Lumion 2024.0: Release Notes

Introducing Lumion 2024

Lumion 2024 streamlines the journey from concept to creation, providing instant visual feedback and clear design answers. It helps tweak and perfect ideas efficiently, reducing the effort needed to bring them to life.

Realism is emphasized in this release, making renderings faithful to the original design and enhancing visual communication with your clients. With new ray tracing enhancements, achieving realism is easier than before.

Moreover, Lumion 2024 enriches the architect's toolkit with an extensive library update, including nature items, characters, Parallax interiors, materials, and more. Combined with improved usability and streamlined import functionality, architects can fully unleash their creative potential.

Lumion 2024.0: Release Notes

20 March 2024

Compatibility

- Please note that *Projects* and models saved in version 2024.0 **cannot** be opened in older versions of *Lumion*.
- See this article on **how to get the new version**, and to see how to transfer settings, models, and *Projects* from older versions of *Lumion*:

    - **Knowledge Base:** [Lumion 2024.0: Everything you need to know](#)

Features, models, and materials with the asterisk (*) character are only available in **Lumion 2024.0 Pro**.

- **Lumion website**: [Lumion 2024.0 Features](#)

Refer also to the *Compare versions table → Comparison* tab:

- **Lumion website**: [Lumion 2024.0 Buy](#)

1. New feature highlights

1.1: Real-time Ray Traced Preview

Lumion 2024 comes with a new temporal denoiser for Preview and Movie Mode.

1.1.1 NRD for *Preview*: The Preview is now instantly denoised allowing for a more accurate visual representation when setting the angle of your renders or adjusting the Effect Stack.

Behaviour:

- NRD is on by default in the Preview and is triggered when adding the Ray Tracing Effect.
- NRD is also present as a *Denoiser* in Movie Mode.

1.1.2 NRD for *Output*: For a final render (Movie/Clip) NRD requires less *Samples* than OIDN (the original *Photo Mode Denoiser*) to output a result of similar fidelity.
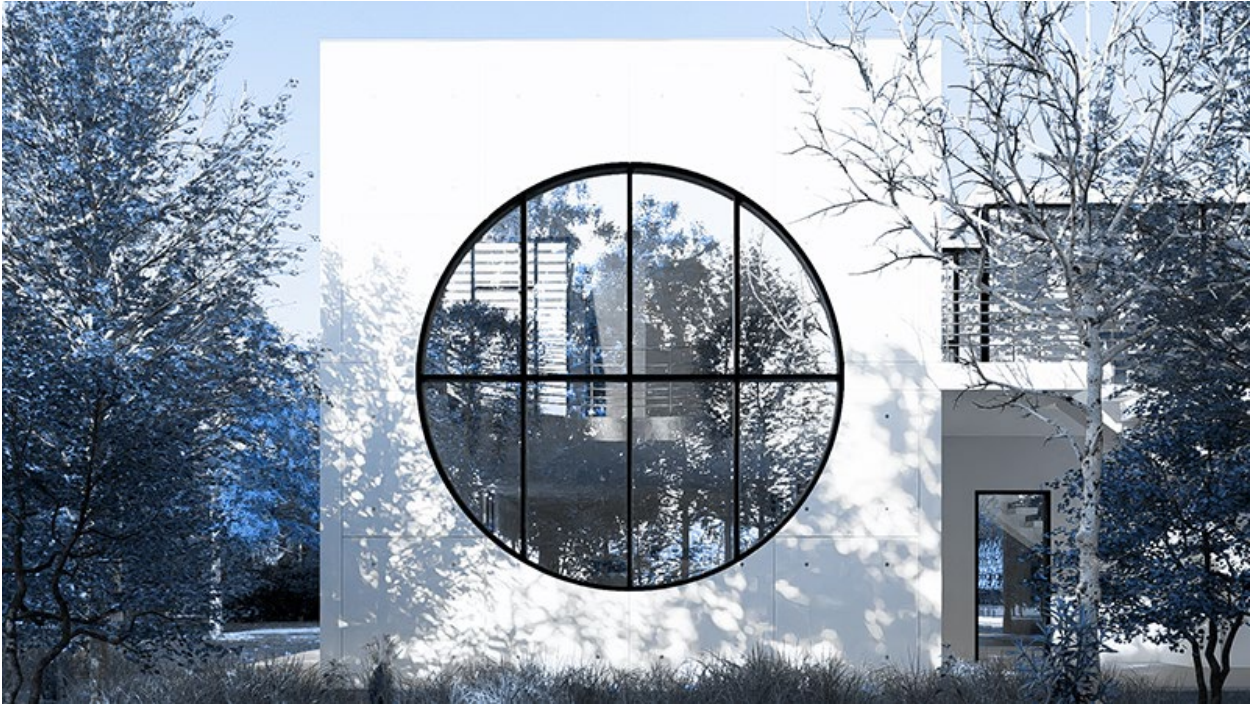
The temporal aspect of NRD considerably reduces the shimmering effect in Movies/Clips compared to denoisers that do not take previous frames into account.

1.1.3: For background on the technology involved see:

- **Lumion Community:** [Lumion - R&D Preview: NRD for Ray Tracing](#)

1.2: Raytraced Trees

The Lumion Nature Library has been fully converted to the bindless pipeline, allowing for better shading on the Objects and accurate Reflections.

1.3: Ray Traced Glass and Shadows

1.3.1 The Glass Material is now more physically accurate in Ray Tracing and allows for better control when aiming to achieve a look closer to reality. This is especially visible in more intricate geometry as the shape will correctly reflect and refract light.
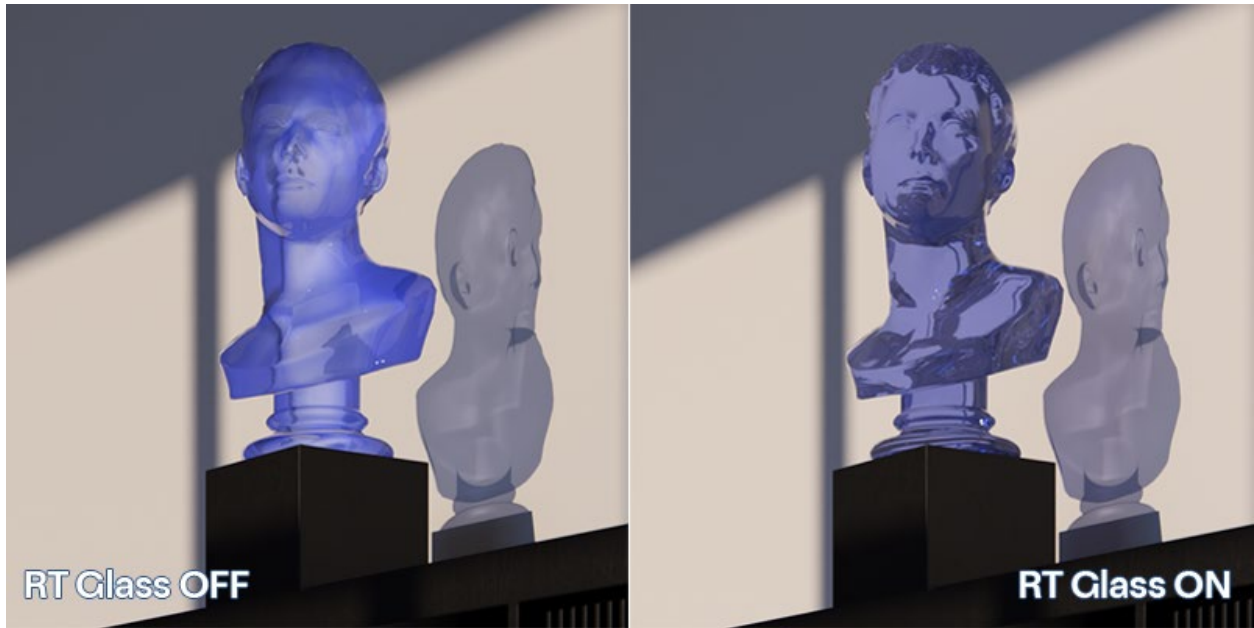
**1.3.2** In Ray Tracing, the new Glass Material also casts colored Shadows.

