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RX 6800 XT

AMD Ryzen 9 5900X 12-Core testing with a ASUS ROG CROSSHAIR VIII HERO (3402 BIOS) and AMD Radeon RX 6800 16GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

RX 6800 XT x2 had the most wins, coming in first place for 54% of the tests.

Based on the geometric mean of all complete results, the fastest (RX 6800 XT x2) was 1.227x the speed of the slowest (RX 6800 x). RX 6800 XT was 0.999x the speed of RX 6800 XT x2, RX 6800 XT x was 1x the speed of RX 6800 XT, RX 6800 was 0.819x the speed of RX 6800 XT x, RX 6800 x2 was 0.998x the speed of RX 6800, RX 6800 x was 0.999x the speed of RX 6800 x2.

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

Ray Tracing In Vulkan (Resolution: 1920 x 1080 - Scene: Cornell Box + Lucy) at 1.329x
Ray Tracing In Vulkan (Resolution: 1920 x 1200 - Scene: Cornell Box + Lucy) at 1.3x
Ray Tracing In Vulkan (Resolution: 3840 x 2160 - Scene: Cornell Box + Lucy) at 1.268x
Ray Tracing In Vulkan (Resolution: 2560 x 1440 - Scene: Cornell Box + Lucy) at 1.248x
Ray Tracing In Vulkan (Resolution: 3840 x 2160 - Scene: Lucy In One Weekend) at 1.246x
Ray Tracing In Vulkan (Resolution: 1920 x 1200 - Scene: Lucy In One Weekend) at 1.234x
Ray Tracing In Vulkan (Resolution: 3840 x 2160 - Scene: Planets In One Weekend) at 1.233x

Ray Tracing In Vulkan (Resolution: 3840 x 2160 - Scene: Cornell Box) at 1.231x
Ray Tracing In Vulkan (Resolution: 3840 x 2160 - Scene: Ray Tracing In One Weekend) at 1.231x
GeeXLab Vulkan Ray-Tracing Demo (Resolution: 3840 x 2160) at 1.229x.

Test Systems:

RX 6800 XT

RX 6800 XT x

RX 6800 XT x2

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3402 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 2000GB, Graphics: AMD Radeon RX 6800 XT 16GB (2575/1000MHz), Audio: AMD Device ab28, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

OS: Ubuntu 20.04, Kernel: 5.8.0-50-generic (x86_64), Desktop: GNOME Shell 3.36.7, Display Server: X Server 1.20.9, OpenGL: 4.6.14735, OpenCL: OpenCL 2.0 AMD-APP (3246.0), Vulkan: 1.2.169, Compiler: GCC 9.3.0 + CUDA 11.2, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: madvise
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 ondemand (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

RX 6800 x

RX 6800 x2

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3402 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 1000GB Sabrent Rocket 4.0 Plus + 2000GB, Graphics: AMD Radeon RX 6800 16GB (2475/1000MHz), Audio: AMD Device ab28, Monitor: ASUS VP28U, Network: Realtek RTL8125 2.5GbE + Intel I211

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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

RX 6800 XT

--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 (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

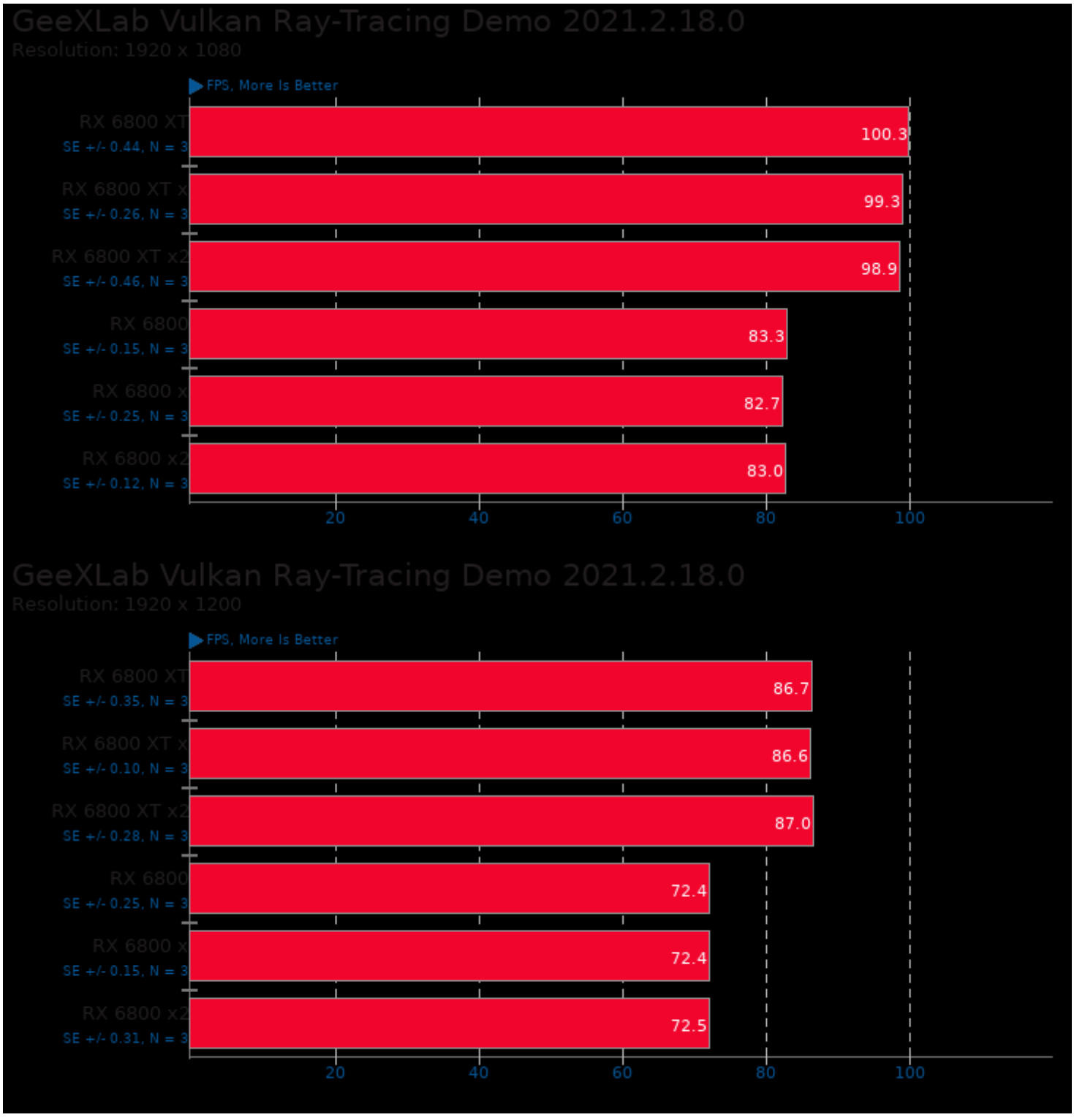
	RX 6800 XT	RX 6800 XT x	RX 6800 XT x2	RX 6800	RX 6800 x	RX 6800 x2
GeeXLab Vulkan Ray-Tracing Demo - 1920 x	**100.3**	99.3	98.9	83.3	**82.7**	83.0
Normalized	100%	99%	98.6%	83.05%	82.45%	82.75%
Standard Deviation	0.8%	0.5%	0.8%	0.3%	0.5%	0.3%
GeeXLab Vulkan Ray-Tracing Demo - 1920 x	86.7	86.6	**87.0**	**72.4**	**72.4**	72.5
Normalized	99.66%	99.54%	100%	83.22%	83.22%	83.33%
Standard Deviation	0.7%	0.2%	0.6%	0.6%	0.3%	0.7%
GeeXLab Vulkan Ray-Tracing Demo - 2560 x	**58.3**	58.0	58.1	48.6	**48.4**	48.6
Normalized	100%	99.49%	99.66%	83.36%	83.02%	83.36%
Standard Deviation	0.2%	0.5%	0.2%	0.7%	0.2%	0.5%
GeeXLab Vulkan Ray-Tracing Demo - 3840 x	**27.9**	27.8	27.8	22.8	**22.7**	22.8
Normalized	100%	99.64%	99.64%	81.72%	81.36%	81.72%
Standard Deviation	0.2%	0.2%	0.2%	0.3%	0.3%	0%
Ray Tracing In Vulkan - 1920 x 1080 - Cornell Box (FPS)	**65.5047**	65.2562	65.5038	**53.3692**	53.5545	53.5169
Normalized	100%	99.62%	100%	81.47%	81.76%	81.7%
Standard Deviation	0.1%	0.2%	0.4%	0.5%	0.1%	0%
Ray Tracing In Vulkan - 1920 x 1200 - Cornell Box (FPS)	**53.5221**	53.4746	53.4631	43.6545	**43.6389**	43.6942
Normalized	100%	99.91%	99.89%	81.56%	81.53%	81.64%
Standard Deviation	0%	0.1%	0.1%	0.6%	0.4%	0.2%
Ray Tracing In Vulkan - 2560 x 1440 - Cornell Box (FPS)	36.9765	**36.9866**	36.9256	30.6487	30.6080	**30.5871**
Normalized	99.97%	100%	99.84%	82.86%	82.75%	82.7%
Standard Deviation	0.1%	0.3%	0.1%	0.4%	0.2%	0.1%
Ray Tracing In Vulkan - 3840 x 2160 - Cornell Box (FPS)	17.6870	**17.6914**	17.6600	14.3754	**14.3729**	14.3796
Normalized	99.98%	100%	99.82%	81.26%	81.24%	81.28%
Standard Deviation	0.1%	0.1%	0%	0.2%	0.1%	0.1%
Ray Tracing In Vulkan - 1920 x 1080 - Cornell Box + Lucy (FPS)	**24.2880**	24.2771	24.2145	18.7783	**18.2790**	18.4980
Normalized	100%	99.96%	99.7%	77.32%	75.26%	76.16%
Standard Deviation	0.1%	0.1%	0.2%	1%	0.8%	1.8%

