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NVIDIA CUDA Blender 3.2

TEST123456

Test Systems:

RTX 3060

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: eVGA NVIDIA GeForce RTX 3060 12GB, Audio: NVIDIA Device 228e, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3060 Ti

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3060 Ti 8GB, Audio: NVIDIA Device 228b, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3070

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3070 8GB, Audio: NVIDIA Device 228b, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3070 Ti

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3070 Ti 8GB, Audio: NVIDIA Device 228b, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines 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 @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR

VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3080 10GB, Audio: NVIDIA Device 1aef, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3080 Ti

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3080 Ti 12GB, Audio: NVIDIA Device 1aef, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

RTX 3090

Processor: AMD Ryzen 9 5950X 16-Core @ 5.08GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 257GB Flash Drive, Graphics: NVIDIA GeForce RTX 3090 24GB, Audio: NVIDIA Device 1aef, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.13.0-48-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.13, Display Driver: NVIDIA 515.48.07, OpenGL: 4.6.0, Compiler: GCC 9.4.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201016
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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

TEST1234567

Processor: Intel Core i5-3317U @ 2.60GHz (2 Cores / 4 Threads), Motherboard: LENOVO (65CN99WW BIOS), Chipset: Intel 3rd Gen Core DRAM, Memory: 8GB, Disk: 32GB SAMSUNG MZMPC032 + 1000GB Seagate ST1000LM024 HN-M + 0GB Card Reader + 2GB Flash Disk, Graphics: Intel 3rd Gen Core, Audio: Conexant CX20590, Network: Realtek RTL810xE PCI + Intel Centrino-N 2200

OS: Ubuntu 22.04, Kernel: 5.15.0-40-generic (x86_64), Display Driver: NVIDIA, Vulkan: 1.2.204, Compiler: GCC 11.2.0,

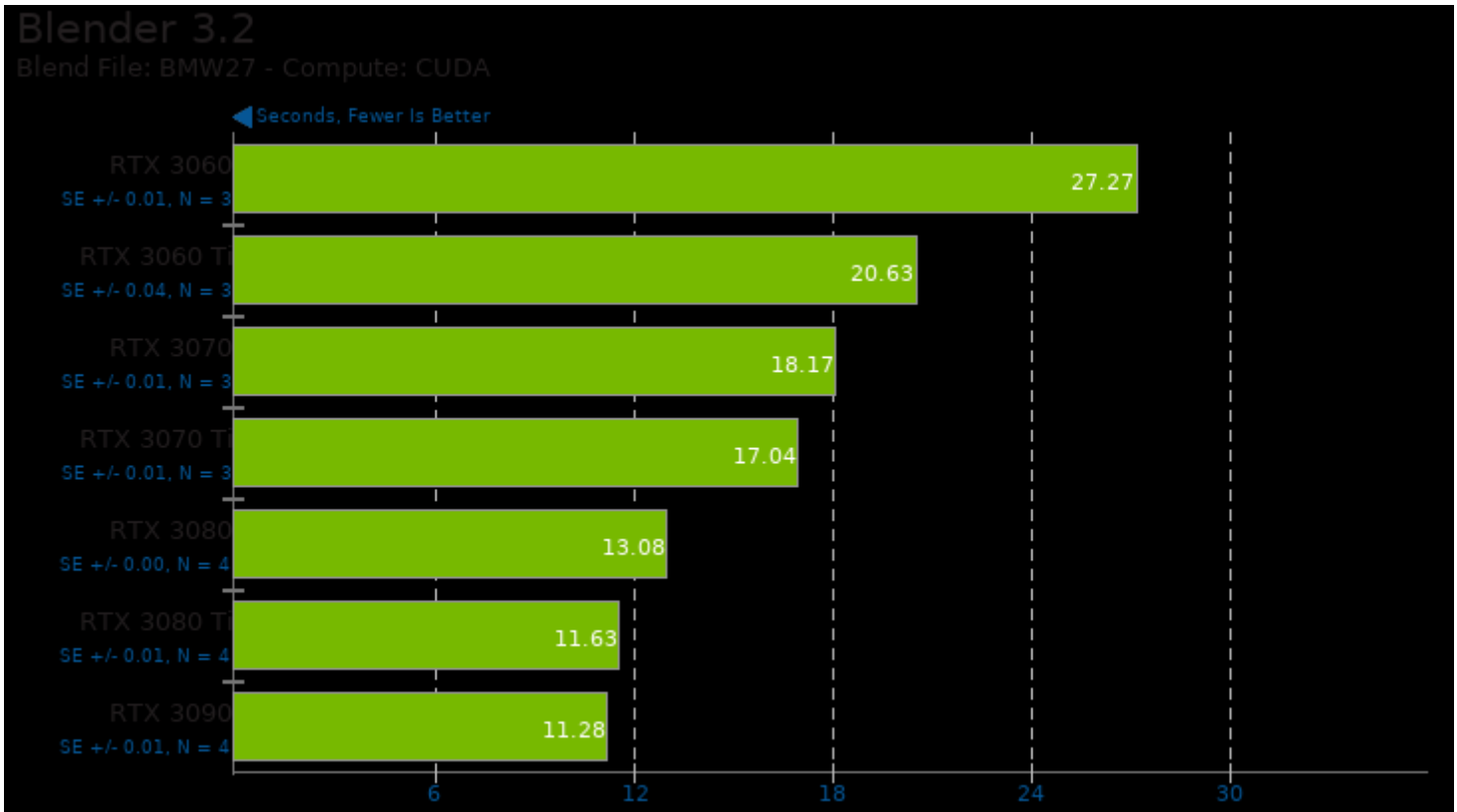
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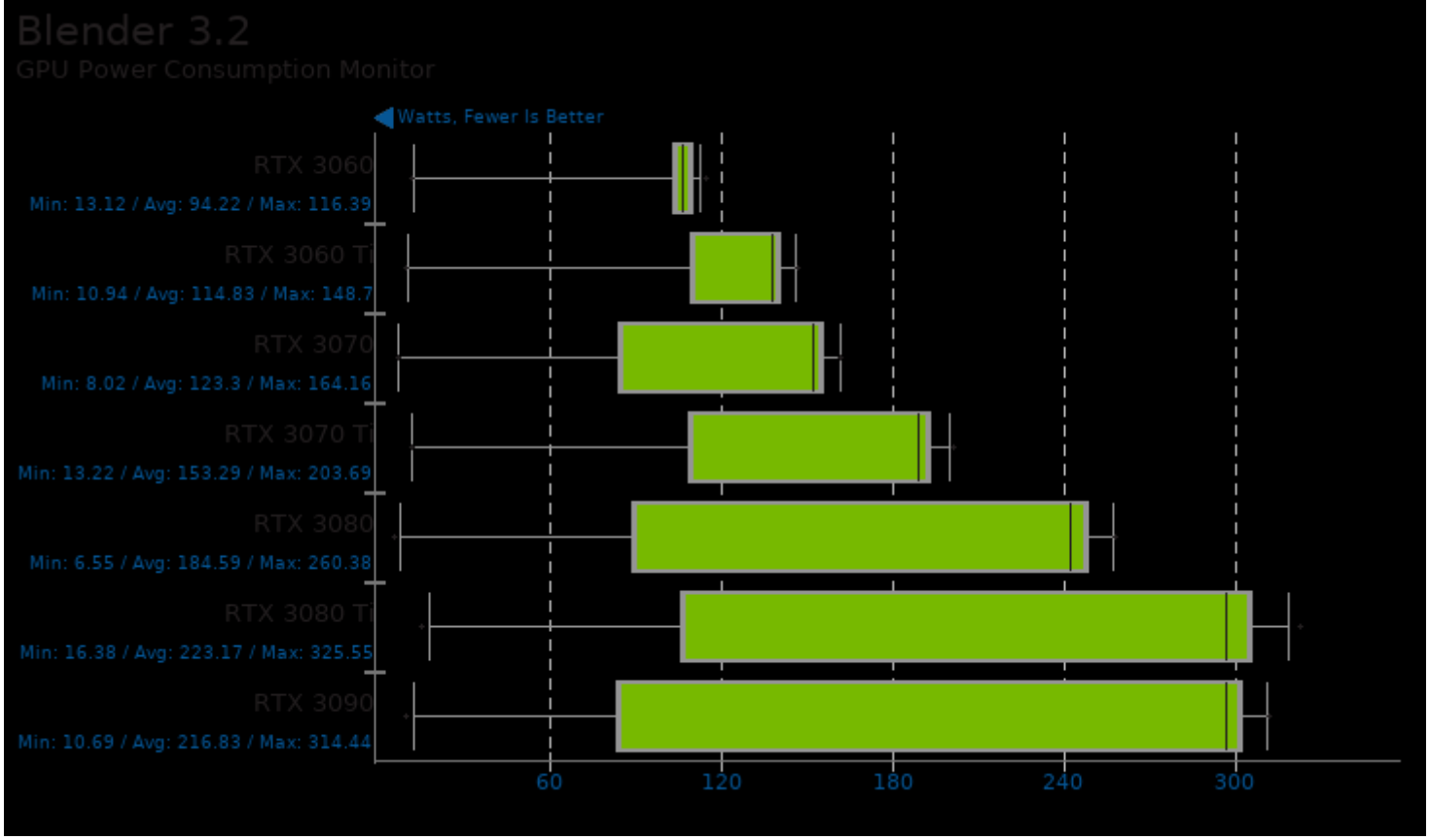
File-System: ext4, Screen Resolution: 1280x768

