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Ryzen 5 2400G - Vega 11 Initial Linux Benchmarks

AMD Ryzen 5 2400G testing for a future article on Phoronix.

Automated Executive Summary

Ryzen 5 2400G - Vega 11 had the most wins, coming in first place for 56% of the tests.

Based on the geometric mean of all complete results, the fastest (Ryzen 5 2400G - Vega 11) was 2.036x the speed of the slowest (Core i5 8400 - UHD 630). ryzen53400g-20200229-1327 was 0.981x the speed of Ryzen 5 2400G - Vega 11, Core i7 5775C - Iris Pro 6200 was 0.807x the speed of ryzen53400g-20200229-1327, A10-7870K - Radeon R7 was 0.712x the speed of Core i7 5775C - Iris Pro 6200, Core i7 8700K - UHD 630 was 0.961x the speed of A10-7870K - Radeon R7, Core i5 8400 - UHD 630 was 0.907x the speed of Core i7 8700K - UHD 630.

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

GpuTest (Test: Triangle - Resolution: 1920 x 1080 - Mode: Fullscreen) at 5.773x
Dota 2 (Resolution: 1920 x 1080 - Renderer: Vulkan) at 2.905x
Dota 2 (Resolution: 1920 x 1080 - Renderer: OpenGL) at 2.707x
Tesseract (Resolution: 1920 x 1080) at 2.568x
Unigine Valley (Resolution: 1280 x 1024 - Mode: Fullscreen) at 2.356x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: Low - Renderer: Vulkan - Scene: Hope, Glory, and Dog is Dead) at 2.264x

Xonotic (Resolution: 1920 x 1080 - Effects Quality: Ultimate) at 2.125x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: Low - Renderer: Vulkan - Scene: Camp Hollow Point) at 2.122x
Mad Max (Resolution: 1920 x 1080 - Graphics Preset: Low - Renderer: Vulkan - Scene: Landmover) at 2.059x
Tomb Raider (Resolution: 1920 x 1080 - Quality: Low) at 1.837x.

Test Systems:

Core i7 8700K - UHD 630

Processor: Intel Core i7-8700K @ 4.70GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0606 BIOS), Chipset: Intel Device 3ec2, Memory: 15360MB, Disk: 525GB SABRENT + Samsung SSD 950 PRO 256GB, Graphics: Intel HD 3072MB (1200MHz), Audio: Realtek ALC1220, Monitor: DELL S2409W, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.15.2-041502-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 18.1.0-devel- padoka PPA, Vulkan: 1.0.61, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Python Notes: Python 2.7.14 + Python 3.6.3
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline Protection

Core i7 5775C - Iris Pro 6200

Processor: Intel Core i7-5775C @ 3.70GHz (4 Cores / 8 Threads), Motherboard: MSI Z97-G45 GAMING (MS-7821) v1.0 (V2.9 BIOS), Chipset: Intel Broadwell-U- DMI, Memory: 16384MB, Disk: 120GB CT120BX100SSD1 + 525GB SABRENT, Graphics: Intel Iris Pro 6200 3072MB (1150MHz), Audio: Intel Broadwell-U Audio, Monitor: DELL S2409W, Network: Qualcomm Atheros Killer E220x Gigabit

OS: Ubuntu 17.10, Kernel: 4.15.2-041502-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 18.1.0-devel- padoka PPA, Vulkan: 1.0.61, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Python Notes: Python 2.7.14 + Python 3.6.3
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline Protection

Core i5 8400 - UHD 630

Processor: Intel Core i5-8400 @ 4.00GHz (6 Cores), Motherboard: MSI Z370M MORTAR (MS-7B54) v1.0 (1.10 BIOS), Chipset: Intel Device 3ec2, Memory: 8192MB, Disk: 525GB SABRENT + 128GB ADATA SX6000NP, Graphics: Intel HD 3072MB (1050MHz), Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.15.2-041502-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 18.1.0-devel- padoka PPA, Vulkan: 1.0.61, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Python Notes: Python 2.7.14 + Python 3.6.3
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline Protection

A10-7870K - Radeon R7

Processor: AMD A10-7870K Radeon R7 12 Compute Cores 4C+8G @ 3.90GHz (2 Cores / 4 Threads), Motherboard: ASUS A88XM-E (2001 BIOS), Chipset: AMD Family 15h, Memory: 15360MB, Disk: 525GB SABRENT + 250GB Samsung SSD 850, Graphics: ASUS AMD Radeon R7 1024MB, Audio: AMD Kaveri HDMI/DP, Monitor: DELL S2409W, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 17.10, Kernel: 4.15.2-041502-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 18.1.0-devel- padoka PPA (LLVM 7.0.0), Vulkan: 1.0.61, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: radeon.si_support=0 radeon.cik_support=0 amdgpu.si_support=1 amdgpu.cik_support=1
Processor Notes: Scaling Governor: acpi-cpufreq performance
Python Notes: Python 2.7.14 + Python 3.6.3
Security Notes: __user pointer sanitization + Full AMD retpoline Protection

Ryzen 5 2400G - Vega 11

Processor: AMD Ryzen 5 2400G @ 3.60GHz (4 Cores / 8 Threads), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 (1.C0 BIOS), Chipset: AMD Device 15d0, Memory: 14336MB, Disk: 525GB SABRENT + 525GB Crucial_CT525MX3 + 120GB Force MP500, Graphics: MSI AMD Radeon Vega 8 Mobile 2048MB, Audio: AMD Device 15de, Monitor: DELL P2415Q, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.15.2-041502-generic (x86_64), Desktop: GNOME Shell 3.26.2, Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 18.1.0-devel- padoka PPA (LLVM 7.0.0), Vulkan: 1.0.61, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: acpi-cpufreq performance
Graphics Notes: GLAMOR
Python Notes: Python 2.7.14 + Python 3.6.3
Security Notes: __user pointer sanitization + Full AMD retpoline IBPB Protection

ryzen53400g-20200229-1327

Processor: AMD Ryzen 5 3400G @ 3.70GHz (4 Cores / 8 Threads), Motherboard: ASRock B450 Gaming-ITX/ac (P3.50 BIOS), Chipset: AMD Raven/Raven2, Memory: 30720MB, Disk: 480GB SATA SSD, Graphics: AMD Picasso 2GB (1400/1500MHz), Audio: AMD Raven/Raven2/Fenghuang, Monitor: DELL U2717D, Network: Intel I211 + Intel Dual Band-AC 3168NGW

