

www.phoronix-test-suite.com

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 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 - 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 - 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

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

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 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

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

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

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

Radeon RX 6800 Series Linux Benchmarks

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 - PRO	RX 6800 - PRO	RX 6800 XT - Mesa	RX 6800 - Mesa	RTX 3080	RTX 2080 SUPER	RTX 2080 Ti	RTX 2080	TITAN RTX	RX 6800 - Mesa New	RX 6800 XT - Mesa New
Unigine Heaven - 3840 x 2160 - Fullscreen - OpenGL (FPS)	**112.930**	100.297	96.2063	63.5870	91.7529	53.2420	74.1948	**48.5670**	65.7503	82.3630	96.7520
Normalized	100%	88.81%	85.19%	56.31%	81.25%	47.15%	65.7%	43.01%	58.22%	72.93%	85.67%
Standard Deviation	0.2%	0.2%	0.1%	0%	0.3%	0.4%	0.2%	0.3%	0.4%	0.1%	0.1%
Unigine Valley - 3840 x 2160 - Fullscreen - OpenGL (FPS)	99.0891	85.7705	**112.804**	72.8185	93.4312	61.3918	78.5576	**55.2379**	76.7963	95.7828	112.474
Normalized	87.84%	76.03%	100%	64.55%	82.83%	54.42%	69.64%	48.97%	68.08%	84.91%	99.71%
Standard Deviation	0.1%	0.5%	0.1%	0.1%	0.1%	0.2%	0.1%	0.3%	0.2%	0.1%	0.1%
VkFFT (Benchmark	51163	44146	52361	46249	50303	29238	37640	**27379**	37440	45162	**52386**
Normalized	97.67%	84.27%	99.95%	88.29%	96.02%	55.81%	71.85%	52.26%	71.47%	86.21%	100%
Standard Deviation	0.1%	0.2%	1.5%	0.6%	0.3%	0.1%	0.1%	0.4%	0.1%	1.5%	0.2%
Unigine Superposition - 3840 x 2160 - Fullscreen - Low - OpenGL (FPS)	121.6	102.0	190.1	122.2	168.1	110.0	141.3	**100.6**	139.8	161.0	**192.3**
Normalized	63.23%	53.04%	98.86%	63.55%	87.42%	57.2%	73.48%	52.31%	72.7%	83.72%	100%
Standard Deviation	0%	0.1%	0.5%	0%	0%	0.1%	0.2%	0.4%	0.1%	0%	0.2%
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS)	155.83	137.02	147.33	100.55	**163.11**	94.00	122.82	**85.03**	125.33	125.66	147.80
Normalized	95.54%	84%	90.33%	61.65%	100%	57.63%	75.3%	52.13%	76.84%	77.04%	90.61%
Standard Deviation	0.1%	0%	0.1%	0%	0.2%	0.2%	0.2%	0.7%	0.3%	0.7%	0.1%

Radeon RX 6800 Series Linux Benchmarks

Unigine Superposition - 3840 x 2160 - Fullscreen - Medium - OpenGL (FPS)	56.7	49.5	78.2	50.7	74.1	46.9	60.3	**42.7**	59.4	67.9	**78.8**
Normalized	71.95%	62.82%	99.24%	64.34%	94.04%	59.52%	76.52%	54.19%	75.38%	86.17%	100%
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.3%	0.2%	0.1%	0.1%
Batman: Arkham Knight - 3840 x 2160 - Low (FPS)			130.83	108.24	**137.33**	**77.85**	104.37		104.58	114.54	131.35
Normalized			95.27%	78.82%	100%	56.69%	76%		76.15%	83.4%	95.65%
Standard Deviation			1%	0.9%	0.5%	1.3%	0.6%		1%	0.8%	0.8%
Dota 2 - 3840 x 2160 - Vulkan (FPS)	161.7	**114.5**	173.3	164.3	**184.6**	160.4	166.8	150.9	170.9	176.5	174.1
Normalized	87.59%	62.03%	93.88%	89%	100%	86.89%	90.36%	81.74%	92.58%	95.61%	94.31%
Standard Deviation	0.7%	0.2%	2.9%	0.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.8%	0.6%
F1 2017 - 3840 x 2160 - High - Off (FPS)	140	124	168	135	**183**	122	147	**111**	152	161	169
Normalized	76.5%	67.76%	91.8%	73.77%	100%	66.67%	80.33%	60.66%	83.06%	87.98%	92.35%
Standard Deviation			2.7%			0.9%	0.4%	1%	1%		2.4%
F1 2017 - 3840 x 2160 - Ultra High - Off (FPS)	106	106	135	110	**147**	101	120	**91**	124	129	135
Normalized	72.11%	72.11%	91.84%	74.83%	100%	68.71%	81.63%	61.9%	84.35%	87.76%	91.84%
Standard Deviation	1.4%		1.9%	0.5%	1.2%	1%	1%		1.2%	0.8%	2.9%
HITMAN 2 - 3840 x 2160 - Low (FPS)			**91.47**	75.74	91.06	**56.77**	72.15		71.64	80.93	91.42
Normalized			100%	82.8%	99.55%	62.06%	78.88%		78.32%	88.48%	99.95%
Standard Deviation			0.6%	0.1%	0.2%	0.2%	0.2%		0.4%	0.1%	0.2%
Shadow of the Tomb Raider - 3840 x 2160 - Low - Off (FPS)	112.8	99.2	98.0	80.6	**132.9**	84.9	102.5	**76.3**	106.0	112.5	129.2
Normalized	84.88%	74.64%	73.74%	60.65%	100%	63.88%	77.13%	57.41%	79.76%	84.65%	97.22%
Standard Deviation	0.2%	0.3%	0.4%	0.1%	0.1%	0.1%	0.3%	0.1%	0.1%	0.1%	0.1%
Shadow of the Tomb Raider - 3840 x 2160 - High - Off (FPS)	85.4	75.6	63.9	**54.1**	**97.4**	60.6	76.0	54.7	76.6	79.7	89.8
Normalized	87.68%	77.62%	65.61%	55.54%	100%	62.22%	78.03%	56.16%	78.64%	81.83%	92.2%
Standard Deviation	0.1%	0.1%	0.2%	0.3%	0.1%	0.1%	2.5%	0.1%	0.2%	0.1%	0.1%
Shadow of the Tomb Raider - 3840 x 2160 - Highest - Off	78.5	69.3	57.1	**48.0**	**89.8**	55.5	68.9	49.7	70.1	72.2	81.4
Normalized	87.42%	77.17%	63.59%	53.45%	100%	61.8%	76.73%	55.35%	78.06%	80.4%	90.65%
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	2.7%	0.2%	0.1%	0%	0%

Radeon RX 6800 Series Linux Benchmarks

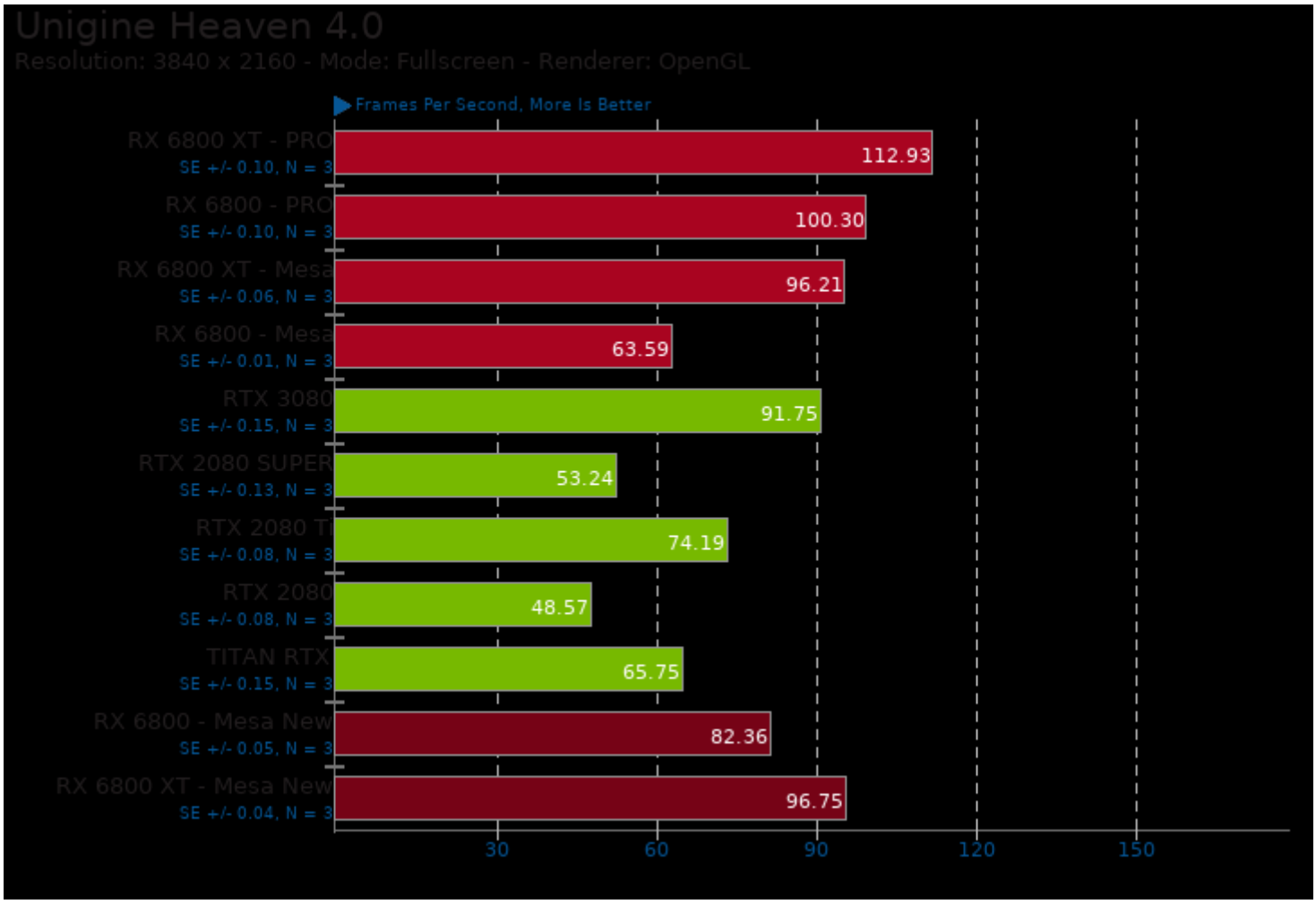
Strange Brigade - 3840 x 2160 - Low (FPS)			181.7	153.6	**183.0**	120.2	153.9	**106.7**	156.4	167.3	180.3
Normalized			99.29%	83.93%	100%	65.68%	84.1%	58.31%	85.46%	91.42%	98.52%
Standard Deviation			0.7%	0.4%	0.1%	0.8%	0.9%	0.4%	0.4%	0.4%	1.1%
Strange Brigade - 3840 x 2160 - Medium (FPS)			168.0	131.7	**175.1**	107.5	138.6	**95.6**	139.9	147.2	165.9
Normalized			95.95%	75.21%	100%	61.39%	79.15%	54.6%	79.9%	84.07%	94.75%
Standard Deviation			0.3%	0.6%	0.4%	1.1%	0.3%	0.5%	0.2%	0.2%	0.7%
Strange Brigade - 3840 x 2160 - High (FPS)			156.8	121.4	**171.5**	100.5	130.2	**90.1**	131.2	136.2	156.3
Normalized			91.43%	70.79%	100%	58.6%	75.92%	52.54%	76.5%	79.42%	91.14%
Standard Deviation			0.6%	0.5%	0.2%	0.6%	1%	0.8%	1%	0.2%	0.3%
Strange Brigade - 3840 x 2160 - Ultra (FPS)			148.8	116.0	**164.9**	96.1	122.7	**87.2**	126.0	129.1	148.6
Normalized			90.24%	70.35%	100%	58.28%	74.41%	52.88%	76.41%	78.29%	90.12%
Standard Deviation			0.3%	0.4%	0.7%	0.3%	1%	1.4%	1.1%	0.1%	0.3%
Total War: Three Kingdoms - 3840 x 2160 - Low - Battle Benchmark	79.1	79.8	132.2	93	**142.7**	85.7	107.8	**78.3**	109.7	120.3	133.0
Normalized	55.43%	55.92%	92.64%	65.17%	100%	60.06%	75.54%	54.87%	76.87%	84.3%	93.2%
Standard Deviation	1.3%	2.1%	0.9%	0.6%	0.8%	0.5%	1.2%	0.7%	1.2%	1%	0.9%
Total War: Three Kingdoms - 3840 x 2160 - Medium - Battle Benchmark (FPS)	58.0	56.6	80.2	56.6	**83.6**	51.9	65.2	**46.3**	65.4	71.8	81.2
Normalized	69.38%	67.7%	95.93%	67.7%	100%	62.08%	77.99%	55.38%	78.23%	85.89%	97.13%
Standard Deviation	1.7%	0.9%	0.8%	0.5%	0.7%	1.4%	1.4%	0.2%	0.4%	0.7%	0.6%
Dota 2 - 3840 x 2160 - Vulkan (FPS/Watt)	2.19	1.52	2.13	**2.25**	**1.24**	1.51	1.45	1.39	1.36		
Normalized	97.33%	67.56%	94.67%	100%	55.11%	67.11%	64.44%	61.78%	60.44%		
Shadow of the Tomb Raider - 3840 x 2160 - High - Off (FPS/Watt)	0.38	**0.44**	0.31	0.36	0.34	**0.28**	0.34	0.30	0.30		
Normalized	86.36%	100%	70.45%	81.82%	77.27%	63.64%	77.27%	68.18%	68.18%		

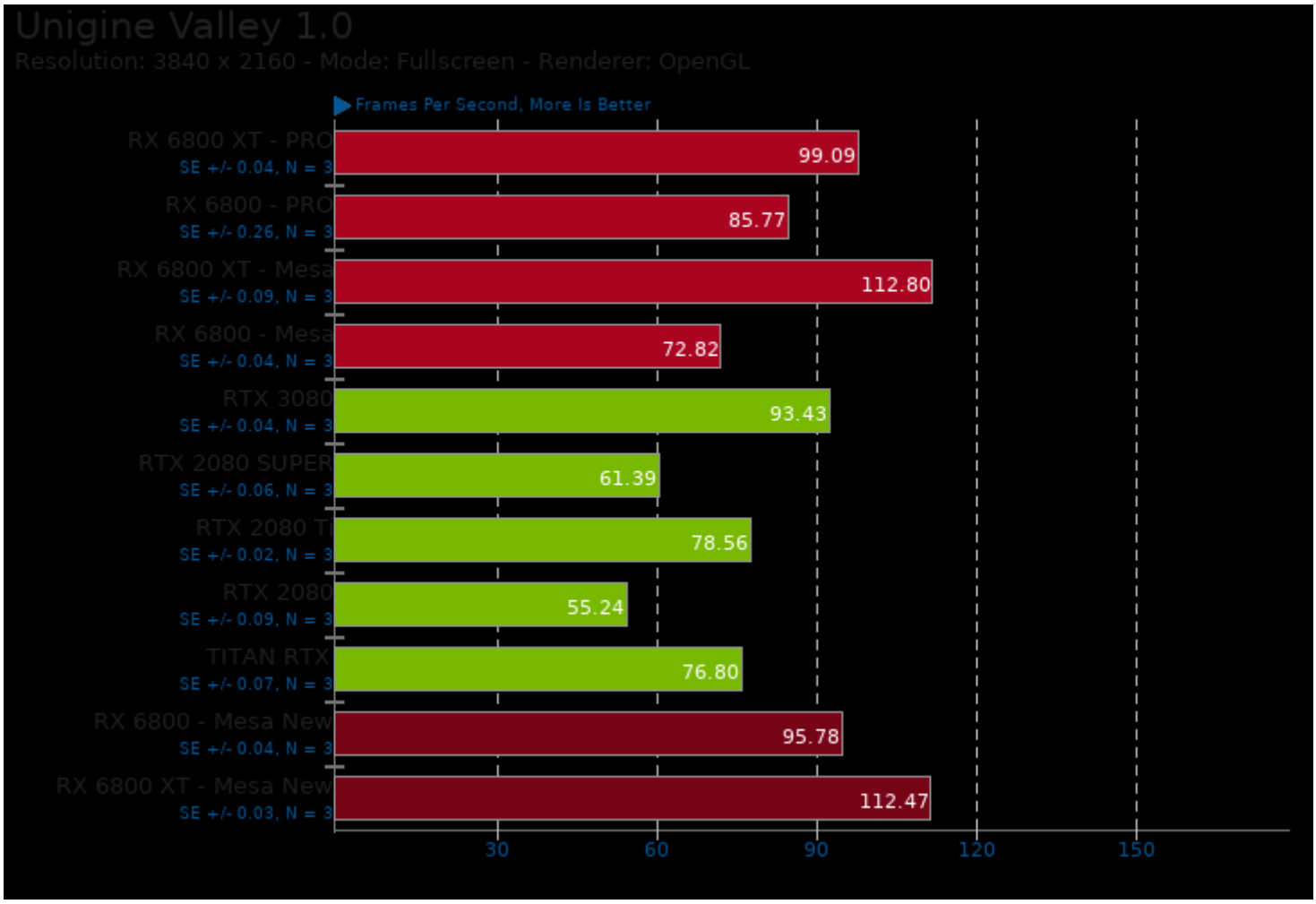
Radeon RX 6800 Series Linux Benchmarks

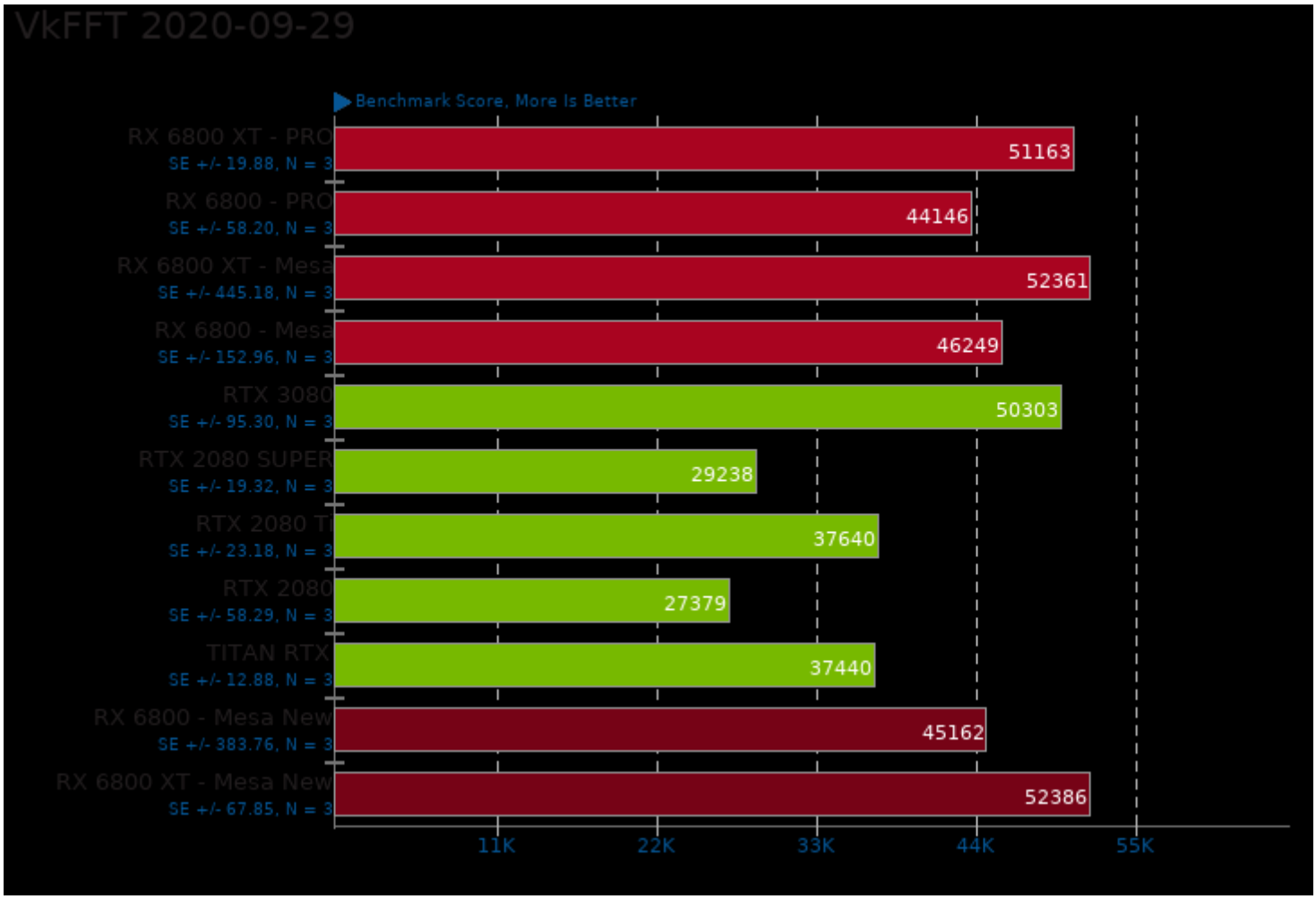
Shadow of the Tomb Raider - 3840 x 2160 - Highest - Off (FPS/Watt)	0.36	**0.40**	0.28	0.33	0.31	**0.25**	0.30	0.27	0.28
Normalized	90%	100%	70%	82.5%	77.5%	62.5%	75%	67.5%	70%
Unigine Heaven - 3840 x 2160 - Fullscreen - OpenGL (FPS/Watt)	0.46	**0.51**	0.39	0.35	0.30	**0.23**	0.30	0.25	0.25
Normalized	90.2%	100%	76.47%	68.63%	58.82%	45.1%	58.82%	49.02%	49.02%
Unigine Superposition - 3840 x 2160 - Fullscreen - Low - OpenGL (FPS/Watt)	0.52	0.60	**0.80**	0.71	0.57	**0.50**	0.59	0.54	0.54
Normalized	65%	75%	100%	88.75%	71.25%	62.5%	73.75%	67.5%	67.5%
Unigine Superposition - 3840 x 2160 - Fullscreen - Medium - OpenGL (FPS/Watt)	0.24	0.26	**0.33**	0.29	0.25	**0.21**	0.25	0.23	0.23
Normalized	72.73%	78.79%	100%	87.88%	75.76%	63.64%	75.76%	69.7%	69.7%
Unigine Valley - 3840 x 2160 - Fullscreen - OpenGL (FPS/Watt)	0.41	0.44	**0.46**	0.38	0.30	**0.26**	0.31	0.29	0.29
Normalized	89.13%	95.65%	100%	82.61%	65.22%	56.52%	67.39%	63.04%	63.04%
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS/Watt)	0.76	**0.84**	0.71	0.71	0.62	0.48	0.56	**0.46**	0.53
Normalized	90.48%	100%	84.52%	84.52%	73.81%	57.14%	66.67%	54.76%	63.1%
VkFFT (Benchmark	**717.57**	670.80	717.01	604.29	346.08	262.02	296.04	**232.71**	236.42
Normalized	100%	93.48%	99.92%	84.21%	48.23%	36.51%	41.26%	32.43%	32.95%
Strange Brigade - 3840 x 2160 - Low (FPS/Watt)			1.06	**1.13**	0.94	0.73	0.89	**0.70**	0.78
Normalized			93.81%	100%	83.19%	64.6%	78.76%	61.95%	69.03%
Strange Brigade - 3840 x 2160 - Medium			**0.96**	**0.96**	0.74	0.62	0.77	**0.61**	0.68
Normalized			100%	100%	77.08%	64.58%	80.21%	63.54%	70.83%

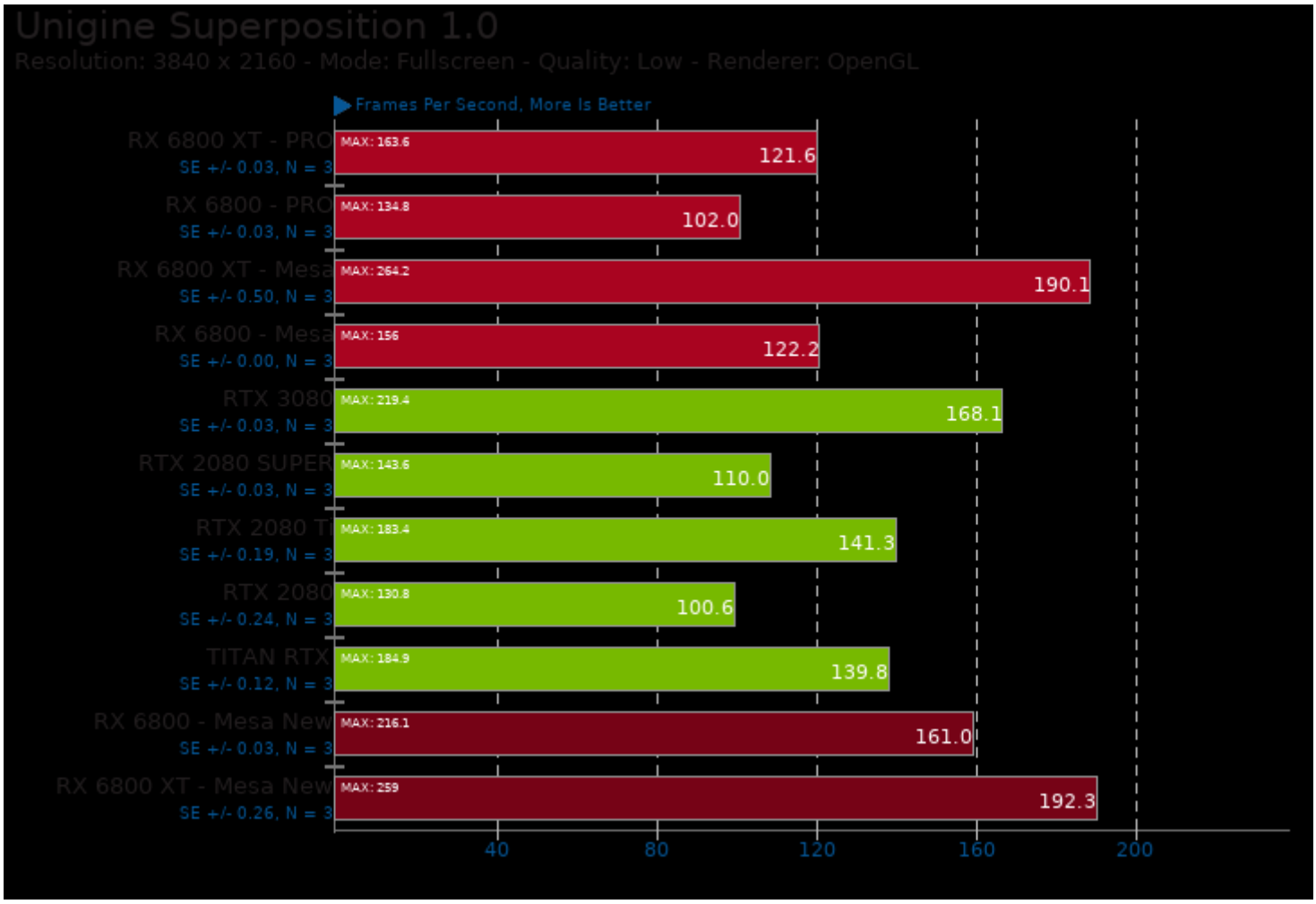
Radeon RX 6800 Series Linux Benchmarks

Strange Brigade - 3840 x 2160 - High (FPS/Watt)			0.89	0.89	0.73	0.58	0.71	0.57	0.64		
Normalized			100%	100%	82.02%	65.17%	79.78%	64.04%	71.91%		
Strange Brigade - 3840 x 2160 - Ultra (FPS/Watt)			0.85	0.86	0.70	0.56	0.70	0.56	0.62		
Normalized			98.84%	100%	81.4%	65.12%	81.4%	65.12%	72.09%		
Batman: Arkham Knight - 3840 x 2160 - Low (FPS/Watt)			1.01	0.72	0.54	0.43	0.54		0.47		
Normalized			100%	71.29%	53.47%	42.57%	53.47%		46.53%		
F1 2017 - 3840 x 2160 - High - Off (FPS/Watt)					0.67	0.60	0.67	0.61	0.64		
Normalized					100%	89.55%	100%	91.04%	95.52%		
F1 2017 - 3840 x 2160 - Ultra High - Off (FPS/Watt)					0.54	0.50	0.54	0.51	0.52		
Normalized					100%	92.59%	100%	94.44%	96.3%		
Shadow of the Tomb Raider - 3840 x 2160 - Low - Off (FPS/Watt)					0.47	0.39	0.44	0.42	0.43		
Normalized					100%	82.98%	93.62%	89.36%	91.49%		
Geometric Mean Of All Test Results - Result Composite - R.R.6.S.L.B	156.144	138.212	171.177	129.135	186.226	119.158	148.551	108.355	148.715	163.827	184.189
Normalized	83.85%	74.22%	91.92%	69.34%	100%	63.99%	79.77%	58.18%	79.86%	87.97%	98.91%

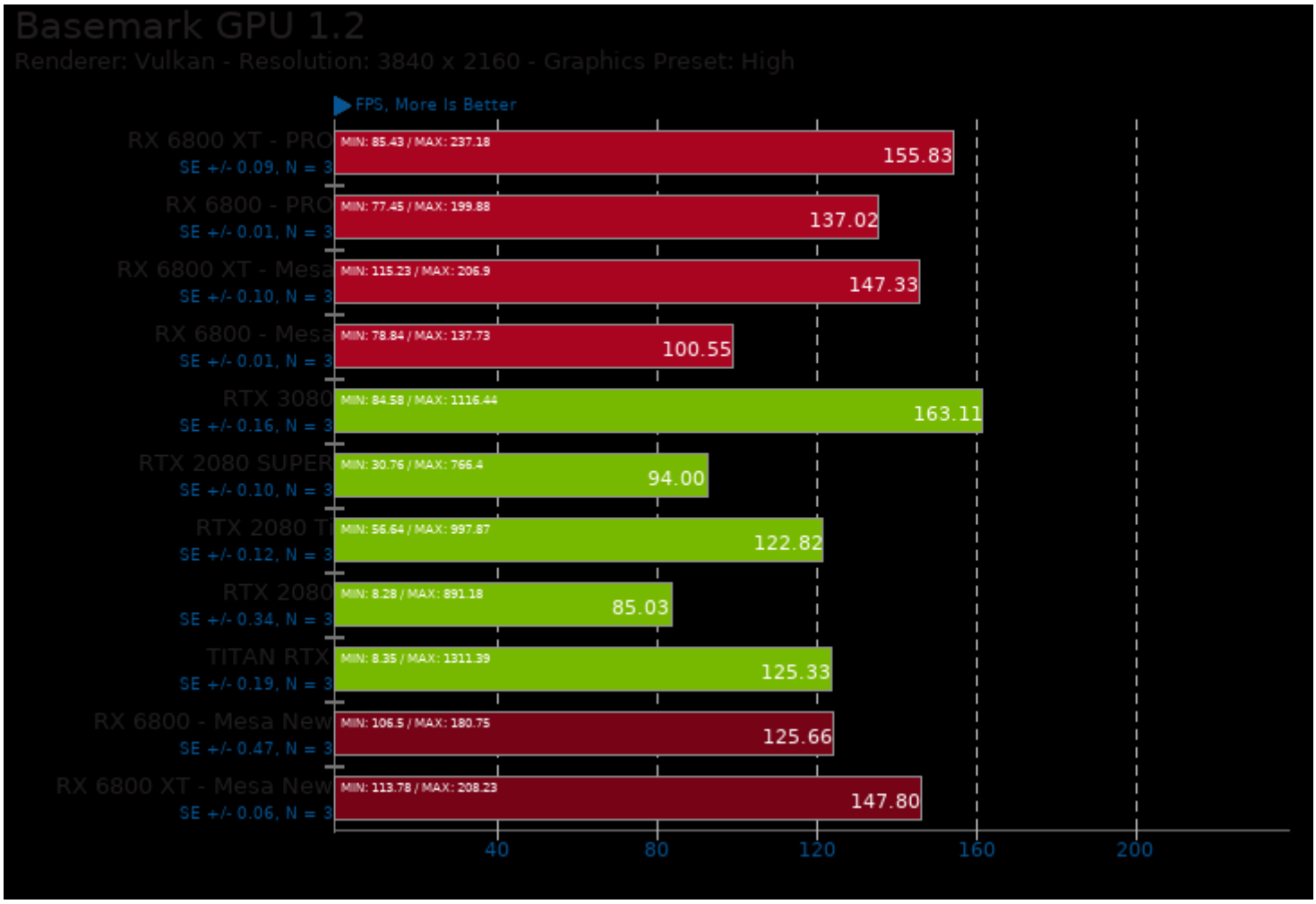

Unigine Heaven 4.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.10, N = 3
112.93
RX 6800 - PRO
SE +/- 0.10, N = 3
100.30
RX 6800 XT - Mesa
SE +/- 0.06, N = 3
96.21
RX 6800 - Mesa
SE +/- 0.01, N = 3
63.59
RTX 3080
SE +/- 0.15,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

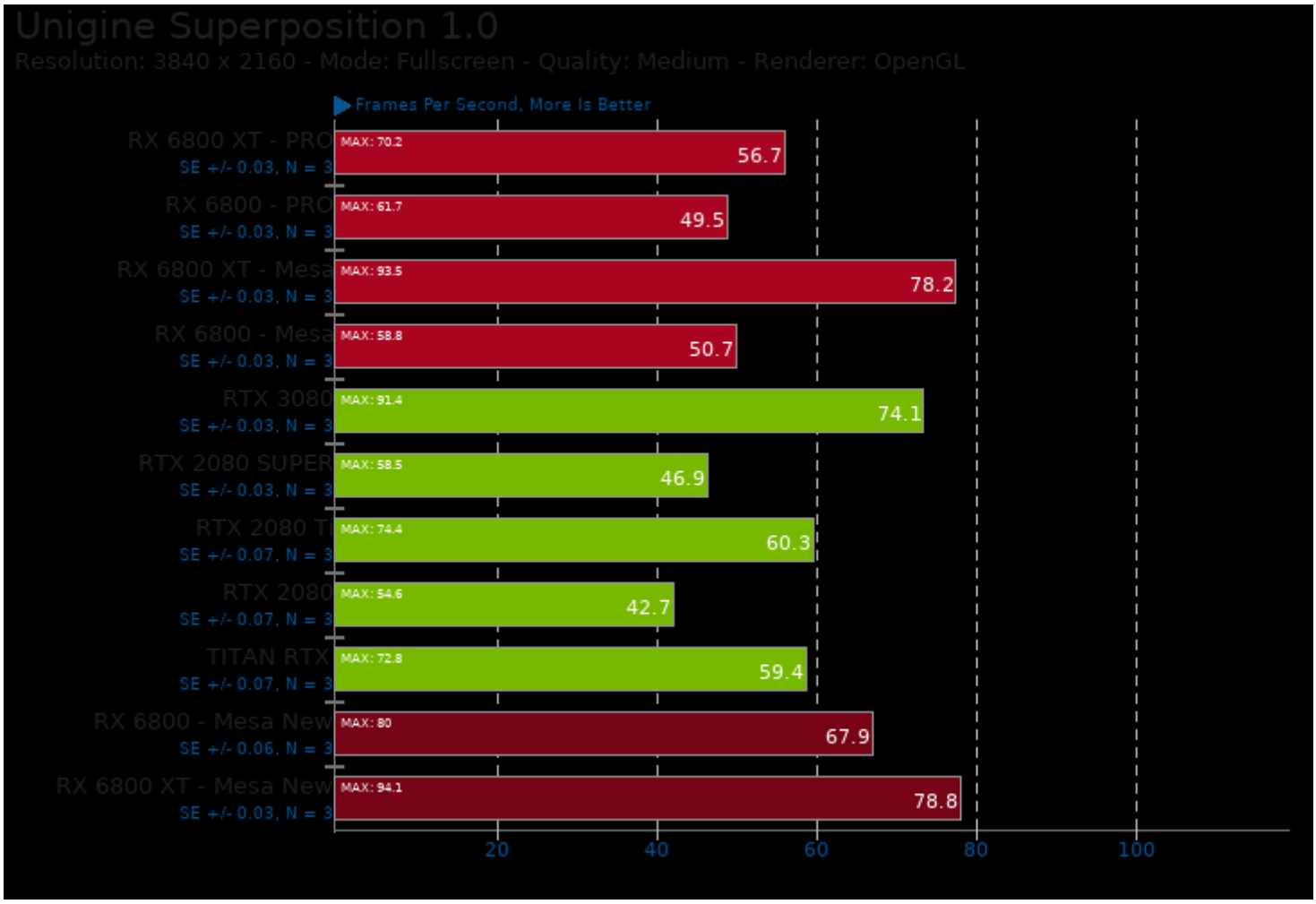

Unigine Valley 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.04, N = 3
99.09
RX 6800 - PRO
SE +/- 0.26, N = 3
85.77
RX 6800 XT - Mesa
SE +/- 0.09, N = 3
112.80
RX 6800 - Mesa
SE +/- 0.04, N = 3
72.82
RTX 3080
SE +/- 0.04,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


VkFFT 2020-09-29
Benchmark Score, More Is Better
RX 6800 XT - PRO
SE +/- 19.88, N = 3
51163
RX 6800 - PRO
SE +/- 58.20, N = 3
44146
RX 6800 XT - Mesa
SE +/- 445.18, N = 3
52361
RX 6800 - Mesa
SE +/- 152.96, N = 3
46249
RTX 3080
SE +/- 95.30, N = 3
50303
RTX 2080 SUPER
SE +/- 19.32, N = 3
29238
RTX 2080 Ti
SE +/- 23.18, N = 3
37640
RTX 2080
SE +/- 58.29, N = 3
27379
TITAN RTX
SE +/- 12.88, N = 3
37440
RX 6800 - Mesa New
SE +/- 383.76, N = 3
45162
RX 6800 XT - Mesa New
SE +/- 67.85, N = 3
52386
11K
22K
33K
44K
55K

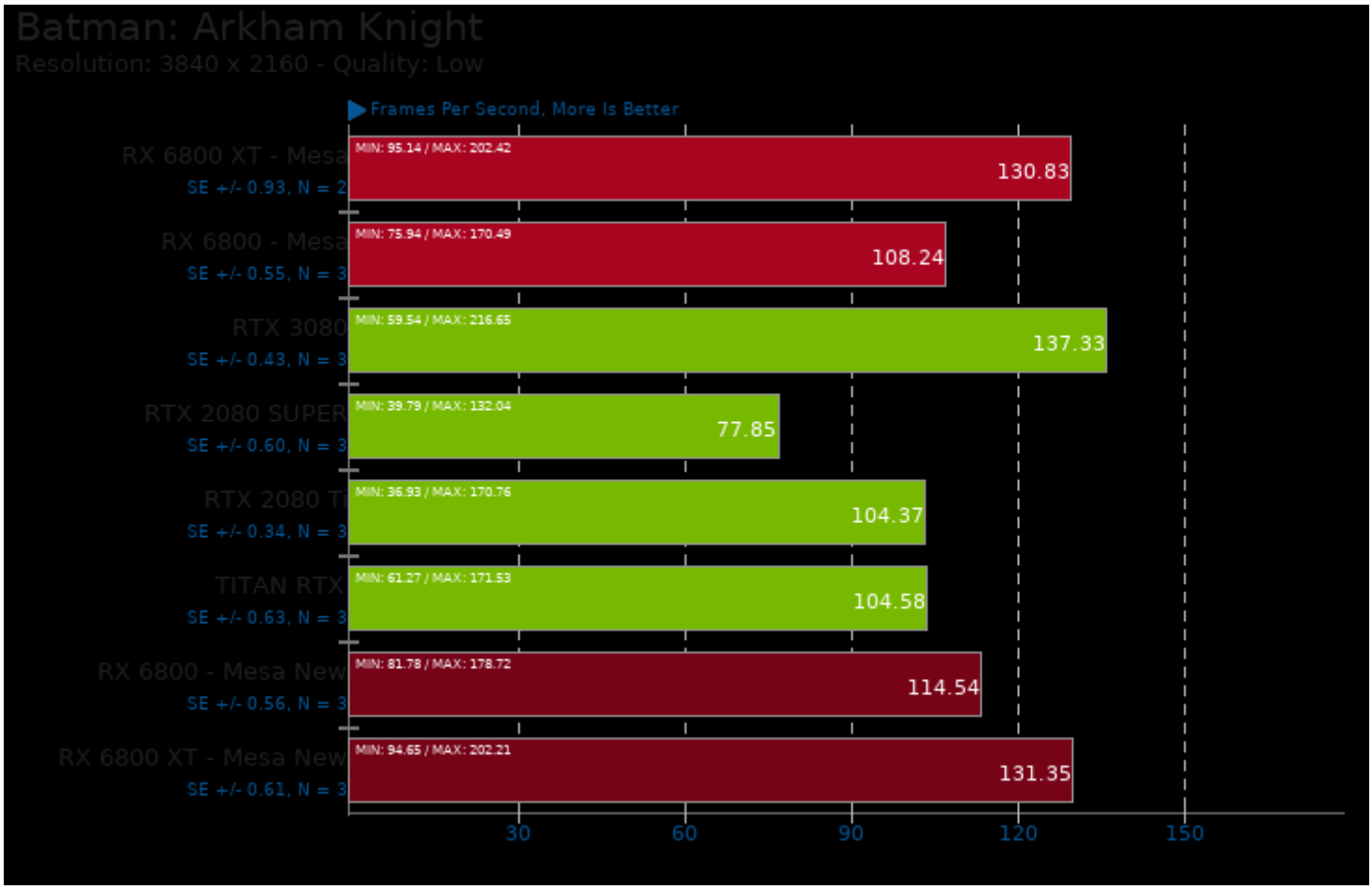

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Low - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.03, N = 3
MAX: 163.6
121.6
RX 6800 - PRO
SE +/- 0.03, N = 3
MAX: 134.8
102.0
RX 6800 XT - Mesa
SE +/- 0.50, N = 3
MAX: 264.2
190.1
RX 6800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

