

GA502 – Level Design II – Session 5

UE4 Lighting

- **Static Lights:**
 - Precomputed.
 - Lowest performance cost.
 - Cannot be changed during gameplay.
 - Lightmaps are baked prior to gameplay.
 - Set lightmap resolution on meshes.
- **Stationary Lights:**
 - Brightness and color can change during gameplay.
 - Static and dynamic shadowing.
 - Medium performance cost.
- **Movable Lights**
 - Completely dynamic.
 - High performance cost.
- **Light Type**
 - Point light.
 - Spot Light
 - Directional Light
 - Sky Light
- Light functions:
 - Materials applied to filter a lights intensity.
 - Cannot control color.
 - Only available for Stationary and Moveable lights.
 - Create new Material > Select Material Node > Set Material Domain to “Light Function.”
 - Select a light > Light Function > Set Texture
- **Lightmass Global Illumination:**

<https://docs.unrealengine.com/latest/INT/Engine/Rendering/LightingAndShadows/Lightmass/index.html>

 - Provides GI and advanced lighting/shadowing.
 - Lightmass Importance Volume for realtime GI.
 - Translucent Shadowing
- **Reflection Environment**
 - Provides glossy reflections.
 - Reflection Capture Shapes
 - Reflection Probe