OS: Fedora 31, Kernel: 5.3.7-301.fc31.x86_64 (x86_64), Desktop: GNOME Shell 3.34.4, Display Server: X Server + Wayland, OpenGL: 4.5 Mesa 19.2.8 (LLVM 9.0.0), Compiler: GCC 9.2.1 20190827, File-System: ext4, Screen Resolution: 2560x1440

Processor Notes: Scaling Governor: acpi-cpufreq ondemand
Security Notes: SELinux + 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 STIBP: disabled RSB filling

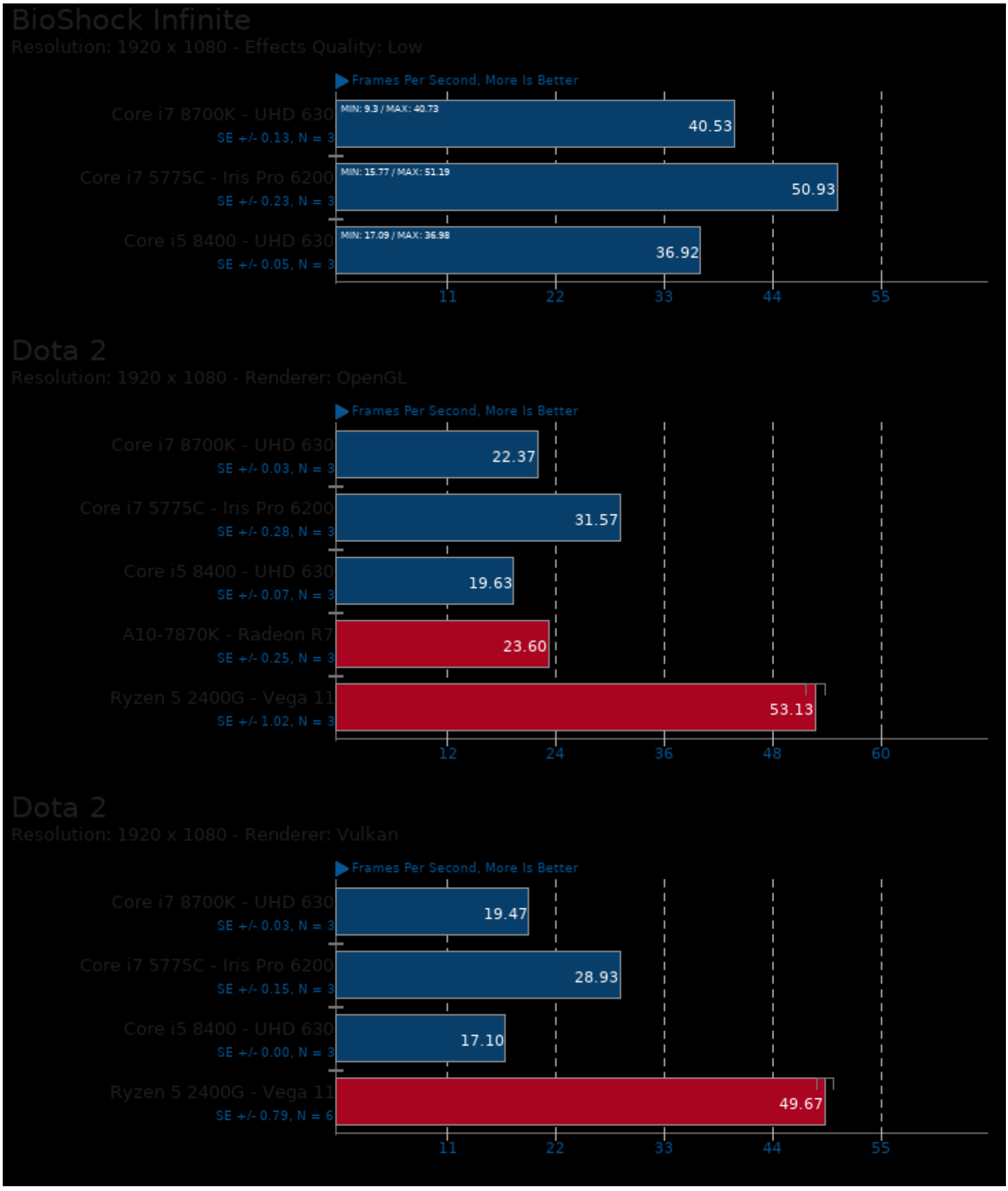
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	Core i7 8700K - UHD 630	Core i7 5775C - Iris Pro 6200	Core i5 8400 - UHD 630	A10-7870K - Radeon R7	Ryzen 5 2400G - Vega 11	ryzen53400g-20200229-1327
BioShock Infinite - 1920 x 1080 - Low (FPS)	40.53	**50.93**	**36.92**			
Normalized	79.58%	100%	72.49%			
Standard Deviation	0.6%	0.8%	0.2%			
Dota 2 - 1920 x 1080 - OpenGL (FPS)	22.37	31.57	**19.63**	23.60	**53.13**	
Normalized	42.1%	59.42%	36.95%	44.42%	100%	
Standard Deviation	0.3%	1.6%	0.6%	1.8%	3.3%	
Dota 2 - 1920 x 1080 - Vulkan (FPS)	19.47	28.93	**17.10**		**49.67**	
Normalized	39.2%	58.24%	34.43%		100%	
Standard Deviation	0.3%	0.9%	0%		3.9%	
ET: Legacy - Renderer2 - 1920 x 1080 (FPS)	105.07	116.17	103.97	**81.87**	**131.90**	129.27
Normalized	79.66%	88.07%	78.82%	62.07%	100%	98.01%
Standard Deviation	4.4%	0.2%	0.3%	3.5%	0.2%	0.1%
GpuTest - Triangle - 1920 x 1080 - Fullscreen (Points)	48293	87540	**42191**	84939	195563	**243552**
Normalized	19.83%	35.94%	17.32%	34.88%	80.3%	100%
Standard Deviation	3.1%	0.5%	0.3%	0%	0%	0.1%
Mad Max - 1920 x 1080 - Low - Vulkan - Camp Hollow Point (FPS)	25.34		**21.84**		**46.34**	
Normalized	54.68%		47.13%		100%	
Mad Max - 1920 x 1080 - Low - Vulkan - Stronghold (FPS)	22.83		**19.80**		**33.74**	
Normalized	67.66%		58.68%		100%	
Mad Max - 1920 x 1080 - Low - Vulkan - H.G.a.D.i.D (FPS)	23.29		**19.98**		**45.24**	
Normalized	51.48%		44.16%		100%	
Mad Max - 1920 x 1080 - Low - Vulkan - Landmover (FPS)	29.28		**25.63**		**52.78**	
Normalized	55.48%		48.56%		100%	
Portal - 1920 x 1080 (FPS)	130.20	**205.02**	**116.96**			
Normalized	63.51%	100%	57.05%			
Standard Deviation	0.7%	0.4%	0.2%			
Serious Sam 3: BFE - 1920 x 1080 - Low - Vulkan (FPS)	44.07	62.95	**38.73**		**107.38**	
Normalized	41.04%	58.62%	36.07%		100%	
Standard Deviation	7.7%	12.6%	0.8%		9.6%	
Serious Sam 3: BFE - 1920 x 1080 - High - Vulkan (FPS)	**23.27**	24.12	24.27		**53.12**	
Normalized	43.81%	45.41%	45.69%		100%	
Standard Deviation	2%	4.6%	1.3%		6.9%	
Tesseract - 1920 x 1080	71.21	103.06	**63.14**	82.57	131.89	**162.16**
Normalized	43.91%	63.55%	38.94%	50.92%	81.33%	100%
Standard Deviation	0.1%	0.4%	0.2%	0.5%	0.5%	1.8%

