

www.phoronix-test-suite.com

Left 4 Dead 2 Linux Vulkan

AMD Ryzen 9 5900X 12-Core testing with a ASUS ROG CROSSHAIR VIII HERO (3501 BIOS) and AMD Radeon RX 56/64 8GB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

RX 6800 XT had the most wins, coming in first place for 56% of the tests.

Based on the geometric mean of all complete results, the fastest (RX 6800 XT) was 1.389x the speed of the slowest (RX 5500 XT). RX 5600 XT was 0.865x the speed of RX 6800 XT, RX Vega 56 was 0.941x the speed of RX 5600 XT, RX 5500 XT was 0.884x the speed of RX Vega 56.

Test Systems:

RX Vega 56

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3501 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus +

2000GB, Graphics: AMD Radeon RX 56/64 8GB (1590/800MHz), Audio: AMD Vega 10 HDMI Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.04, Kernel: 5.13.0-051300rc6daily20210617-generic (x86_64) 20210616, Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-849ab4e 2021-06-17 hirsute-oibaf-ppa) (LLVM 12.0.0), Vulkan: 1.2.180, Compiler: GCC 10.3.0 + CUDA 11.3, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - 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 5500 XT

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3501 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 2000GB, Graphics: Gigabyte AMD Radeon RX 5500/5500M / Pro 5500M 8GB (1900/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.04, Kernel: 5.13.0-051300rc6daily20210617-generic (x86_64) 20210616, Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-849ab4e 2021-06-17 hirsute-oibaf-ppa) (LLVM 12.0.0), Vulkan: 1.2.180, Compiler: GCC 10.3.0 + CUDA 11.3, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - 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 5600 XT

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3501 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 2000GB, Graphics: Sapphire AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 6GB (1780/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 21.04, Kernel: 5.13.0-051300rc6daily20210617-generic (x86_64) 20210616, Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-849ab4e 2021-06-17 hirsute-oibaf-ppa) (LLVM 12.0.0), Vulkan: 1.2.180, Compiler: GCC 10.3.0 + CUDA 11.3, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - 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

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3501 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 2000GB, Graphics: AMD Radeon RX 6800/6800 XT / 6900 16GB (2575/1000MHz), Audio: AMD Navi 21 HDMI Audio, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

Left 4 Dead 2 Linux Vulkan

OS: Ubuntu 21.04, Kernel: 5.13.0-051300rc6daily20210617-generic (x86_64) 20210616, Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-849ab4e 2021-06-17 hirsute-oibaf-ppa) (LLVM 12.0.0), Vulkan: 1.2.180, Compiler: GCC 10.3.0 + CUDA 11.3, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - 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 Vega 56	RX 5500 XT	RX 5600 XT	RX 6800 XT
Left 4 Dead 2 - 1280 x 1024 - OpenGL (FPS)	**390.43**	392.47	399.9	**403.03**
Normalized	96.87%	97.38%	99.22%	100%
Left 4 Dead 2 - 1280 x 1024 - Vulkan (FPS)	402.73	**394.16**	**412.32**	400.95
Normalized	97.67%	95.6%	100%	97.24%
Left 4 Dead 2 - 1600 x 1200 - OpenGL (FPS)	349.47	**335.29**	375.52	**391.15**
Normalized	89.34%	85.72%	96%	100%
Left 4 Dead 2 - 1600 x 1200 - Vulkan (FPS)	390.32	**345.4**	395.39	**396.01**
Normalized	98.56%	87.22%	99.84%	100%
Left 4 Dead 2 - 1920 x 1080 - OpenGL (FPS)	330.92	**318.62**	360.91	**380.66**
Normalized	86.93%	83.7%	94.81%	100%
Left 4 Dead 2 - 1920 x 1080 - Vulkan (FPS)	**379.47**	**327.88**	379.2	356.46
Normalized	100%	86.4%	99.93%	93.94%
Left 4 Dead 2 - 1920 x 1200 - OpenGL (FPS)	325.74	**305.69**	358.67	**382.11**
Normalized	85.25%	80%	93.87%	100%
Left 4 Dead 2 - 1920 x 1200 - Vulkan (FPS)	371.21	**315.27**	**380.83**	364.17
Normalized	97.47%	82.78%	100%	95.63%
Left 4 Dead 2 - 2560 x 1440 - OpenGL (FPS)	267.88	**235.48**	299.08	**377.03**
Normalized	71.05%	62.46%	79.33%	100%
Left 4 Dead 2 - 2560 x 1440 - Vulkan (FPS)	307.3	**241.16**	329.09	**387.54**
Normalized	79.3%	62.23%	84.92%	100%
Left 4 Dead 2 - 3840 x 2160 - OpenGL (FPS)	166.55	**132.7**	184.2	**362.28**
Normalized	45.97%	36.63%	50.84%	100%
Left 4 Dead 2 - 3840 x 2160 - Vulkan (FPS)	185.46	**138.6**	206.15	**389.55**
Normalized	47.61%	35.58%	52.92%	100%

