

26.14.13 Editors - Properties Editor - Object Data Properties Tab - Light Object

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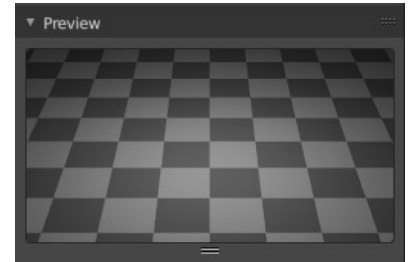
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Preview panel

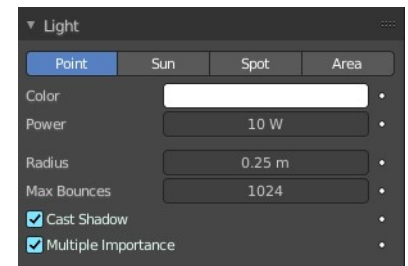
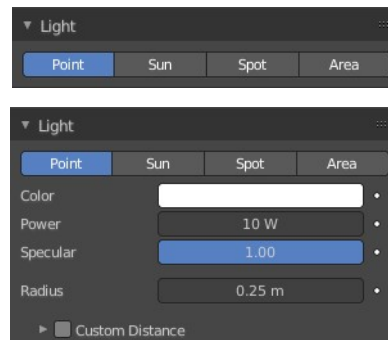
Provides a preview window for the light.



Light panel

The light panel contains the settings for the different light types. Color, strength, and so on.

The content differs, depend and of the chosen renderer. Workbench has no settings here. So we just cover the panel content with Eevee and Cycles.



Some props can be animated by setting a keyframe with the Animate Property button behind.

Point Light Eevee

The light emits from a point, and has falloff.

Color

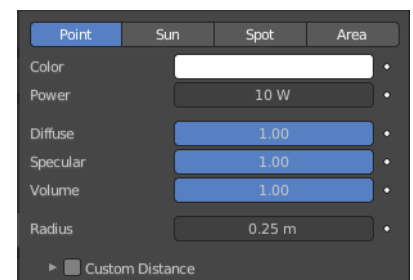
The color of the light. Clicking at the color field will open a color picker.

Power

Power of the light in Watts. Higher values increase the intensity of the light. Negative values can be set, but should be avoided for predictable and physically based result.

Diffuse

Diffuse Reflection multiplier.



Specular

Specular Light intensity multiplier.

Volume

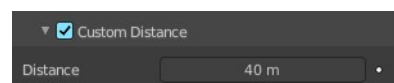
Volume Light multiplier.

Radius

When larger than zero, light will be emitted from a spherical surfaces with the specified radius. Lights with larger size have softer shadows and specular highlights.

Custom Distance

Eevee Renderer. If enabled uses Distance as the custom attenuation distance instead of global light threshold. In order to avoid long setup times, this distance is first computed automatically based on a light threshold. The distance is computed at the light origin and using the inverse square falloff.



Distance

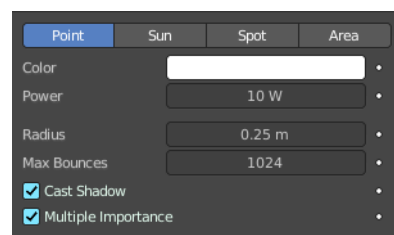
The distance where light influence will be set to 0.

Point Light Cycles

The light emits from a point, and has falloff.

Color

The color of the light. Clicking at the color field will open a color picker.



Power

Power of the light in Watts. Higher values increase the intensity of the light. Negative values can be set, but should be avoided for predictable and physically based result.

Radius

When larger than zero, light will be emitted from a spherical surfaces with the specified radius. Lights with larger size have softer shadows and specular highlights.

Max Bounces

Cycles renderer. Maximum number of times light from the light is allowed to bounce. Limited by scene-wide bounce settings.

Cast Shadow

Light casts shadow.

Multiple Importance

Multiple importance sampling reduces noise for area lights and sharp glossy materials.

Sun Light Eevee

The light has no falloff, and goes into one direction.

Color

The color of the light. Clicking at the color field will open a color picker.

Strength

Strength of the light in Watts per square meter.

Diffuse

Diffuse Reflection multiplier.