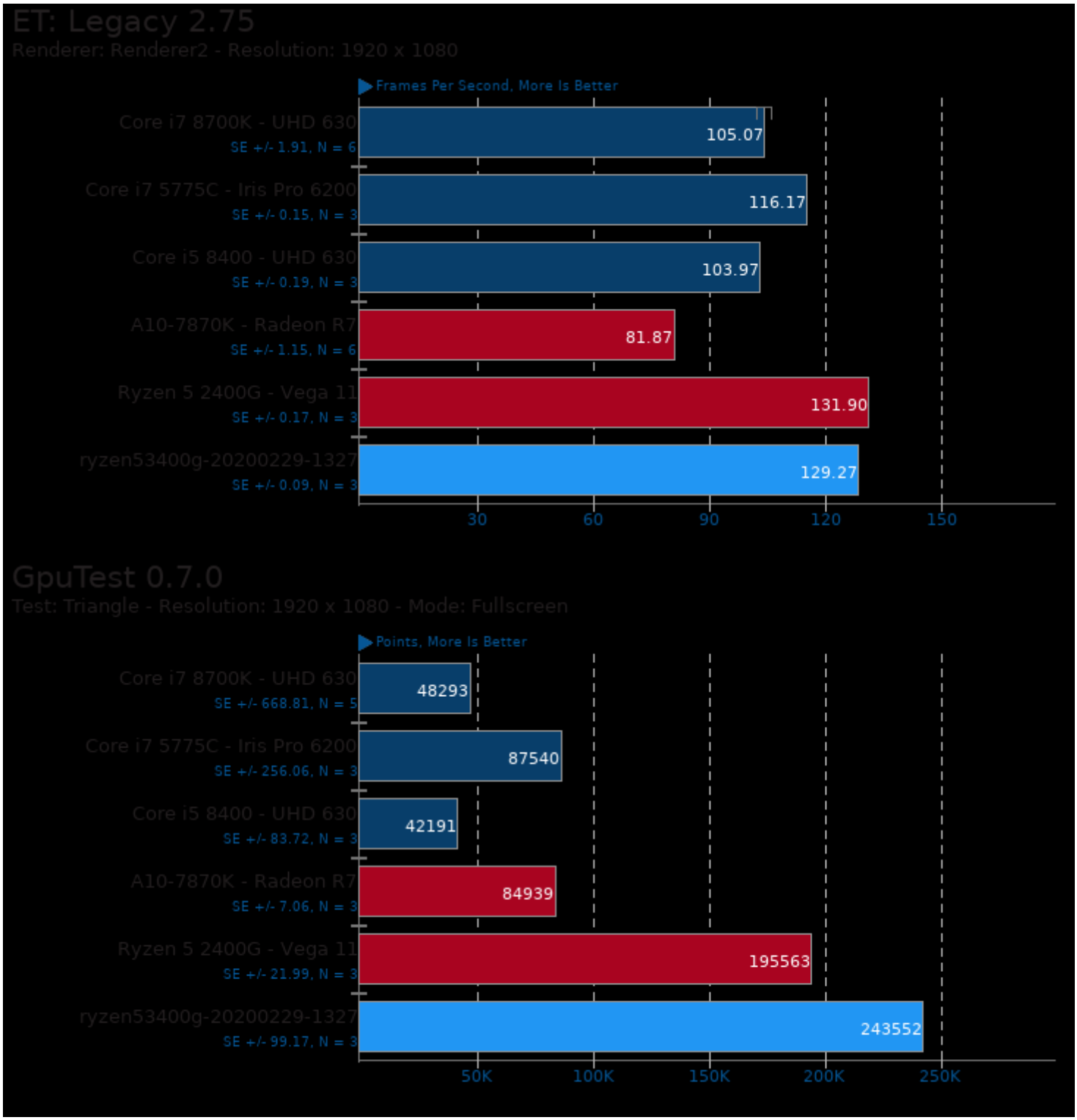
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The Talos Principle - Vulkan - 1920 x 1080 (FPS)	18.97	20.47	**16.03**		**31.95**	
Normalized	59.37%	64.07%	50.17%		100%	
Standard Deviation	30.1%	2%	3.2%		6.6%	
Tomb Raider - 1920 x 1080 - Low (FPS)	35.43	**56.20**	**30.60**			
Normalized	63.04%	100%	54.45%			
Standard Deviation	1.8%	1.7%	0.6%			
Unigine Valley - 1280 x 1024 - Fullscreen (FPS)	17.56	22.66	**14.82**		31.53	**34.91**
Normalized	50.3%	64.91%	42.45%		90.32%	100%
Standard Deviation	0.7%	0%			0.1%	0.2%
Xonotic - 1920 x 1080 - High (FPS)	146.67	**213.44**	135.39	**125.70**	205.22	181.13
Normalized	68.72%	100%	63.43%	58.89%	96.15%	84.86%
Standard Deviation	2.8%	0.8%	0.3%	0.2%	1.1%	0.3%
Xonotic - 1920 x 1080 - Ultra (FPS)	115.41	173.85	**102.47**	109.40	**184.72**	156.31
Normalized	62.48%	94.12%	55.47%	59.22%	100%	84.62%
Standard Deviation	0.5%	0.8%	0.1%	0.6%	0.1%	0.4%
Xonotic - 1920 x 1080 - Ultimate (FPS)	80.65	124.04	**71.39**	79.31	**151.71**	120.89
Normalized	53.16%	81.76%	47.06%	52.28%	100%	79.68%
Standard Deviation	1%	0.1%	0.1%	0.2%	0.2%	0.3%

