LUMEN STEALTH ADDON

The Lumen Stealth Add-On enhances the Stealth Component by dynamically adjusting the actor's stealth effectiveness based on surrounding light conditions. When enabled, the system continuously evaluates the environment's luminance using the LightDetector and calculates a Lumen Stealth Buff, which is then applied as part of the Total Stealth Buff. Brighter areas reduce the buff, while darker areas strengthen the actor's concealment. This makes the actor's detectability directly influenced by environmental lighting, allowing them to hide more effectively in shadows and become more exposed under strong illumination. In essence, the Lumen Stealth Add-On transforms light levels into a real-time stealth modifier, adding depth, realism, and environmental responsiveness to detection gameplay.

Calibration

The Lumen Stealth Add-On automatically calibrates itself by analyzing the environment and determining the lowest darkness values and highest light values it encounters. This calibration process happens seamlessly during gameplay, and in most cases, the user will not notice it. However, if the user wants to provide an initial calibration baseline, this can be done by placing LumenProbes in the scene.

LumenProbes are simple GameObjects containing a LumenProbe component (an empty MonoBehaviour used solely for identification during the Lumen initialization process). A LumenProbe prefab can be created manually or found in the Prefabs folder. The user may place as many probes as needed throughout the environment. During the Start phase, each probe is scanned, and its current light level is recorded to establish the brightest and darkest reference points.

While these probes help define an initial calibration range, the Lumen system will continue to self-adjust throughout play mode, ensuring accurate and stable luminance-based stealth behavior as lighting conditions change.

Even without probes or manual adjustment, the system remains fully functional and continues to calibrate automatically during gameplay.

Probe Offset Y

"Sets the height at which the Lumen system measures light above the character. If set to 0, the system automatically places the probe slightly above the character's top mesh boundary (+0.2f) at runtime."

Because most character pivot points are positioned at ground level, light detection must be performed above the character to avoid incorrect readings. Probe Offset Y allows the user to define how high above the character the light-detection point should be placed.

A properly calibrated offset is important.

If the probe is positioned too low, the system may measure light inside the character's mesh, detecting unintended shadows. In these cases, a character standing in bright light could incorrectly receive shadow-based stealth bonuses.

By adjusting Probe Offset Y, the user ensures that light detection happens at a realistic, unobstructed point above the character's body, improving the accuracy of the Lumen Stealth Add-On.

Lumen Stealth Add-On Inspector Tab
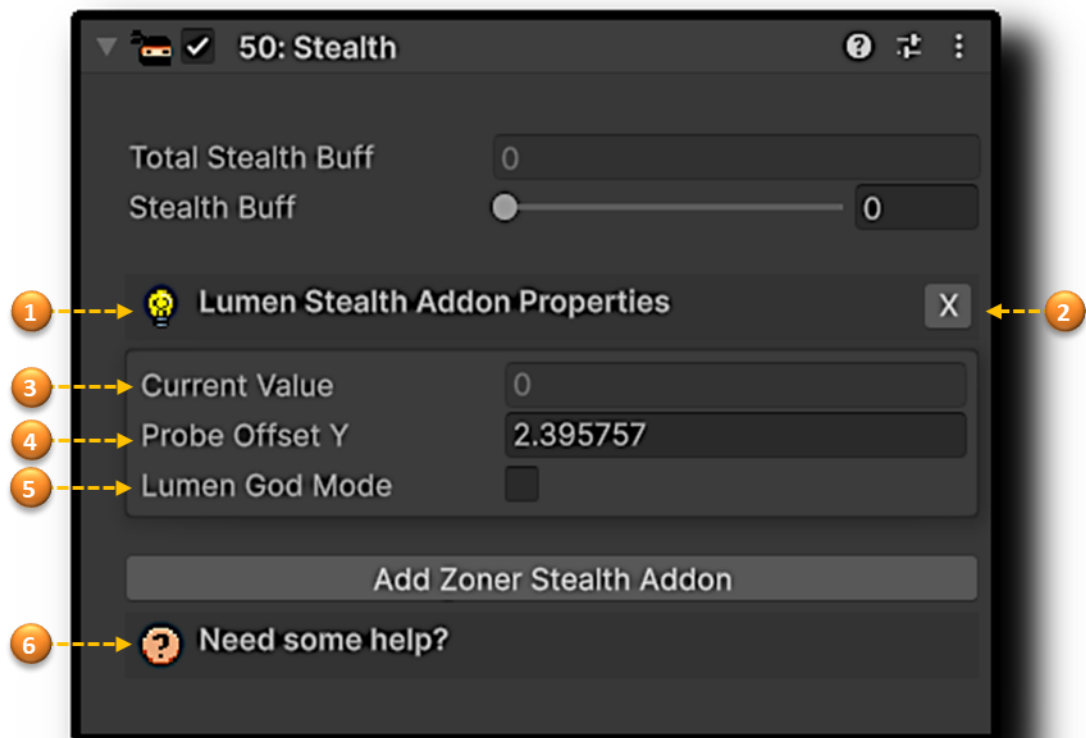
1	Lumen Stealth Addon Properties Foldout	Allows showing / hiding of Lumen Stealth Addon properties.
2	Disable Button	Allows disabling Lumen Stealth Addon.
3	Lumen Stealth Addon	Displays current Lumen Stealth Addon Value (*only during Play Mode)
4	Probe Offset Y	Sets the height at which the Lumen system measures light above the character. If set to 0, the system automatically places the probe slightly above the character's top mesh boundary (+0.2f) at runtime.
5	Lumen God Mode	When enabled, max lumen value will effect in maximum Stealth Buff Value.
6	'Need some help?'	Displays Help Information.

When a God Mode is active: If the Lumen Stealth Buff equals 1.0 then the Total Stealth Buff is forced to 1.0, regardless of all other values.