

PxrBarnLightFilter

The PxrBarnLightFilter allows us to create physically accurate window barns to simulate the real set lighting with correct shadowing. Its other usage includes controlling bounce lights in a large scene. In addition to the physical mode, it also provides an analytic mode.

Parameters

Barn Mode

Select a barn mode:physical (0) The barn behaves like an open window through which light falls. The falloff and blur are determined by the size of the light, the distance to the light, and the distance from the barn.analytic (1) The barn has a fixed projection and manual falloff controls. If possible, use Physical Barn.

Projection (For Analytic Barn Only)

Directional

When this is on, the texture projects along a direction using the orthographic projection. When it is off, the texture projects using a focal point specified by the Apex.

Shear X

Shear the projection along the X-axis.

Shear Y

Shear the projection along the Y-axis.

Apex

Distance between the center of the barn and the center of projection. This is only applicable when Directional is off.

Use Light Direction

If this is on, the projection direction is determined by the position of the center of the light source. Otherwise, it only follows the orientation of the cookie. WARNING: This does not work with dome and mesh lights.

Barn Shape

Width

Width of the inner region of the barn (X-axis).

Height

Height of the inner region of the barn (y-axis).

Radius

The radius of the corners of the inner barn square.

Edge

The thickness of the edge region.

Pre Barn

The effect on the light before it reaches the barn.

- no effect (0)
- cone (1)
- no light (2)

Scale

Scale Width

Scale the width of the inner barn shape (X axis).

Scale Height

Scale the height of the inner barn shape (Y axis).

Refine Edges

Left

The additional size of the left region (-X axis)

Right

The additional size of the right region (+X axis)

Bottom

The additional size of the bottom region (-Y axis)

Top

The additional size of the top region (+Y axis)

Scale Edges

Left Edge

Additional soft size of the left region (-X axis).

Right Edge

Additional soft size of the right region (+X axis).

Bottom Edge

Additional soft size of the bottom region (-Y axis).

Top Edge

Additional soft size of the top region (+Y axis).

Multiplier

Density

Controls the strength of this light filter.

Invert

Specify whether to invert the result of this light filter before it is applied.

Intensity

Global Multiplier for both the diffuse and specular contribution below.

Diffuse

Multiplier of this light filter result for the diffuse contribution.

Specular

Multiplier of this light filter result for the specular contribution.

Density Falloff (For Analytic Barn Only)

Density Near

Distance from the barn where the density interpolation starts.

Density Far

Distance from the barn where the density interpolation ends.

Density Near Val

Density multiplier where the blur interpolation starts.

Density Far Val

Density multiplier where the blur interpolation ends.

Density Exponent

The exponent of the density interpolation.

Combine Mode

Combine Mode

mult: The results of all the filters are multiplied together

max: The maximum result from all filters is used. This works best for grey-scale light filters.

min: The minimum result from all filters is used. This works best for grey-scale light filters.

screen: Similar to the max operation, but it combines gradients in a smoother way. This works best for grey-scale light.

Light filters on a light that are grouped by their combined mode. Light filters in the same group are executed together and combined by the combined mode. The groups are executed in this order (max, min, screen, and then mult) and are multiplied together, which means a filter that turns things black in the mult group will zero out all other filters.