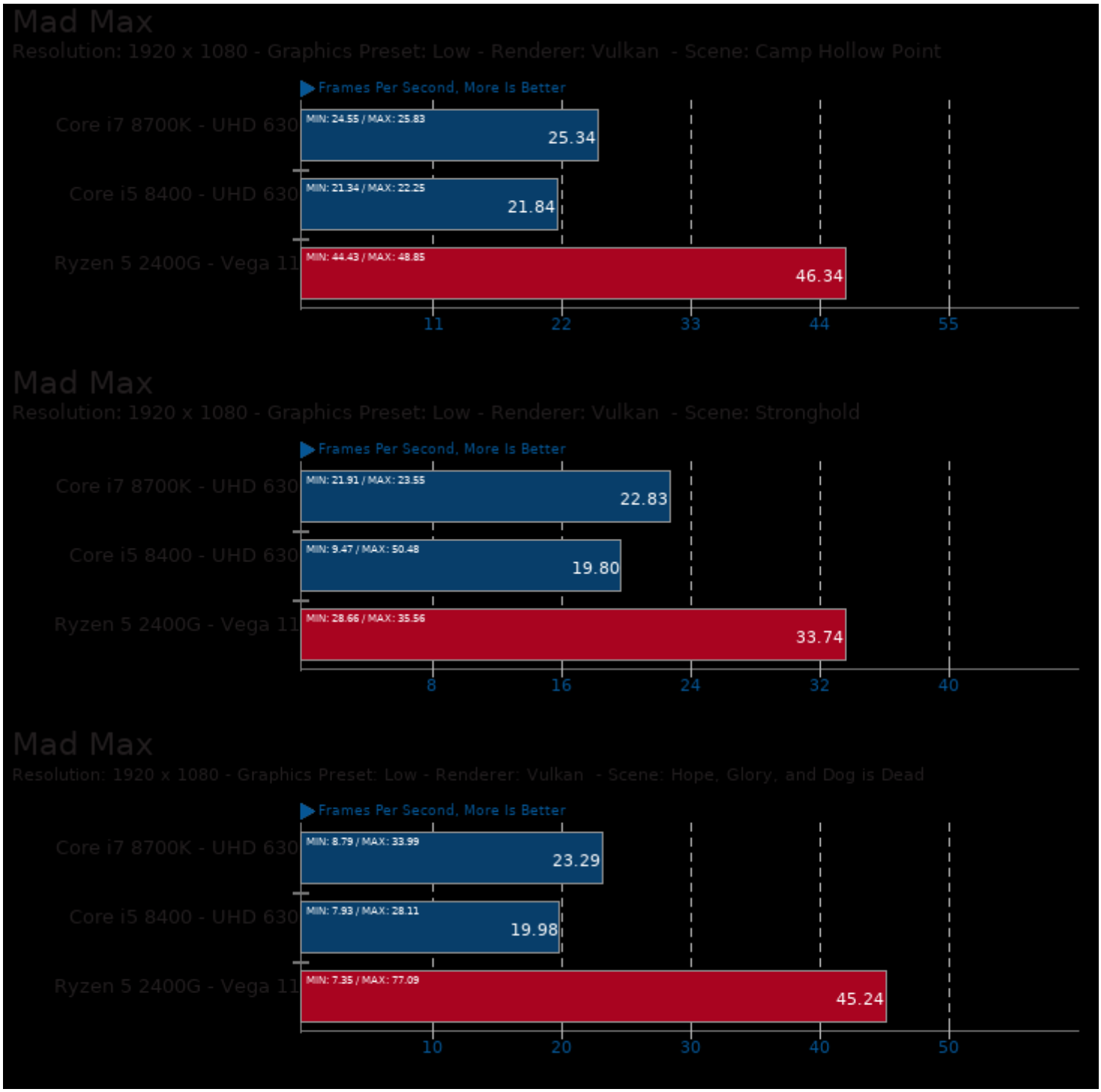
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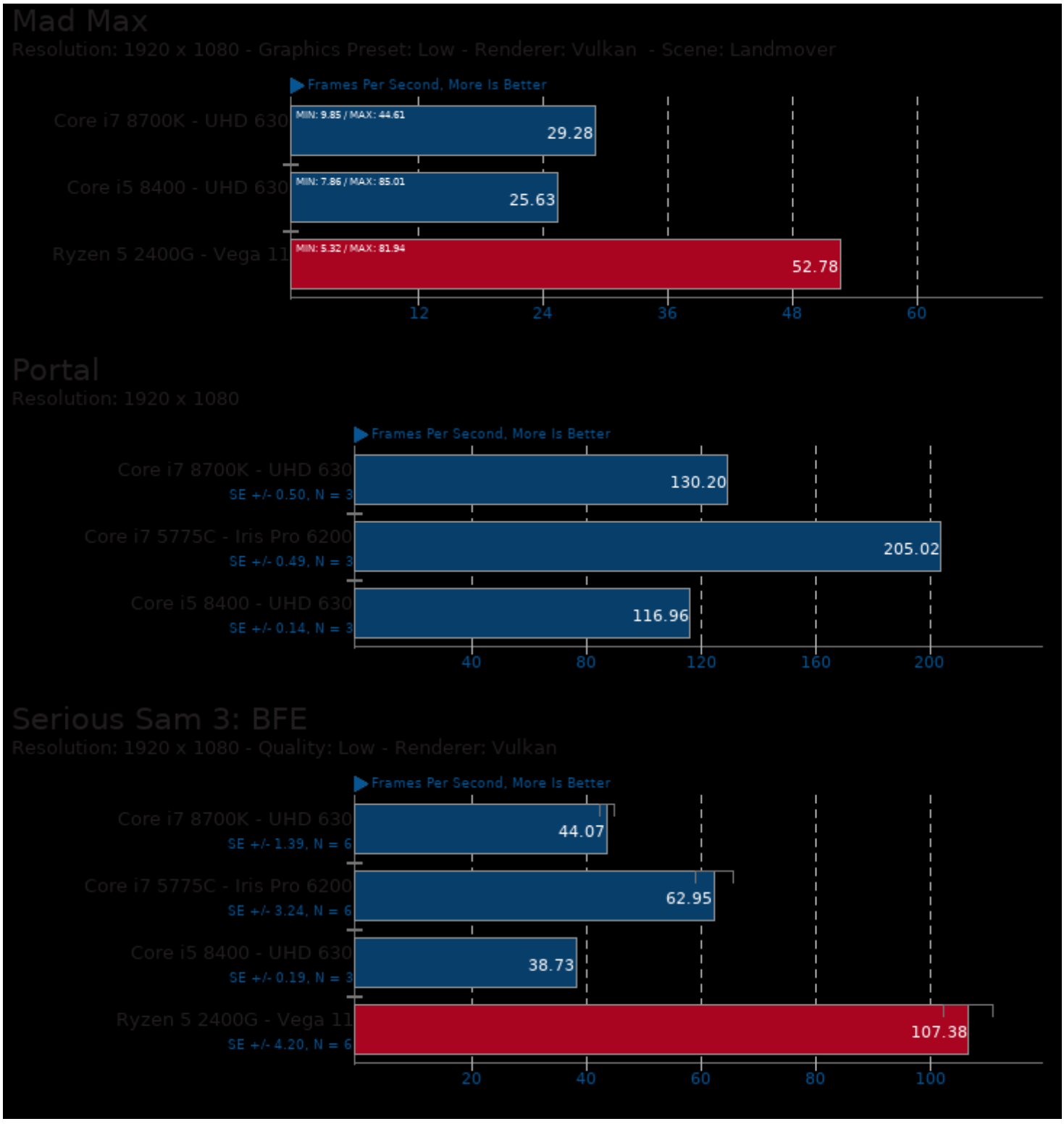
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