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_cpufreq schedutil - CPU Microcode: 0x21 - Thermald 2.4.9
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + mmio_stale_data: 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 Retpolines IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Vulnerable: No microcode + tsx_async_abort: Not affected

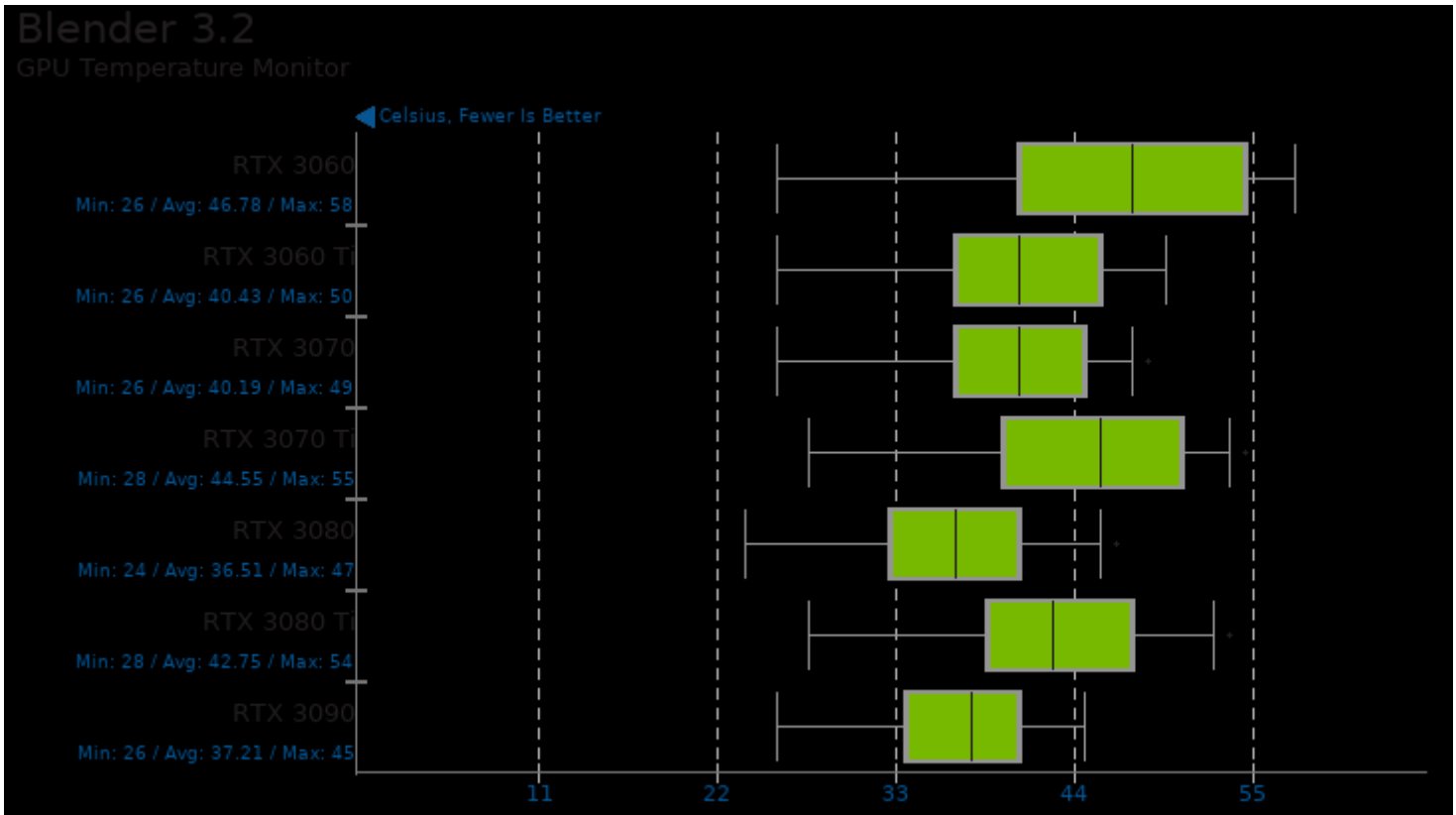
	RTX 3060	RTX 3060 Ti	RTX 3070	RTX 3070 Ti	RTX 3080	RTX 3080 Ti	RTX 3090	TEST12345 67
Blender - BMW27 - CUDA (sec)	**27.27**	20.63	18.17	17.04	13.08	11.63	**11.28**	
Normalized	41.36%	54.68%	62.08%	66.2%	86.24%	96.99%	100%	
Standard Deviation	0.1%	0.3%	0.1%	0.1%	0.1%	0.1%	0.2%	
Blender - Classroom - CUDA (sec)	**58.37**	43.48	38.55	36.02	27.66	24.15	**23.49**	
Normalized	40.24%	54.02%	60.93%	65.21%	84.92%	97.27%	100%	
Standard Deviation	0.2%	0%	0.1%	0.1%	0.2%	0.3%	0.1%	
Blender - Fishy Cat - CUDA (sec)	**59.99**	44.29	37.69	36.26	26.86	23.91	**22.94**	
Normalized	38.24%	51.79%	60.86%	63.27%	85.41%	95.94%	100%	
Standard Deviation	0.3%	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%	
Blender - Pabellon Barcelona - CUDA (sec)	**145.07**	104.84	89.30	84.17	61.40	52.49	**50.51**	
Normalized	34.82%	48.18%	56.56%	60.01%	82.26%	96.23%	100%	
Standard Deviation	0%	0.1%	0.1%	0.1%	0.3%	0.2%	0.3%	
Blender - Barbershop - CUDA (sec)	**239.62**	179.00	156.14	146.05	109.45	95.05	**92.18**	
Normalized	38.47%	51.5%	59.04%	63.12%	84.22%	96.98%	100%	
Standard Deviation	0.3%	0.1%	0%	0%	0.2%	0.4%	0.1%	

