Feature	Built-in	LWRP	Goal Release	Details
Camera				
HDR	<u>~</u>	<u> </u>		
MSAA	lacksquare	ightharpoons	1	
Physical Camera			2019.2	https://docs.unity3d.com/Manual/PhysicalCameras.html
Dynamic Resolution	lacksquare	$\underline{\underline{\hspace{0.1cm}}}$		https://docs.unity3d.com/Manual/DynamicResolution.html
Multi Display	lacksquare	ightharpoonup	1	
Stacking			2019.2	
Flare Layer		Deprecated		https://docs.unity3d.com/Manual/class-FlareLayer.html
Depth Texture		\checkmark		https://docs.unity3d.com/Packages/com.unity.render- pipelines.lightweight@5.2/manual/lwrp-asset.html
Depth + Normals Texture	✓	Not Supported		promise in the second in the s
2 opt. Hermale Texture				https://docs.unity3d.com/Packages/com.unity.render-
Color Texture	Not Supported	✓		pipelines.lightweight@5.2/manual/lwrp-asset.html
Motion Vectors			2019.3	
Realtime Lights				
Light Types				
	✓	✓		In LWRP only a single directional light is supported. This
Directional				limit will be increased.
Spot		<u>✓</u>		
Point	<u> </u>	<u>✓</u>		
Area	Not Supported	Not Supported		
Inner Spot Light Angle	Not Supported		2019 2	Exposes in light inspector to control both outer and inner spot light angle.
minor oper Light, mig.o	The supported		20.0.2	LWRP renders all lights in a single shader pass. This
Shading	Multiple Passes	Single Pass		reduces both amount of drawcalls and overdraw compare to Built-in renderer.
Culling	Per-Object	Per-Object		
Per-Object		\checkmark		
Per-Layer		\checkmark		
Light Limits				
Directional Lights	Unlimited	1	2019.2	Increase limits of Directional lights above 1.
Per-Object	Unlimited	4	2019.3	Increase limits of Per-Object lights above 4.
Per-Camera	Unlimited	16	2019.2	Increase limits of visible Per-Camera lights above 16.
Attenuation	Legacy	InverseSquared		https://docs.unity3d.com/Manual/ProgressiveLightmapper- CustomFallOff.html
Vertex Lights	✓	☑		Vertex Lights work differently than Builtin. Main Light is always rendered per-pixel. Additional per-object lights can be rendered per-pixel or per-vertex. https://docs.unity3d.com/Packages/com.unity.render-pipelines.lightweight@5. 2/manual/lwrp-asset.html
SH Lights	✓		In Research	Add support to baked remaining lights in SH. https://docs. unity3d.com/Manual/RenderTech-ForwardRendering.html
SH Lights Realtime Shadows			iii Nescaioli	dintyod.com/manda//tender recirri orwarditendening.num
Light Types				
Directional	✓	✓		
Spot	✓	✓		
Point	✓		2019 3	Add support to point light shadows
Area	Not Supported	Not Supported	2019.3	Add support to point light shadows
Shadow Projection	rvot oupporteu	Not Supported		
Stable Fit		✓		
Close Fit	✓		2010.3	Support Close Fit shadow projection.
Shadow Cascades			2019.3	Capport Ciddo Fit Graddow projection.
Shadow Cascades				Expose option with 3 cascades and additional
Number of Cascades	1, 2, or 4	1, 2, or 4	In Research	customization.
Control by Percentage	✓	✓		
Control by Distance	Not Supported		2019.2	Allow to controls shadow cascade partition by distance.
Shadow Resolve Type		_		
Lighting Pass		✓		LWRP Resolves shadows while shading lights whenever shadow cascades are disabled.
Screen Space Pass	✓	✓		

Shadow Bias	Constant clip space offset + normal bias.	Offsets shadowmap texels in the light direction + normal bias. This gives better shadow bias control given different shadow		
Batching		Cinteres in Superior		
Static Batching (By Shader)	Not Supported	~		Caches materials and batches by shader. (SRP Batcher)
State Date mig (2) emadely				In LWRP batching fallback by material when the shader is
Static Batching (By Material)	$ lap{}$	✓		not compatible with SRP Batcher.