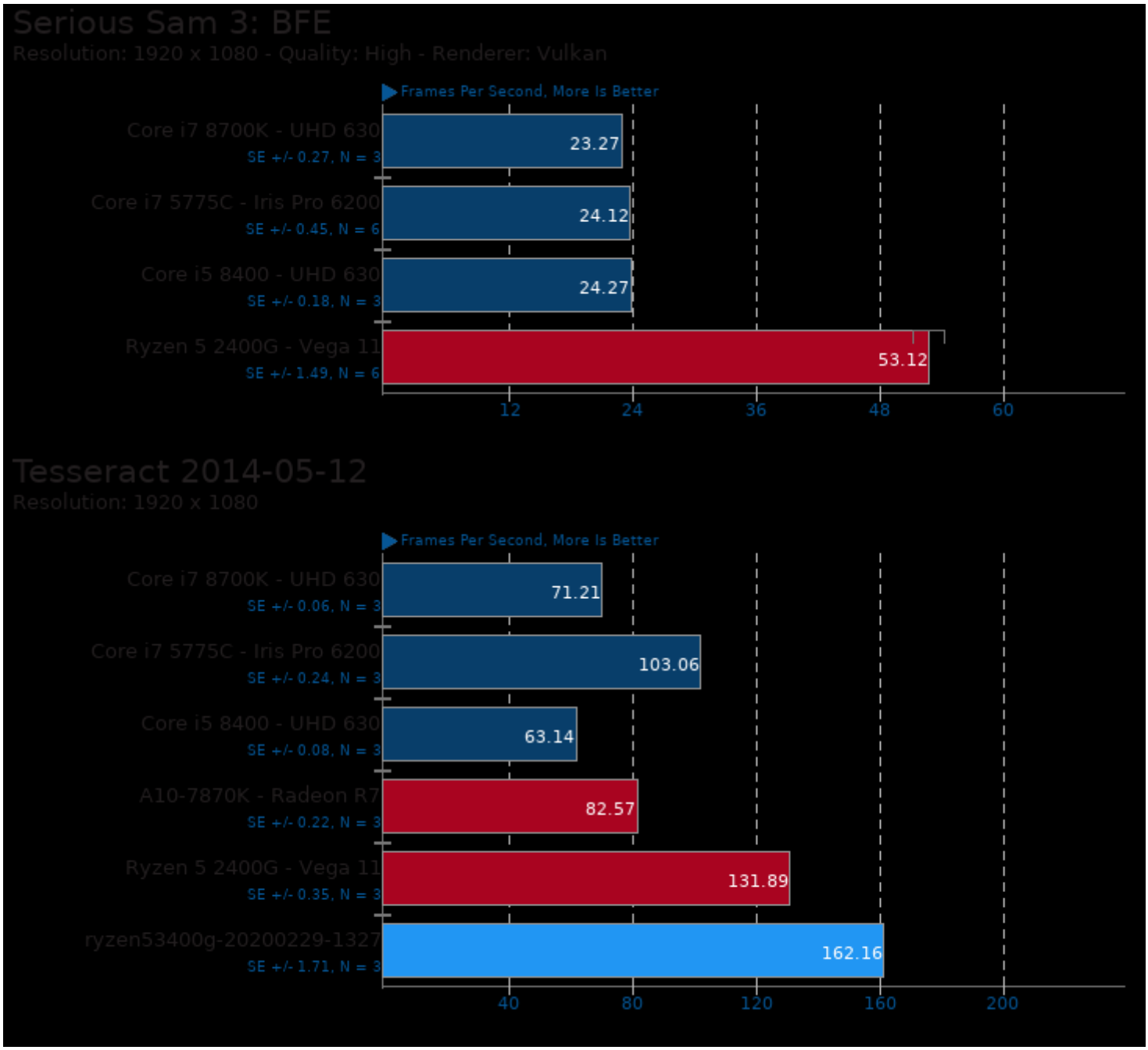
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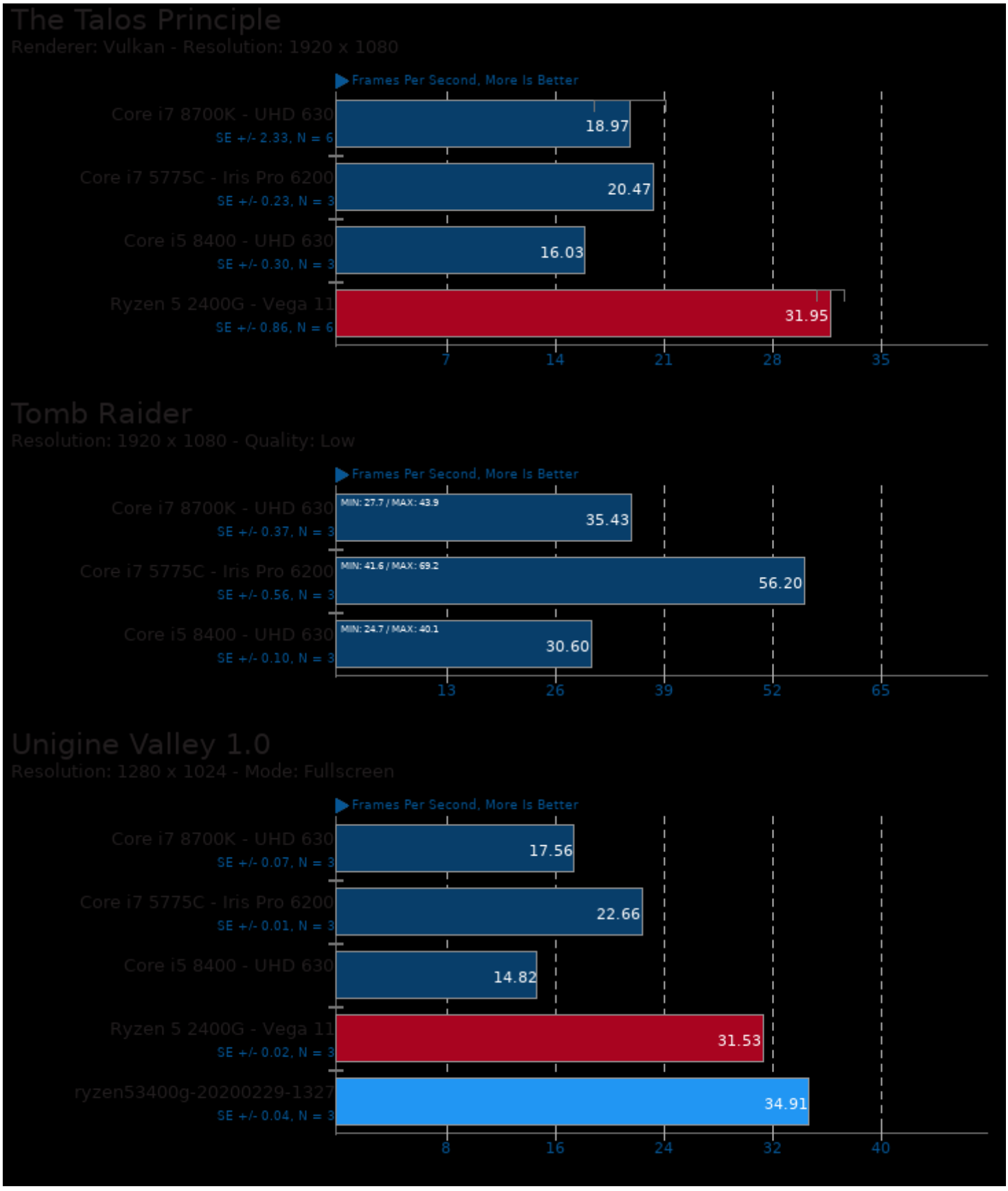