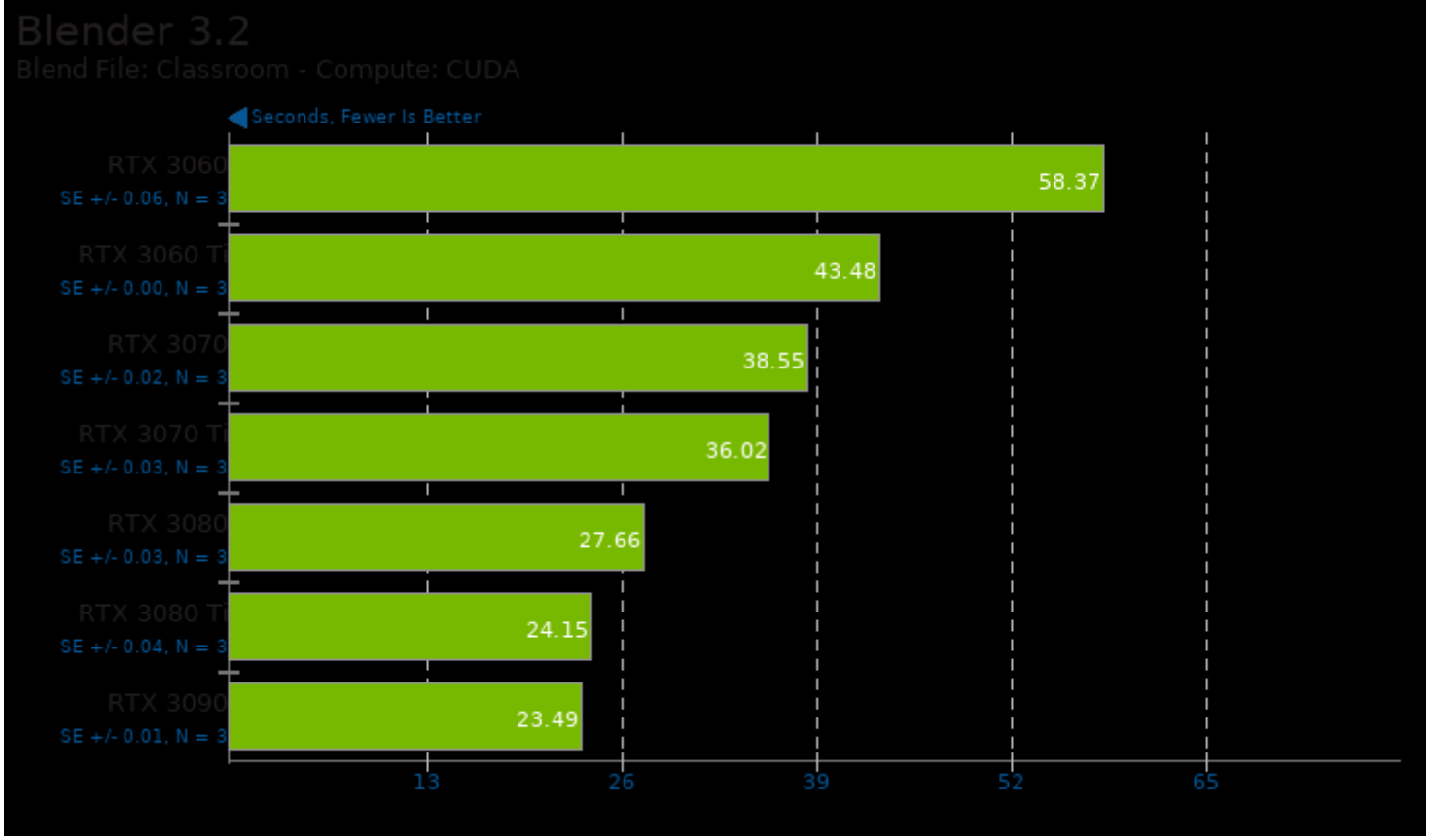
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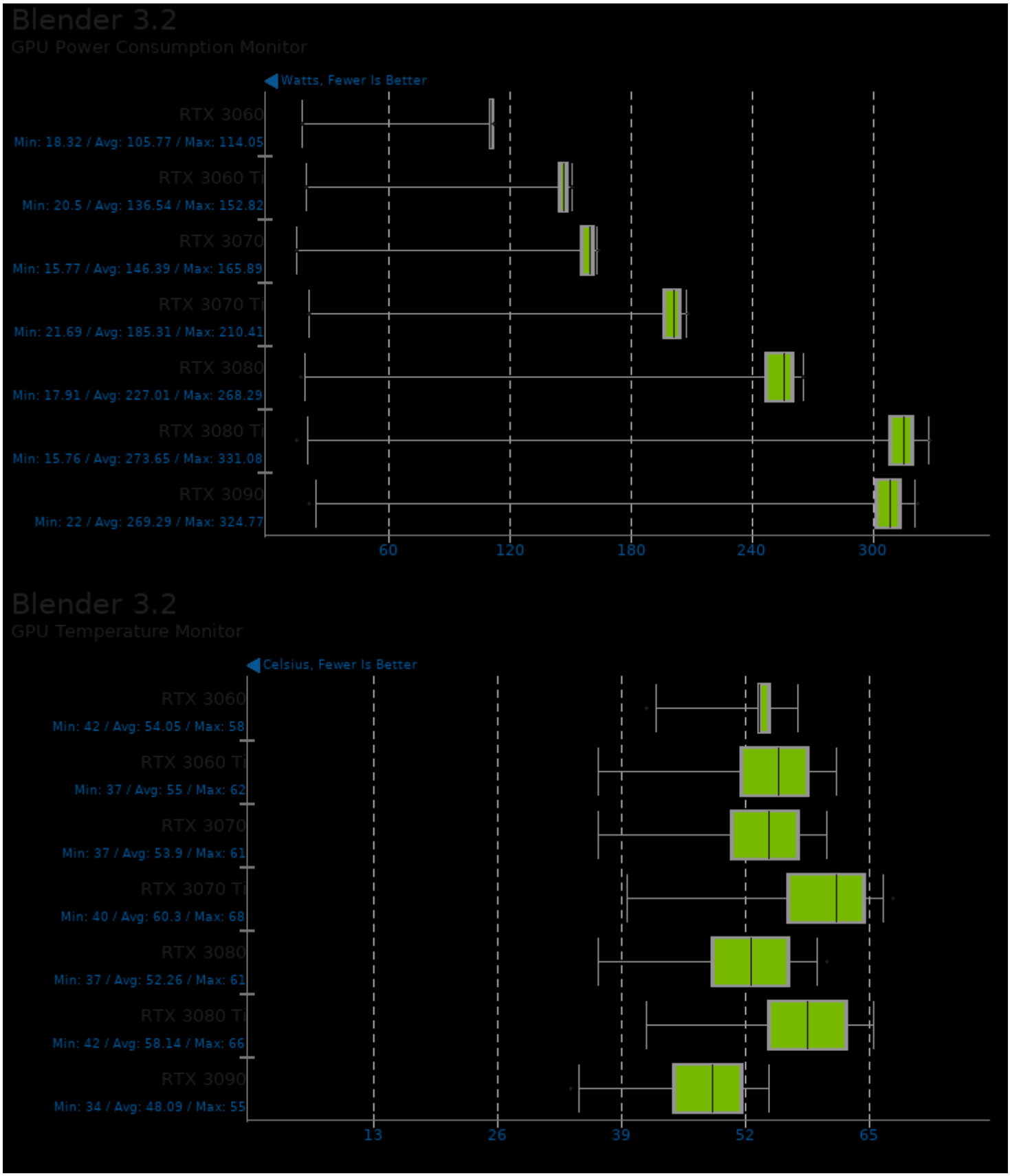