Specular

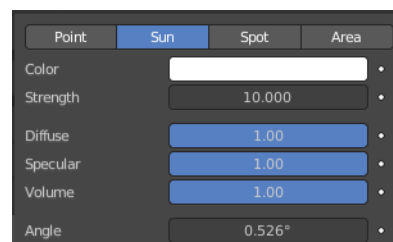
Specular Light intensity multiplier.

Volume

Volume Light multiplier.

Angle

The size of the sun light according to its angular diameter as seen from earth.



Sun Light Cycles

The light has no falloff, and goes into one direction.

Color

The color of the light. Clicking at the color field will open a color picker.

Strength

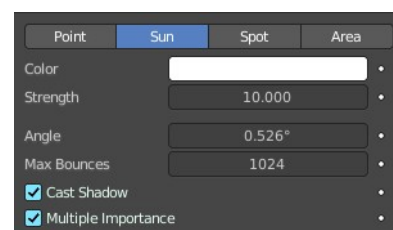
Strength of the light in Watts per square meter.

Angle

The size of the sun light according to its angular diameter as seen from earth.

Max Bounces

Cycles renderer. Maximum number of times light from the light is allowed to bounce. Limited by scene-wide



bounce settings.

Cast Shadow

Light casts shadow.

Multiple Importance

Multiple importance sampling reduces noise for area lights and sharp glossy materials.

Spot Light Eevee

The light has falloff. And gets distributed in a cone shape.

Color

The color of the light. Clicking at the color field will open a color picker.

Power

Strength of the light in Watts per square meter.

Diffuse

Diffuse Reflection multiplier.

Specular

Specular Light intensity multiplier.

Volume

Volume Light multiplier.

Radius

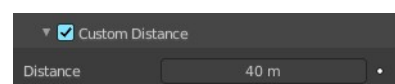
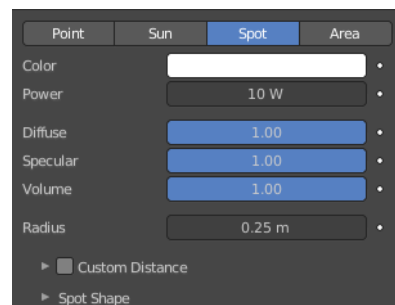
When larger than zero, light will be emitted from a spherical surfaces with the specified radius. Lights with larger size have softer shadows and specular highlights.

Custom Distance

Eevee Renderer. If enabled uses Distance as the custom attenuation distance instead of global light threshold. In order to avoid long setup times, this distance is first computed automatically based on a light threshold. The distance is computed at the light origin and using the inverse square falloff.

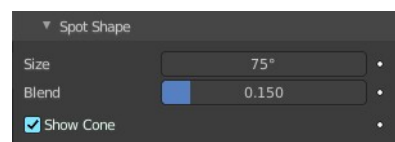
Distance

The distance where light influence will be set to 0.



Spot shape

Eevee renderer.



Size

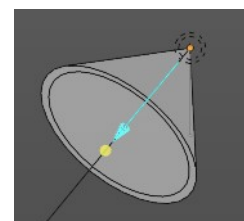
The size of the outer cone of a spot.

Blend

Blending to the inner cone of a spot. The inner cone boundary line indicates the point at which light from the Spot will start to blur/soften.

Show cone

Shows the cone opaque in the 3D view



Spot Light Cycles

The light has falloff. And gets distributed in a cone shape.

Color

The color of the light. Clicking at the color field will open a color picker.

Power

Strength of the light in Watts per square meter.

Radius

When larger than zero, light will be emitted from a spherical surfaces with the specified radius. Lights with larger size have softer shadows and specular highlights.

Max Bounces

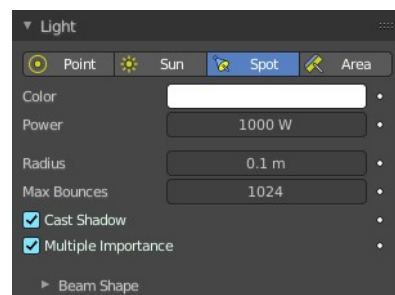
Maximum number of times light from the light is allowed to bounce. Limited by scene-wide bounce settings.