Lumion now supports two types of glass: Ray Traced Standard Glass and Fully Ray Traced Glass. Fully Ray Traced Glass can be enabled in the Ray Tracing Effect and will affect all surfaces that have been assigned the Glass Material:
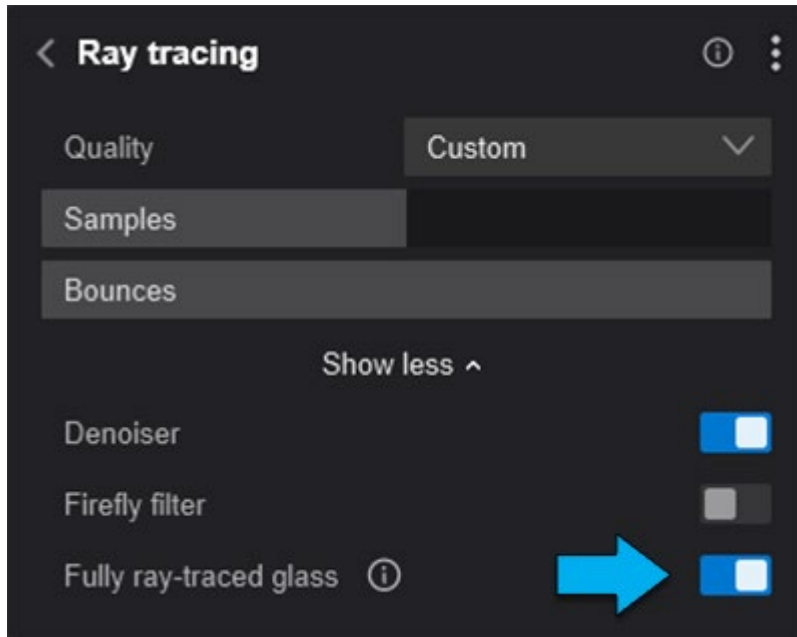
- **Knowledge Base:** [How do you use the new Ray Tracing Effect?](#)
- **Knowledge Base:** [The New Glass Material for Lumion 2024 and the Glass setting for Ray Tracing](#)

## 1.4: Ray Traced Subsurface Scattering:
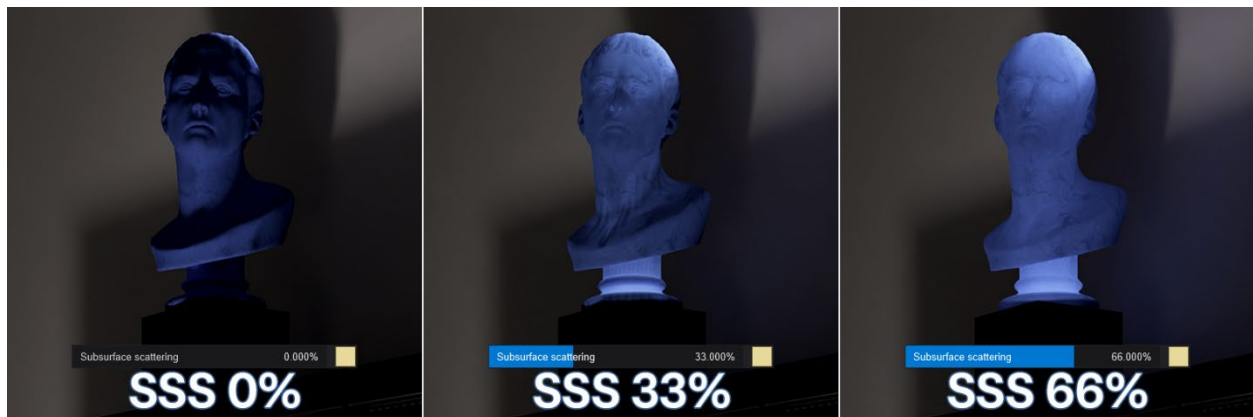
Lumion 2024 also brings ray traced Subsurface Scattering that accurately depicts the natural diffusion of light through surfaces and volumes.

The *Slider* controls the intensity of the scattering while the *Color Picker* influences the tint that the object will have once light passes through it.

1.5: Parallax interiors*

A new Content Library Subcategory has been added with 25 Parallax Interiors usable in their day and night variants. With options covering offices, residential spaces, and retail areas, these interiors provide a quick and effective way to elevate the visual impact of architectural renderings.
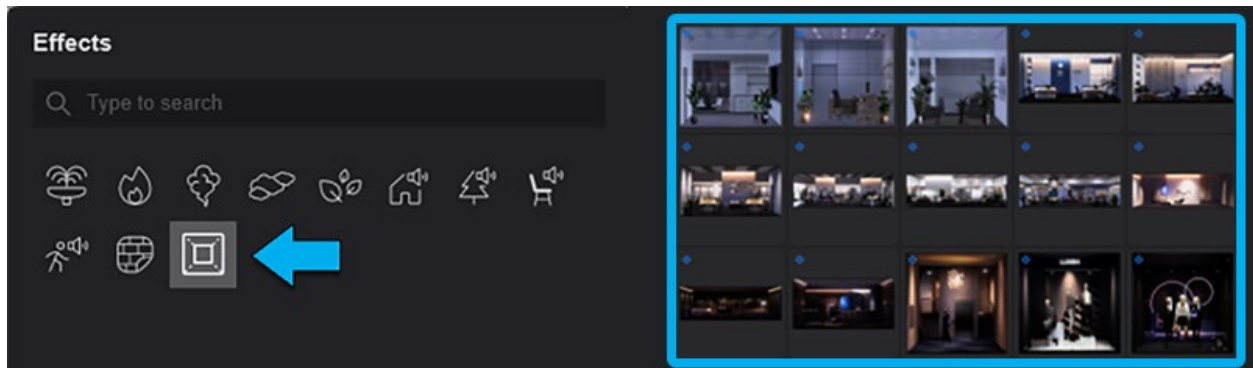

The Parallax Objects are always facing the camera within the boundary of the object and are resource-efficient, thus improving the scene-building process and saving computational power.

More information:

- **Video Tutorials:** Lumion 2024: Parallax interiors

1.6: Landscape tiling

1.6.1 Landscape Mode: Most textures in the Landscape Mode are now tiled by default using hexagonal mapping to reduce repetitiveness.
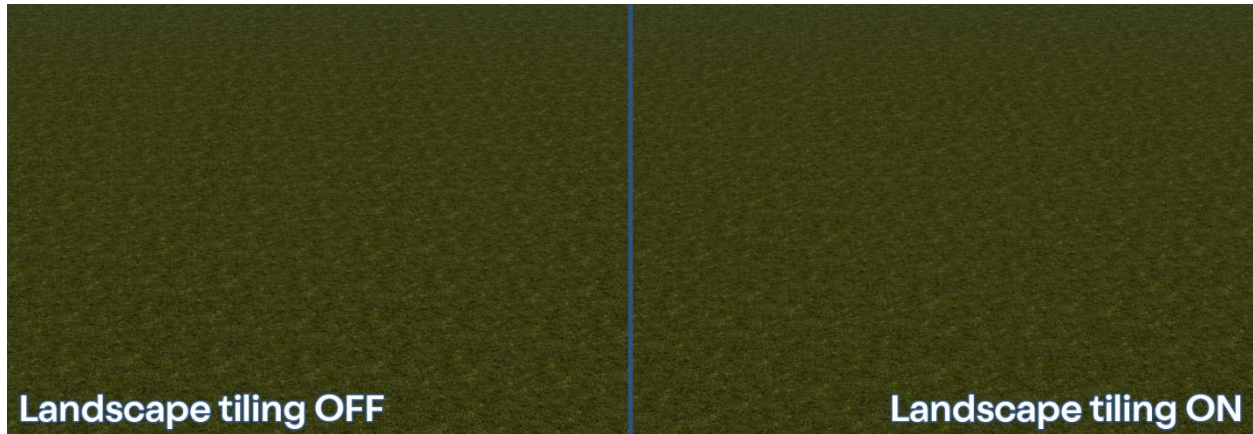
1.6.2 Material Mode: *Landscape Tiling* can also be applied to the Standard Materials in Lumion by enabling the *Toggle* under the 'UV Coordinates' tab.
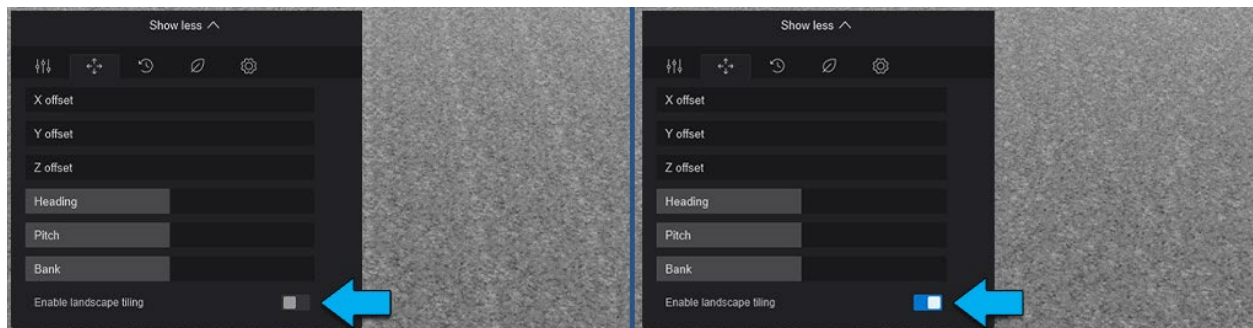

1.7: Multiple importance sampling (MIS):