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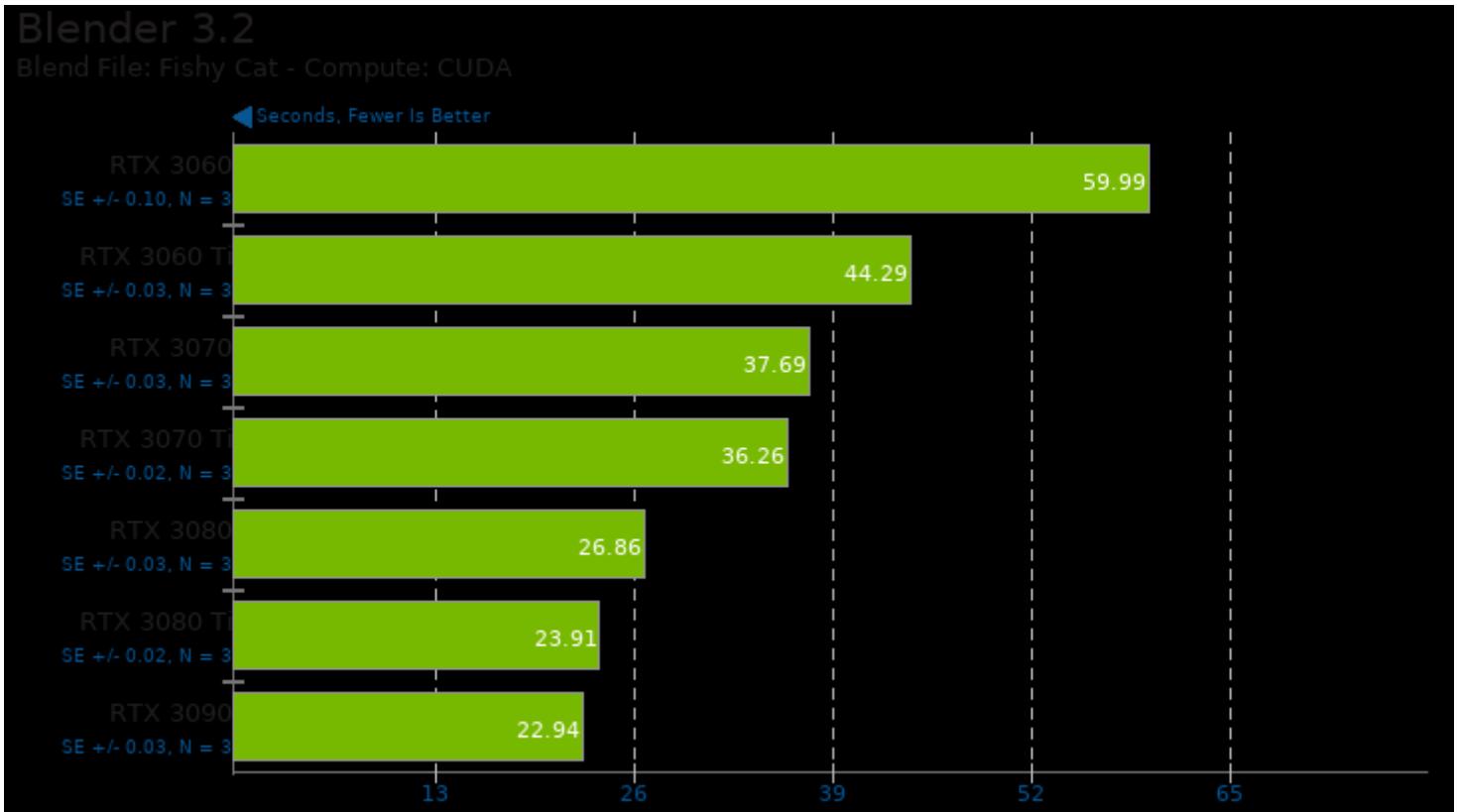