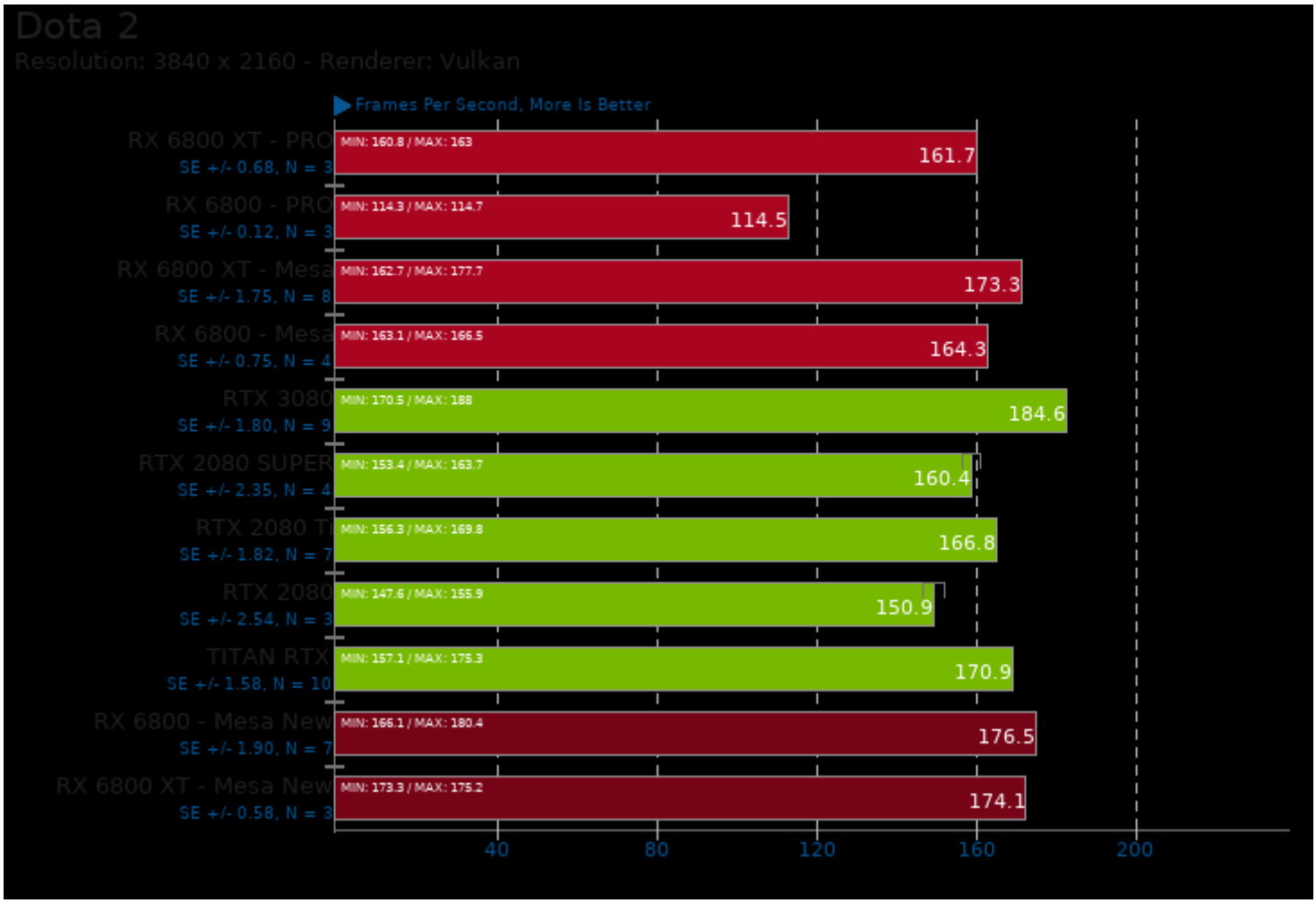
Radeon RX 6800 Series Linux Benchmarks

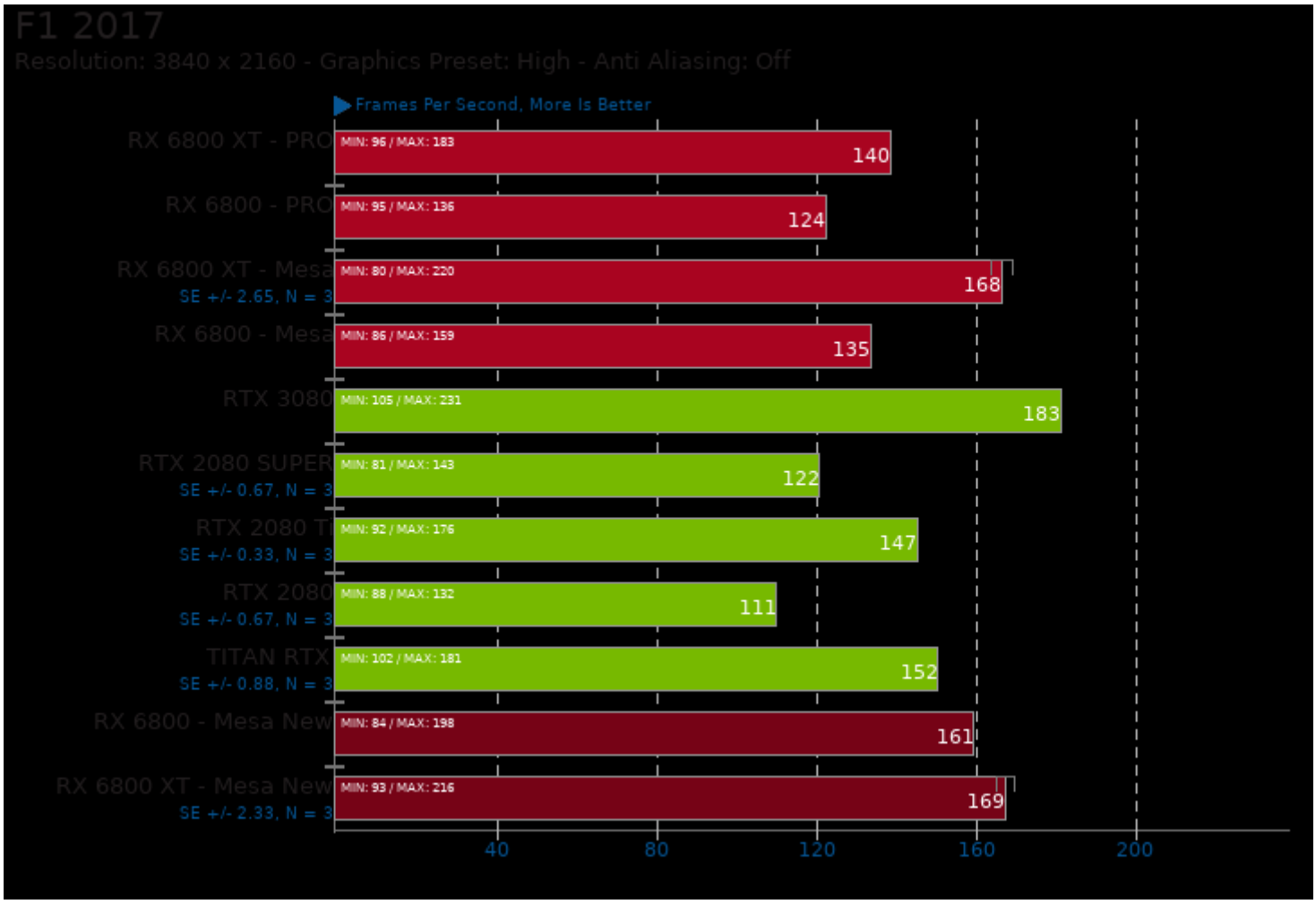



Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Medium - Renderer: OpenGL
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.03, N = 3
MAX: 70.2
56.7
RX 6800 - PRO
SE +/- 0.03, N = 3
MAX: 61.7
49.5
RX 6800 XT - Mesa
SE +/- 0.03, N = 3
MAX: 93.5
78.2
RX 6800 -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

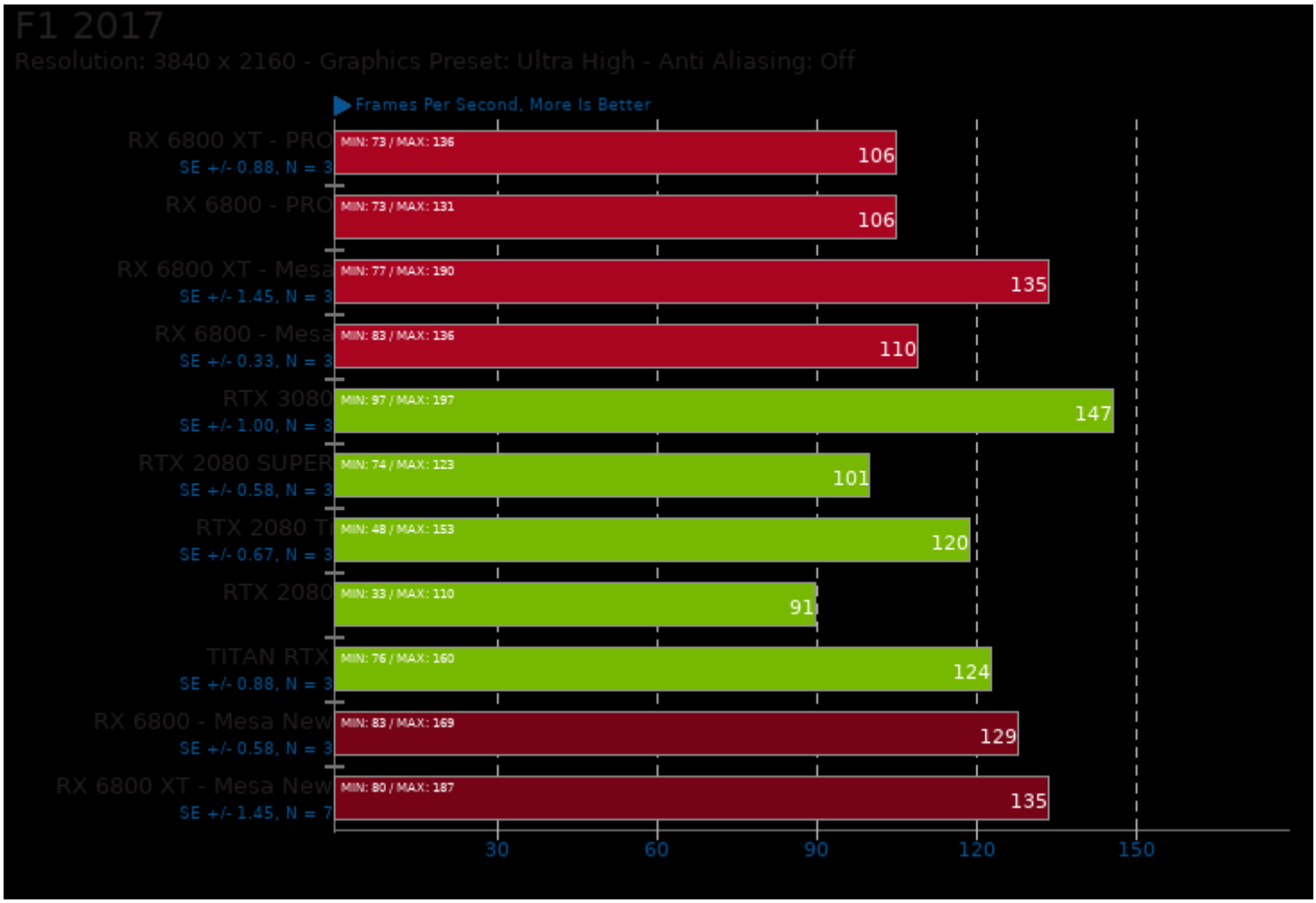
Radeon RX 6800 Series Linux Benchmarks

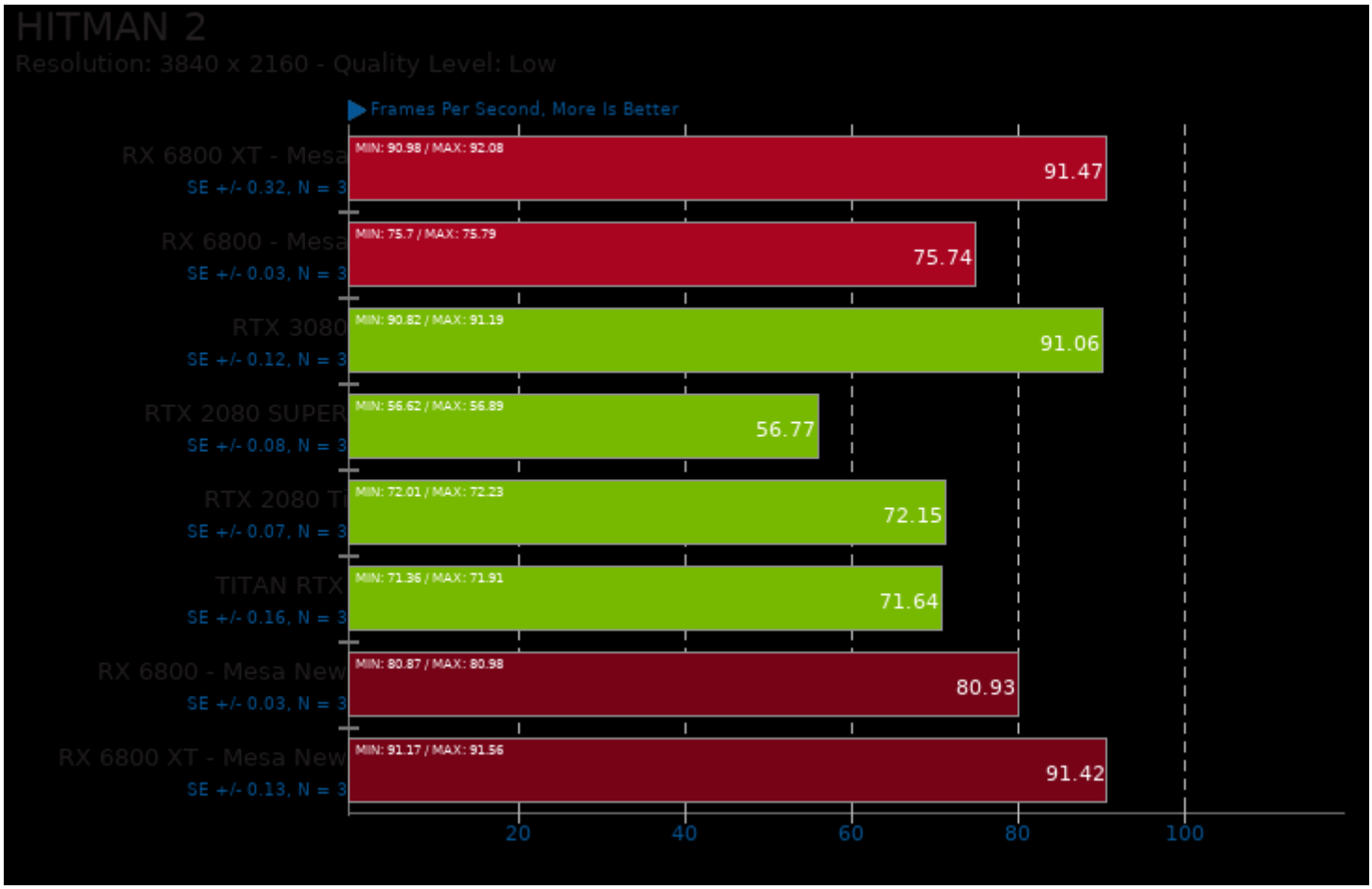


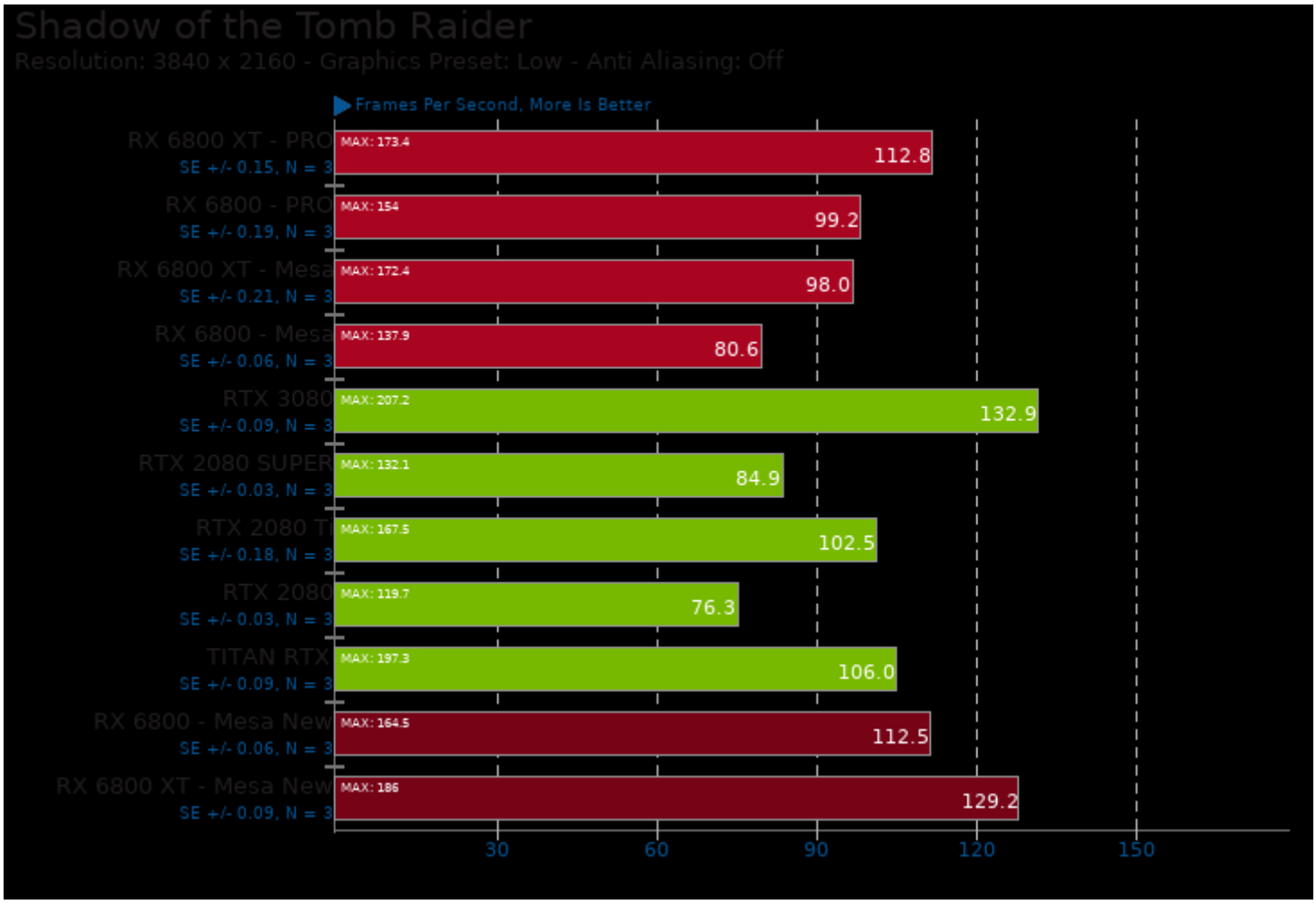

Dota 2
Resolution: 3840 x 2160 - Renderer: Vulkan
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.68, N = 3
MIN: 160.8 / MAX: 163
161.7
RX 6800 - PRO
SE +/- 0.12, N = 3
MIN: 114.3 / MAX: 114.7
114.5
RX 6800 XT - Mesa
SE +/- 1.75, N = 8
MIN: 162.7 / MAX: 177.7
173.3
RX 6800 - Mesa
SE +/- 0.75,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

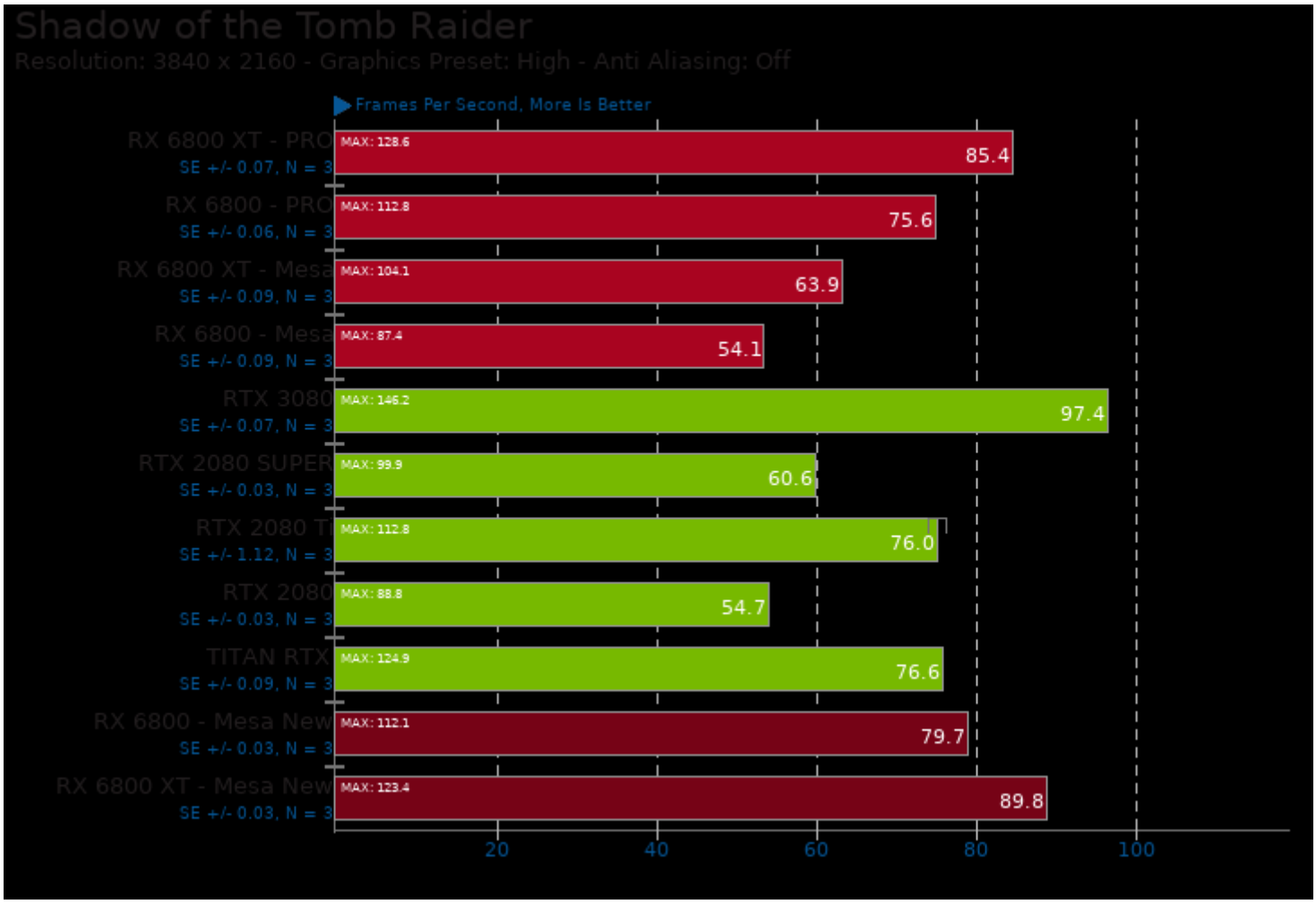

F1 2017
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second, More Is Better
RX 6800 XT - PRO
MIN: 96 / MAX: 183
140
RX 6800 - PRO
MIN: 95 / MAX: 136
124
RX 6800 XT - Mesa
SE +/- 2.65, N = 3
MIN: 80 / MAX: 220
168
RX 6800 - Mesa
MIN: 86 / MAX: 159
135
RTX 3080
MIN: 105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

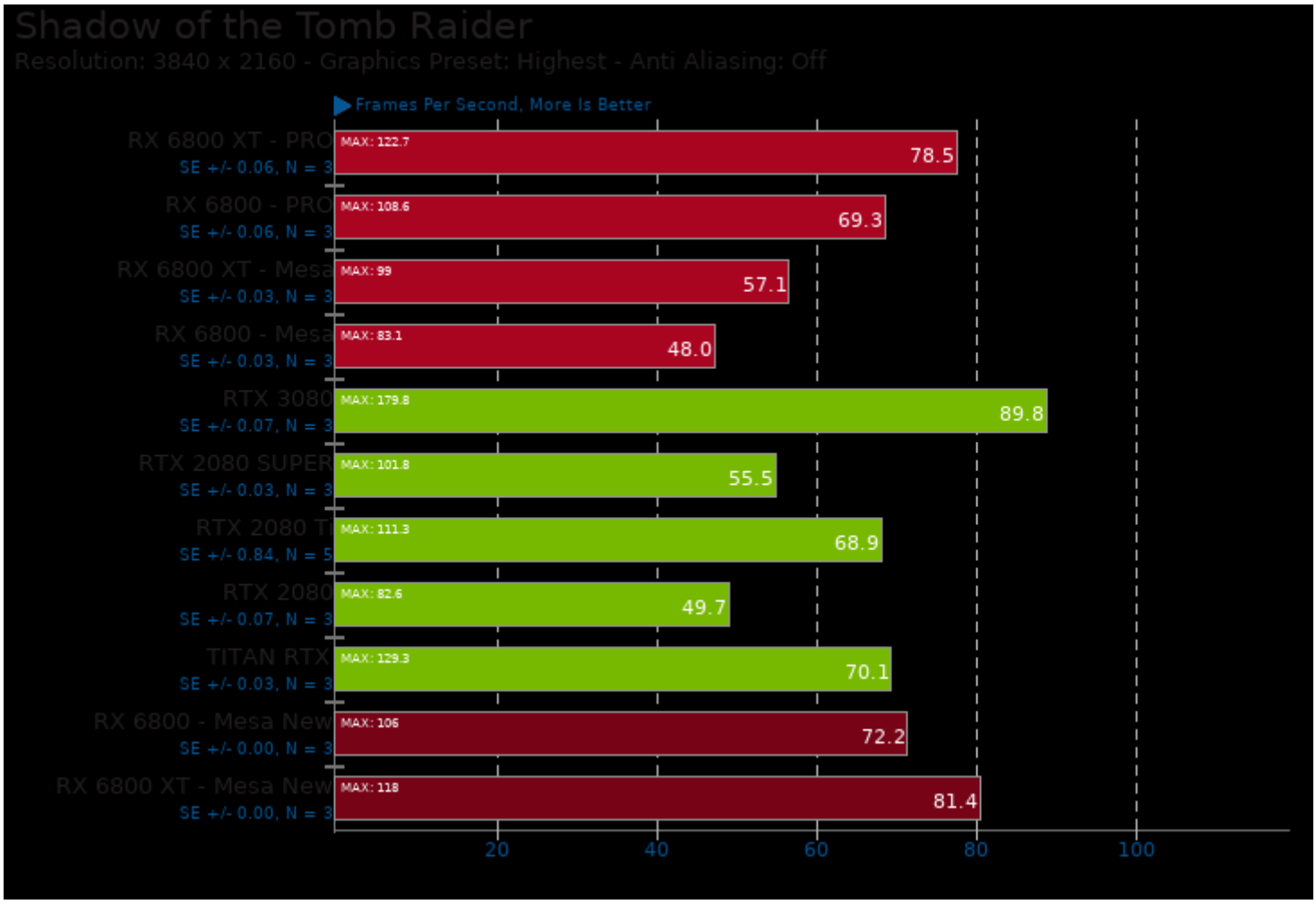
Radeon RX 6800 Series Linux Benchmarks



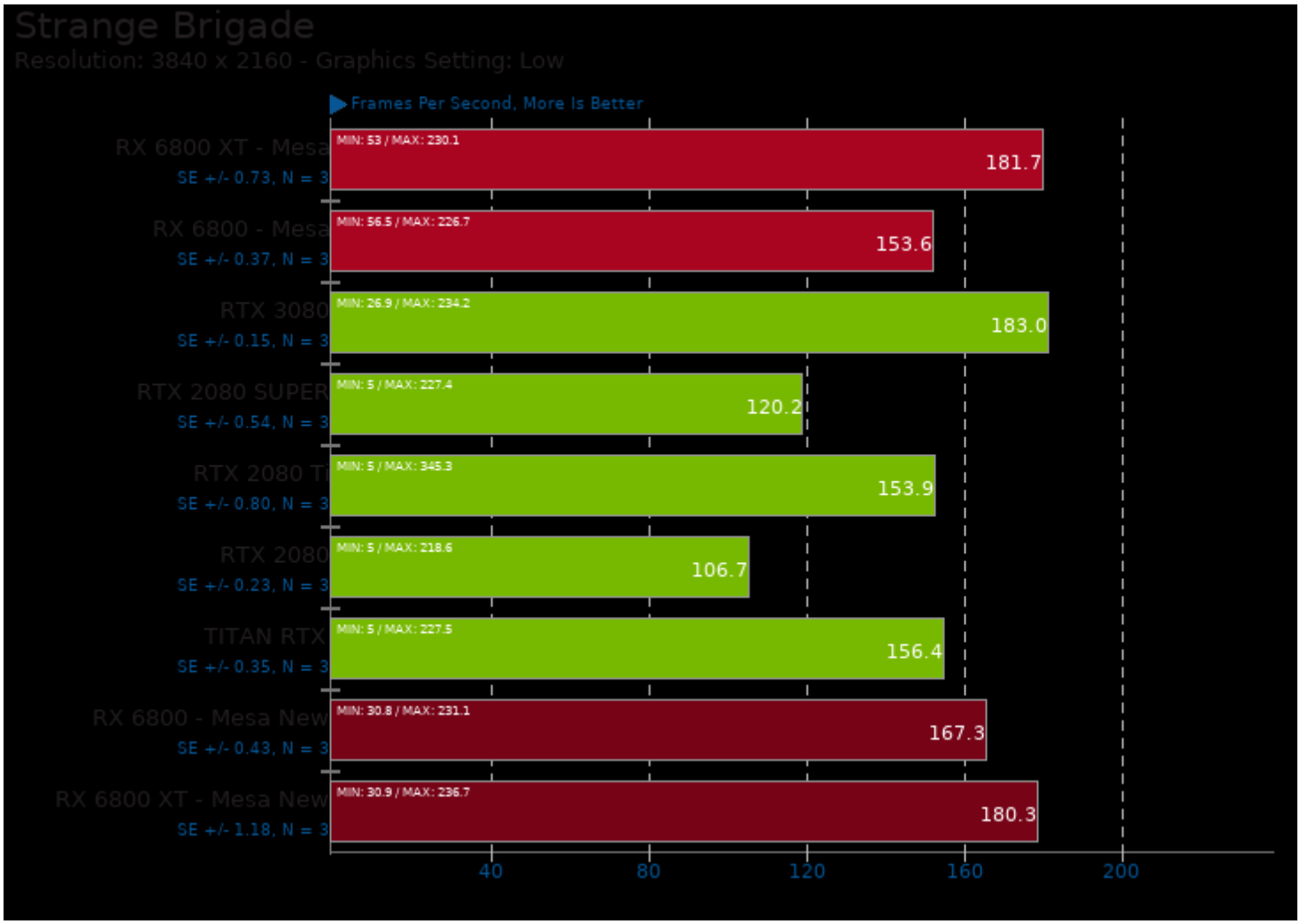

HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Low
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.32, N = 3
MIN: 90.98 / MAX: 92.08
91.47
RX 6800 - Mesa
SE +/- 0.03, N = 3
MIN: 75.7 / MAX: 75.79
75.74
RTX 3080
SE +/- 0.12, N = 3
MIN: 90.82 / MAX: 91.19
91.06
RTX 2080 SUPER
SE +/- 0.08, N = 3
MIN: 56.62 / MAX: 56.89
56.77
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
RX 6800 - Mesa New
SE +/- 0.03, N = 3
MIN: 80.87 / MAX: 80.98
80.93
RX 6800 XT - Mesa New
SE +/- 0.13, N = 3
MIN: 91.17 / MAX: 91.56
91.42
20
40
60
80
100

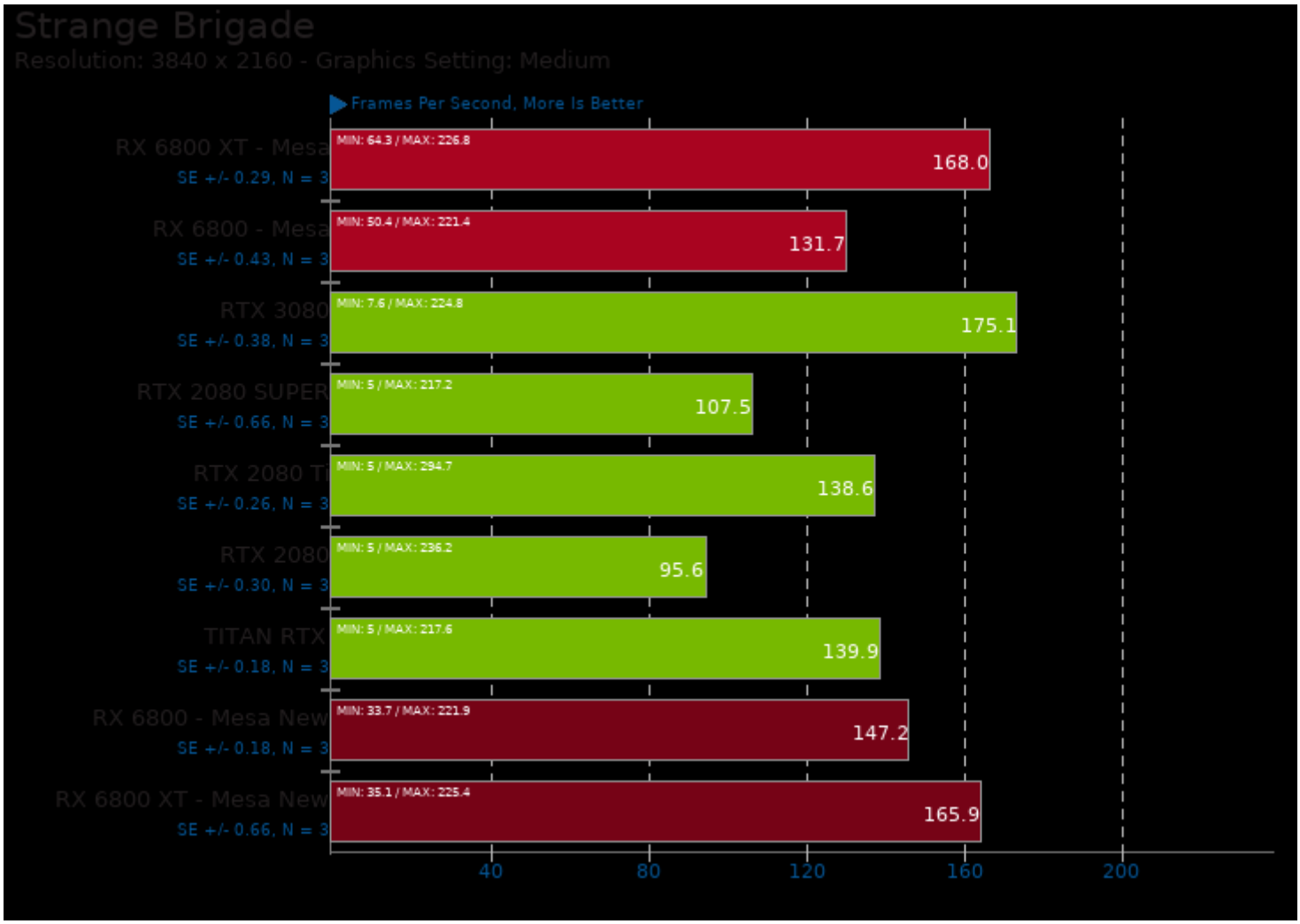

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Low - Anti Aliasing: Off
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.15, N = 3
MAX: 173.4
112.8
RX 6800 - PRO
SE +/- 0.19, N = 3
MAX: 154
99.2
RX 6800 XT - Mesa
SE +/- 0.21, N = 3
MAX: 172.4
98.0
RX 6800 - Mesa
SE +/-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

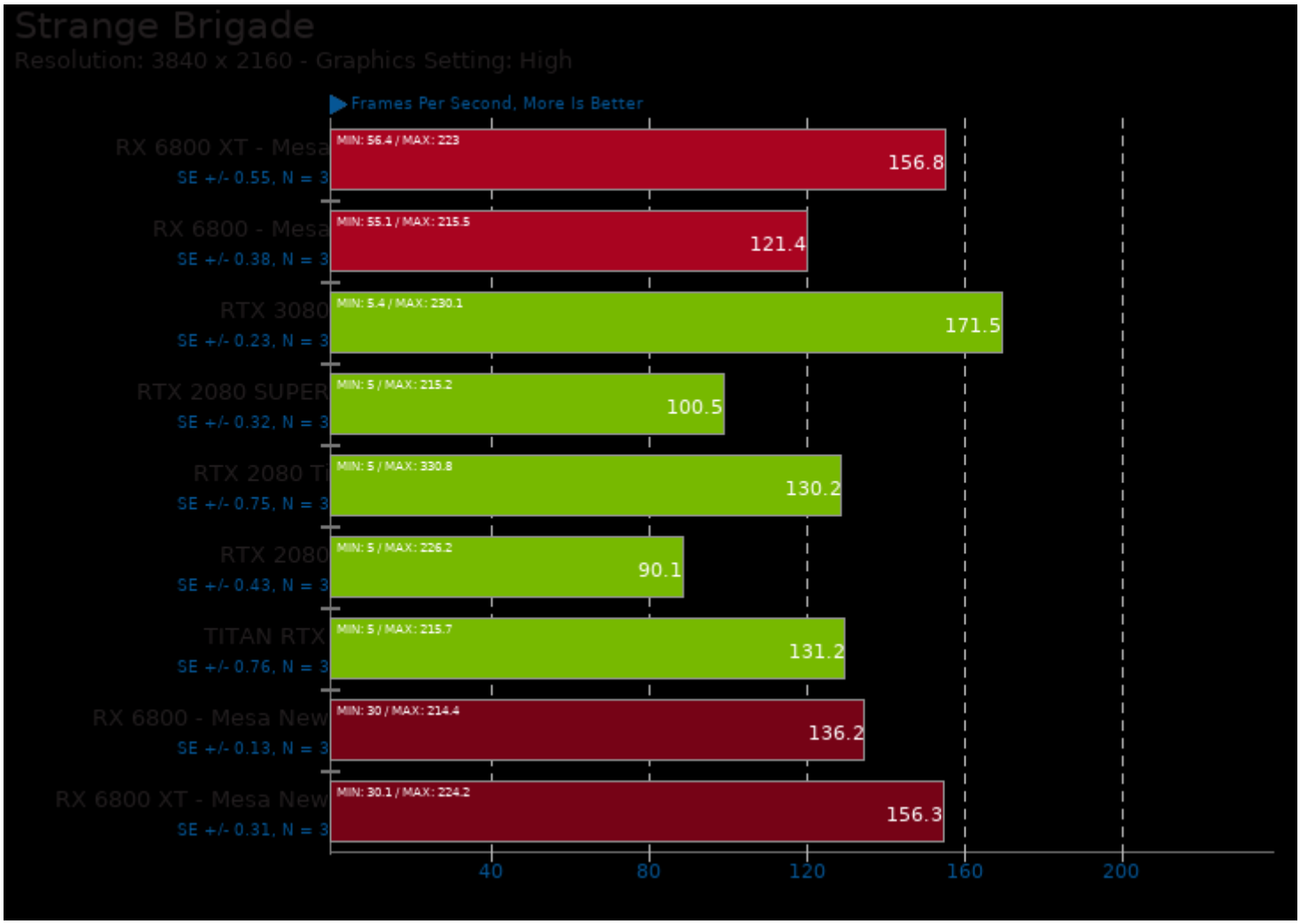

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.07, N = 3
MAX: 128.6
85.4
RX 6800 - PRO
SE +/- 0.06, N = 3
MAX: 112.8
75.6
RX 6800 XT - Mesa
SE +/- 0.09, N = 3
MAX: 104.1
63.9
RX 6800 - Mesa
SE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