Cast Shadow

Light casts shadow.

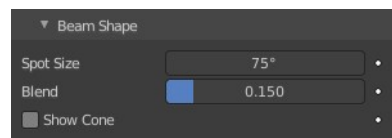
Multiple Importance

Multiple importance sampling reduces noise for area lights and sharp glossy materials.



Beam shape

Eevee renderer.



Size

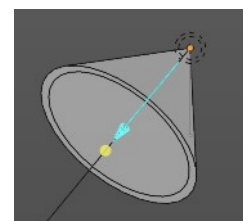
The size of the outer cone of a spot.

Blend

Blending to the inner cone of a spot. The inner cone boundary line indicates the point at which light from the Spot will start to blur/soften.

Show cone

Shows the cone opaque in the 3D view



Area Light Eevee

The light emits from a surface, and has falloff.

Color

The color of the light. Clicking at the color field will open a color picker.

Power

Power of the light in Watts. Higher values increase the intensity of the light.

Negative values can be set, but should be avoided for predictable and physically based result.

Diffuse

Diffuse Reflection multiplier.

Specular

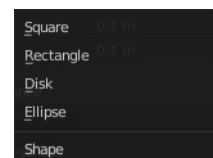
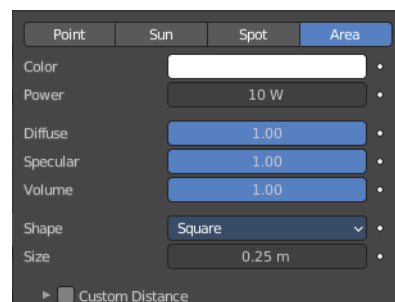
Specular Light intensity multiplier.

Volume

Volume Light multiplier.

Shape

The shape of the light emitting surface.

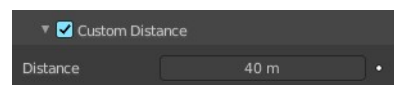


Size

The size of the light emitting surface.

Custom Distance

Eevee Renderer. If enabled uses Distance as the custom attenuation distance instead of global light threshold. In order to avoid long setup times, this distance is first computed automatically based on a light threshold. The distance is computed at the light origin and using the inverse square falloff.



Distance

The distance where light influence will be set to 0.

Area Light Cycles

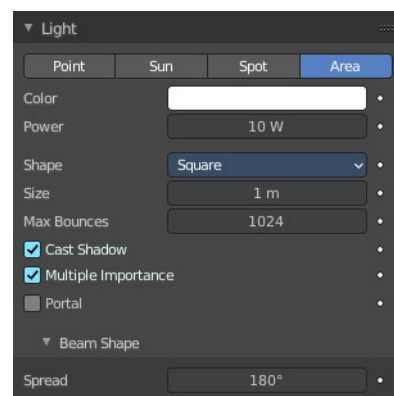
The light emits from a surface, and has falloff.

Color

The color of the light. Clicking at the color field will open a color picker.

Power

Power of the light in Watts. Higher values increase the intensity of the light. Negative values can be set, but should be avoided for predictable and physically based result.

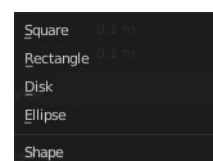


Shape

The shape of the light emitting surface.

Size

The size of the light emitting surface.

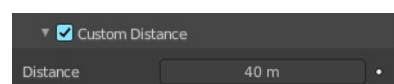


Max Bounces

Cycles renderer. Maximum number of times light from the light is allowed to bounce. Limited by scene-wide bounce settings.

Custom Distance

Eevee Renderer. If enabled uses Distance as the custom attenuation distance instead of global light threshold. In order to avoid long setup times, this distance is first computed automatically based on a light threshold. The distance is computed at the light origin and using the inverse square falloff.



Distance

The distance where light influence will be set to 0.

Cast Shadow

Cycles renderer. The light source casts a shadow.

Multiple Importance

Cycles renderer. By default lights use only direct light sampling. Which can be noisy with sharp glossy reflections. Multiple Importance activates Indirect light sampling to reduce noise.

