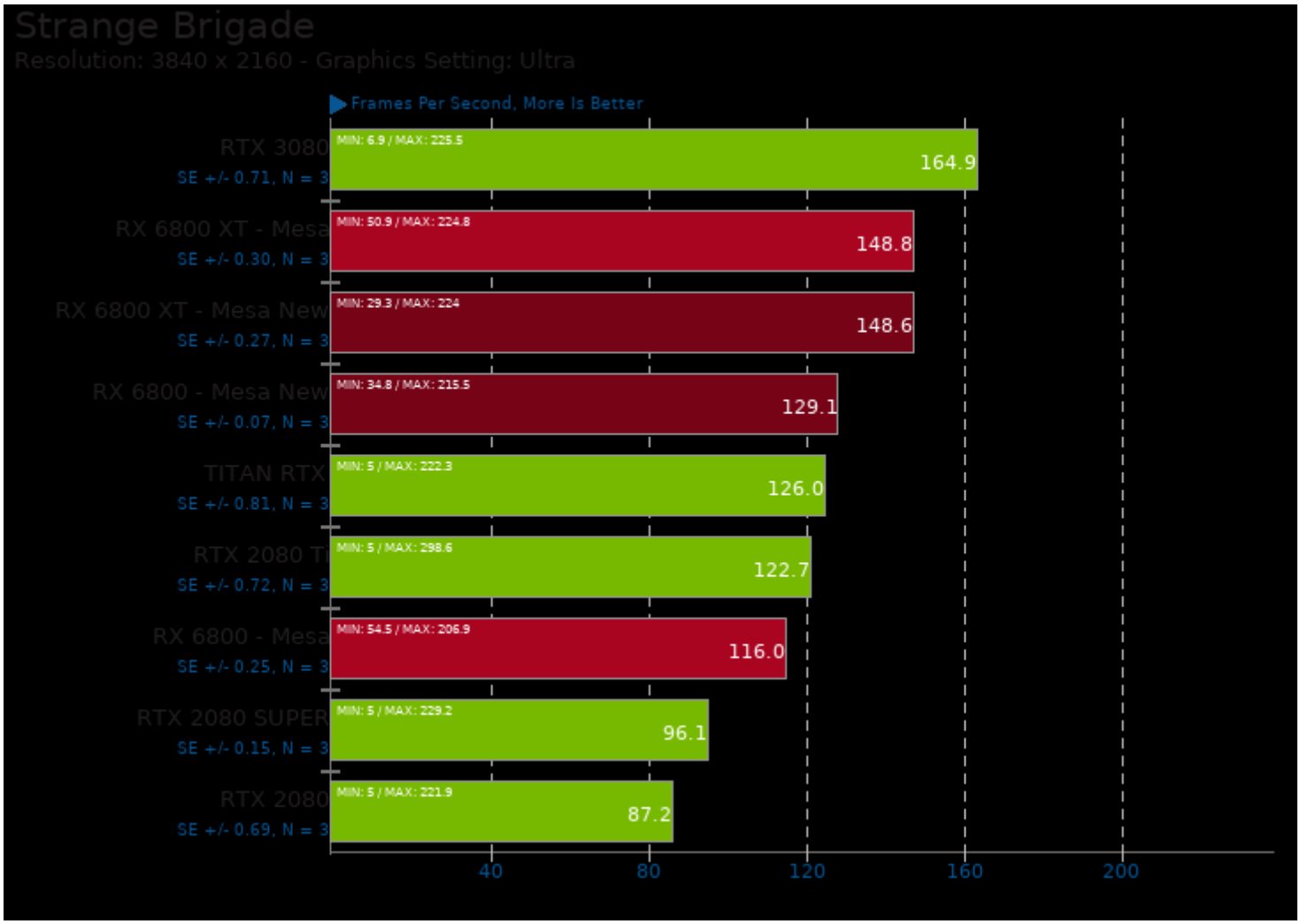

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: High
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.23, N = 3
MIN: 5.4 / MAX: 230.1
171.5
RX 6800 XT - Mesa
SE +/- 0.55, N = 3
MIN: 56.4 / MAX: 223
156.8
RX 6800 XT - Mesa New
SE +/- 0.31, N = 3
MIN: 30.1 / MAX: 224.2
156.3
RX 6800 - Mesa New
SE +/- 0.13, N = 3
MIN: 30 / MAX: 214.4
136.2
TITAN RTX
SE +/- 0.76, N = 3
MIN: 5 / MAX: 215.7
131.2
RTX 2080 Ti
SE +/- 0.75, N = 3
MIN: 5 / MAX: 330.8
130.2
RX 6800 - Mesa
SE +/- 0.38, N = 3
MIN: 55.1 / MAX: 215.5
121.4
RTX 2080 SUPER
SE +/- 0.32, N = 3
MIN: 5 / MAX: 215.2
100.5
RTX 2080
SE +/- 0.43, N = 3
MIN: 5 / MAX: 226.2
90.1
40
80
120
160
200

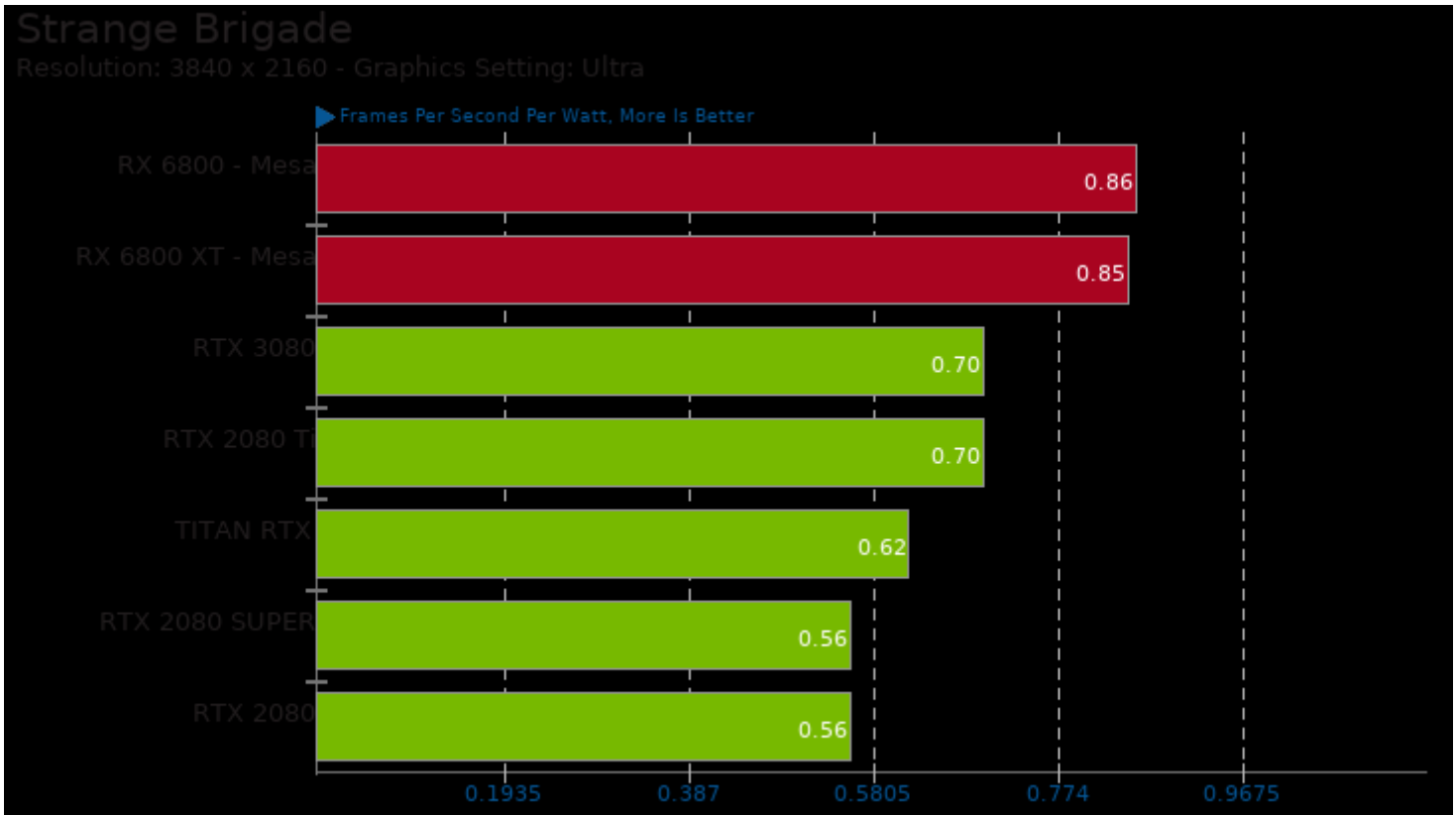

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: High
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
RX 6800 - Mesa
RTX 3080
RTX 2080 Ti
TITAN RTX
RTX 2080 SUPER
RTX 2080
0.89
0.89
0.73
0.71
0.64
0.58
0.57
0.2003
0.4006
0.6009
0.8012
1.0015