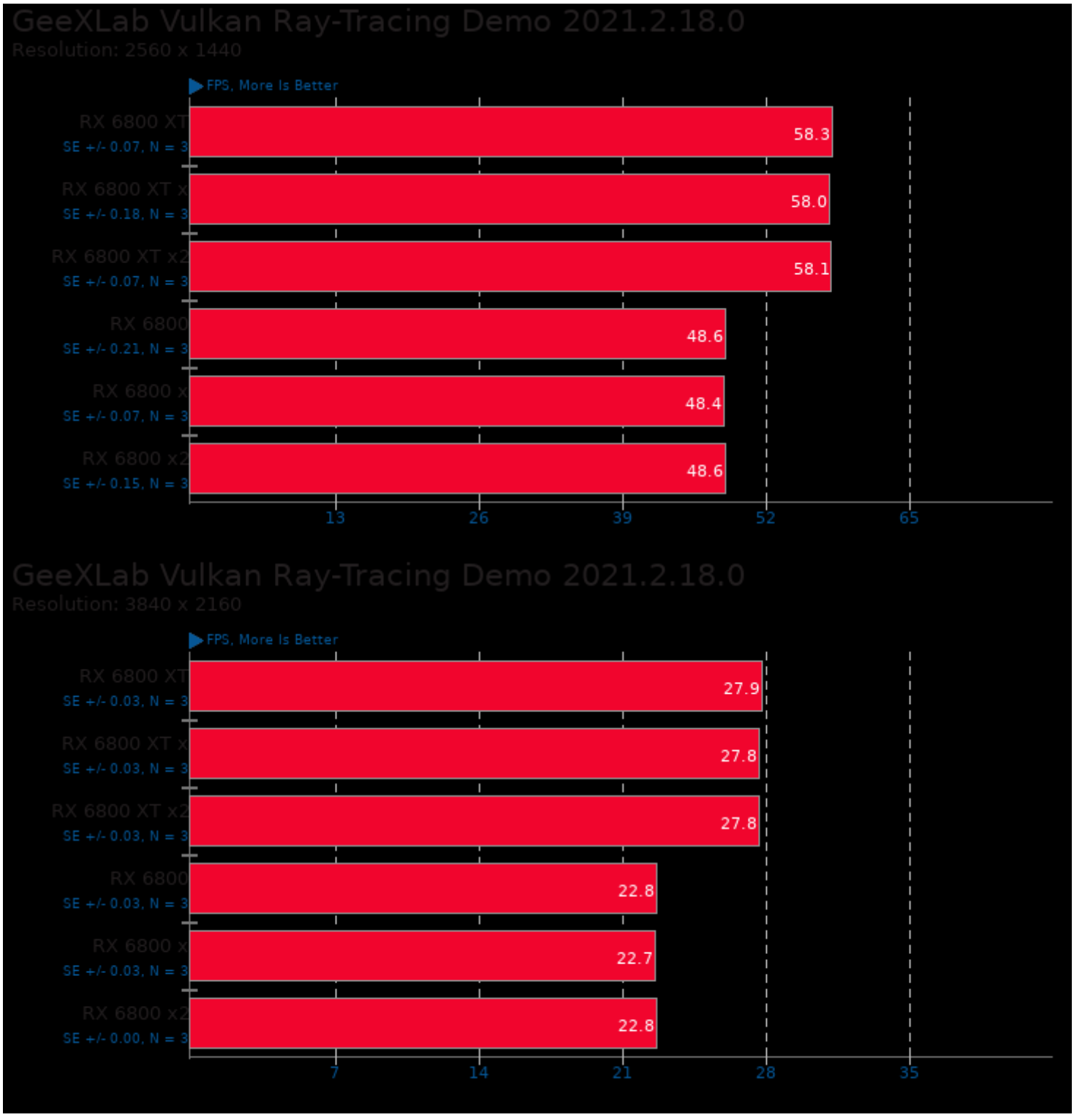
RX 6800 XT

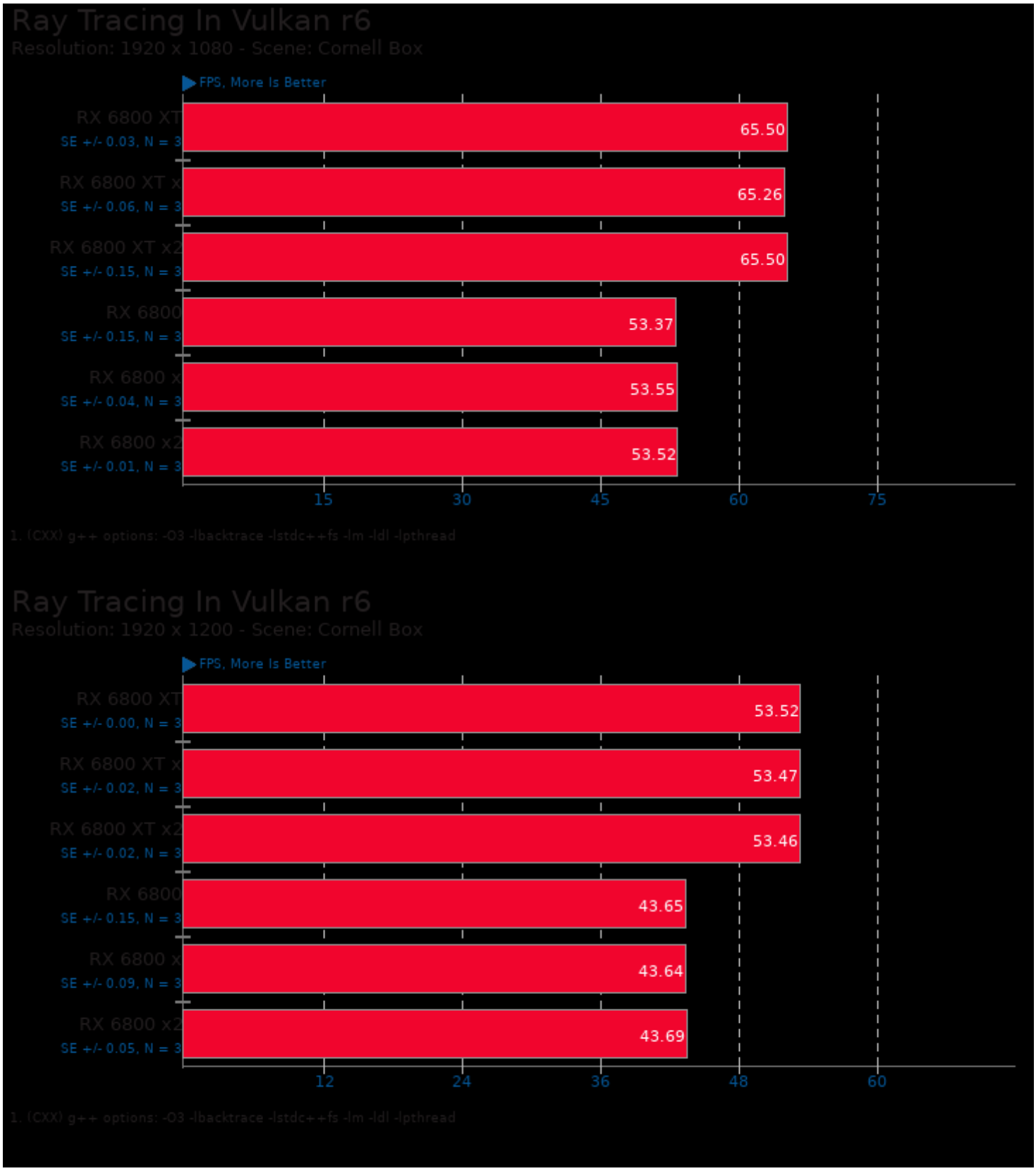
Ray Tracing In Vulkan - 1920 x 1200 - Cornell Box + Lucy (FPS)	19.6357	19.5770	**19.6402**	15.5385	**15.1122**	15.2404
Normalized	99.98%	99.68%	100%	79.12%	76.95%	77.6%
Standard Deviation	0.2%	0.1%	0.4%	0.2%	0.7%	2.5%
Ray Tracing In Vulkan - 2560 x 1440 - Cornell Box + Lucy (FPS)	13.4838	**13.5021**	13.5003	**10.8174**	10.8179	10.8389
Normalized	99.86%	100%	99.99%	80.12%	80.12%	80.28%
Standard Deviation	0.1%	0.1%	0.1%	0.3%	0.6%	0.2%
Ray Tracing In Vulkan - 3840 x 2160 - Cornell Box + Lucy (FPS)	6.51437	6.50188	**6.51893**	5.14017	5.14322	**5.13940**
Normalized	99.93%	99.74%	100%	78.85%	78.9%	78.84%
Standard Deviation	0.2%	0%	0.1%	0.1%	0%	0.1%
Ray Tracing In Vulkan - 1920 x 1080 - L.I.O.W (FPS)	34.7686	**34.7991**	34.7820	28.8914	**28.8744**	28.8892
Normalized	99.91%	100%	99.95%	83.02%	82.97%	83.02%
Standard Deviation	0.1%	0.3%	0.1%	0.2%	0.2%	0.1%
Ray Tracing In Vulkan - 1920 x 1200 - L.I.O.W (FPS)	30.3240	30.5146	**30.5764**	24.8470	**24.7859**	24.8110
Normalized	99.17%	99.8%	100%	81.26%	81.06%	81.14%
Standard Deviation	1.5%	0.1%	0.3%	0.4%	0.1%	0.1%
Ray Tracing In Vulkan - 2560 x 1440 - L.I.O.W (FPS)	20.8082	20.8676	**20.8686**	17.4879	**17.4725**	17.4955
Normalized	99.71%	100%	100%	83.8%	83.73%	83.84%
Standard Deviation	0.7%	0.1%	0.2%	0.1%	0.1%	0.1%
Ray Tracing In Vulkan - 3840 x 2160 - L.I.O.W (FPS)	10.6596	10.6488	**10.6635**	**8.55517**	8.56603	8.56968
Normalized	99.96%	99.86%	100%	80.23%	80.33%	80.36%
Standard Deviation	0%	0.2%	0.2%	0.1%	0.1%	0.1%
Ray Tracing In Vulkan - 1920 x 1080 - P.I.O.W (FPS)	83.1585	**83.5128**	83.3976	68.5646	68.5641	**68.1860**
Normalized	99.58%	100%	99.86%	82.1%	82.1%	81.65%
Standard Deviation	0.1%	0.2%	0.2%	0%	0%	1%
Ray Tracing In Vulkan - 1920 x 1200 - P.I.O.W (FPS)	73.1803	73.1407	**73.3275**	60.9945	60.9662	**60.9448**
Normalized	99.8%	99.75%	100%	83.18%	83.14%	83.11%
Standard Deviation	0.3%	0.1%	0.2%	0.1%	0.1%	0.2%
Ray Tracing In Vulkan - 2560 x 1440 - P.I.O.W (FPS)	47.1337	47.0570	**47.1800**	39.1745	39.0162	**38.9967**
Normalized	99.9%	99.74%	100%	83.03%	82.7%	82.66%
Standard Deviation	0.1%	0.1%	0%	0.6%	0.1%	0.2%
Ray Tracing In Vulkan - 3840 x 2160 - P.I.O.W (FPS)	22.7078	22.7443	**22.7513**	18.5351	**18.4584**	18.4814
Normalized	99.81%	99.97%	100%	81.47%	81.13%	81.23%
Standard Deviation	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%
Ray Tracing In Vulkan - 1920 x 1080 - R.T.I.O.W (FPS)	84.4855	83.7602	**84.5651**	**69.5547**	69.6817	69.6597
Normalized	99.91%	99.05%	100%	82.25%	82.4%	82.37%
Standard Deviation	0.2%	0.5%	0.2%	0.3%	0%	0%