This algorithm has been introduced in Lumion 2024 to improve light distribution on objects and rendering efficiency. MIS employs multiple sampling techniques and takes into account the dimension of a light source. As such, it is able to approximate the contribution of light to a pixel and produce a higher accuracy result.
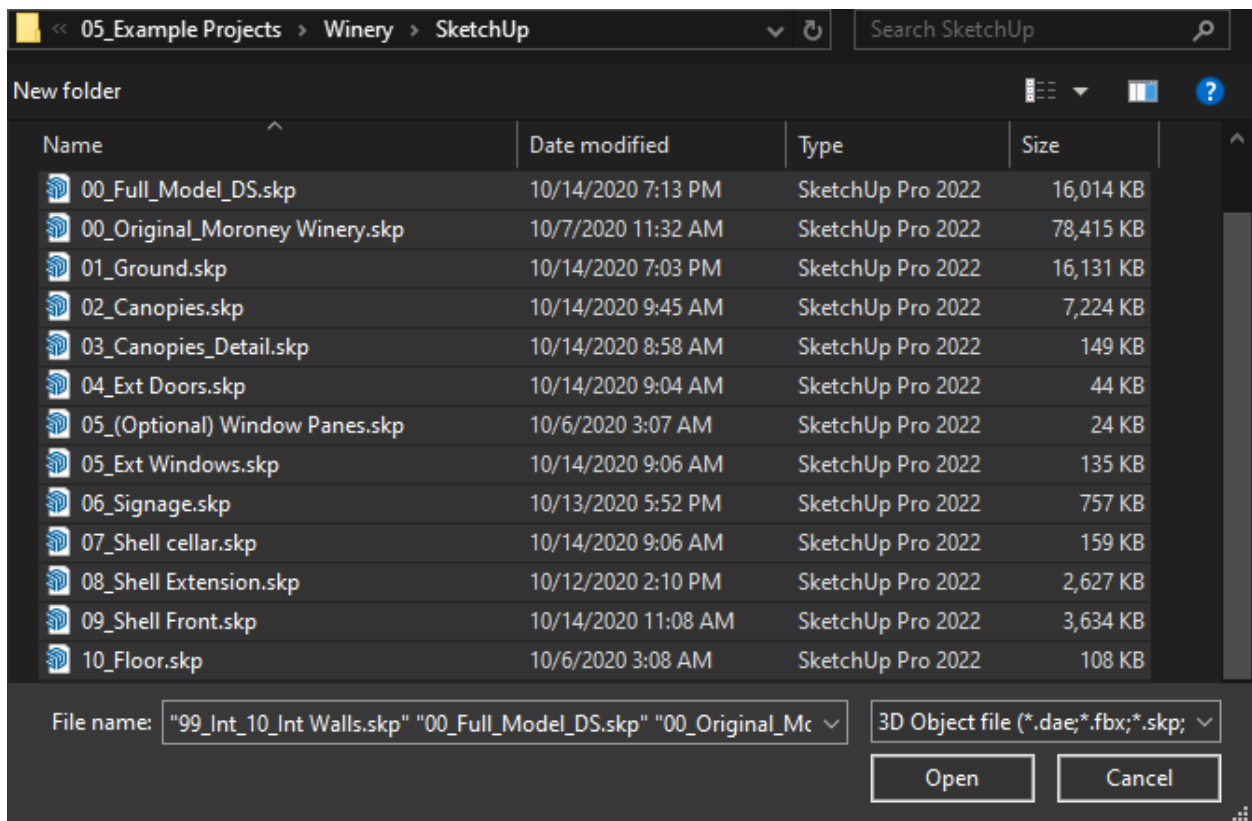
In the example below, two Lights (one measuring 0.1x0.1m and the other one at 1.0x1.0m) have the same *Brightness* and are placed at the same distance from the subject:
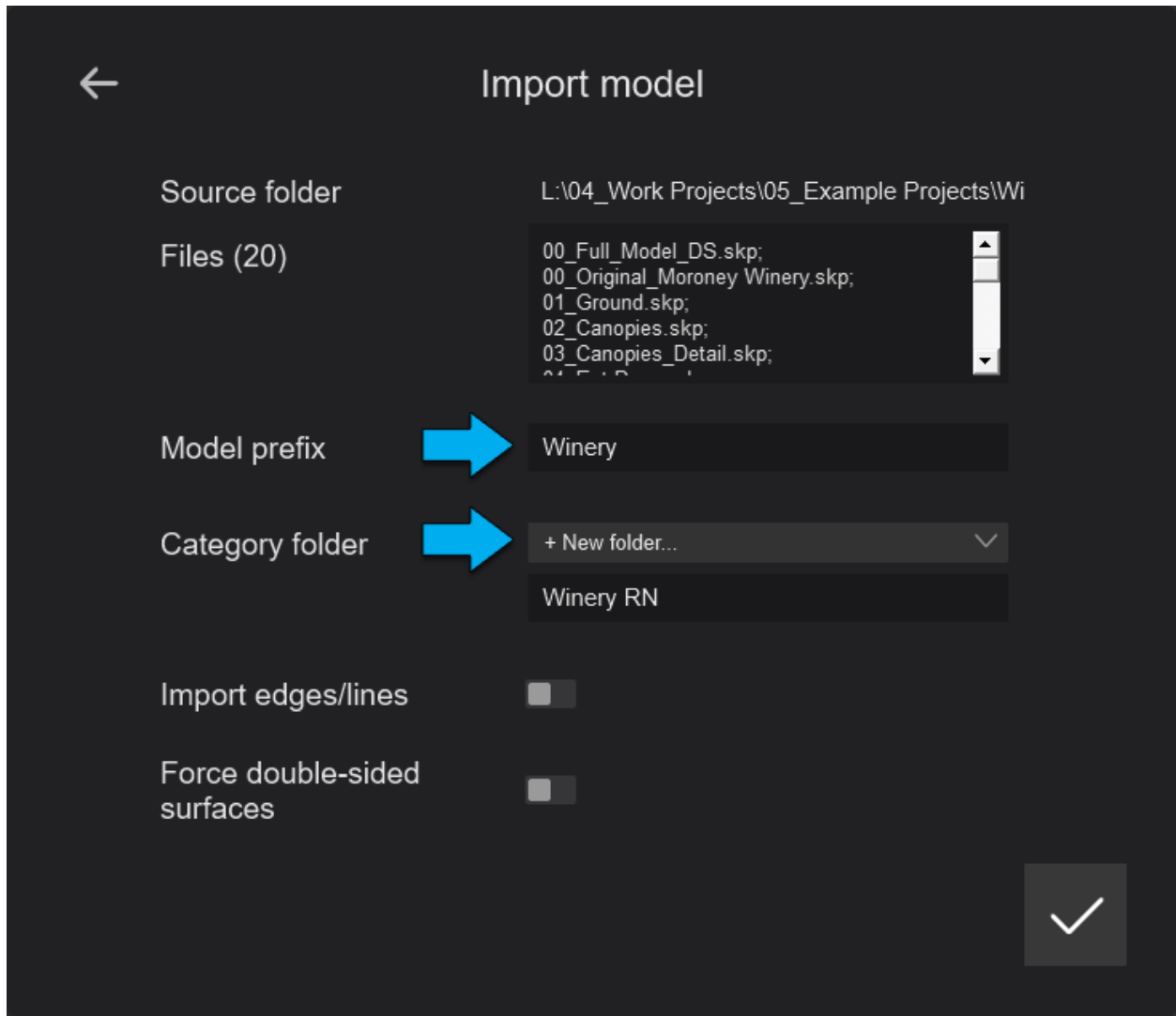
Area Light 0.1 x 0.1 m | Area Light 1.0 x 1.0 m
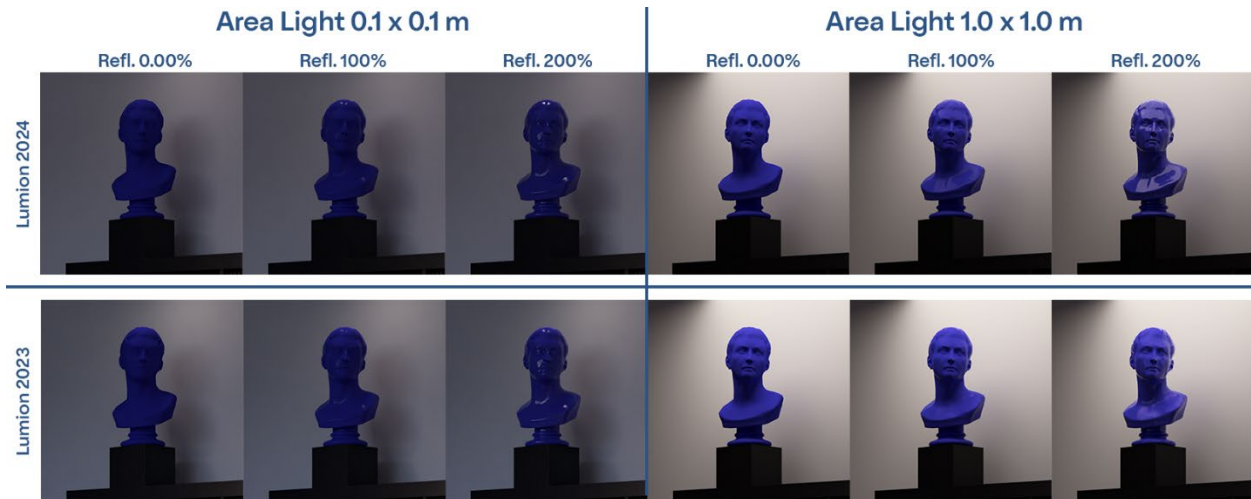
1.10: Batch importing:

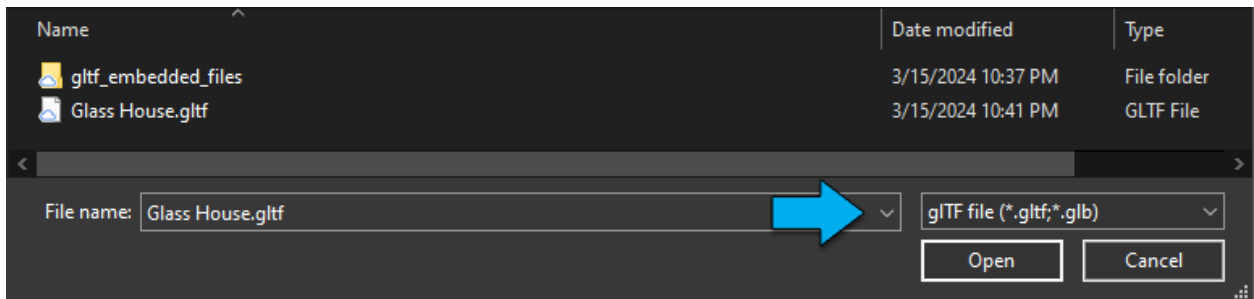Multiple *Models* can now be imported at once when clicking the 'Import model button'.

The option to add a prefix is also available and to place the models in a folder within the *Lumion-documents* of choice:
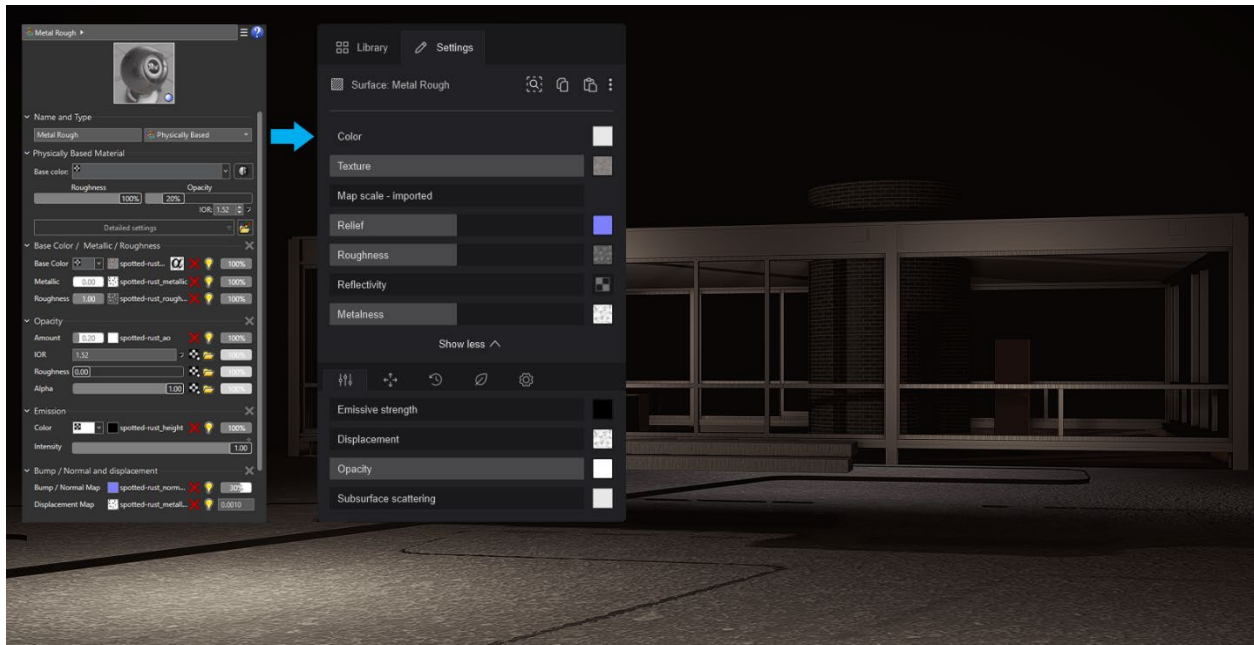
They will automatically be aligned to the Lumion world origin:

1.11: GLTF Importing

A new format is available in Lumion 2024 for Imported Models: .GLTF/.GLB. The models are generally lighter than other formats and support a PBR workflow.

1.12: Lumion Library content

1.12.1: New Models:

Accurately represent various styles, environments, and contexts in your designs with the new selection of library assets. Choose from 309 new Objects covering the following Categories:

Fine-detail Nature: 100* 18 *Plants*, 82 *Trees*	***Objects:*** 9
People and Animals: 45 (15 available in *Lumion Standard*)	***Effects:*** 130* ***Special Effects:*** Parallax interiors: 25*

See also Section **1. Models:** and Section 4 **Lumion Object Categories**:

- **Knowledge Base: What is the new content added in Lumion 2024?**
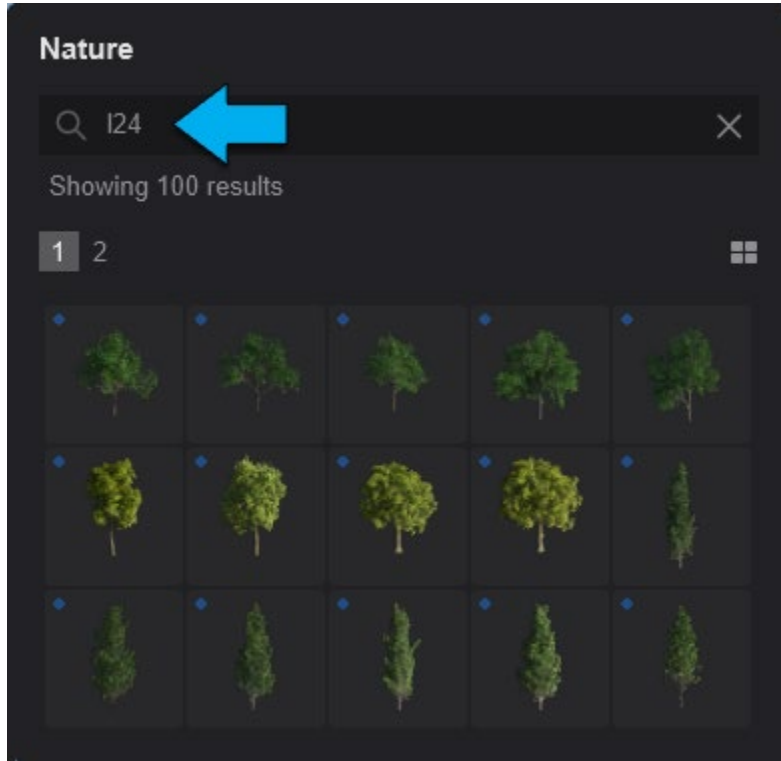
See also the 'New in Lumion' button in this article:

- **Knowledge Base: What Models/Objects are in the Lumion Library 2024? Gallery**

For Parallax interiors see Section **1.5: Parallax interiors*** (above).

1.12.2: New Materials:

- ▪ **26** Brick Materials

1.12.3: Added content can be searched in the Object Library using the 'L24' search item:
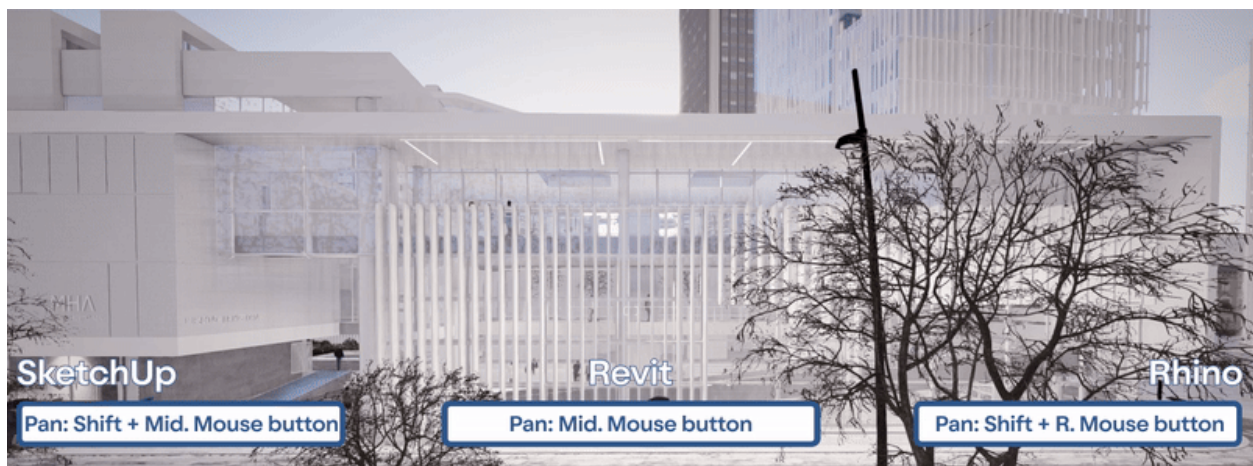

See also Section **2.5.5 Library Search Tags** for the new features (below).