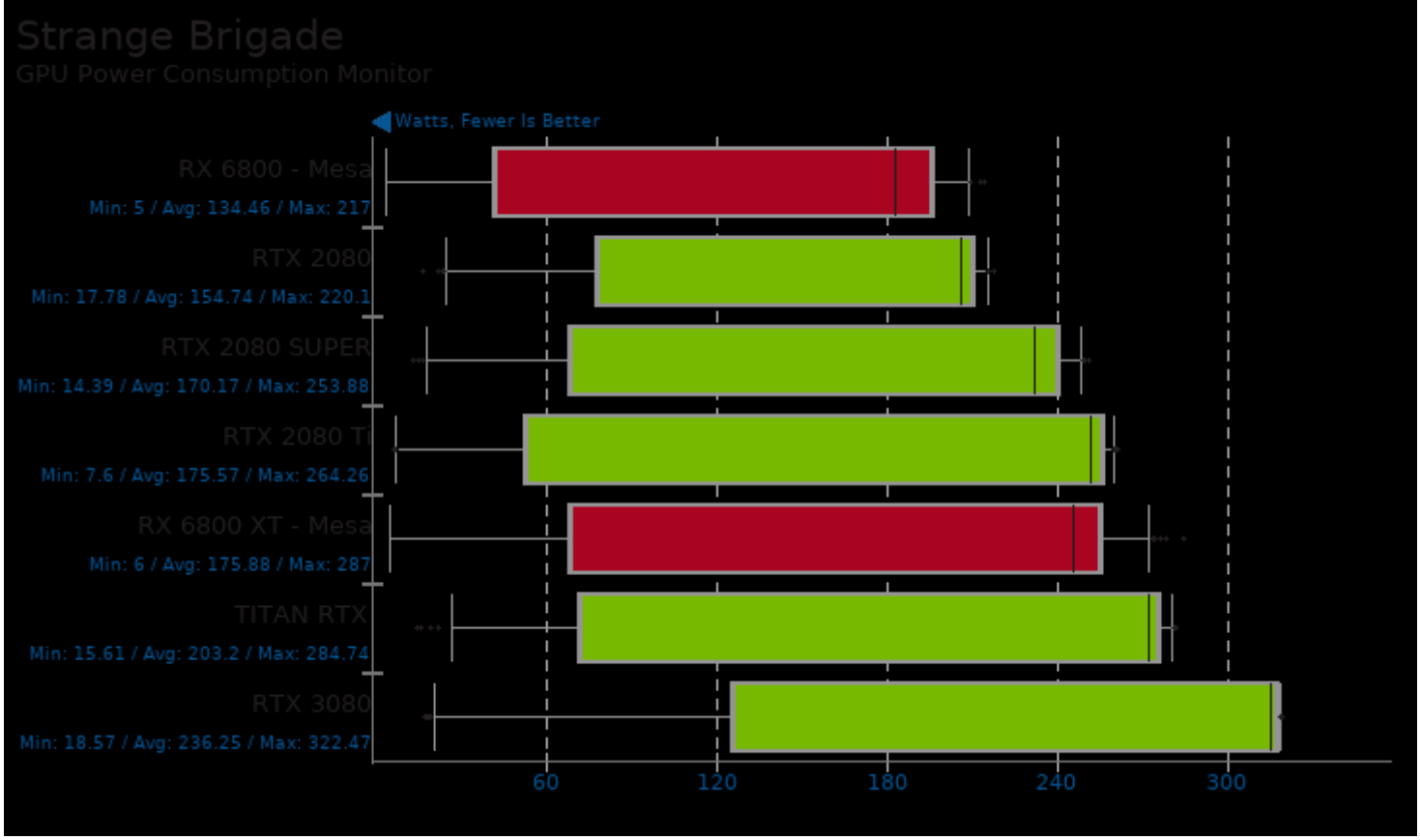

Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 137.1 / Max: 222
RTX 2080
Min: 21.7 / Avg: 157.49 / Max: 221.75
RTX 2080 SUPER
Min: 15.11 / Avg: 172.11 / Max: 251.46
RX 6800 XT - Mesa
Min: 6 / Avg: 176.07 / Max: 279
RTX 2080 Ti
Min: 8.15 / Avg: 182.52 / Max: 263.6
TITAN RTX
Min: 16.82 / Avg: 204.79 / Max: 286.72
RTX 3080
Min: 18.38 / Avg: 235.79 / Max: 322.03
60
120
180
240
300

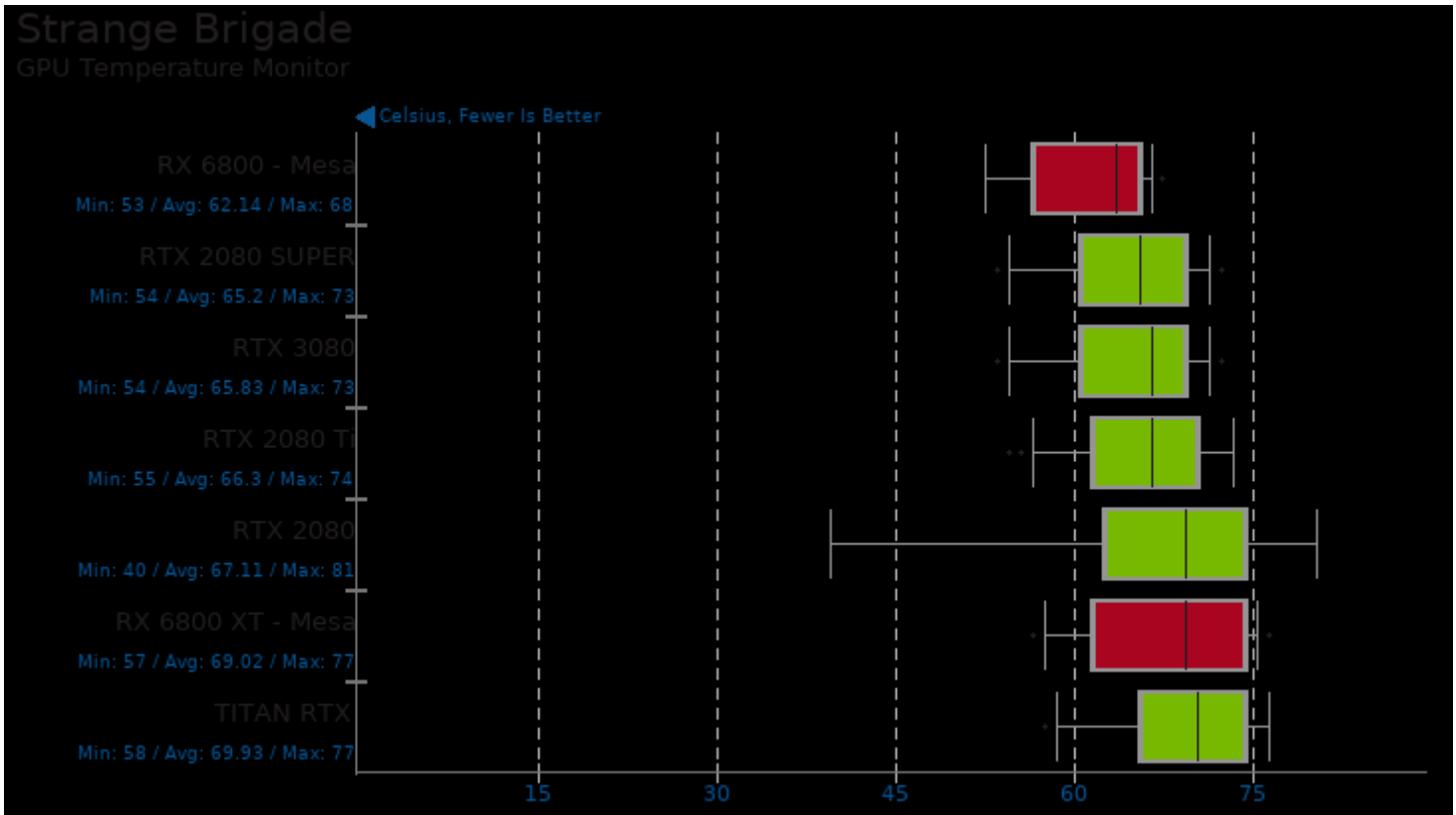

Strange Brigade
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 53 / Avg: 62.09 / Max: 68
RTX 2080 SUPER
Min: 55 / Avg: 65.25 / Max: 73
RTX 3080
Min: 54 / Avg: 65.74 / Max: 72
RTX 2080 Ti
Min: 55 / Avg: 67.26 / Max: 74
RX 6800 XT - Mesa
Min: 57 / Avg: 68.9 / Max: 76
TITAN RTX
Min: 58 / Avg: 69.8 / Max: 77
RTX 2080
Min: 61 / Avg: 74.12 / Max: 82
16
32
48
64
80