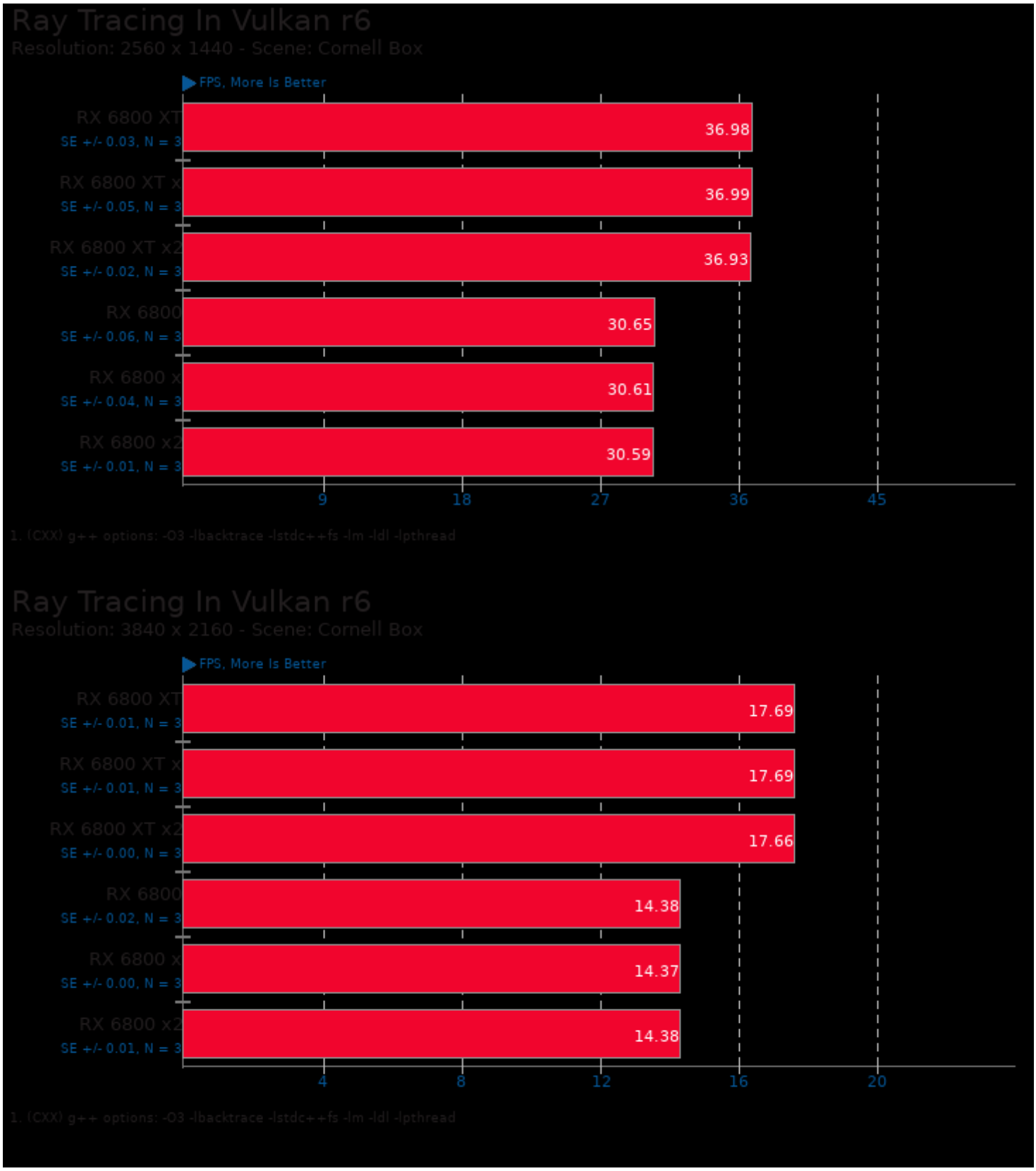
RX 6800 XT

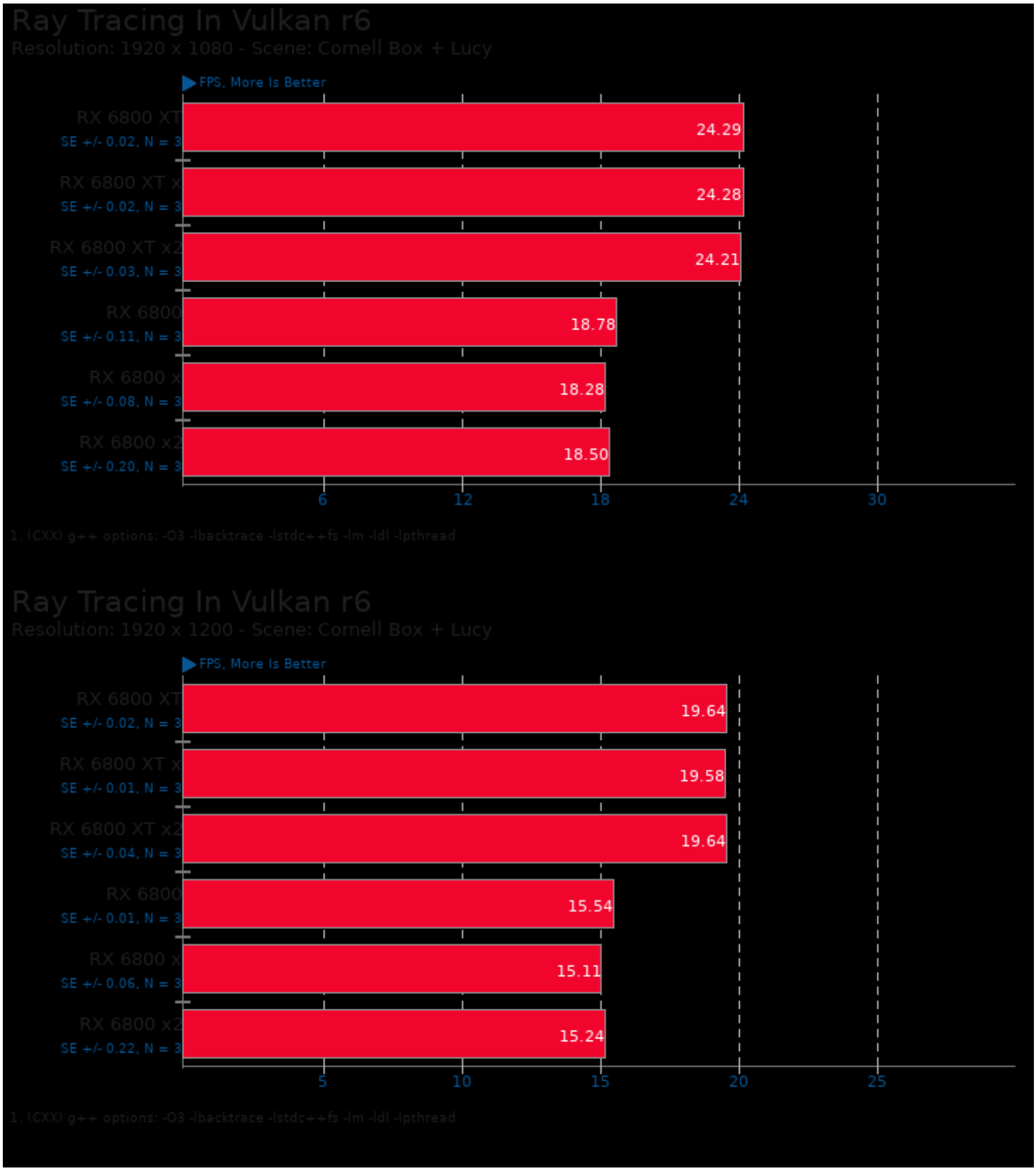
Ray Tracing In Vulkan - 1920 x 1200 - R.T.I.O.W (FPS)	75.0549	75.1116	**75.2874**	61.9800	61.9412	**61.8660**
Normalized	99.69%	99.77%	100%	82.32%	82.27%	82.17%
Standard Deviation	0.3%	0.1%	0%	0.5%	0.6%	0.4%
Ray Tracing In Vulkan - 2560 x 1440 - R.T.I.O.W (FPS)	47.8826	48.5530	**48.6495**	40.2368	40.2479	**40.1895**
Normalized	98.42%	99.8%	100%	82.71%	82.73%	82.61%
Standard Deviation	2.3%	0.1%	0%	0.5%	0.3%	0.4%
Ray Tracing In Vulkan - 3840 x 2160 - R.T.I.O.W (FPS)	23.1507	23.1184	**23.2073**	18.8843	18.8839	**18.8576**
Normalized	99.76%	99.62%	100%	81.37%	81.37%	81.26%
Standard Deviation	0.1%	0.1%	0%	0.2%	0.2%	0%

