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DRM-Next 4.13 AMDGPU Early Tests

AMD Ryzen 7 1800X Eight-Core testing with a MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 and MSI AMD POLARIS10 (DRM 3.17.0 / 4.12.0-996-generic LLVM 5.0.0) 8192MB on Ubuntu 17.04 via the Phoronix Test Suite.

Automated Executive Summary

R9 Fury: DRM-Next 4.13 had the most wins, coming in first place for 68% of the tests.

Based on the geometric mean of all complete results, the fastest (R9 Fury: DRM-Next 4.13) was 1.17x the speed of the slowest (RX 580: Linux 4.12). R9 Fury: DRM-Next 4.13 was 1.009x the speed of R9 Fury: Linux 4.12, RX 580: Linux 4.12 was 0.855x the speed of R9 Fury: DRM-Next 4.13, RX 580: DRM-Next 4.13 was 1.002x the speed of RX 580: Linux 4.12.

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

Civilization VI (Quality: Lowest - Resolution: 1920 x 1080 - Total Frame Time) at 3.877x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: High - Renderer: Vulkan - Scene: Hope, Glory, and Dog is Dead) at 1.457x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: High - Renderer: Vulkan - Scene: Landmover) at 1.451x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: High - Renderer: Vulkan - Scene: Camp Hollow Point) at 1.328x
Portal (Resolution: 3840 x 2160) at 1.277x
Serious Sam 3: BFE (Resolution: 3840 x 2160 - Quality: Ultra - Renderer: OpenGL) at 1.265x

Dota 2 (Resolution: 3840 x 2160 - Renderer: Vulkan) at 1.243x
Serious Sam 3: BFE (Resolution: 3840 x 2160 - Quality: Ultra - Renderer: Vulkan) at 1.234x
Tesseract (Resolution: 3840 x 2160) at 1.221x
Dawn of War III (Resolution: 1920 x 1080 - Graphics Preset: Maximum - Renderer: Vulkan) at 1.22x.

Test Systems:

R9 Fury: Linux 4.12

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + 256GB INTEL SSDPEKKW256G7, Graphics: Sapphire AMD FIJI (DRM 3.15.0 / 4.12.0-999-generic LLVM 5.0.0) 4096MB, Audio: AMD Fiji HDMI/DP, Monitor: DELL P2415Q, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.04, Kernel: 4.12.0-999-generic (x86_64) 20170516, Desktop: Unity 7.5.0, Display Server: X Server 1.19.3, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.2.0-devel- padoka PPA (LLVM 5.0.0), Vulkan: 1.0.42, Compiler: GCC 6.3.0 20170406, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: acpi-cpufreq performance
Graphics Notes: GLAMOR

R9 Fury: DRM-Next 4.13

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + 256GB INTEL SSDPEKKW256G7, Graphics: Sapphire AMD FIJI (DRM 3.17.0 / 4.12.0-996-generic LLVM 5.0.0) 4096MB, Audio: AMD Fiji HDMI/DP, Monitor: DELL P2415Q, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.04, Kernel: 4.12.0-996-generic (x86_64) 20170626, Desktop: Unity 7.5.0, Display Server: X Server 1.19.3, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.2.0-devel- padoka PPA (LLVM 5.0.0), Vulkan: 1.0.42, Compiler: GCC 6.3.0 20170406, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: acpi-cpufreq performance
Graphics Notes: GLAMOR

RX 580: Linux 4.12

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + 256GB INTEL SSDPEKKW256G7, Graphics: MSI AMD POLARIS10 (DRM 3.15.0 / 4.12.0-999-generic LLVM 5.0.0) 8192MB, Audio: AMD Device aaf0, Monitor: DELL P2415Q, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.04, Kernel: 4.12.0-999-generic (x86_64) 20170516, Desktop: Unity 7.5.0, Display Server: X Server 1.19.3, Display Driver: modesetting 1.19.3, OpenGL: 4.5 Mesa 17.2.0-devel- padoka PPA (LLVM 5.0.0), Vulkan: 1.0.42, Compiler: GCC 6.3.0 20170406, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: acpi-cpufreq performance
Graphics Notes: GLAMOR

RX 580: DRM-Next 4.13

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + 256GB INTEL SSDPEKKW256G7, Graphics: MSI AMD POLARIS10 (DRM 3.17.0 / 4.12.0-996-generic LLVM 5.0.0) 8192MB, Audio: AMD Device aaf0, Monitor: DELL P2415Q, Network: Intel I211 Gigabit Connection

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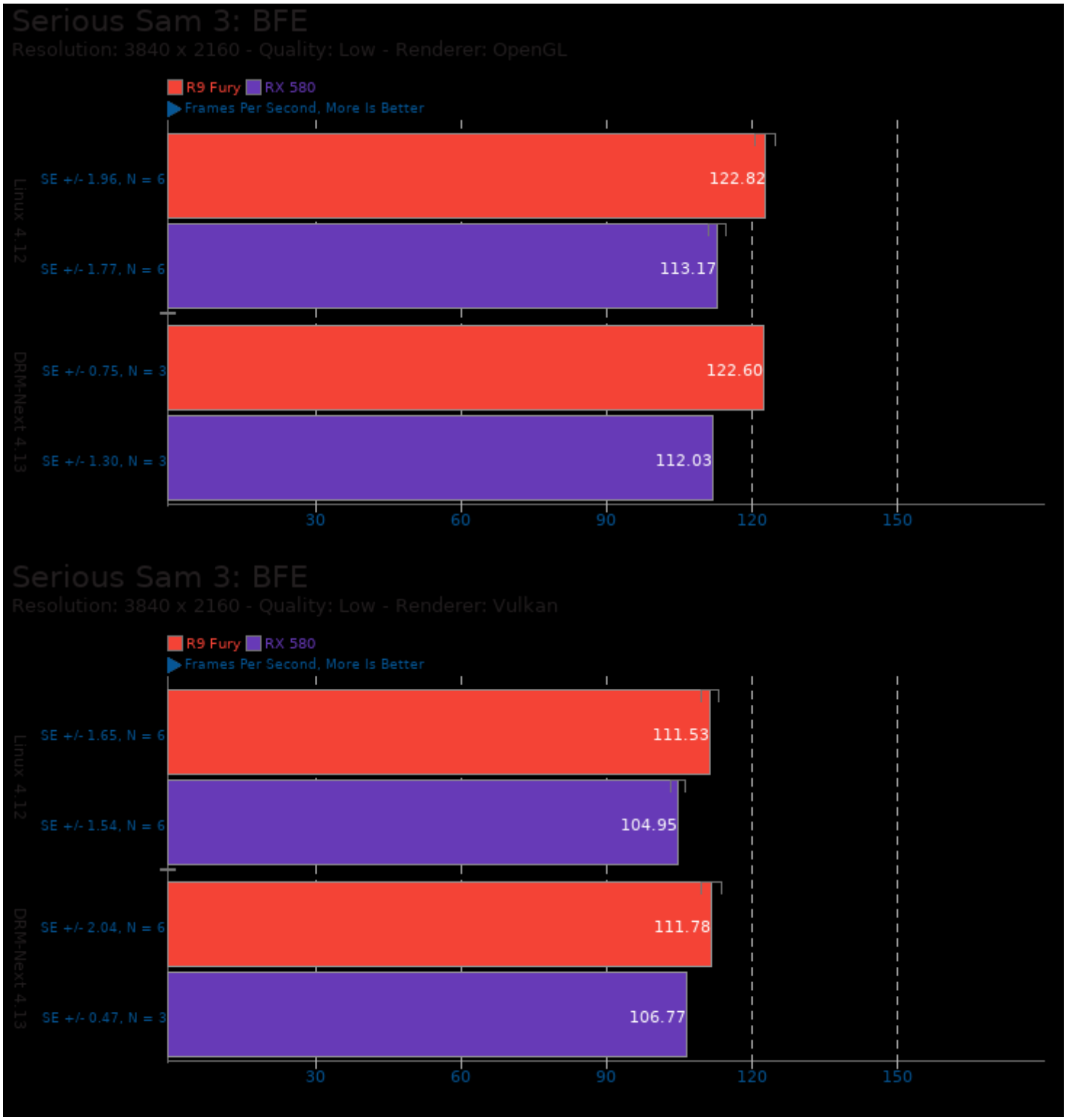
Processor Notes: Scaling Governor: acpi-cpufreq performance
Graphics Notes: GLAMOR