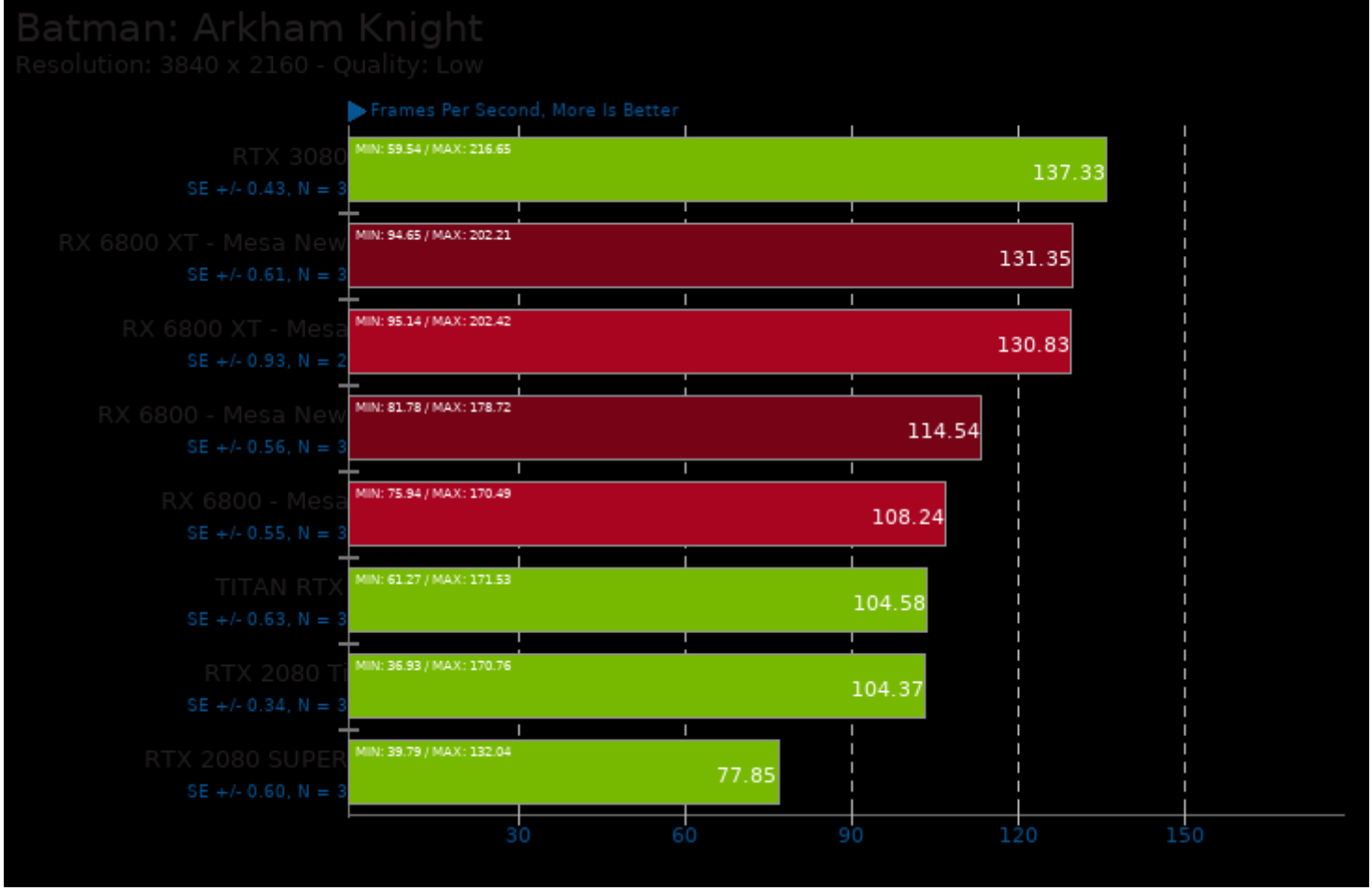
Radeon RX 6800 Series Linux Benchmarks

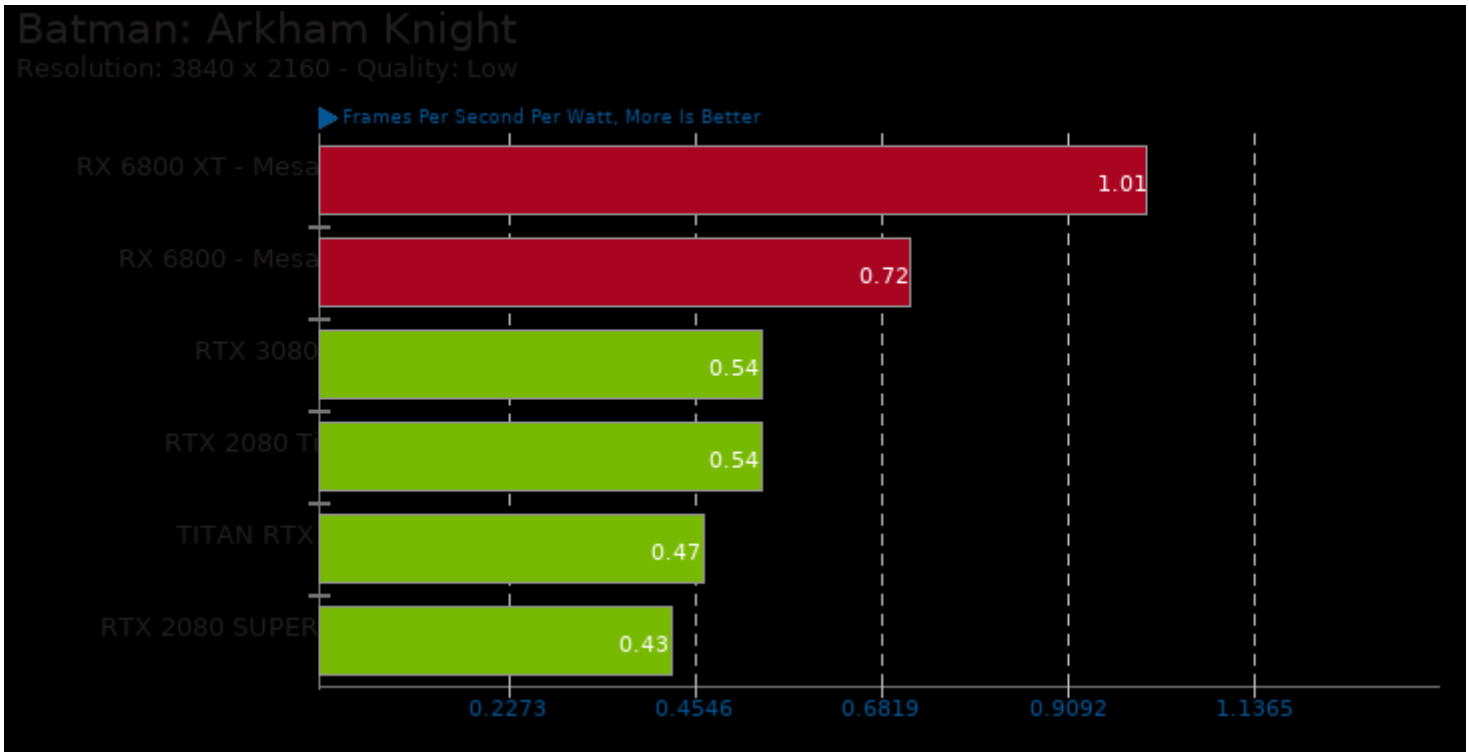


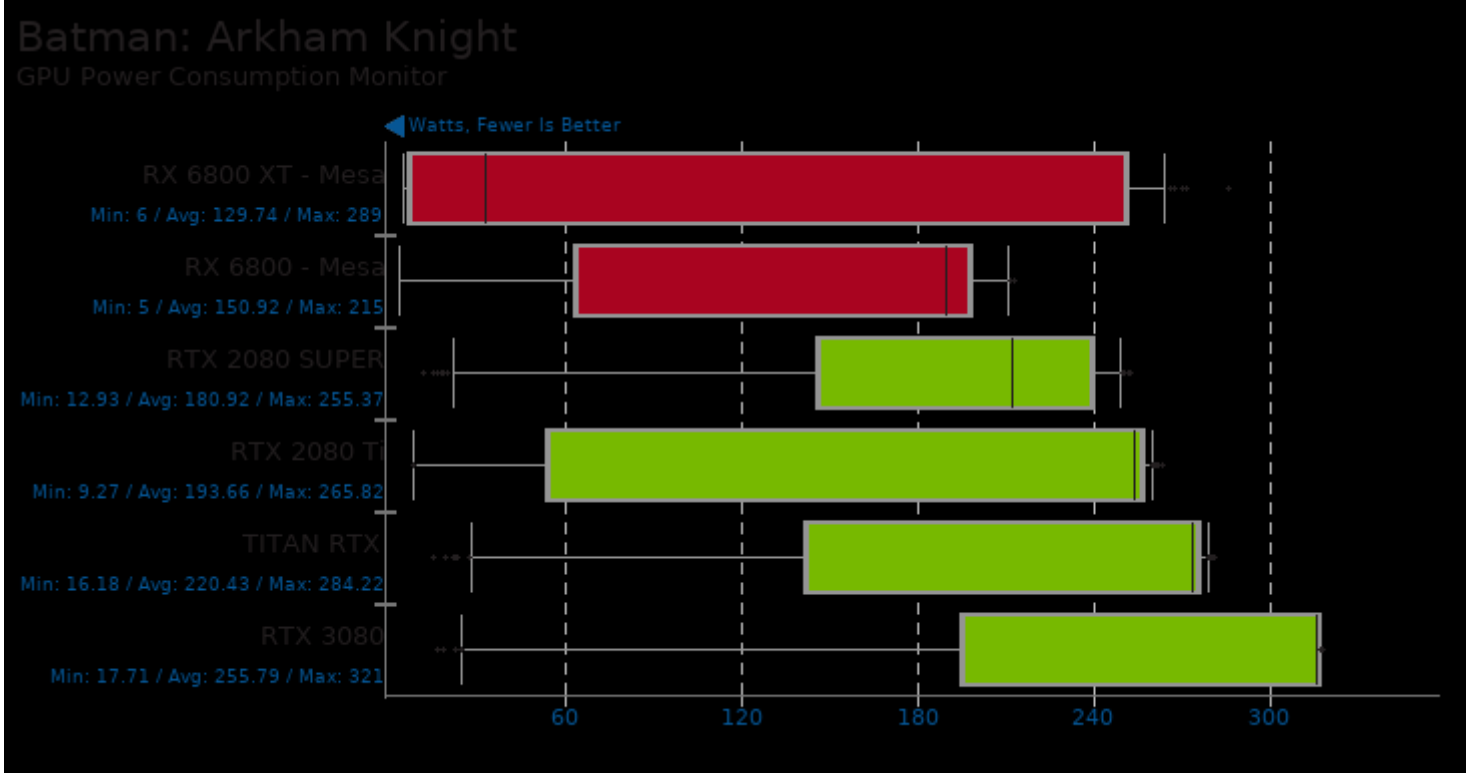

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Ultra
Frames Per Second Per Watt, More Is Better
RX 6800 - Mesa
RX 6800 XT - Mesa
RTX 3080
RTX 2080 Ti
TITAN RTX
RTX 2080 SUPER
RTX 2080
0.86
0.85
0.70
0.70
0.62
0.56
0.56
0.1935
0.387
0.5805
0.774
0.9675


Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 - Mesa
Min: 5 / Avg: 134.46 / Max: 217
RTX 2080
Min: 17.78 / Avg: 154.74 / Max: 220.1
RTX 2080 SUPER
Min: 14.39 / Avg: 170.17 / Max: 253.88
RTX 2080 Ti
Min: 7.6 / Avg: 175.57 / Max: 264.26
RX 6800 XT - Mesa
Min: 6 / Avg: 175.88 / Max: 287
TITAN RTX
Min: 15.61 / Avg: 203.2 / Max: 284.74
RTX 3080
Min: 18.57 / Avg: 236.25 / Max: 322.47
60
120
180
240
300

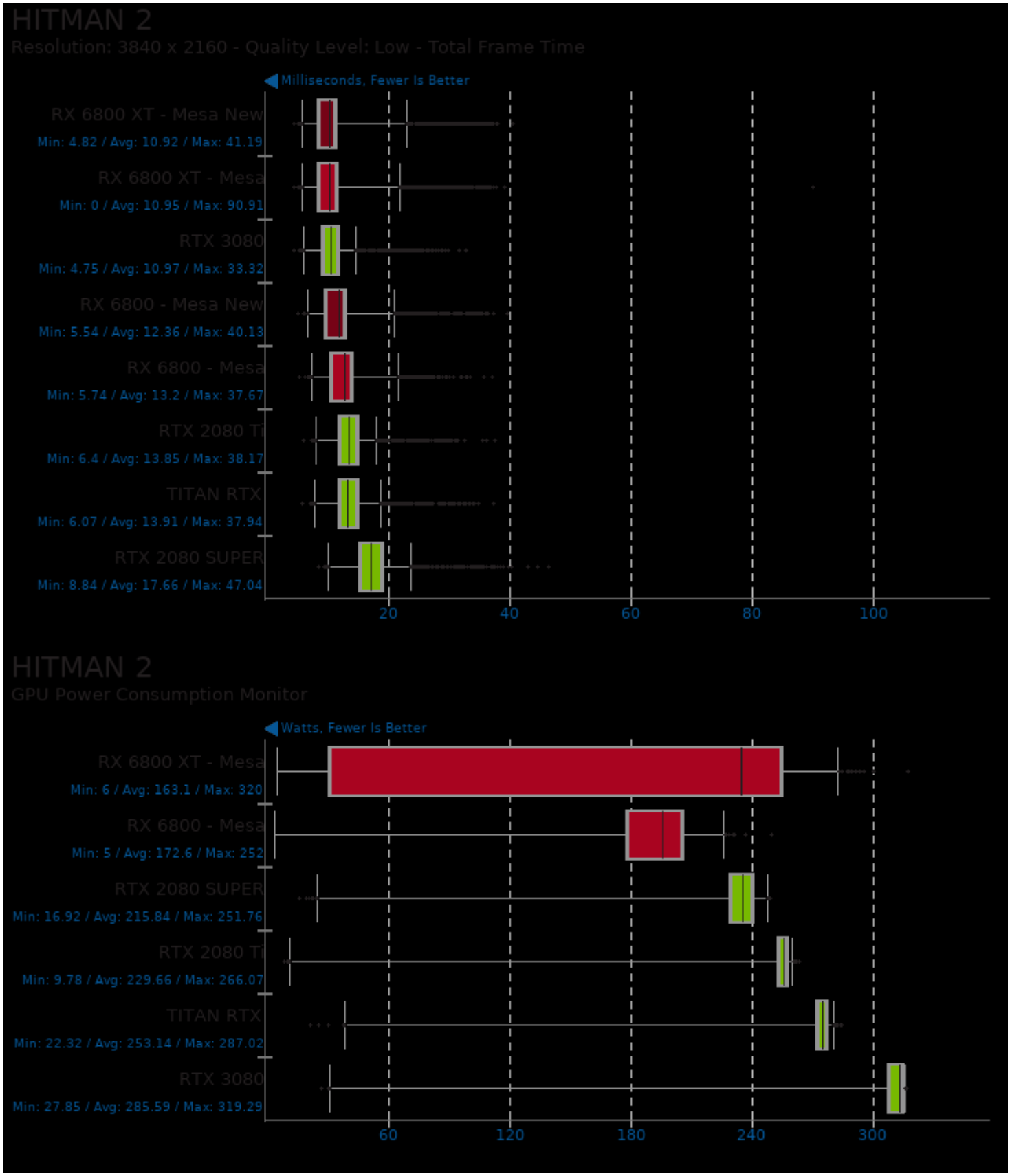

Strange Brigade
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 53 / Avg: 62.14 / Max: 68
RTX 2080 SUPER
Min: 54 / Avg: 65.2 / Max: 73
RTX 3080
Min: 54 / Avg: 65.83 / Max: 73
RTX 2080 Ti
Min: 55 / Avg: 66.3 / Max: 74
RTX 2080
Min: 40 / Avg: 67.11 / Max: 81
RX 6800 XT - Mesa
Min: 57 / Avg: 69.02 / Max: 77
TITAN RTX
Min: 58 / Avg: 69.93 / Max: 77
15
30
45
60
75


Batman: Arkham Knight
Resolution: 3840 x 2160 - Quality: Low
Frames Per Second, More Is Better
RTX 3080
SE +/- 0.43, N = 3
MIN: 59.54 / MAX: 216.65
137.33
RX 6800 XT - Mesa New
SE +/- 0.61, N = 3
MIN: 94.65 / MAX: 202.21
131.35
RX 6800 XT - Mesa
SE +/- 0.93, N = 2
MIN: 95.14 / MAX: 202.42
130.83
RX 6800 - Mesa New
SE +/- 0.56, N = 3
MIN: 81.78 / MAX: 178.72
114.54
RX 6800 - Mesa
SE +/- 0.55, N = 3
MIN: 75.94 / MAX: 170.49
108.24
TITAN RTX
SE +/- 0.63, N = 3
MIN: 61.27 / MAX: 171.53
104.58
RTX 2080 Ti
SE +/- 0.34, N = 3
MIN: 36.93 / MAX: 170.76
104.37
RTX 2080 SUPER
SE +/- 0.60, N = 3
MIN: 39.79 / MAX: 132.04
77.85
30
60
90
120
150

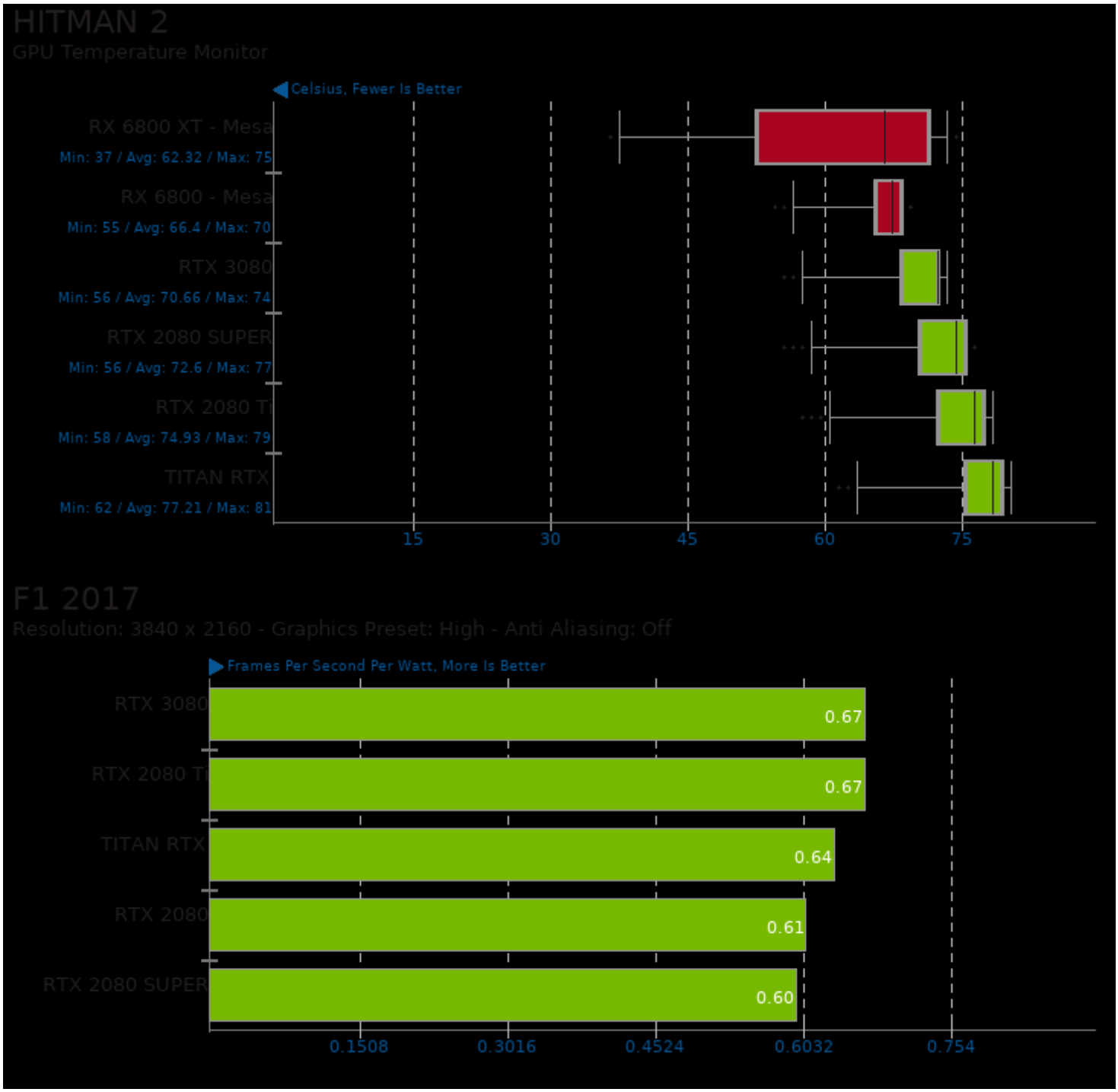

Batman: Arkham Knight
Resolution: 3840 x 2160 - Quality: Low
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
1.01
RX 6800 - Mesa
0.72
RTX 3080
0.54
RTX 2080 Ti
0.54
TITAN RTX
0.47
RTX 2080 SUPER
0.43
0.2273
0.4546
0.6819
0.9092
1.1365

