

Lux meter

Helping you identify energy savings

What is a lux meter?

A lux meter is a powerful tool used to identify energy savings. Use your lux meter to pinpoint over-lit areas in your office, then delamp (see over) to reduce energy use.

Using the lux meter

Measure lux levels:

- at table or waist height
- at four to five different points in each room either:
 - at night (if the room is used at night), or
 - at around one to two hours after sunrise or before sunset.
- at a time that corresponds roughly to the earliest or latest the room will be used in the middle of winter. If delamping in summer, remember that sun sets earlier and is much lower.

Minimum recommended light levels in the horizontal plane are shown in the table below for various areas, from AS 1680:1990: Interior Lighting.

Type of room or task	Minimum recommended maintenance illuminance (lux)
Circulation and amenity areas	
Toilets, change rooms, locker rooms, cleaners rooms	80
Corridors, passageways, ramps	40
Stairs	Internal: 80 External: 20
Entrance halls, lobbies, foyers	160
Waiting rooms	160
Enquiry desks	320
Other	
First aid	Rest rooms: 40 Treatment rooms: 400
Cafeterias	General: 160 Counters: 240
Kitchens	General: 160 Food preparation: 240
Administration areas	
Filing areas	Simple, clear detail: 240 Difficult, fine detail: 320
Office	General tasks involving typing, reading, writing: 320 Background: 160
Meeting rooms	320
Training rooms, seminar rooms	240
Photocopying	240

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How to delamp

Delamping of fluorescent fittings is achieved most easily by removing the starter. Remove the tube, and put a sticker in its place indicating that it has been deliberately removed to avoid any confusion.

Double fittings

In double fluorescent fittings, you can remove one tube. If it seems too dull, replace the remaining tube with a brighter triphosphor tube (uses same amount of energy), or an even brighter quadphosphor tube. You can fit a reflector onto the remaining tube to further increase light levels.

Triple fittings

In triple fittings you have the choice of removing one or two tubes. It may be possible to remove two tubes and put in a single quadphosphor tube with reflector, reducing your energy use by nearly two thirds. Check that the lamp relights properly after delamping. This is unlikely to be a problem with individual ballasts or a single ballast supplying two lamps operating in parallel, but will cause problems if lamps are in series on the one ballast.

Making sure your office stays bright

Removing too many lights from your office can make your workplace seem dull, especially if the ceiling and walls are darker colours.

Reflections, glare, shadows, areas of bright contrasts can make visual tasks difficult. The colour and brightness of surfaces, particularly walls, ceilings and floors, also influence light levels and light uniformity. Generally, clean white walls and ceilings make visual tasks easier.

Consult a lighting professional if in doubt.

Recycle safely

Fluorescent lamps contain mercury, a highly toxic substance that remains in the food chain and environment. All lamps which are removed should be sent to a mercury recycling centre (make sure that your contractor does this).