

www.phoronix-test-suite.com

Windows 10 vs. Ubuntu 16.04 Linux NVIDIA Intel AMD Analyze

Tests by Michael Larabel for a future article.

Test Systems:

Intel: Windows 10

Processor: Intel Family 6 Model 94 Stepping 3 Intel (4 Cores), Disk: 238GB

OS: Windows NT, Kernel: 10.0 (x86_64)

Intel: Linux

Processor: Intel Core i5-6600K @ 3.90GHz (4 Cores), Motherboard: MSI Z170A GAMING PRO (MS-7984) v1.0, Chipset: Intel Sky Lake, Memory: 15360MB, Disk: 256GB TS256GSSD370S, Graphics: Intel Sky Lake (1150MHz), Audio: Realtek ALC1150, Monitor: DELL P2415Q, Network: Intel Connection

OS: Ubuntu 16.04, Kernel: 4.7.0-999-generic (x86_64) 20160622, Desktop: Unity 7.4.0, Display Server: X Server 1.18.3, Display Driver: intel 2.99.917, OpenGL: 4.3 Mesa 12.1.0-devel- padoka PPA (git-6b0ac95), Compiler: GCC 5.3.1 20160413, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: intel_pstate performance
Graphics Notes: SNA

AMD: Linux

Processor: Intel Xeon E3-1280 v5 @ 4.00GHz (8 Cores), Motherboard: MSI C236A WORKSTATION (MS-7998) v1.0, Chipset: Intel Sky Lake, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: Sapphire AMD Radeon R9 Fury 4096MB, Audio: Realtek ALC1150, Monitor: DELL P2415Q, Network: Intel Connection

OS: Ubuntu 16.04, Kernel: 4.4.0-24-generic (x86_64), Desktop: Unity 7.4.0, Display Server: X Server 1.18.3, OpenGL: 4.5.13439, OpenCL: OpenCL 2.0 AMD-APP (2079.3), Compiler: GCC 5.3.1 20160413, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: intel_pstate performance
Graphics Notes: GLAMOR

NVIDIA: Ubuntu 16.04

Processor: Intel Xeon E3-1280 v5 @ 4.00GHz (8 Cores), Motherboard: MSI C236A WORKSTATION (MS-7998) v1.0, Chipset: Intel Sky Lake, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: NVIDIA GeForce GTX 1080 8192MB (1605/5005MHz), Audio: Realtek ALC1150, Network: Intel Connection

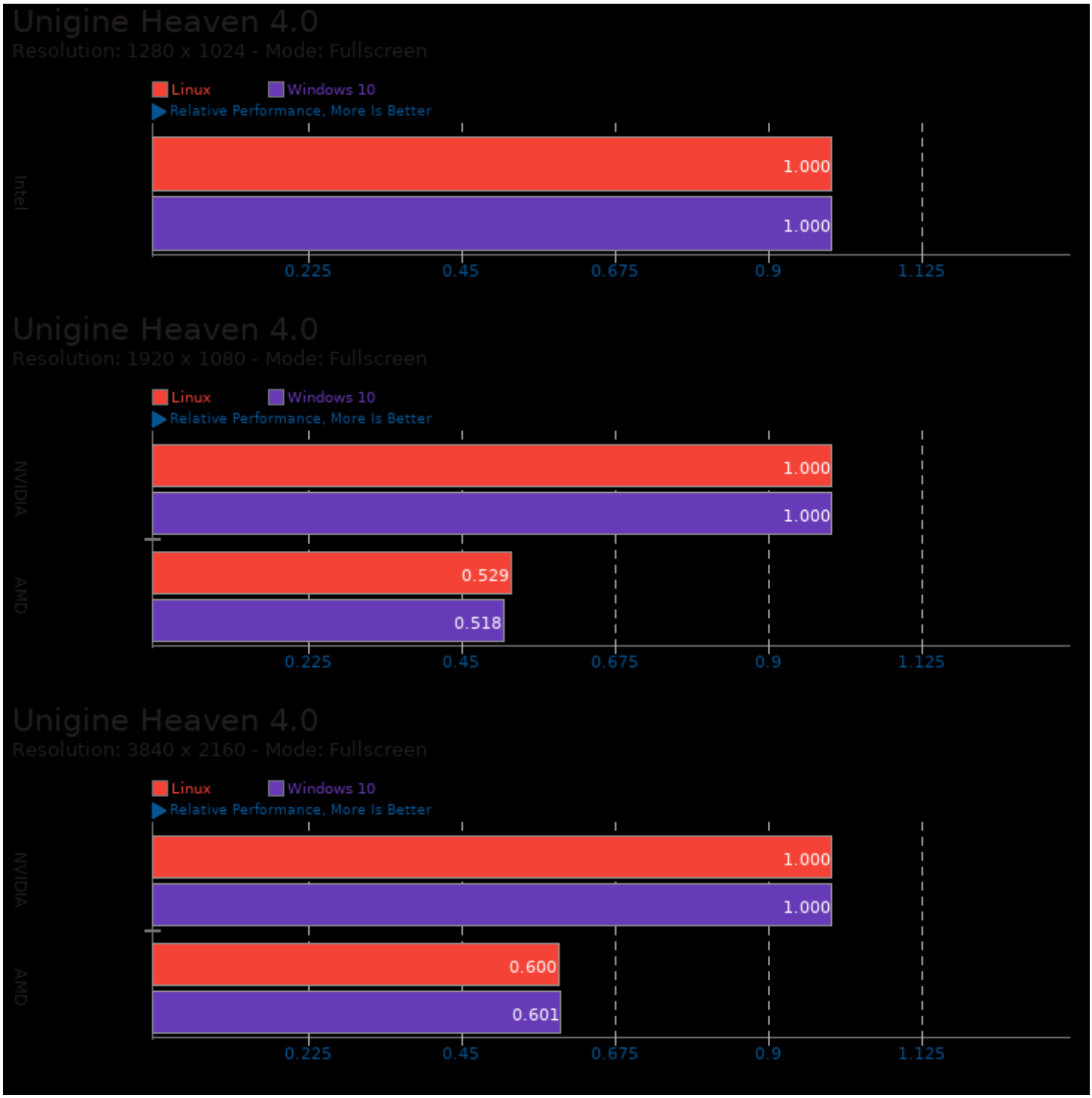
OS: Ubuntu 16.04, Kernel: 4.4.0-24-generic (x86_64), Desktop: Unity 7.4.0, Display Server: X Server 1.18.3, Display Driver: NVIDIA 367.27, OpenGL: 4.5.0, Vulkan: 1.0.8, Compiler: GCC 5.3.1 20160413, File-System: ext4, Screen Resolution: 3840x2160