	R9 Fury: Linux 4.12	R9 Fury: DRM-Next 4.13	RX 580: Linux 4.12	RX 580: DRM-Next 4.13
Serious Sam 3: BFE - 3840 x 2160 - Low - OpenGL (FPS)	**122.82**	122.60	113.17	**112.03**
Normalized	100%	99.82%	92.14%	91.21%
Standard Deviation	3.9%	1.1%	3.8%	2%
Serious Sam 3: BFE - 3840 x 2160 - Low - Vulkan (FPS)	111.53	**111.78**	**104.95**	106.77
Normalized	99.78%	100%	93.89%	95.52%
Standard Deviation	3.6%	4.5%	3.6%	0.8%
Serious Sam 3: BFE - 3840 x 2160 - Ultra - OpenGL (FPS)	51.17	**51.97**	**41.07**	41.70
Normalized	98.46%	100%	79.03%	80.24%
Standard Deviation	1.8%	0.2%	1.7%	0.7%
Serious Sam 3: BFE - 3840 x 2160 - Ultra - Vulkan (FPS)	49.73	**49.80**	**40.37**	40.80
Normalized	99.86%	100%	81.06%	81.93%
Standard Deviation	1.3%	1.9%	2.5%	0.2%
Civilization VI - Lowest - 1920 x 1080 (FPS)	36.56	**37.95**	**33.46**	34.35
Normalized	96.34%	100%	88.17%	90.51%
Standard Deviation	1%	3.3%	0.7%	2%
DiRT Rally - 1920 x 1080 - High (FPS)	**115.78**	115.38	98.83	**98.40**
Normalized	100%	99.65%	85.36%	84.99%
Standard Deviation	0.6%	0.3%	0.3%	0.2%
Dota 2 - 1920 x 1080 - OpenGL (FPS)	120.67	**124.50**	112.20	**106.03**
Normalized	96.92%	100%	90.12%	85.16%
Standard Deviation	2.2%	0.6%	4.1%	1.7%
Dota 2 - 1920 x 1080 - Vulkan (FPS)	98.33	**99.00**	**94.00**	96.60
Normalized	99.32%	100%	94.95%	97.58%
Standard Deviation	0.5%	0.8%	1.4%	0.7%
Dota 2 - 3840 x 2160 - OpenGL (FPS)	69.93	**70.10**	59.07	**58.90**
Normalized	99.76%	100%	84.27%	84.02%
Standard Deviation	0.5%	0.5%	0.2%	0.4%
Dota 2 - 3840 x 2160 - Vulkan (FPS)	**55.83**	55.53	45.33	**44.90**
Normalized	100%	99.46%	81.19%	80.42%

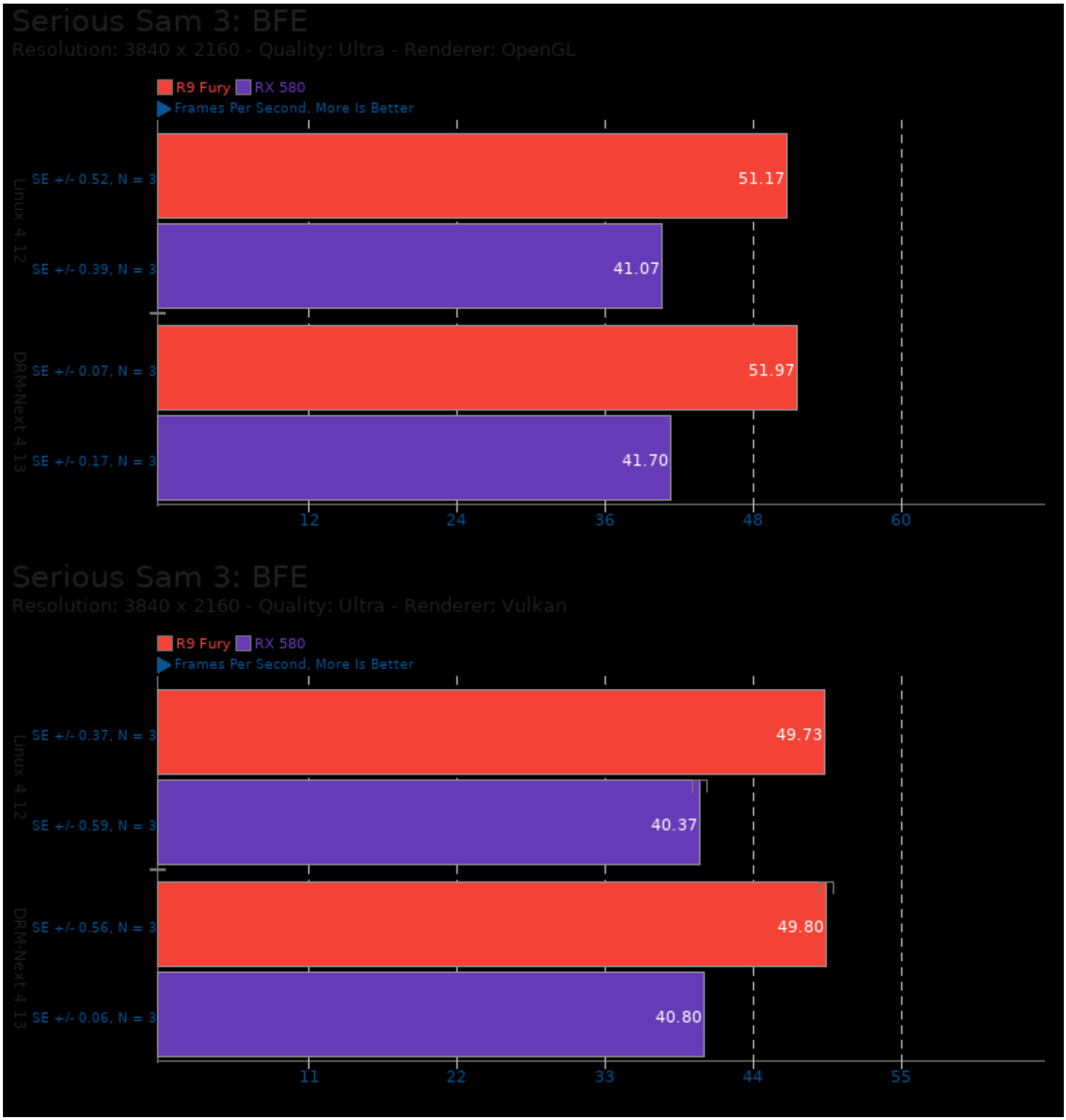
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Standard Deviation	0.5%	0.9%	1.4%	1.7%
Dawn of War III - 1920 x 1080 - Maximum - Vulkan (FPS)	59.96	59.65	49.74	49.16
Normalized	100%	99.48%	82.96%	81.99%
Standard Deviation	0.2%	0.3%	0.8%	0.2%
ET: Legacy - Renderer2 - 3840 x 2160 (FPS)	196.53	195.77	184.23	183.77
Normalized	100%	99.61%	93.74%	93.51%
Standard Deviation	1%	0.7%	0.2%	0.4%
Mad Max - 1920 x 1080 - High - OpenGL - Camp Hollow Point (FPS)	210.21	212.50	183.71	187.84
Normalized	98.92%	100%	86.45%	88.4%
Mad Max - 1920 x 1080 - High - OpenGL - Stronghold (FPS)	77.45	74.18	75.69	64.84
Normalized	100%	95.78%	97.73%	83.72%
Mad Max - 1920 x 1080 - High - OpenGL - H.G.a.D.i.D (FPS)	211.05	210.74	177.69	179.25
Normalized	100%	99.85%	84.19%	84.93%
Mad Max - 1920 x 1080 - High - OpenGL - Landmover (FPS)	242.82	245.18	202.89	208.61
Normalized	99.04%	100%	82.75%	85.08%
Mad Max - 1920 x 1080 - High - Vulkan - Camp Hollow Point (FPS)	199.46	212.50	162.54	159.98
Normalized	93.86%	100%	76.49%	75.28%
Mad Max - 1920 x 1080 - High - Vulkan - Stronghold (FPS)	71.00	74.18	65.38	65.29
Normalized	95.71%	100%	88.14%	88.02%
Mad Max - 1920 x 1080 - High - Vulkan - H.G.a.D.i.D (FPS)	175.77	210.74	144.60	146.76
Normalized	83.41%	100%	68.62%	69.64%
Mad Max - 1920 x 1080 - High - Vulkan - Landmover (FPS)	205.07	245.18	168.94	170.18
Normalized	83.64%	100%	68.9%	69.41%
Metro: Last Light Redux - 1920 x 1080 (FPS)	134.32	136.80	119.77	120.47
Normalized	98.19%	100%	87.55%	88.06%
Standard Deviation	0.6%	0.7%	0.9%	0.3%
Portal - 3840 x 2160 (FPS)	354.49	354.78	277.82	277.87
Normalized	99.92%	100%	78.31%	78.32%
Standard Deviation	0.1%	0.1%	0.2%	0.1%
Tesseract - 3840 x 2160 (FPS)	225.46	226.54	185.52	187.91
Normalized	99.52%	100%	81.89%	82.95%
Standard Deviation	1.7%	0.3%	0.4%	0.5%
Unigine Superposition - 1920 x 1080 - Fullscreen - High (FPS)	38.30	38.30	32.70	32.70
Normalized	100%	100%	85.38%	85.38%
Xonotic - 3840 x 2160 - Ultimate (FPS)	216.82	217.48	180.64	181.51
Normalized	99.7%	100%	83.06%	83.46%
Standard Deviation	0.4%	0.3%	0.8%	0.8%