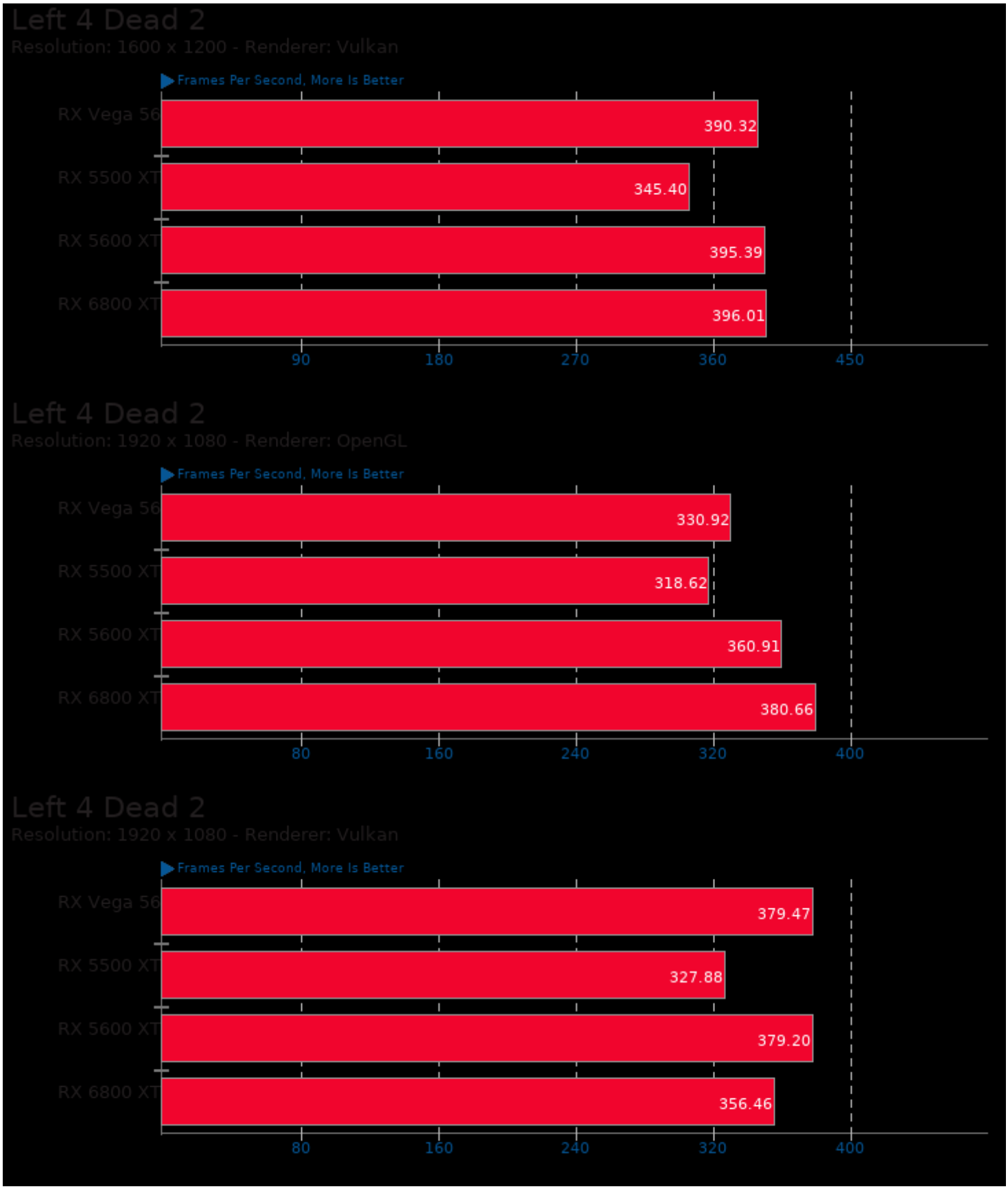
Left 4 Dead 2 Linux Vulkan

Left 4 Dead 2 - 800 x 600 - OpenGL (FPS)	**406.66**	404.05	**395.43**
Normalized	100%	99.36%	97.24%
Left 4 Dead 2 - 800 x 600 - Vulkan	**402.73**	**415.62**	412.1
Normalized	96.9%	100%	99.15%
Left 4 Dead 2 - 1024 x 768 - OpenGL (FPS)	**402.81**	402.77	**398.03**
Normalized	100%	99.99%	98.81%
Left 4 Dead 2 - 1024 x 768 - Vulkan (FPS)	**400.47**	**421.69**	405.25
Normalized	94.97%	100%	96.1%