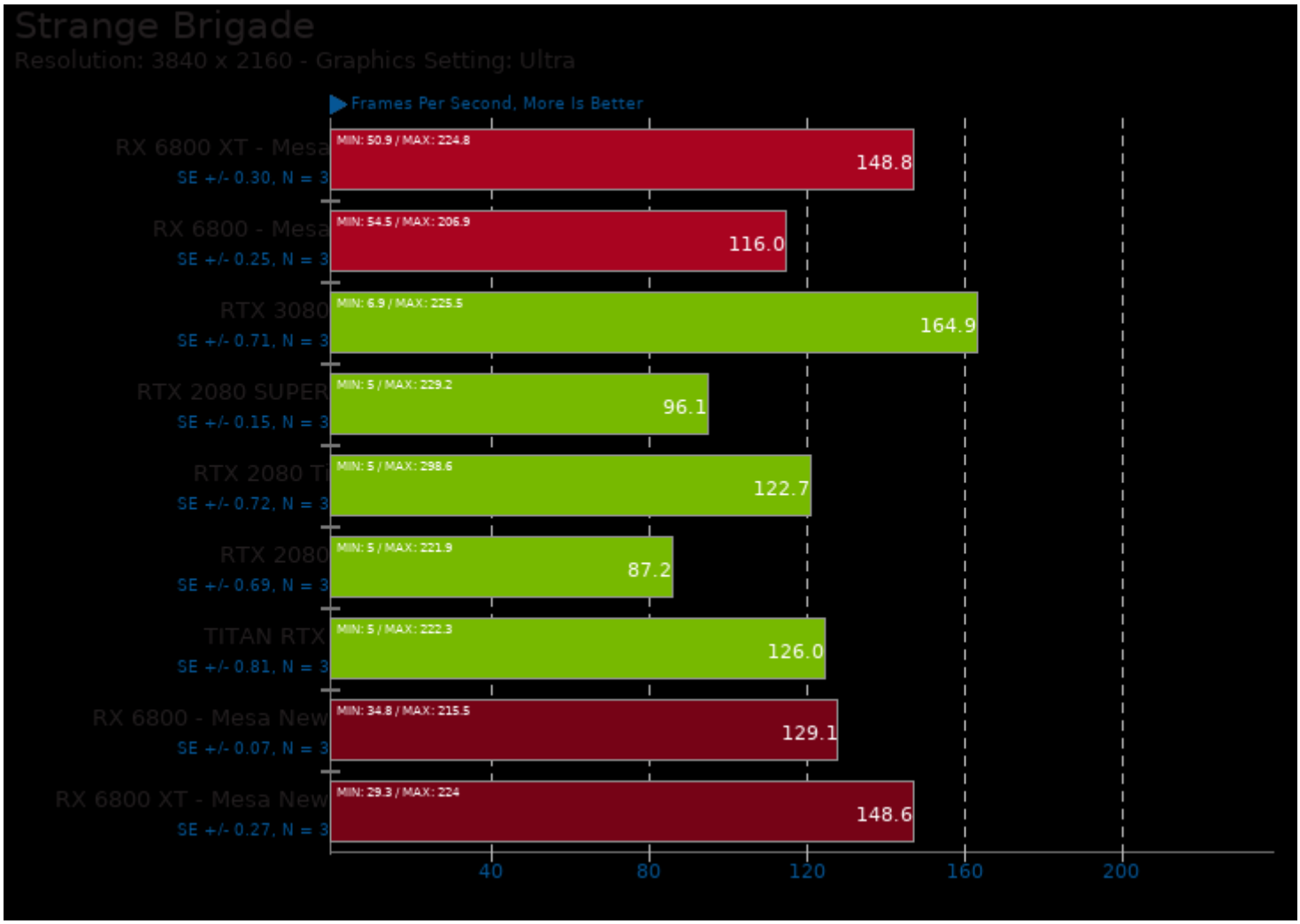

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.06, N = 3
MAX: 122.7
78.5
RX 6800 - PRO
SE +/- 0.06, N = 3
MAX: 108.6
69.3
RX 6800 XT - Mesa
SE +/- 0.03, N = 3
MAX: 99
57.1
RX 6800 - Mesa
SE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

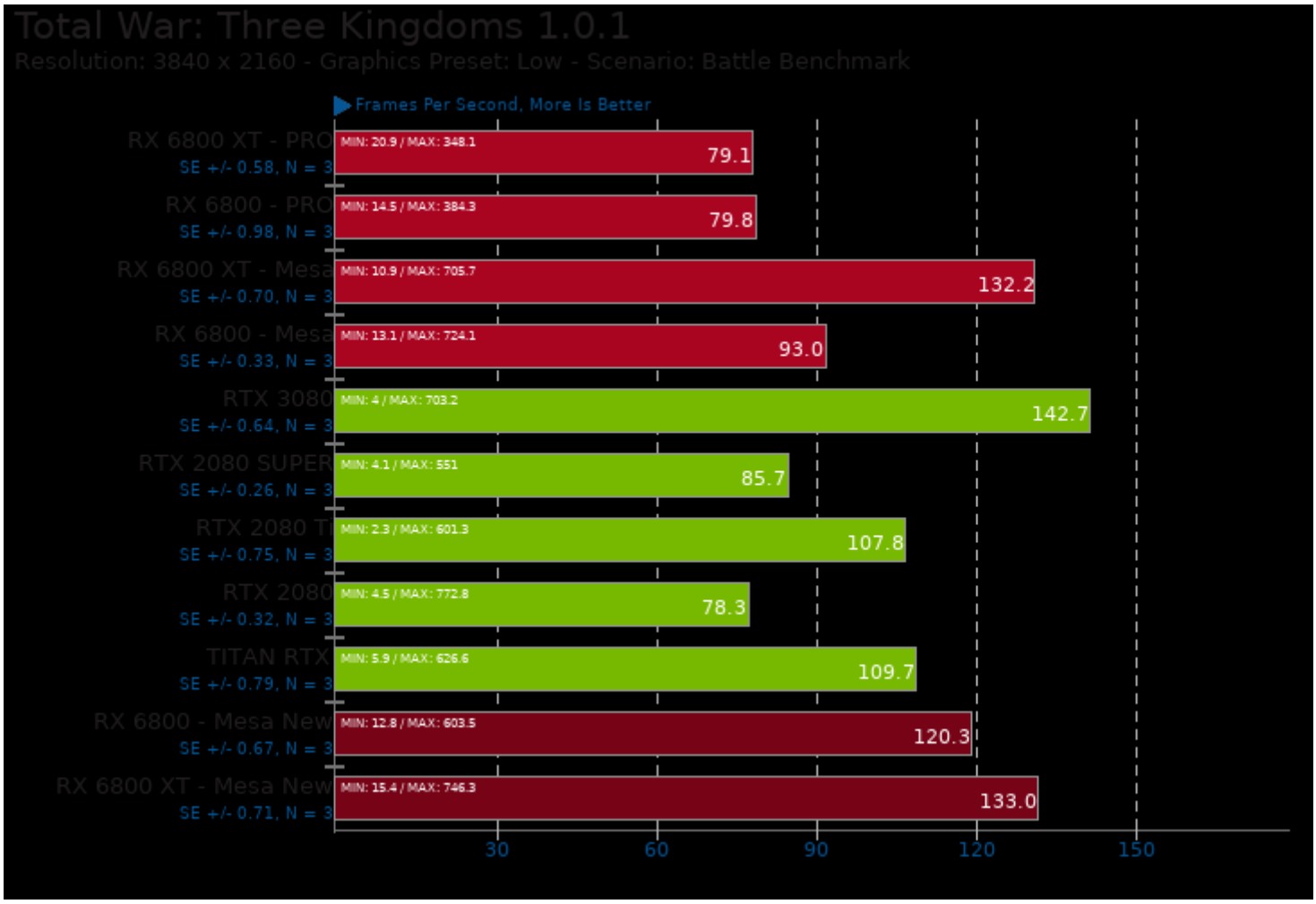
Radeon RX 6800 Series Linux Benchmarks

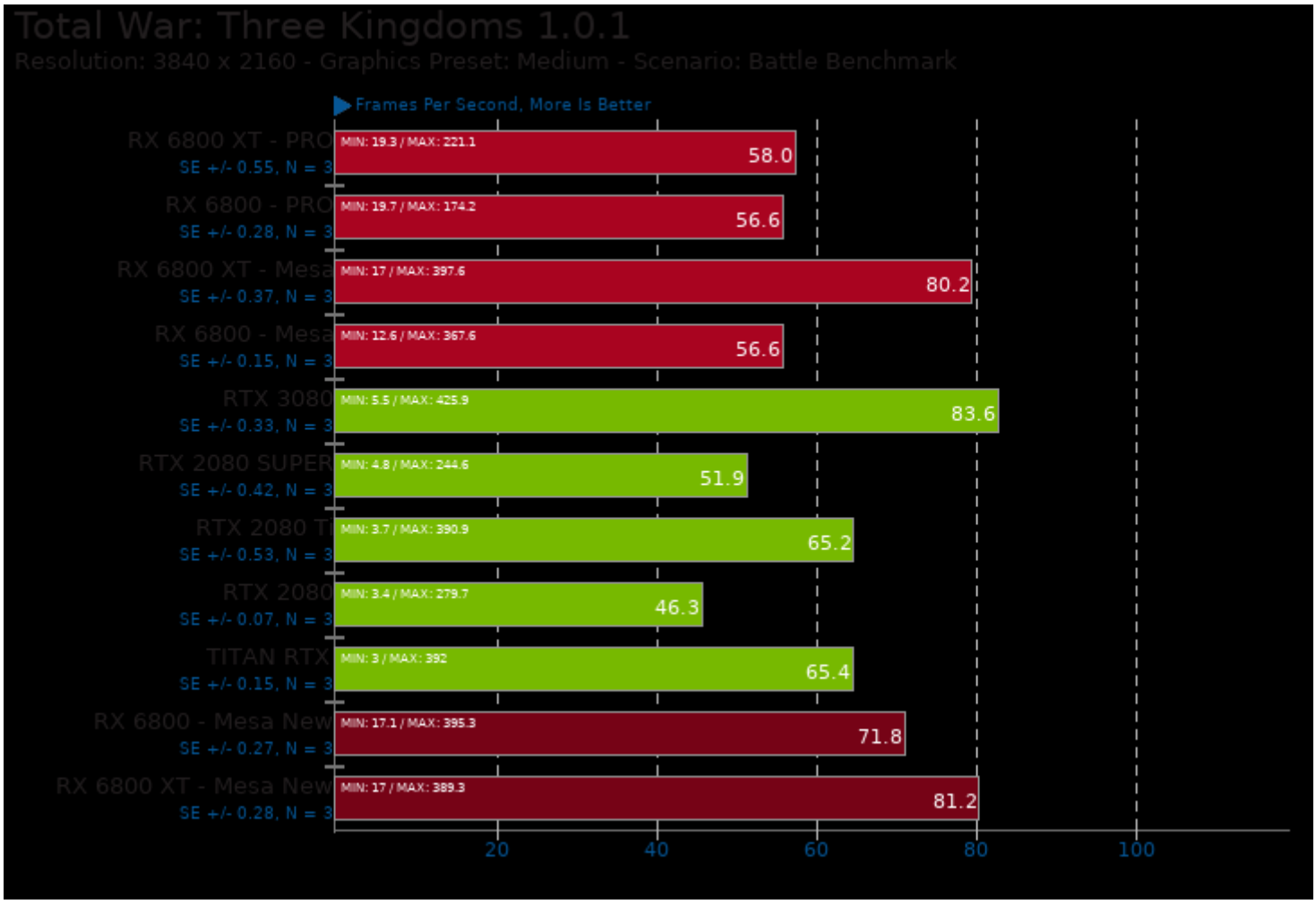


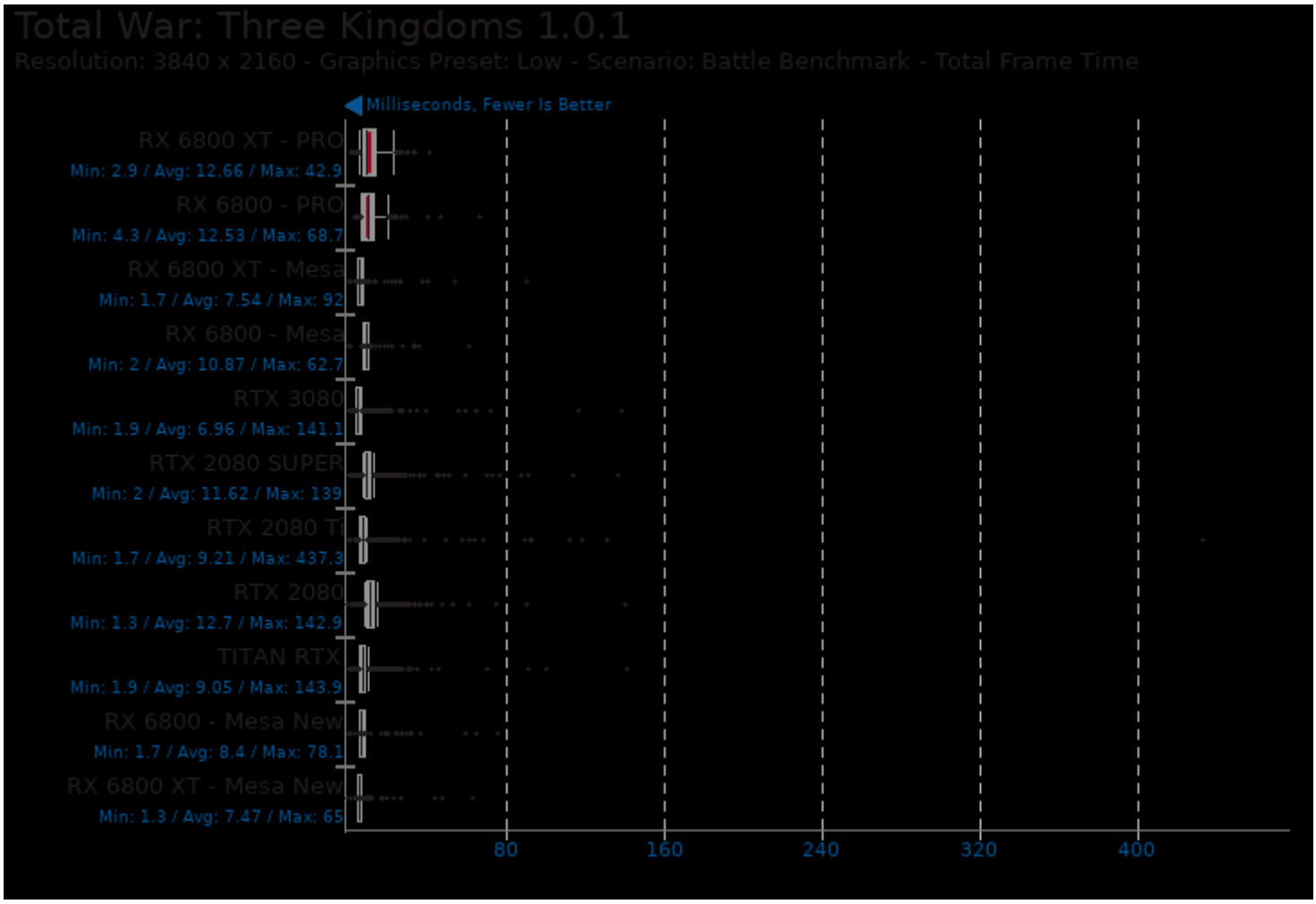

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Medium
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.29, N = 3
MIN: 64.3 / MAX: 226.8
168.0
RX 6800 - Mesa
SE +/- 0.43, N = 3
MIN: 50.4 / MAX: 221.4
131.7
RTX 3080
SE +/- 0.38, N = 3
MIN: 7.6 / MAX: 224.8
175.1
RTX 2080 SUPER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

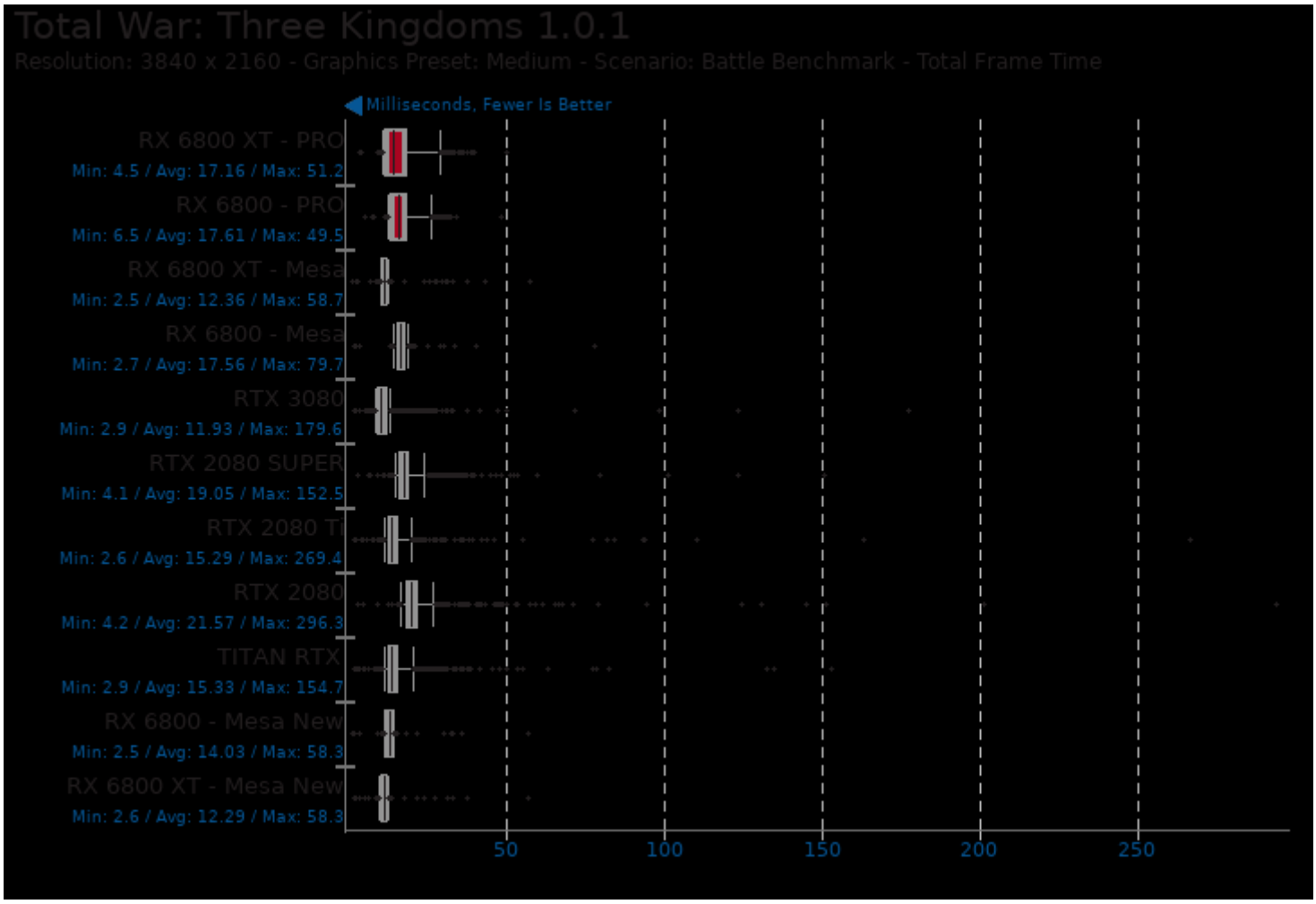

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: High
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.55, N = 3
MIN: 56.4 / MAX: 223
156.8
RX 6800 - Mesa
SE +/- 0.38, N = 3
MIN: 55.1 / MAX: 215.5
121.4
RTX 3080
SE +/- 0.23, N = 3
MIN: 5.4 / MAX: 230.1
171.5
RTX 2080 SUPER
SE +/-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

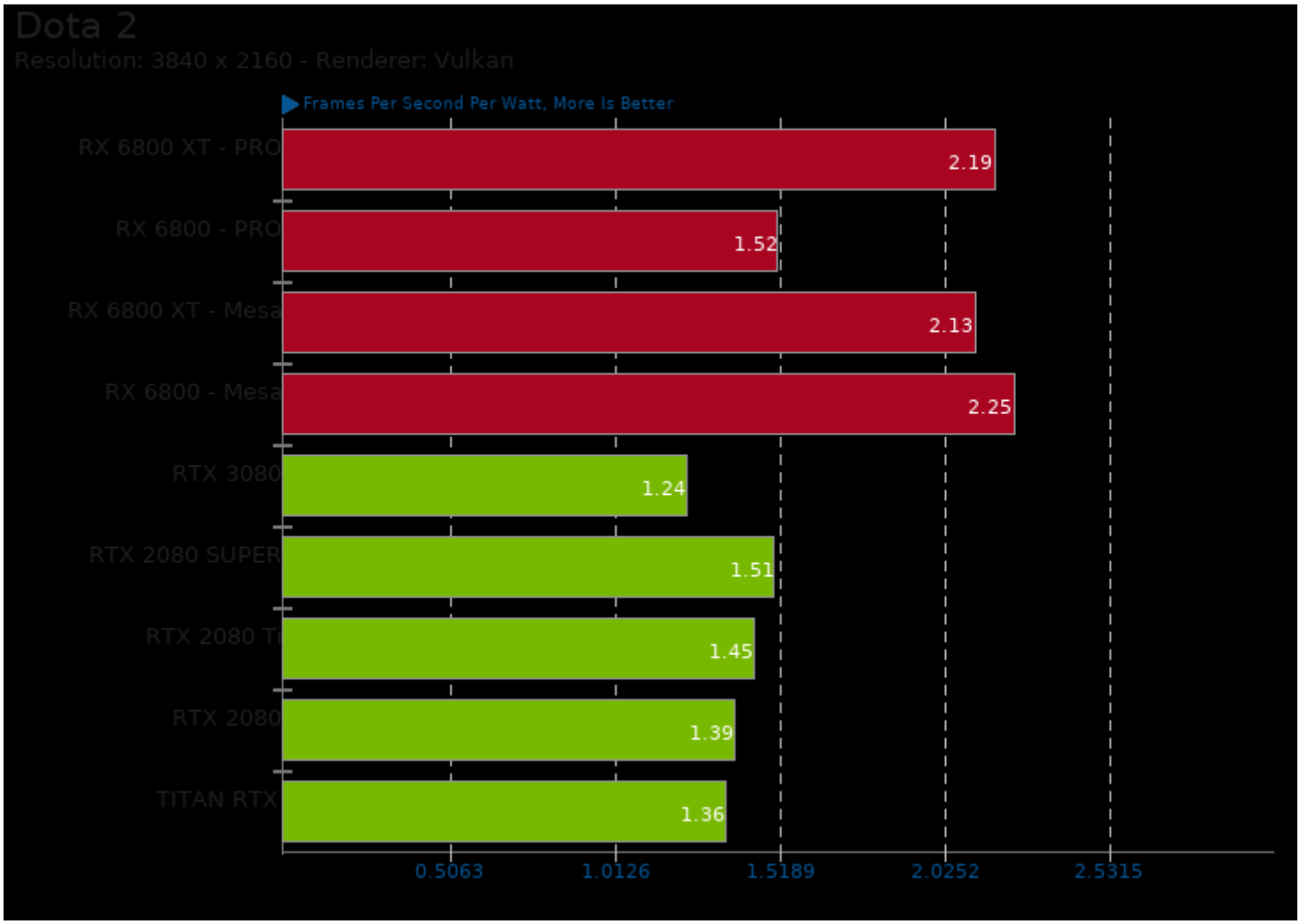

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Ultra
Frames Per Second, More Is Better
RX 6800 XT - Mesa
SE +/- 0.30, N = 3
MIN: 50.9 / MAX: 224.8
148.8
RX 6800 - Mesa
SE +/- 0.25, N = 3
MIN: 54.5 / MAX: 206.9
116.0
RTX 3080
SE +/- 0.71, N = 3
MIN: 6.9 / MAX: 225.5
164.9
RTX 2080 SUPER
SE +/- 0.15, N = 3
MIN: 5 / MAX: 229.2
96.1
RTX 2080 Ti
SE +/- 0.72, N = 3
MIN: 5 / MAX: 298.6
122.7
RTX 2080
SE +/- 0.69, N = 3
MIN: 5 / MAX: 221.9
87.2
TITAN RTX
SE +/- 0.81, N = 3
MIN: 5 / MAX: 222.3
126.0
RX 6800 - Mesa New
SE +/- 0.07, N = 3
MIN: 34.8 / MAX: 215.5
129.1
RX 6800 XT - Mesa New
SE +/- 0.27, N = 3
MIN: 29.3 / MAX: 224
148.6
40
80
120
160
200

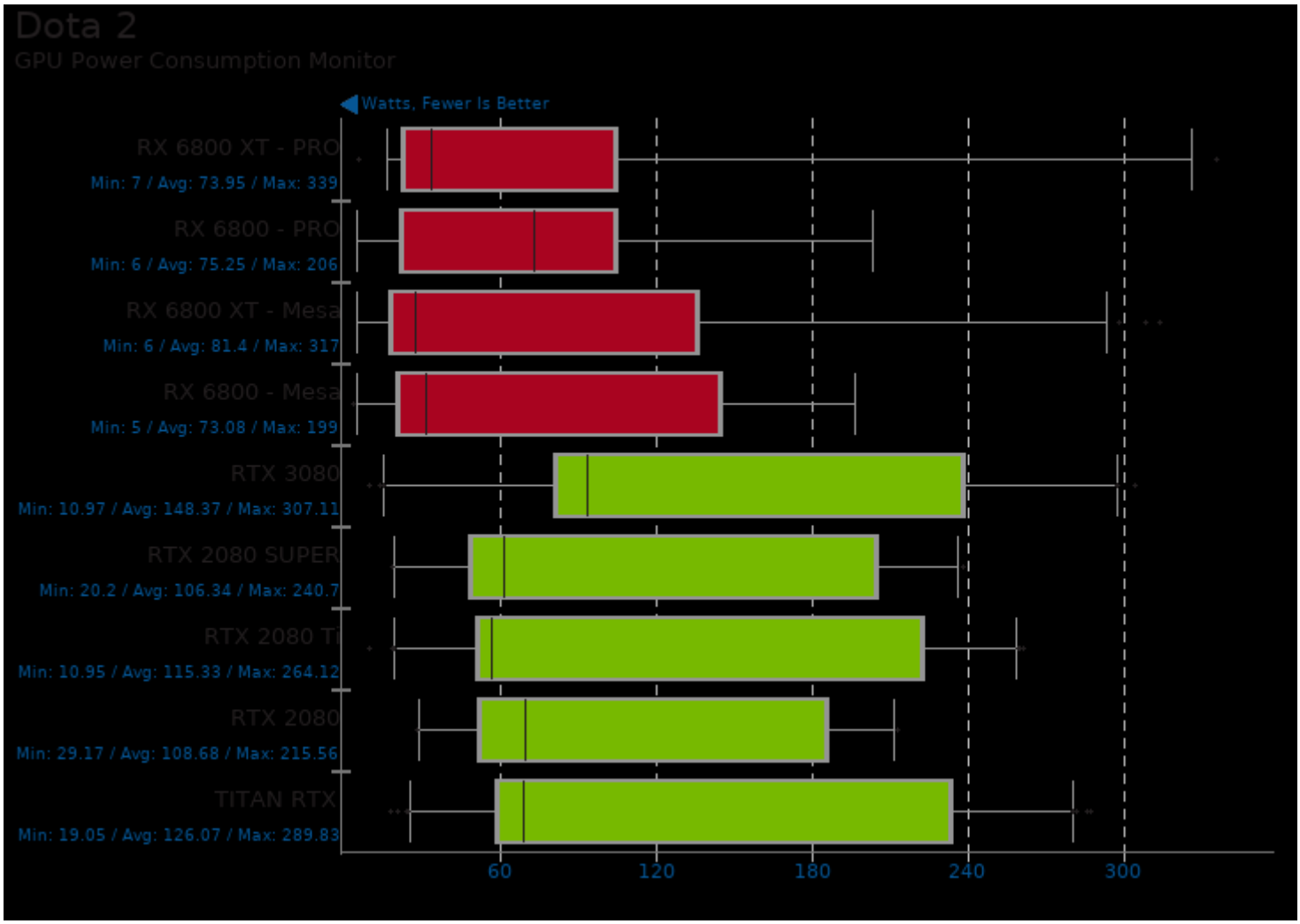

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Low - Scenario: Battle Benchmark
Frames Per Second, More Is Better
RX 6800 XT - PRO
SE +/- 0.58, N = 3
MIN: 20.9 / MAX: 348.1
79.1
RX 6800 - PRO
SE +/- 0.98, N = 3
MIN: 14.5 / MAX: 384.3
79.8
RX 6800 XT - Mesa
SE +/- 0.70, N =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


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

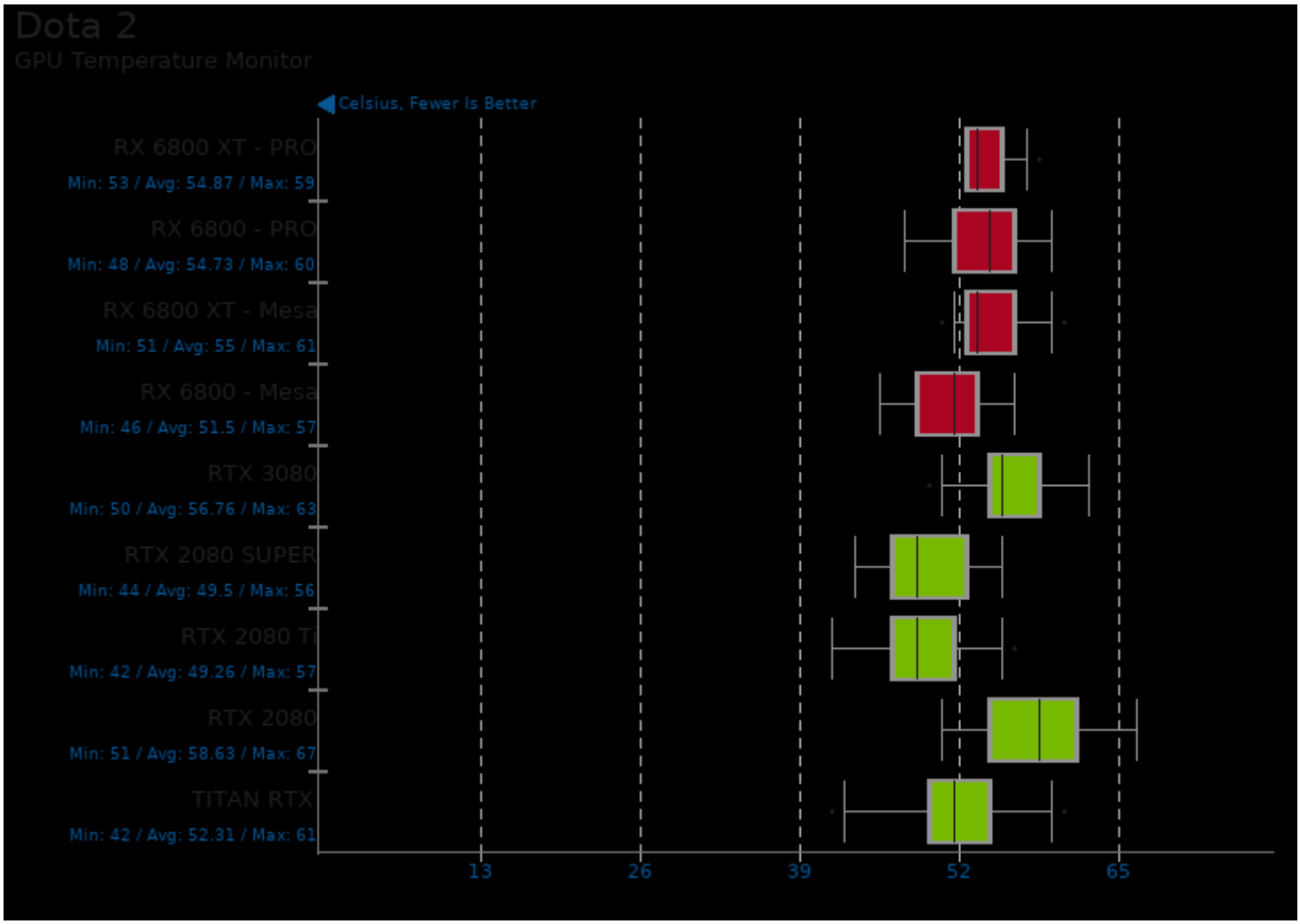

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Low - Scenario: Battle Benchmark - Total Frame Time
Milliseconds, Fewer Is Better
RX 6800 XT - PRO
Min: 2.9 / Avg: 12.66 / Max: 42.9
RX 6800 - PRO
Min: 4.3 / Avg: 12.53 / Max: 68.7
RX 6800 XT - Mesa
Min: 1.7 / Avg: 7.54 / Max: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

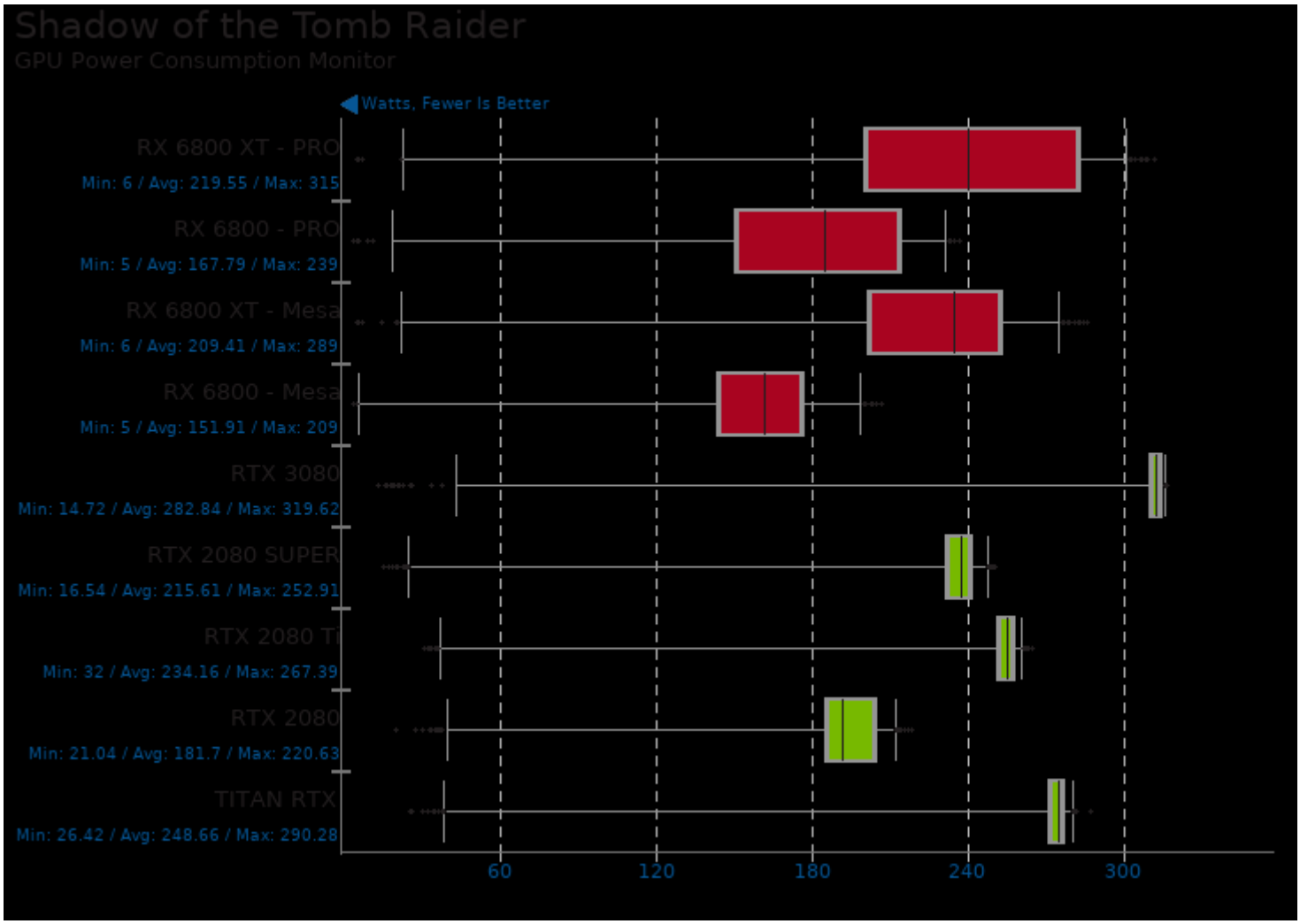

Total War: Three Kingdoms 1.0.1
Resolution: 3840 x 2160 - Graphics Preset: Medium - Scenario: Battle Benchmark - Total Frame Time
Milliseconds, Fewer Is Better
RX 6800 XT - PRO
Min: 4.5 / Avg: 17.16 / Max: 51.2
RX 6800 - PRO
Min: 6.5 / Avg: 17.61 / Max: 49.5
RX 6800 XT - Mesa
Min: 2.5 / Avg: 12.36 /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

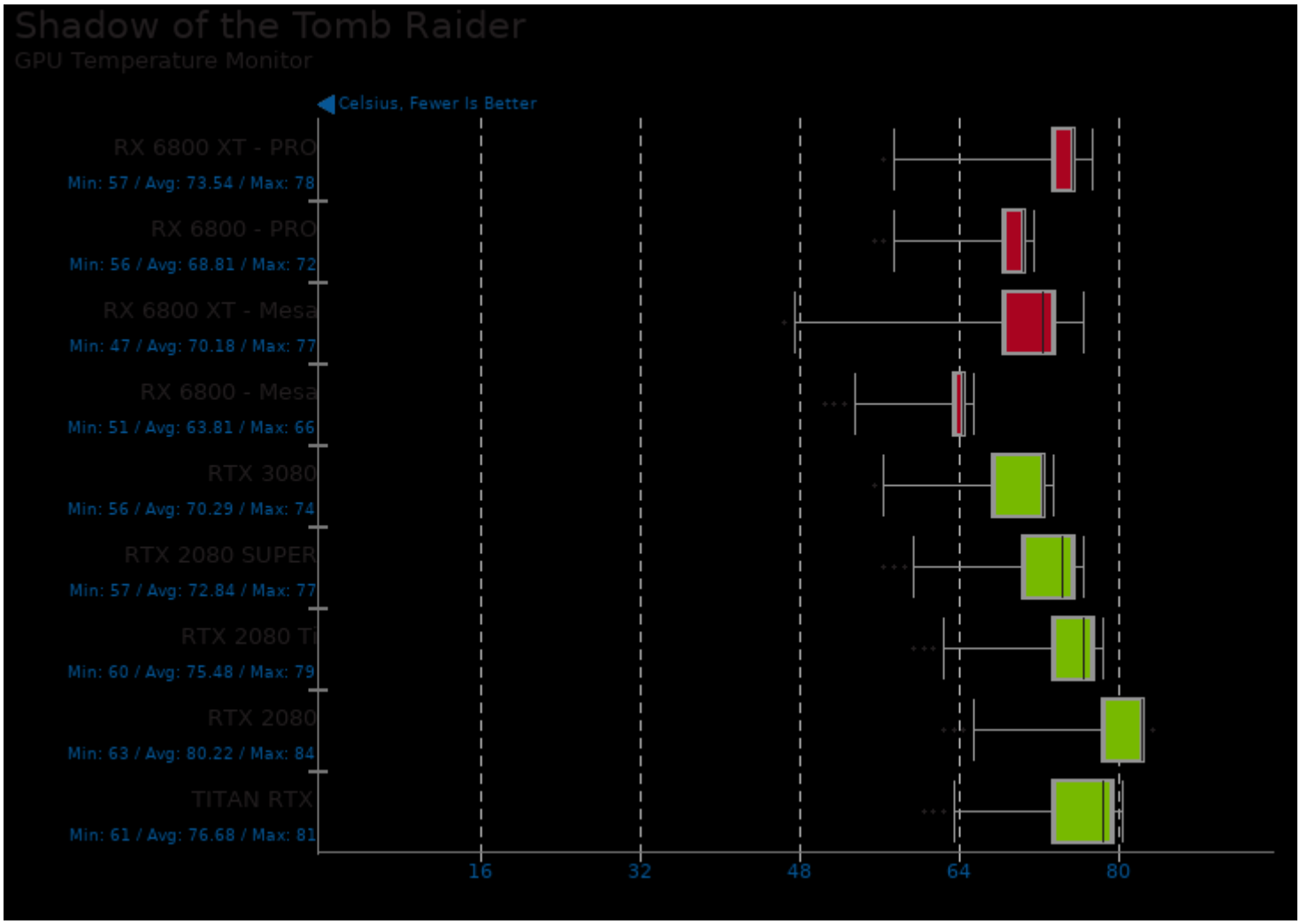

Dota 2
Resolution: 3840 x 2160 - Renderer: Vulkan
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
2.19
RX 6800 - PRO
1.52
RX 6800 XT - Mesa
2.13
RX 6800 - Mesa
2.25
RTX 3080
1.24
RTX 2080 SUPER
1.51
RTX 2080 Ti
1.45
RTX 2080
1.39
TITAN RTX
1.36
0.5063
1.0126
1.5189
2.0252
2.5315