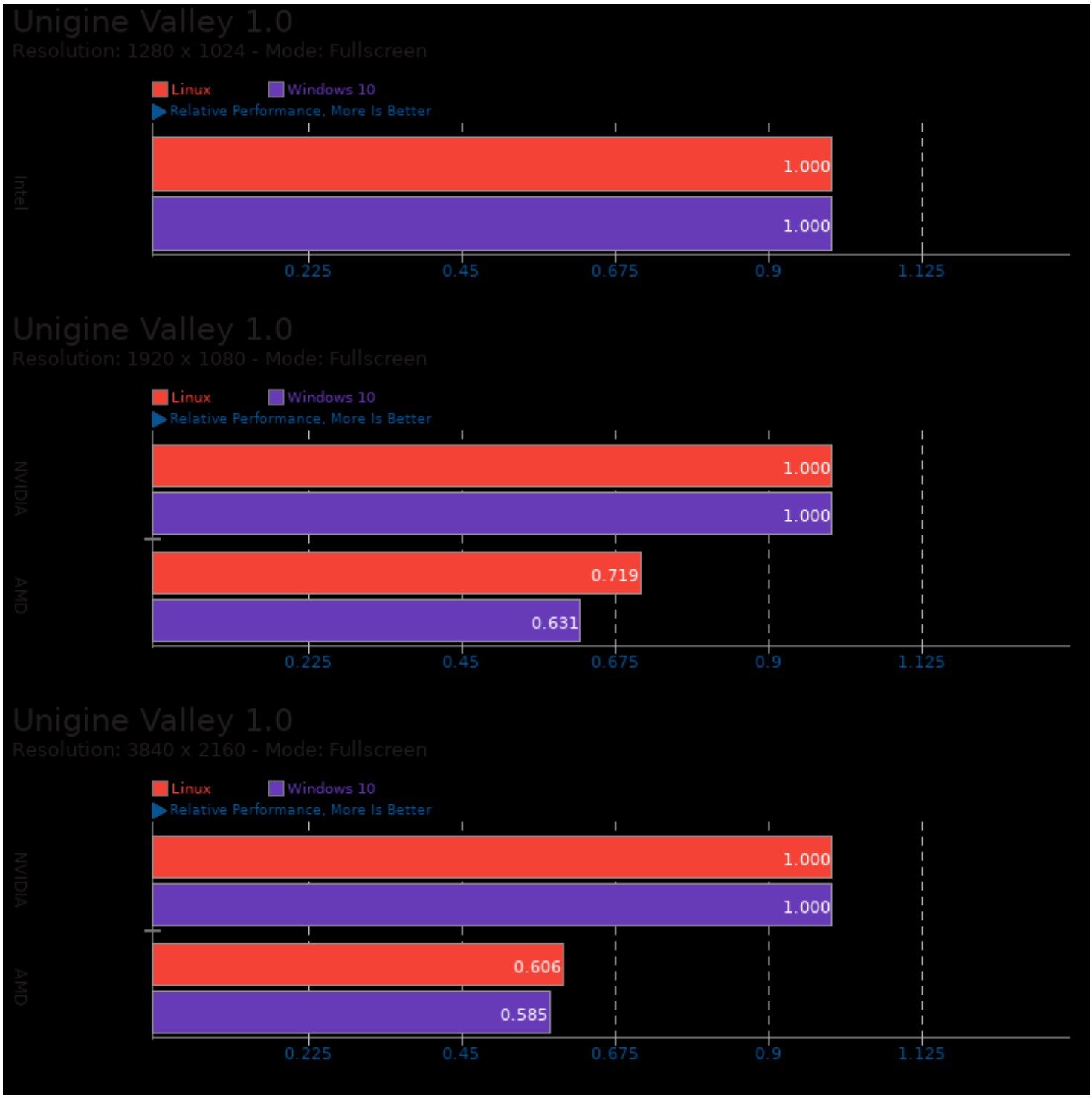
Processor Notes: Scaling Governor: intel_pstate performance

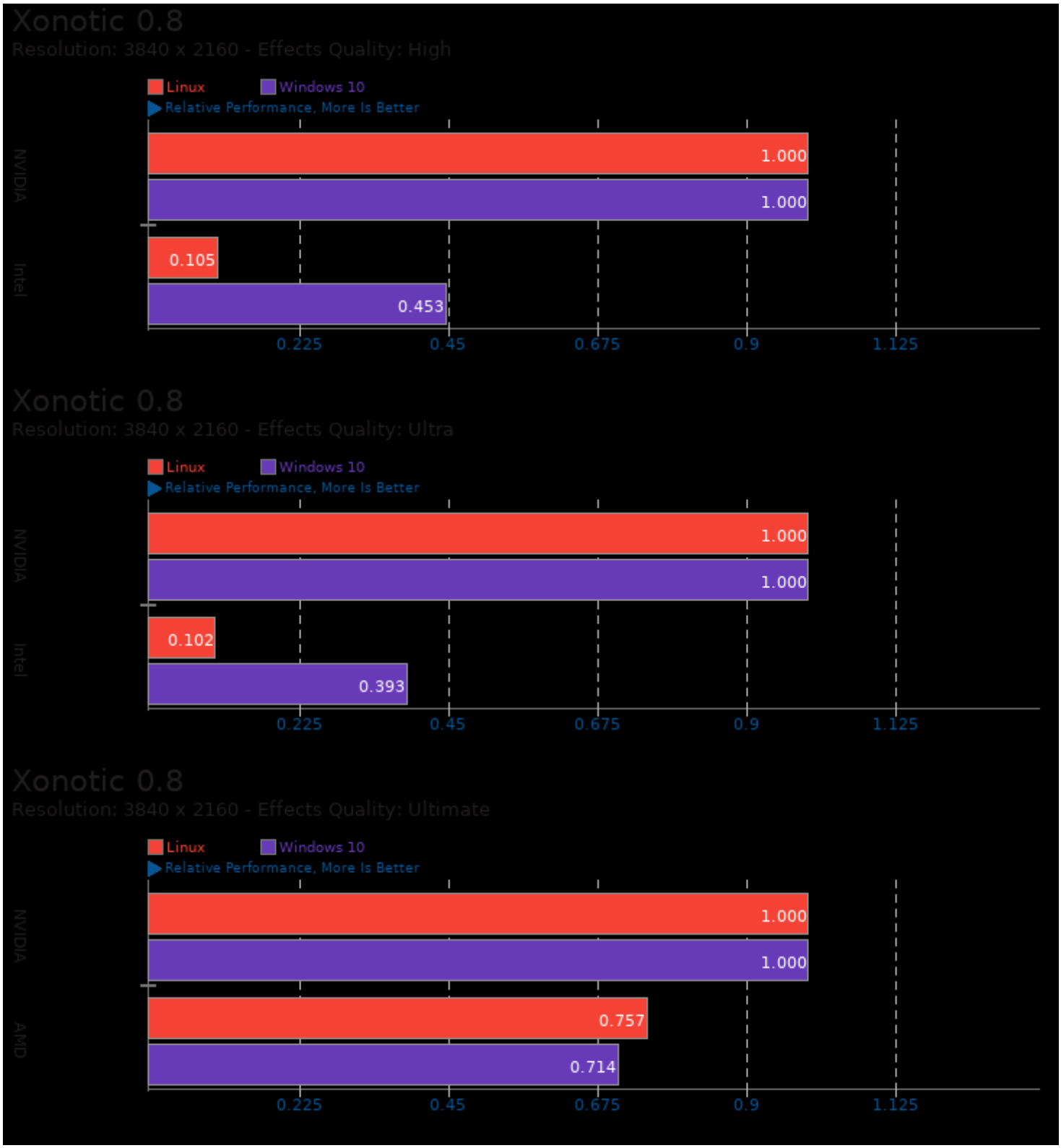
	Intel: Windows 10	Intel: Linux	AMD: Linux	NVIDIA: Ubuntu 16.04
Unigine Heaven - 1280 x 1024 - Fullscreen (FPS)	**15.97**	**14.53**		
Normalized	100%	90.98%		
Standard Deviation	0.5%	0%		
Unigine Heaven - 1920 x 1080 - Fullscreen (FPS)			**84.40**	
Normalized			50.99%	
Standard Deviation			0.3%	
Unigine Heaven - 3840 x 2160 - Fullscreen (FPS)			**20.94**	
Normalized			59.97%	
Standard Deviation			0%	