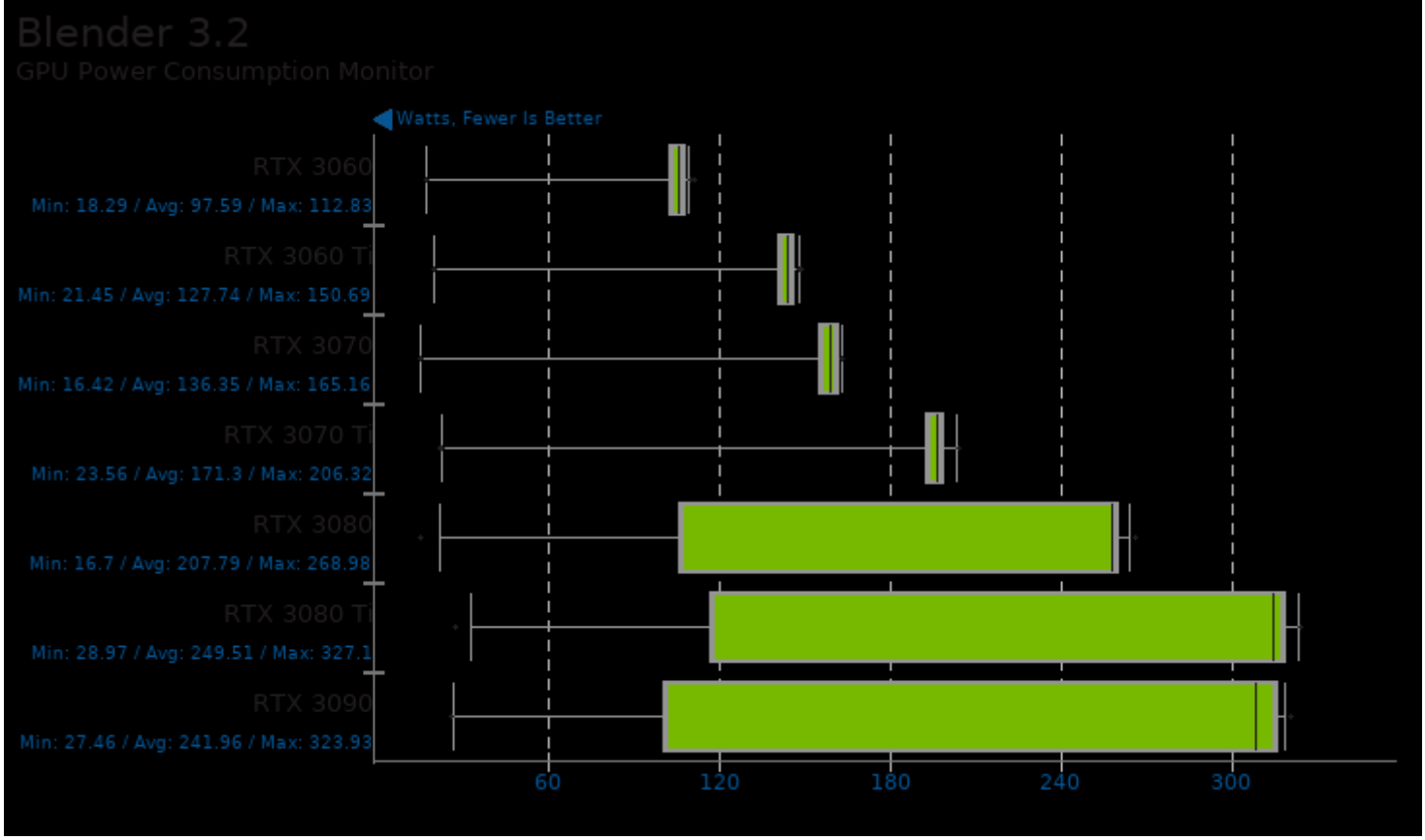


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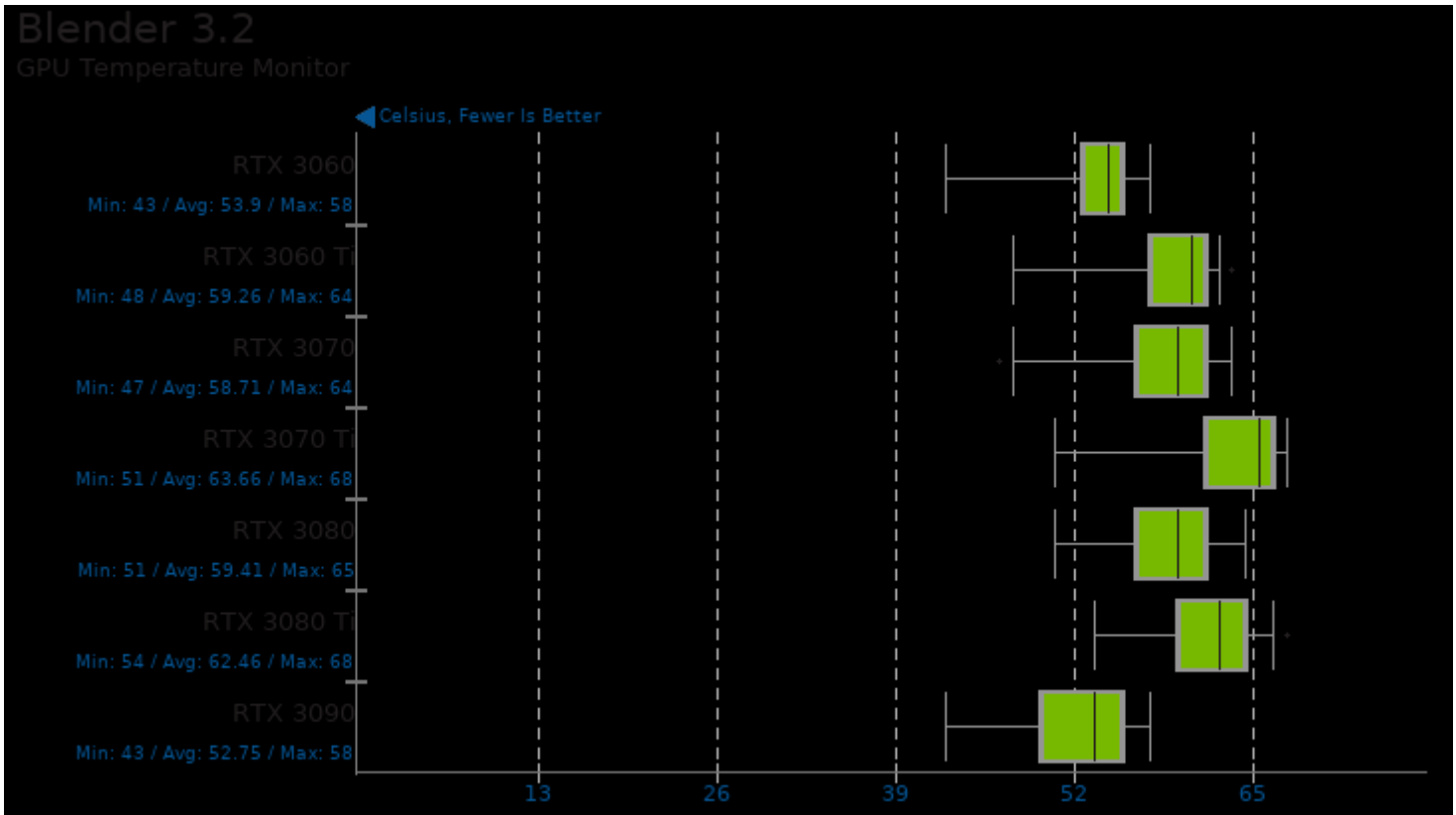


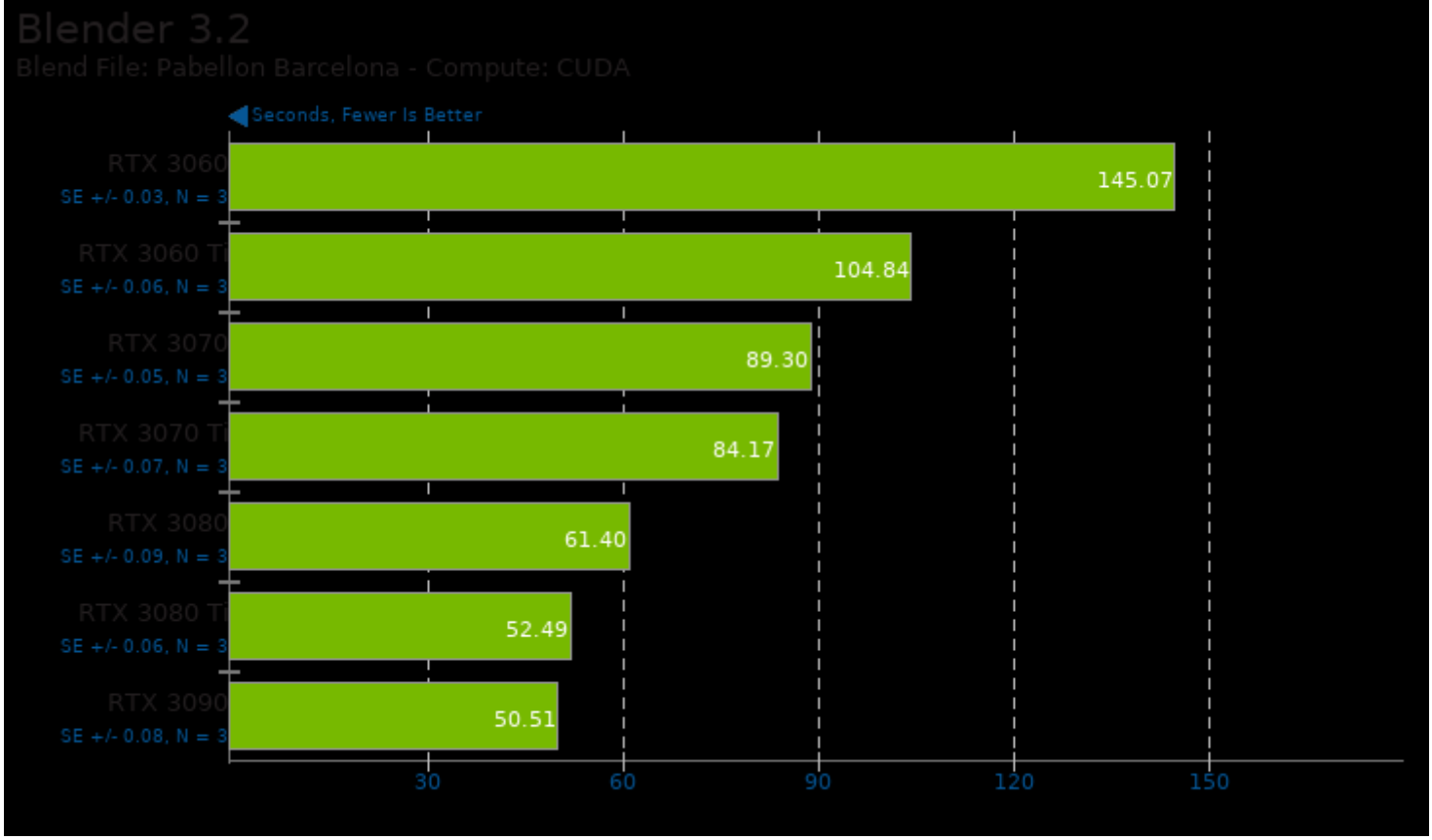
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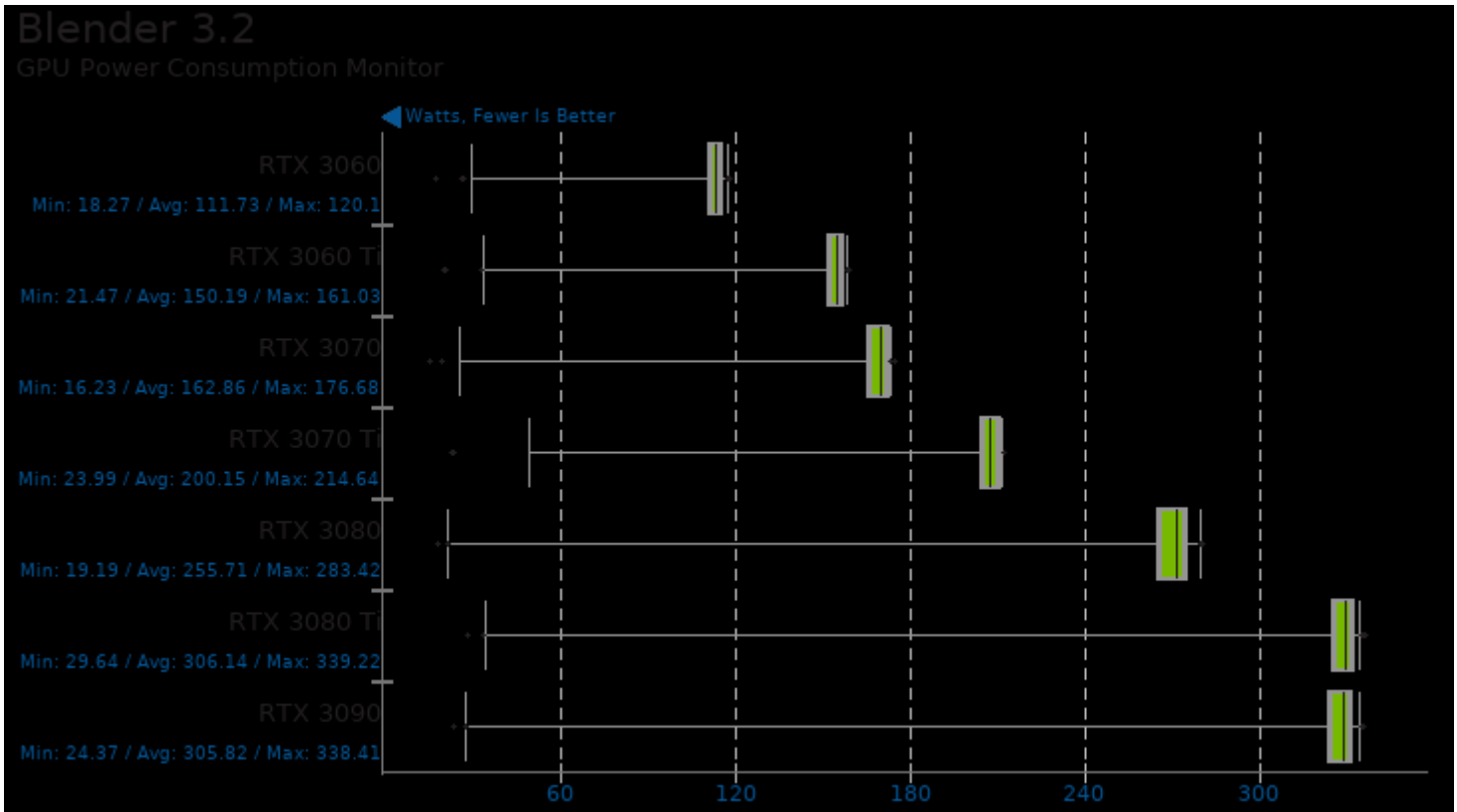


