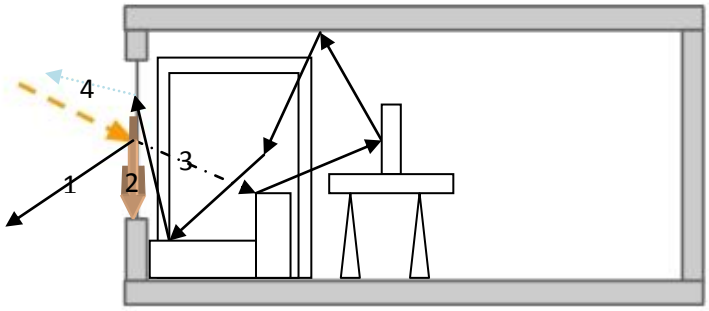
Arch-753-001 Building Performance Simulation

Light Ray Reflection Diagram

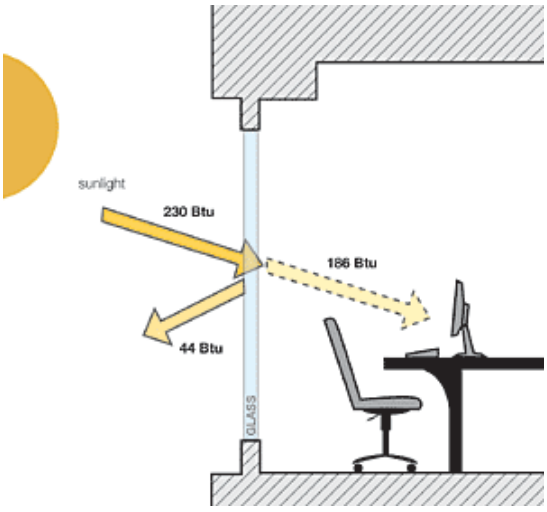
Pegah Mathur

Sep 20, 2015



The light ray which hits the window will be divided in three parts:

1. The reflected light ray directly after hitting the window
2. The absorbed light ray by the window material which heats the glass up
3. Te light ray radiated into the room and will be reflected to many other surfaces in the room and looses energy
4. The last reflected ray, reflecting out the window, with the most wavelength



http://archrecord.construction.com

visibility of objects is dependent on availability of visible light in the environment (reflections or emissions from the objects). This visible light is a small part of the electromagnetic spectrum and objects that have a certain range of temperature can emit visible light with a certain wavelength. Objects with higher temperatures have more energy to release and they emit more short-wavelength radiations (that are able to carry more powerful waves) than objects with lower temperatures.

$$\nu = \frac{c}{\lambda}$$