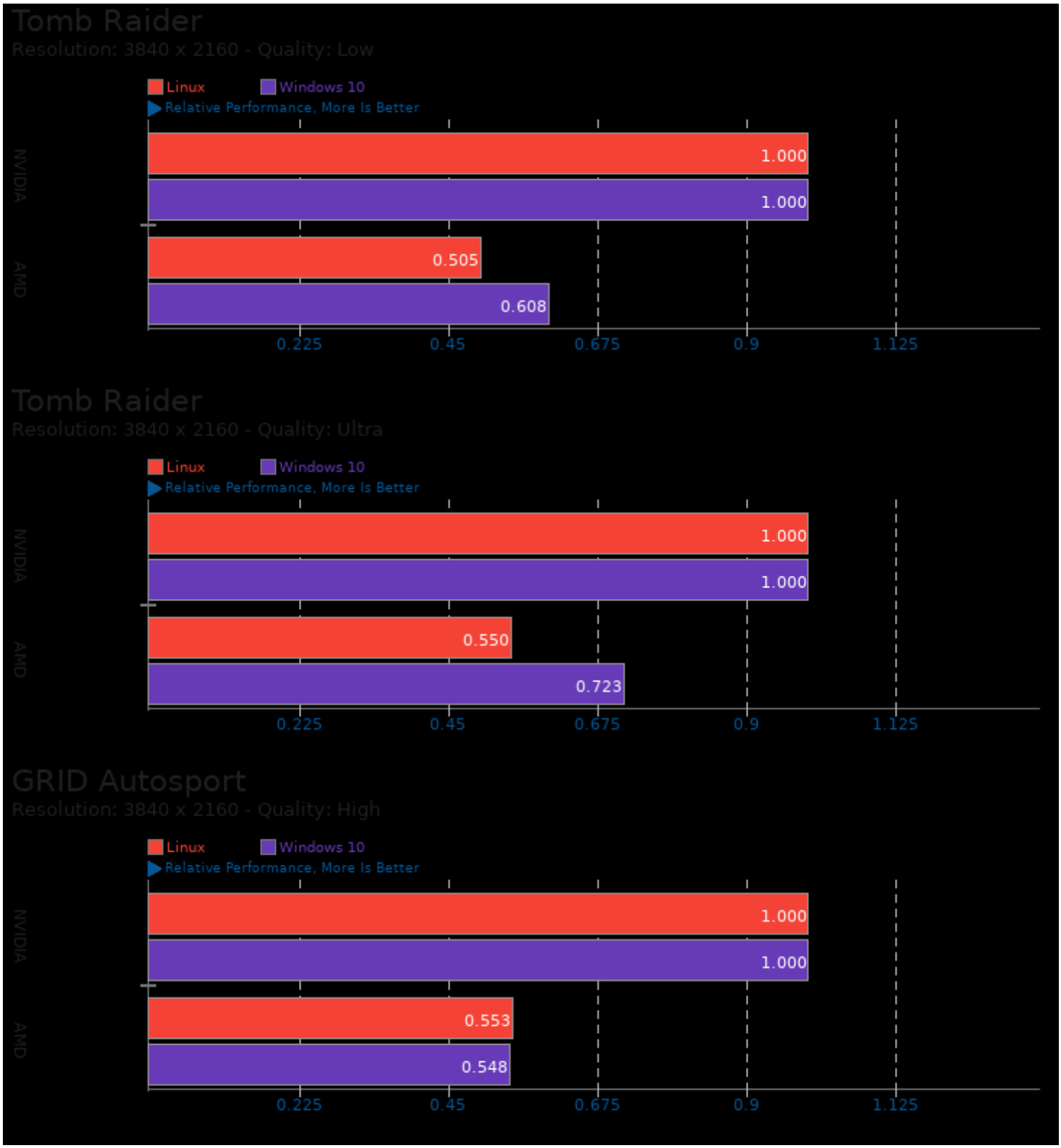
Unigine Valley - 1280 x 1024 - Fullscreen (FPS)	**18.45**	**13.46**	
Normalized	100%	72.95%	
Standard Deviation	0.1%	0%	
Unigine Valley - 1920 x 1080 - Fullscreen (FPS)			**93.07**
Normalized			62.2%
Standard Deviation			0%
Unigine Valley - 3840 x 2160 - Fullscreen (FPS)			28.65
Normalized			58.62%
Standard Deviation			0%
Xonotic - 3840 x 2160 - High (FPS)	144.05	**38.54**	
Normalized	39.24%	10.5%	
Standard Deviation	0.2%	0.1%	
Xonotic - 3840 x 2160 - Ultra (FPS)	110.04	**30.69**	
Normalized	36.51%	10.18%	
Standard Deviation	0.5%	0.1%	
Xonotic - 3840 x 2160 - Ultimate (FPS)			165.52
Normalized			73.49%
Standard Deviation			0.7%
Tomb Raider - 3840 x 2160 - Low			**72.5**
Normalized			30%
Tomb Raider - 3840 x 2160 - Ultra			**29.3**
Normalized			37.9%
GRID Autosport - 3840 x 2160 - High (FPS)			**57.52**
Normalized			37.79%
GRID Autosport - 3840 x 2160 - Ultra (FPS)			**39.07**
Normalized			36.24%
The Talos Principle 64-bit - 3840 x 2160 - Ultra (FPS)			
Dota 2 - 3840 x 2160 - OpenGL (FPS)			78.40
Normalized			77.39%
Dota 2 - 3840 x 2160 - Vulkan (FPS)			**80.90**
Normalized			76.58%
Metro Last Light Redux - 3840 x 2160 - High (FPS)			58.47
Normalized			56.9%
Shadow of Mordor - 3840 x 2160 - High (FPS)			**39.69**
Normalized			54.18%
Shadow of Mordor - 3840 x 2160 - Ultra (FPS)			**33.15**
Normalized			51.76%
F1 2015 - 2560 x 1440 - Ultra High (FPS)			**33.74**
Normalized			23.58%
Tomb Raider - 1600 x 900 - Low (FPS)	**68.8**	**30.7**	
Normalized	100%	44.62%	
Tomb Raider - 1920 x 1080 - Low	**48.5**	**22.6**	
Normalized	100%	46.6%	