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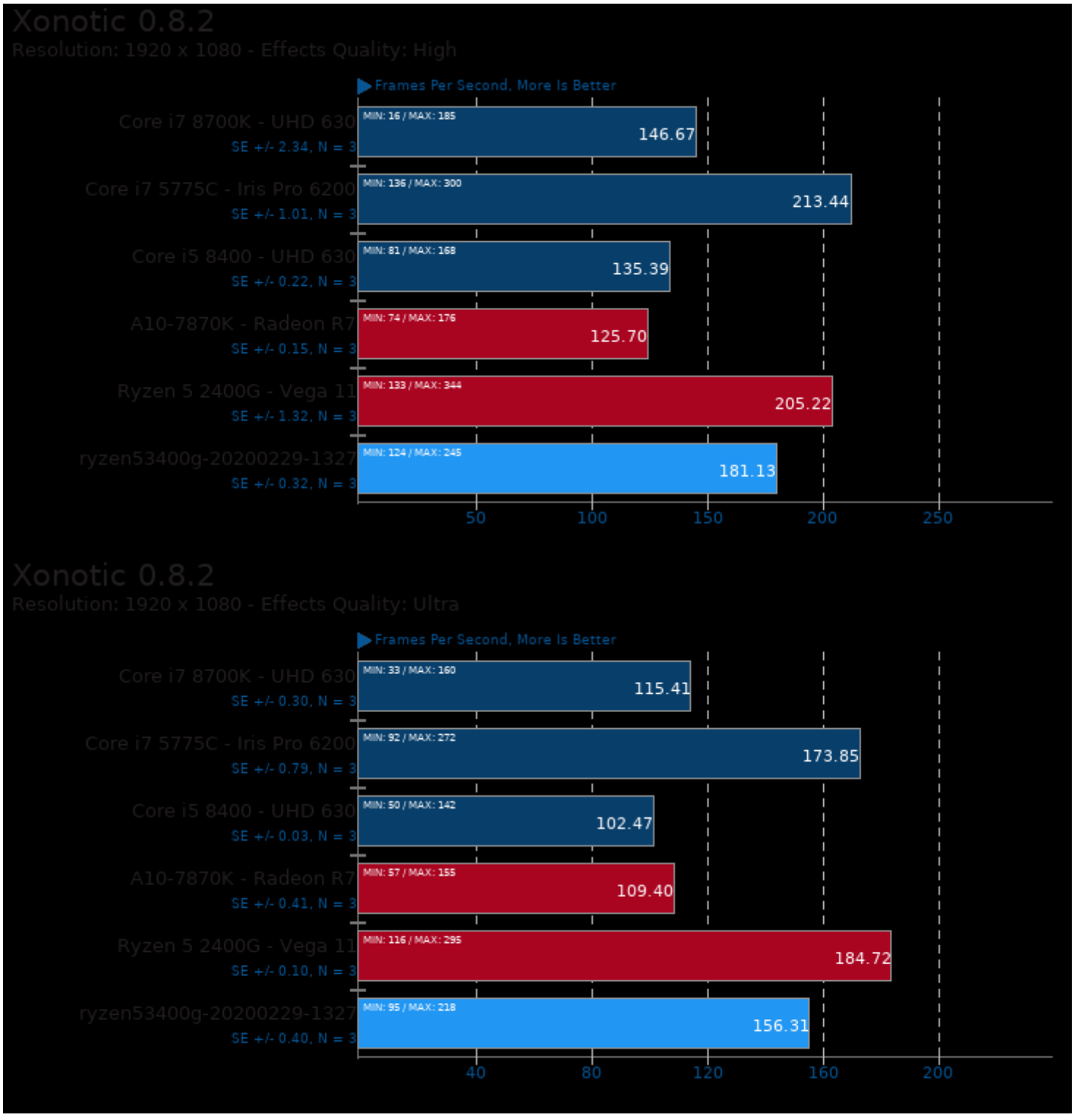
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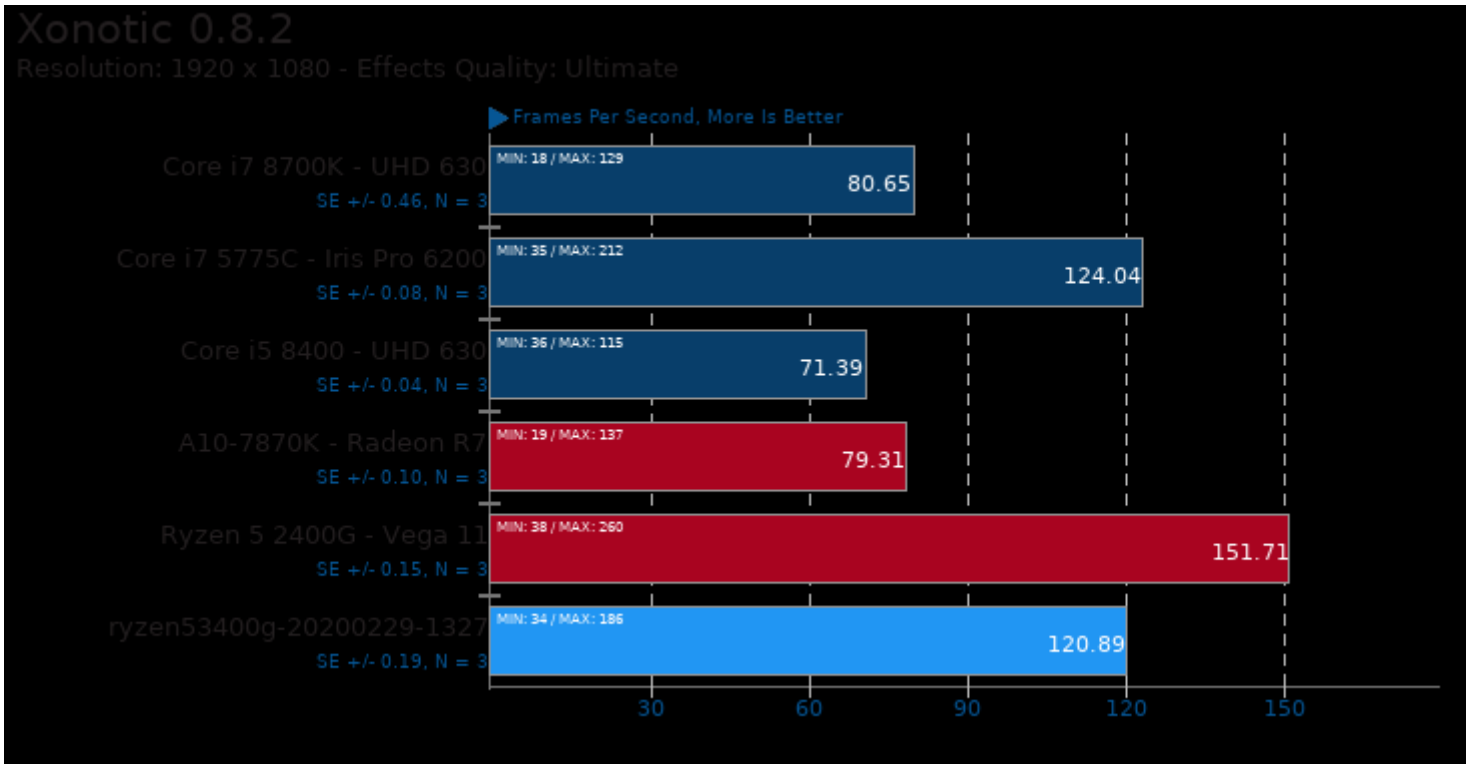