Dynamic Batching	\checkmark	\checkmark		
Dynamic Batching (Shadows)	\checkmark		In Research	We use SRP batcher we may not want to support this
GPU Instancing	✓	✓		
Color Space				
Linear	\checkmark	✓		
Gamma	$\overline{\checkmark}$	✓		
GI (Backing Back End)	_	_		
Enlighten	\checkmark	✓		
Enlighten Realtime			In Research	Support Realtime GI
Progressive CPU	✓	✓	III I COGGIOTI	Support Redutine Of
Progressive GPU	<u>▼</u>	<u>✓</u>		
-	<u> </u>	<u> </u>		
Mixed Lighting				
Subtractive	<u> </u>	✓		
Baked Indirect	$\overline{}$			Add support for Baked Indirect Mixed Light Mode
Shadow Mask	\blacksquare			Add support for Shadow Mask Mixed Light Mode
Distance Shadow Mask	\checkmark		2019.3	Add support for Distance Shadow Mask Mixed Light Mode
GI (Light Probes)				
Blending		✓		
Proxy Volume (LPPV)	✓		In Research	Add support for LPPV
Custom Provided	✓	\checkmark		
Occlusion Probes	✓		2019.1	Add support Per-Object Occlusion Probes. One interpolated probe per object.
GI (Reflection Probes)				
Realtime	\checkmark	\checkmark		
Baked	✓	\checkmark		
Sampling				
Simple	✓	✓		Either Reflection Probe or Skybox
Blend Probes	<u> </u>		2019.3	Add support for Blend Light Probes mode
Blend Probes and Skybox	<u> </u>			Add support for Blend Probe and Skybox Light Probes mode.
Box Projection	\checkmark			Add support Box Projection
GI (Lightmap Modes)				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Non-Directional	~	~		
Directional	<u>✓</u>	✓		
GI (Environment)				
Source Source				
Skybox	✓	✓		
Gradient	<u>✓</u>	✓ ✓		
Color				
Ambient Mode				
Realtime			In Research	Add support Realtime Ambient Mode
Baked	\checkmark	☑		
Skybox				
Procedural	\checkmark	\checkmark		
6 Sided	ightharpoons	\checkmark		
Cubemap	ightharpoons	\checkmark		
Panoramic	\checkmark	\checkmark		
Fog				
Linear	✓	✓		

Exponential	✓	✓		
Exponential Squared	<u>✓</u>	<u>~</u>		
Visual Effects Components	•			
Halo	✓	Deprecated		
Lens Flare	<u>✓</u>	Deprecated		
Trail Renderer	<u>✓</u>	✓ ✓		
Billboard Renderer	<u>✓</u>	<u>~</u>		
Projector	<u>✓</u>	Deprecated		
Forward Decals	<u>✓</u>	Deprecated	In Research	
Blob Shadows	✓		In Research	
Shaders (General)			mrescaron	
Shader Graph	Not Supported	\checkmark		
Surface Shaders	✓	Deprecated		
Camera Relative Rendering	Not Supported		In Research	
Builtin Lit Uber Shader	Постопри			
Metallic Workflow	\checkmark	✓		
Specular Workflow	✓	$\overline{}$		
Surface Type and Blend Modes	_	_		
Opaque	ightharpoons	\checkmark		
Faded (Alpha Blend)	$\overline{\mathbf{v}}$	✓		Select Alpha with Transparent
Transparent	$\overline{\mathbf{Z}}$	✓		Select Premultiply blend mode with Transparent
Cutout	<u> </u>	✓		
Additive	Not Supported	✓		
Multiply	Not Supported	<u> </u>		
Surface Inputs		_		
Albedo (Base Map)	ightharpoons	✓		
Specular	$\overline{\checkmark}$	✓		
Metallic	$\overline{m arphi}$	✓		
Smoothness	$\overline{\checkmark}$	<u> </u>		
Ambient Occlusion	$\overline{\checkmark}$	<u> </u>		
Normal Map	\checkmark	<u> </u>		
Detail Map	<u> </u>	Not Supported		Use Shadergraph
Detail Normal Map	✓	Not Supported		Use Shadergraph
Heightmap	✓	Not Supported		Use Shadergraph
Light Cookies	\checkmark		In Research	
Parallax Mapping	\checkmark	Not Supported		Use Shadergraph
				Add support for light distance fade so lights can be culled by
Light Distance Fade	Not Supported		In Research	distance and fade smoothly.
Shadow Distance Fade	\checkmark		In Research	Add support for shadow distance fade so shadows fade out to shadow distance smoothly.
S. addition and			1 (00001011	Add support for shadow cascade blending so shadows fade
Shadow Cascade Blending	Not Supported		In Research	out smoothly to the next cascade
GPU Instancing	\checkmark	\checkmark		
Double Sided GI	\checkmark	\checkmark		
Two Sided	Not Supported	\checkmark		
Order In Layer	Not Supported		2019.1	Expose selecting in the LWRP material's UI layer sorting.