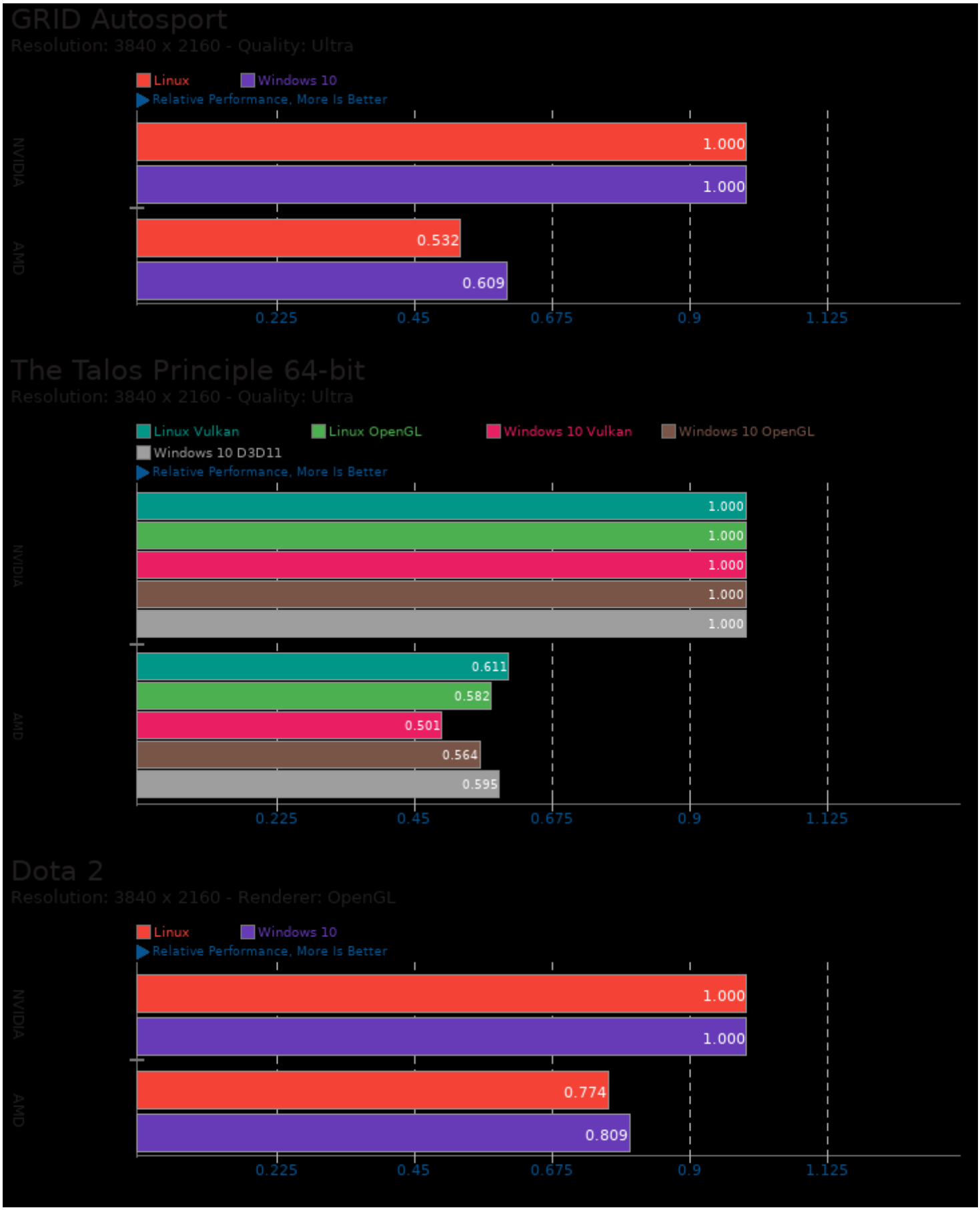
Tomb Raider - 1920 x 1080 - Normal (FPS)	**32.5**	**16.9**	
Normalized	100%	52%	
Shadow of Mordor - 1280 x 720 - Lowest (FPS)	**38.74**	**26.27**	
Normalized	100%	67.81%	
The Talos Principle - 1920 x 1080 - Low (FPS)			
Metro Last Light Redux - 1920 x 1080 (FPS)	**17.8**	**16.2**	
Normalized	100%	91.01%	
BioShock Infinite - 3840 x 2160 - Ultra (FPS)			92.91
Normalized			73.97%
Company of Heroes 2 - 3840 x 2160 - Minimum (FPS)			**25.99**
Normalized			34.39%
Company of Heroes 2 - 3840 x 2160 - Maximum (FPS)			**21.66**
Normalized			34.84%