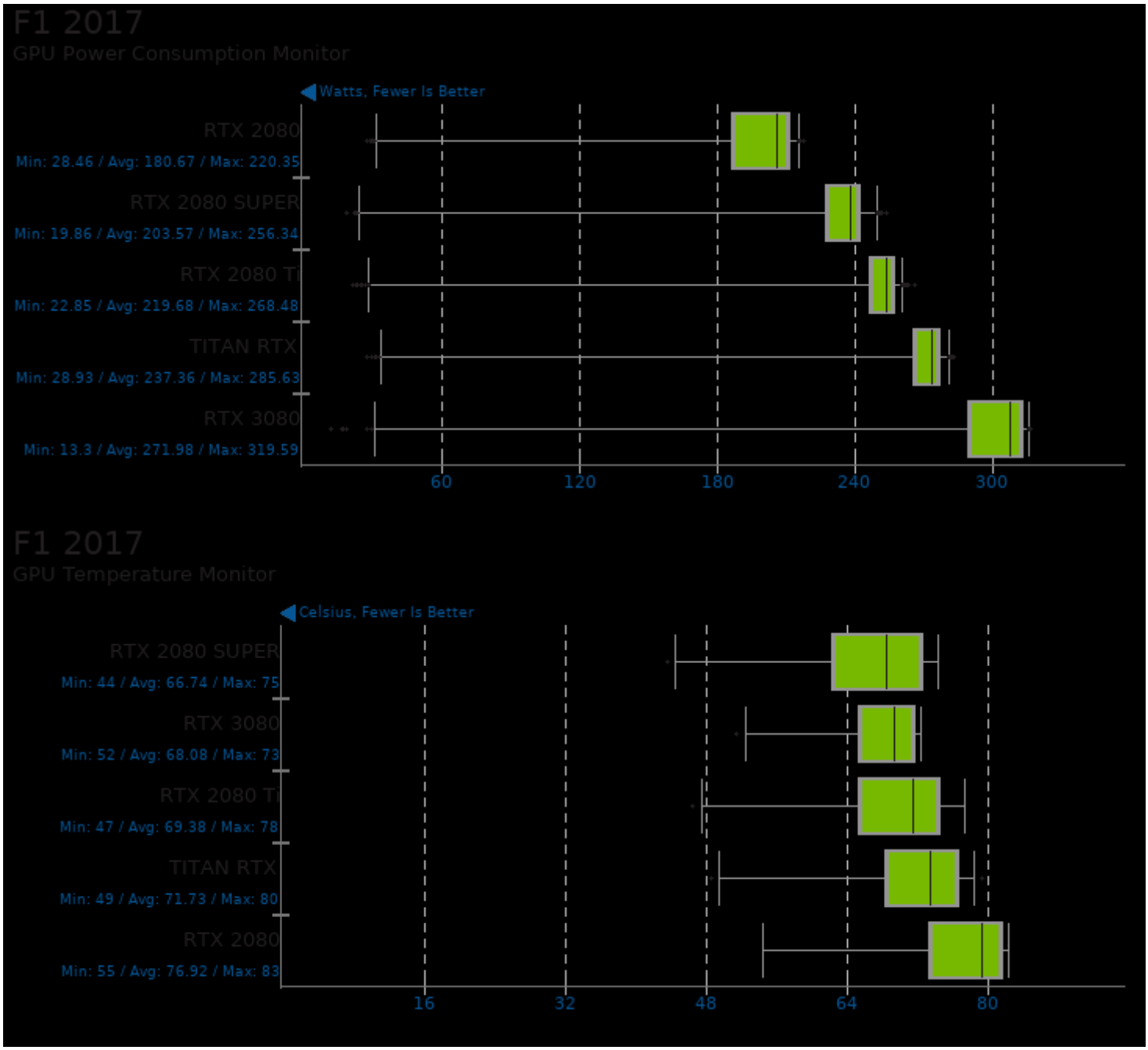

Batman: Arkham Knight
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - Mesa
Min: 6 / Avg: 129.74 / Max: 289
RX 6800 - Mesa
Min: 5 / Avg: 150.92 / Max: 215
RTX 2080 SUPER
Min: 12.93 / Avg: 180.92 / Max: 255.37
RTX 2080 Ti
Min: 9.27 / Avg: 193.66 / Max: 265.82
TITAN RTX
Min: 16.18 / Avg: 220.43 / Max: 284.22
RTX 3080
Min: 17.71 / Avg: 255.79 / Max: 321
60
120
180
240
300

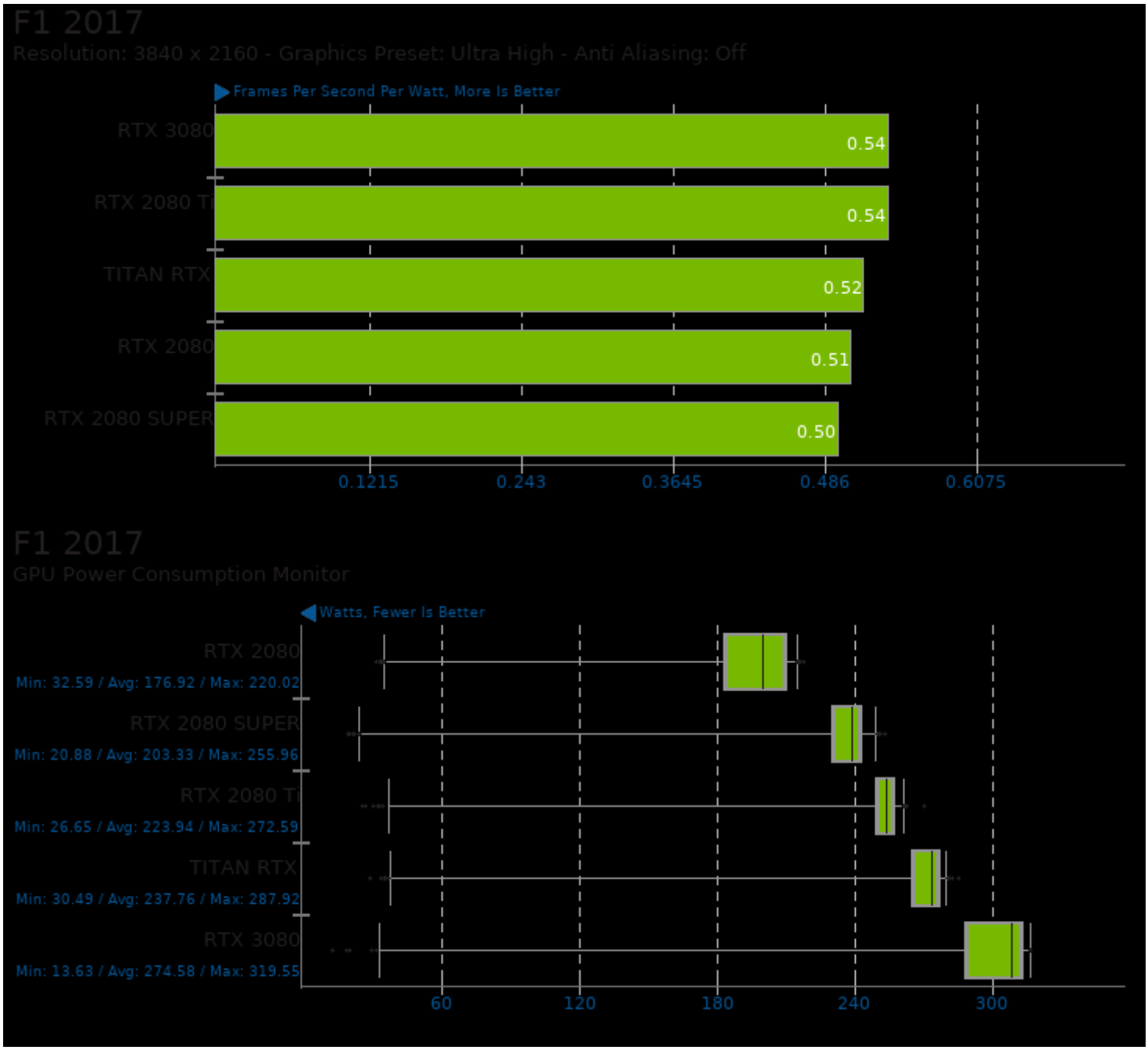

Batman: Arkham Knight
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 - Mesa
Min: 52 / Avg: 64.06 / Max: 69
RX 6800 XT - Mesa
Min: 50 / Avg: 64.86 / Max: 77
RTX 2080 SUPER
Min: 52 / Avg: 66.91 / Max: 74
RTX 3080
Min: 52 / Avg: 67.26 / Max: 74
RTX 2080 Ti
Min: 53 / Avg: 68.51 / Max: 76
TITAN RTX
Min: 56 / Avg: 71.8 / Max: 79
15
30
45
60
75
HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Low
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.32, N = 3
MIN: 90.98 / MAX: 92.08
91.47
RX 6800 XT - Mesa New
SE +/- 0.13, N = 3
MIN: 91.17 / MAX: 91.56
91.42
RTX 3080
SE +/- 0.12, N = 3
MIN: 90.82 / MAX: 91.19
91.06
RX 6800 - Mesa New
SE +/- 0.03, N = 3
MIN: 80.87 / MAX: 80.98
80.93
RX 6800 - Mesa
SE +/- 0.03, N = 3
MIN: 75.7 / MAX: 75.79
75.74
RTX 2080 Ti
SE +/- 0.07, N = 3
MIN: 72.01 / MAX: 72.23
72.15
TITAN RTX
SE +/- 0.16, N = 3
MIN: 71.36 / MAX: 71.91
71.64
RTX 2080 SUPER
SE +/- 0.08, N = 3
MIN: 56.62 / MAX: 56.89
56.77
20
40
60
80
100