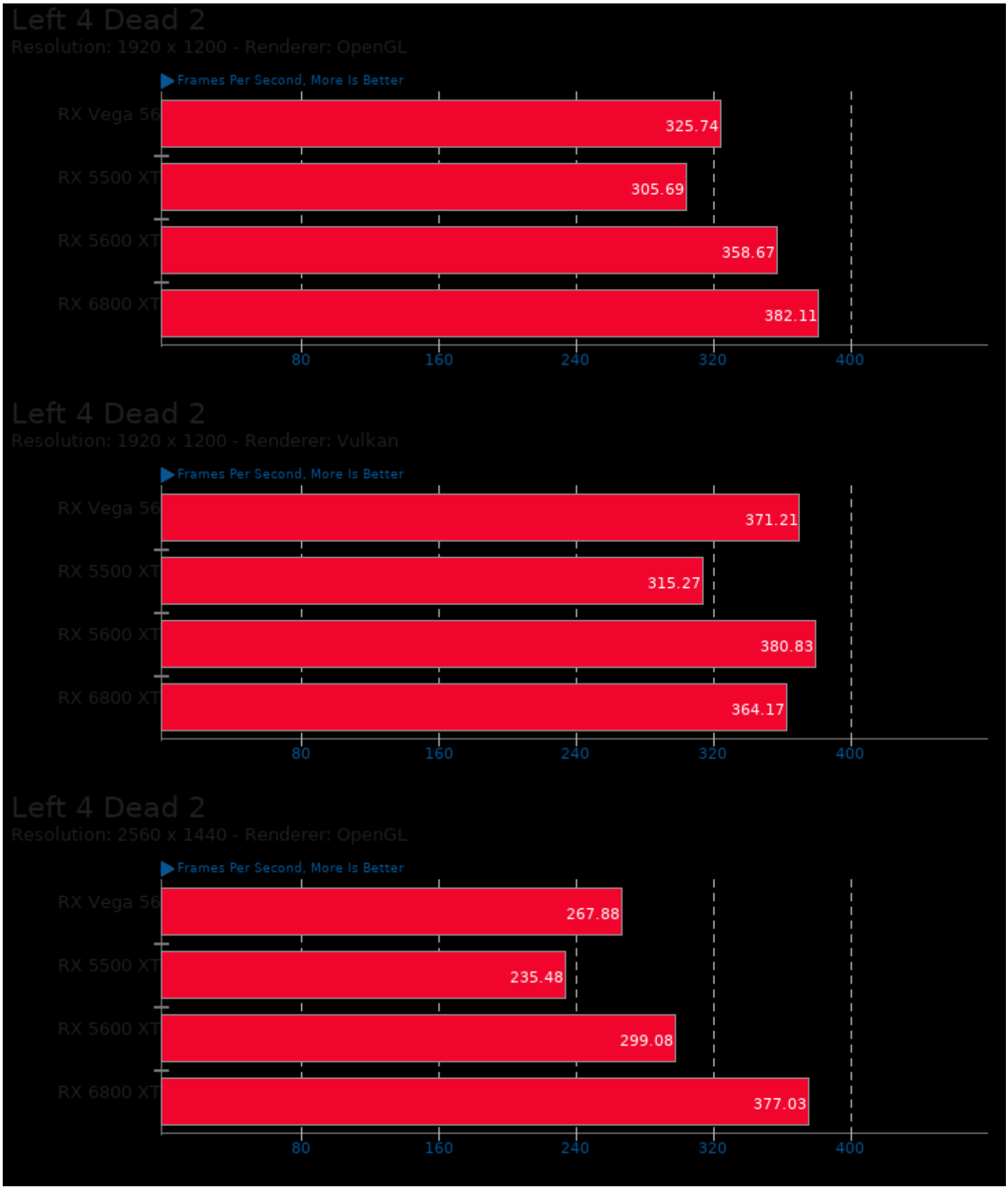
Left 4 Dead 2 Linux Vulkan



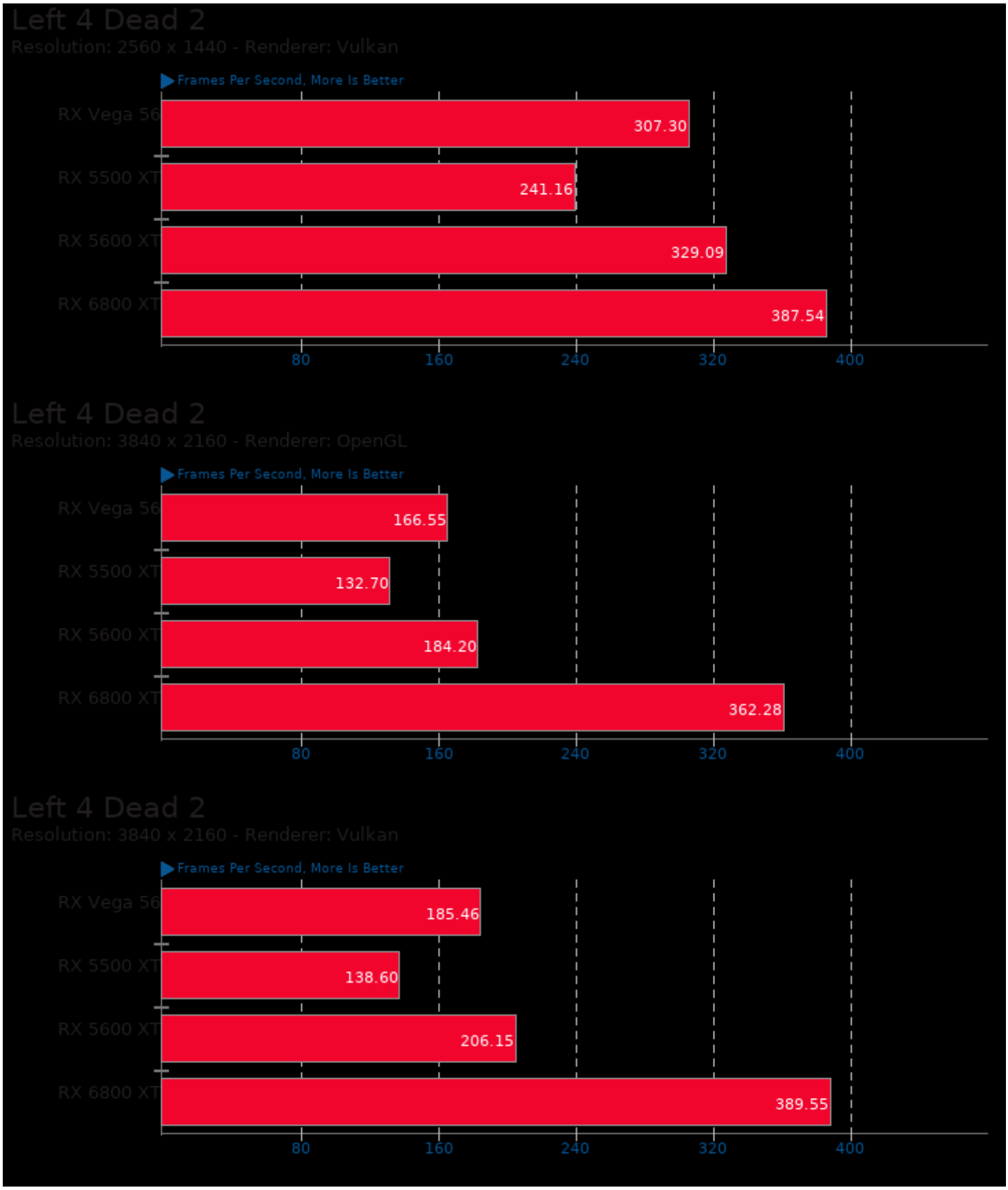