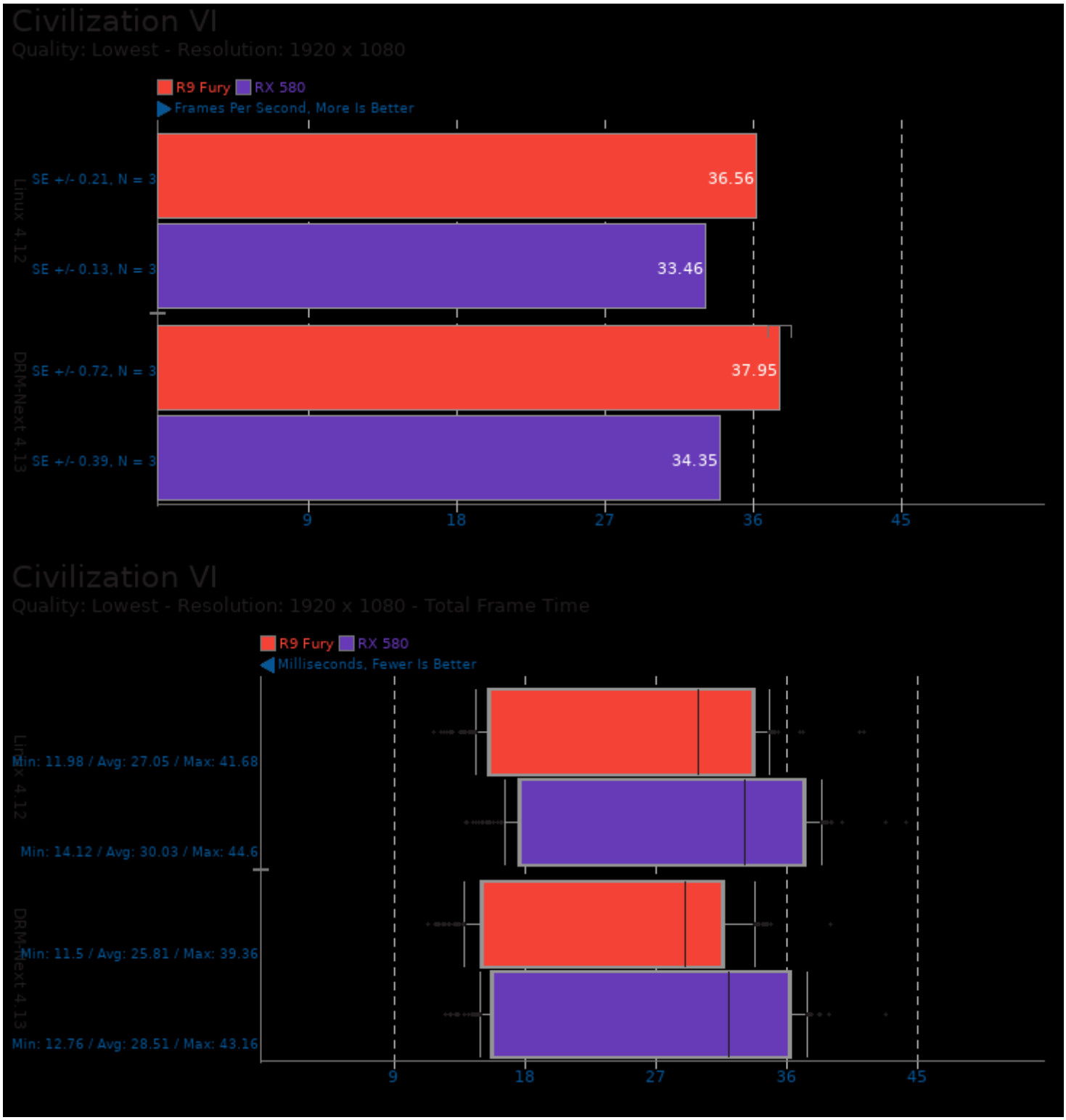
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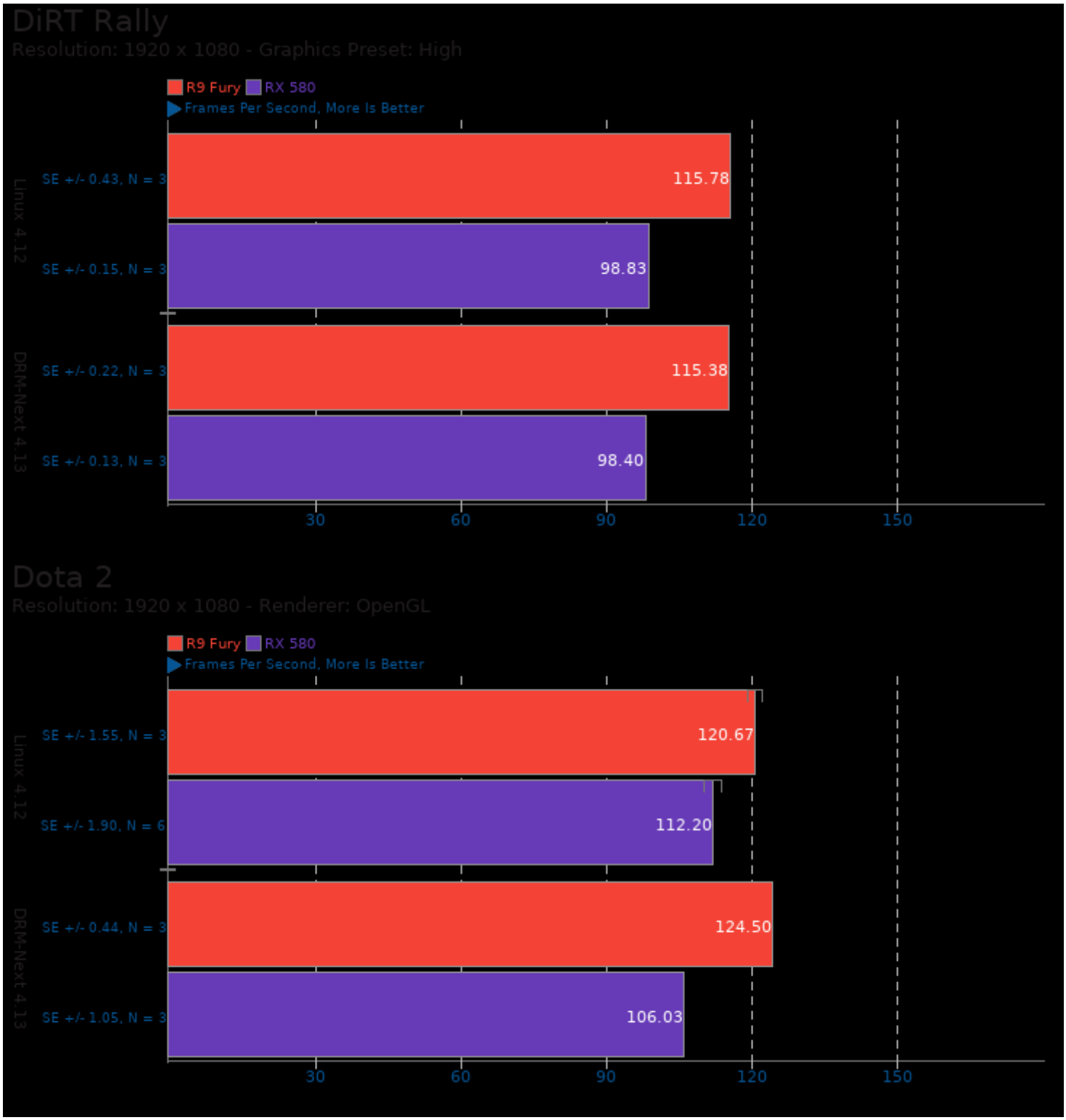
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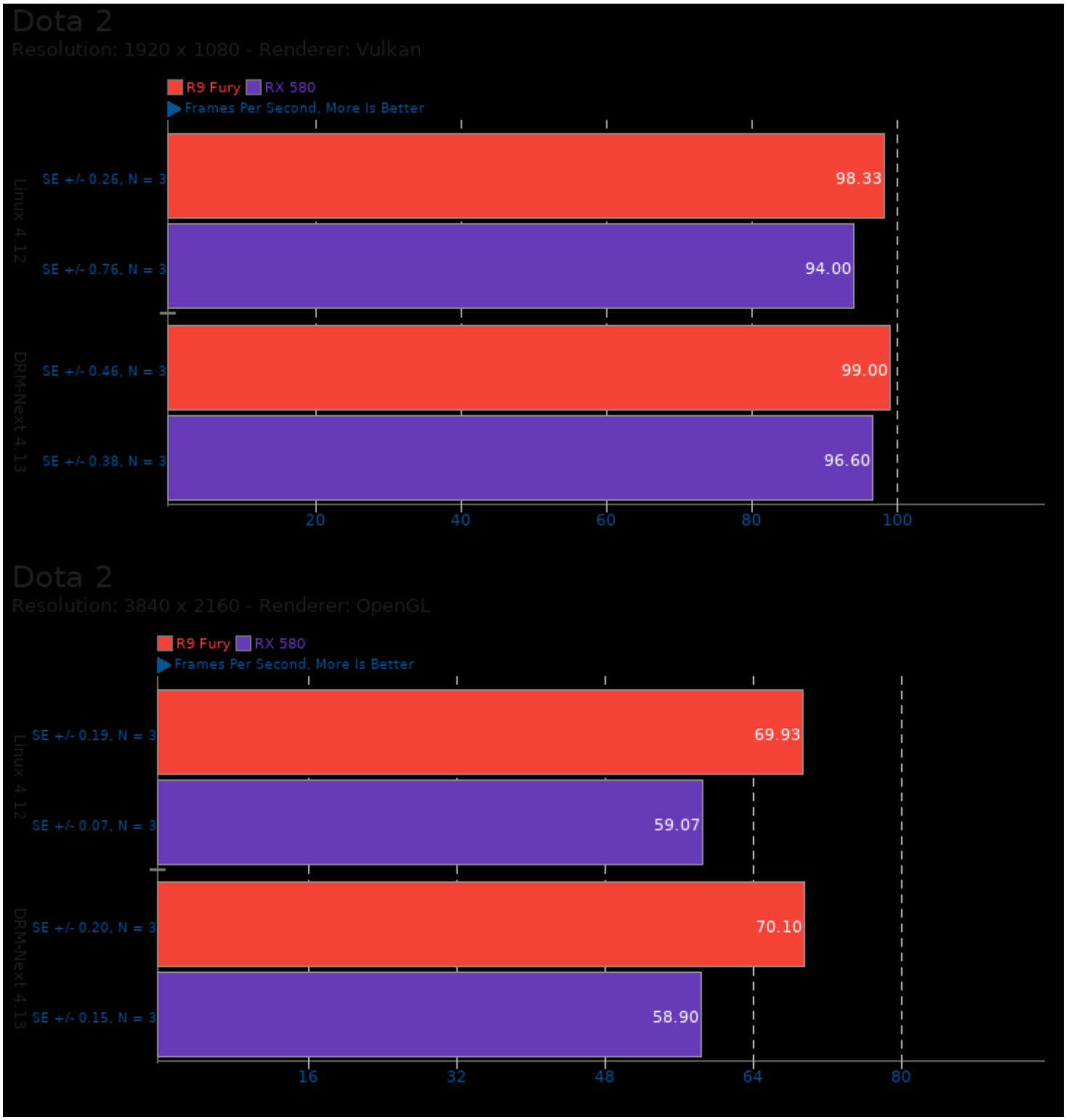