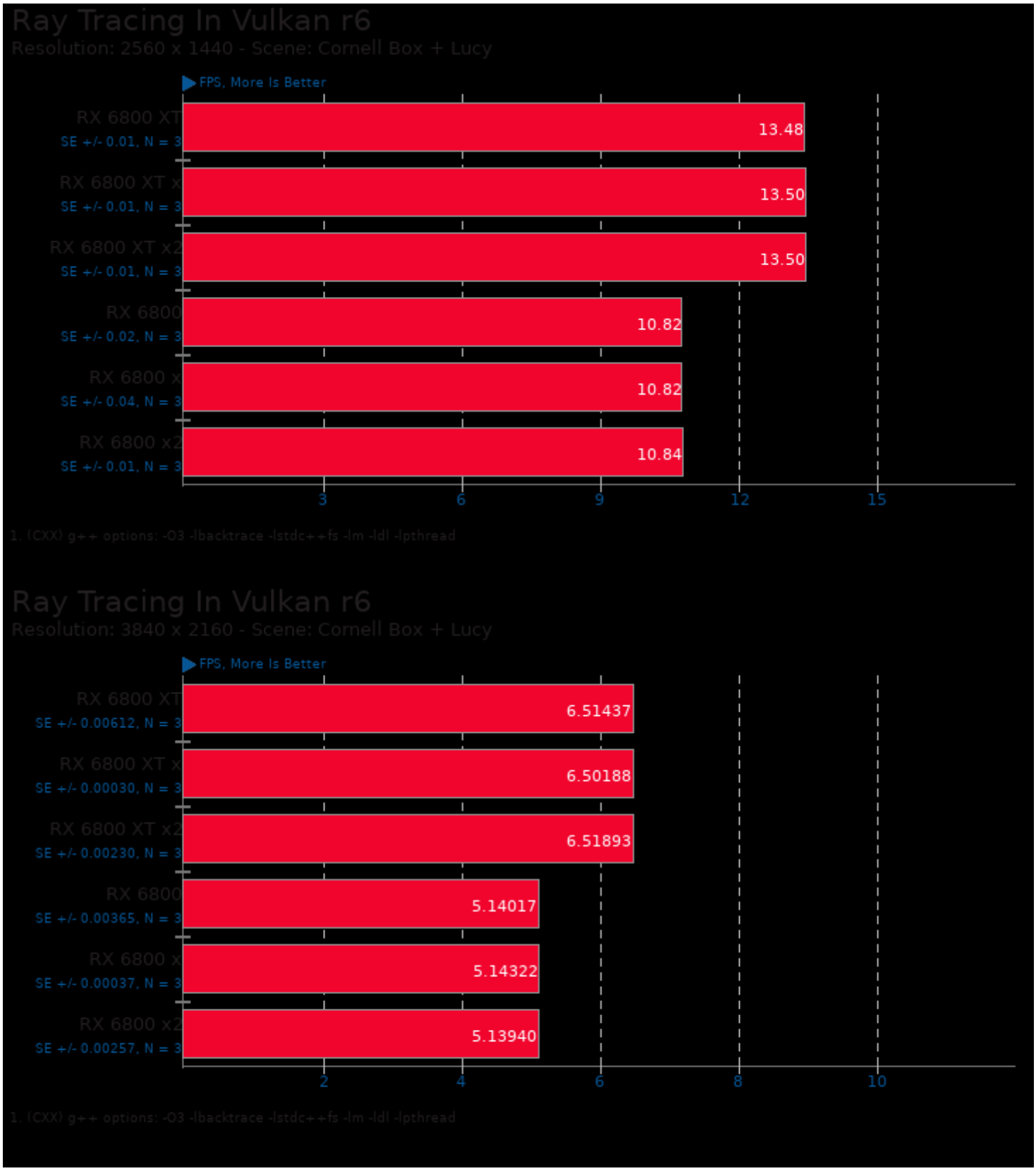

GeeXLab Vulkan Ray-Tracing Demo 2021.2.18.0
Resolution: 1920 x 1080
FPS, More Is Better
RX 6800 XT
SE +/- 0.44, N = 3
100.3
RX 6800 XT x
SE +/- 0.26, N = 3
99.3
RX 6800 XT x2
SE +/- 0.46, N = 3
98.9
RX 6800
SE +/- 0.15, N = 3
83.3
RX 6800 x
SE +/- 0.25, N = 3
82.7
RX 6800 x2
SE +/- 0.12, N = 3
83.0
20
40
60
80
100
GeeXLab Vulkan Ray-Tracing Demo 2021.2.18.0
Resolution: 1920 x 1200
FPS, More Is Better
RX 6800 XT
SE +/- 0.35, N = 3
86.7
RX 6800 XT x
SE +/- 0.10, N = 3
86.6
RX 6800 XT x2
SE +/- 0.28, N = 3
87.0
RX 6800
SE +/- 0.25, N = 3
72.4
RX 6800 x
SE +/- 0.15, N = 3
72.4
RX 6800 x2
SE +/- 0.31, N = 3
72.5
20
40
60
80
100