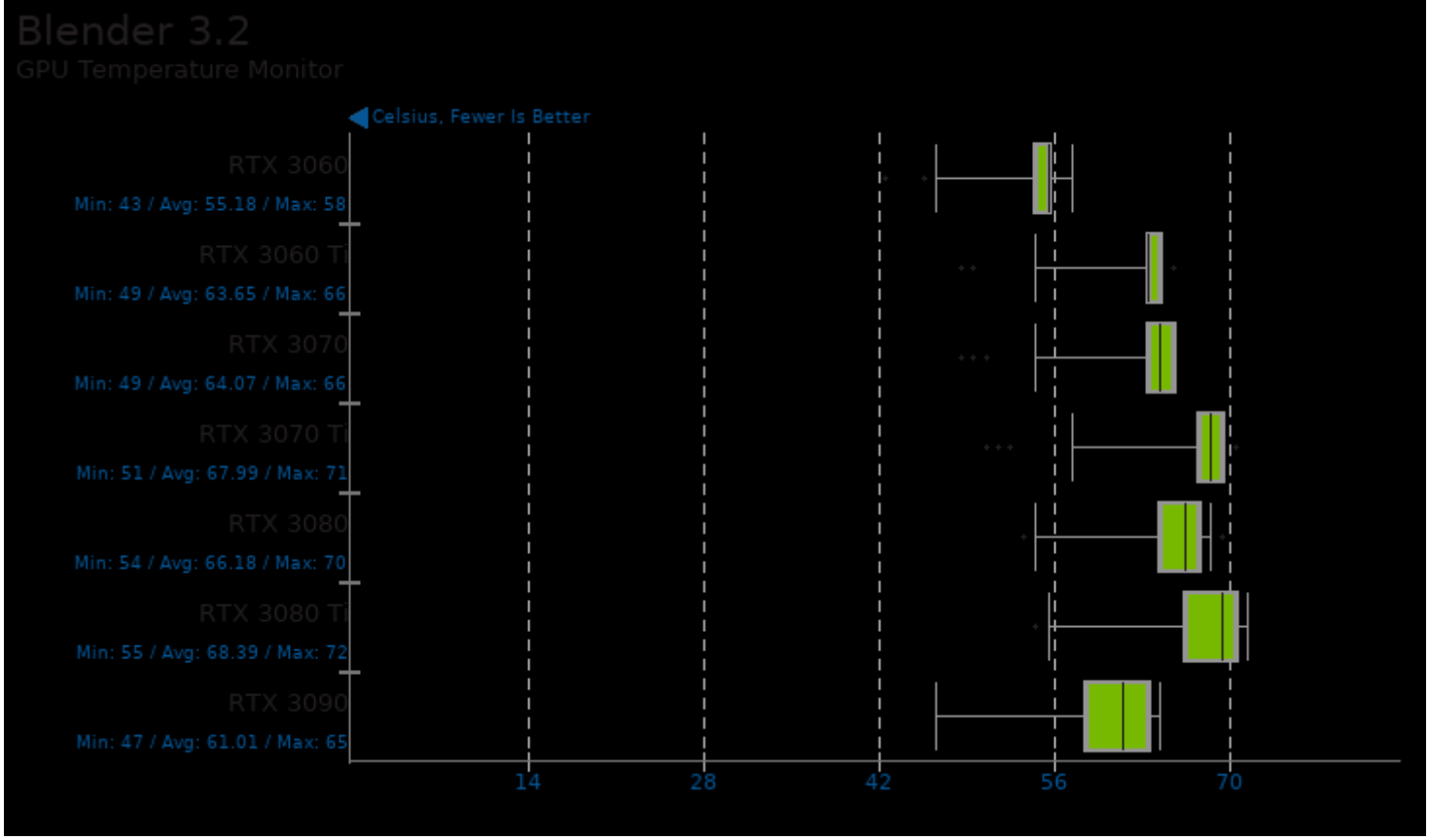
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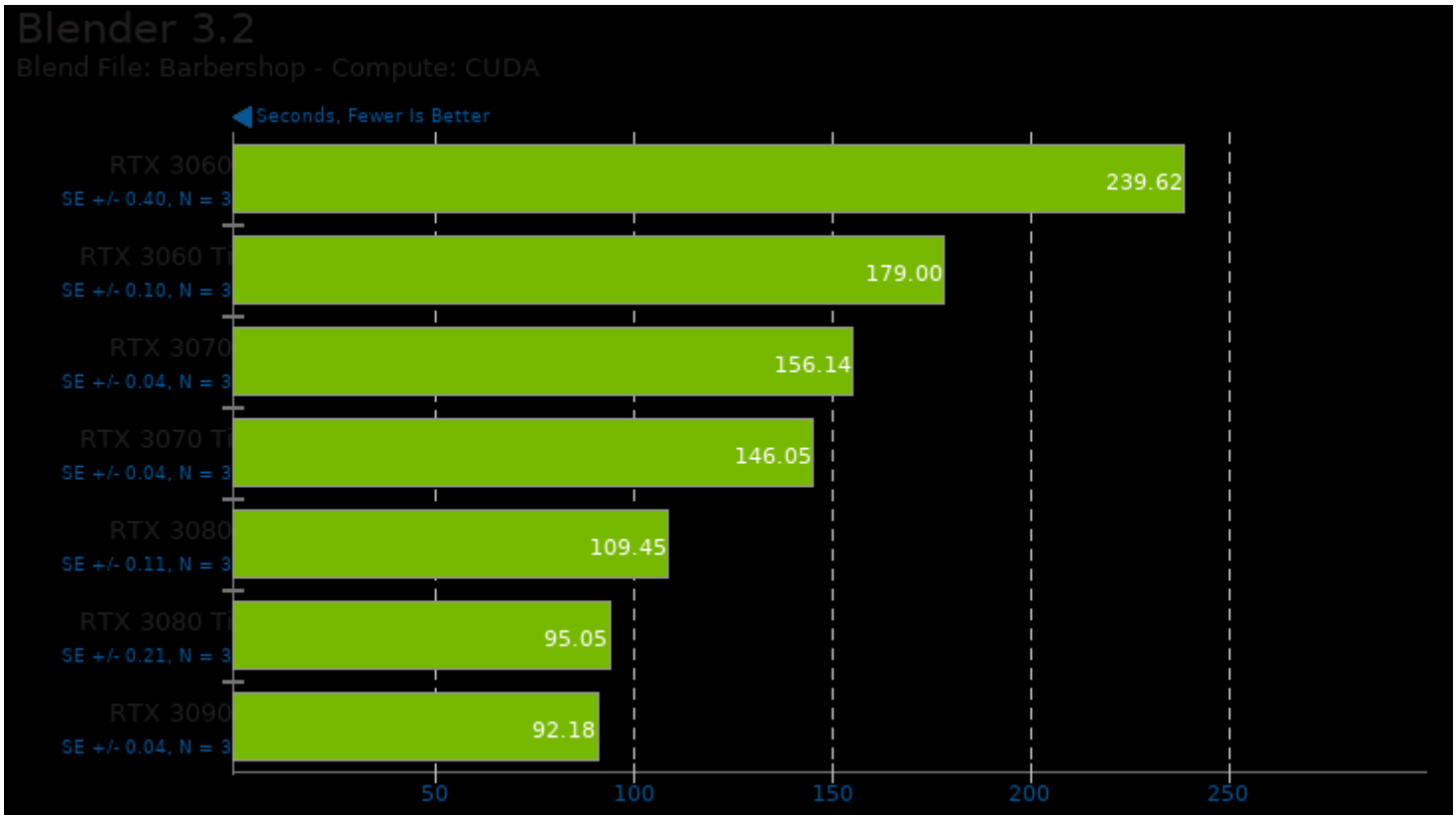