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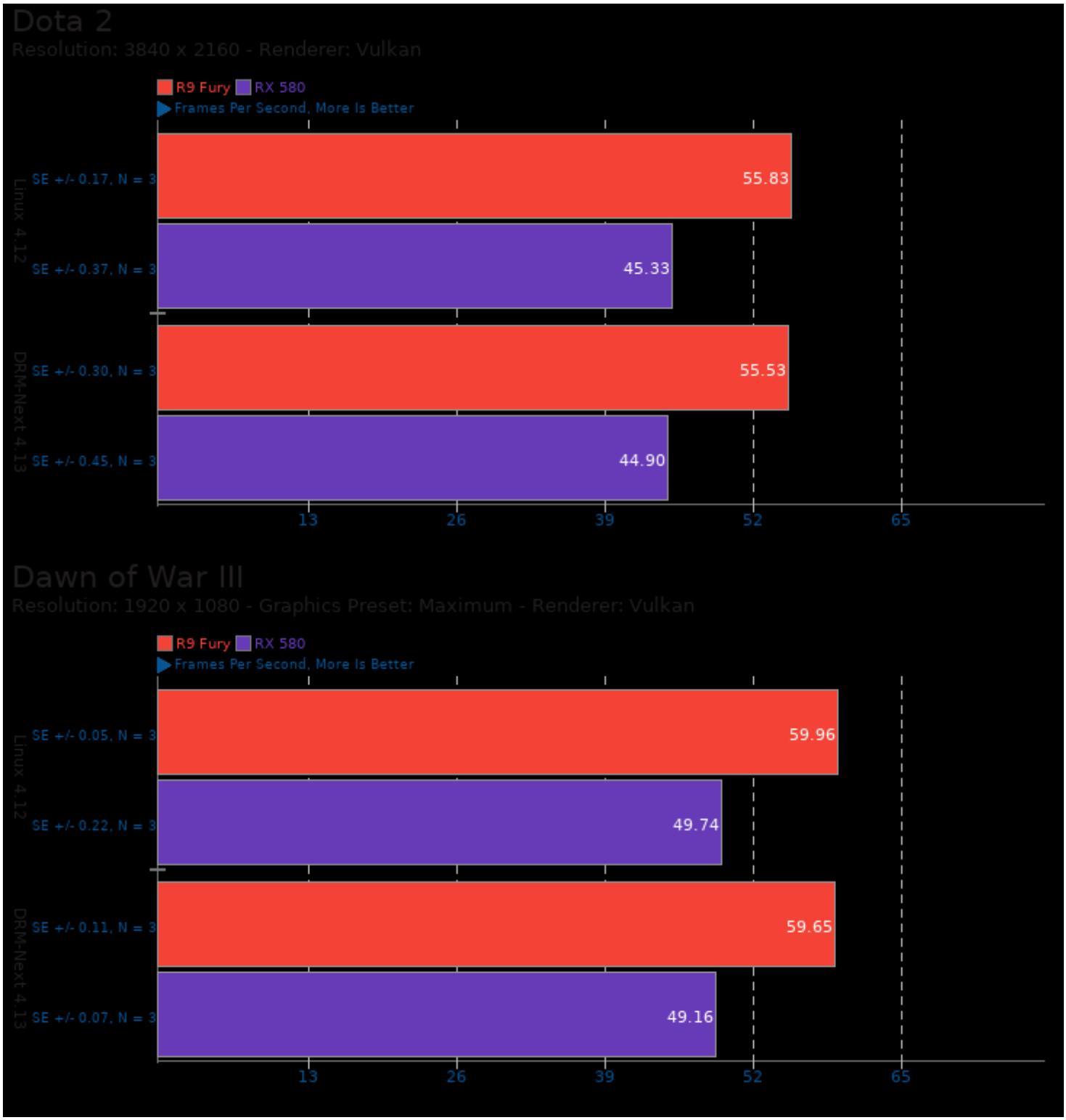
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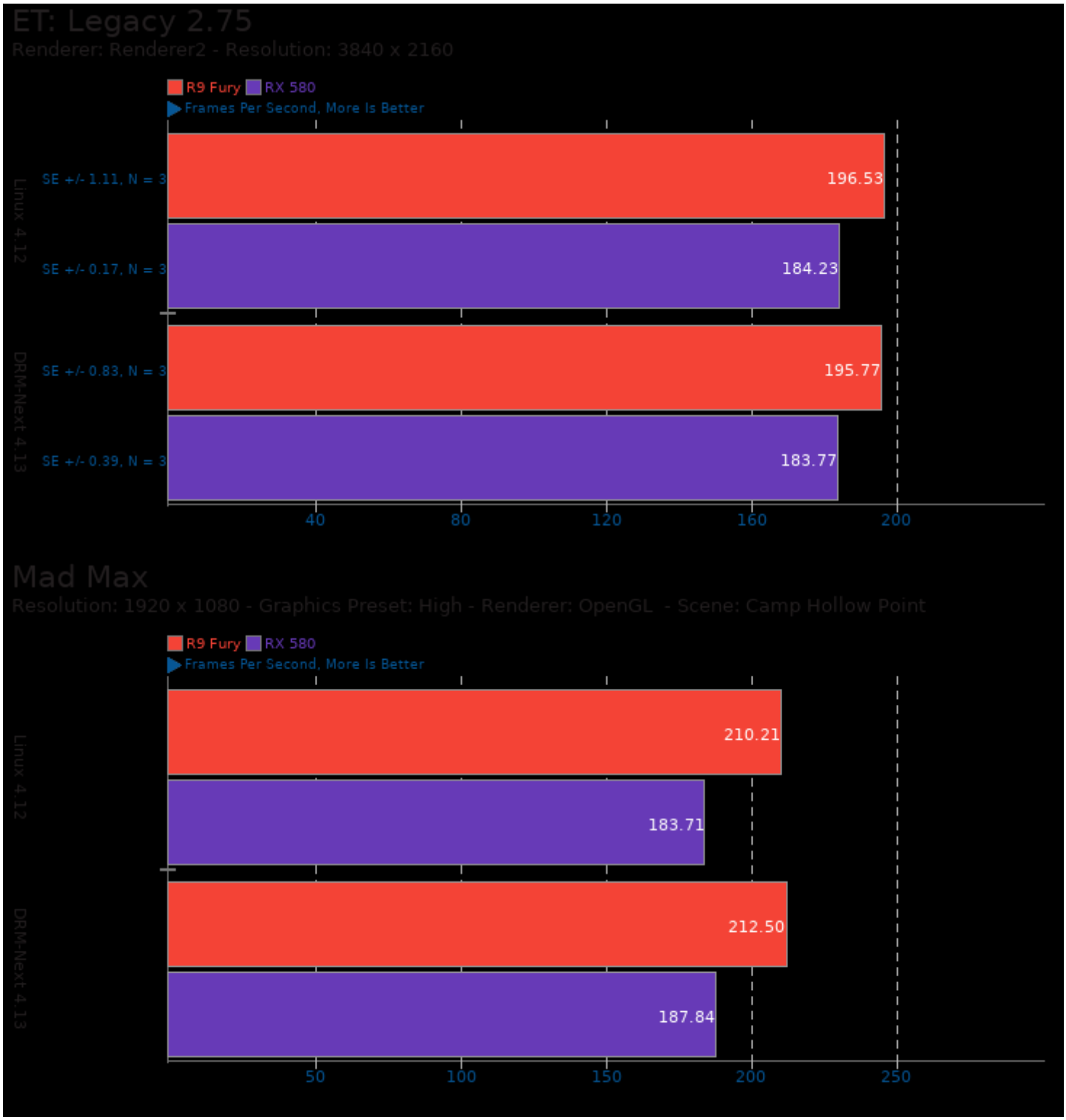