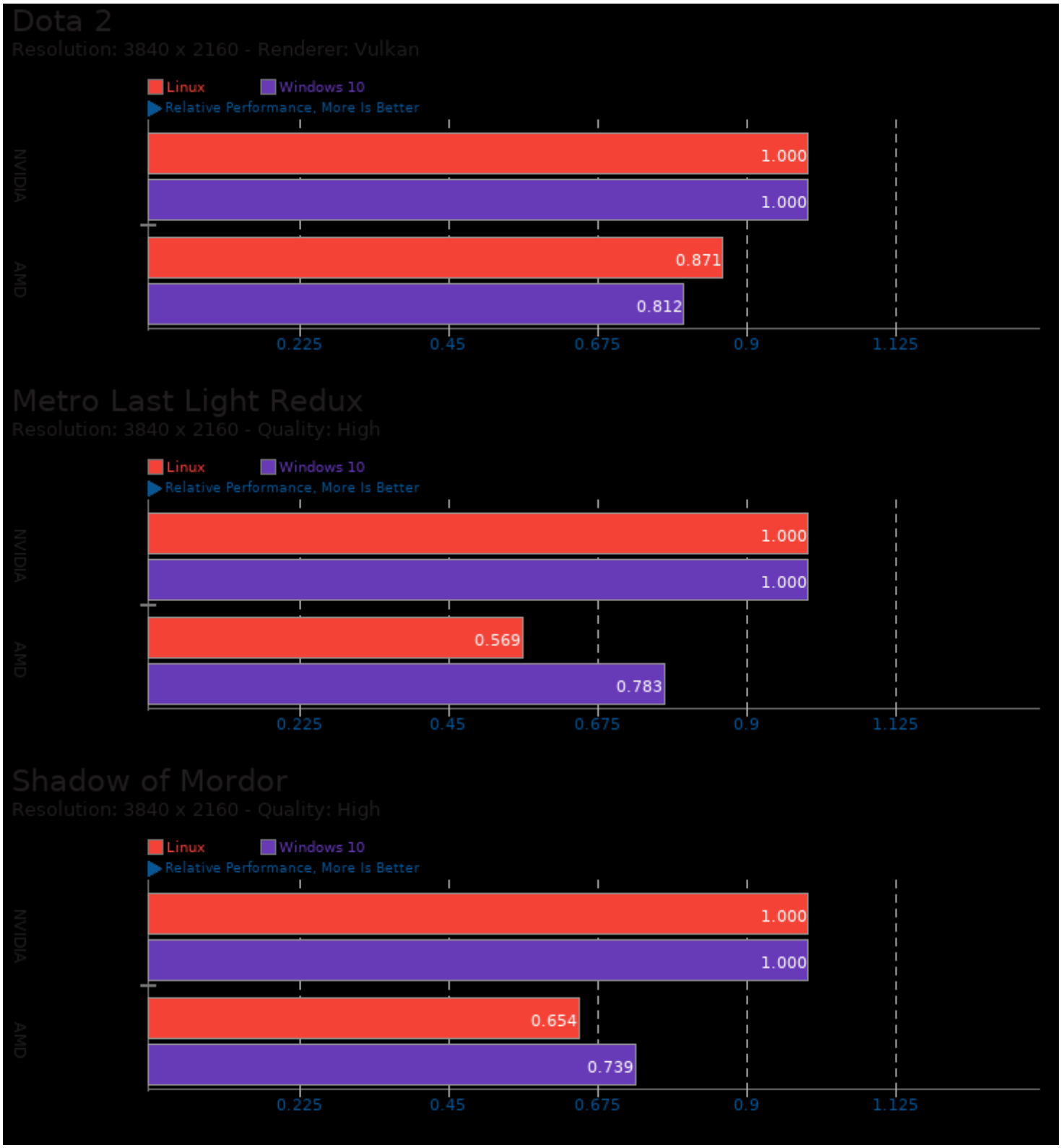

Unigine Heaven 4.0
Resolution: 1280 x 1024 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
Unigine Heaven 4.0
Resolution: 1920 x 1080 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.529
0.518
0.225
0.45
0.675
0.9
1.125
Unigine Heaven 4.0
Resolution: 3840 x 2160 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.600
0.601
0.225
0.45
0.675
0.9
1.125

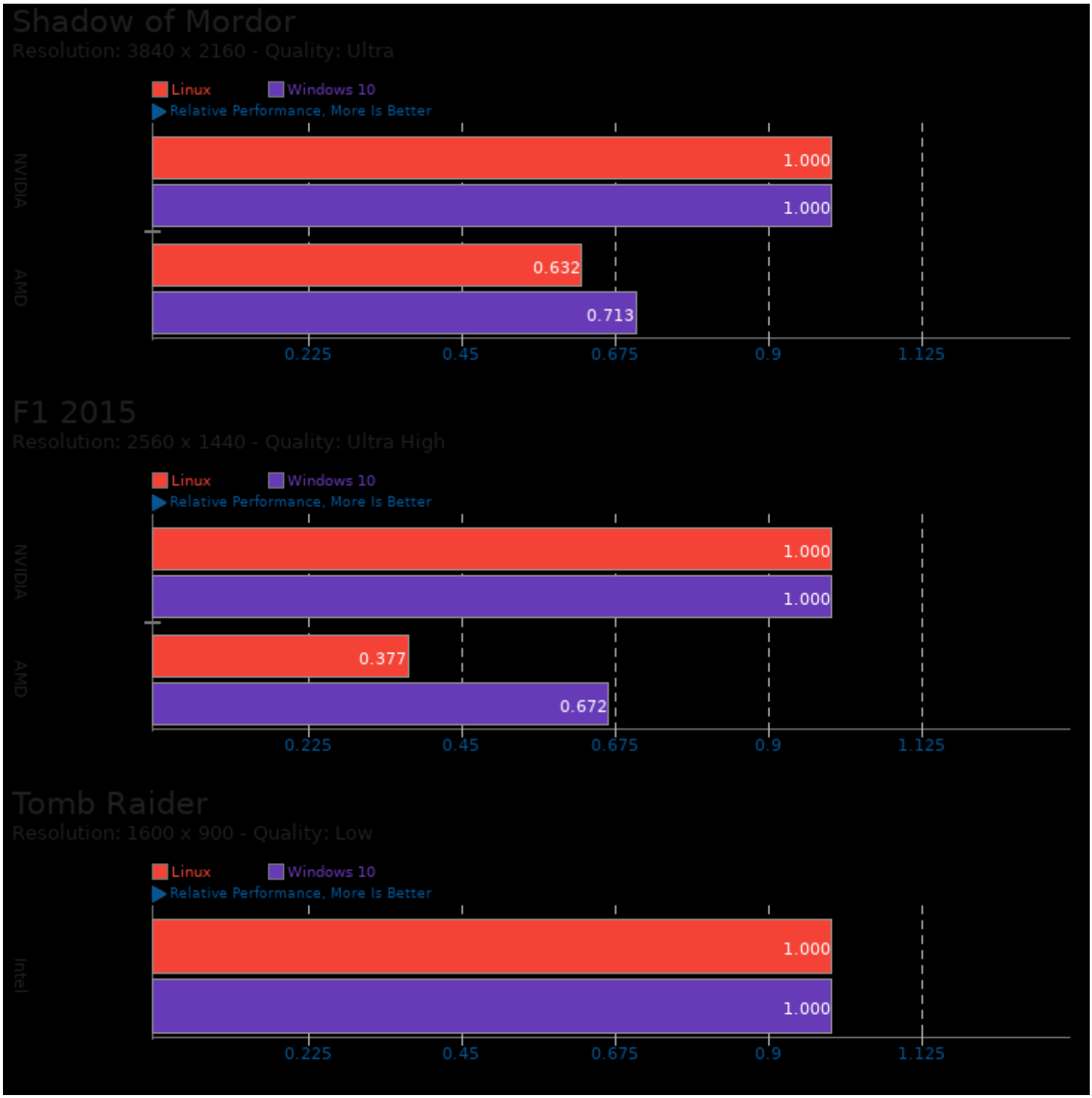

Unigine Valley 1.0
Resolution: 1280 x 1024 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
Unigine Valley 1.0
Resolution: 1920 x 1080 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.719
0.631
0.225
0.45
0.675
0.9
1.125
Unigine Valley 1.0
Resolution: 3840 x 2160 - Mode: Fullscreen
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.606
0.585
0.225
0.45
0.675
0.9
1.125