And, for the options on using the Search feature in Lumion 2024 see Section **2. How to Search:**

- **Knowledge Base:** **What is the new content added in Lumion 2024?**

1.13: Camera Controls

The option to control the Lumion workspace using consistent controls with the 3D modelling software has been added for the following applications:

- **SketchUp** (Pan: `Shift+MMB`, Orbit: `MMB`)
- **Revit**(Pan: `MMB`, Orbit: `Shift+MMB`)
- **Rhino** (Pan: `Shift+RMB`, Orbit: `RMB`, Look around: `Ctrl+AltMMB`)

This setting can be enabled from *Settings → Input* and will mirror the *Orbit* and *Pan* key inputs.
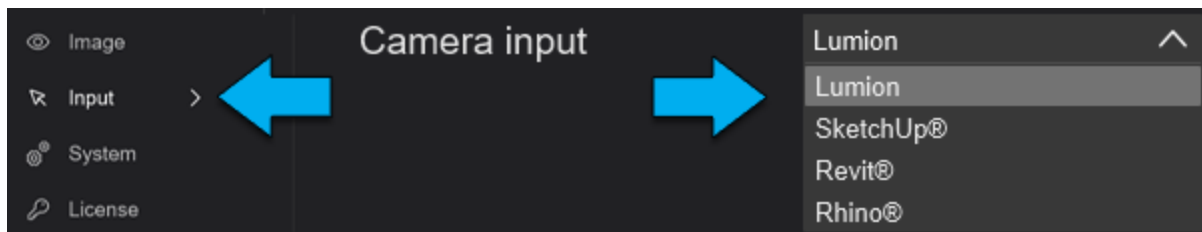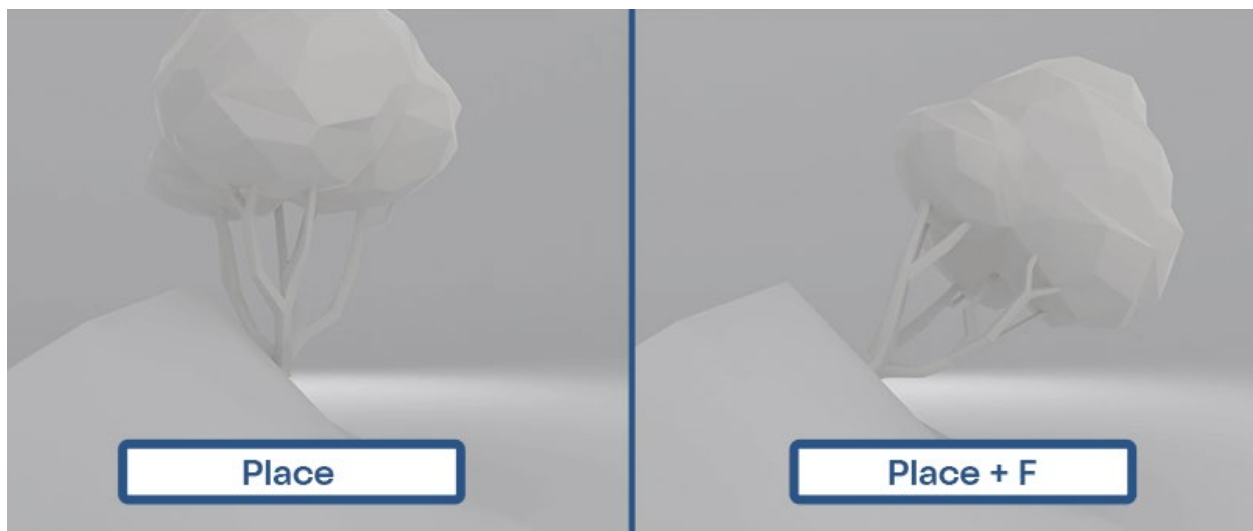

2. Other new features & improvements

2.1: *Build Mode* and *Object Library*

Content Library & Place/Select Modes:

2.1.1: Conforming Objects to the Landscape is now possible during placement when pressing the `F` key.

2.1.2: Fine-detail Nature Objects can now be added to a Project using all placement methods (Single, Line, Cluster, and Paint).

***Landscape Mode*:**

2.1.3: The 'On/Off' toggle has been disabled when using the *White Landscape Preset*.

2.2: *Photo Mode, Movie Mode & Panorama Mode*

2.2.1 *Preview***:** New *Grid Overlays* have been added for better organisation of the visual composition in the final output. The included templates are:

-
    -
        - ▪ Golden Ratio
        - ▪ Rule of thirds
        - ▪ Grid
        - ▪ Diagonal
        - ▪ Triangle
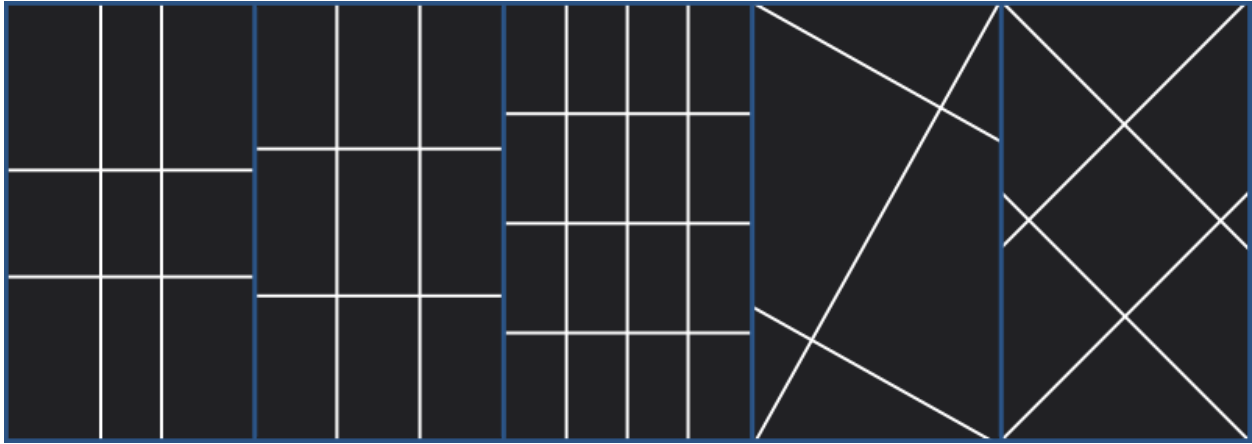
2.2.2: The 'Store camera' / 'Add camera keyframe' sound has now been removed.