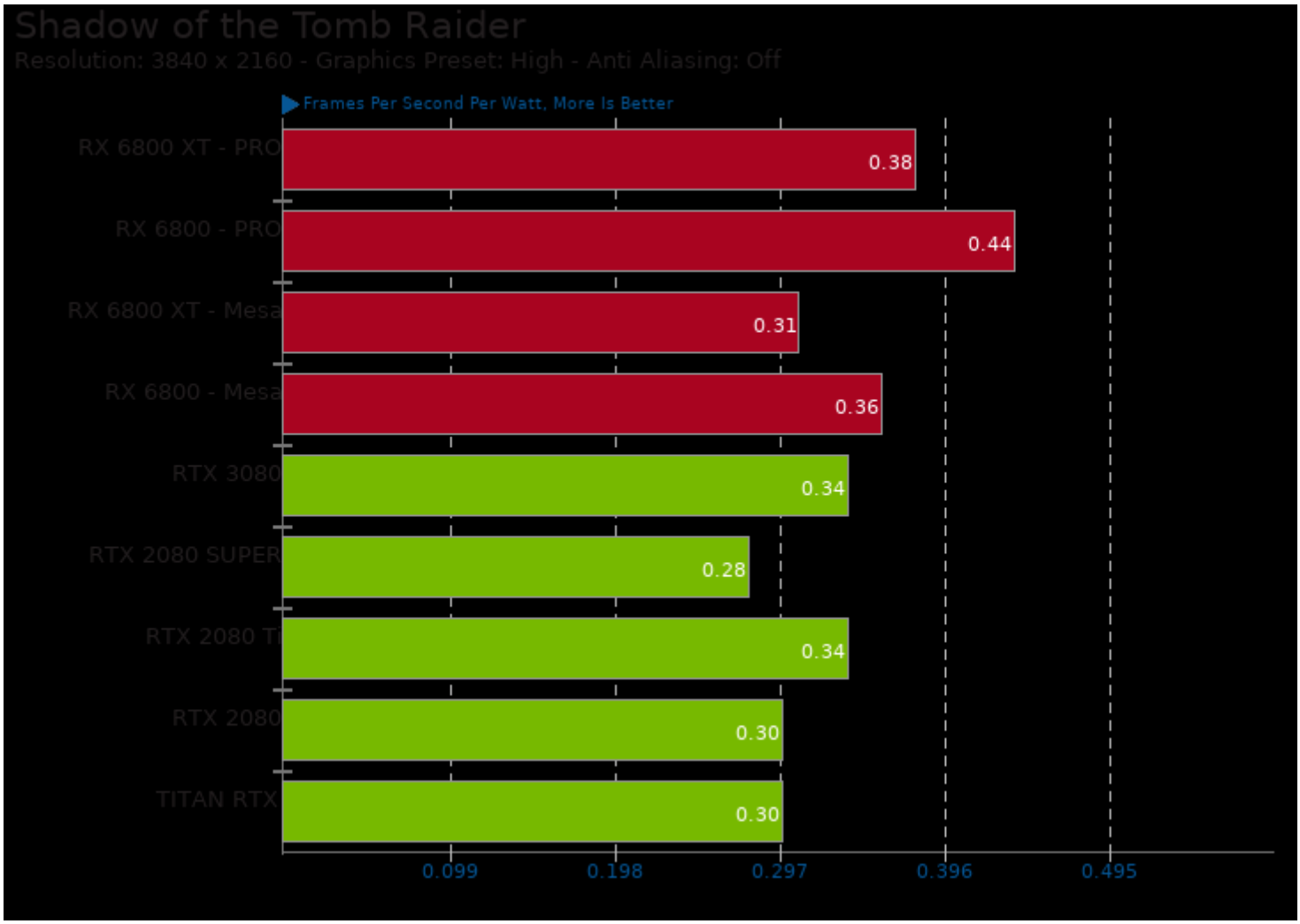

Dota 2
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 73.95 / Max: 339
RX 6800 - PRO
Min: 6 / Avg: 75.25 / Max: 206
RX 6800 XT - Mesa
Min: 6 / Avg: 81.4 / Max: 317
RX 6800 - Mesa
Min: 5 / Avg: 73.08 / Max: 199
RTX 3080
Min: 10.97 / Avg: 148.37 / Max: 307.11
RTX 2080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

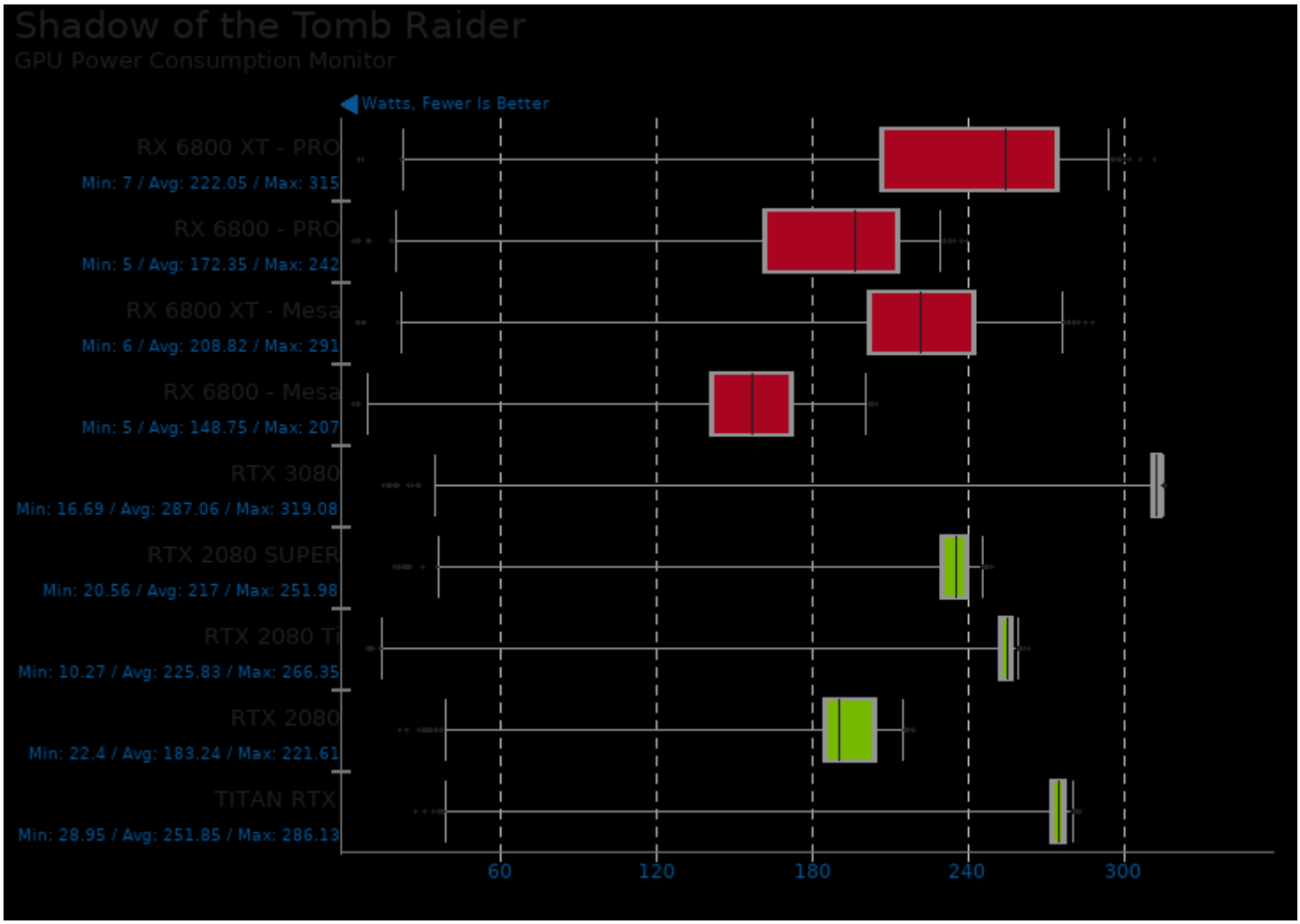
Radeon RX 6800 Series Linux Benchmarks

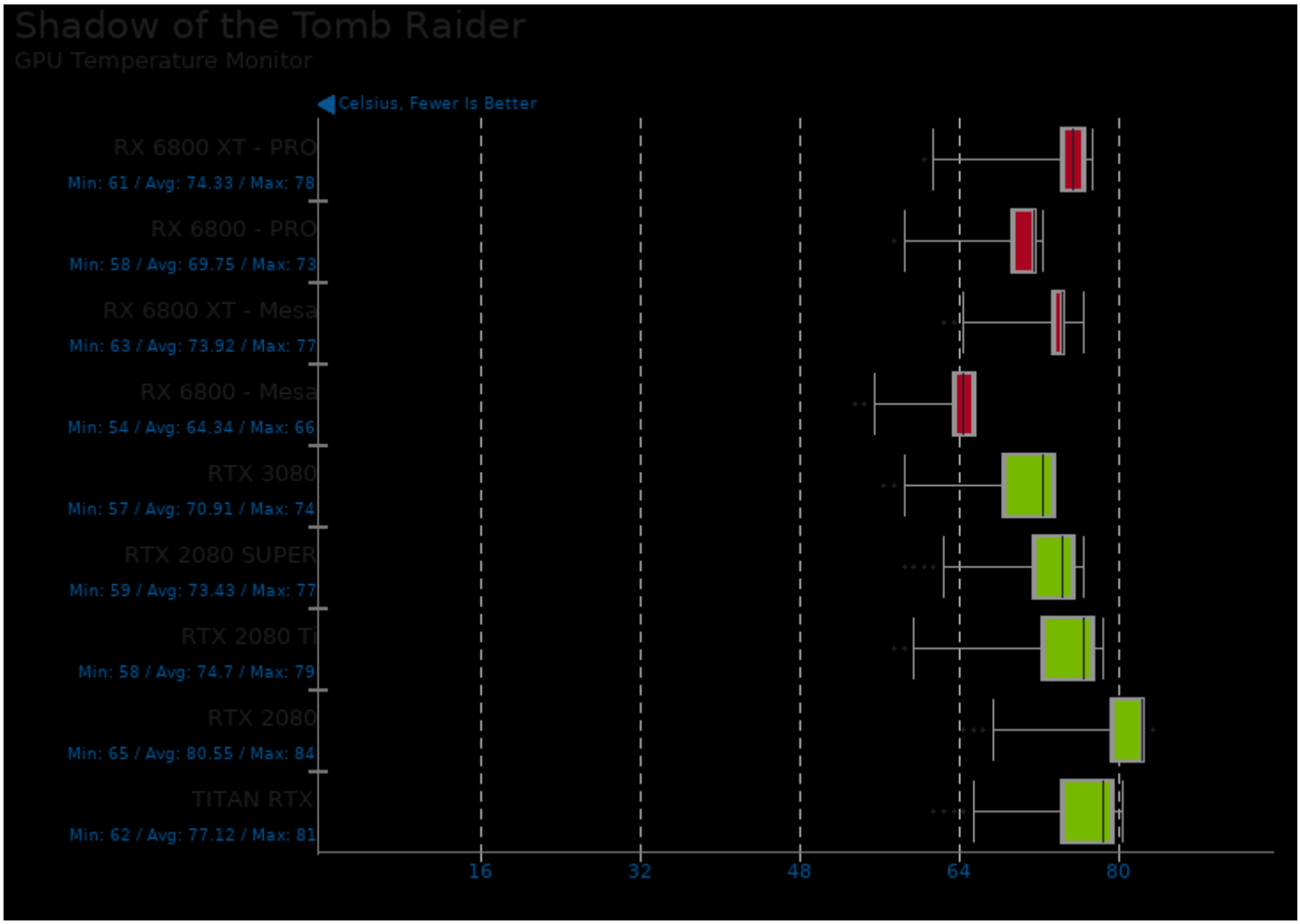


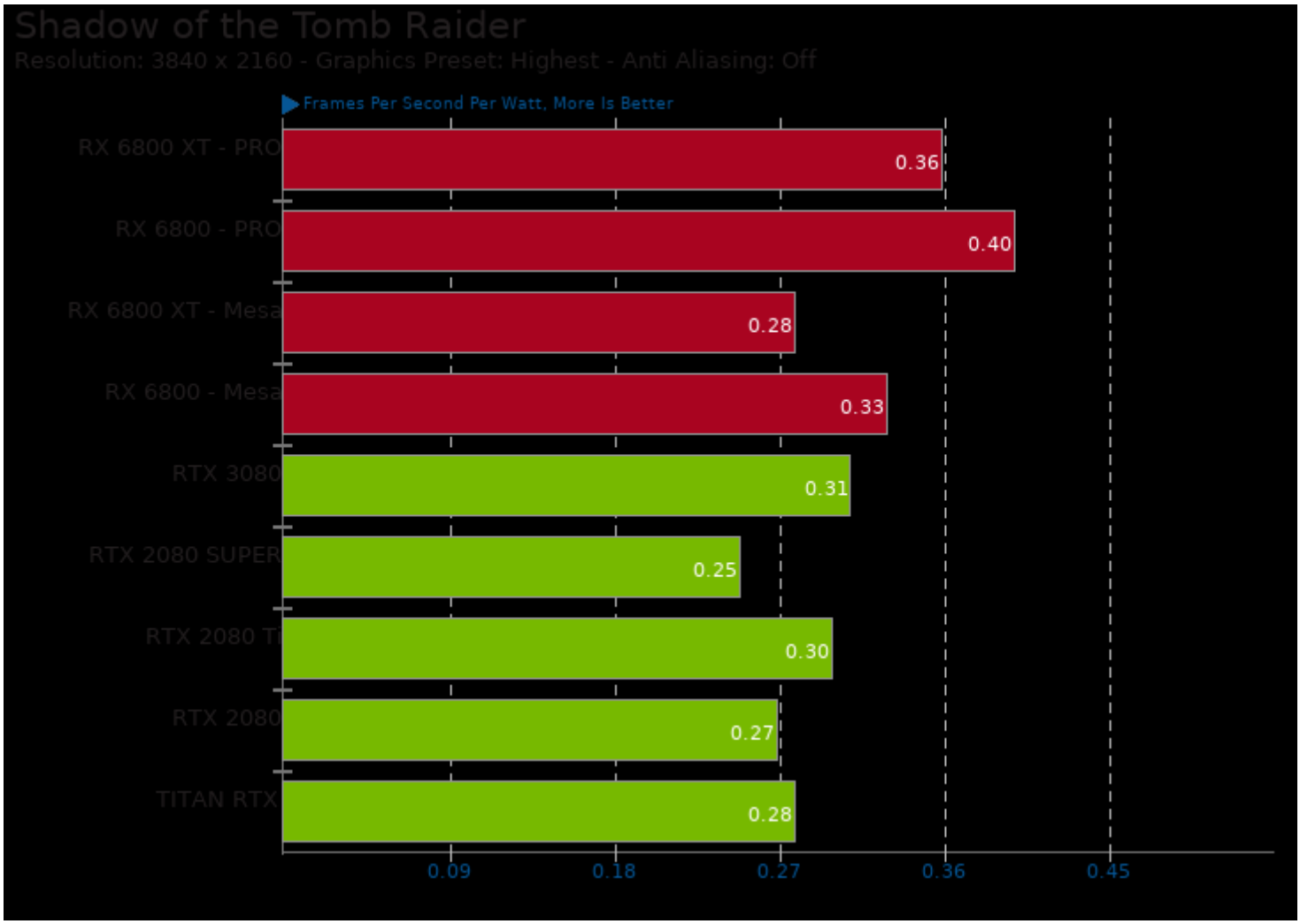

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 6 / Avg: 219.55 / Max: 315
RX 6800 - PRO
Min: 5 / Avg: 167.79 / Max: 239
RX 6800 XT - Mesa
Min: 6 / Avg: 209.41 / Max: 289
RX 6800 - Mesa
Min: 5 / Avg: 151.91 / Max: 209
RTX 3080
Min: 14.72 / Avg: 282.84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

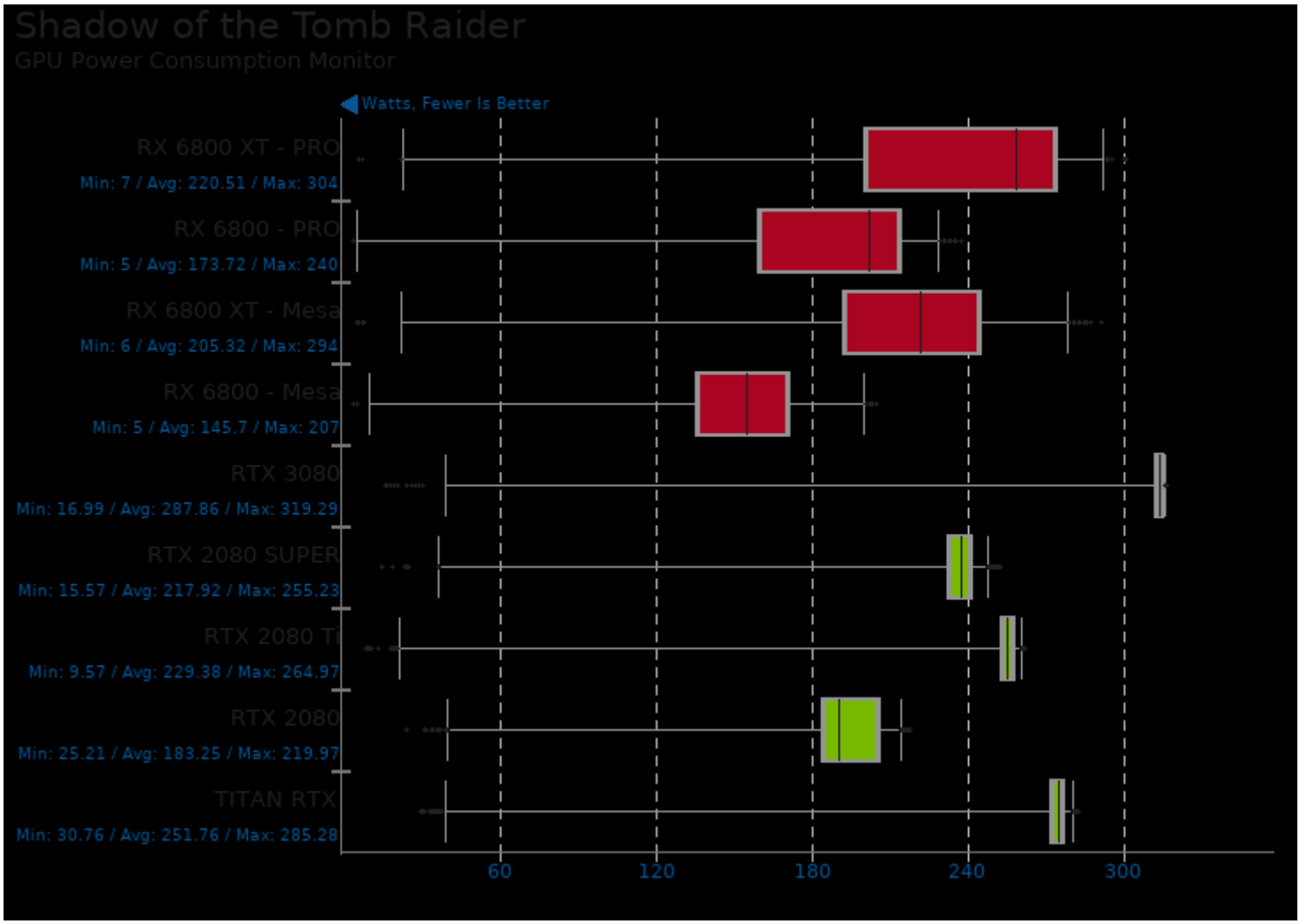

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 57 / Avg: 73.54 / Max: 78
RX 6800 - PRO
Min: 56 / Avg: 68.81 / Max: 72
RX 6800 XT - Mesa
Min: 47 / Avg: 70.18 / Max: 77
RX 6800 - Mesa
Min: 51 / Avg: 63.81 / Max: 66
RTX 3080
Min: 56 / Avg: 70.29 / Max: 74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

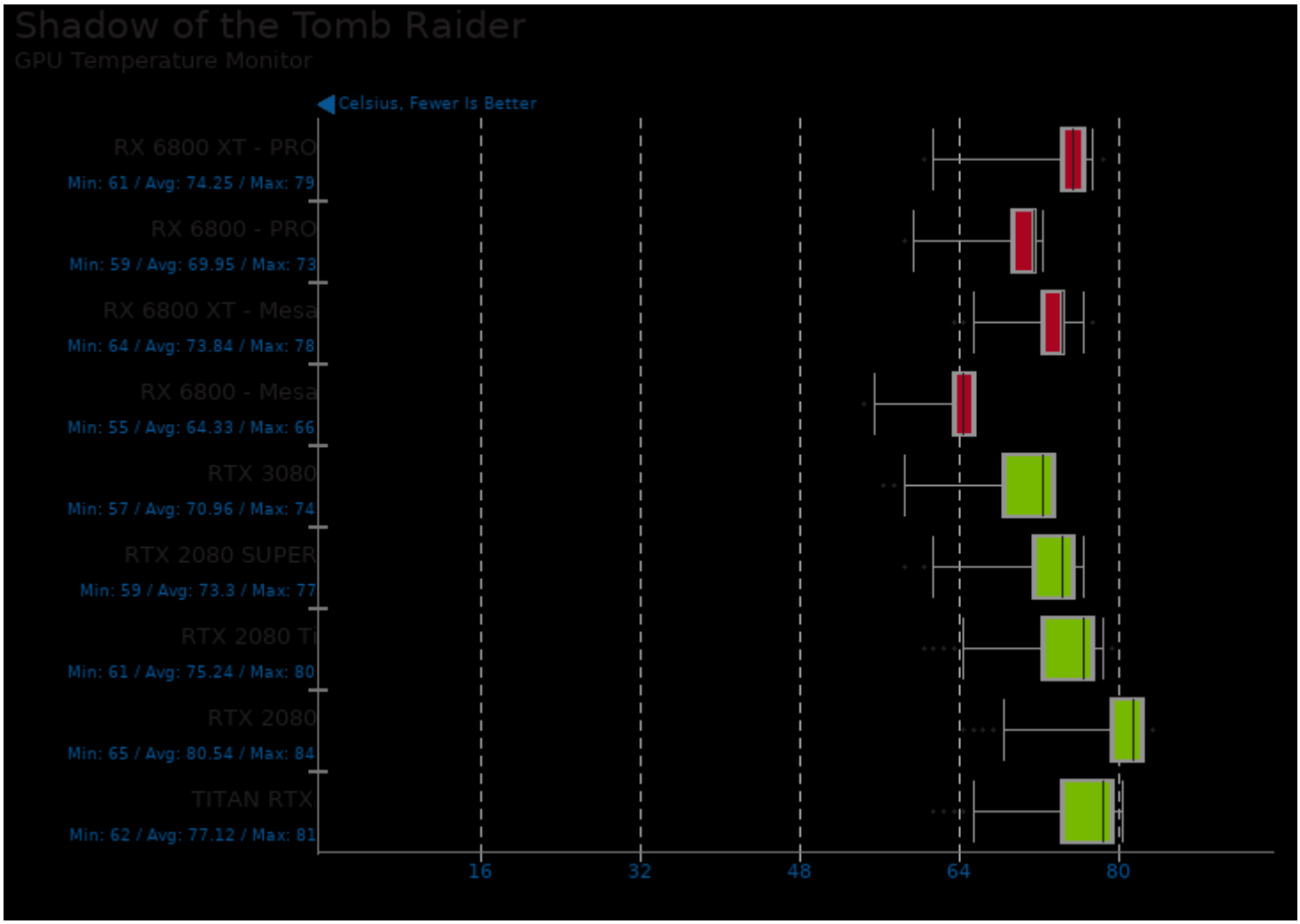

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
0.38
RX 6800 - PRO
0.44
RX 6800 XT - Mesa
0.31
RX 6800 - Mesa
0.36
RTX 3080
0.34
RTX 2080 SUPER
0.28
RTX 2080 Ti
0.34
RTX 2080
0.30
TITAN RTX
0.30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

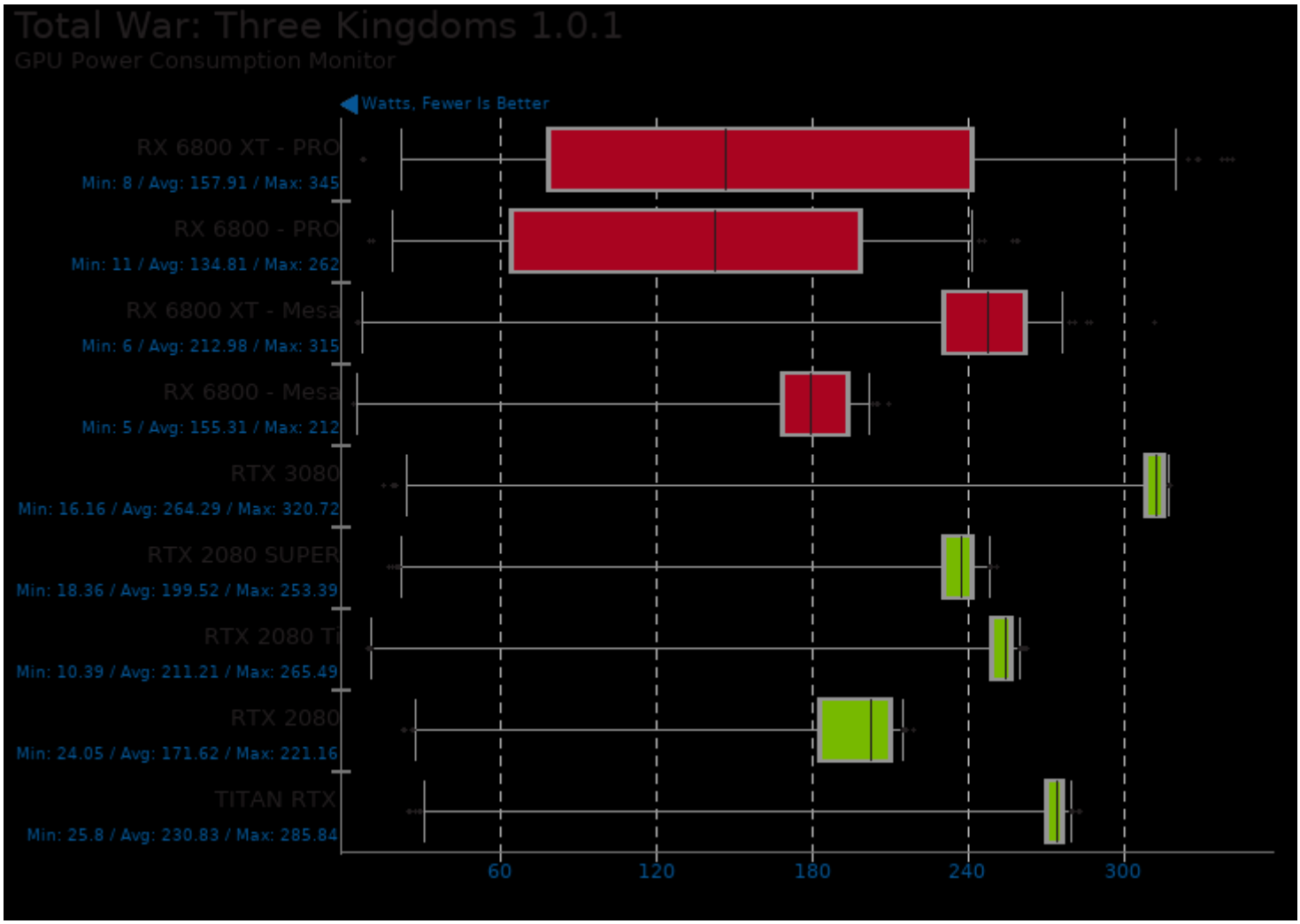

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 222.05 / Max: 315
RX 6800 - PRO
Min: 5 / Avg: 172.35 / Max: 242
RX 6800 XT - Mesa
Min: 6 / Avg: 208.82 / Max: 291
RX 6800 - Mesa
Min: 5 / Avg: 148.75 / Max: 207
RTX 3080
Min: 16.69 / Avg: 287.06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

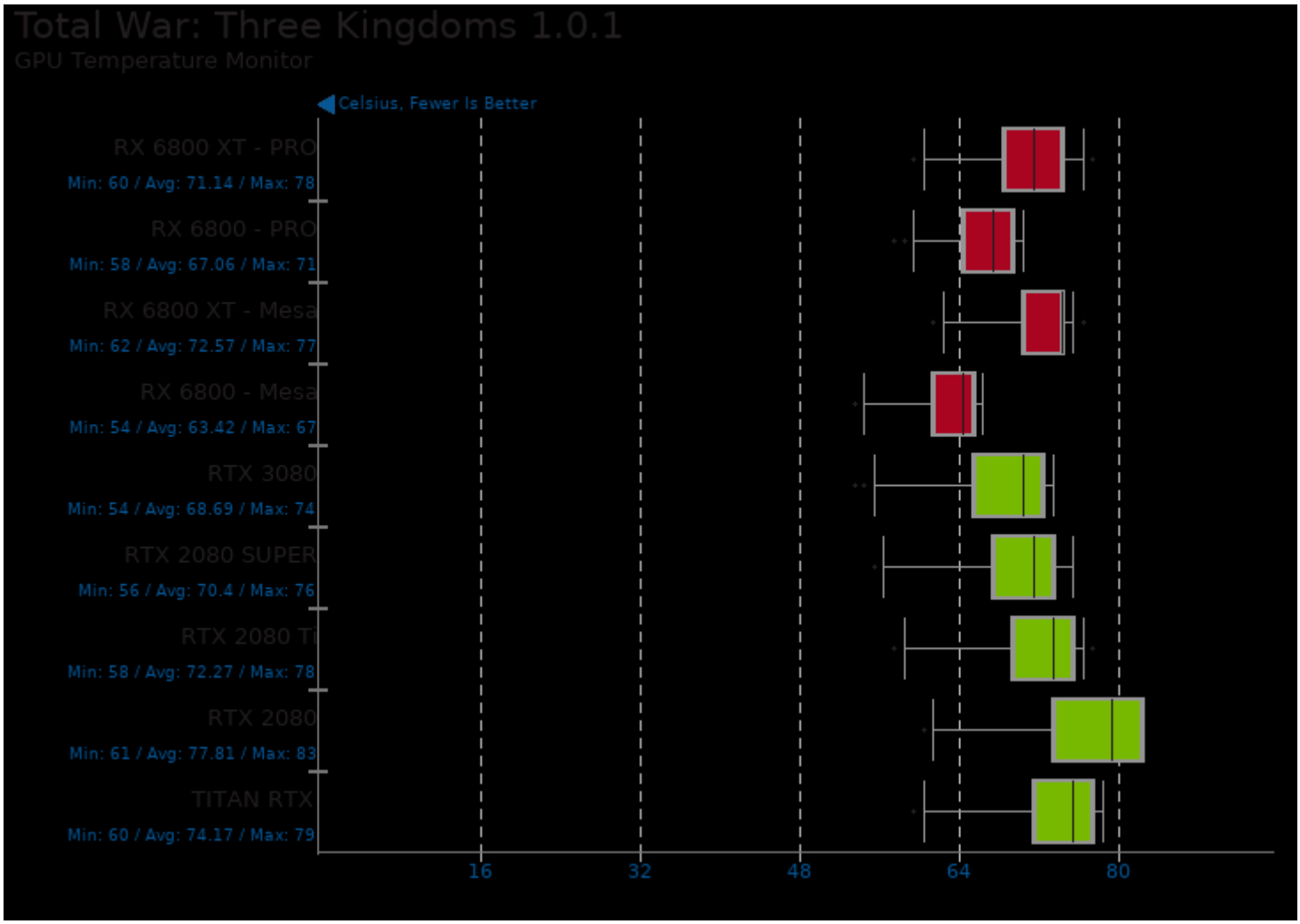

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 61 / Avg: 74.33 / Max: 78
RX 6800 - PRO
Min: 58 / Avg: 69.75 / Max: 73
RX 6800 XT - Mesa
Min: 63 / Avg: 73.92 / Max: 77
RX 6800 - Mesa
Min: 54 / Avg: 64.34 / Max: 66
RTX 3080
Min: 57 / Avg: 70.91 / Max: 74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

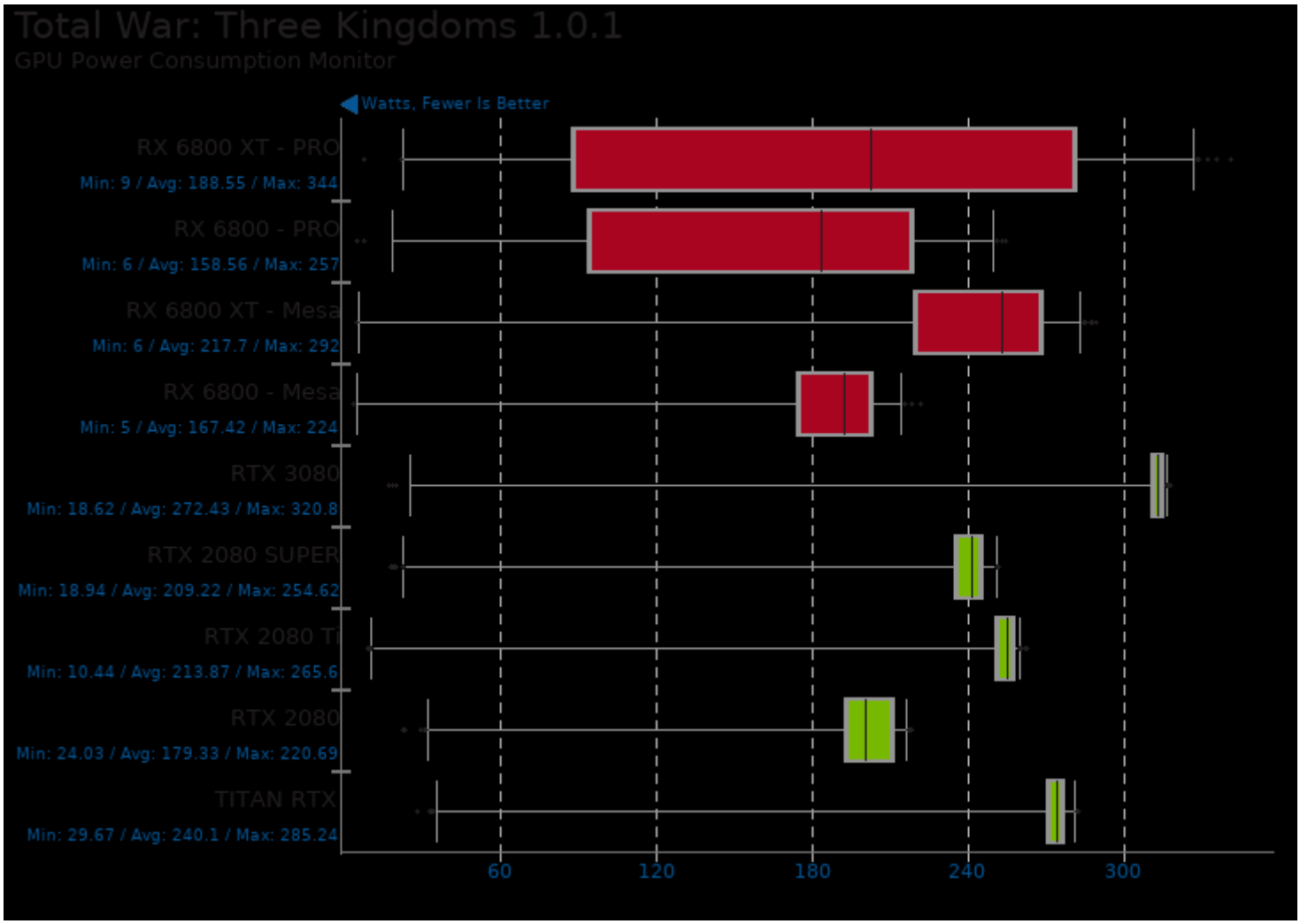

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Highest - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
0.36
RX 6800 - PRO
0.40
RX 6800 XT - Mesa
0.28
RX 6800 - Mesa
0.33
RTX 3080
0.31
RTX 2080 SUPER
0.25
RTX 2080 Ti
0.30
RTX 2080
0.27
TITAN RTX
0.28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

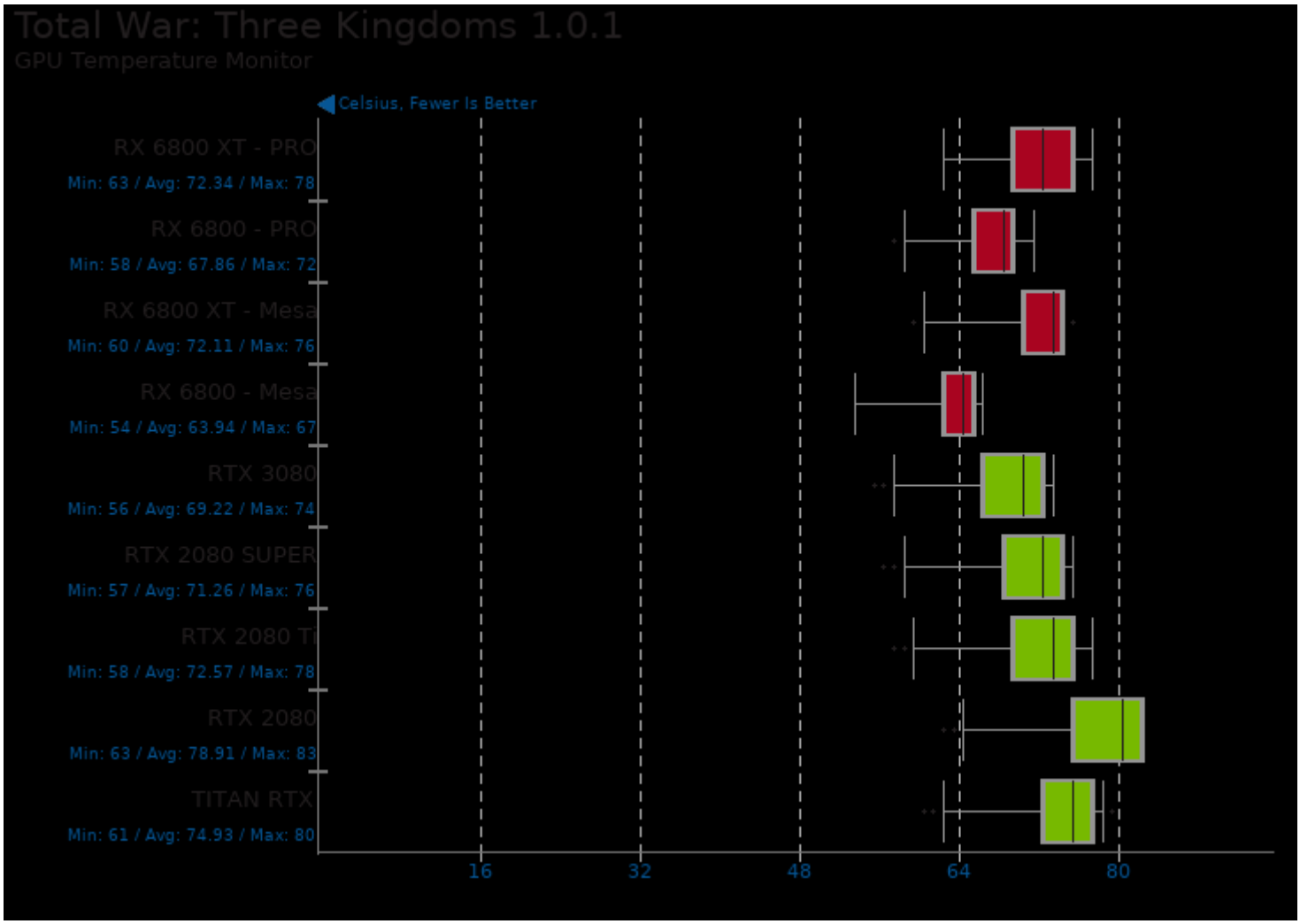

Shadow of the Tomb Raider
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 220.51 / Max: 304
RX 6800 - PRO
Min: 5 / Avg: 173.72 / Max: 240
RX 6800 XT - Mesa
Min: 6 / Avg: 205.32 / Max: 294
RX 6800 - Mesa
Min: 5 / Avg: 145.7 / Max: 207
RTX 3080
Min: 16.99 / Avg: 287.86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