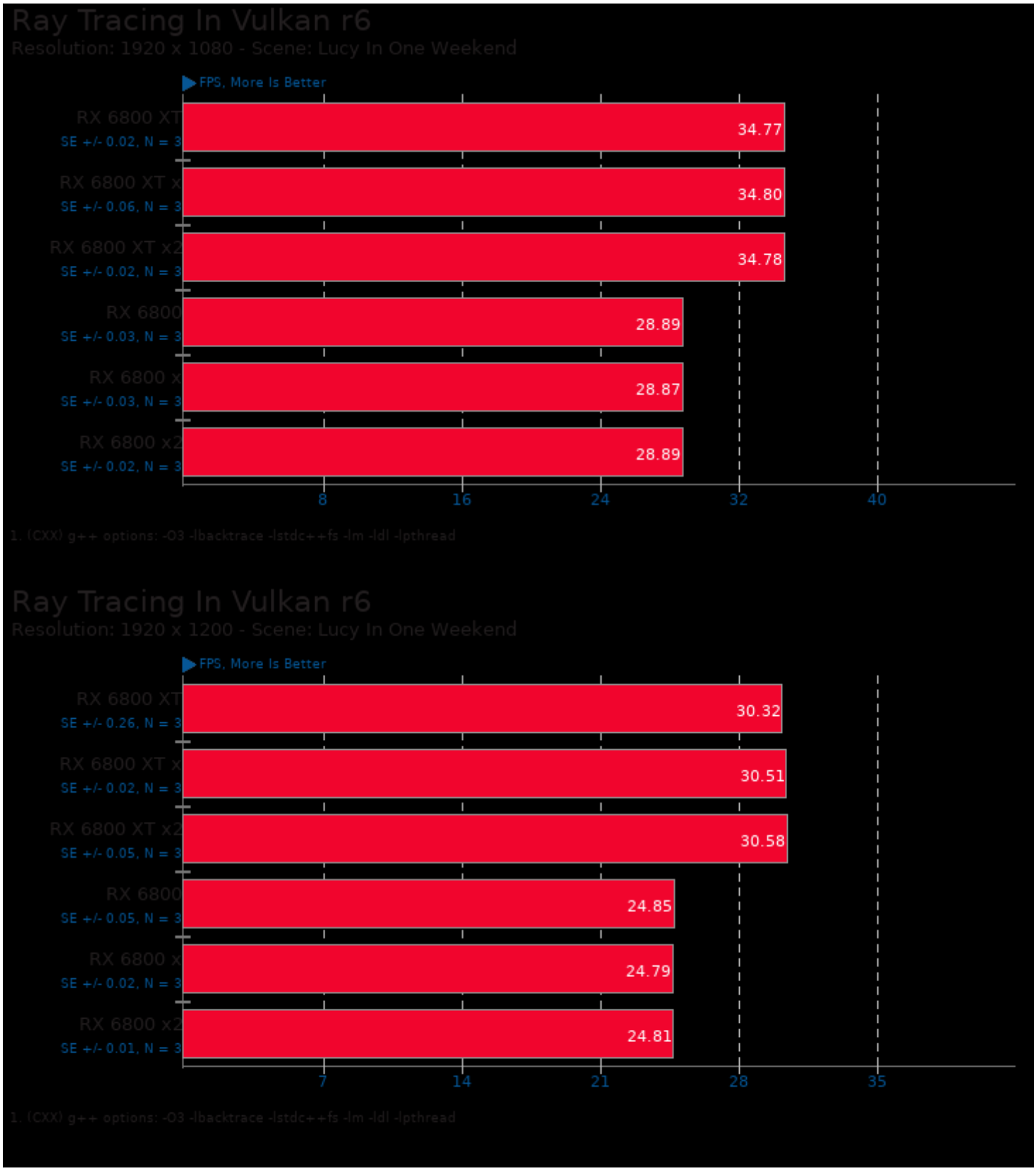

GeeXLab Vulkan Ray-Tracing Demo 2021.2.18.0
Resolution: 2560 x 1440
FPS, More Is Better
RX 6800 XT
SE +/- 0.07, N = 3
58.3
RX 6800 XT x
SE +/- 0.18, N = 3
58.0
RX 6800 XT x2
SE +/- 0.07, N = 3
58.1
RX 6800
SE +/- 0.21, N = 3
48.6
RX 6800 x
SE +/- 0.07, N = 3
48.4
RX 6800 x2
SE +/- 0.15, N = 3
48.6
13
26
39
52
65
GeeXLab Vulkan Ray-Tracing Demo 2021.2.18.0
Resolution: 3840 x 2160
FPS, More Is Better
RX 6800 XT
SE +/- 0.03, N = 3
27.9
RX 6800 XT x
SE +/- 0.03, N = 3
27.8
RX 6800 XT x2
SE +/- 0.03, N = 3
27.8
RX 6800
SE +/- 0.03, N = 3
22.8
RX 6800 x
SE +/- 0.03, N = 3
22.7
RX 6800 x2
SE +/- 0.00, N = 3
22.8
7
14
21
28
35

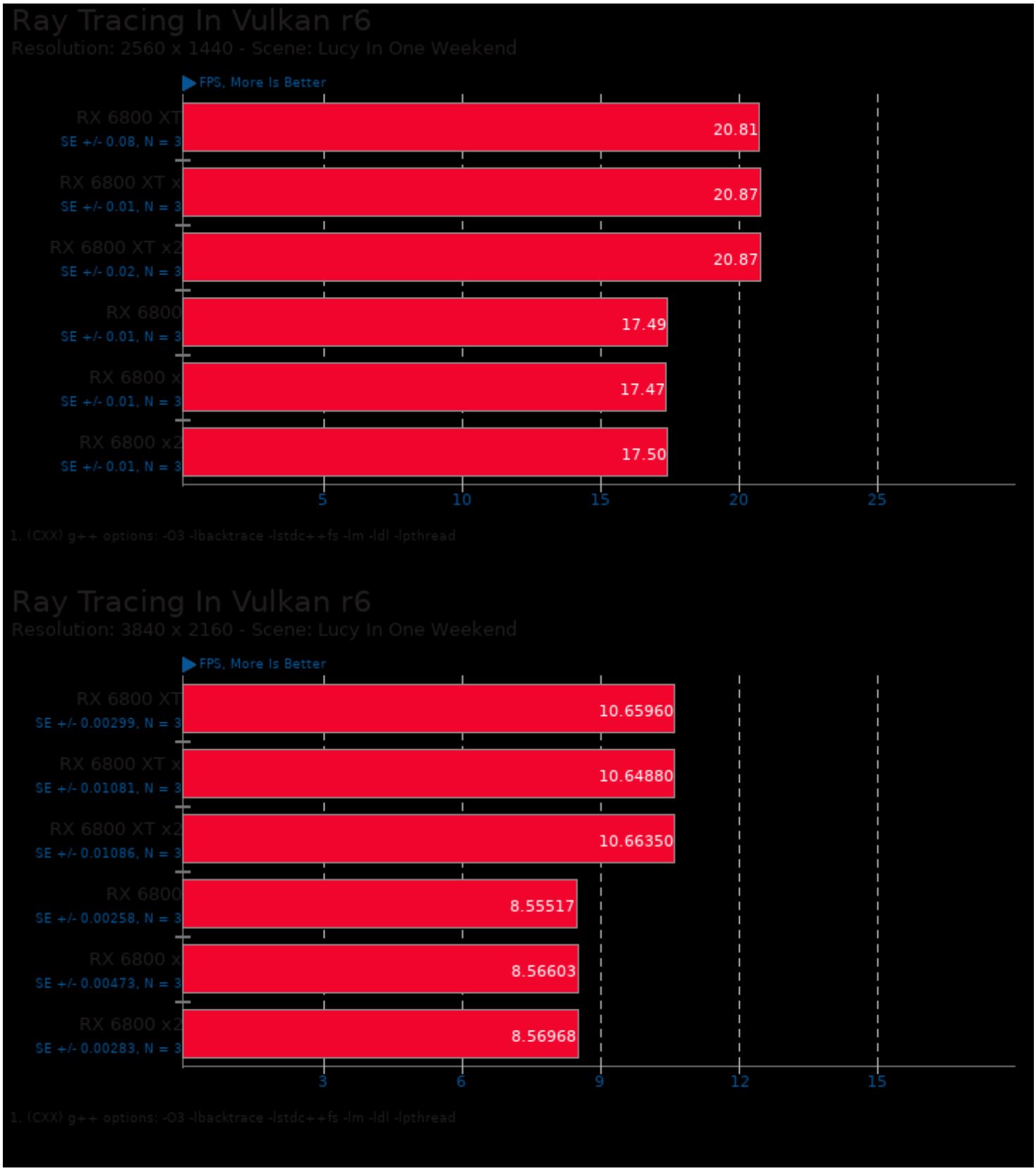

Ray Tracing In Vulkan r6
Resolution: 1920 x 1080 - Scene: Cornell Box
FPS, More Is Better
RX 6800 XT
SE +/- 0.03, N = 3
65.50
RX 6800 XT x
SE +/- 0.06, N = 3
65.26
RX 6800 XT x2
SE +/- 0.15, N = 3
65.50
RX 6800
SE +/- 0.15, N = 3
53.37
RX 6800 x
SE +/- 0.04, N = 3
53.55
RX 6800 x2
SE +/- 0.01, N = 3
53.52
15
30
45
60
75
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 1920 x 1200 - Scene: Cornell Box
FPS, More Is Better
RX 6800 XT
SE +/- 0.00, N = 3
53.52
RX 6800 XT x
SE +/- 0.02, N = 3
53.47
RX 6800 XT x2
SE +/- 0.02, N = 3
53.46
RX 6800
SE +/- 0.15, N = 3
43.65
RX 6800 x
SE +/- 0.09, N = 3
43.64
RX 6800 x2
SE +/- 0.05, N = 3
43.69
12
24
36
48
60
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