2.3: *Effects & Styles*

2.3.1 *Ray Tracing Effect*: A series of presets have been introduced for more intuitive use:
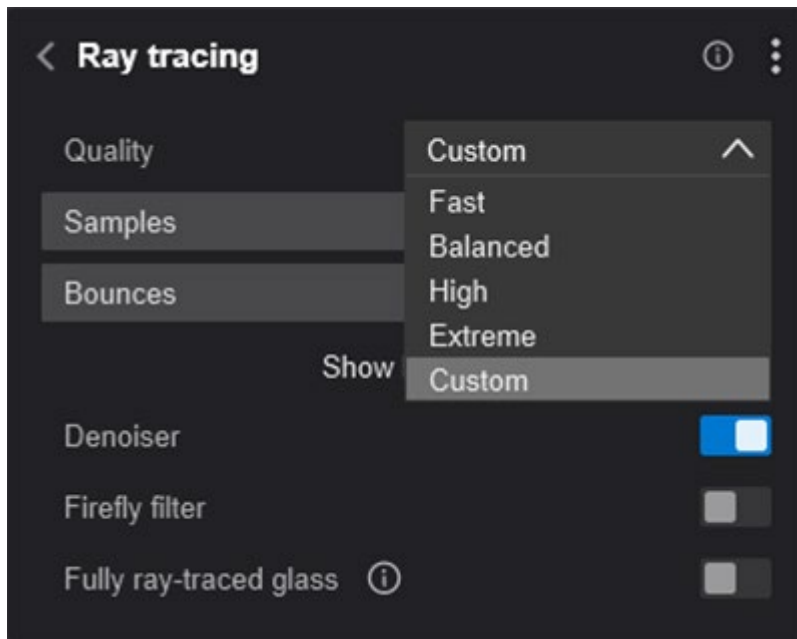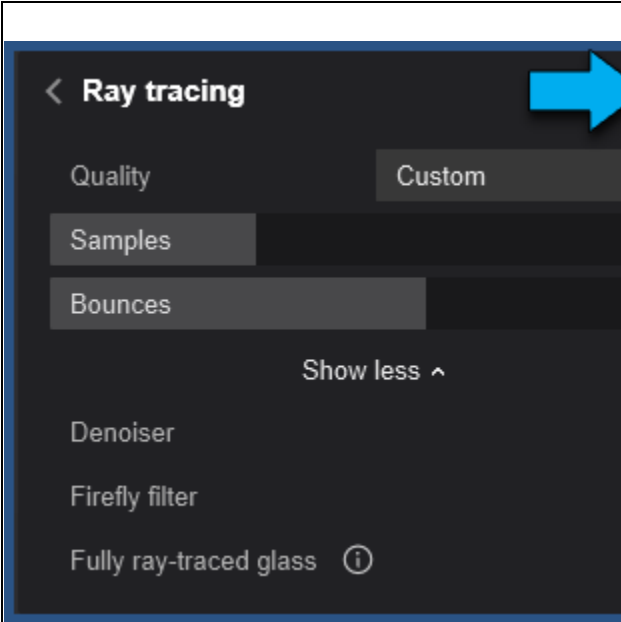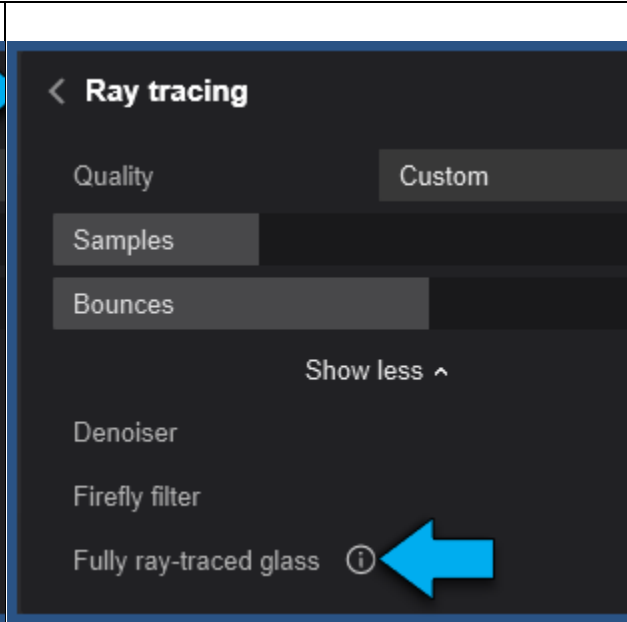
	Fast	Balanced	High	Extreme	Custom
Samples (Photo)	*16*	*64*	*256*	*512*	User input

Bounces (Photo)	3	5	7	8	User input
Samples (Movie)	1	4	16	64	User input
Bounces (Movie)	5	6	7	8	User input
RT Glass	OFF	OFF	ON	ON	User input

Note: In *Movie Mode* the NRD *Denoiser* is on by default, while *Photo Mode* will use OIDN.

2.3.2 *Ray Tracing Effect*: Links redirect for more information on how the *Ray Tracing Effect* works have also been added:

• **Knowledge Base:** How do you use the new Ray Tracing Effect?
• **Knowledge Base:** The New Glass Material for Lumion 2024 and the Glass setting for Ray Tracing

2.3.3 *The Precipitation Effect*: has been added to the *Ray Tracing* pipeline.

2.3.4 *Color Correction Effect*: will no longer reset the *HQ Preview* to *Preview* (draft) when adjusting the values of the sliders. You can see the *HQ Preview* image dynamically change according to the *Color Correction Effect* changes and stay as an *HQ Preview*.

2.3.5 *Real Skies Effect* → Loading Custom HDR: will no longer crash Lumion when the .HDR file is corrupted or invalid and instead, the input will be ignored.

2.3.6 *Real Skies Effect* → Background Brightness: Adjusting this *Slider* will now result in higher resolution processing of the background.

2.3.7 *Fog Effect*: Using the *Fog Effect* together with *Ray Tracing* will now display as expected multiple layers of *Glass* surfaces positioned in front of each other.

2.4: Miscellaneous

Performance improvement: The OIDN *Denoiser* performance has been improved on AMD graphics cards.

2.5: Interface

2.5.1 Menu Sidebar: The screenspace has been optimized by moving the Output Modes, *Settings*, and *Save* button to the sidebar on the left.
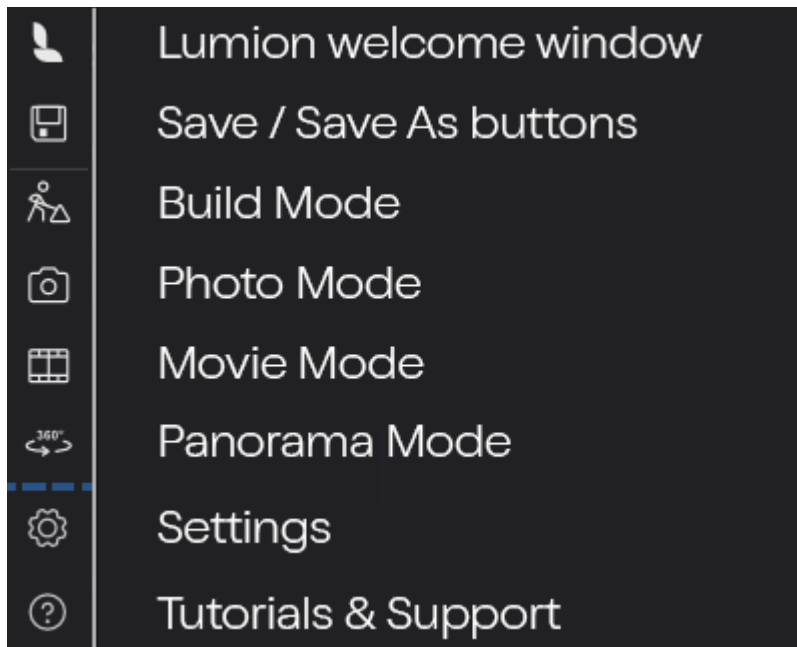
Hovering over the 'Save' button will initiate a fold-out bar allowing for 'Saving' and 'Saving As...'
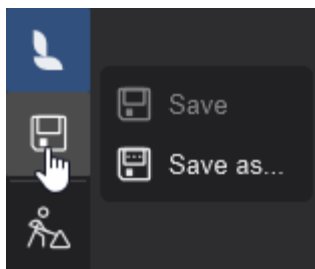
2.5.2 Large *Thumbnail Preview*: Hovering over a Library Object will now display a larger Preview to aid with the selection of assets during Project building.

2.5.3 *Library Thumbnails***:** The Library Thumbnails have been revamped to be in tone with the UI aspect of Lumion 2024.

2.5.4 *Library* **Search Tags:** The tagging and searching functionality has been improved and now allows for adding, removing, replacing, and/or excluding tags from the search string. The following commands have been made added:

