

Color Temperatures in Light

Working in the virtual 3D world offers both advantages and difficulties compared to real life. On the upside you have absolute control over lighting, and access to physically impossible lights like negative lights. On the

downside you don't have real time feedback when designing lighting and you have to design surfaces materials that react to light in the way you want.

| Light Souce | Color Temp | Hue |
|--|-------------------|------------|
| Overcast Daylight | 6000K | 130 |
| Noontime Daylight | 5000K | 45 |
| White Fluorescent | 4000k | 27 |
| Tungsten/Halogen Lamp | 3200K | 20 |
| Incandescent Lamp (100 Watt to 200Watt) | 2900K | 16 |
| Incandescent Lamp 25Watt | 2500K | 12 |
| Sunlight at Sunset or Sunrise | 2000K | 7 |
| Candle Flame | 1750K | 5 |

Type of lights

Omni Directional point lights:

there are point sources that radiate light in all directions. The Intensity of light from a point source falls off in an inverse square manner as you move away from the light. Omni lights are good for simulating bare light globes, light with shades that let light out in all directions and diffuse reradiated light from objects.

Spot Lights:

these are also point sources with a radiation pattern that has a defined hot spot and a falloff to a circular or rectangular area. Like omni directional lights, the light intensity falls off in an inverse square manner as you move away from the light. Spotlights are the most common types of light used when setting up studio type lighting and controlled lighting of

interiors.

Directional or Distant lights

a distant or directional light is a light-source that is so far away that the light rays are effectively parallel and the light intensity does not falloff with distance from the light source. The main uses for directional lights are to simulate sunlight and diffuse reradiated light from walls and other large flat surfaces.

Area Lights

Fluorescent light fixtures and lights with large white diffusers examples of area lights. The soft re-radiation of light from surfaces of objects can also be simulated with area lights. Simulating area lights is extremely time consuming and is not normally offered outside of dedicated radiosity renderers.