Left 4 Dead 2 Linux Vulkan



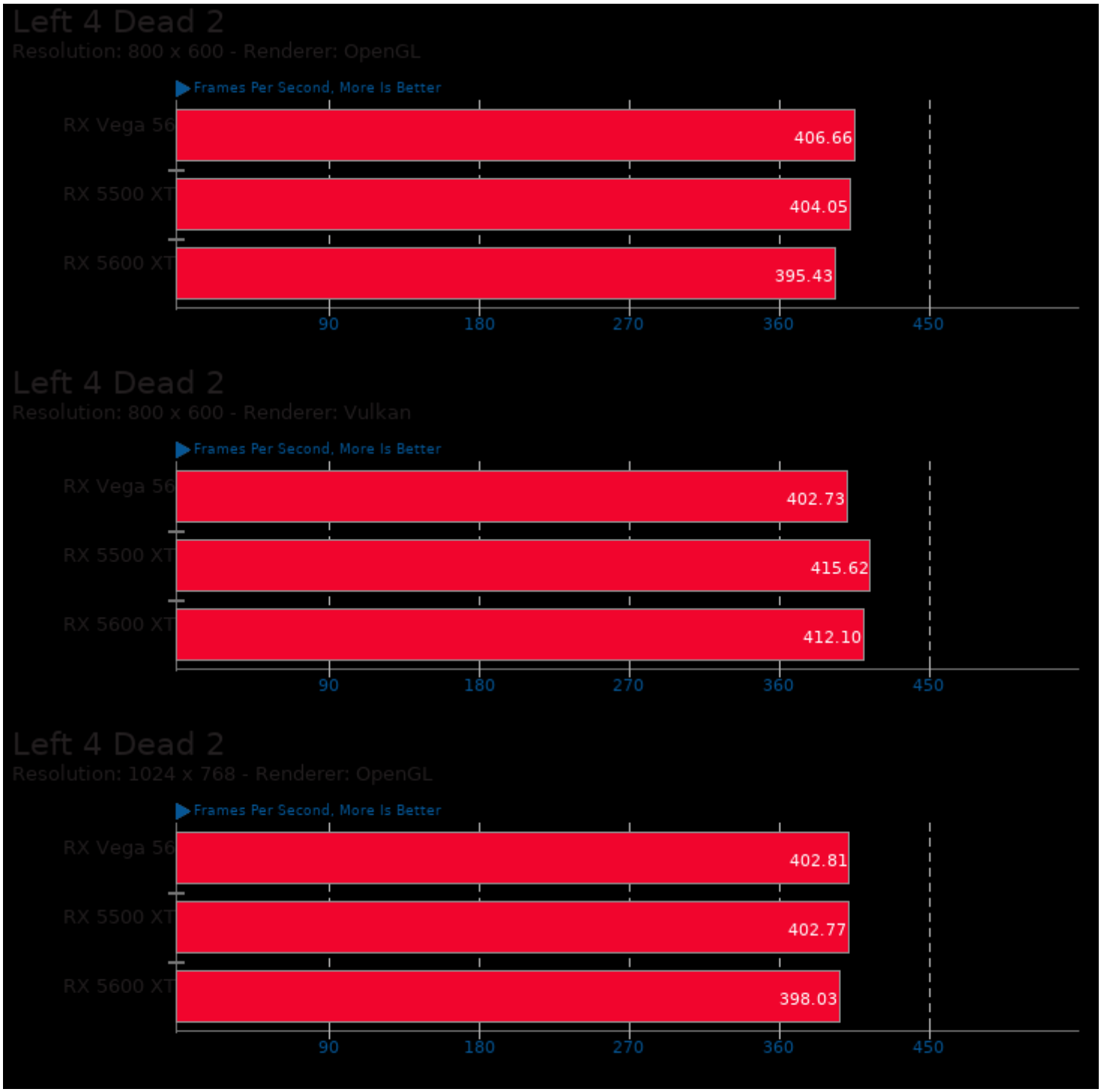
Left 4 Dead 2 Linux Vulkan