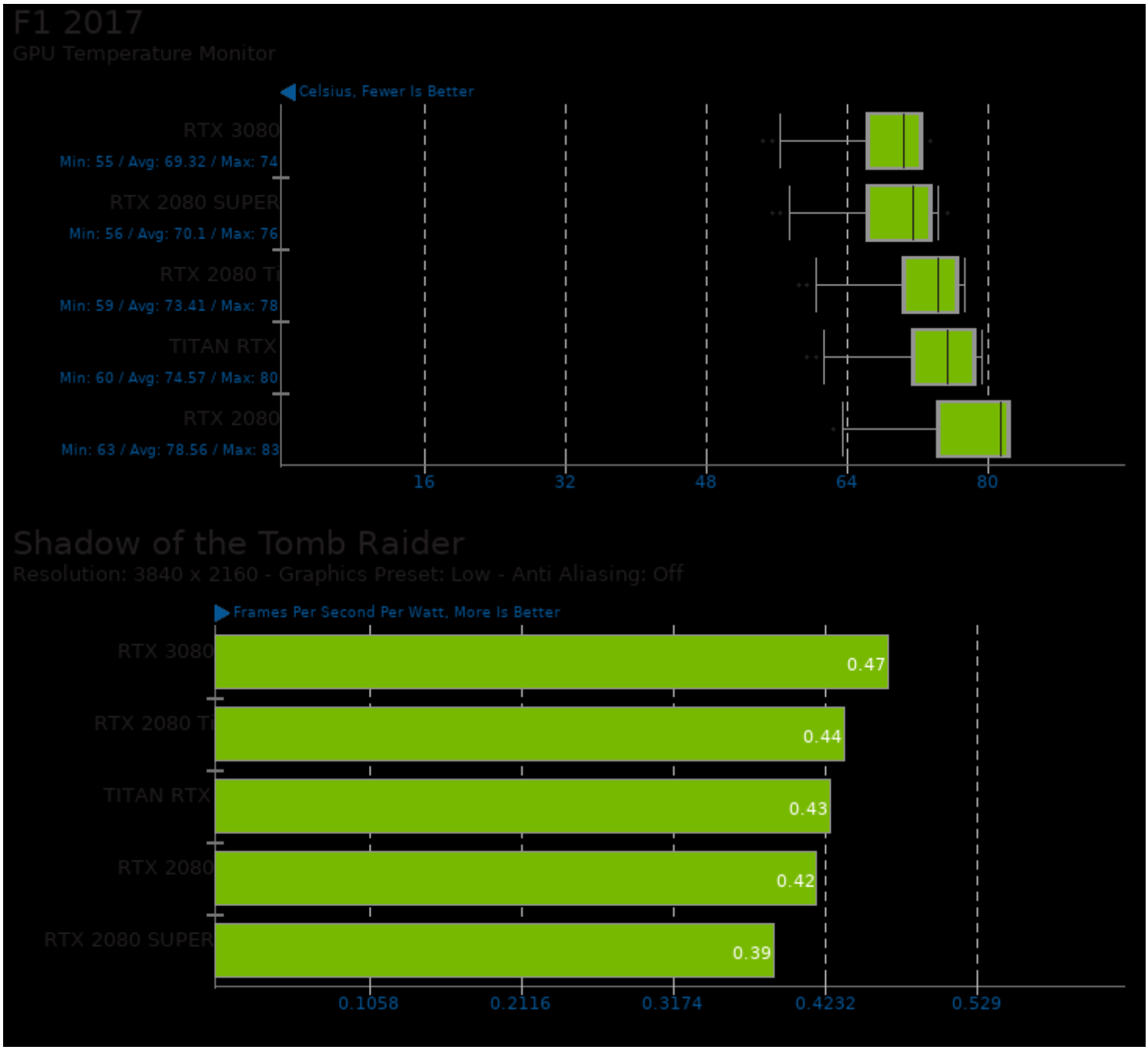

HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Low - Total Frame Time
Milliseconds, Fewer Is Better
RX 6800 XT - Mesa New
Min: 4.82 / Avg: 10.92 / Max: 41.19
RX 6800 XT - Mesa
Min: 0 / Avg: 10.95 / Max: 90.91
RTX 3080
Min: 4.75 / Avg: 10.97 / Max: 33.32
RX 6800 - Mesa New
Min: 5.54 / Avg: 12.36 / Max: 40.13
RX 6800 - Mesa
Min: 5.74 / Avg: 13.2 / Max: 37.67
RTX 2080 Ti
Min: 6.4 / Avg: 13.85 / Max: 38.17
TITAN RTX
Min: 6.07 / Avg: 13.91 / Max: 37.94
RTX 2080 SUPER
Min: 8.84 / Avg: 17.66 / Max: 47.04
20
40
60
80
100
HITMAN 2
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - Mesa
Min: 6 / Avg: 163.1 / Max: 320
RX 6800 - Mesa
Min: 5 / Avg: 172.6 / Max: 252
RTX 2080 SUPER
Min: 16.92 / Avg: 215.84 / Max: 251.76
RTX 2080 Ti
Min: 9.78 / Avg: 229.66 / Max: 266.07
TITAN RTX
Min: 22.32 / Avg: 253.14 / Max: 287.02
RTX 3080
Min: 27.85 / Avg: 285.59 / Max: 319.29
60
120
180
240
300