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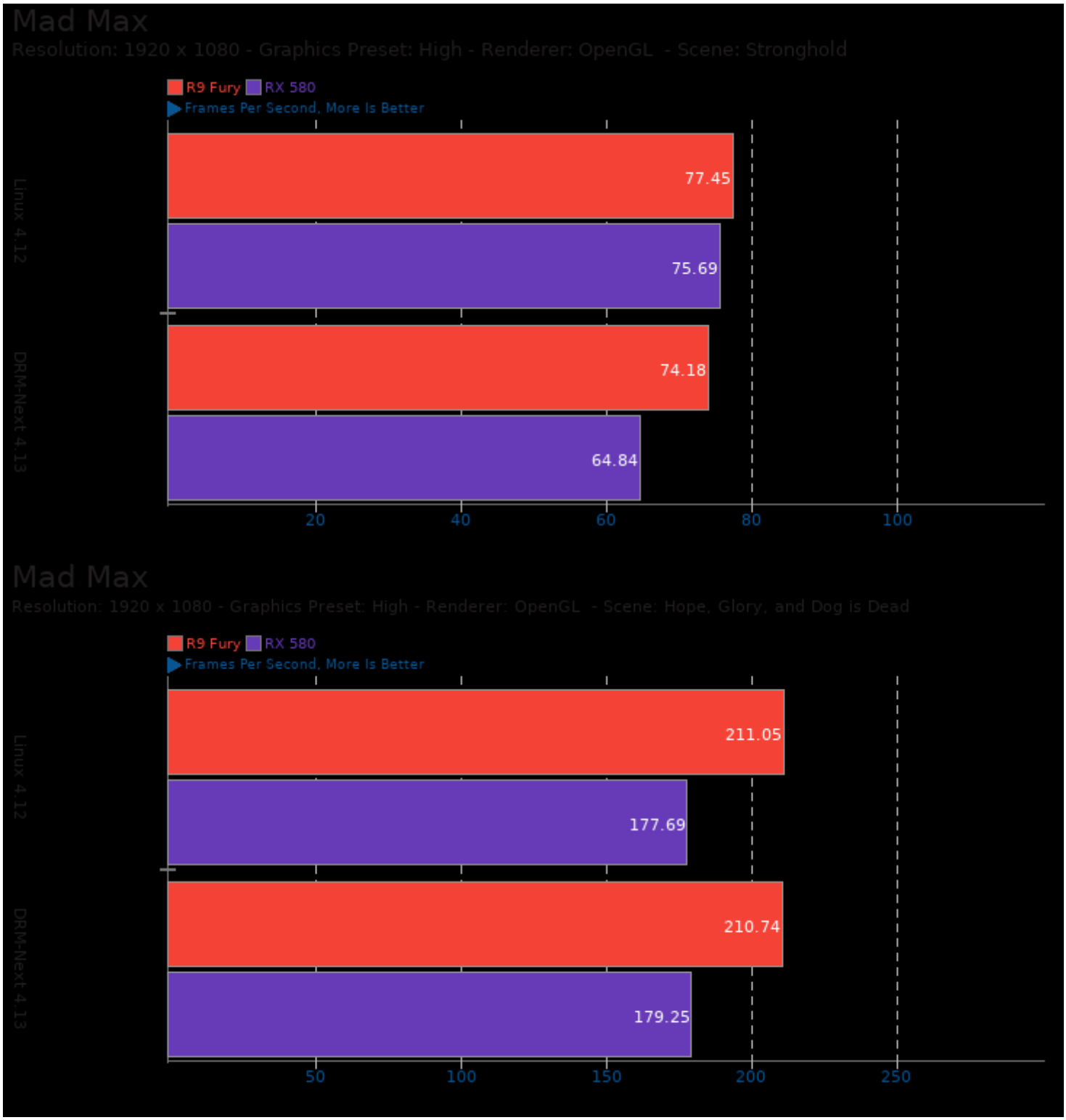
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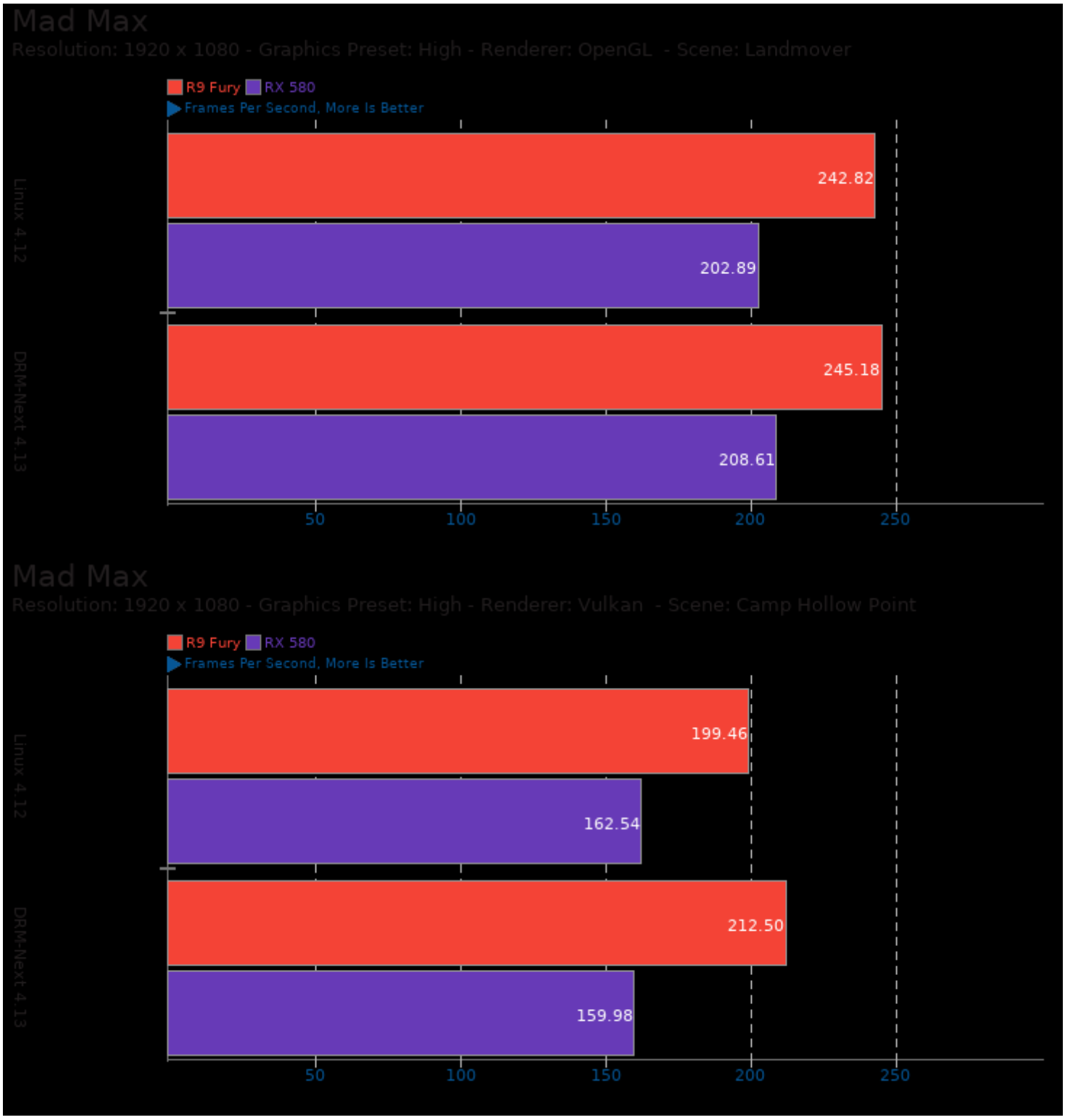
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