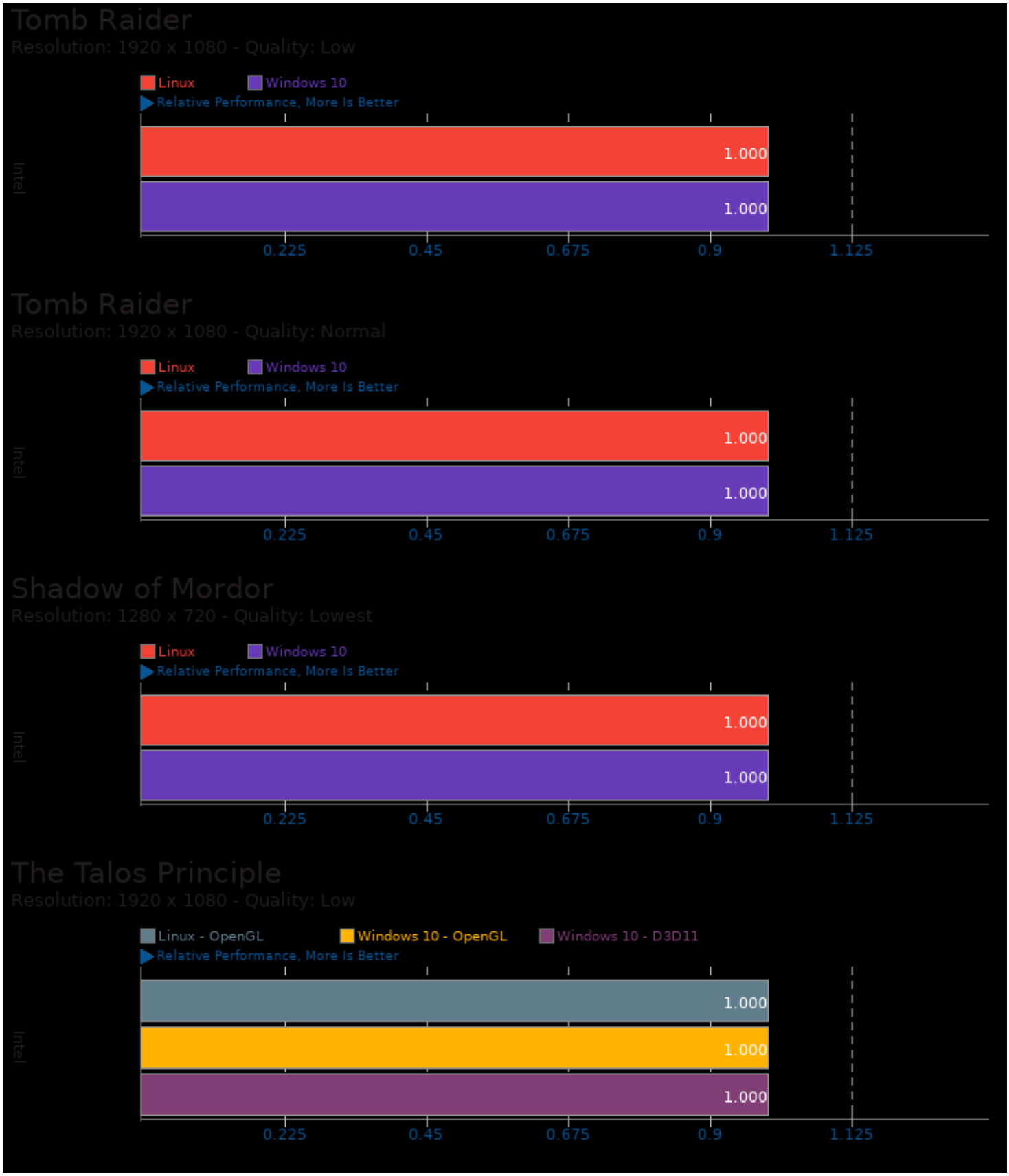

Xonotic 0.8
Resolution: 3840 x 2160 - Effects Quality: High
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
Intel
1.000
1.000
0.105
0.453
0.225
0.45
0.675
0.9
1.125
Xonotic 0.8
Resolution: 3840 x 2160 - Effects Quality: Ultra
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
Intel
1.000
1.000
0.102
0.393
0.225
0.45
0.675
0.9
1.125
Xonotic 0.8
Resolution: 3840 x 2160 - Effects Quality: Ultimate
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.757
0.714
0.225
0.45
0.675
0.9
1.125