- `L-Click`: the clicked *Tag* will be added to the search and, if the tag is already in the search, clicking it once more will remove it from the string
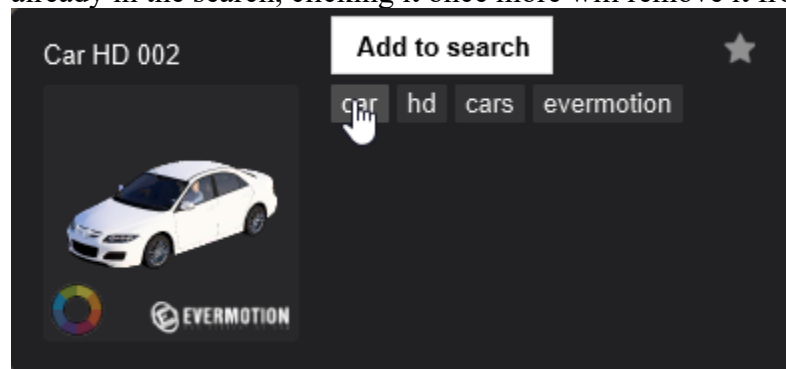
-
- `Ctrl+L-Click`: the clicked *Tag* will replace the whole search string
- `Shift+L-Click`: will add the clicked *Tag* to the search string as a negative search parameter (i.e. will exclude the items with the selected *Tag* from the search)
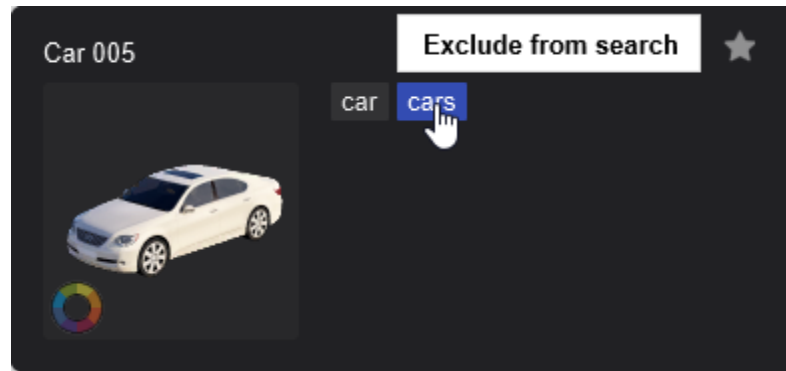
2.5.5: Vendor *Tags* have also been added for externally procured Library Models:
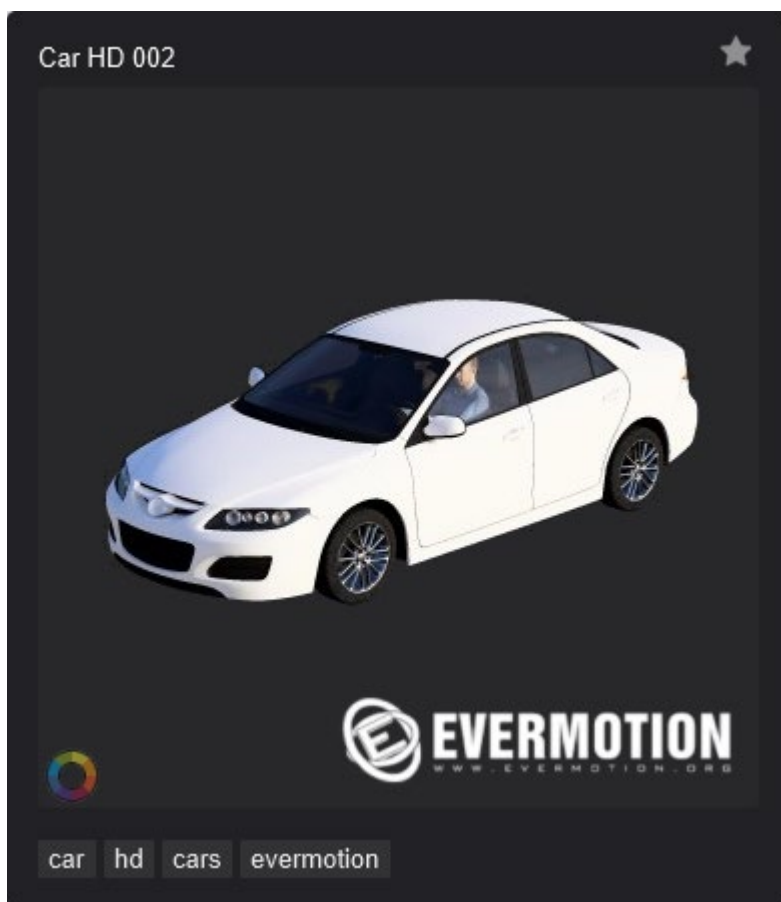
See also Section **2. How to Search:**

- **Knowledge Base:** **What is the new content added in Lumion 2024?**

2.5.6 In-Lumion Tutorials: Various tutorials have been added in Lumion 2024 to serve as start-up basic guides for functional areas of the software.
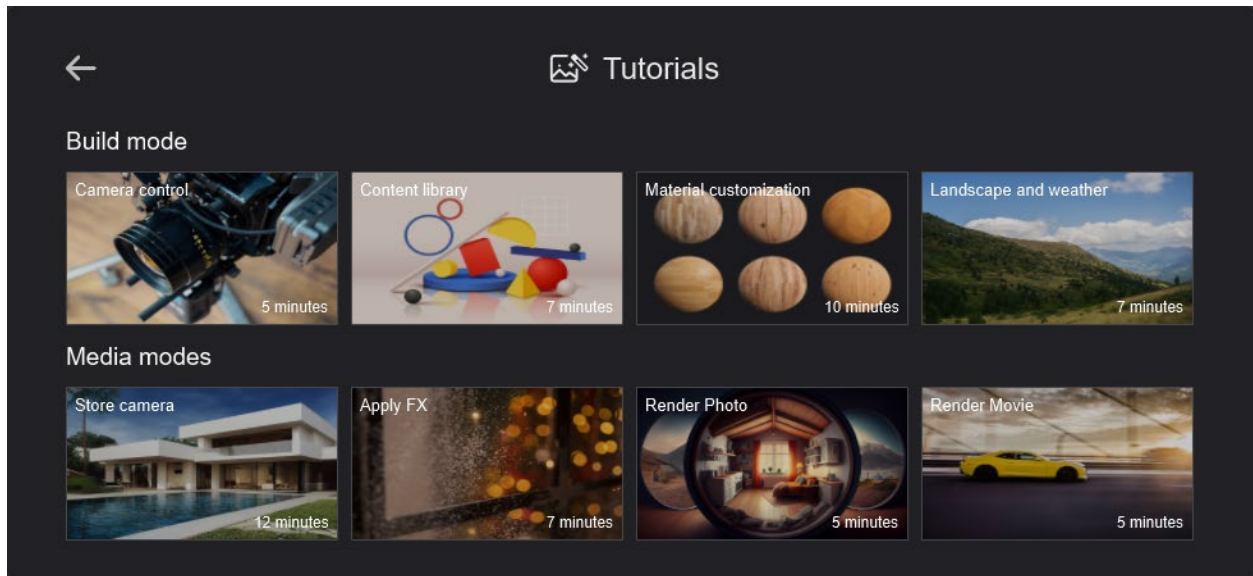
2.5.7 *Material Editor*: The Material Categories have been moved under a single tab and the icons received a revamp.
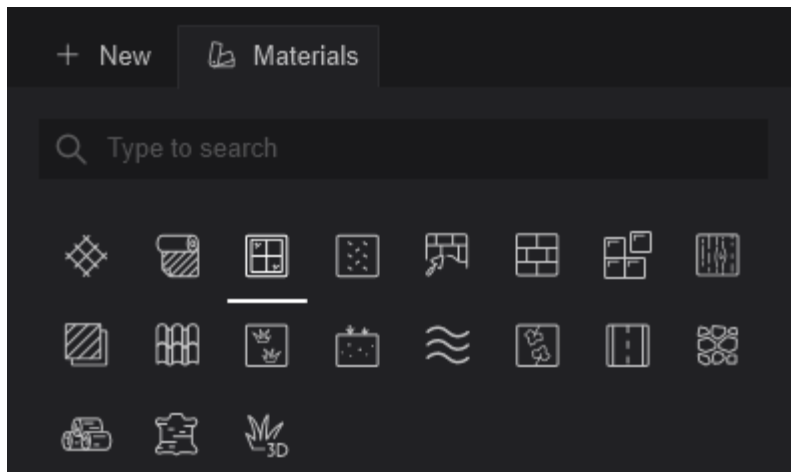
2.5.8 *Material Editor*: The Material Thumbnails have been revamped for better display accuracy of the Material properties.

2.5.9 Post-update screen: After a Lumion update has successfully been installed, a pop-up will appear on first startup highlighting the main features added.

2.6: New Example Projects and Templates

2.6.1 *Example Projects:*

- All Example Projects have been updated
- A new Example Project, *Museum Pavilion* now replaces the *Glass House*

2.6.2 *Templates:*

- All Templates, except for the *Suburban Environment* and *Design Showcase*, have been updated

2.6.3 *Styles:*

- **8** new Styles covering *Ray Tracing*, *Rasterization*, and conceptual representation now replace the Styles from the previous versions
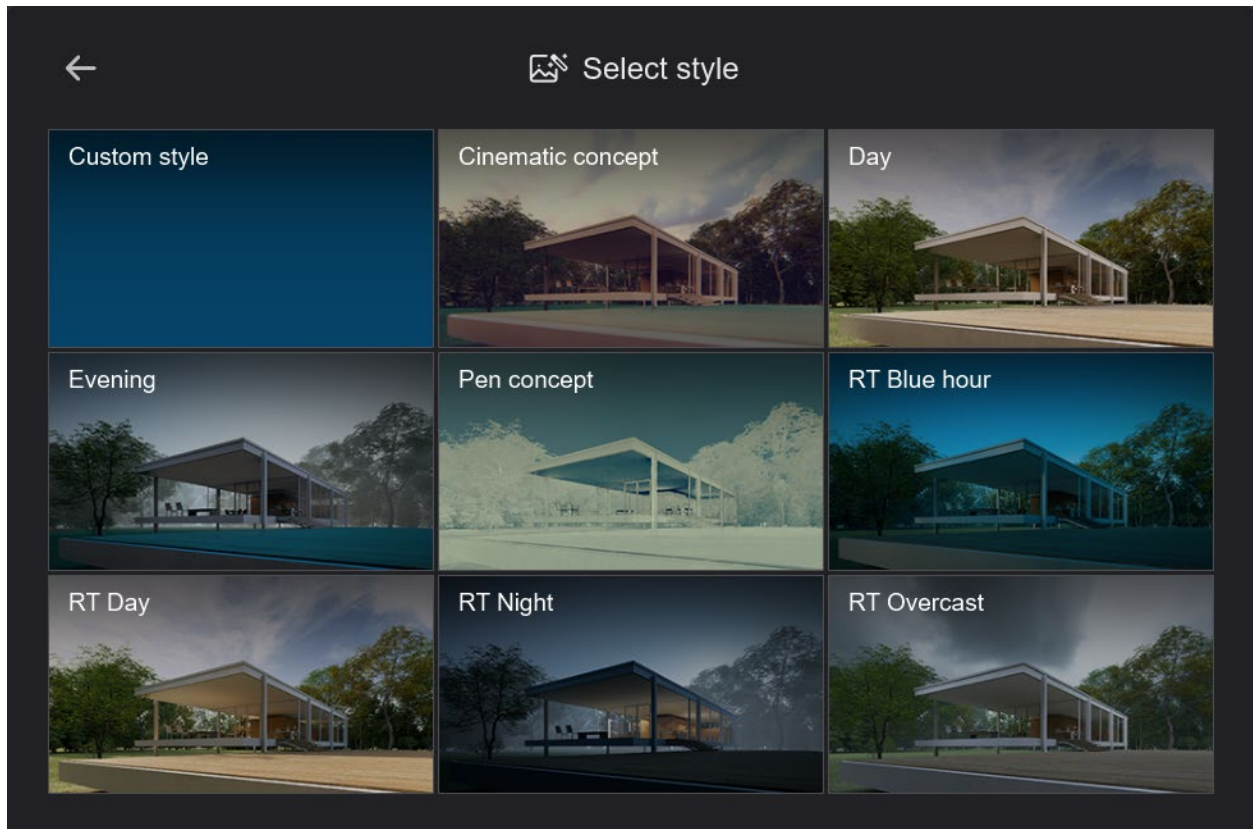
3. Changes & Resolved Errors