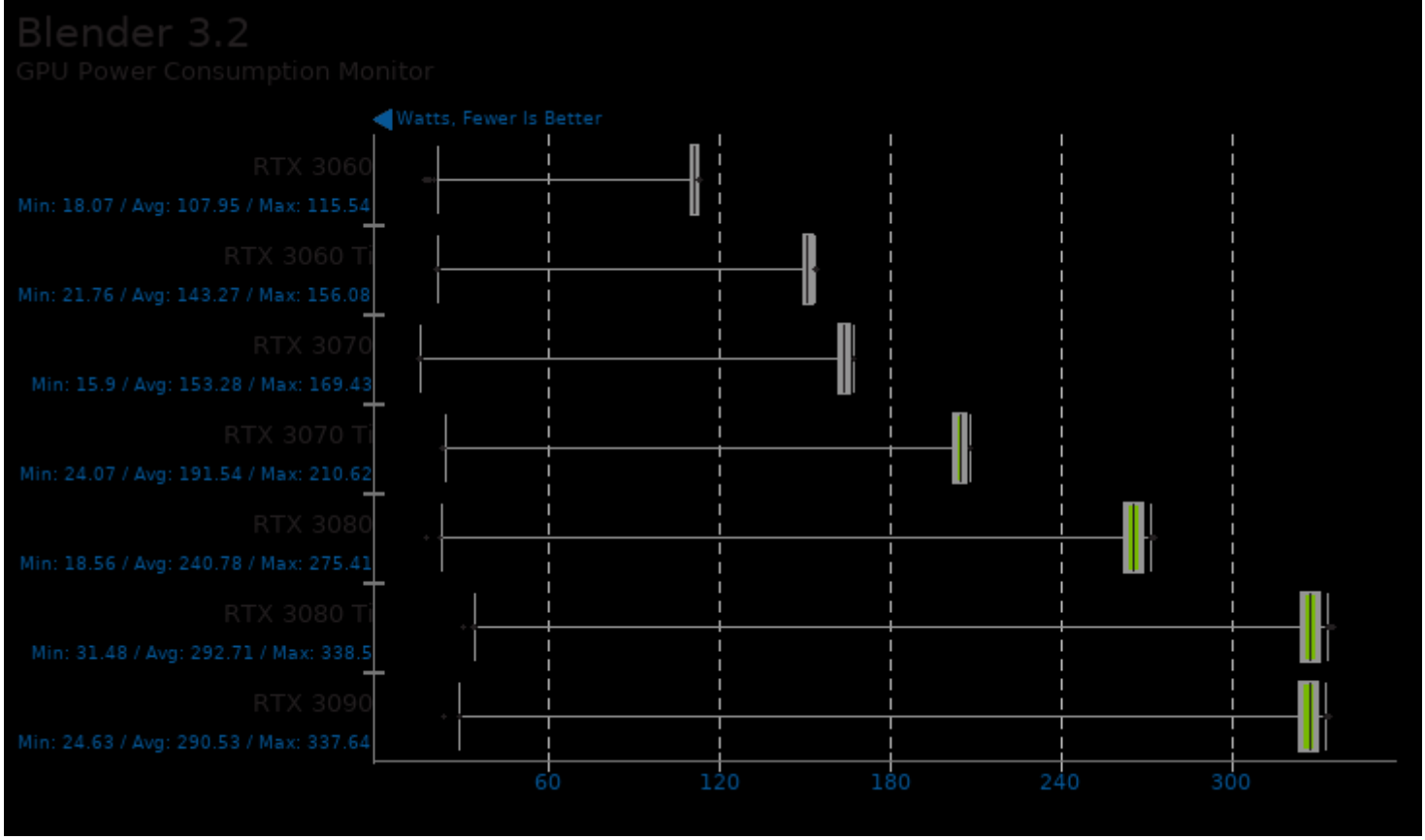
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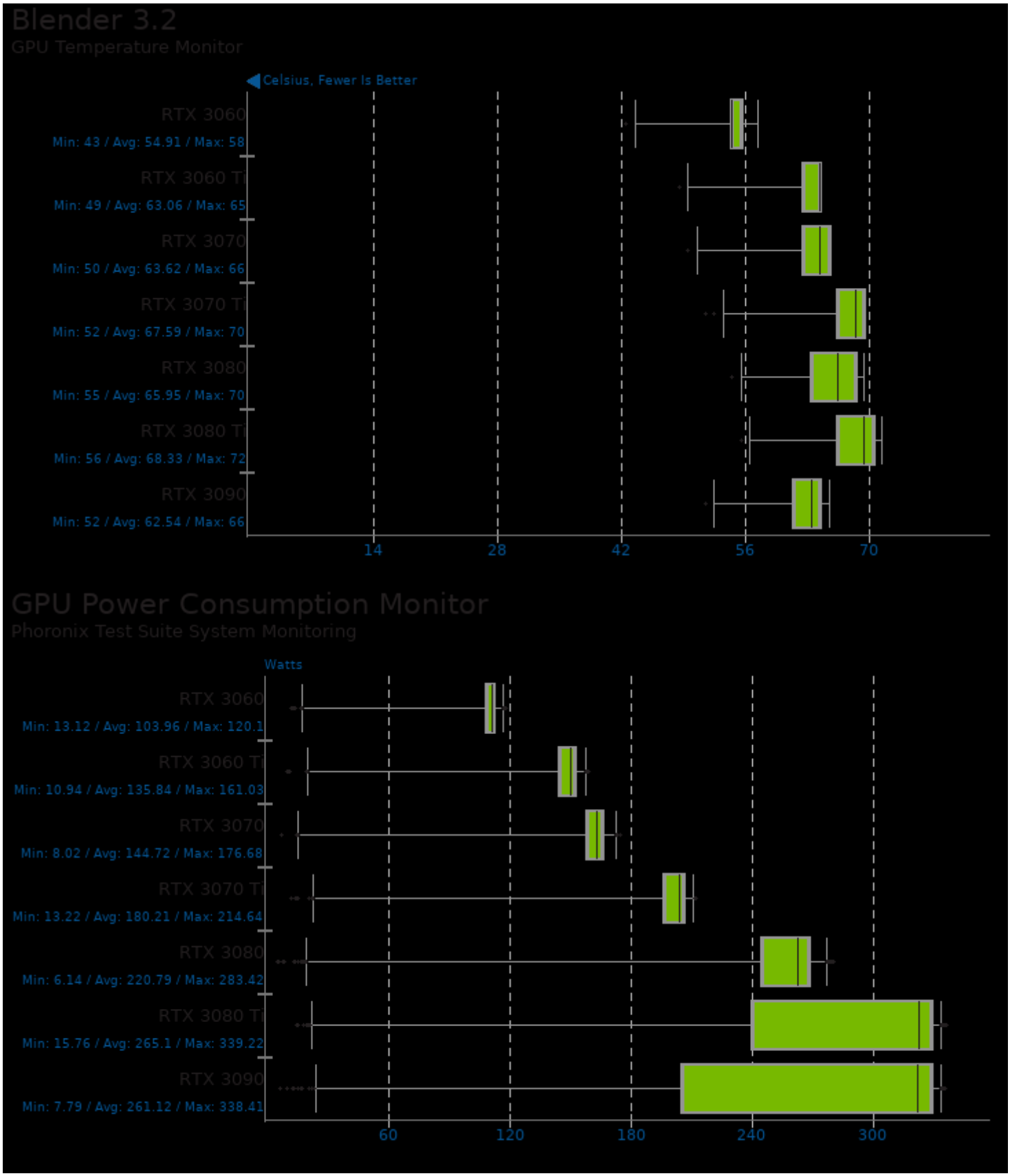


