

## Theoretical introduction

Place an object close to a light source, and it will receive a lot of light. Place it farther and it will receive less light.

By how much?

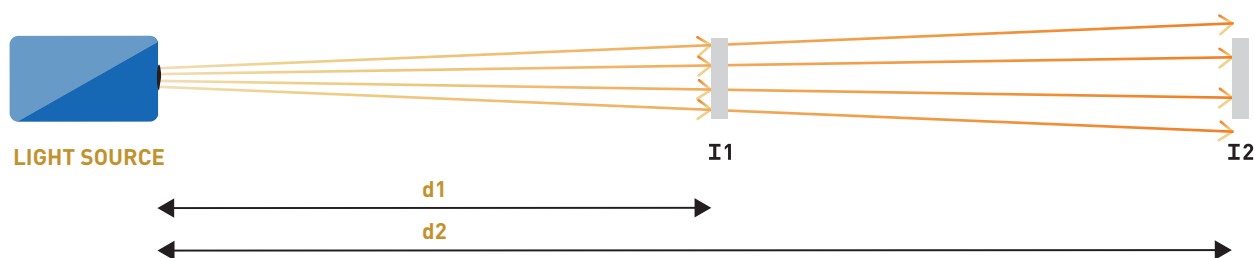
The inverse square law states that the “intensity” of lighting (Irradiance) from a point source onto a subject varies in inverse proportion to the square of their distance.

It can be expressed under the convenient form as follows:

$$I = k / d^2$$

where “k” is a constant depending, among other things, on the light source power.

“d” is the distance to the light source.



$$I2 = I1 \times \left( \frac{d1}{d2} \right)^2$$

**EXAMPLE: DOUBLING THE DISTANCE BETWEEN ILLUMINATOR AND SUBJECT RESULTS IN A FOUR-FOLD REDUCTION OF THE LUMINOUS ENERGY WHICH HITS THE SUBJECT I.E. 2 F-STOPS (OR -6 dB) UNDEREXPOSURE.**

## Practical application