Portal

With Cycles Area lights can also function as light portals to help sample the environment light. This can significantly reduce noise in interior scenes. Light portals are not helpful for outdoor scenes. Since outdoor the light bounces just fly off into the sky.

Using the light as portal hides it.

Beam Shape Subpanel

Spread

How widely the emitted light fans out.



Light panel

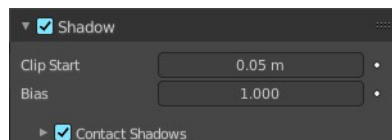
Eevee renderer shadow settings. Eevee is a realtime renderer. And in Eevee shadows are done with shadow maps.

Clip Start

Shadow clip start distance. A distance below will not generate a shadow.

Bias

The bias to reduce self shadowing.



Cascaded Shadow Map

Sun light only. Shadow large scenes by distributing multiple shadow maps over the frustum range. Each cascade covers a different portion of the view frustum. Note that cascade shadow maps are always updated because they are view dependent.

Note! In orthographic view the cascades cover the whole depth range of the camera with an evenly distributed shadow precision.

Count

Number of cascades to use. More cascades means better precision but a lower update rate.

Fade

Fade transition area between two cascades. Higher values means less overall resolution because cascades need to overlap.

Max Distance

Distance away from the view origin (or camera origin if in camera view) to cover by the cascade. If the view far clip distance is lower than Max Distance, the view far clip distance will be used. Only works in perspective view.

Distribution

Puts more resolution towards the near clip plane. Only works in perspective view.

Contact Shadows

Contact shadows exists to fix light leaking caused by bias or shadow map undersampling. The same limitations applies like for screen space reflections. Unknown object thickness and effect disappearing at screen edges.

Tip! Keep the distance of contact shadows small. They are not accurate enough to shadow the entire scene.

Distance

World space distance in which to search for screen space occluder.

Bias

Bias applied to the ray tracing to reduce self-shadowing artifacts.

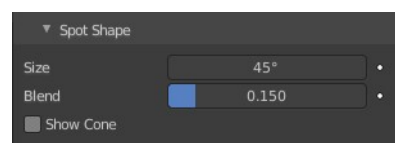
Thickness

Pixel thickness used to detect occlusion, treating any potential occluder as this thick.

Light panel - Spot Shape subpanel

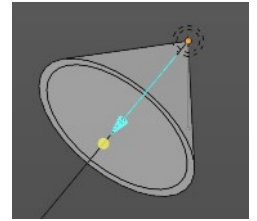
Size

The size of the outer cone of a spot.



Blend

Blending to the inner cone of a spot. The inner cone boundary line indicates the point at which light from the Spot will start to blur/soften.

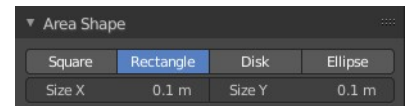


Show cone

Shows the cone opaque in the 3D view.

Area Shape panel

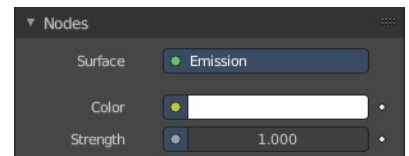
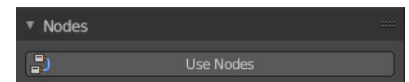
Workbench renderer. The shape and size of the Area light.



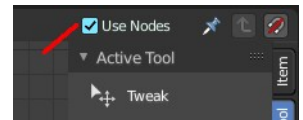
Nodes panel

Use Nodes

Use nodes for the light setup. Creates the standard nodes for an emission light. Which can be found in the Node editor then. Once activated the Nodes panel shows the content of the emission node.



To revert, and not to use nodes, untick the Use Nodes checkbox in the node editor.



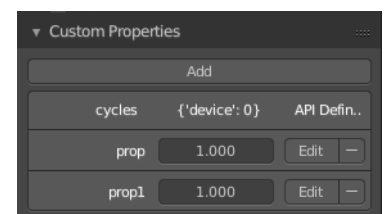
Custom Properties Panel

Here you can define custom properties that can be used for scripting.

Here you might also find custom properties from addons or scripts.

Add

Adds a new property.



Edit

Opens a panel where you can adjust the settings for the custom property.

Remove

Removes the property.