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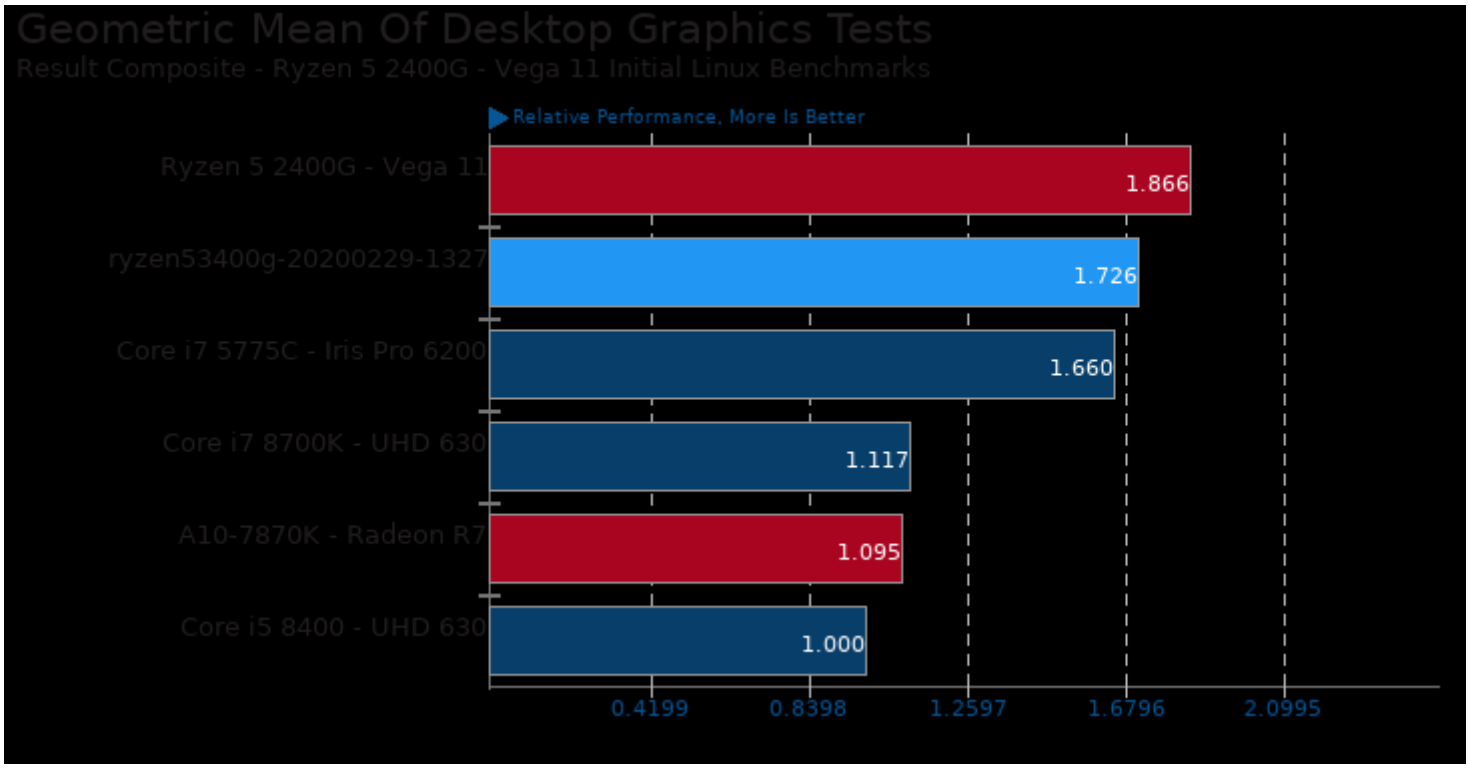


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These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/xonotic, pts/tesseract and pts/unigine-valley

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 10:28.