

PRACTICAL LIGHTING KNOWLEDGE

Choosing the *reflector*

Lumens are produced once. The reflector decides the lux that lands. Here is how to pick one.



Same lumens, **half the light?**

Two fixtures with identical lumen output can read 400 lux or 90 lux on the same floor. The reflector is doing the work, not the box.



REFLECTOR TYPE · 1 OF 2

Specular

Polished. **Squeezes light.**



Anodised aluminium near **92% reflectance**.

Keeps lumens directional. Best at high mounting heights.



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EPISODE 05 · CHOOSING THE REFLECTOR

REFLECTOR TYPE · 2 OF 2

Diffuse

Matte. **Shares light.**



White powder coat near **80% reflectance**.
Loses a little intensity. Softens glare on the sightline.



THE RELATIONSHIP

Coverage = beam
angle
*** mounting height**

A 60° beam covers about 7 m across at 6 m. Double the height, quadruple the area, quarter the lux.



Three things to remember.

The reflector is a design decision, not a cosmetic one. Carry these into your next spec conversation.

SPREAD

**Narrow travels,
wide spreads**

15

VS 60 DEG

HEIGHT

**Coverage scales
with mount height**

×4

AREA AT 2× HEIGHT

FINISH

**Specular or diffuse
changes glare**

UGR

NOT LUMENS

Beam angles worth memorising.

Typical bands and where each one belongs. Confirm with the photometric file.

Narrow spot · accent, display

10-24 deg

Medium · office downlight

36 deg

Flood · corridors, general

60 deg

Wide flood · warehouse aisles

90 deg

Batwing · desks, classrooms

120 deg



The common misconception.

That a glossy brochure cone tells you the truth. **It is marketing.** Beam angle is measured at 50% intensity, and the field at 10% peak is often **30 to 50% wider.** Plan for the spill too.

NEXT TIME YOU SPEC A FIXTURE

Ask for the photometric file.

Not the brochure cone. The reflector and lens are one optical system, so specify both, then check the finish against the glare the room needs.

- ✓ Beam angle and field angle, in degrees
- ✓ Candela in the photometric file (.ies or .ldt)
- ✓ Reflector finish: white, mirror-silver, or matte-black



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