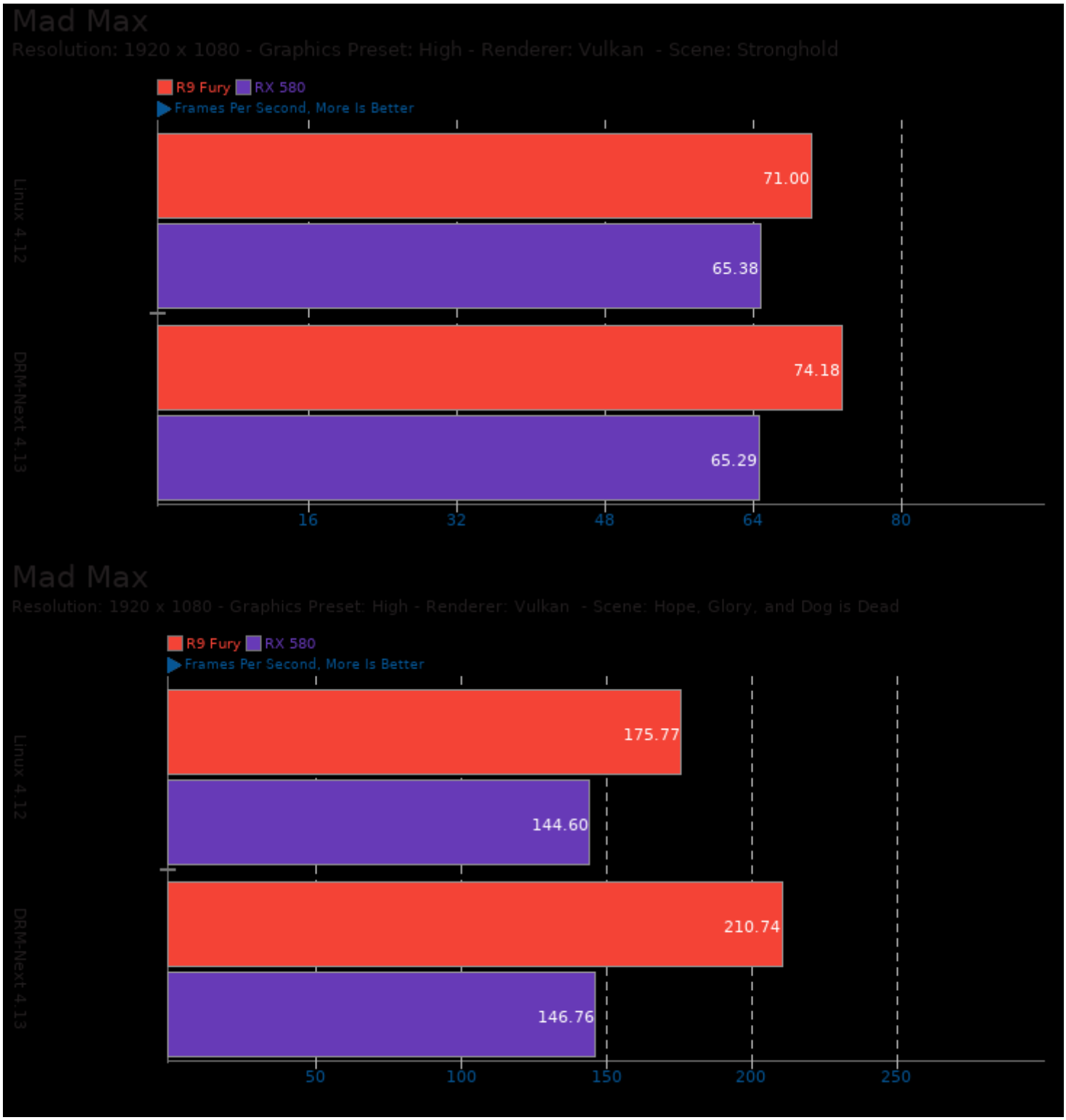
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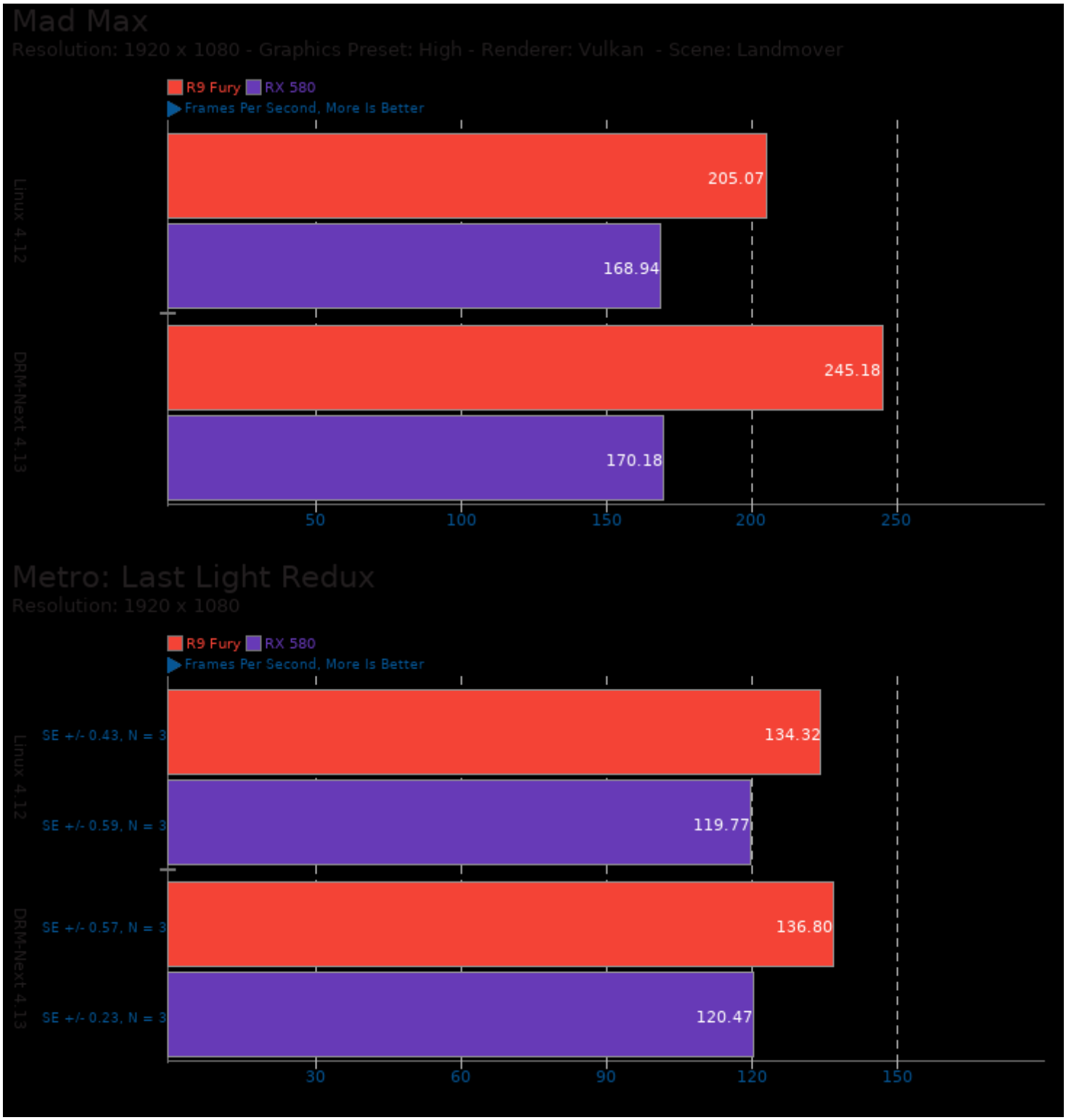
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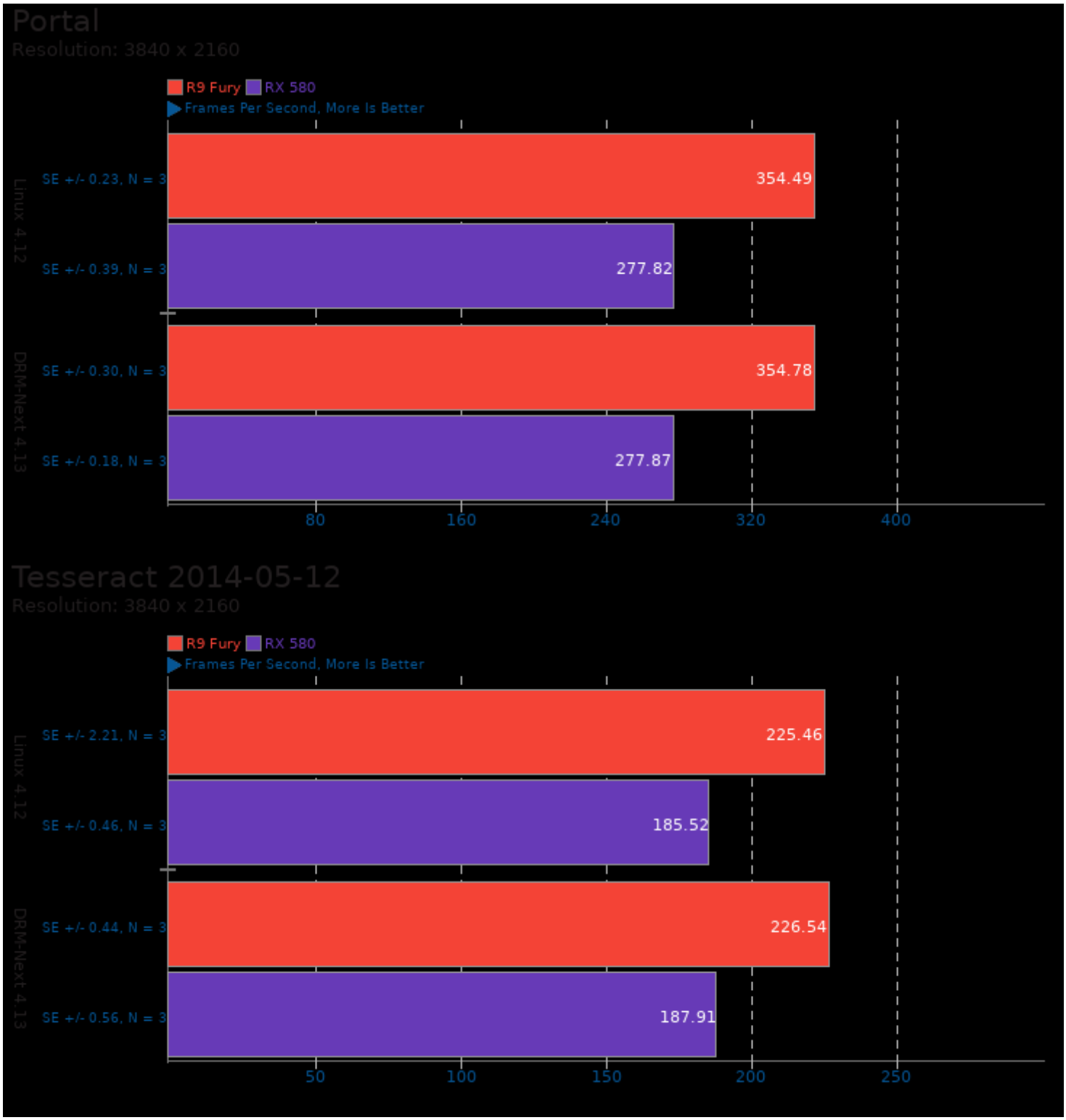