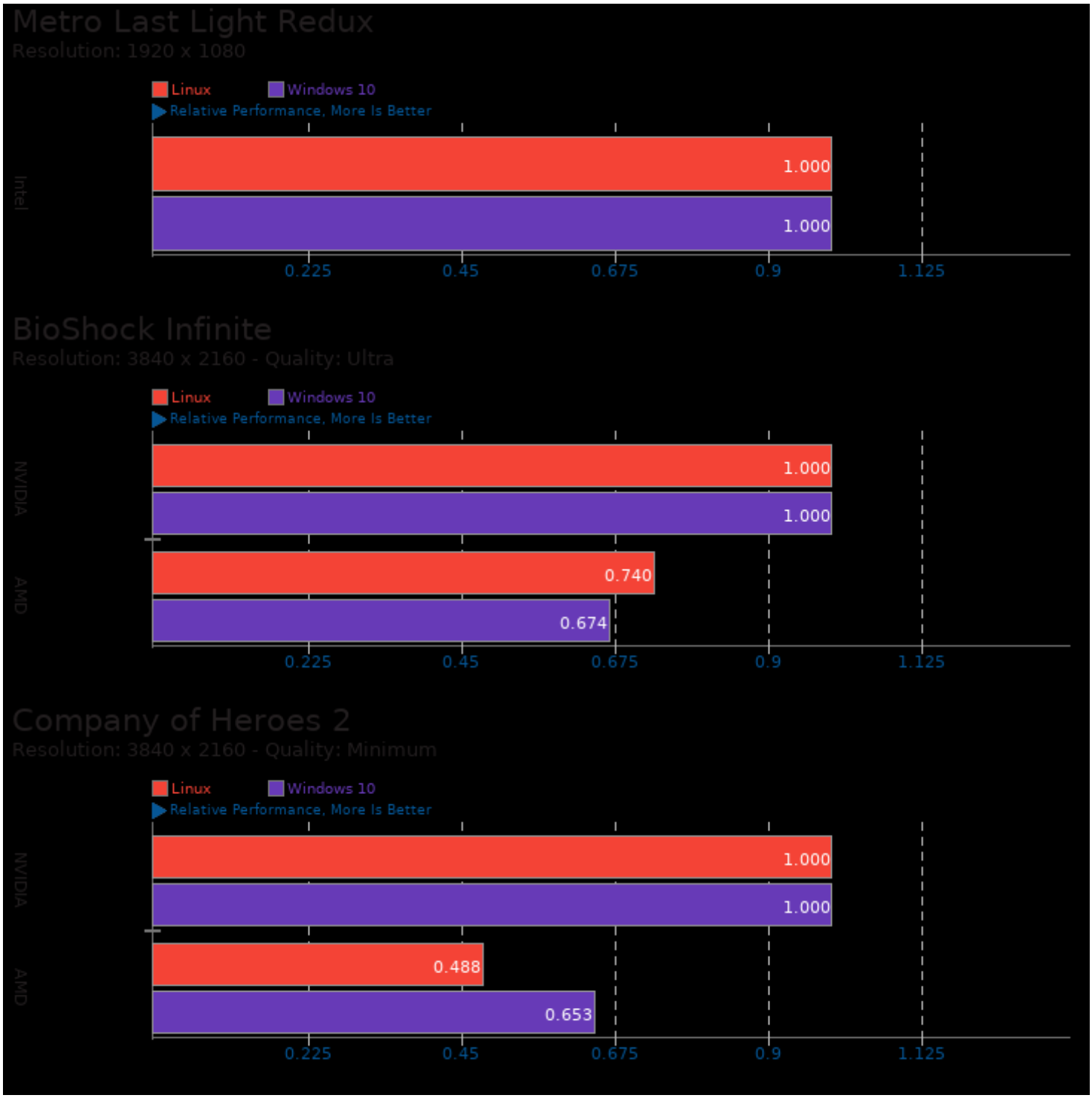

Tomb Raider
Resolution: 3840 x 2160 - Quality: Low
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.505
0.608
0.225
0.45
0.675
0.9
1.125
Tomb Raider
Resolution: 3840 x 2160 - Quality: Ultra
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.550
0.723
0.225
0.45
0.675
0.9
1.125
GRID Autosport
Resolution: 3840 x 2160 - Quality: High
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.553
0.548
0.225
0.45
0.675
0.9
1.125

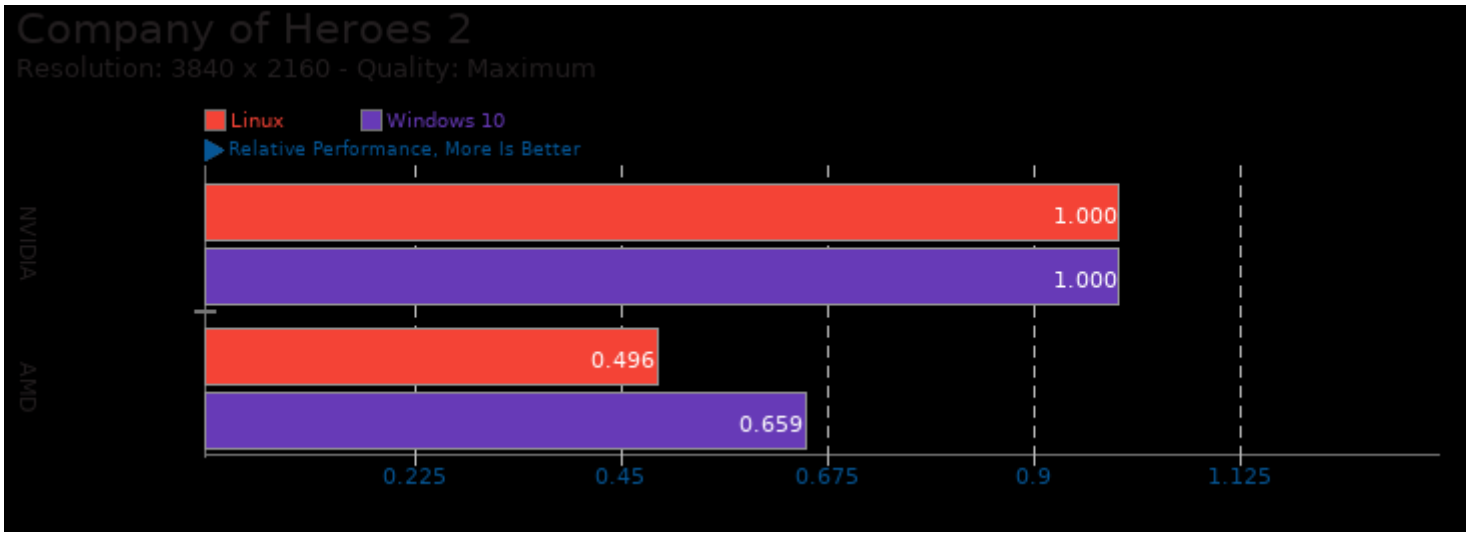

GRID Autosport
Resolution: 3840 x 2160 - Quality: Ultra
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.532
0.609
0.225
0.45
0.675
0.9
1.125
The Talos Principle 64-bit
Resolution: 3840 x 2160 - Quality: Ultra
Linux Vulkan
Linux OpenGL
Windows 10 Vulkan
Windows 10 OpenGL
Windows 10 D3D11
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
1.000
1.000
1.000
0.611
0.582
0.501
0.564
0.595
0.225
0.45
0.675
0.9
1.125
Dota 2
Resolution: 3840 x 2160 - Renderer: OpenGL
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.774
0.809
0.225
0.45
0.675
0.9
1.125


Dota 2
Resolution: 3840 x 2160 - Renderer: Vulkan
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.871
0.812
0.225
0.45
0.675
0.9
1.125
Metro Last Light Redux
Resolution: 3840 x 2160 - Quality: High
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.569
0.783
0.225
0.45
0.675
0.9
1.125
Shadow of Mordor
Resolution: 3840 x 2160 - Quality: High
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.654
0.739
0.225
0.45
0.675
0.9
1.125