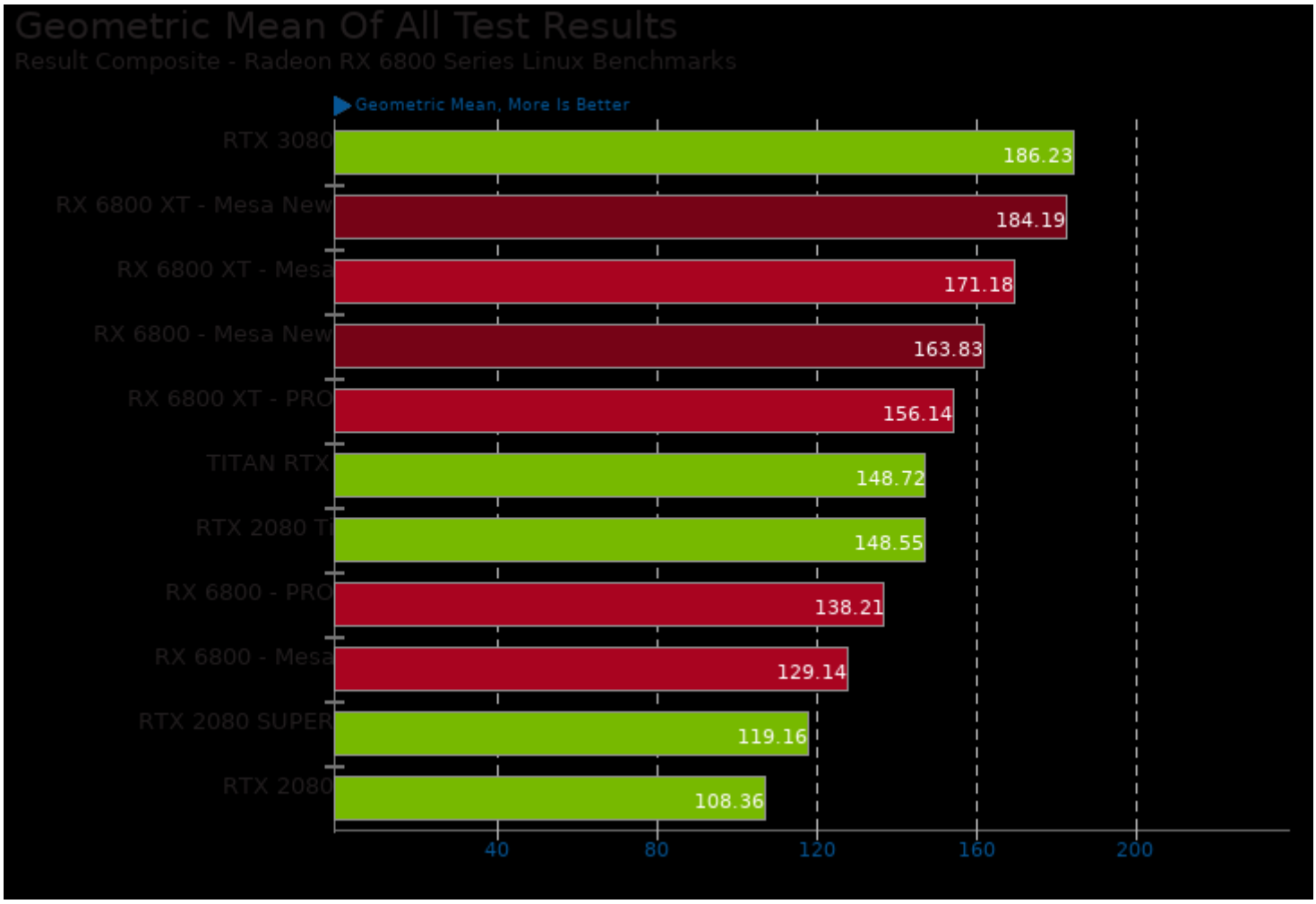
Radeon RX 6800 Series Linux Benchmarks



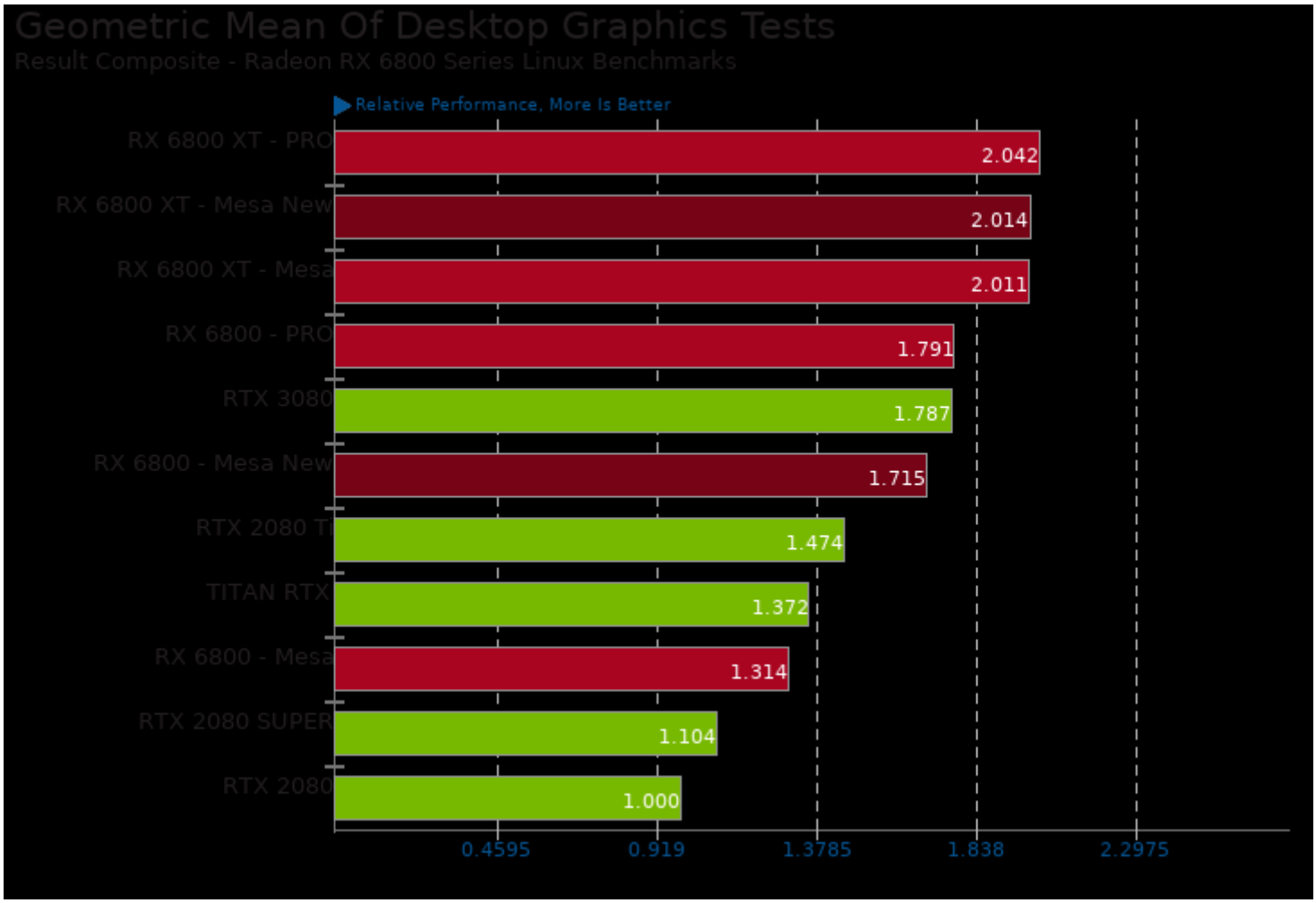

F1 2017
GPU Power Consumption Monitor
Watts, Fewer Is Better
RTX 2080
Min: 28.46 / Avg: 180.67 / Max: 220.35
RTX 2080 SUPER
Min: 19.86 / Avg: 203.57 / Max: 256.34
RTX 2080 Ti
Min: 22.85 / Avg: 219.68 / Max: 268.48
TITAN RTX
Min: 28.93 / Avg: 237.36 / Max: 285.63
RTX 3080
Min: 13.3 / Avg: 271.98 / Max: 319.59
60
120
180
240
300
F1 2017
GPU Temperature Monitor
Celsius, Fewer Is Better
RTX 2080 SUPER
Min: 44 / Avg: 66.74 / Max: 75
RTX 3080
Min: 52 / Avg: 68.08 / Max: 73
RTX 2080 Ti
Min: 47 / Avg: 69.38 / Max: 78
TITAN RTX
Min: 49 / Avg: 71.73 / Max: 80
RTX 2080
Min: 55 / Avg: 76.92 / Max: 83
16
32
48
64
80


F1 2017
Resolution: 3840 x 2160 - Graphics Preset: Ultra High - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RTX 3080
0.54
RTX 2080 Ti
0.54
TITAN RTX
0.52
RTX 2080
0.51
RTX 2080 SUPER
0.50
0.1215
0.243
0.3645
0.486
0.6075
F1 2017
GPU Power Consumption Monitor
Watts, Fewer Is Better
RTX 2080
Min: 32.59 / Avg: 176.92 / Max: 220.02
RTX 2080 SUPER
Min: 20.88 / Avg: 203.33 / Max: 255.96
RTX 2080 Ti
Min: 26.65 / Avg: 223.94 / Max: 272.59
TITAN RTX
Min: 30.49 / Avg: 237.76 / Max: 287.92
RTX 3080
Min: 13.63 / Avg: 274.58 / Max: 319.55
60
120
180
240
300

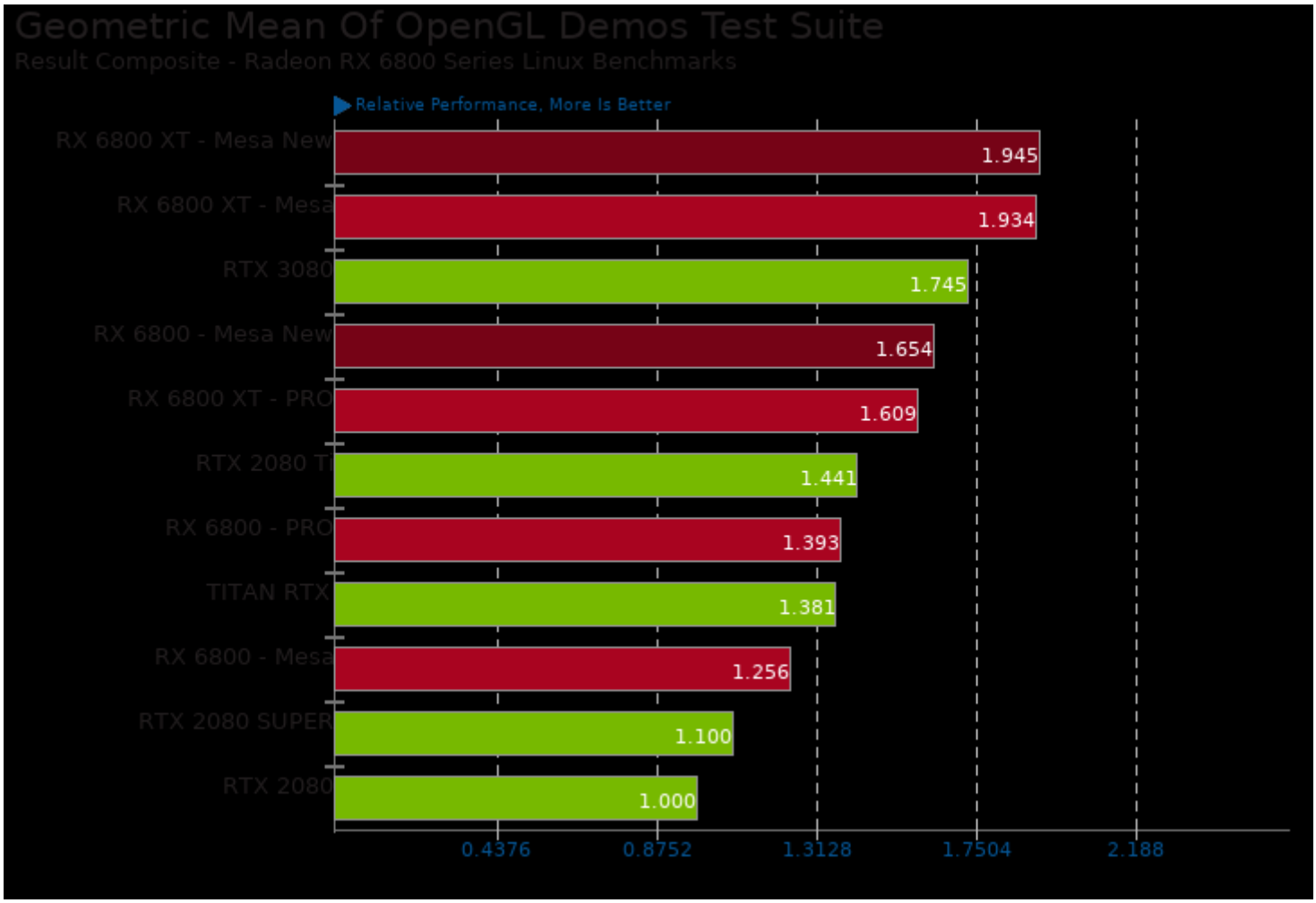

F1 2017
GPU Temperature Monitor
Celsius, Fewer Is Better
RTX 3080
Min: 55 / Avg: 69.32 / Max: 74
RTX 2080 SUPER
Min: 56 / Avg: 70.1 / Max: 76
RTX 2080 Ti
Min: 59 / Avg: 73.41 / Max: 78
TITAN RTX
Min: 60 / Avg: 74.57 / Max: 80
RTX 2080
Min: 63 / Avg: 78.56 / Max: 83
16
32
48
64
80
Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Low - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RTX 3080
0.47
RTX 2080 Ti
0.44
TITAN RTX
0.43
RTX 2080
0.42
RTX 2080 SUPER
0.39
0.1058
0.2116
0.3174
0.4232
0.529