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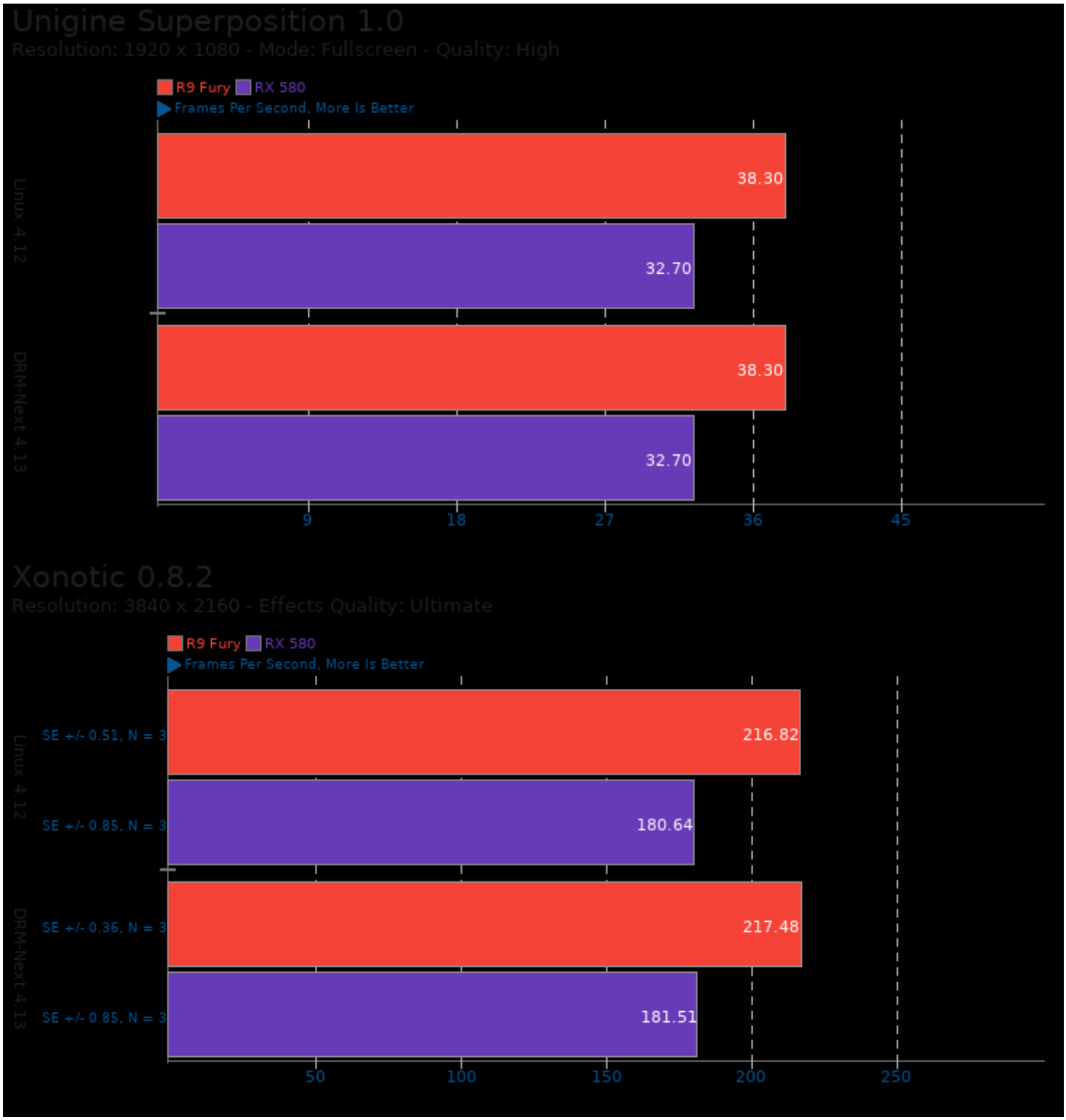
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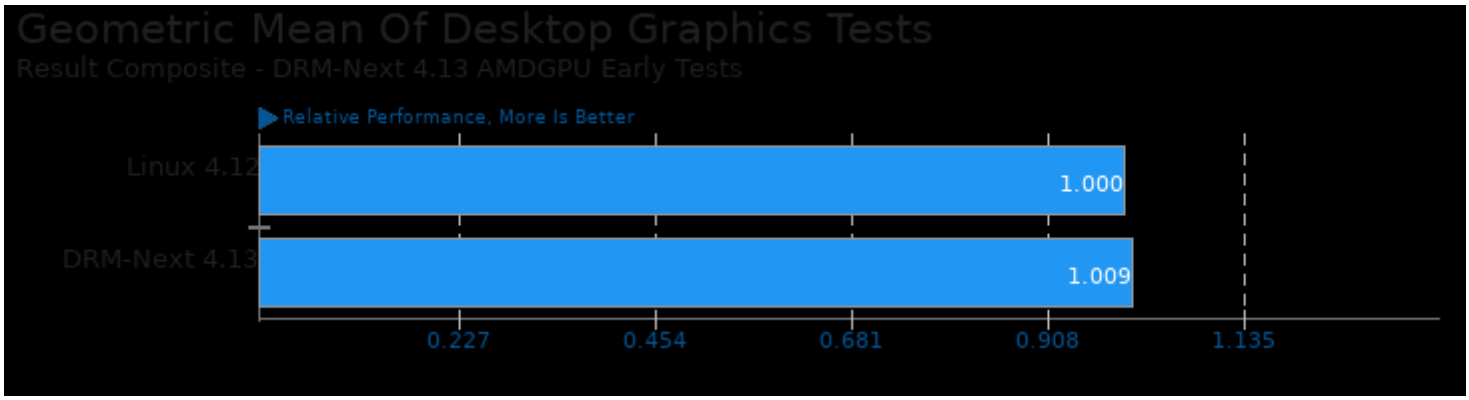