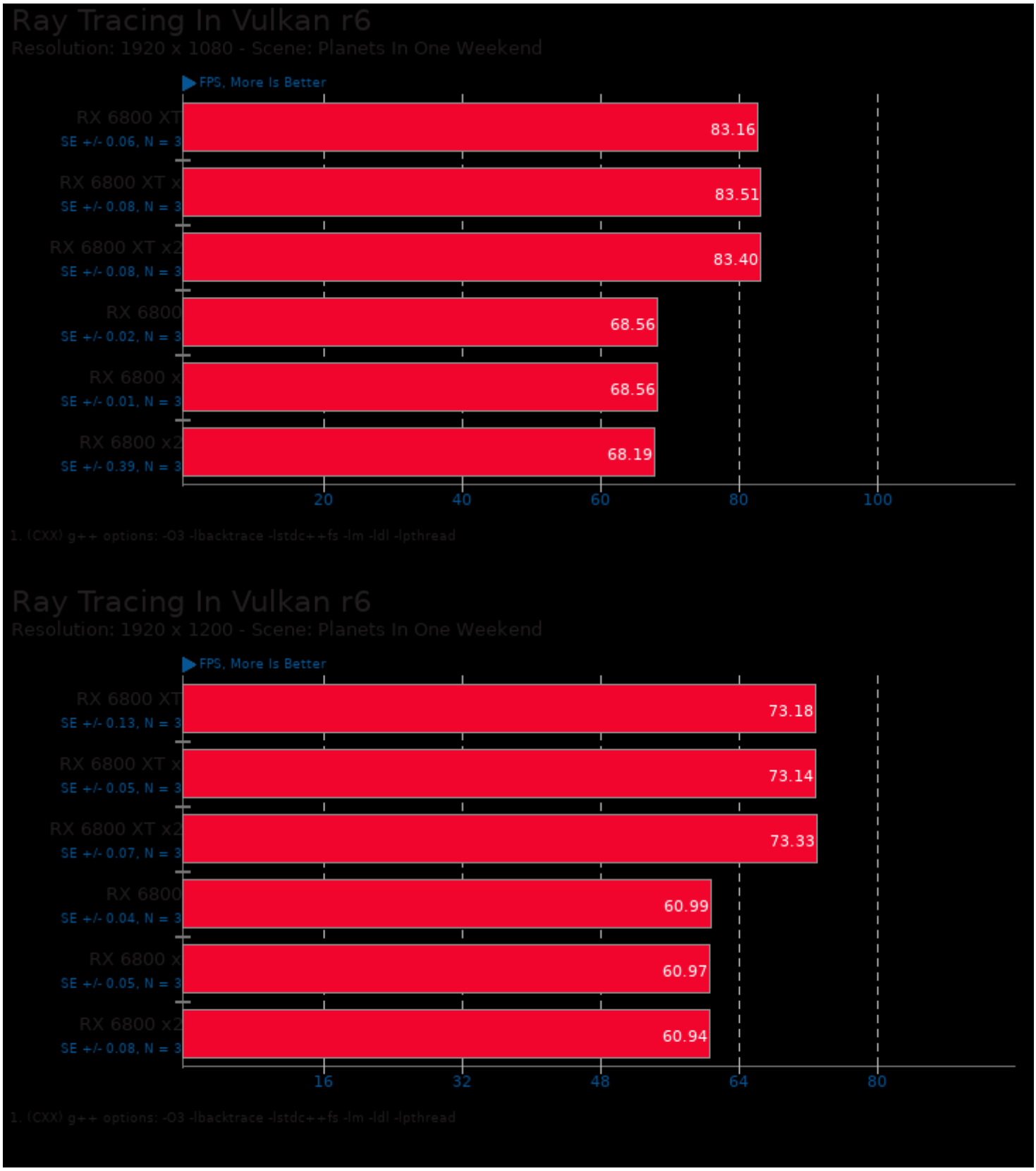

Ray Tracing In Vulkan r6
Resolution: 2560 x 1440 - Scene: Cornell Box
FPS, More Is Better
RX 6800 XT
SE +/- 0.03, N = 3
36.98
RX 6800 XT x
SE +/- 0.05, N = 3
36.99
RX 6800 XT x2
SE +/- 0.02, N = 3
36.93
RX 6800
SE +/- 0.06, N = 3
30.65
RX 6800 x
SE +/- 0.04, N = 3
30.61
RX 6800 x2
SE +/- 0.01, N = 3
30.59
9
18
27
36
45
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 3840 x 2160 - Scene: Cornell Box
FPS, More Is Better
RX 6800 XT
SE +/- 0.01, N = 3
17.69
RX 6800 XT x
SE +/- 0.01, N = 3
17.69
RX 6800 XT x2
SE +/- 0.00, N = 3
17.66
RX 6800
SE +/- 0.02, N = 3
14.38
RX 6800 x
SE +/- 0.00, N = 3
14.37
RX 6800 x2
SE +/- 0.01, N = 3
14.38
4
8
12
16
20
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

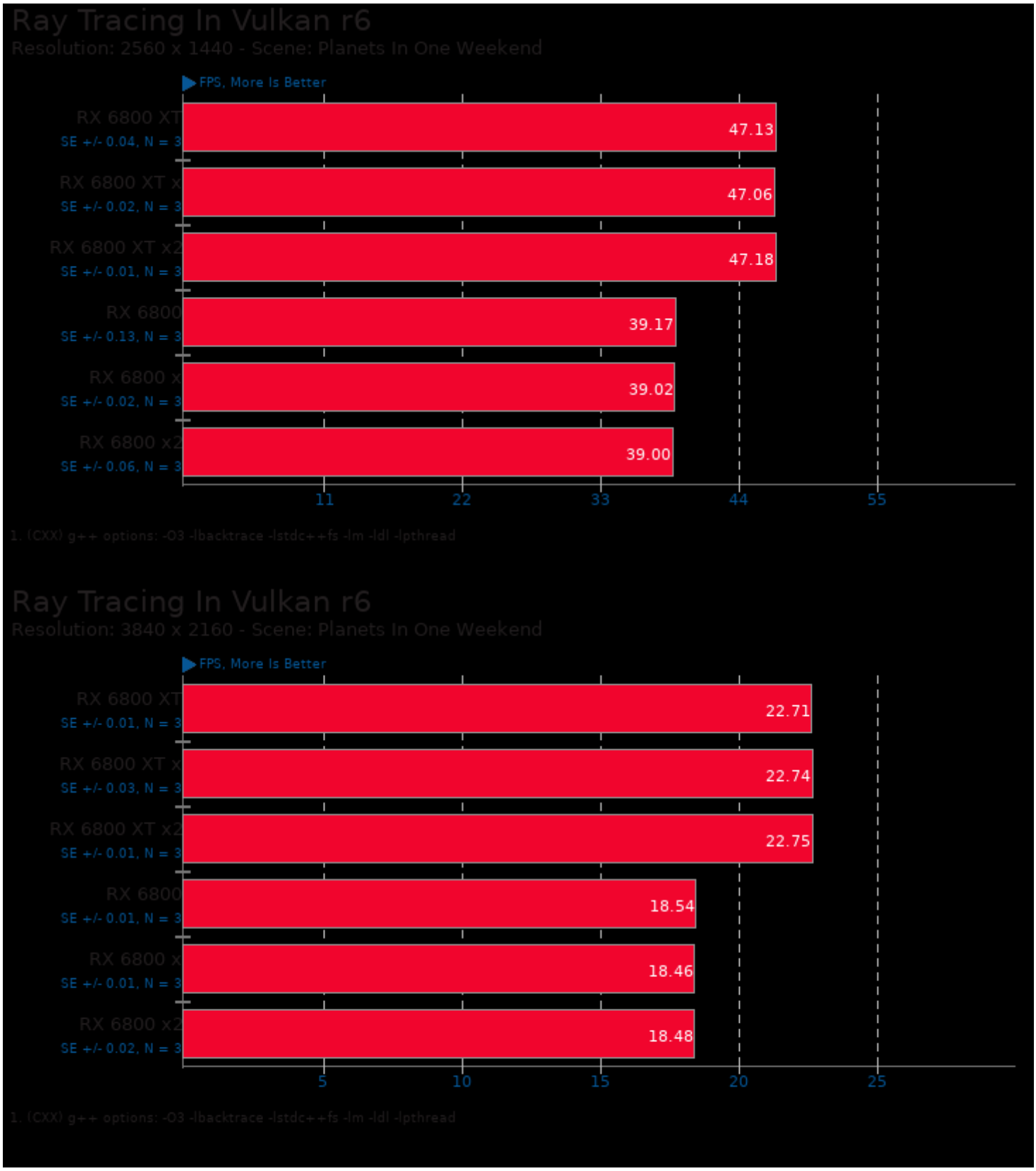

Ray Tracing In Vulkan r6
Resolution: 1920 x 1080 - Scene: Cornell Box + Lucy
FPS, More Is Better
RX 6800 XT
SE +/- 0.02, N = 3
24.29
RX 6800 XT x
SE +/- 0.02, N = 3
24.28
RX 6800 XT x2
SE +/- 0.03, N = 3
24.21
RX 6800
SE +/- 0.11, N = 3
18.78
RX 6800 x
SE +/- 0.08, N = 3
18.28
RX 6800 x2
SE +/- 0.20, N = 3
18.50
6
12
18
24
30
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 1920 x 1200 - Scene: Cornell Box + Lucy
FPS, More Is Better
RX 6800 XT
SE +/- 0.02, N = 3
19.64
RX 6800 XT x
SE +/- 0.01, N = 3
19.58
RX 6800 XT x2
SE +/- 0.04, N = 3
19.64
RX 6800
SE +/- 0.01, N = 3
15.54
RX 6800 x
SE +/- 0.06, N = 3
15.11
RX 6800 x2
SE +/- 0.22, N = 3
15.24
5
10
15
20
25
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

