

The maintained illuminance for general lighting of operating theatres is 1000 lx. This is usually adequate for performance of ancillary tasks by theatre staff. To minimise the possibility of bacterial transmission the general theatre luminaires should have ingress protection of $IP \geq 65/54$; that is IP65 void-to-room with the front frame fixed on and IP54 when the frame is off for lamp replacement.

The general lighting is required to provide both horizontal and vertical components of illuminance, vertical being required for good visibility of swab count racks, wall-mounted equipment, life support equipment etc., the surfaces of which should not be glossy.

For ophthalmic, ear, nose and throat (ENT), and micro-surgery, much lower levels of general illuminance will be required. A value of between 10 to 50 lx is recommended. Dimming will provide the flexibility that is often required in theatres to permit multi-functional use

Surface mounted or, in some instances, wall mounted luminaires may be required where theatre ceilings are not suitable for recessed luminaires. If wall mounted luminaires are used care should be taken to ensure that the minimum horizontal light requirement is achieved without glare to theatre staff.

Practice has shown that glare should not be a problem in the comparatively small areas of modern operating theatres provided that the recommended illuminances, colours and reflectances are used and linear recessed or surface fluorescent luminaires having a downward light output ratio of approximately 0.6 are specified.

Failure of the lighting during an operation may have serious consequences and it is essential to provide sufficient and reliable standby lighting. Instantaneous change-over to the standby supply is required for the major surgical luminaire or surgical luminaire system.