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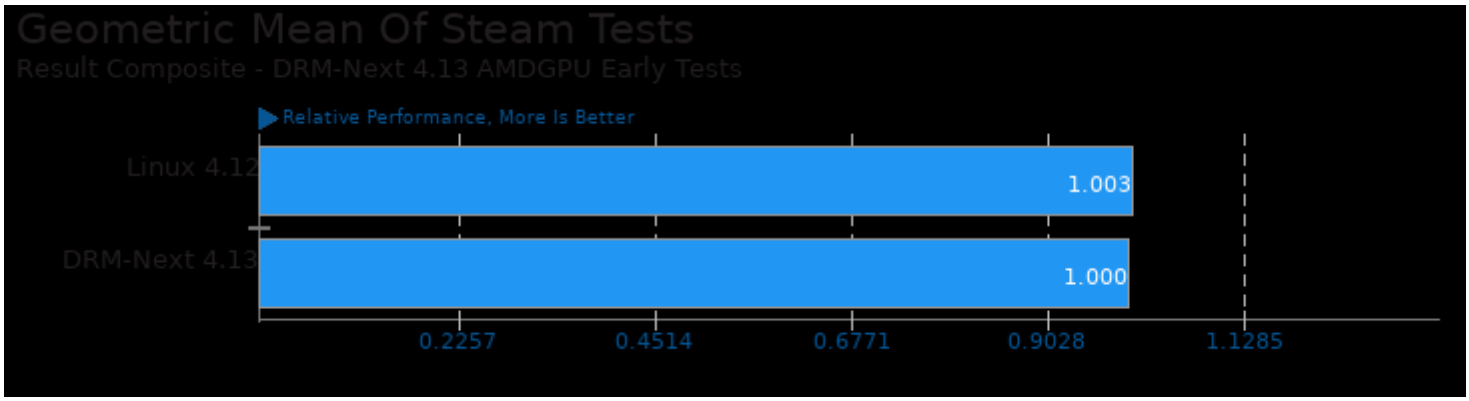


DRM-Next 4.13 AMDGPU Early Tests

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



Geometric mean based upon tests: pts/xonotic and pts/tesseract



Geometric mean based upon tests: pts/civilization-vi, pts/dirt-rally, pts/dota2, pts/dow3, pts/metroll-redux and pts/portal

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 16:20.