3.1: *Build Mode and Object Library*

Content Library & Place/Select Modes:

- **Context Menu → Space objects evenly:** Has been recalibrated to space Objects at equal distances between the first selected and furthest Object of the selection.
- **Context Menu → Space objects evenly:** Has been fitted with a snapping point at 5m.
- **Context Menu → Randomize size:** Objects no longer change positions after using the *Randomize size* button, deselecting the Objects and then reselecting them.
- **Context Menu → Randomize size:** Has been fitted with auto-snapping at 10%, 20%, 30%, and 40%.
- **Context Menu → Align height:** Will no longer revert to the original value after using the 'Space object evenly' button.
- *Line Placement*: The *Slider*s for 'Randomize spacing along line' and 'Randomize rotation' no longer snap at 90%.
- *Auto-snap*: The Lumion Landscape is now taken into consideration as a collision point.
- *Content Library*: Car Objects can no longer be placed on top of Objects in the People & Animals Category.

- ***Content Library → Cluster Trees*:** Now correctly point to the camera when seen from above.
- ***Content Library → Static Characters*:** No longer appears black with *Flat-shading* enabled.
- ***Content Library → Characters*:** Seated Characters now snap to seating Objects that allow it.
- ***Content Library → Characters*:** The reflectivity of Billboard and Static Characters has been re-adjusted.

***Landscape Mode*:**

- **UI → Layer tab:** The Layers are now displayed while in Landscape Mode.
- ***Landscape → Paint*:** Changing the Landscape Preset now also updates the Reflection cubemap.
- ***Landscape → Grass*:** The Scatter object Library has been updated to the new UI.

Weather Mode:

- **UI → Layer tab:** The Layers are now displayed while in Weather Mode.
- ***Wind Slider*:** Will now update accordingly after loading or creating a Project.

3.2: *Materials*

- ***Water Material*:** Overlapping surfaces that share the same Water Material will no longer display holes when Ray Tracing is enabled.
- ***Glass Material*:** The value for the *Double-Sided Slider* has been set to a Default of 0. This is to ensure artefacts from *Ray Tracing Glass* do not occur in certain cases where multiple surfaces exist.
- ***Standard Material → Soften Edges*:** The surface will no longer be displayed brighter when the value of the *Soften Edges Slider* is different than 0%.
- ***Standard Material → Map scale*:** The *Map Scale* will now utilize the imperial system when selected in the *Settings*.
- **Auto-material conversion → Glass Material:** Importing a model with surfaces that are auto-assigned the Glass Material will now have the *Relief* value set to 50.
- **Custom .TIF Textures:** *Alpha Maps* included in .TIF textures will now correctly be assigned to the *Opacity Slot*.

3.3: *Photo Mode, Movie Mode & Panorama Mode*

- ***Build with FX*:** The *Camera* position no longer resets when returning to the Output Mode from Build with FX.
- ***Build with FX*:** Will not display the Effects when the *'FX' toggle* is Off.

- **Preview → Aspect Ratio:** Copy/pasting a *Photo* with an *Aspect Ratio* other than 16:9 to a Clip will now update the *Aspect Ratio* as expected.
- **Preview and Output:** Will no longer show a diagonal dotted line when used with AMD graphics cards.
- **Preview:** *Object Shadows* are now are now updated in the Preview after Objects are deleted/hidden/moved in Build Mode.

Photo Mode

- **Photo Matching Effect:** The *Camera* will no longer move into the sky when the *Scale Slider* is set to a very low value.

Movie Mode

- **Import Camera Path:** Will now display the source model's location when hovering the mouse over the *Import* button.
- **Import Camera Path:** Switching from Build Mode to Movie Mode will no longer reset the *Camera* position.
- **Camera Presets → Pan/Tilt Camera:** The *End Angle* snap points have been reduced to 3.
- **Camera Presets → Follow Object:** The *Camera* will now retain its position instead of projecting high up in the sky when the *Target Object* is deleted.
- **Camera Presets → Follow Object:** The *Camera* can now be moved using the *Gizmo* when set to follow an Object.
- **Camera Presets → Orbit Camera:** Switching between *Simple* and *Advanced Camera Paths* now updates the *Camera Path* as expected.

Panorama Mode

- **Ray Tracing Effect:** has been disabled in Panorama Mode for the time being.

3.4: *Effects & Styles*

- **Orthographic View Effect:** Will no longer allow for the *Camera* to be moved when the Preview is being updated.
- **Orthographic View Effect:** The *Zoom Slider* is no longer inverted.
- **Precipitation Effect:** The *Extra Fog addition* and *Rain Streaks Sliders* will now work as expected when keyframed.
- **Precipitation Effect:** *Particles* are now displayed as expected from all angles.
- **Sun Effect + Real Skies:** *Slider* values are set correctly and no longer default to maximum when keyframed.
- **Global Illumination Effect:** has been deprecated.
- **Tilt-shift Effect:** *Rotation Slider* values now convert accordingly when loading a file from an older version of Lumion.

- *Titles Effect*: Will now copy text as expected between Clips.
- *Autumn Colors Effect*: The *Color hue shift* slider name better reflects the name of the *Color Properties* slider for *Green selection hue shift*.
- *Advanced Move Effect*: The *Time offset* slider now displays seconds as units.

Ray Tracing

- **Applying *Ray Tracing***: Is now faster and no longer causes a hiccup when adding the Effect.
- **Applying *Ray Tracing***: Will no longer cause render artefacts when the Fog Effect is added and the *Denoiser* enabled.
- *Reflections*: Surfaces with a *Clearcoat* value different than 0% no longer offset the Reflection position.
- *Reflections*: Switching from rasterization to Ray Tracing or between Photos/Clips will now update the Reflection cubemap.
- *Side-by-Side Stereo Effect*: Has been disabled when Ray Tracing is present.
- *Lens Flare Effect*: *Streaks* have been improved and are no longer pixelated in Ray Tracing.
- **Camera movement:** through geometry will no longer cause substantial changes in lighting and reflections.
- *Lights*: intersecting surfaces when Ray Tracing is active will no longer cause noise and fireflies.
- *Sun*: When blocked by geometry the Sun is no longer visible in Water Reflections while Ray Tracing is active.

3.5: Save, load, and recovery

- **Loading files:** Lumion will now display the correct version the .LSF file was saved in when loading an unsupported version of an .LSF file into an incompatible edition of.

3.6: Importing and Exporting

- **Importing .MAX files:** Will no longer result in flipped faces when a model was mirrored or scaled negatively in 3DS Max.
- **Importing .FBX files:** Will now assign the *Roughness* and the *Opacity Maps* to the correct slot.
- **Importing *Nodes*:** The *Re-import required* button is now displayed when the original file containing the *Nodes* is missing from the initial import location.
- *Lumion LiveSync*: Models that are LiveSynced into Lumion will no longer disappear after closing and reopening the 3D modelling software without stopping LiveSync.

3.7: Miscellaneous

- **File Formats:** .JPEG and .JPG files are now behaving the same in the Windows File Explorer.

3.8 Interface

- *Slider***s:** Have been converted from values to percentages for relevant situations.
- **Import Panel:** The design has been unified for importing the following:
    - IES Profiles.
    - Flag Object textures.
    - Volumetric Fire textures.
    - Character Billboards.
- **Transform Gizmo:** *XY, XZ, YZ Planes* are not draggable when overlapping with one of the X, Y, or Z axes.

3.9: Features that are still in development/on the Roadmap:

The article below covers items that are still a work in progress and will be added in future updates:

- **Knowledge Base:** [Transitions from prior versions to using Lumion 2024](#)