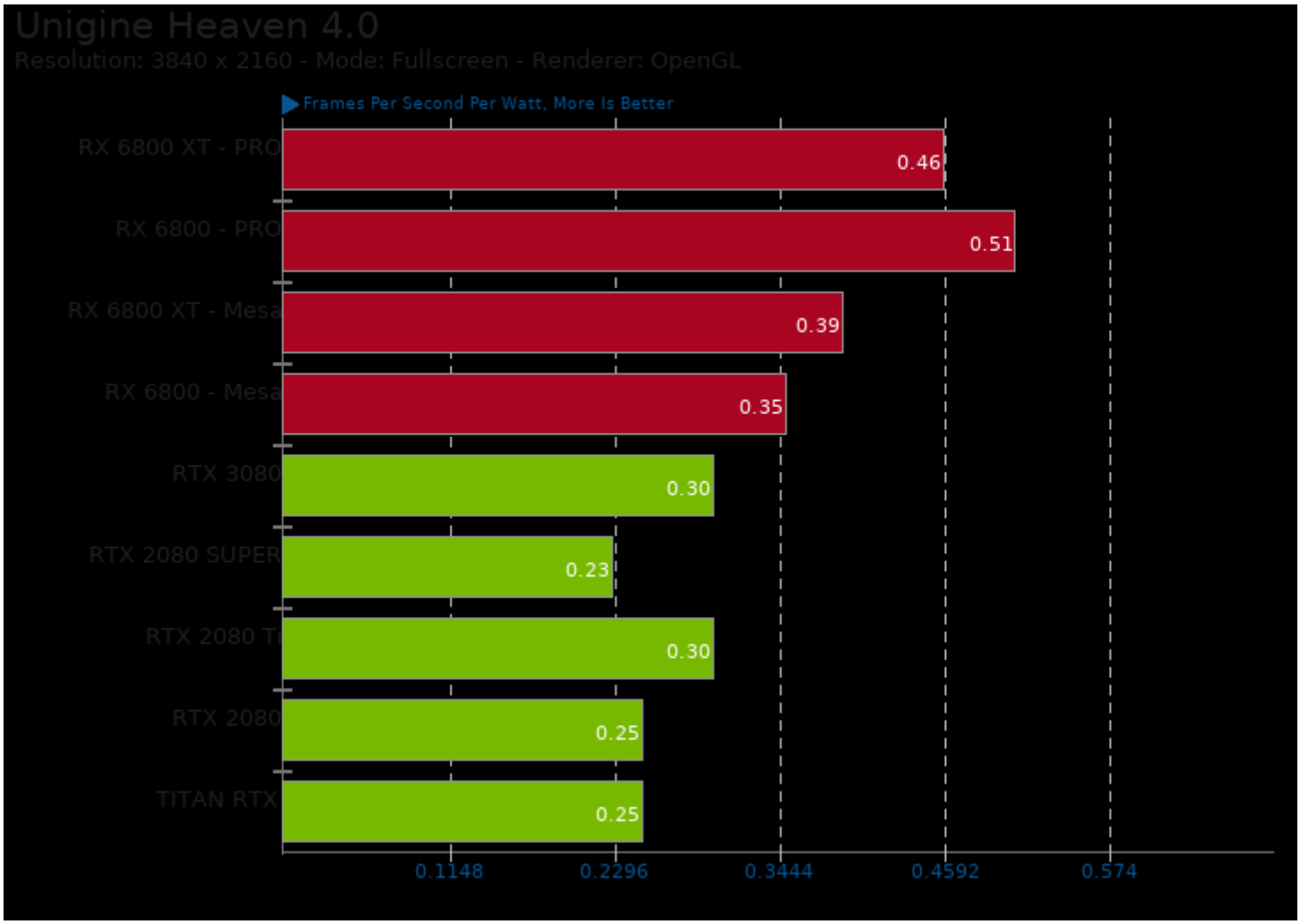

Shadow of the Tomb Raider
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 61 / Avg: 74.25 / Max: 79
RX 6800 - PRO
Min: 59 / Avg: 69.95 / Max: 73
RX 6800 XT - Mesa
Min: 64 / Avg: 73.84 / Max: 78
RX 6800 - Mesa
Min: 55 / Avg: 64.33 / Max: 66
RTX 3080
Min: 57 / Avg: 70.96 / Max: 74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

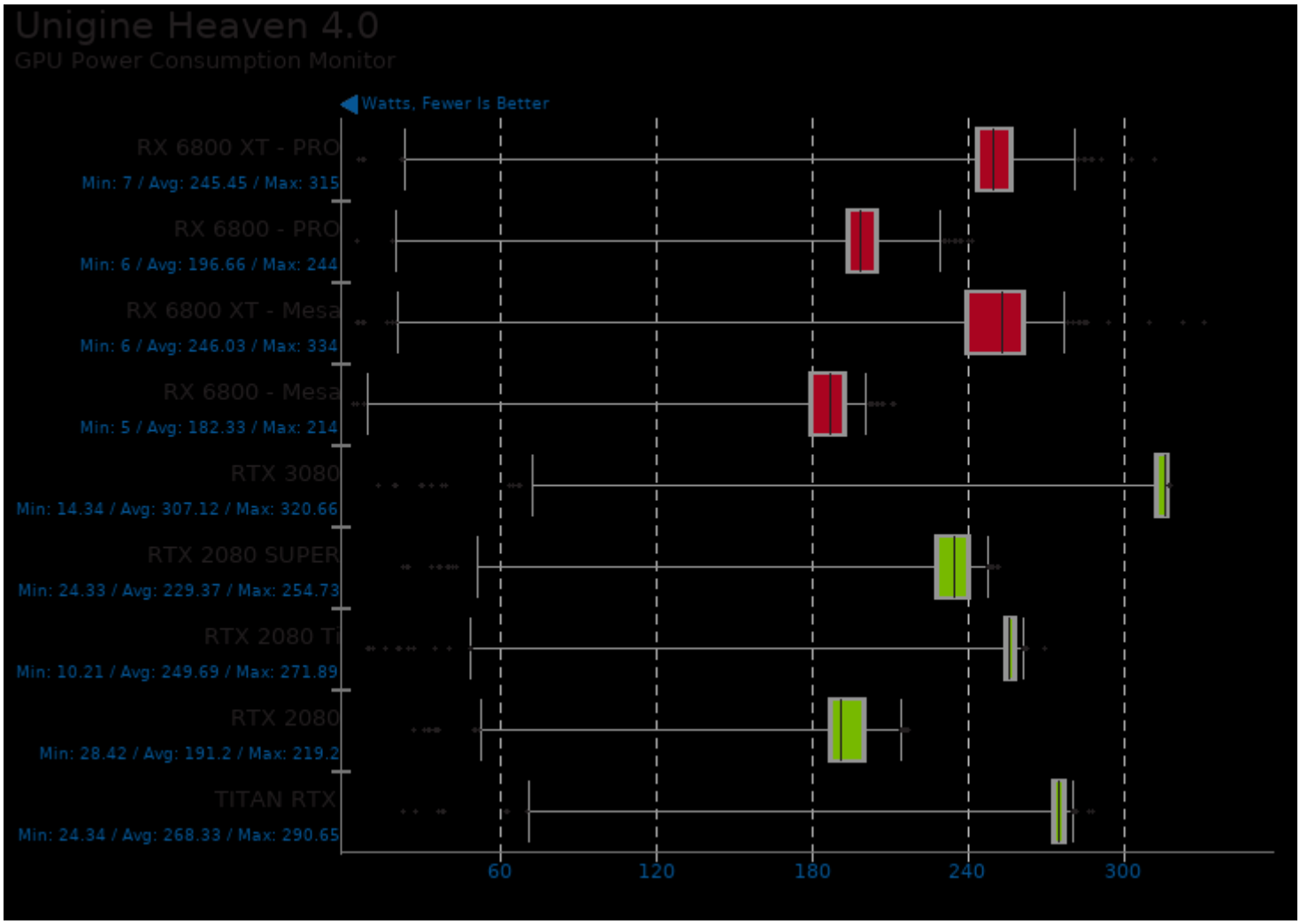

Total War: Three Kingdoms 1.0.1
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 8 / Avg: 157.91 / Max: 345
RX 6800 - PRO
Min: 11 / Avg: 134.81 / Max: 262
RX 6800 XT - Mesa
Min: 6 / Avg: 212.98 / Max: 315
RX 6800 - Mesa
Min: 5 / Avg: 155.31 / Max: 212
RTX 3080
Min: 16.16 / Avg: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

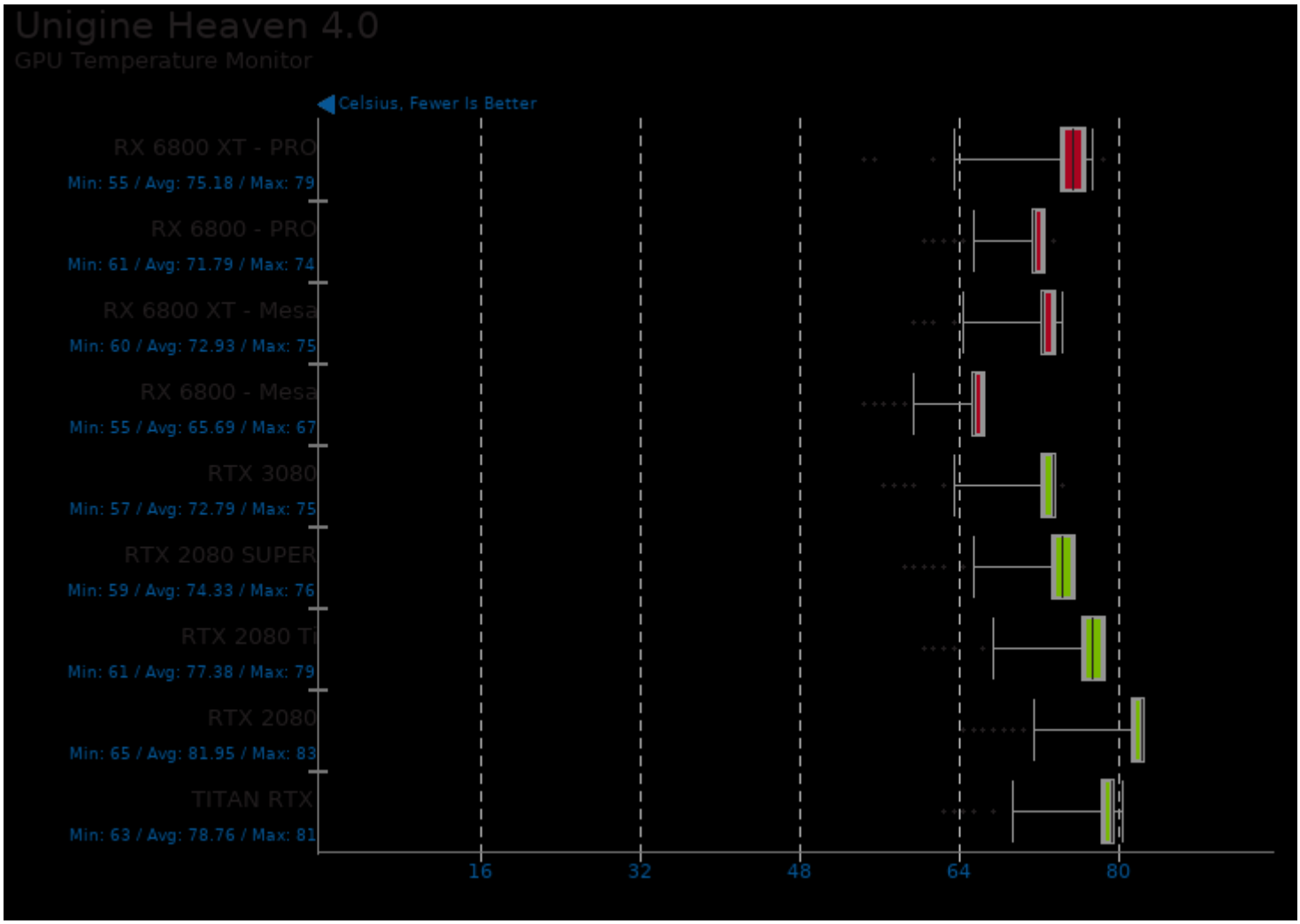

Total War: Three Kingdoms 1.0.1
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 60 / Avg: 71.14 / Max: 78
RX 6800 - PRO
Min: 58 / Avg: 67.06 / Max: 71
RX 6800 XT - Mesa
Min: 62 / Avg: 72.57 / Max: 77
RX 6800 - Mesa
Min: 54 / Avg: 63.42 / Max: 67
RTX 3080
Min: 54 / Avg: 68.69 /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

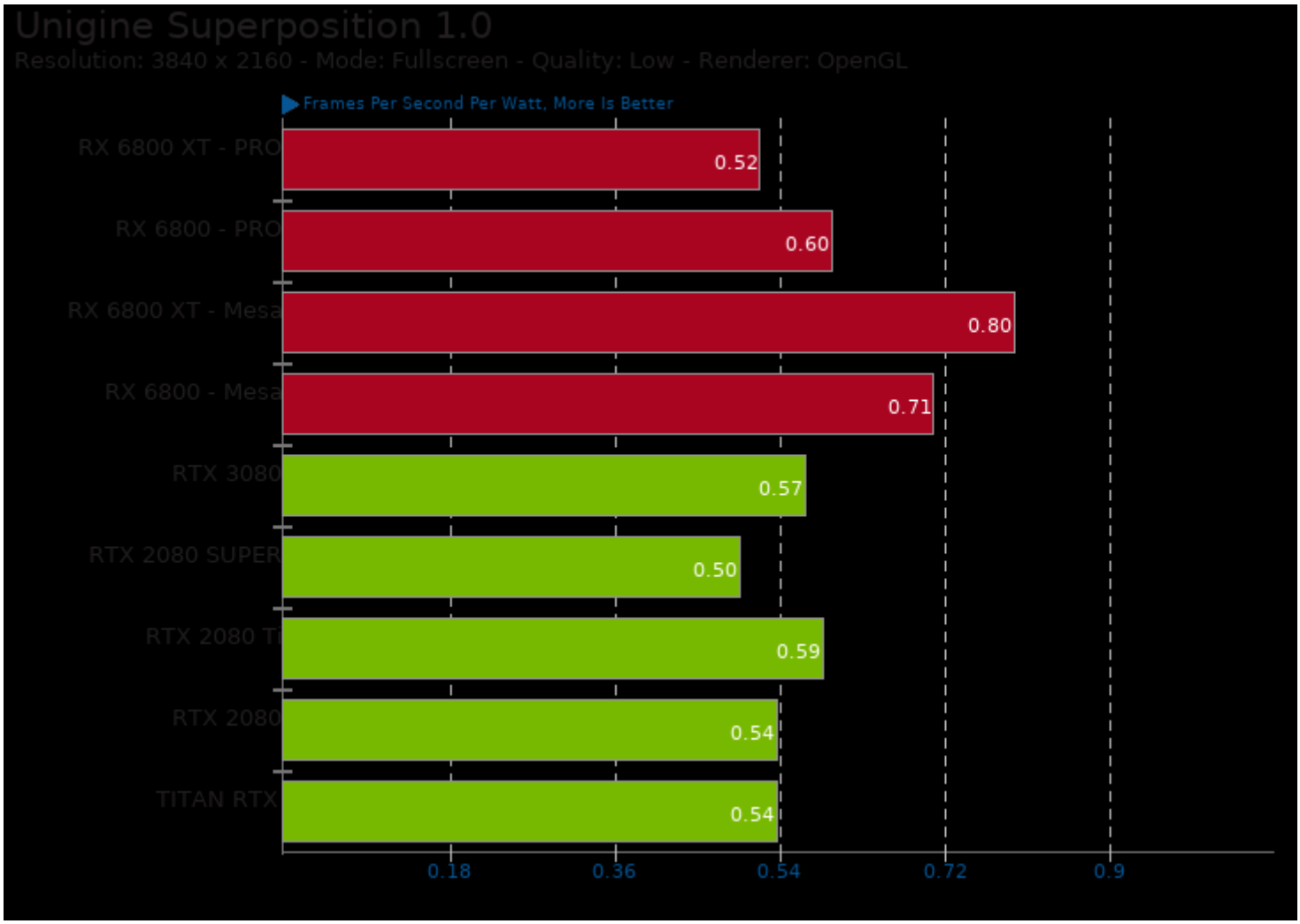

Total War: Three Kingdoms 1.0.1
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 9 / Avg: 188.55 / Max: 344
RX 6800 - PRO
Min: 6 / Avg: 158.56 / Max: 257
RX 6800 XT - Mesa
Min: 6 / Avg: 217.7 / Max: 292
RX 6800 - Mesa
Min: 5 / Avg: 167.42 / Max: 224
RTX 3080
Min: 18.62 / Avg: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

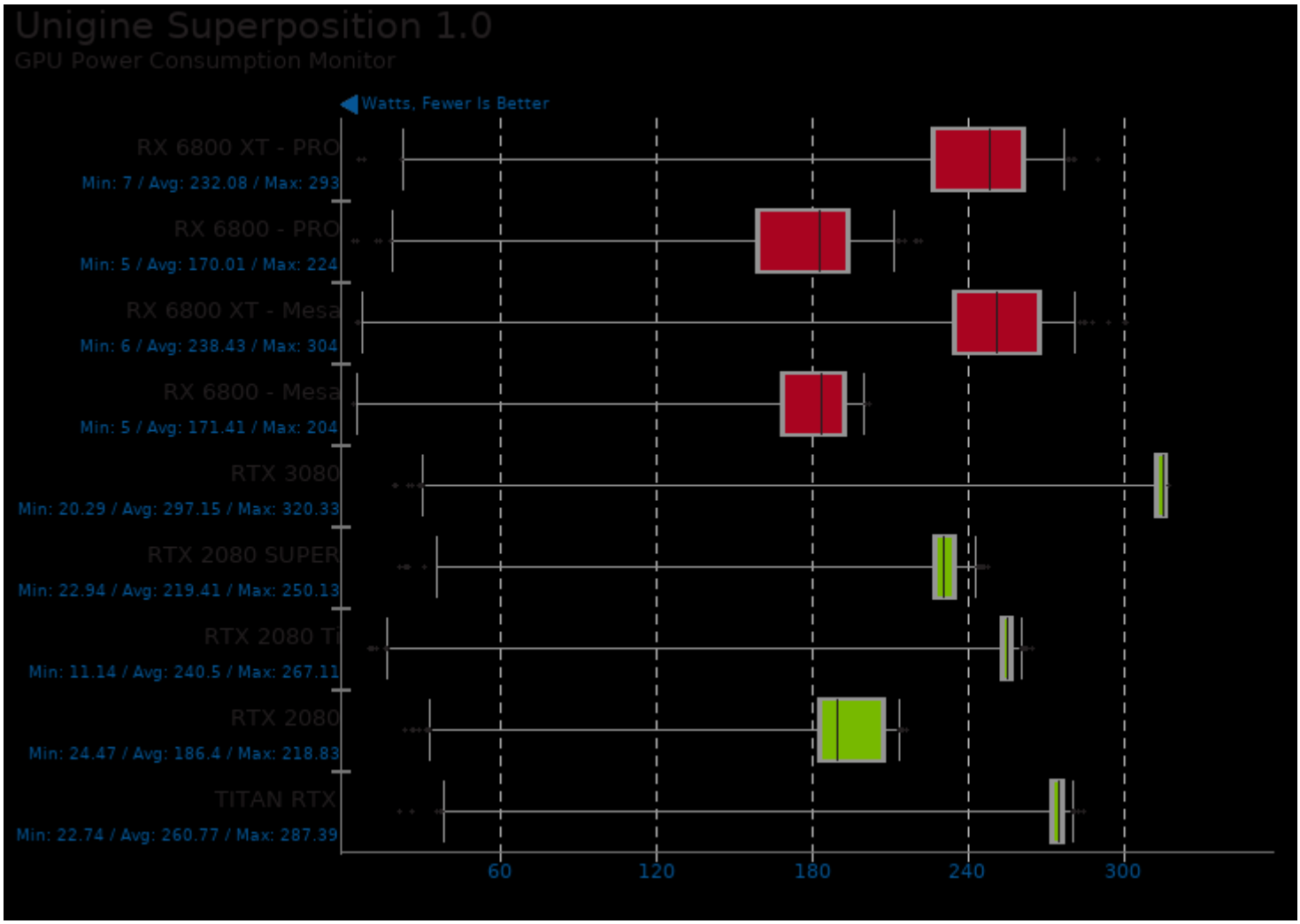

Total War: Three Kingdoms 1.0.1
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 63 / Avg: 72.34 / Max: 78
RX 6800 - PRO
Min: 58 / Avg: 67.86 / Max: 72
RX 6800 XT - Mesa
Min: 60 / Avg: 72.11 / Max: 76
RX 6800 - Mesa
Min: 54 / Avg: 63.94 / Max: 67
RTX 3080
Min: 56 / Avg: 69.22 /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

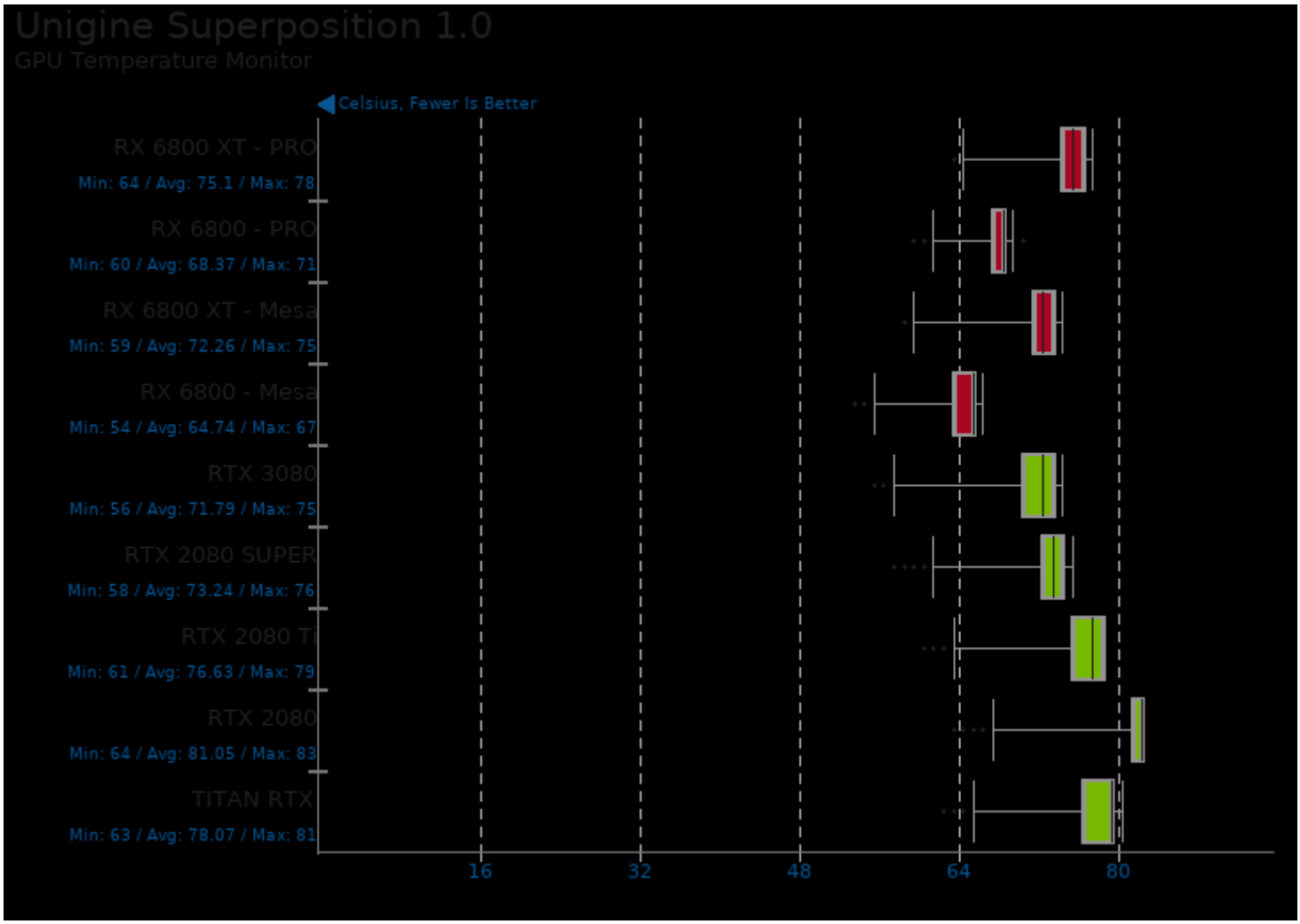

Unigine Heaven 4.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
0.46
RX 6800 - PRO
0.51
RX 6800 XT - Mesa
0.39
RX 6800 - Mesa
0.35
RTX 3080
0.30
RTX 2080 SUPER
0.23
RTX 2080 Ti
0.30
RTX 2080
0.25
TITAN RTX
0.25
0.1148
0.2296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

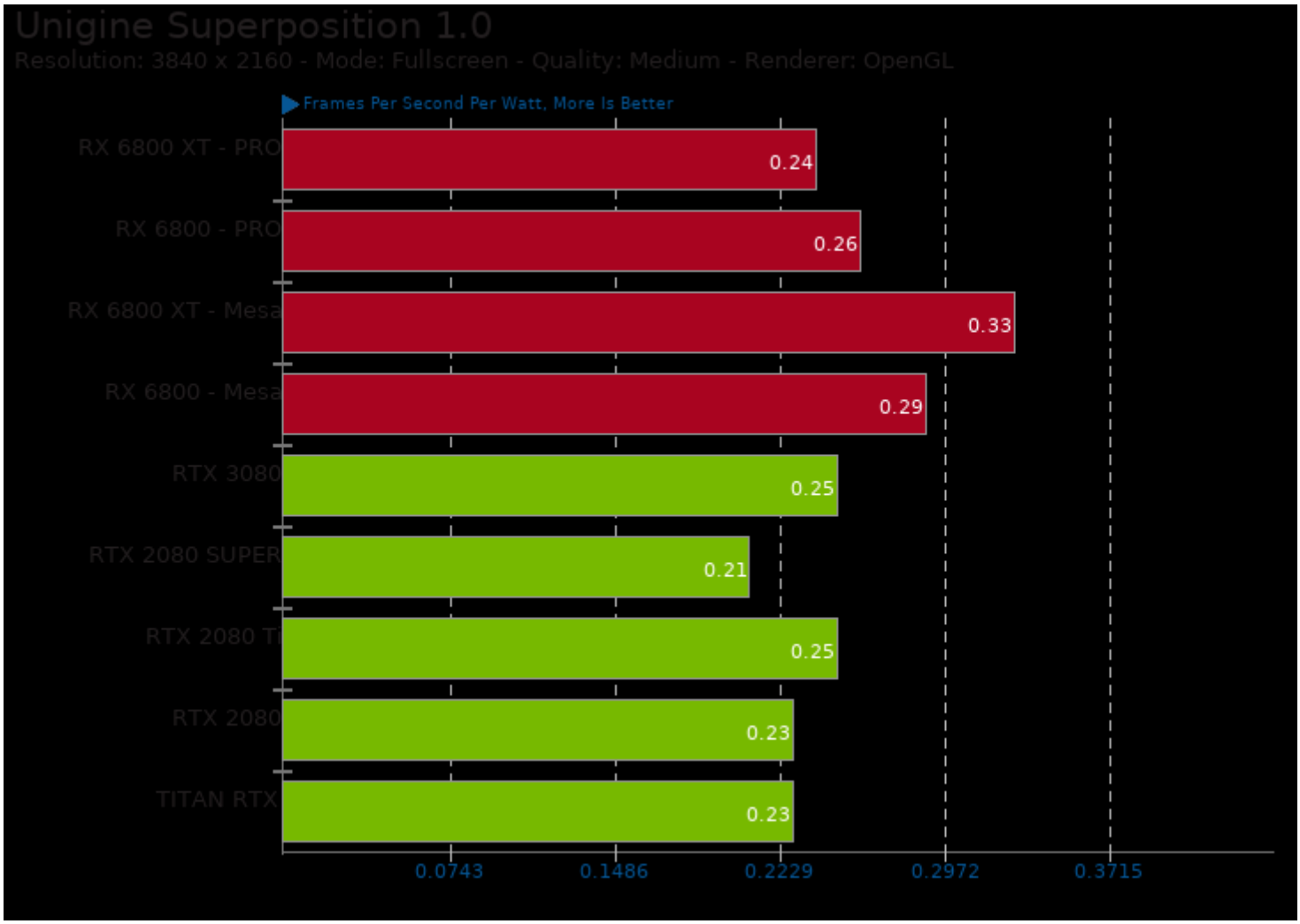

Unigine Heaven 4.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 245.45 / Max: 315
RX 6800 - PRO
Min: 6 / Avg: 196.66 / Max: 244
RX 6800 XT - Mesa
Min: 6 / Avg: 246.03 / Max: 334
RX 6800 - Mesa
Min: 5 / Avg: 182.33 / Max: 214
RTX 3080
Min: 14.34 / Avg: 307.12 / Max: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

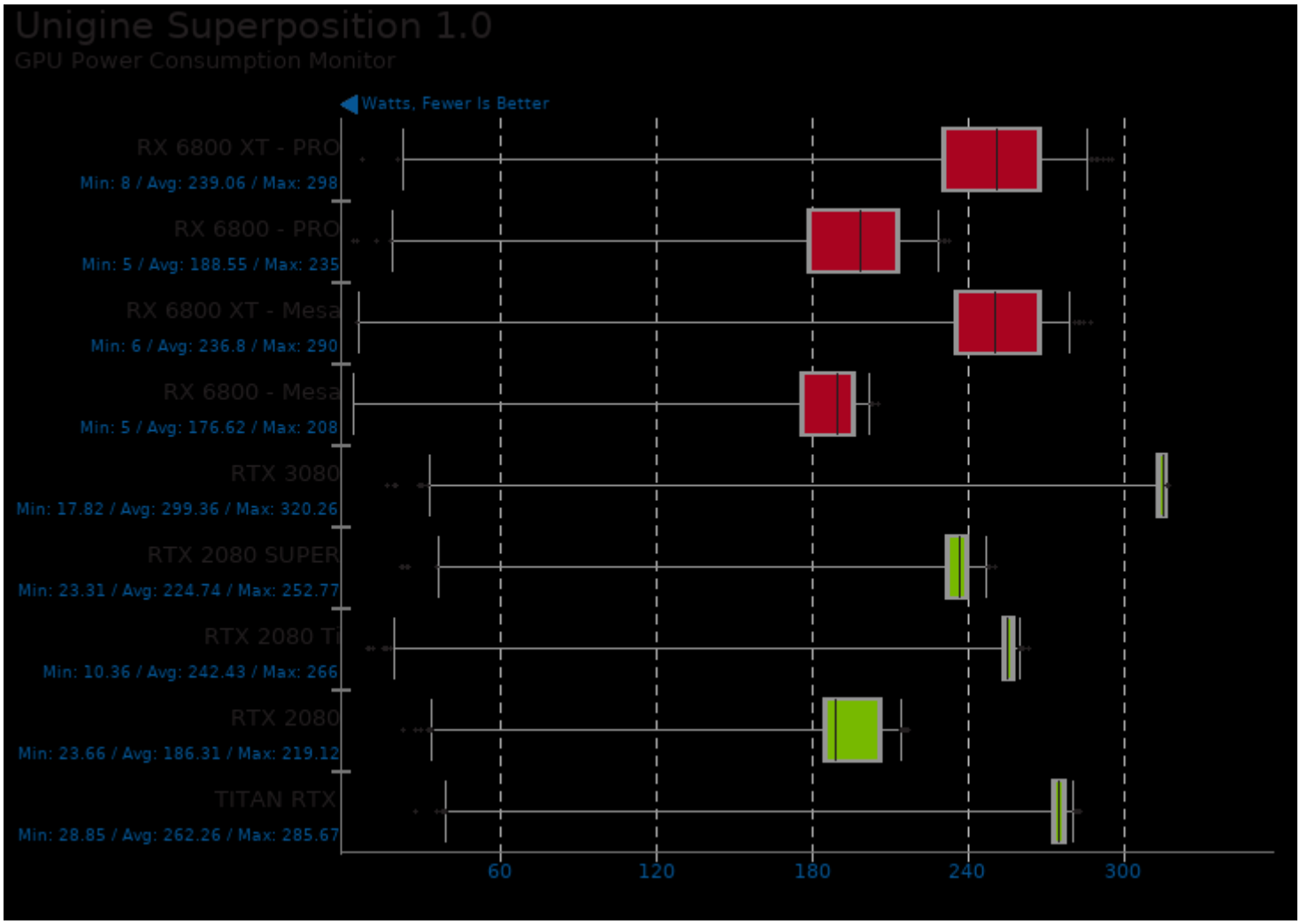

Unigine Heaven 4.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 55 / Avg: 75.18 / Max: 79
RX 6800 - PRO
Min: 61 / Avg: 71.79 / Max: 74
RX 6800 XT - Mesa
Min: 60 / Avg: 72.93 / Max: 75
RX 6800 - Mesa
Min: 55 / Avg: 65.69 / Max: 67
RTX 3080
Min: 57 / Avg: 72.79 / Max: 75
RTX 2080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

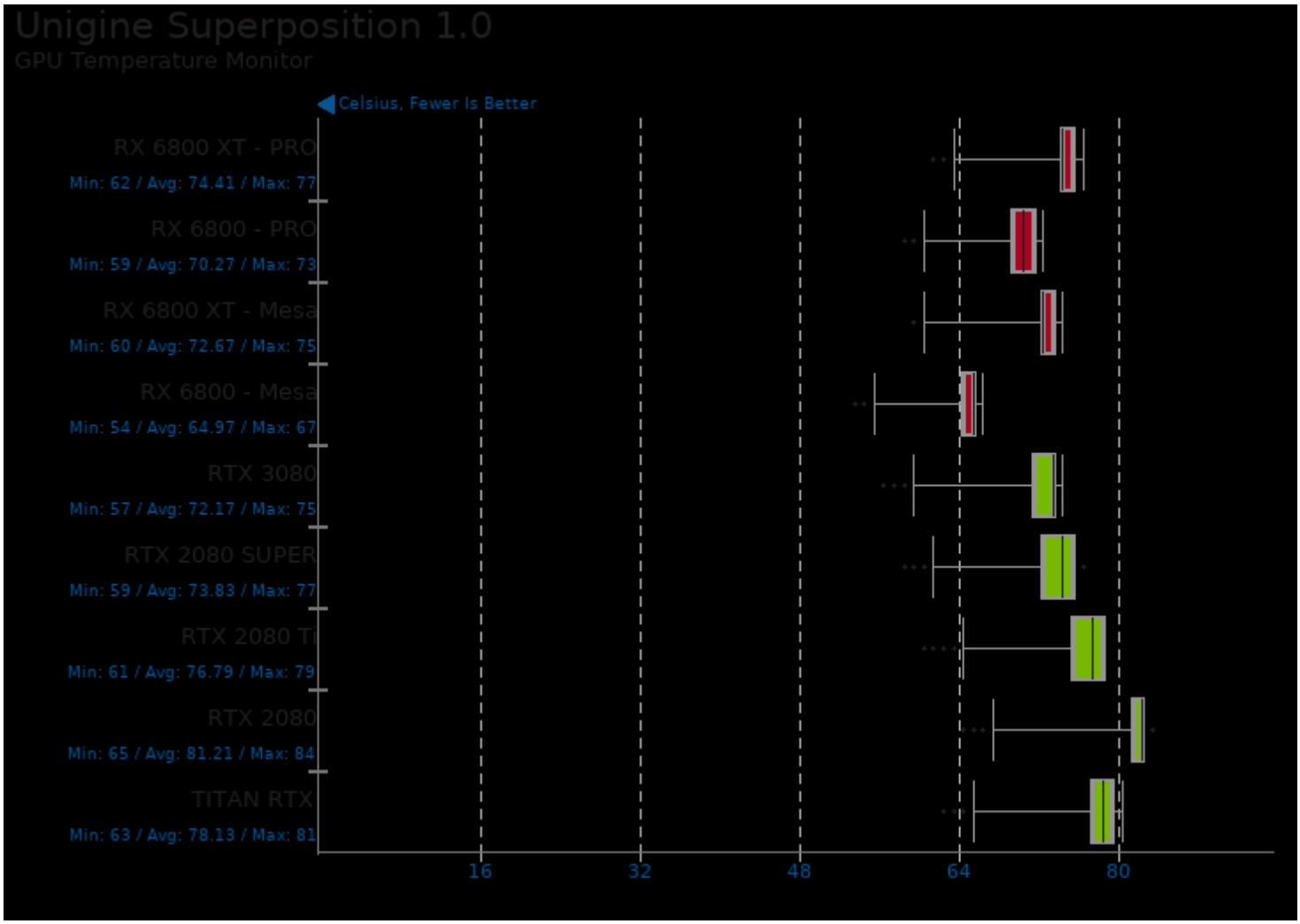

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Low - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
0.52
RX 6800 - PRO
0.60
RX 6800 XT - Mesa
0.80
RX 6800 - Mesa
0.71
RTX 3080
0.57
RTX 2080 SUPER
0.50
RTX 2080 Ti
0.59
RTX 2080
0.54
TITAN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

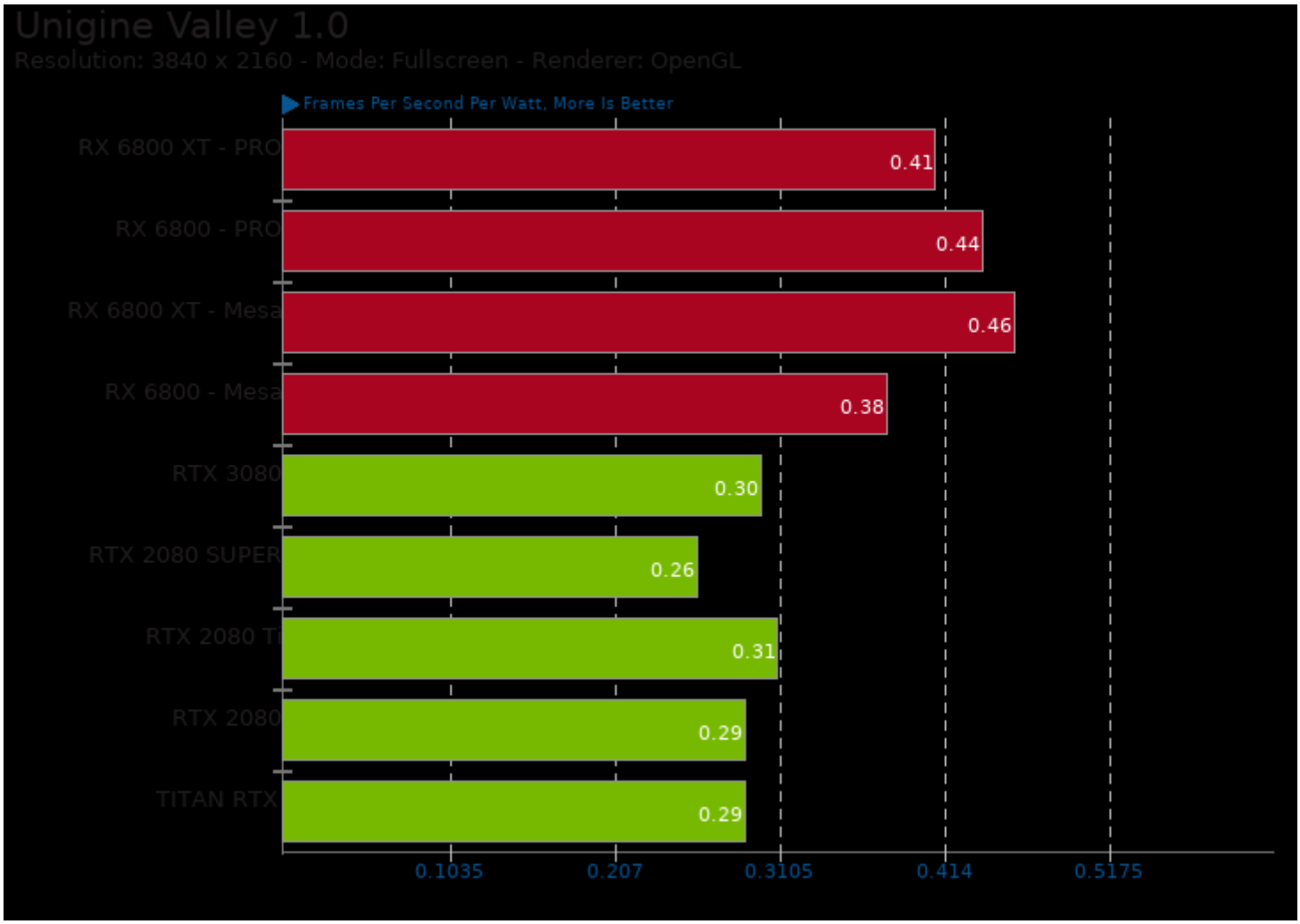

Unigine Superposition 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 232.08 / Max: 293
RX 6800 - PRO
Min: 5 / Avg: 170.01 / Max: 224
RX 6800 XT - Mesa
Min: 6 / Avg: 238.43 / Max: 304
RX 6800 - Mesa
Min: 5 / Avg: 171.41 / Max: 204
RTX 3080
Min: 20.29 / Avg: 297.15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

