Electricity Saving Tips for Homes and Offices

How much lighting is good lighting for a room?

Good lighting enhances the beauty of a room. Some people take good care of lighting while furnishing a room and some just put a tube-light or a bulb here and there to just light up a room. But have you ever thought how much lighting is good lighting for a room? Have you ever analyzed if you have less light or more light in a room, or are you wasting electricity by putting extra lights? With this article we just want to provide some guidelines to setting up lighting in room, so that you do not waste electricity but light up your room appropriately as per the needs.

Lumens is for brightness not watts

In past we had always compared brightness of a light by comparing wattage of the bulbs. But after using CFLs we realized that same amount of light can be achieved through lesser wattage. So is watt a good representation of brightness? No. The actual technical term for brightness is Lumens. More the lumens, brighter the light is. The number of lumens is different for different bulbs and some of the branded lights do have this information, but most bulbs available in out country do not have this information. But below are some guidelines for comparison:

For Bulbs:

Incandescent Watts	CFL Watts	LED Watts	Lumens (Brightness)
40	8 – 12	4 – 5	450
60	13 – 18	6 – 8	890
75 – 100	18 – 22	9 – 13	1210
100	23 – 30	16 – 20	1750
150	30 – 55	25 – 28	2780

The new Lumens rating makes buying LED bulbs much simpler

Choosing a light bulb today is more complicated than ever, and the choice of bulbs keeps growing. Consumers have to choose between incandescents, CFLs,

halogens and LEDs, and a multitude of sizes and shapes, different bases, and of course widely differing prices.

The FTC has recently mandated that, by 2012, all light bulb packages will be standardized with new labels which will make it much easier to buy light bulbs, whether they be incandescent, LED, CFL or halogen. The main indicator on the light bulb package will be "lumens", which will replace the current "watts". Lumens represents the amount of light emitted by a light source, and is a more accurate measure of the brightness of a bulb.

Incandescent Watts	CFL Watts	LED Watts	Lumens (Brightness)
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So no matter what kind of bulb you are interested in, simply comparing lumens will enable you to compare the brightness level each bulb will deliver. After you determine the lumen level you prefer, you can then look to other indicators such as energy efficiency, lifetime run cost, and dimmability to select the ideal bulb for your application.

To learn more about the upcoming new labelling system for all light bulbs, see our article: Lumens are the New Watts.

For Tubelights:

Type	Lumens (Brightness)
T12 40W 4ft	2800
T8 36 W 4ft	2700
T5 28W 4ft	2750
T5 14W 2ft	1275

How much light is required for your room

Amount of lighting required for a room depends on the size of the room and the purpose of the room. Intricate tasks require more lighting and just moving around the room requires much less light. The amount of light required in an area is defined as "LUX" level that is equal to lumens/area (lm/m^2). Below table gives a good idea of LUX level for various tasks:

Activity	Illumination *(lux, lumen/m^2)*
Public areas with dark surroundings	20 – 50
Simple orientation for short visits	50 – 100
Working areas where visual tasks are only occasionally performed	100 – 150
Warehouses, Homes, Theaters, Archives	150
Easy Office Work, Classes	250
Normal Office Work, PC Work, Study Library	500

So if you have a room that is 10 ft x 10 ft (which is 9.29 m^2) and you want to do easy office work in the room, then the amount of light required in the room is 250 x 9.29 which is about 2400 lumens. 1 single tube light or about 2 75-80 Watt bulbs can achieve this.

If you have a small area of a square meter and you use it for pc work, then a 12-watt CFL is good for it.

Task based lighting can be done in a room accordingly.

Philips LED Tube Light • Rated Lifetime : 40,000 Hours • Beam Angle : 150º • CRI : 83 • Rated Luminous Flux : 1600lm • Wattage : 16Watt	**CFL Watts** 40W-60	incandescent light bulbs 100W
Price : 600	300	200