Geometric Mean Of All Test Results
Result Composite - Radeon RX 6800 Series Linux Benchmarks
Geometric Mean, More Is Better
RTX 3080
186.23
RX 6800 XT - Mesa New
184.19
RX 6800 XT - Mesa
171.18
RX 6800 - Mesa New
163.83
RX 6800 XT - PRO
156.14
TITAN RTX
148.72
RTX 2080 Ti
148.55
RX 6800 - PRO
138.21
RX 6800 - Mesa
129.14
RTX 2080 SUPER
119.16
RTX 2080
108.36
40
80
120
160
200

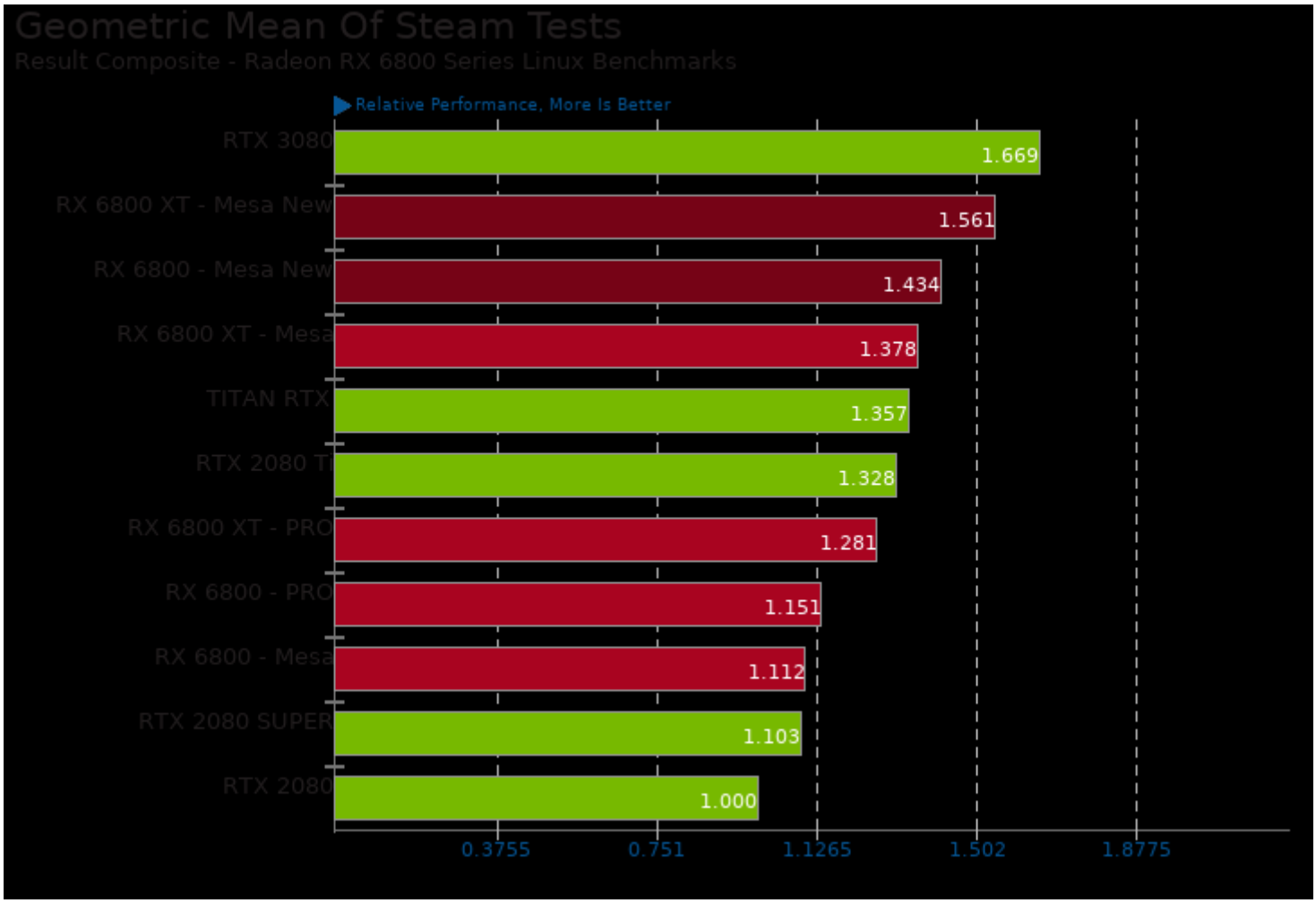
These geometric means are based upon test groupings / test suites for this result file.



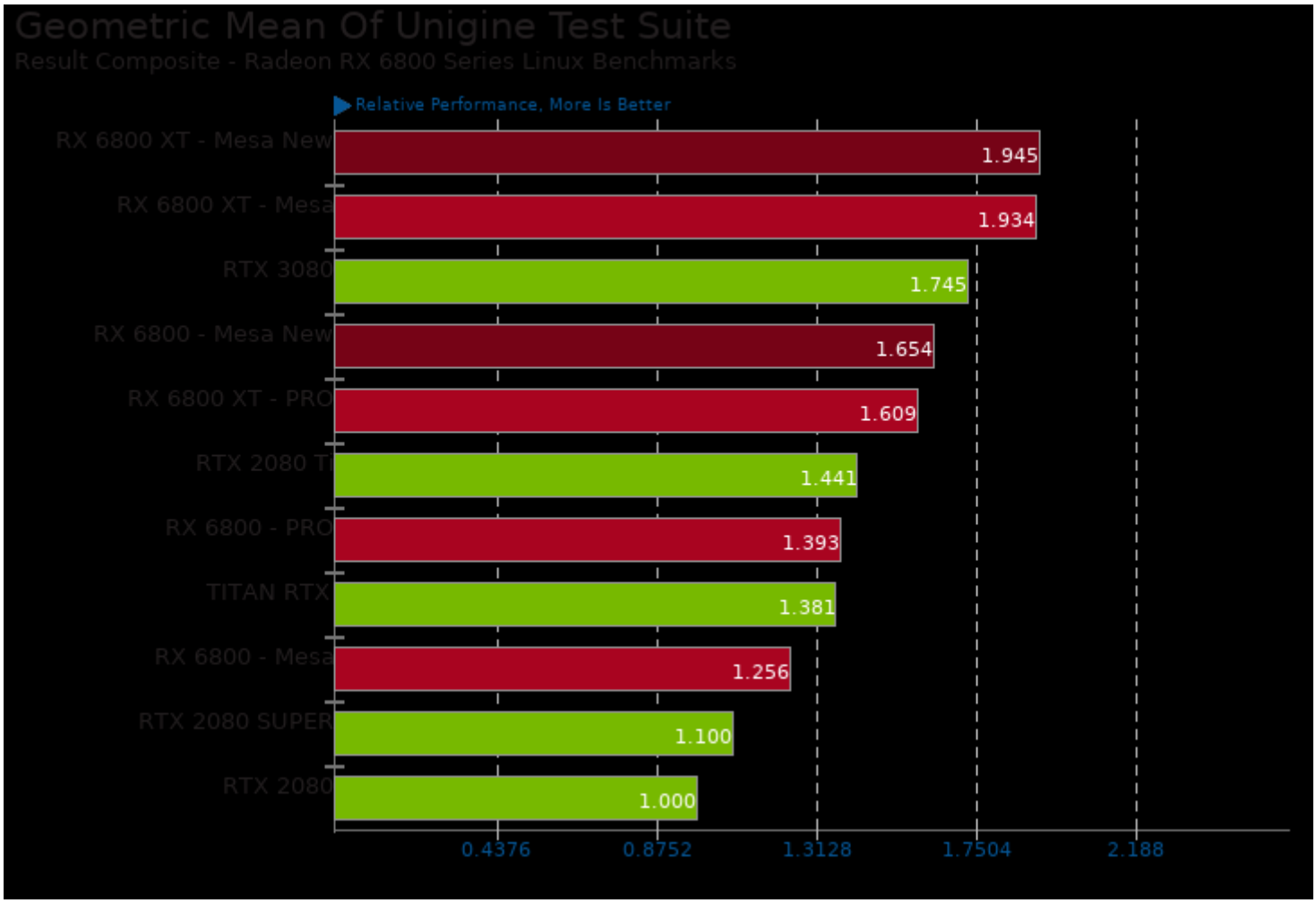
Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven



Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven and pts/unigine-super



Geometric mean based upon tests: pts/batman-knight, pts/dota2, pts/f12017, pts/hitman2, pts/shadowofthetombraider, pts/strange-brigade and pts/twtk



Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven and pts/unigine-super

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 21:20.