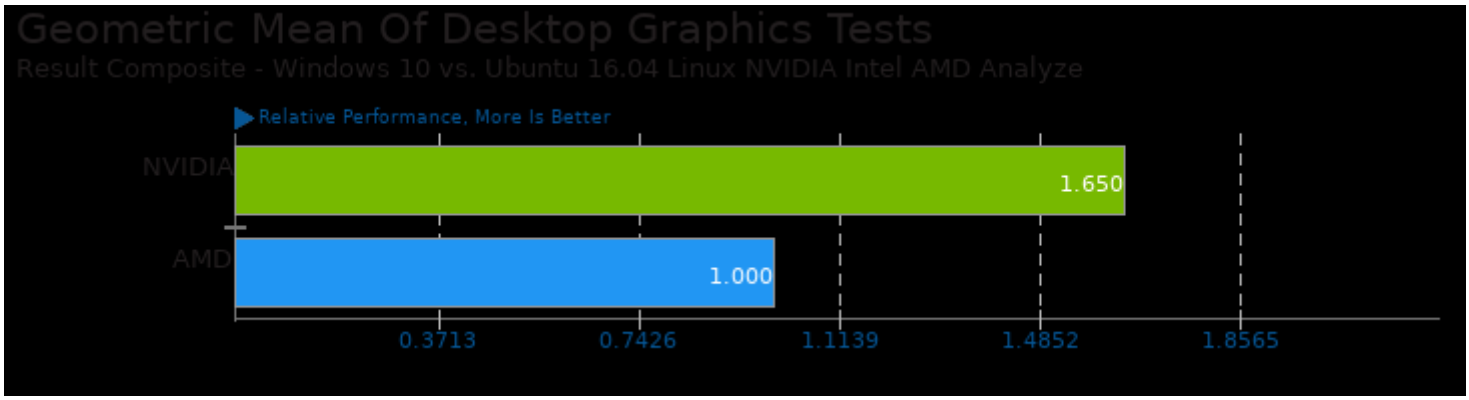

Shadow of Mordor
Resolution: 3840 x 2160 - Quality: Ultra
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.632
0.713
0.225
0.45
0.675
0.9
1.125
F1 2015
Resolution: 2560 x 1440 - Quality: Ultra High
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.377
0.672
0.225
0.45
0.675
0.9
1.125
Tomb Raider
Resolution: 1600 x 900 - Quality: Low
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125


Tomb Raider
Resolution: 1920 x 1080 - Quality: Low
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
Tomb Raider
Resolution: 1920 x 1080 - Quality: Normal
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
Shadow of Mordor
Resolution: 1280 x 720 - Quality: Lowest
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
The Talos Principle
Resolution: 1920 x 1080 - Quality: Low
Linux - OpenGL
Windows 10 - OpenGL
Windows 10 - D3D11
Relative Performance, More Is Better
Intel
1.000
1.000
1.000
0.225
0.45
0.675
0.9
1.125

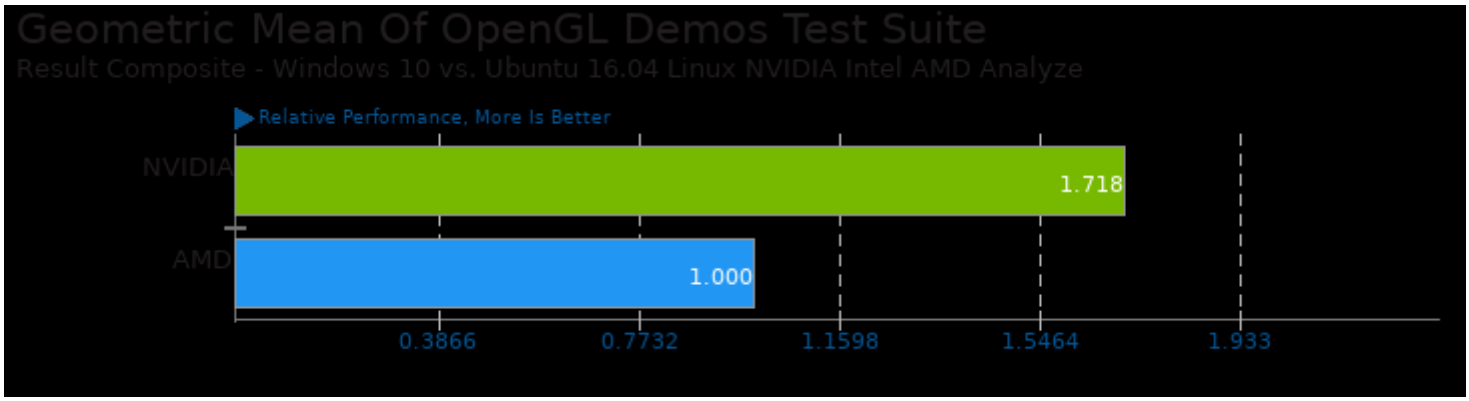

Metro Last Light Redux
Resolution: 1920 x 1080
Linux
Windows 10
Relative Performance, More Is Better
Intel
1.000
1.000
0.225
0.45
0.675
0.9
1.125
BioShock Infinite
Resolution: 3840 x 2160 - Quality: Ultra
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.740
0.674
0.225
0.45
0.675
0.9
1.125
Company of Heroes 2
Resolution: 3840 x 2160 - Quality: Minimum
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.488
0.653
0.225
0.45
0.675
0.9
1.125


Company of Heroes 2
Resolution: 3840 x 2160 - Quality: Maximum
Linux
Windows 10
Relative Performance, More Is Better
NVIDIA
AMD
1.000
1.000
0.496
0.659
0.225
0.45
0.675
0.9
1.125

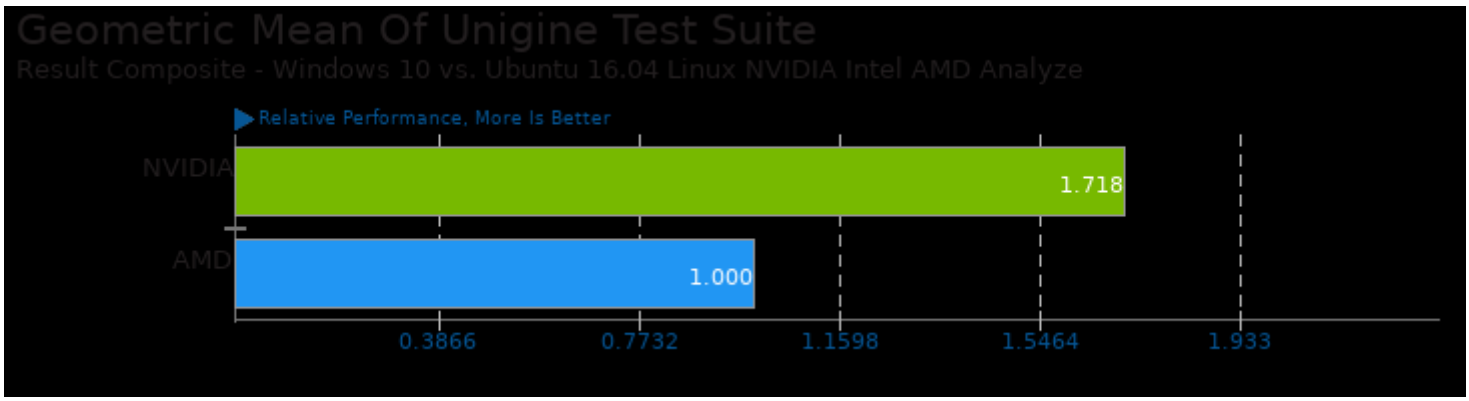
These geometric means are based upon test groupings / test suites for this result file.



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



Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven



Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 05:32.