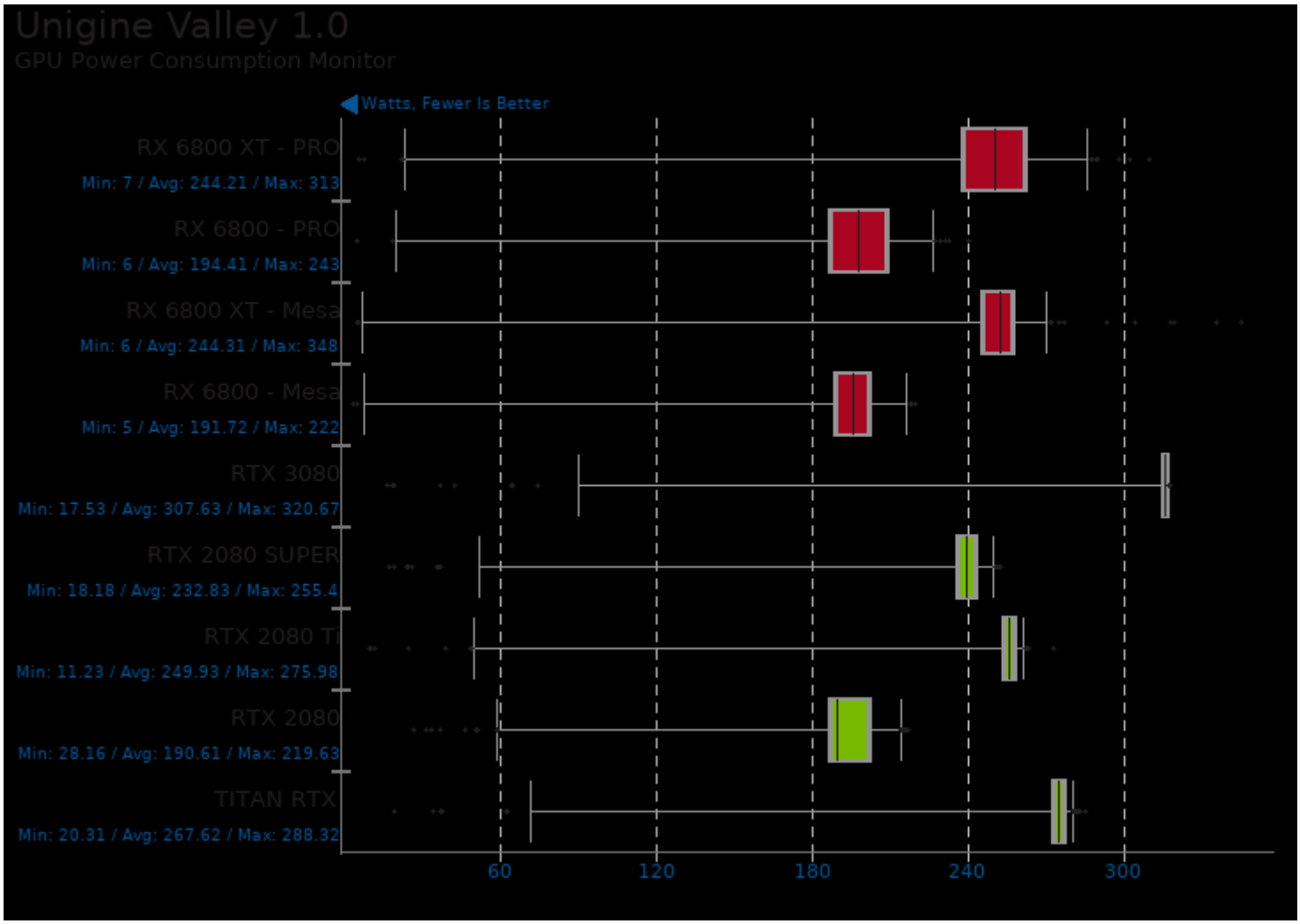

Unigine Superposition 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 64 / Avg: 75.1 / Max: 78
RX 6800 - PRO
Min: 60 / Avg: 68.37 / Max: 71
RX 6800 XT - Mesa
Min: 59 / Avg: 72.26 / Max: 75
RX 6800 - Mesa
Min: 54 / Avg: 64.74 / Max: 67
RTX 3080
Min: 56 / Avg: 71.79 / Max: 75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

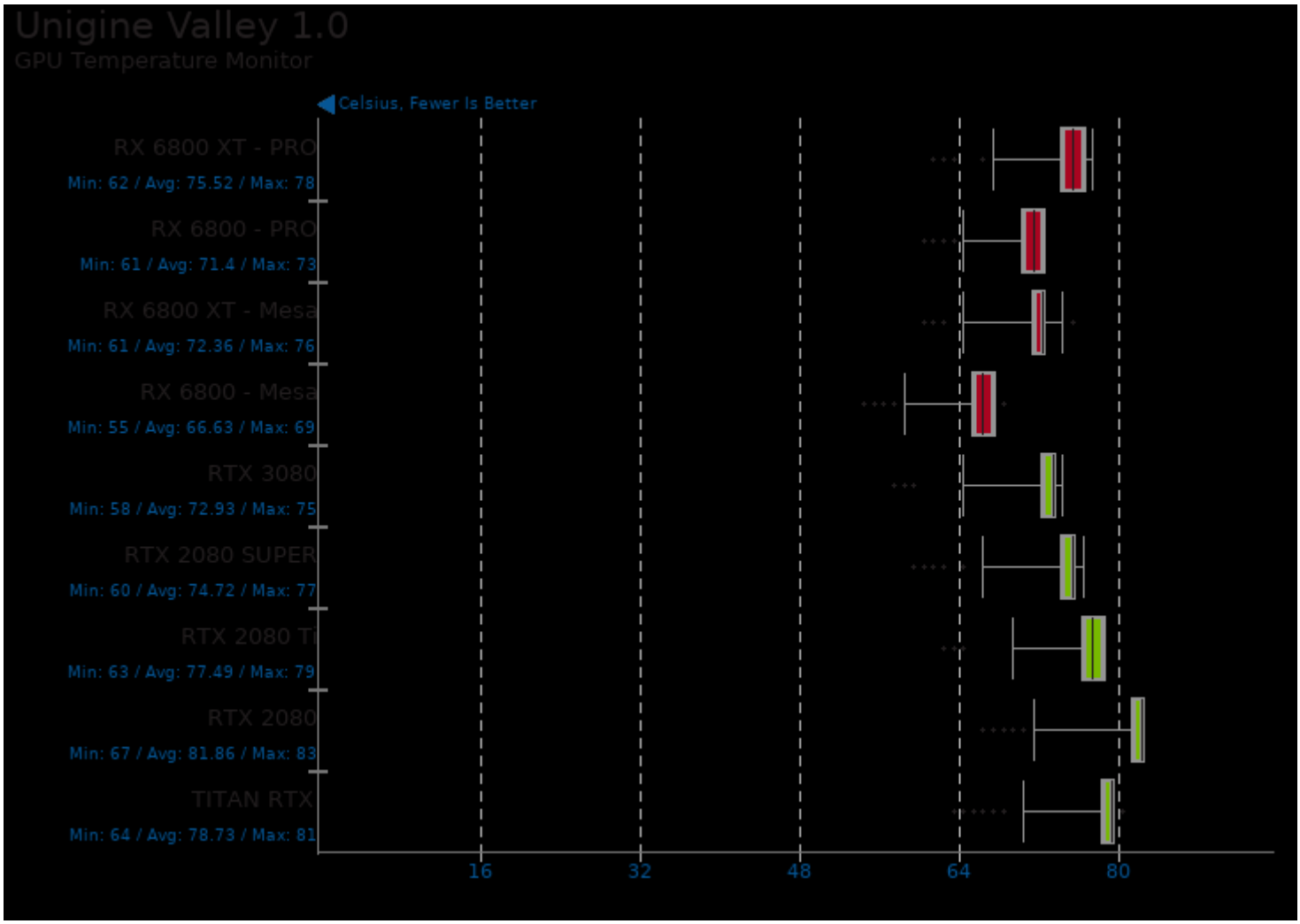

Unigine Superposition 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen - Quality: Medium - Renderer: OpenGL
Frames Per Second Per Watt, More Is Better
RX 6800 XT - PRO
0.24
RX 6800 - PRO
0.26
RX 6800 XT - Mesa
0.33
RX 6800 - Mesa
0.29
RTX 3080
0.25
RTX 2080 SUPER
0.21
RTX 2080 Ti
0.25
RTX 2080
0.23
TITAN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

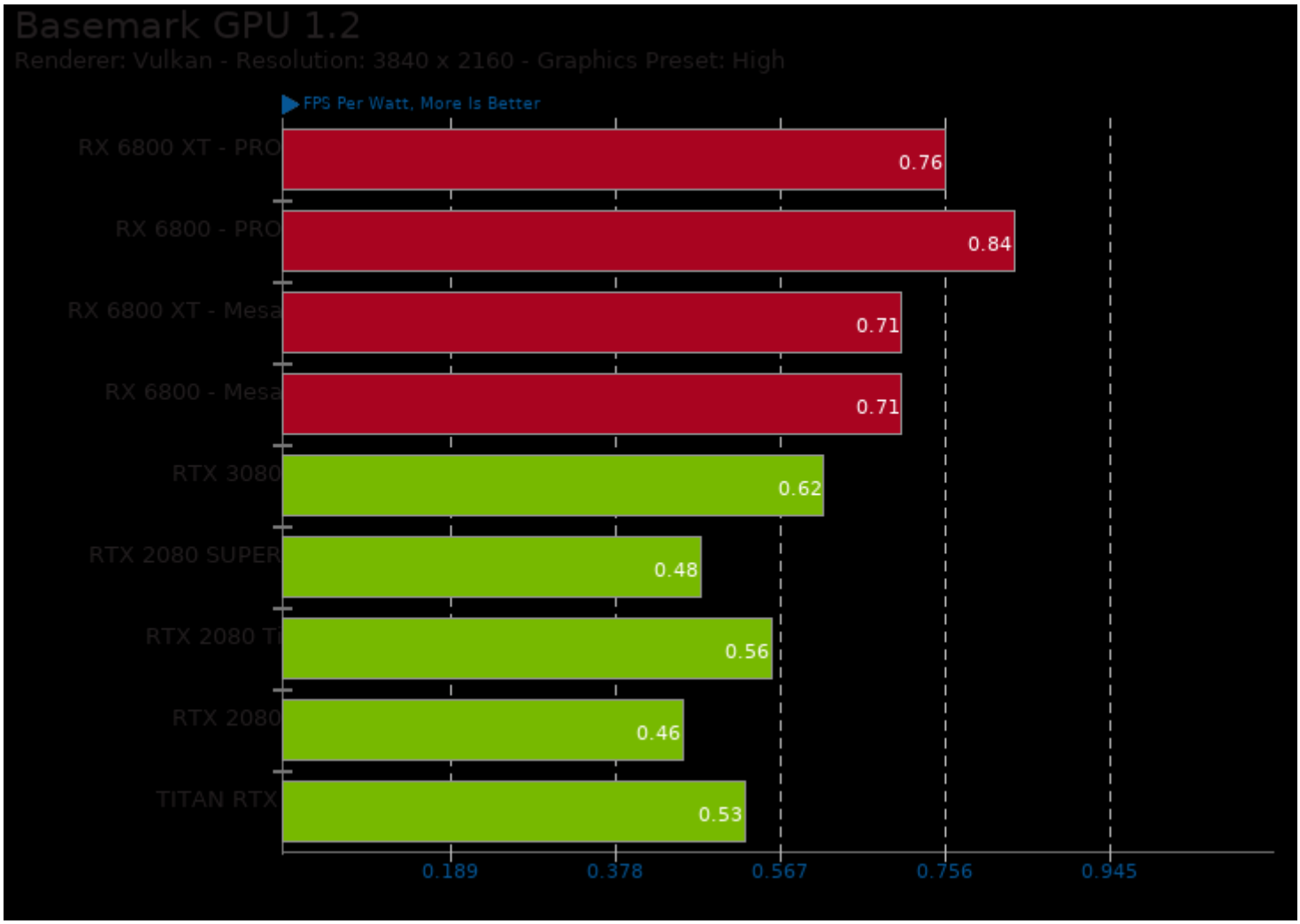

Unigine Superposition 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 8 / Avg: 239.06 / Max: 298
RX 6800 - PRO
Min: 5 / Avg: 188.55 / Max: 235
RX 6800 XT - Mesa
Min: 6 / Avg: 236.8 / Max: 290
RX 6800 - Mesa
Min: 5 / Avg: 176.62 / Max: 208
RTX 3080
Min: 17.82 / Avg: 299.36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

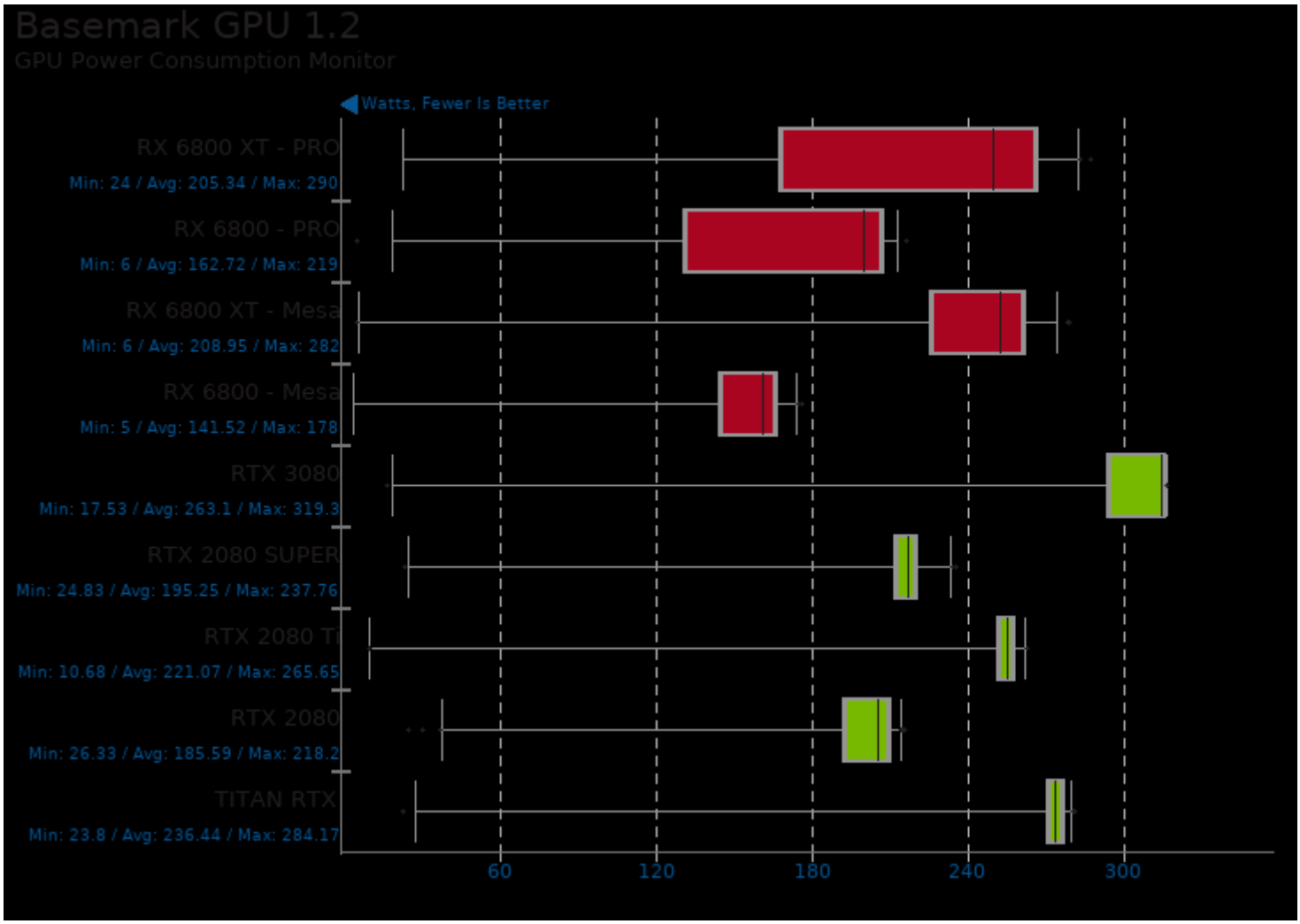

Unigine Superposition 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 62 / Avg: 74.41 / Max: 77
RX 6800 - PRO
Min: 59 / Avg: 70.27 / Max: 73
RX 6800 XT - Mesa
Min: 60 / Avg: 72.67 / Max: 75
RX 6800 - Mesa
Min: 54 / Avg: 64.97 / Max: 67
RTX 3080
Min: 57 / Avg: 72.17 / Max: 75
RTX 2080 SUPER
Min: 59 / Avg: 73.83 / Max: 77
RTX 2080 Ti
Min: 61 / Avg: 76.79 / Max: 79
RTX 2080
Min: 65 / Avg: 81.21 / Max: 84
TITAN RTX
Min: 63 / Avg: 78.13 / Max: 81
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 - PRO
0.41
RX 6800 - PRO
0.44
RX 6800 XT - Mesa
0.46
RX 6800 - Mesa
0.38
RTX 3080
0.30
RTX 2080 SUPER
0.26
RTX 2080 Ti
0.31
RTX 2080
0.29
TITAN RTX
0.29
0.1035
0.207
0.3105
0.414
0.5175

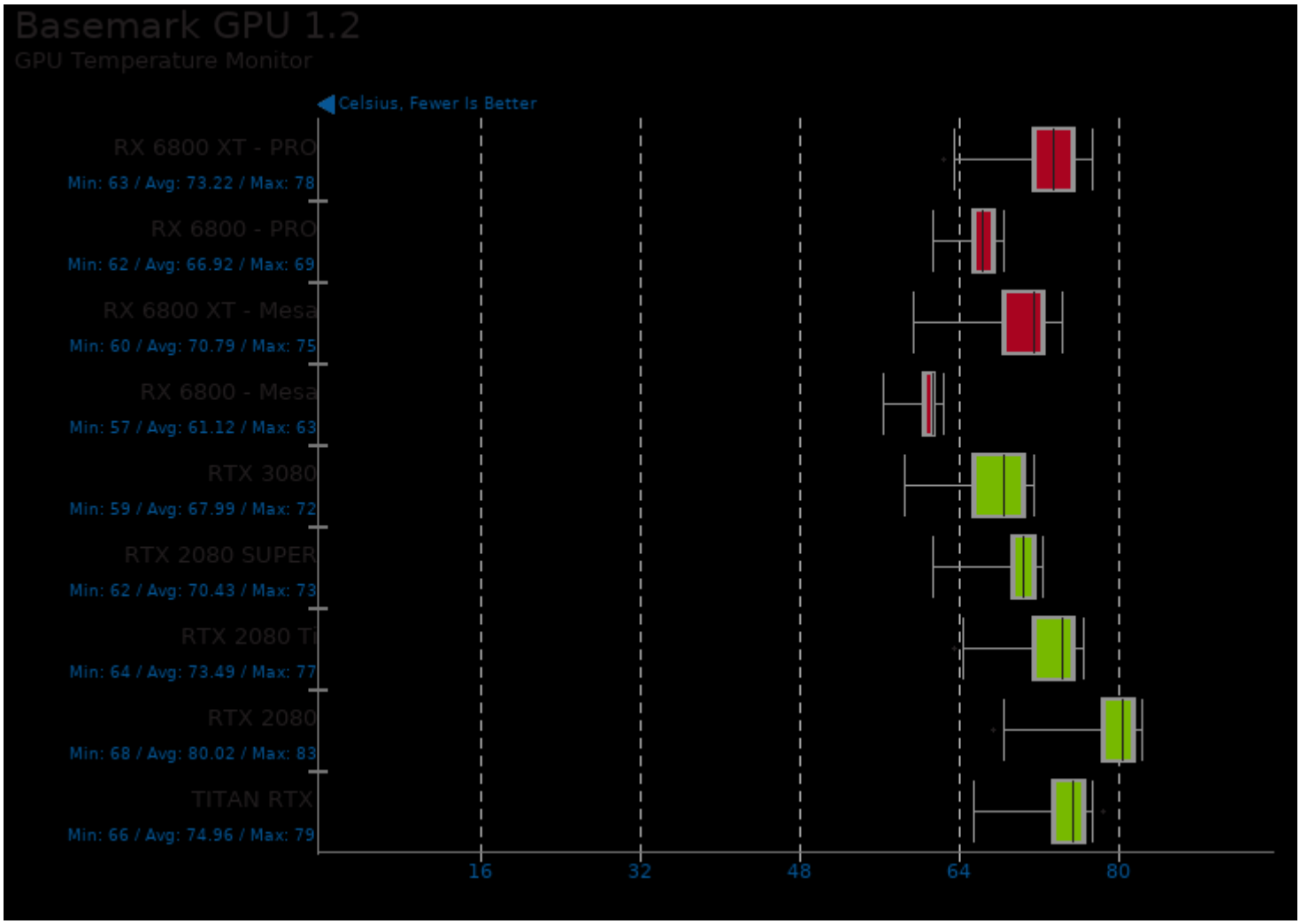

Unigine Valley 1.0
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 7 / Avg: 244.21 / Max: 313
RX 6800 - PRO
Min: 6 / Avg: 194.41 / Max: 243
RX 6800 XT - Mesa
Min: 6 / Avg: 244.31 / Max: 348
RX 6800 - Mesa
Min: 5 / Avg: 191.72 / Max: 222
RTX 3080
Min: 17.53 / Avg: 307.63 / Max: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

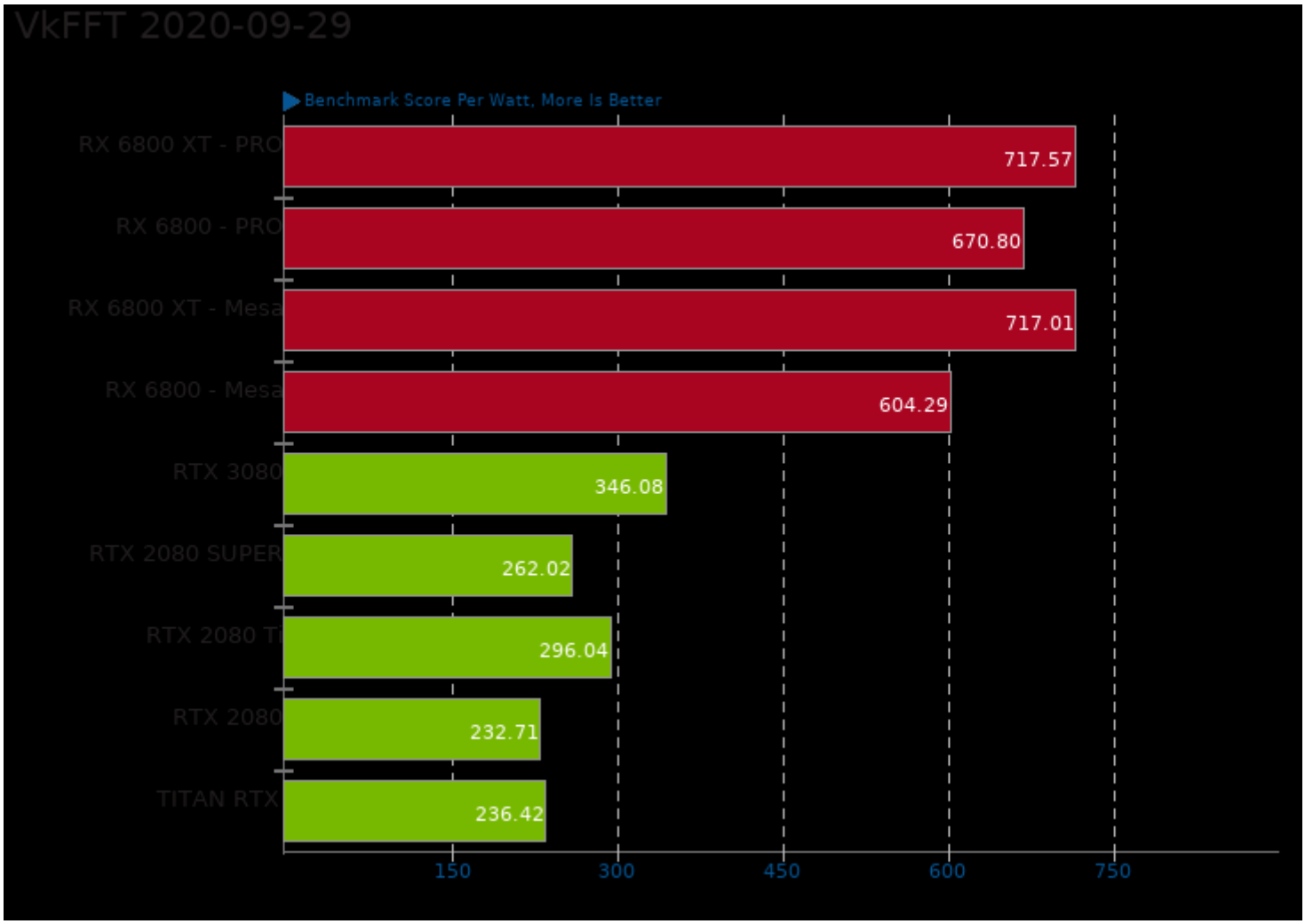

Unigine Valley 1.0
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 62 / Avg: 75.52 / Max: 78
RX 6800 - PRO
Min: 61 / Avg: 71.4 / Max: 73
RX 6800 XT - Mesa
Min: 61 / Avg: 72.36 / Max: 76
RX 6800 - Mesa
Min: 55 / Avg: 66.63 / Max: 69
RTX 3080
Min: 58 / Avg: 72.93 / Max: 75
RTX 2080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

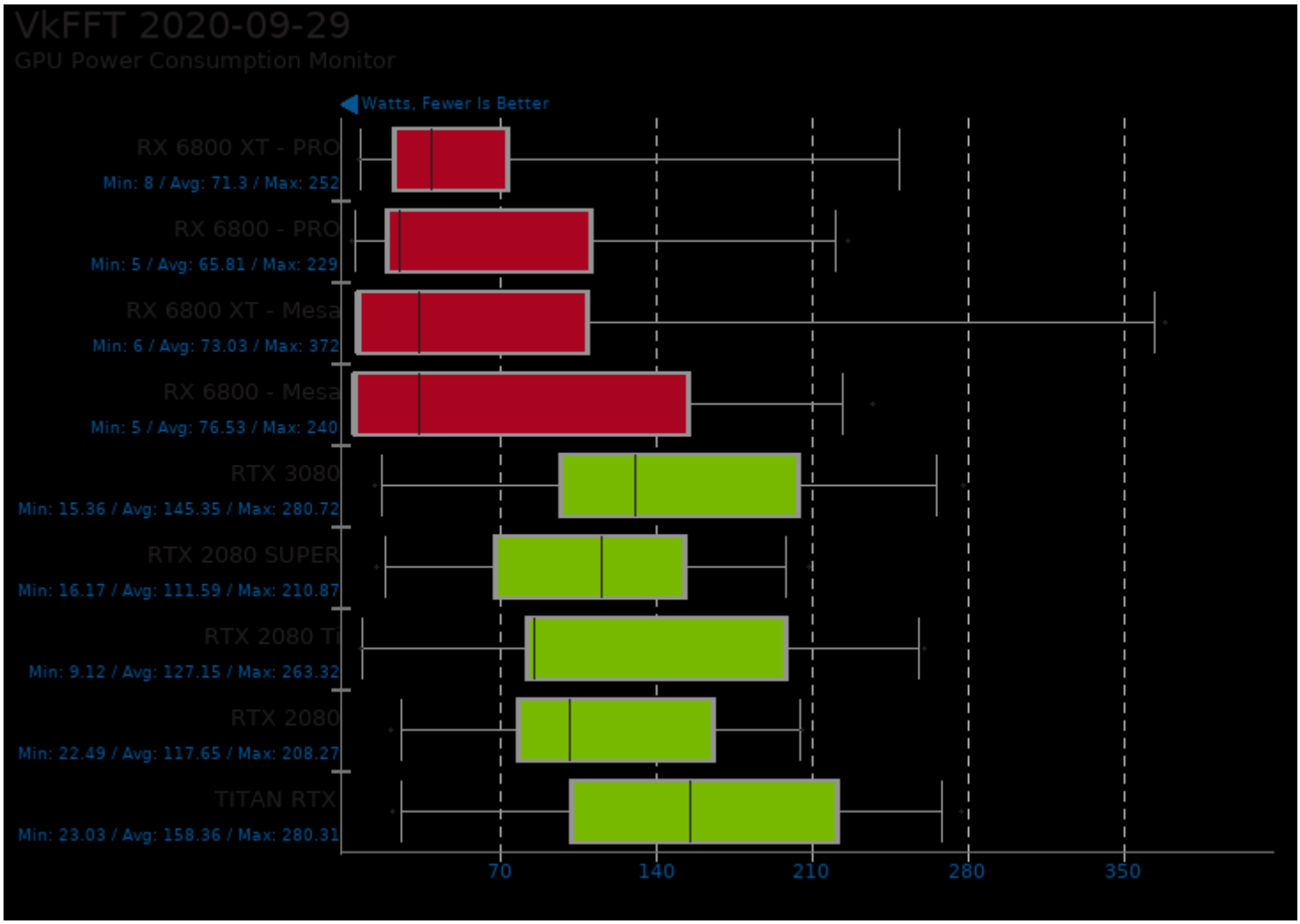

Basemark GPU 1.2
Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High
FPS Per Watt, More Is Better
RX 6800 XT - PRO
0.76
RX 6800 - PRO
0.84
RX 6800 XT - Mesa
0.71
RX 6800 - Mesa
0.71
RTX 3080
0.62
RTX 2080 SUPER
0.48
RTX 2080 Ti
0.56
RTX 2080
0.46
TITAN RTX
0.53
0.189
0.378
0.567
0.756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

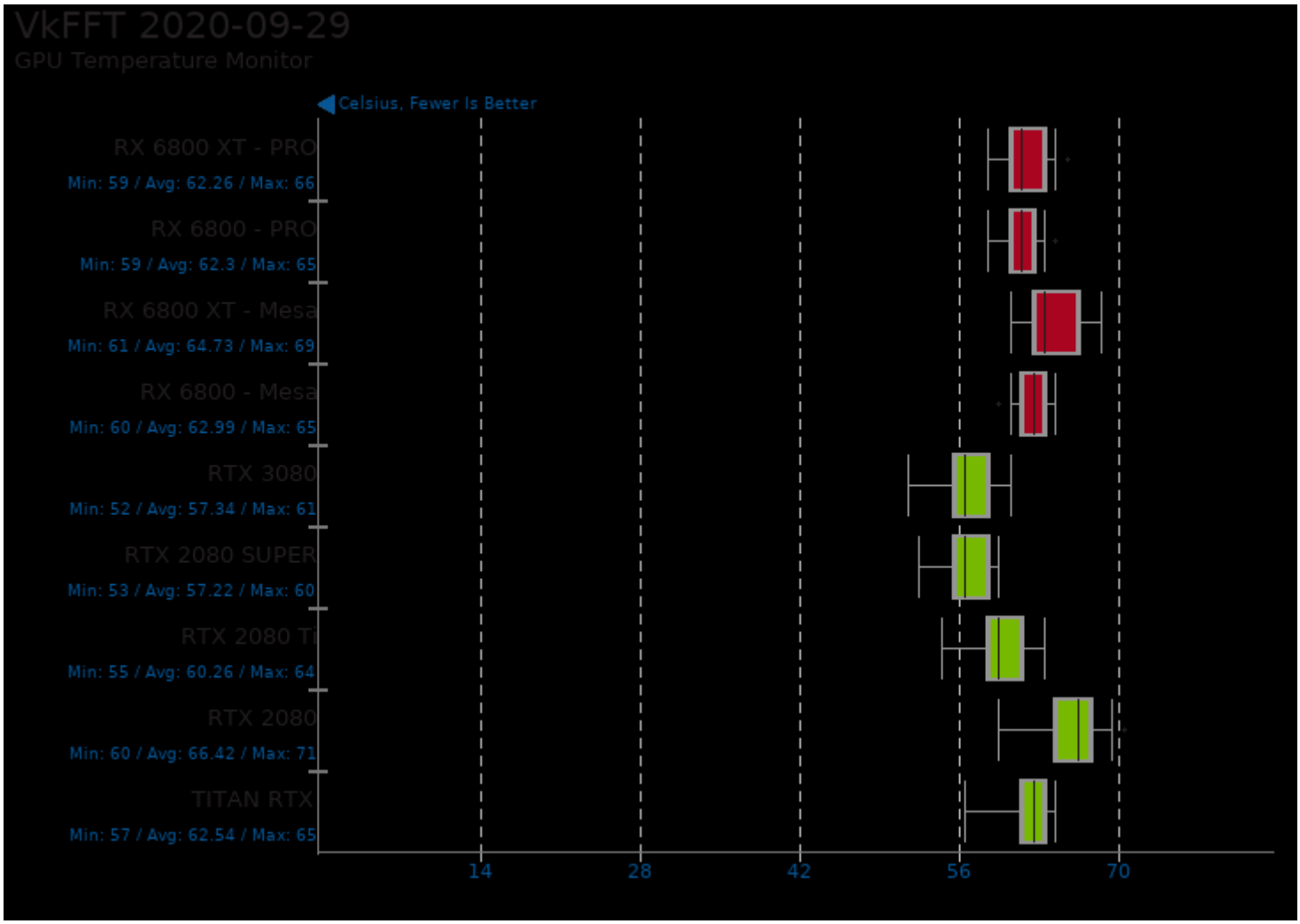

Basemark GPU 1.2
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 24 / Avg: 205.34 / Max: 290
RX 6800 - PRO
Min: 6 / Avg: 162.72 / Max: 219
RX 6800 XT - Mesa
Min: 6 / Avg: 208.95 / Max: 282
RX 6800 - Mesa
Min: 5 / Avg: 141.52 / Max: 178
RTX 3080
Min: 17.53 / Avg: 263.1 / Max: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

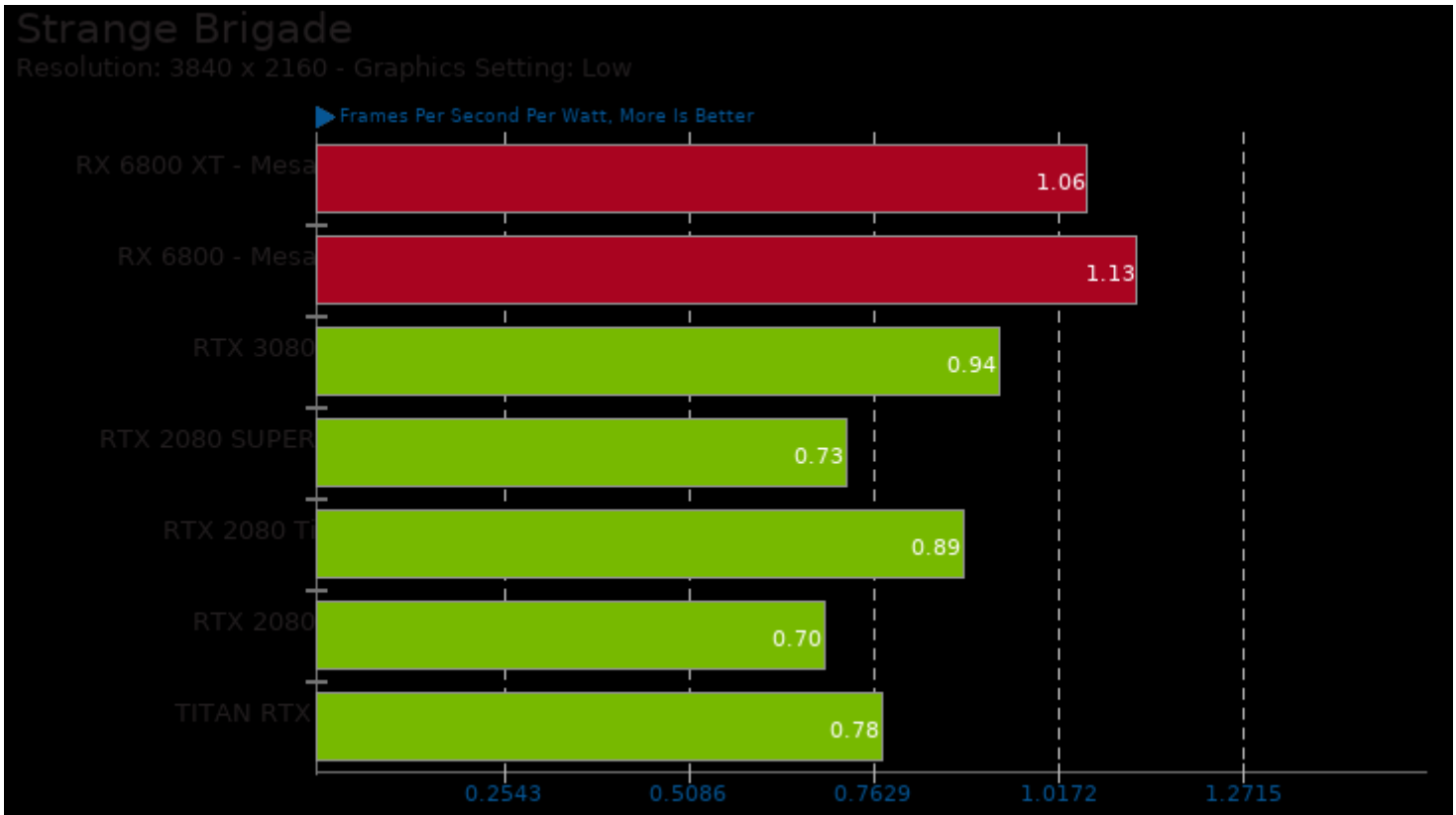
Radeon RX 6800 Series Linux Benchmarks

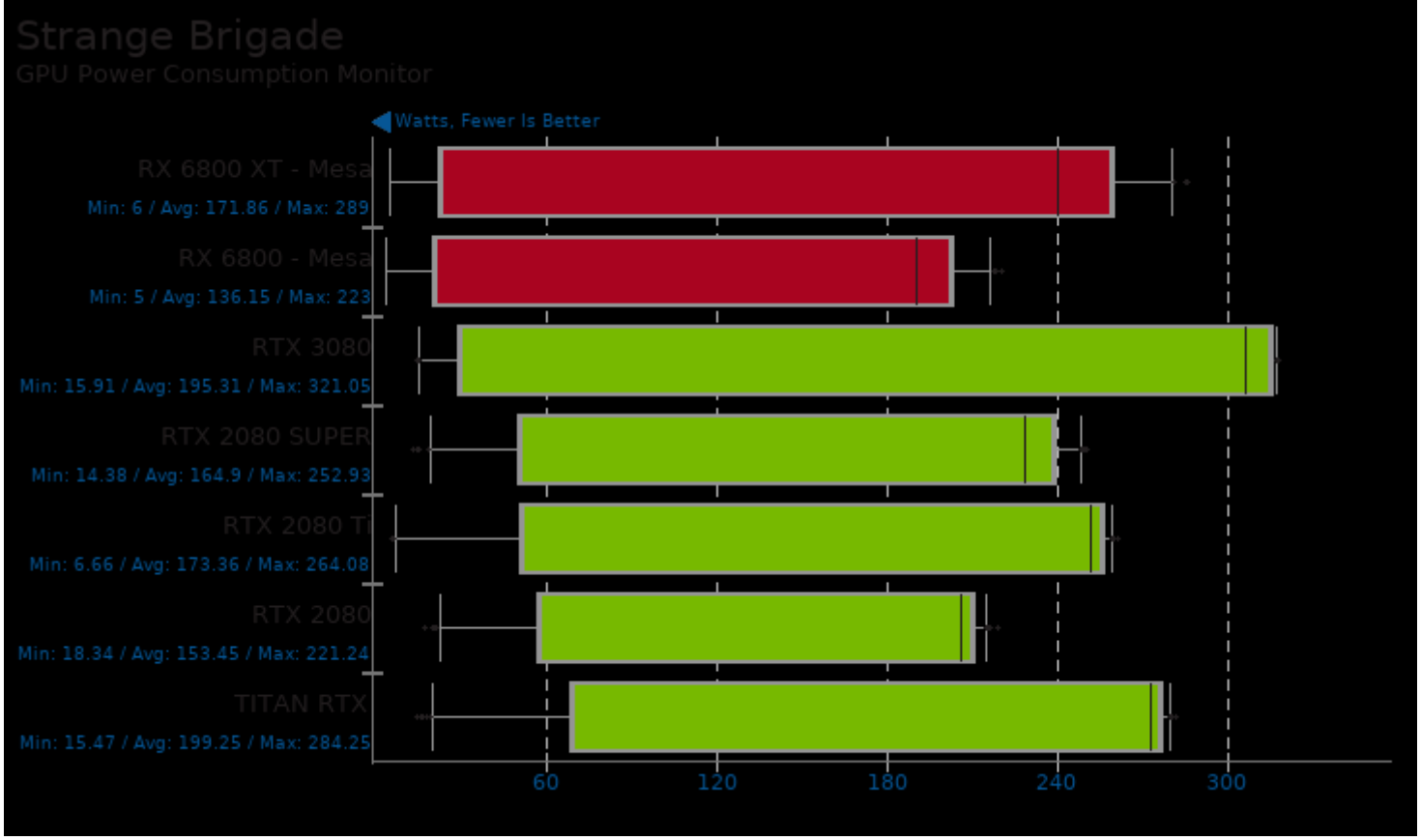


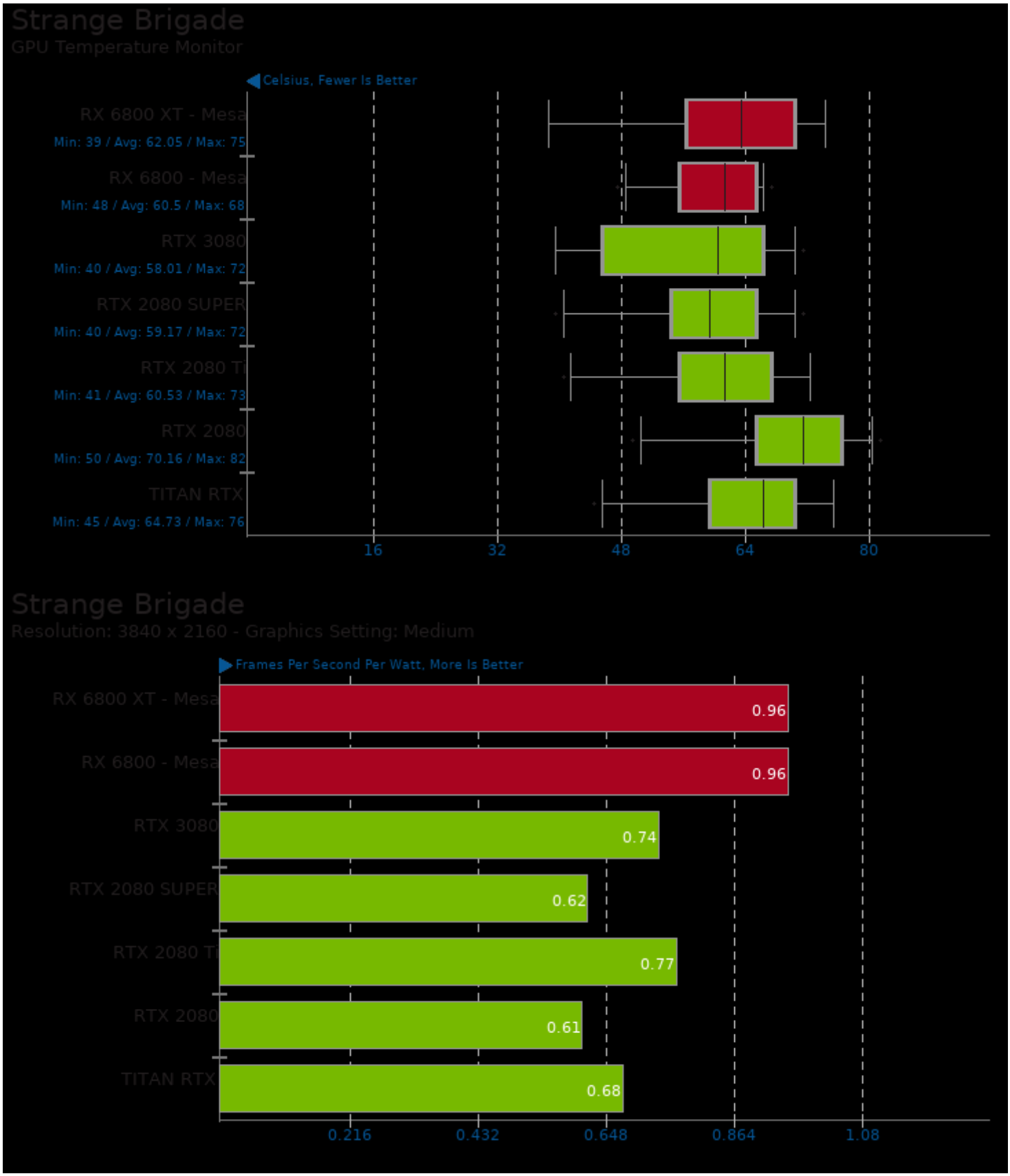

VkFFT 2020-09-29
Benchmark Score Per Watt, More Is Better
RX 6800 XT - PRO
717.57
RX 6800 - PRO
670.80
RX 6800 XT - Mesa
717.01
RX 6800 - Mesa
604.29
RTX 3080
346.08
RTX 2080 SUPER
262.02
RTX 2080 Ti
296.04
RTX 2080
232.71
TITAN RTX
236.42
150
300
450
600
750