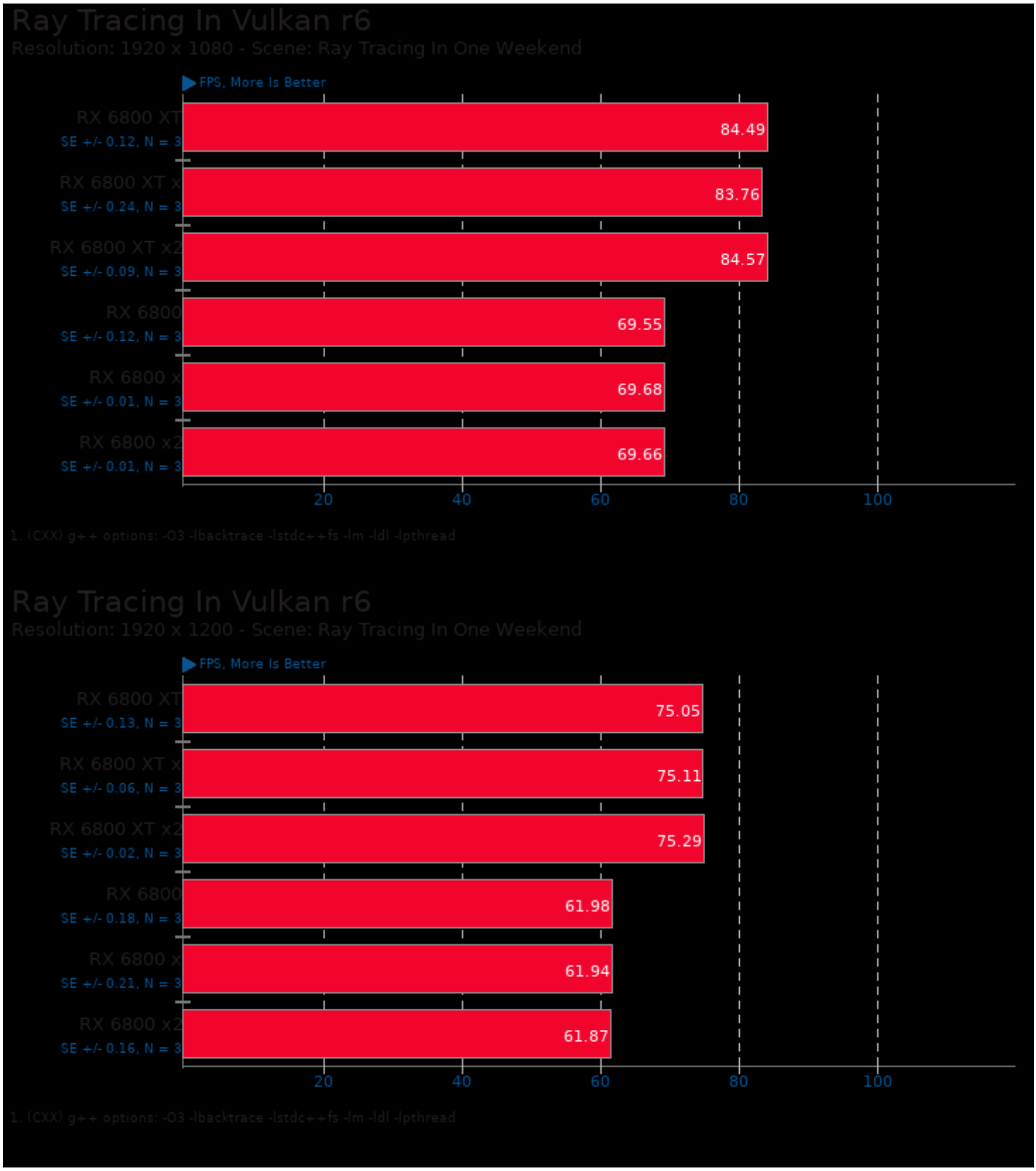

Ray Tracing In Vulkan r6
Resolution: 2560 x 1440 - Scene: Cornell Box + Lucy
FPS, More Is Better
RX 6800 XT
SE +/- 0.01, N = 3
13.48
RX 6800 XT x
SE +/- 0.01, N = 3
13.50
RX 6800 XT x2
SE +/- 0.01, N = 3
13.50
RX 6800
SE +/- 0.02, N = 3
10.82
RX 6800 x
SE +/- 0.04, N = 3
10.82
RX 6800 x2
SE +/- 0.01, N = 3
10.84
3
6
9
12
15
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 3840 x 2160 - Scene: Cornell Box + Lucy
FPS, More Is Better
RX 6800 XT
SE +/- 0.00612, N = 3
6.51437
RX 6800 XT x
SE +/- 0.00030, N = 3
6.50188
RX 6800 XT x2
SE +/- 0.00230, N = 3
6.51893
RX 6800
SE +/- 0.00365, N = 3
5.14017
RX 6800 x
SE +/- 0.00037, N = 3
5.14322
RX 6800 x2
SE +/- 0.00257, N = 3
5.13940
2
4
6
8
10
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

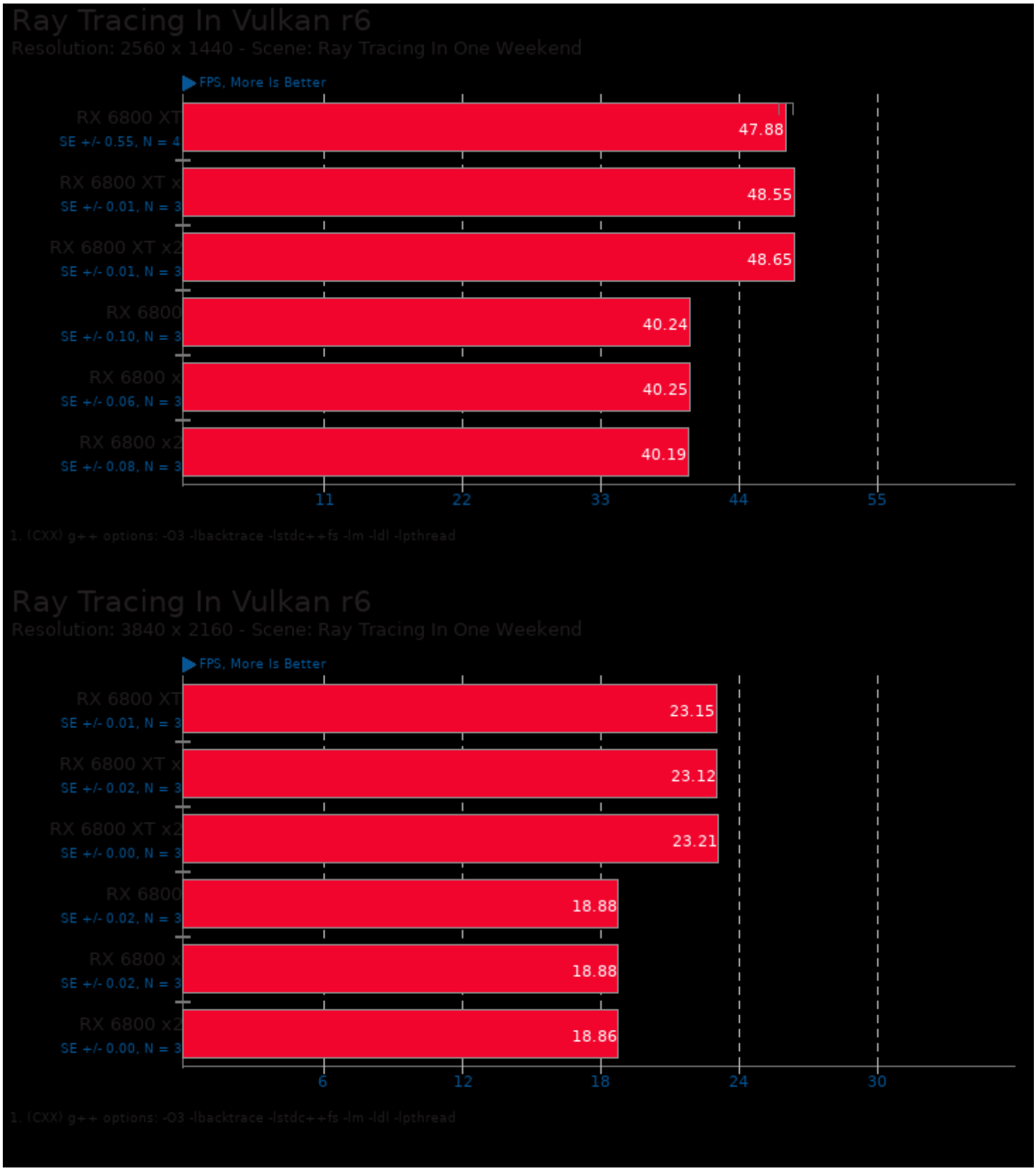

Ray Tracing In Vulkan r6
Resolution: 1920 x 1080 - Scene: Lucy In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.02, N = 3
34.77
RX 6800 XT x
SE +/- 0.06, N = 3
34.80
RX 6800 XT x2
SE +/- 0.02, N = 3
34.78
RX 6800
SE +/- 0.03, N = 3
28.89
RX 6800 x
SE +/- 0.03, N = 3
28.87
RX 6800 x2
SE +/- 0.02, N = 3
28.89
8
16
24
32
40
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 1920 x 1200 - Scene: Lucy In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.26, N = 3
30.32
RX 6800 XT x
SE +/- 0.02, N = 3
30.51
RX 6800 XT x2
SE +/- 0.05, N = 3
30.58
RX 6800
SE +/- 0.05, N = 3
24.85
RX 6800 x
SE +/- 0.02, N = 3
24.79
RX 6800 x2
SE +/- 0.01, N = 3
24.81
7
14
21
28
35
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread


