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🗣️ العربية · EN

PRACTICAL LIGHTING KNOWLEDGE

Lux *VS* Lumen

What every lighting spec sheet actually means, and the four numbers worth memorising.

More lumens = brighter?

Not exactly. The number on the box tells you what a fixture *produces*. It doesn't tell you what arrives where you actually need it.

DEFINITION · 1 OF 2

Lumen

Total light **at the source.**



Like water **leaving the tap.**
Every direction. All of it added up.

DEFINITION · 2 OF 2

Lux

Light that **lands on a surface**. Per m².



Like water **hitting the bucket**.
Only what actually arrives counts.

THE RELATIONSHIP

$$\text{Lux} = \frac{\text{Lumens}}{\text{area in m}^2}$$

More distance, wider beam, or a different reflector, and the same lumens become very different lux.

One fixture. Three outcomes.

A single 1,000-lumen downlight, three mounting setups. Same lumens. Wildly different lux on the floor.

SETUP A

3 m mount, narrow beam

400

LUX

SETUP B

6 m mount, narrow beam

100

LUX

SETUP C

3 m mount, wide reflector

160

LUX

Lux targets you can screenshot.

Illustrative values per EN 12464-1. Confirm against task and surface reflectance.

Corridor · circulation

100 lux

Office desk · general workspace

500 lux

Warehouse aisle (manual)

200 lux

Retail focal · display

750+ lux

Hospital examination

1,000 lux



The common spec mistake.

Buying by lumens on the box and hoping for the best.
You end up with **glare on the ceiling** and not enough
light **where work actually happens.**

NEXT TIME YOU SPEC A FIXTURE

Ask for lux at **the** **work plane.**

Not lumens on the box. Then ask for the photometric file (.ies / .ldt). If your supplier can't share it, that's the answer.

- ✓ Target lux on the working surface
- ✓ Photometric file (.ies or .ldt)
- ✓ DIALux model on request



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