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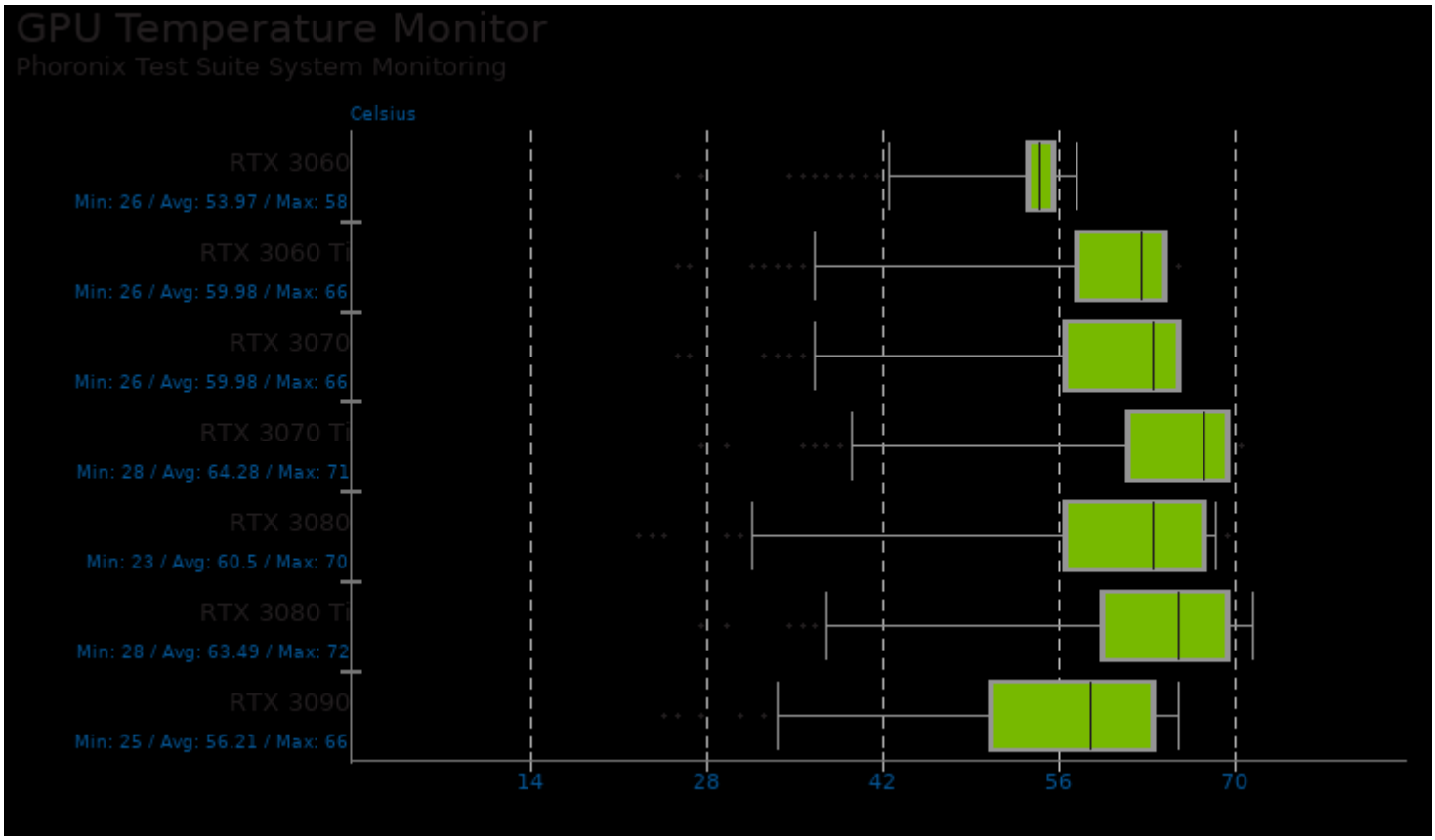




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