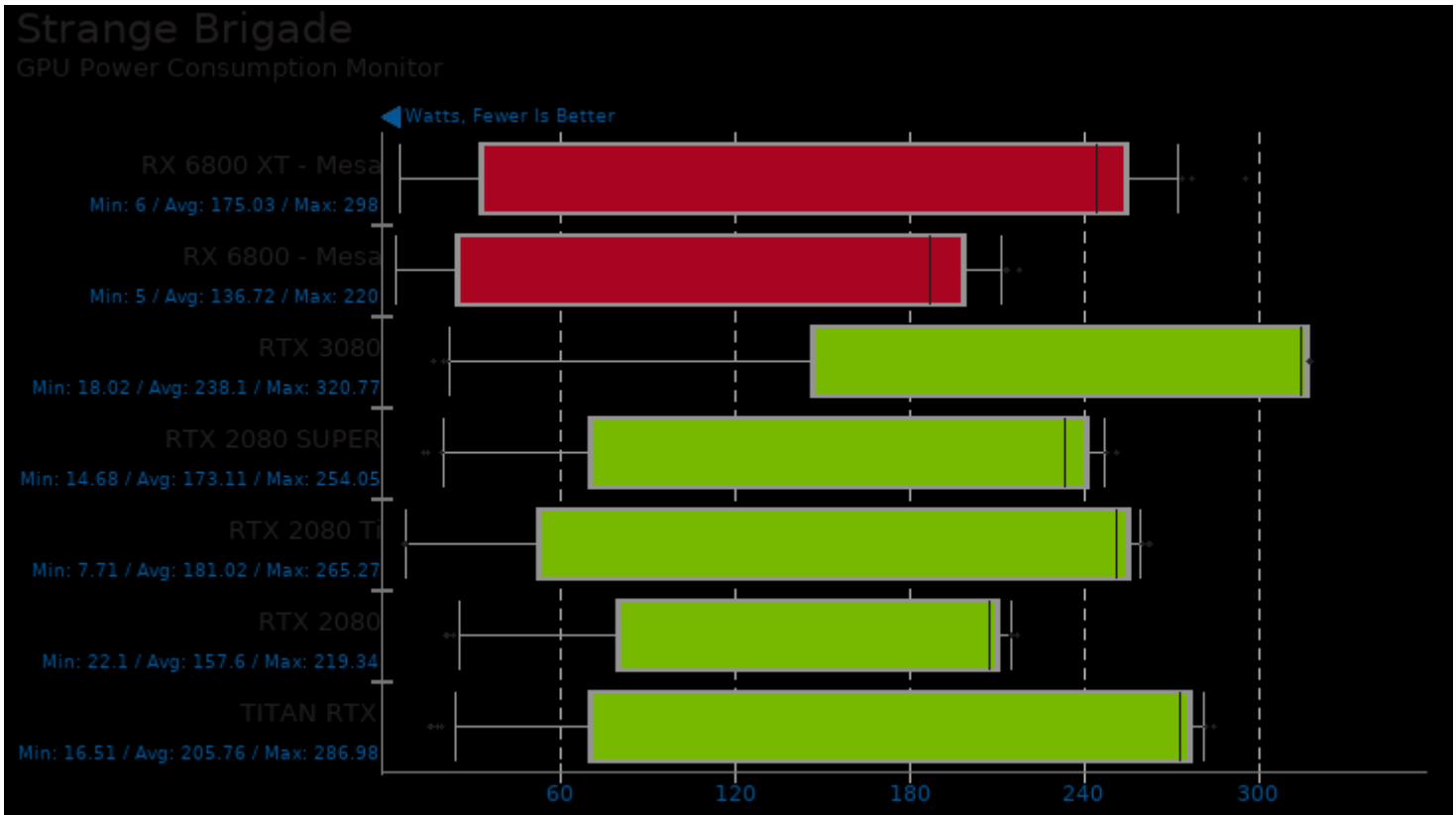

VkFFT 2020-09-29
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - PRO
Min: 8 / Avg: 71.3 / Max: 252
RX 6800 - PRO
Min: 5 / Avg: 65.81 / Max: 229
RX 6800 XT - Mesa
Min: 6 / Avg: 73.03 / Max: 372
RX 6800 - Mesa
Min: 5 / Avg: 76.53 / Max: 240
RTX 3080
Min: 15.36 / Avg: 145.35 / Max: 280.72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

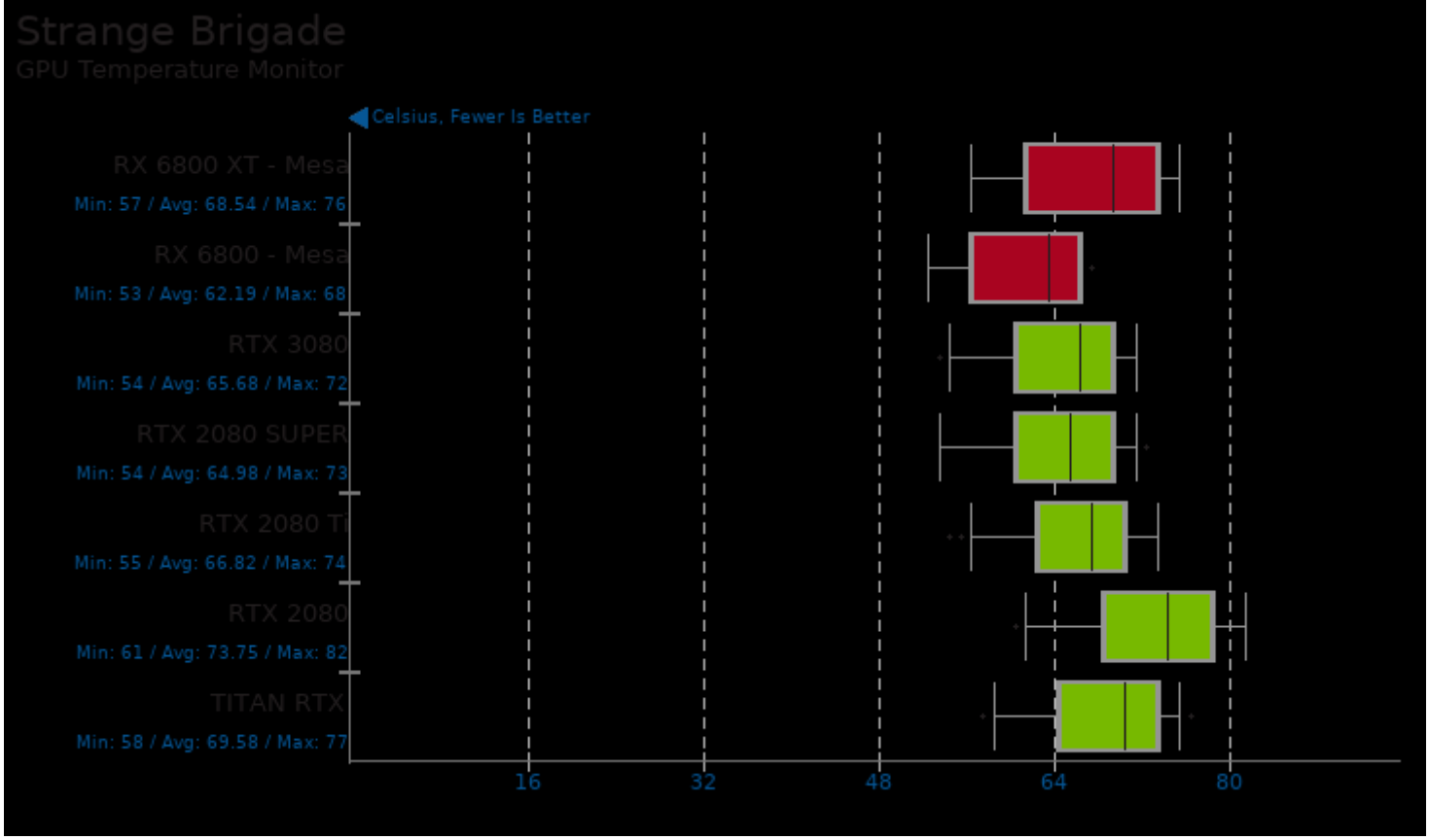

VkFFT 2020-09-29
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - PRO
Min: 59 / Avg: 62.26 / Max: 66
RX 6800 - PRO
Min: 59 / Avg: 62.3 / Max: 65
RX 6800 XT - Mesa
Min: 61 / Avg: 64.73 / Max: 69
RX 6800 - Mesa
Min: 60 / Avg: 62.99 / Max: 65
RTX 3080
Min: 52 / Avg: 57.34 / Max: 61
RTX 2080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

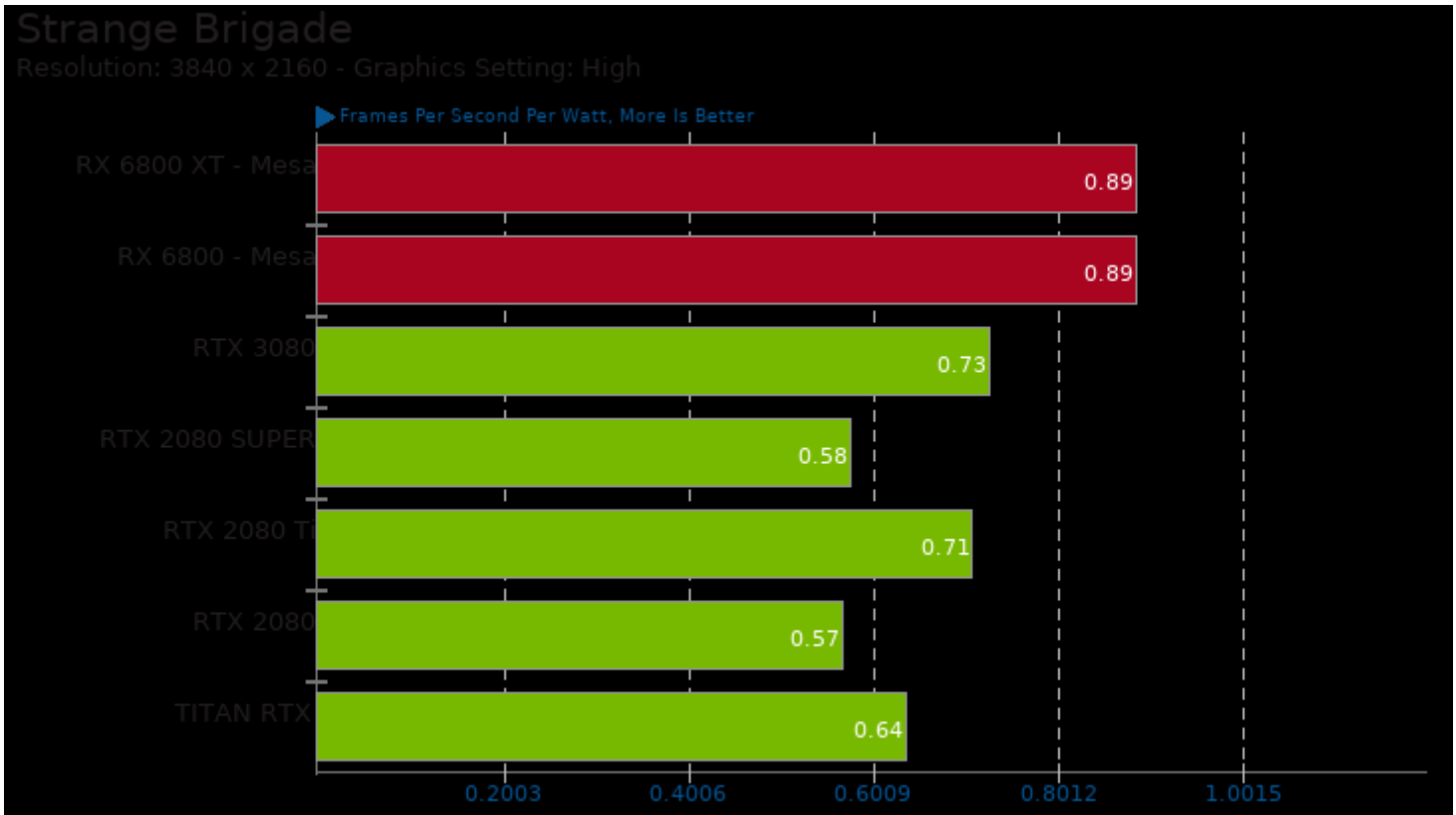

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Low
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
1.06
RX 6800 - Mesa
1.13
RTX 3080
0.94
RTX 2080 SUPER
0.73
RTX 2080 Ti
0.89
RTX 2080
0.70
TITAN RTX
0.78
0.2543
0.5086
0.7629
1.0172
1.2715

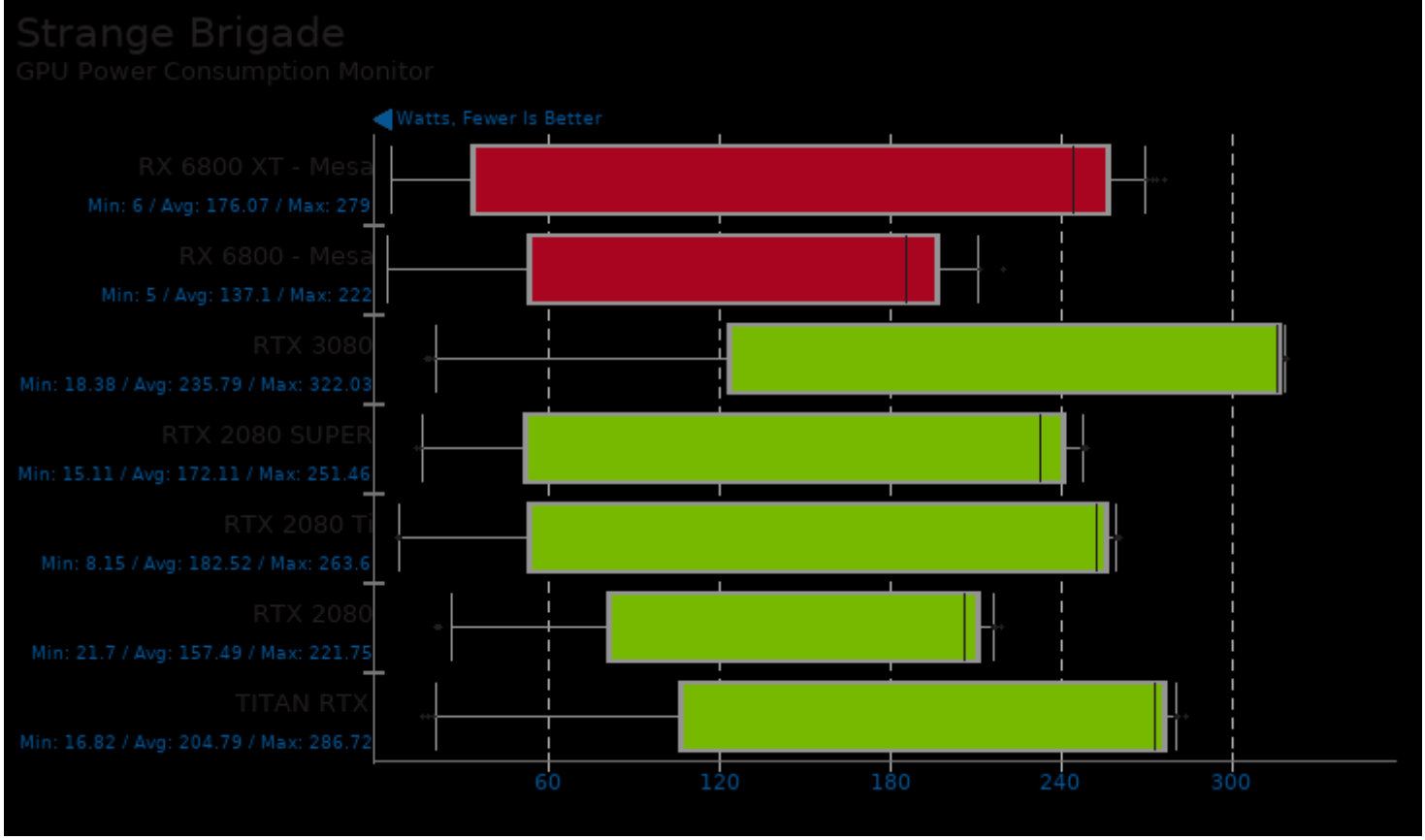

Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - Mesa
Min: 6 / Avg: 171.86 / Max: 289
RX 6800 - Mesa
Min: 5 / Avg: 136.15 / Max: 223
RTX 3080
Min: 15.91 / Avg: 195.31 / Max: 321.05
RTX 2080 SUPER
Min: 14.38 / Avg: 164.9 / Max: 252.93
RTX 2080 Ti
Min: 6.66 / Avg: 173.36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

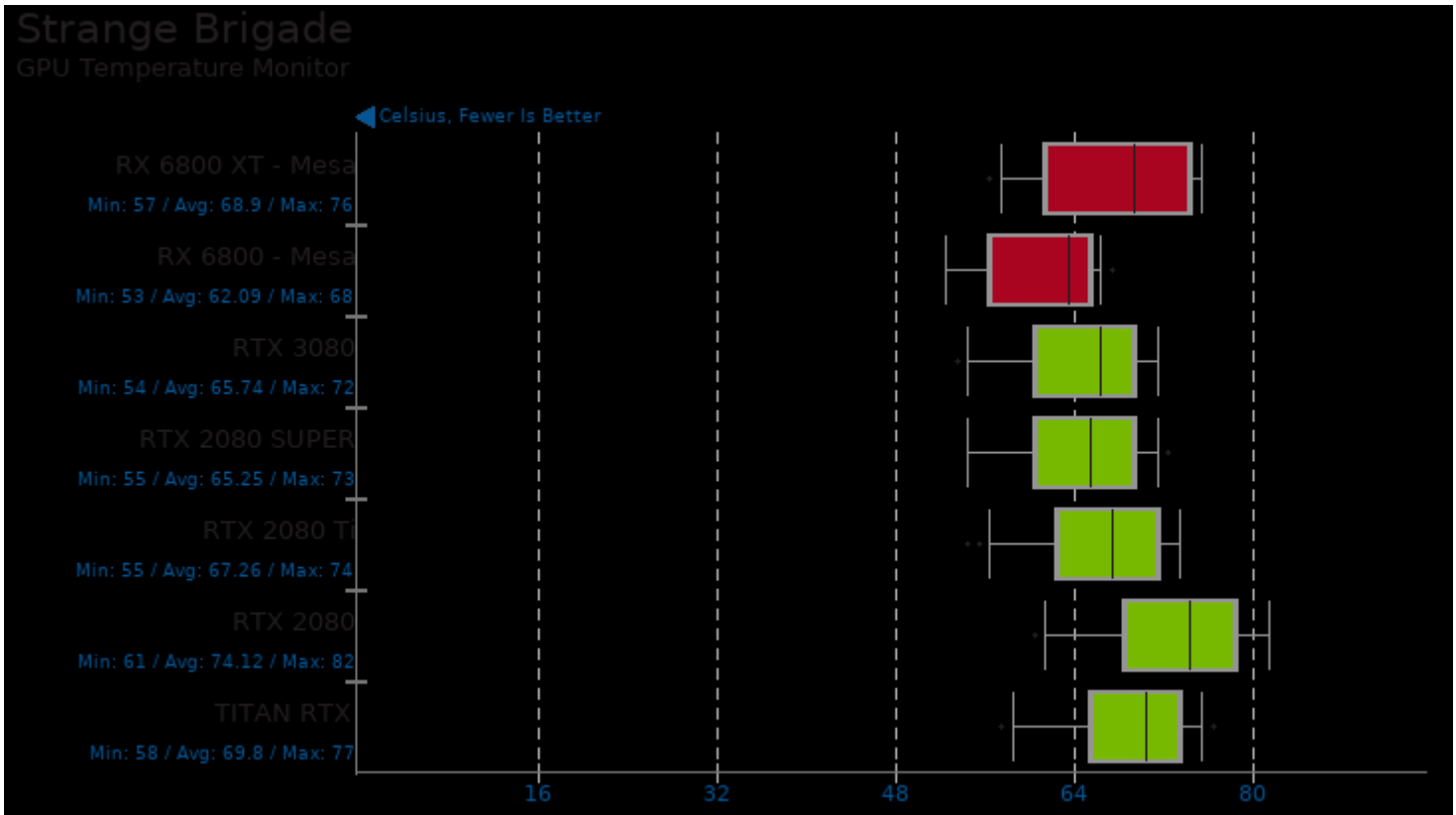

Strange Brigade
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - Mesa
Min: 39 / Avg: 62.05 / Max: 75
RX 6800 - Mesa
Min: 48 / Avg: 60.5 / Max: 68
RTX 3080
Min: 40 / Avg: 58.01 / Max: 72
RTX 2080 SUPER
Min: 40 / Avg: 59.17 / Max: 72
RTX 2080 Ti
Min: 41 / Avg: 60.53 / Max: 73
RTX 2080
Min: 50 / Avg: 70.16 / Max: 82
TITAN RTX
Min: 45 / Avg: 64.73 / Max: 76
16
32
48
64
80
Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Medium
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.96
RX 6800 - Mesa
0.96
RTX 3080
0.74
RTX 2080 SUPER
0.62
RTX 2080 Ti
0.77
RTX 2080
0.61
TITAN RTX
0.68
0.216
0.432
0.648
0.864
1.08

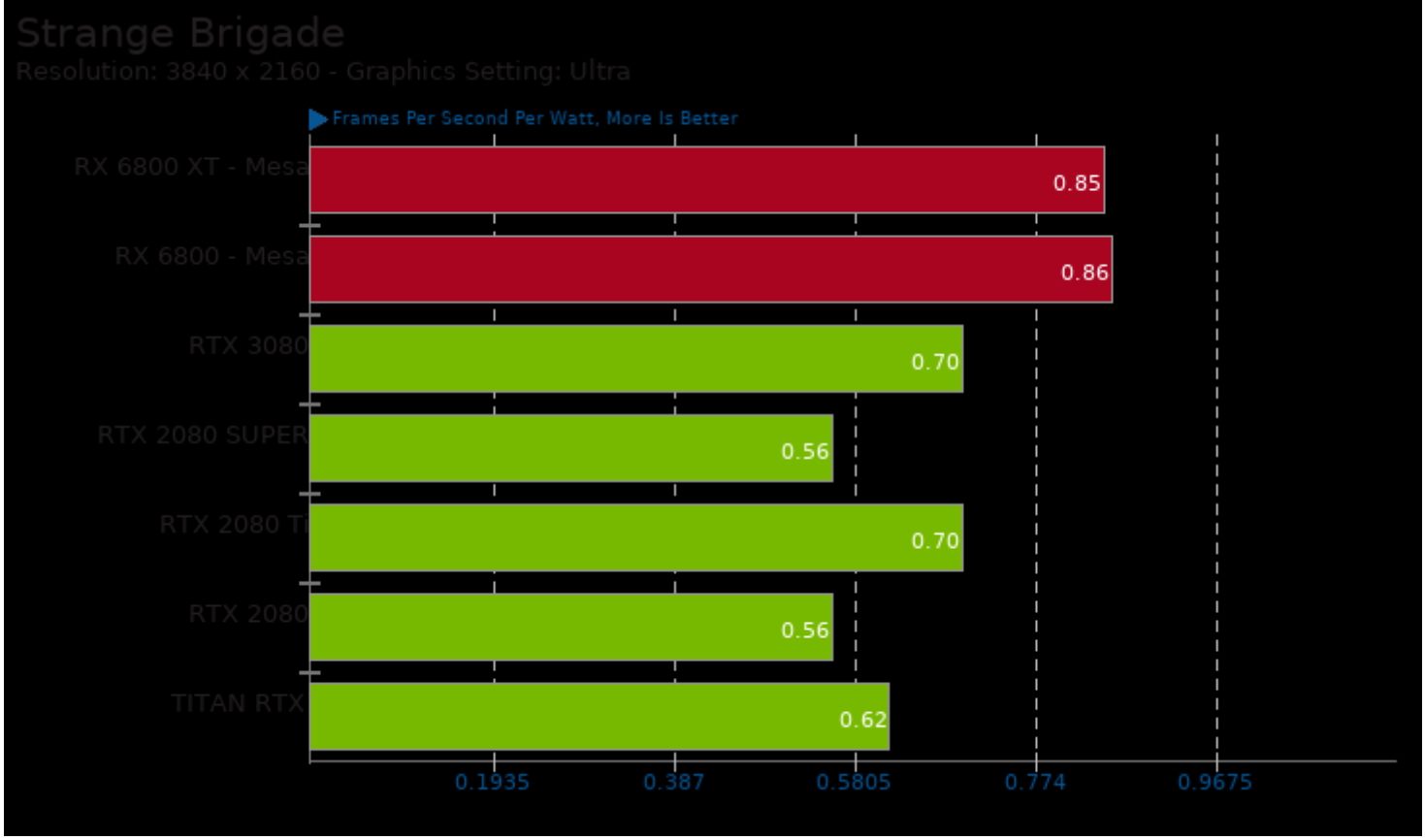

Strange Brigade
GPU Power Consumption Monitor
Watts, Fewer Is Better
RX 6800 XT - Mesa
Min: 6 / Avg: 175.03 / Max: 298
RX 6800 - Mesa
Min: 5 / Avg: 136.72 / Max: 220
RTX 3080
Min: 18.02 / Avg: 238.1 / Max: 320.77
RTX 2080 SUPER
Min: 14.68 / Avg: 173.11 / Max: 254.05
RTX 2080 Ti
Min: 7.71 / Avg: 181.02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


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

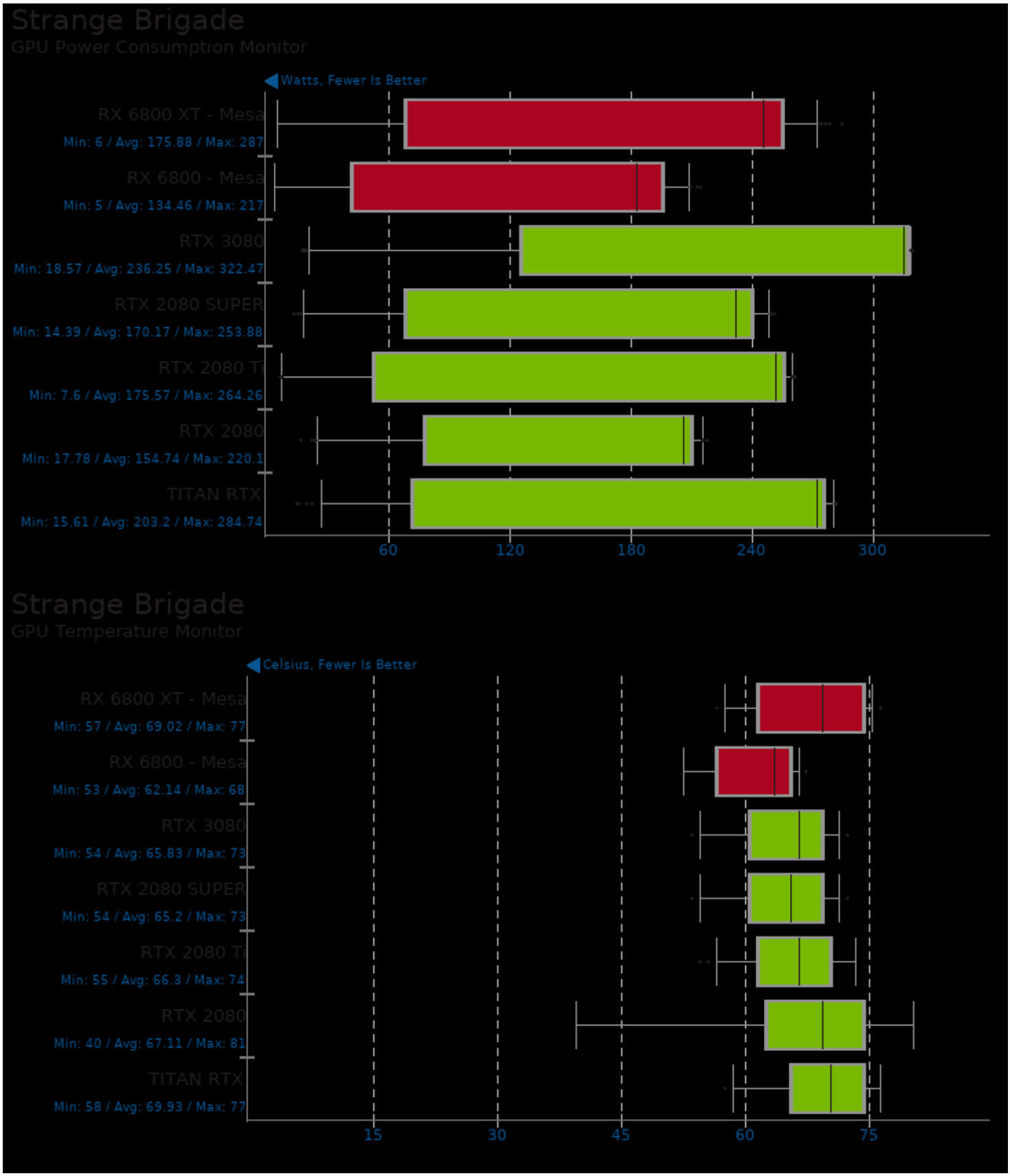

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: High
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.89
RX 6800 - Mesa
0.89
RTX 3080
0.73
RTX 2080 SUPER
0.58
RTX 2080 Ti
0.71
RTX 2080
0.57
TITAN RTX
0.64
0.2003
0.4006
0.6009
0.8012
1.0015


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

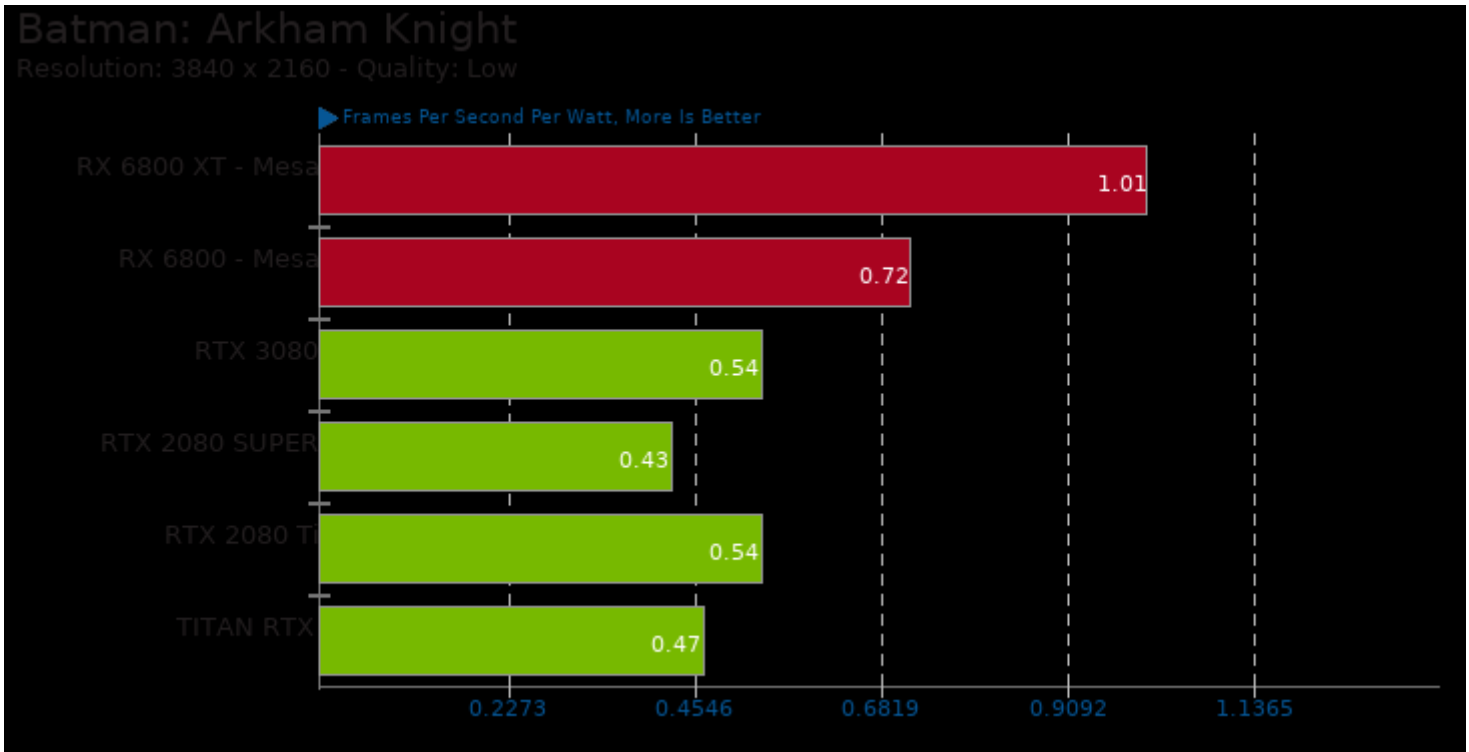

Strange Brigade
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - Mesa
Min: 57 / Avg: 68.9 / Max: 76
RX 6800 - Mesa
Min: 53 / Avg: 62.09 / Max: 68
RTX 3080
Min: 54 / Avg: 65.74 / Max: 72
RTX 2080 SUPER
Min: 55 / Avg: 65.25 / Max: 73
RTX 2080 Ti
Min: 55 / Avg: 67.26 / Max: 74
RTX 2080
Min: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

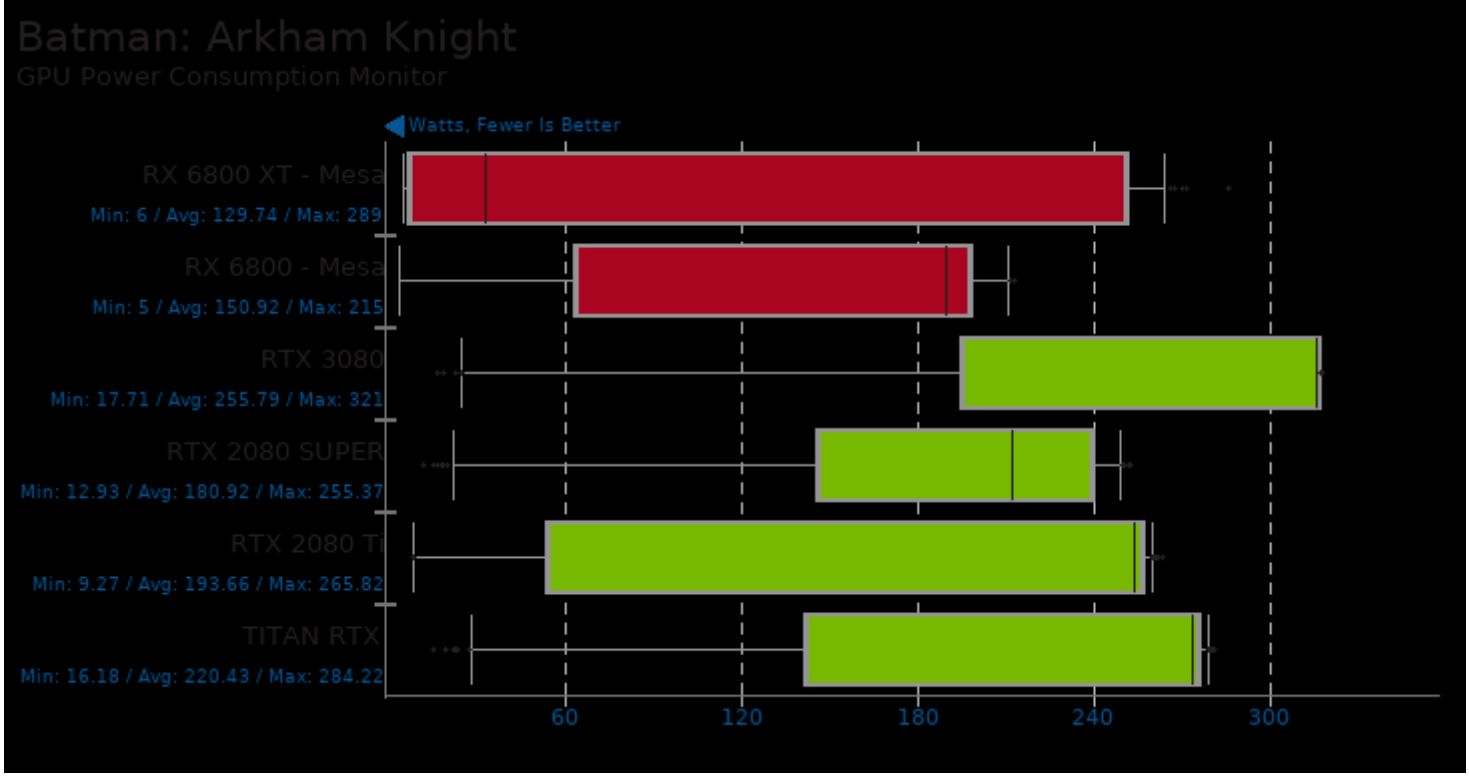

Strange Brigade
Resolution: 3840 x 2160 - Graphics Setting: Ultra
Frames Per Second Per Watt, More Is Better
RX 6800 XT - Mesa
0.85
RX 6800 - Mesa
0.86
RTX 3080
0.70
RTX 2080 SUPER
0.56
RTX 2080 Ti
0.70
RTX 2080
0.56
TITAN RTX
0.62
0.1935
0.387
0.5805
0.774
0.9675