Ray Tracing In Vulkan r6
Resolution: 2560 x 1440 - Scene: Lucy In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.08, N = 3
20.81
RX 6800 XT x
SE +/- 0.01, N = 3
20.87
RX 6800 XT x2
SE +/- 0.02, N = 3
20.87
RX 6800
SE +/- 0.01, N = 3
17.49
RX 6800 x
SE +/- 0.01, N = 3
17.47
RX 6800 x2
SE +/- 0.01, N = 3
17.50
5
10
15
20
25
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 3840 x 2160 - Scene: Lucy In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.00299, N = 3
10.65960
RX 6800 XT x
SE +/- 0.01081, N = 3
10.64880
RX 6800 XT x2
SE +/- 0.01086, N = 3
10.66350
RX 6800
SE +/- 0.00258, N = 3
8.55517
RX 6800 x
SE +/- 0.00473, N = 3
8.56603
RX 6800 x2
SE +/- 0.00283, N = 3
8.56968
3
6
9
12
15
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

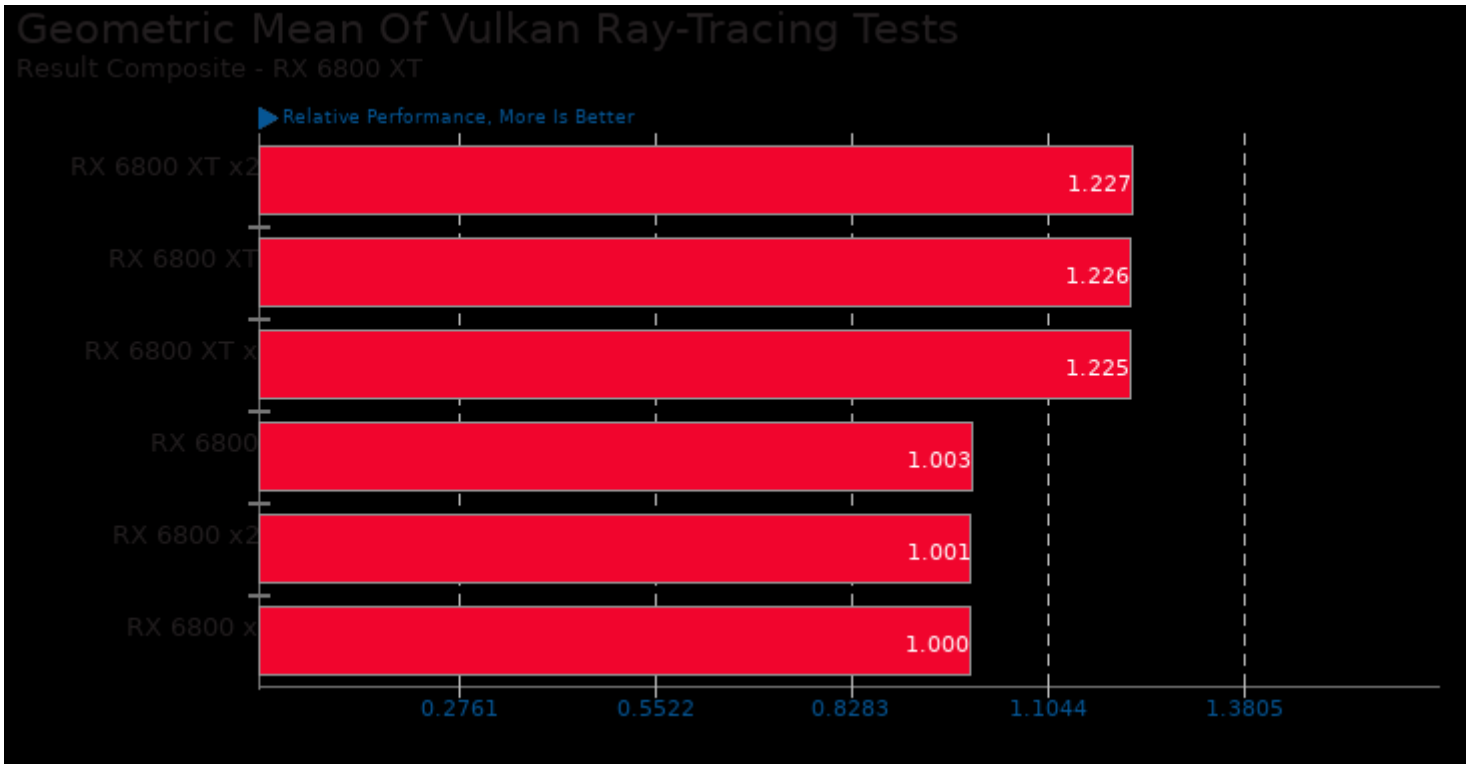

Ray Tracing In Vulkan r6
Resolution: 1920 x 1080 - Scene: Planets In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.06, N = 3
83.16
RX 6800 XT x
SE +/- 0.08, N = 3
83.51
RX 6800 XT x2
SE +/- 0.08, N = 3
83.40
RX 6800
SE +/- 0.02, N = 3
68.56
RX 6800 x
SE +/- 0.01, N = 3
68.56
RX 6800 x2
SE +/- 0.39, N = 3
68.19
20
40
60
80
100
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 1920 x 1200 - Scene: Planets In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.13, N = 3
73.18
RX 6800 XT x
SE +/- 0.05, N = 3
73.14
RX 6800 XT x2
SE +/- 0.07, N = 3
73.33
RX 6800
SE +/- 0.04, N = 3
60.99
RX 6800 x
SE +/- 0.05, N = 3
60.97
RX 6800 x2
SE +/- 0.08, N = 3
60.94
16
32
48
64
80
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread


Ray Tracing In Vulkan r6
Resolution: 2560 x 1440 - Scene: Planets In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.04, N = 3
47.13
RX 6800 XT x
SE +/- 0.02, N = 3
47.06
RX 6800 XT x2
SE +/- 0.01, N = 3
47.18
RX 6800
SE +/- 0.13, N = 3
39.17
RX 6800 x
SE +/- 0.02, N = 3
39.02
RX 6800 x2
SE +/- 0.06, N = 3
39.00
11
22
33
44
55
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 3840 x 2160 - Scene: Planets In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.01, N = 3
22.71
RX 6800 XT x
SE +/- 0.03, N = 3
22.74
RX 6800 XT x2
SE +/- 0.01, N = 3
22.75
RX 6800
SE +/- 0.01, N = 3
18.54
RX 6800 x
SE +/- 0.01, N = 3
18.46
RX 6800 x2
SE +/- 0.02, N = 3
18.48
5
10
15
20
25
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread


Ray Tracing In Vulkan r6
Resolution: 1920 x 1080 - Scene: Ray Tracing In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.12, N = 3
84.49
RX 6800 XT x
SE +/- 0.24, N = 3
83.76
RX 6800 XT x2
SE +/- 0.09, N = 3
84.57
RX 6800
SE +/- 0.12, N = 3
69.55
RX 6800 x
SE +/- 0.01, N = 3
69.68
RX 6800 x2
SE +/- 0.01, N = 3
69.66
20
40
60
80
100
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 1920 x 1200 - Scene: Ray Tracing In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.13, N = 3
75.05
RX 6800 XT x
SE +/- 0.06, N = 3
75.11
RX 6800 XT x2
SE +/- 0.02, N = 3
75.29
RX 6800
SE +/- 0.18, N = 3
61.98
RX 6800 x
SE +/- 0.21, N = 3
61.94
RX 6800 x2
SE +/- 0.16, N = 3
61.87
20
40
60
80
100
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread


Ray Tracing In Vulkan r6
Resolution: 2560 x 1440 - Scene: Ray Tracing In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.55, N = 4
47.88
RX 6800 XT x
SE +/- 0.01, N = 3
48.55
RX 6800 XT x2
SE +/- 0.01, N = 3
48.65
RX 6800
SE +/- 0.10, N = 3
40.24
RX 6800 x
SE +/- 0.06, N = 3
40.25
RX 6800 x2
SE +/- 0.08, N = 3
40.19
11
22
33
44
55
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread
Ray Tracing In Vulkan r6
Resolution: 3840 x 2160 - Scene: Ray Tracing In One Weekend
FPS, More Is Better
RX 6800 XT
SE +/- 0.01, N = 3
23.15
RX 6800 XT x
SE +/- 0.02, N = 3
23.12
RX 6800 XT x2
SE +/- 0.00, N = 3
23.21
RX 6800
SE +/- 0.02, N = 3
18.88
RX 6800 x
SE +/- 0.02, N = 3
18.88
RX 6800 x2
SE +/- 0.00, N = 3
18.86
6
12
18
24
30
1. (CXX) g++ options: -O3 -lbacktrace -lstdc++fs -lm -ldl -lpthread

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



Geometric mean based upon tests: pts/rtiv and pts/geexlab-rt

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 21:42.