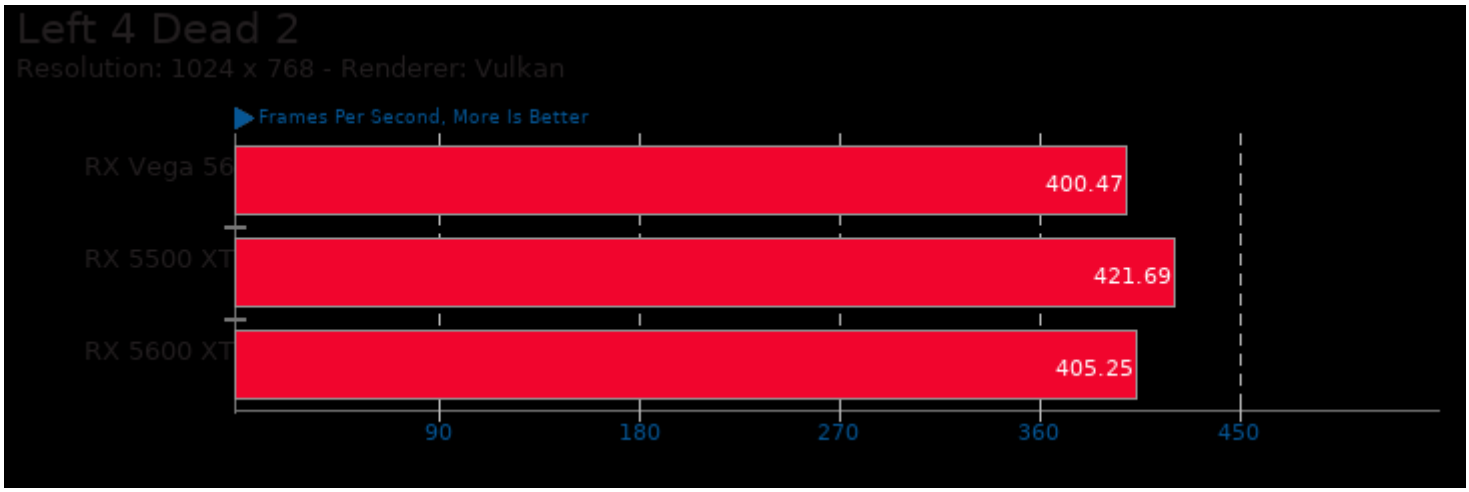
Left 4 Dead 2 Linux Vulkan



Left 4 Dead 2 Linux Vulkan



Left 4 Dead 2 Linux Vulkan



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 10:15.