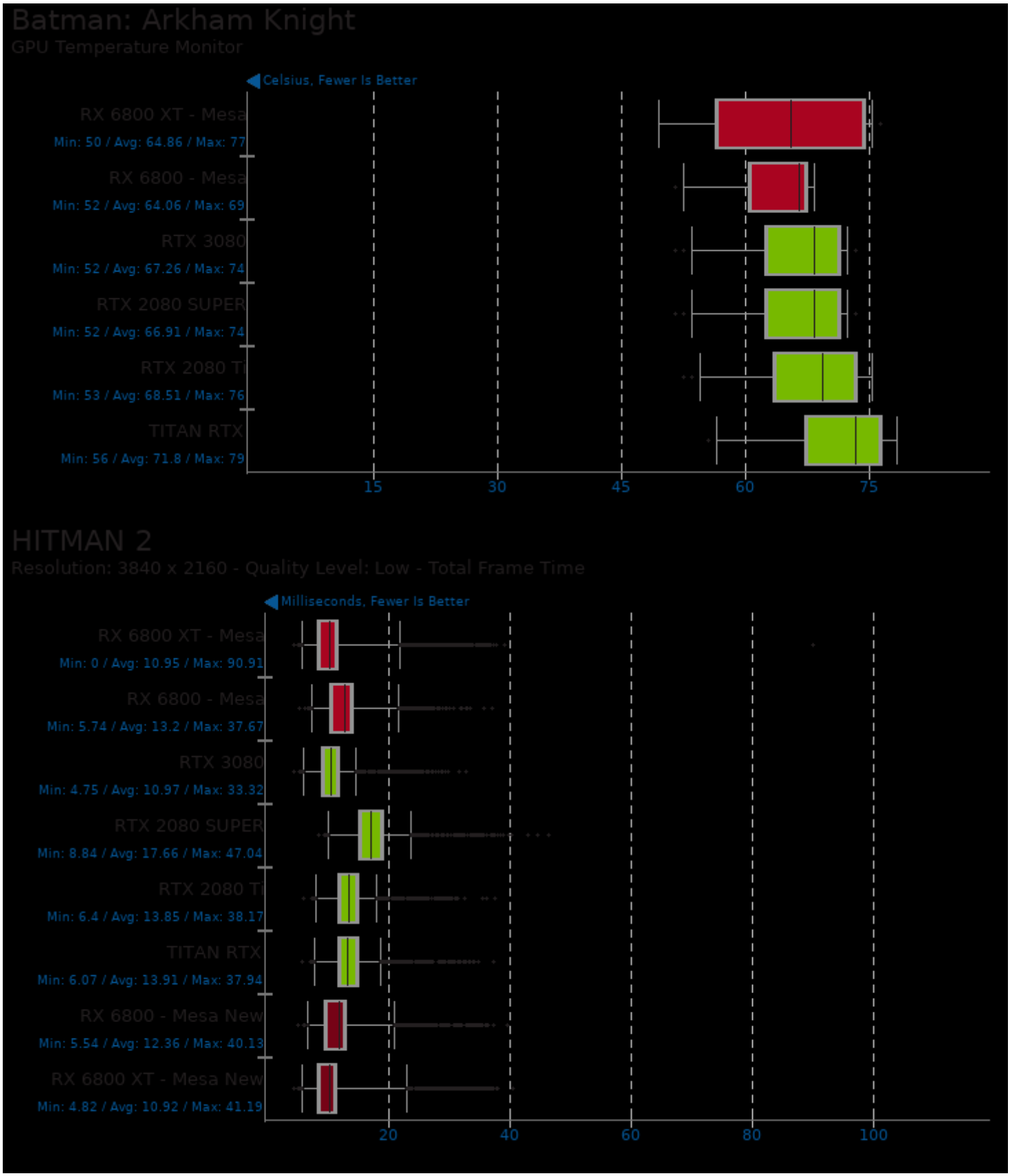
Radeon RX 6800 Series Linux Benchmarks

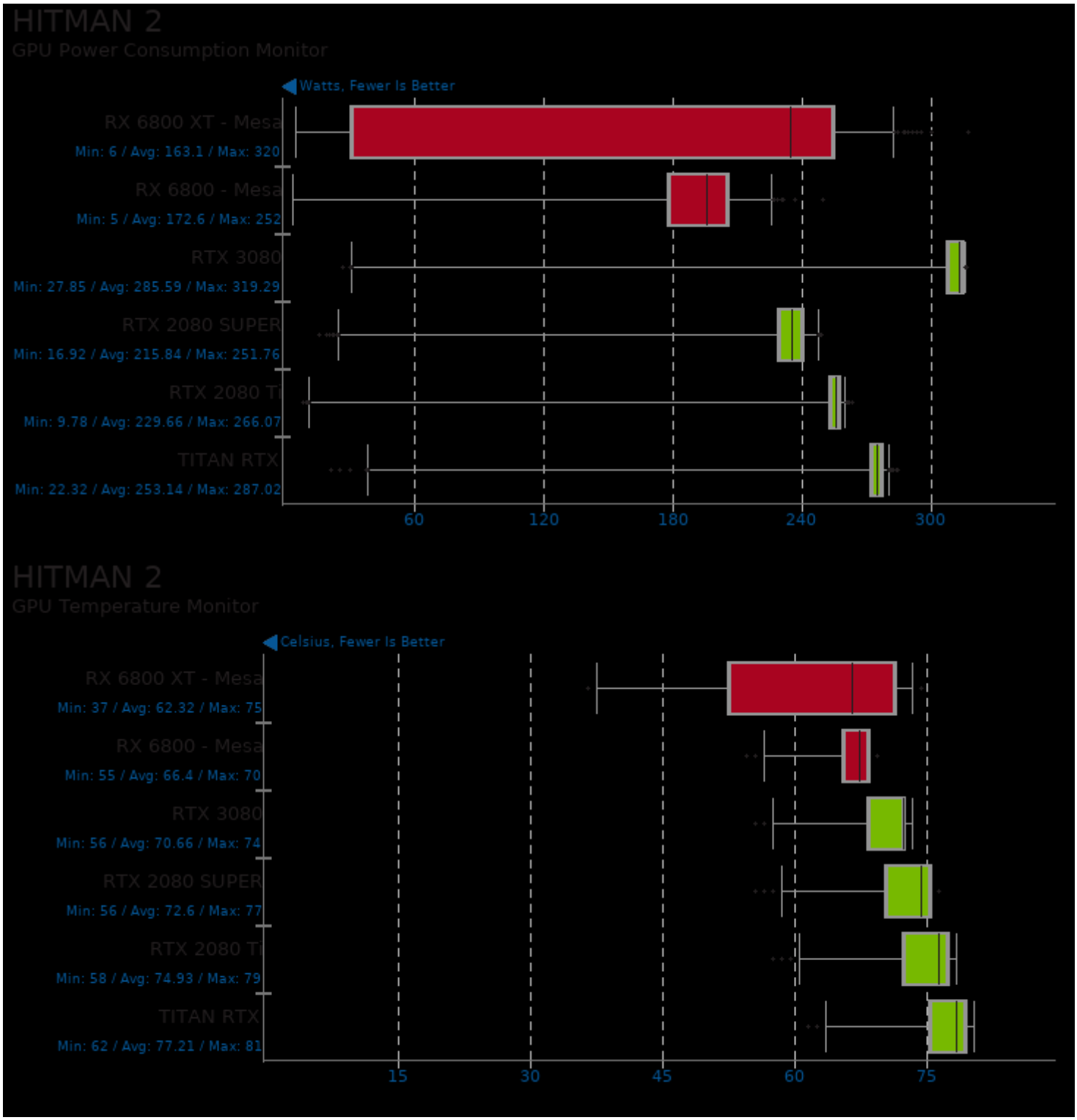


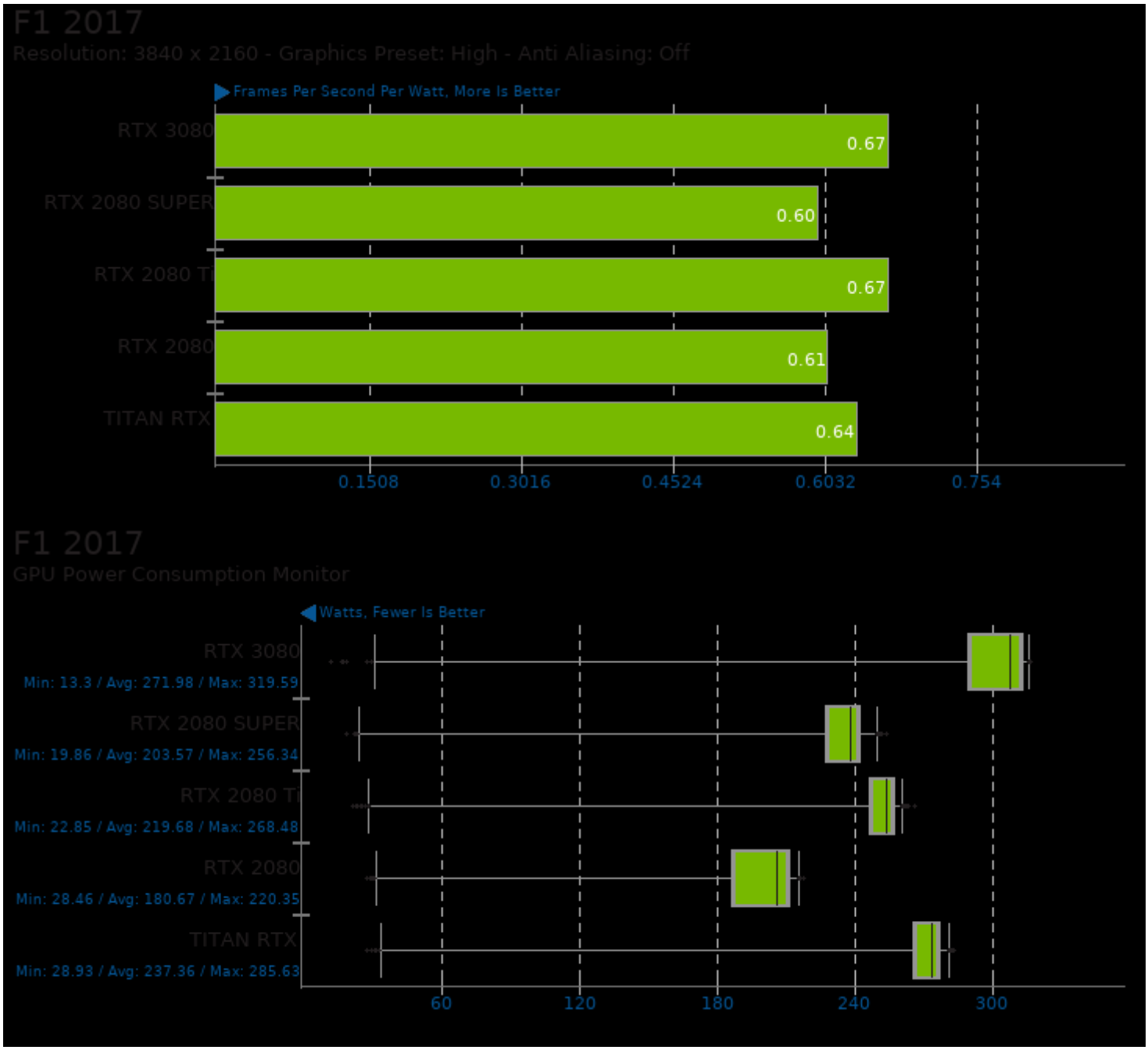
Radeon RX 6800 Series Linux Benchmarks

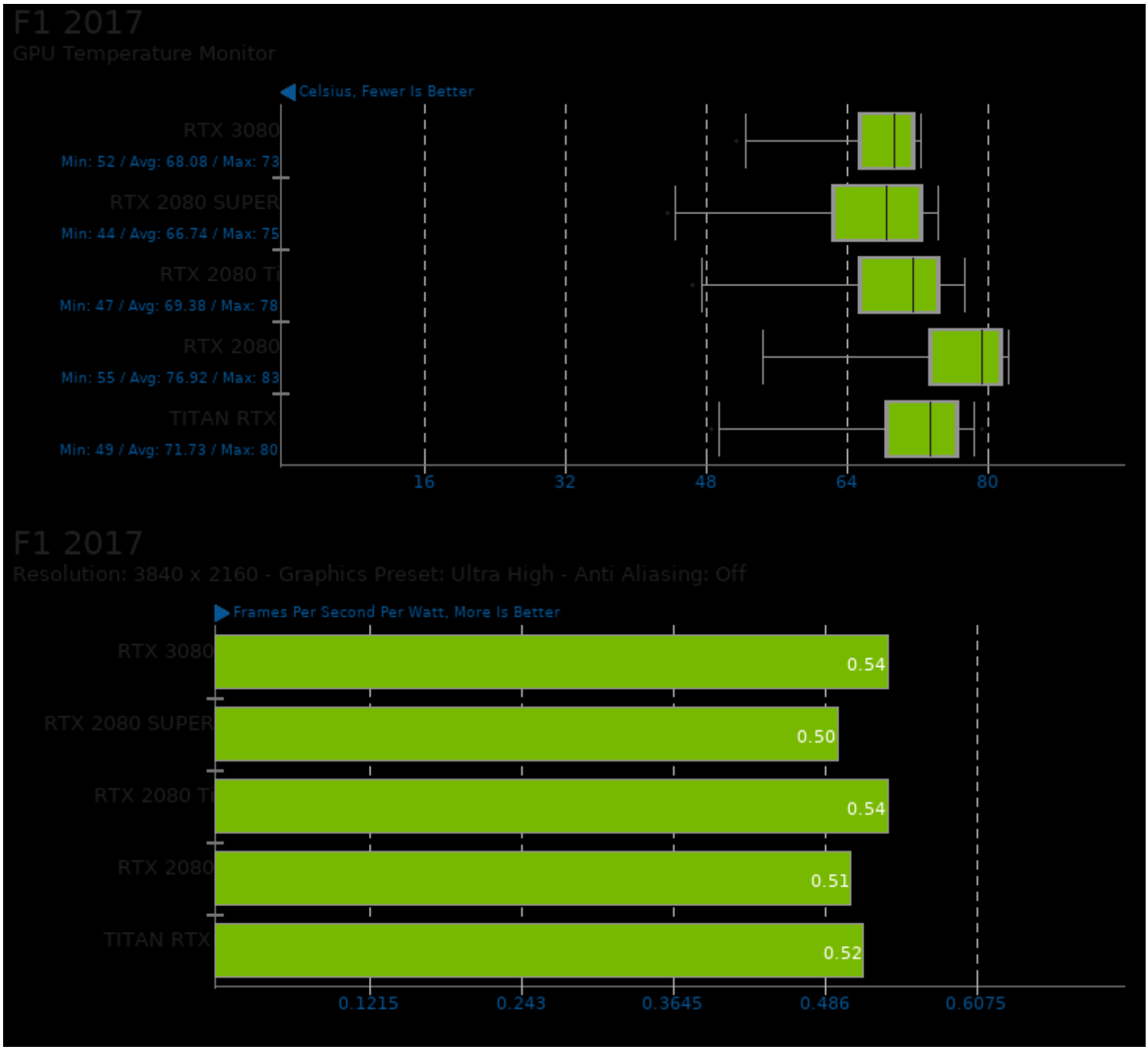


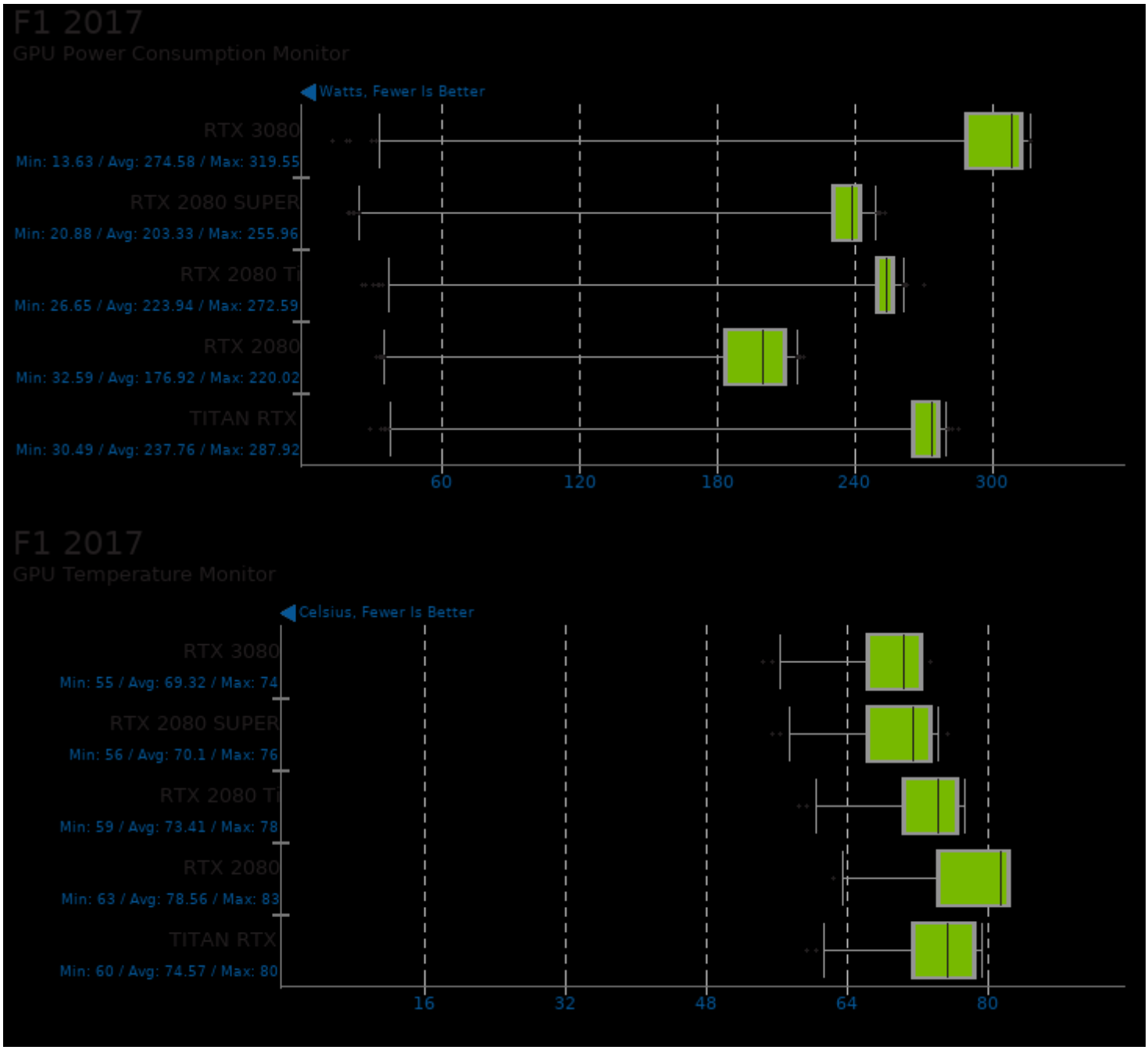


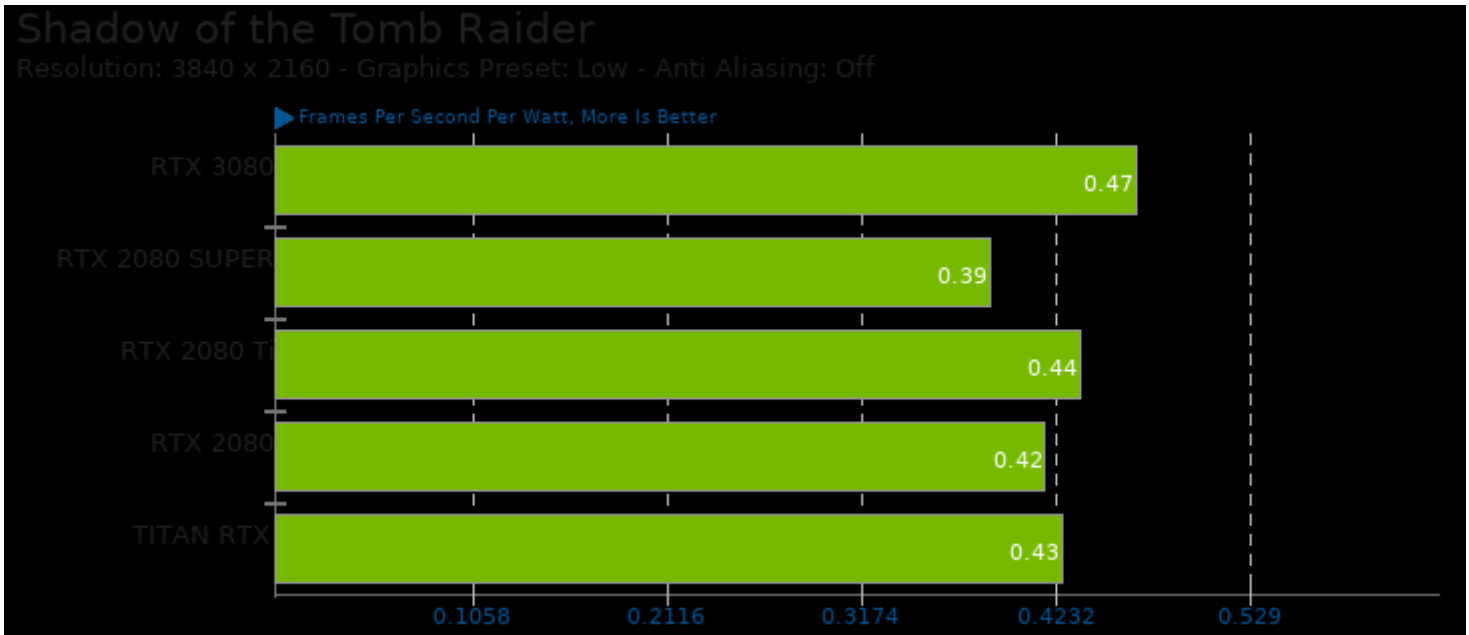

Batman: Arkham Knight
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - Mesa
Min: 50 / Avg: 64.86 / Max: 77
RX 6800 - Mesa
Min: 52 / Avg: 64.06 / Max: 69
RTX 3080
Min: 52 / Avg: 67.26 / Max: 74
RTX 2080 SUPER
Min: 52 / Avg: 66.91 / Max: 74
RTX 2080 Ti
Min: 53 / Avg: 68.51 / Max: 76
TITAN RTX
Min: 56 / Avg: 71.8 / Max: 79
15
30
45
60
75
HITMAN 2
Resolution: 3840 x 2160 - Quality Level: Low - Total Frame Time
Milliseconds, Fewer Is Better
RX 6800 XT - Mesa
Min: 0 / Avg: 10.95 / Max: 90.91
RX 6800 - Mesa
Min: 5.74 / Avg: 13.2 / Max: 37.67
RTX 3080
Min: 4.75 / Avg: 10.97 / Max: 33.32
RTX 2080 SUPER
Min: 8.84 / Avg: 17.66 / Max: 47.04
RTX 2080 Ti
Min: 6.4 / Avg: 13.85 / Max: 38.17
TITAN RTX
Min: 6.07 / Avg: 13.91 / Max: 37.94
RX 6800 - Mesa New
Min: 5.54 / Avg: 12.36 / Max: 40.13
RX 6800 XT - Mesa New
Min: 4.82 / Avg: 10.92 / Max: 41.19
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 3080
Min: 27.85 / Avg: 285.59 / Max: 319.29
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
60
120
180
240
300
HITMAN 2
GPU Temperature Monitor
Celsius, Fewer Is Better
RX 6800 XT - Mesa
Min: 37 / Avg: 62.32 / Max: 75
RX 6800 - Mesa
Min: 55 / Avg: 66.4 / Max: 70
RTX 3080
Min: 56 / Avg: 70.66 / Max: 74
RTX 2080 SUPER
Min: 56 / Avg: 72.6 / Max: 77
RTX 2080 Ti
Min: 58 / Avg: 74.93 / Max: 79
TITAN RTX
Min: 62 / Avg: 77.21 / Max: 81
15
30
45
60
75


F1 2017
Resolution: 3840 x 2160 - Graphics Preset: High - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RTX 3080
0.67
RTX 2080 SUPER
0.60
RTX 2080 Ti
0.67
RTX 2080
0.61
TITAN RTX
0.64
0.1508
0.3016
0.4524
0.6032
0.754
F1 2017
GPU Power Consumption Monitor
Watts, Fewer Is Better
RTX 3080
Min: 13.3 / Avg: 271.98 / Max: 319.59
RTX 2080 SUPER
Min: 19.86 / Avg: 203.57 / Max: 256.34
RTX 2080 Ti
Min: 22.85 / Avg: 219.68 / Max: 268.48
RTX 2080
Min: 28.46 / Avg: 180.67 / Max: 220.35
TITAN RTX
Min: 28.93 / Avg: 237.36 / Max: 285.63
60
120
180
240
300

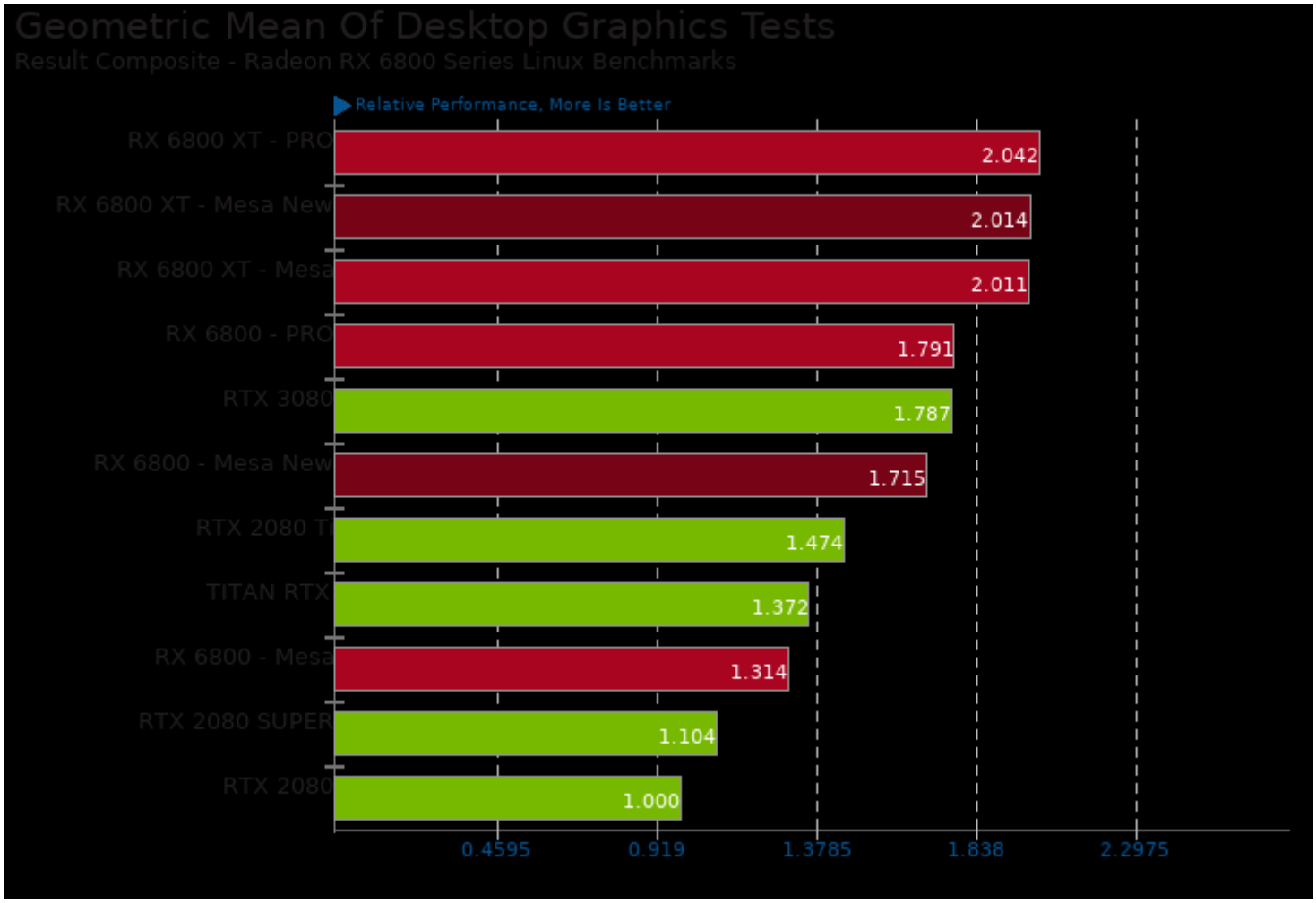

F1 2017
GPU Temperature Monitor
Celsius, Fewer Is Better
RTX 3080
Min: 52 / Avg: 68.08 / Max: 73
RTX 2080 SUPER
Min: 44 / Avg: 66.74 / Max: 75
RTX 2080 Ti
Min: 47 / Avg: 69.38 / Max: 78
RTX 2080
Min: 55 / Avg: 76.92 / Max: 83
TITAN RTX
Min: 49 / Avg: 71.73 / Max: 80
16
32
48
64
80
F1 2017
Resolution: 3840 x 2160 - Graphics Preset: Ultra High - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RTX 3080
0.54
RTX 2080 SUPER
0.50
RTX 2080 Ti
0.54
RTX 2080
0.51
TITAN RTX
0.52
0.1215
0.243
0.3645
0.486
0.6075


F1 2017
GPU Power Consumption Monitor
Watts, Fewer Is Better
RTX 3080
Min: 13.63 / Avg: 274.58 / Max: 319.55
RTX 2080 SUPER
Min: 20.88 / Avg: 203.33 / Max: 255.96
RTX 2080 Ti
Min: 26.65 / Avg: 223.94 / Max: 272.59
RTX 2080
Min: 32.59 / Avg: 176.92 / Max: 220.02
TITAN RTX
Min: 30.49 / Avg: 237.76 / Max: 287.92
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
RTX 2080
Min: 63 / Avg: 78.56 / Max: 83
TITAN RTX
Min: 60 / Avg: 74.57 / Max: 80
16
32
48
64
80

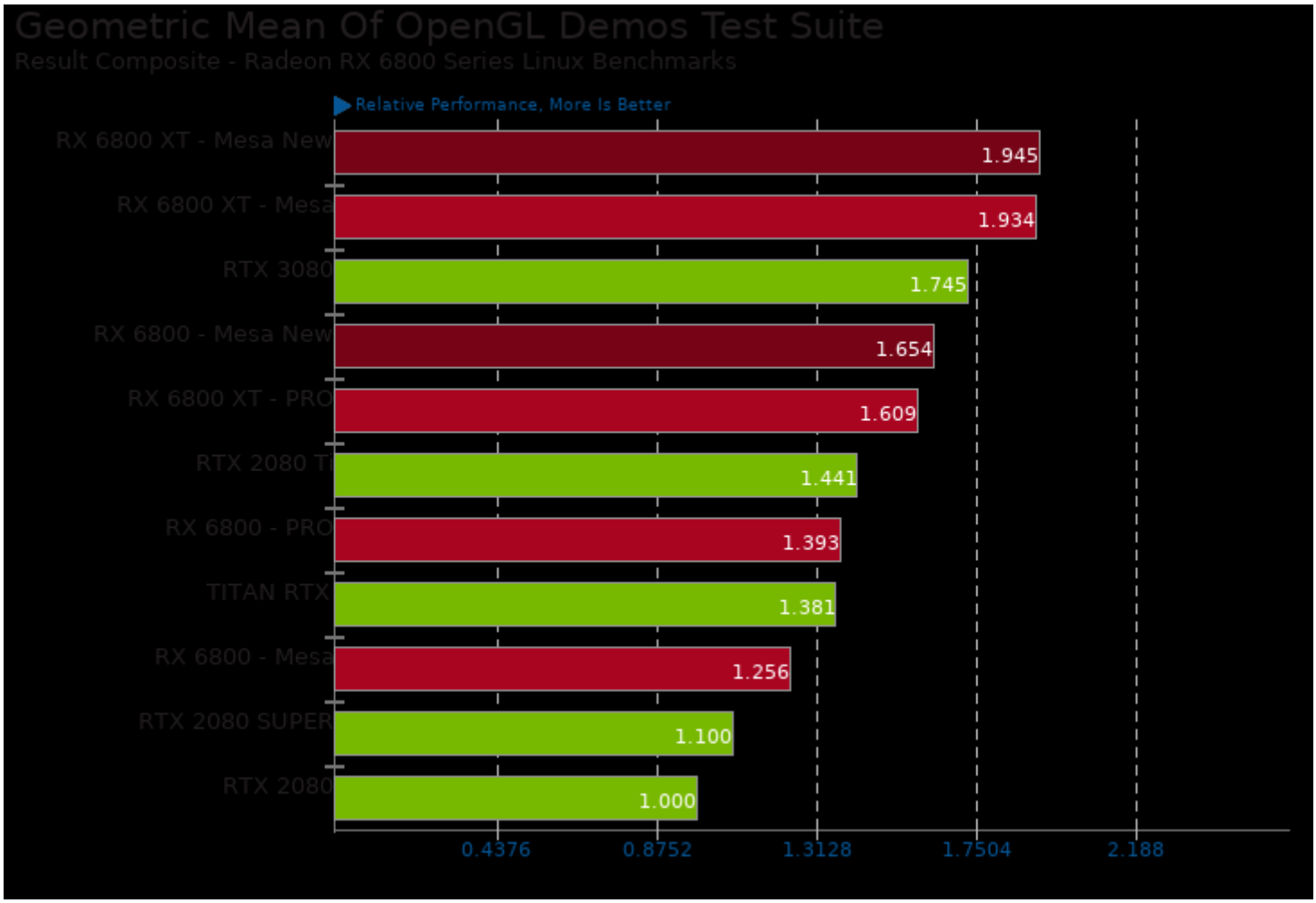

Shadow of the Tomb Raider
Resolution: 3840 x 2160 - Graphics Preset: Low - Anti Aliasing: Off
Frames Per Second Per Watt, More Is Better
RTX 3080
0.47
RTX 2080 SUPER
0.39
RTX 2080 Ti
0.44
RTX 2080
0.42
TITAN RTX
0.43
0.1058
0.2116
0.3174
0.4232
0.529


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

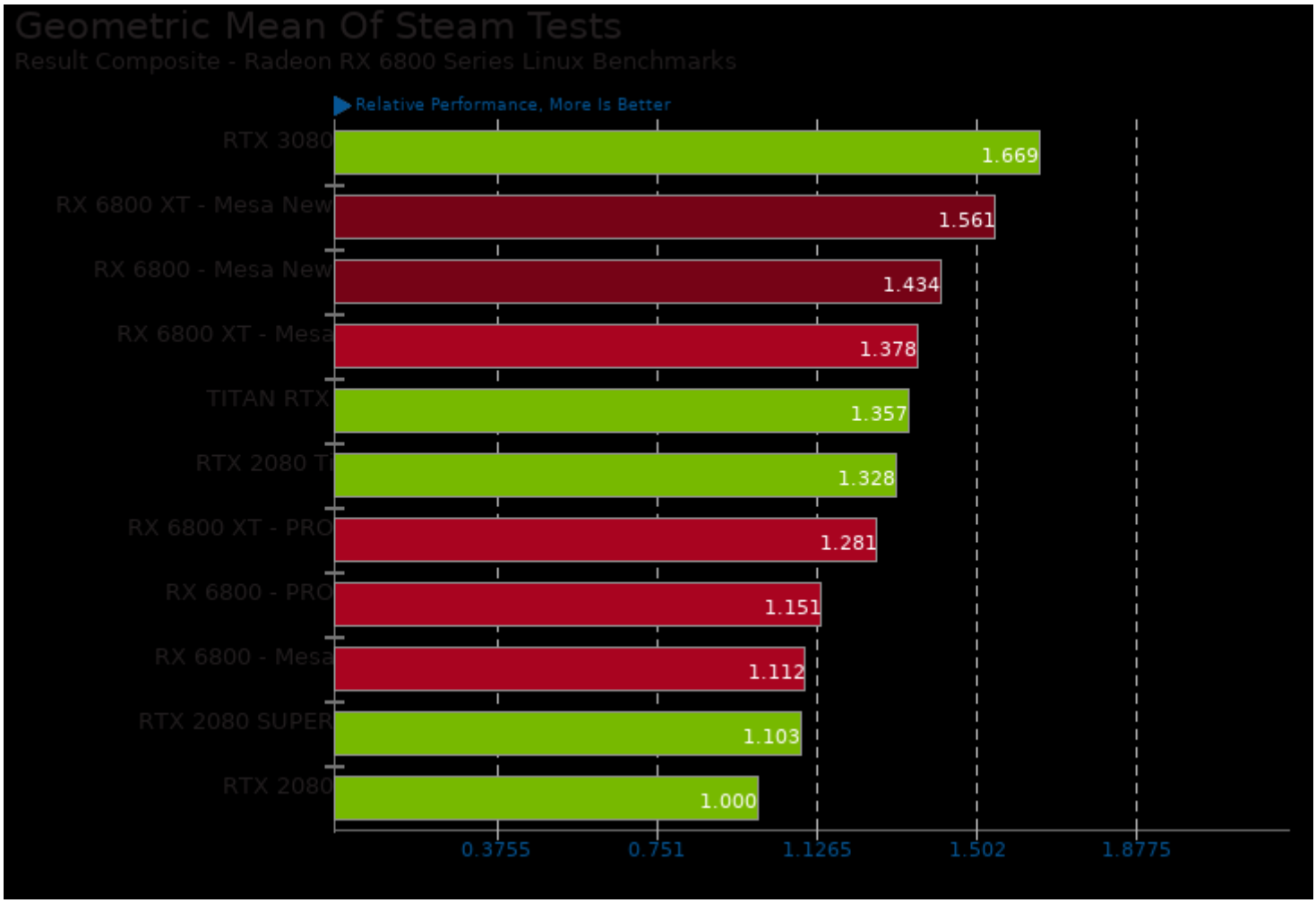
These geometric means are based upon test groupings / test suites for this result file.



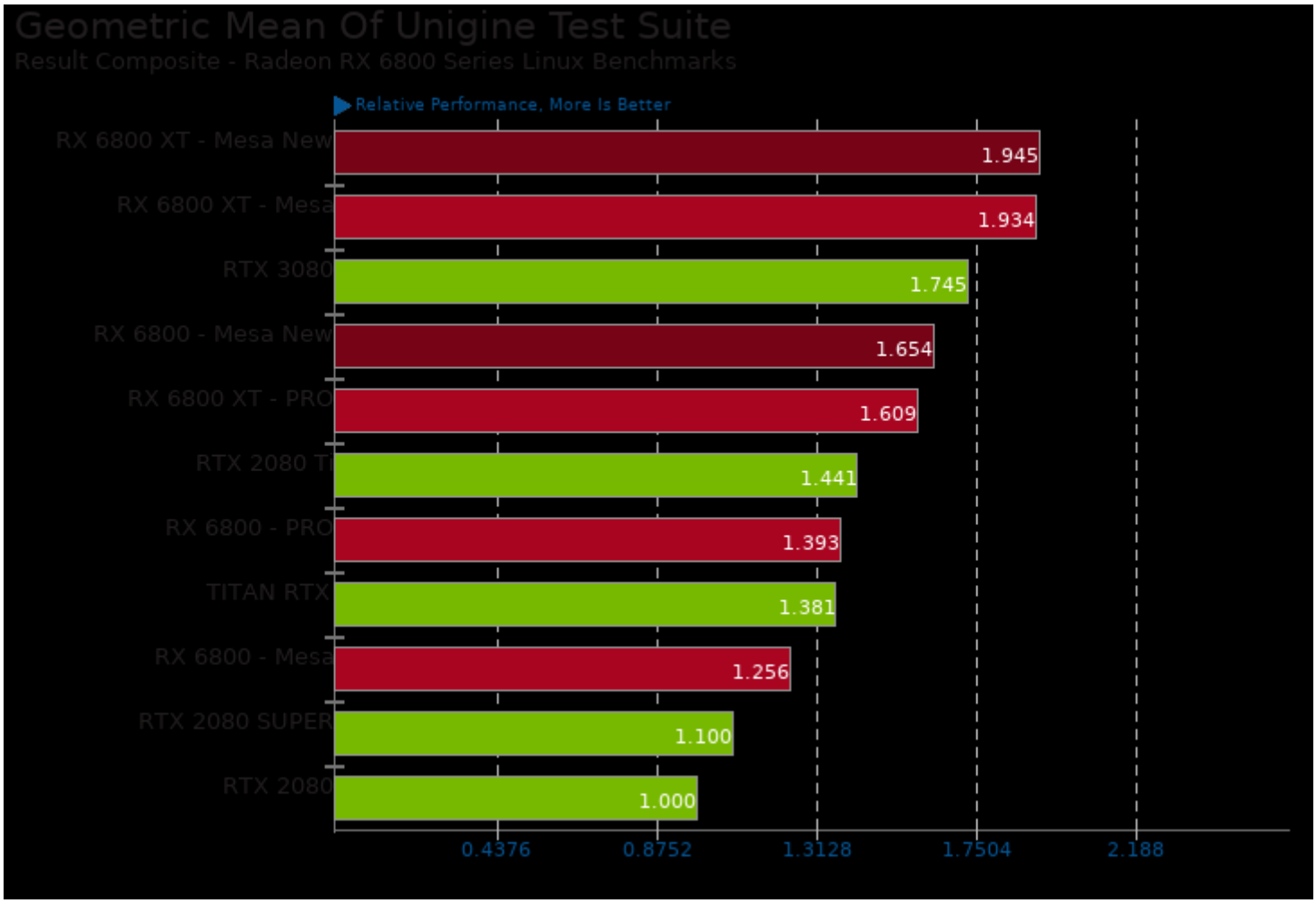
Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven



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 15:48.