Render Pipeline Hooks				
Camera.RenderWithShader	\checkmark	Deprecated		
Camera.AddCommandBuffer*/Camera.R	✓	Deprecated		
Camera.Render	\checkmark	Deprecated		
Light.AddCommandBuffer*/LightRemove		Deprecated		
OnPreCull	\checkmark	Deprecated		
OnPreRender	\checkmark	Deprecated		
OnPostRender	\checkmark	Deprecated		
OnRenderImage	\checkmark	Deprecated		
OnRenderObject	\checkmark	Deprecated		
OnWillRenderObject	\checkmark	\checkmark		
OnBecameVisible	\checkmark	\checkmark		
OnBecameInvisible	✓	\checkmark		
Camera Replacement Material	Not Supported		In Research	Expose option in the camera to override the material.

RenderPipeline.BeginFrameRendering	Not Supported	✓		
RenderPipeline.EndFrameRendering	Not Supported		2019.1	
			2019.1	
RenderPipeline.BeginCameraRendering		<u> </u>	0040.4	
RenderPipeline.EndCameraRendering	Not Supported		2019.1	
LightweightRenderPipeline.RenderSingle	Not Supported	✓		Call this instead of Camera.Render
ScriptableRenderPass	Not Supported	✓		ScriptableRenderPass can be injected in the renderer and a render context is provided with them. https://docs.unity3d.com/ScriptReference/Experimental.Rendering.ScriptableRenderContext.html This allows CommandBuffer execution but also much more flexibility.
Custom Renderers	Not Supported		2019.1	In LWRP, one can completely override the renderer. This works by receiving some rendering data and injecting your own render passes. This can be used to create a stylized renderer or a Forward+/Tile/Clustered for instance.
Post Processing				
Ambient Occlusion (MSVO)	\checkmark		2019.3	Add support for MSVO and LWRP.
Auto Exposure	\checkmark	\checkmark		
Bloom	\checkmark	\checkmark		
Chromatic Aberration	\checkmark	✓		
Color Grading	✓	✓		
Depth of Field	\checkmark	\checkmark		
Grain	\checkmark	\checkmark		
Lens Distortion	\checkmark	\checkmark		
Motion Blur	\checkmark		2019.3	
Screen Space Reflections	\checkmark	Not Supported		
Vignette	\checkmark	\checkmark		
Particles				
VFX Graph (GPU)	Not Supported		2019.1	
Particles System (CPU)	\checkmark	\checkmark		
Shaders				
Physically Based	\checkmark	\checkmark		
Simple Lighting (Blinn-Phong)	Not Supported	✓		
Unlit	\checkmark	\checkmark		
Soft Particles	\checkmark	\checkmark		
Distortion	\checkmark	\checkmark		
Flipbook Bleding	\checkmark	\checkmark		
Terrain				
Shaders				
Physically Based	\checkmark	\checkmark		
Simple Lighting (Blinn-Phong)	\checkmark		In Research	
Unlit	Not Supported		In Research	
Speed Tree	\checkmark		2019.2	
Vegetation	\checkmark	\checkmark		
Detail	✓	✓		
Wind Zone	\checkmark	\checkmark		
Number of Layers	Unlimited	4		
GPU Patch Generation	✓	\checkmark		
Surface Mask	Not Supported		2019.1	
2D				
Sprite	\checkmark	\checkmark		
Tilemap	\checkmark	$ ule{}$		won't work with 2D lighting in 19.2
Sprite Shape	\checkmark	\checkmark		won't work with 2D lighting in 19.2
Pixel-Perfect	✓		2019.2	
2D Shape Lights	Not Supported		2019.2	
2D Point Lights with Normal Map	Not Supported		2019.2	
2D Point Lights with Shadows	Not Supported		2019.3	
UI (Canvas Renderer)				
Screen Space - Overlay	\checkmark	\checkmark		
Screen Space - Camera	\checkmark		2019.2	
World Space	\checkmark	\checkmark		
Text Mesh Pro	✓	\checkmark		

VR				
Multipass			2019.2	
Single Pass	~	✓		
Single Pass Instanced	✓	\checkmark		
Post-Processing				
Oculus Rift	✓	\checkmark		
OpenVR		\checkmark		
Steam VR		\checkmark		
PSVR	✓	\checkmark		
WMR	\checkmark	\checkmark		
GearVR			In Research	
Cardboard			In Research	
Oculus Go			In Research	
Daydream	ightharpoons		In Research	
AR				
AR Toolkit	✓	\checkmark		
Debug				
Scene view modes	ightharpoons		2019.3	
Docs				