



## Lighting Levels

The CIBSE (Chartered Institute of Building Engineers) produces a code for Interior Lighting which gives lighting requirements for areas. This is also replicated in BS EN 12464-1:2002 Light and Lighting - Lighting of work places - Part 1: Indoor work places.

Illuminance (lux)	Activity	Area
100	Casual seeing	Corridors, changing rooms, stores
150	Some perception of detail	Loading bays, switch rooms, plant rooms
200	Continuously occupied	Foyers, entrance halls, dinin rooms
300	Visual tasks moderately easy	Libraries, sports halls, lecture theatres
500	Visual tasks moderately difficult	General offices, kitchens, laboratories, retail shops
750	Visual tasks difficult	Drawing offices, meat inspection, chain stores
1000	Visual tasks very difficult	General inspection, electronic assembly, paintwork, supermarkets
1500	Visual tasks extremely difficult	Fine work and inspection, precision assembly
2000	Visual tasks exceptionally difficult	Assembly of minute items, finished fabric inspection

Extracts from CIBSE Code for Lighting Part 2 (2002).

### Educational

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Classrooms	300	19	80
Technical drawing rooms	750	16	80
Computer practice rooms	300	19	80

### Retail Premises

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Sales area	300	22	80
Till area	500	19	80
Wrapper table	500	19	80

### Hotels and Restaurants

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Kitchen	500	22	80
Restaurant, dining room	-	-	80
Self service restaurant	200	22	80
Conference rooms	500	19	80

### Healthcare - Wards

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
General lighting	100	19	80
Reading lighting	300	19	80
Simple examinations	300	19	80
Examination & treatment	1000	19	80

### Residential - Flats / Bedsits

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Lounge	100 - 300	19	80
Kitchens	150 - 300	-	80
Bathrooms	150	-	80
Toilets	100	-	80

### Offices

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Filling, copying etc.	300	19	80
Writing, typing, reading	500	19	80
Technical drawing	750	16	80
CAD work stations	500	19	80
Conference & meeting	500	19	80
Reception desk	300	22	80
Archives	200	25	80

### Theatres, Concert Halls and Cinemas

Area	Illuminance (lux)	Limiting Glare rating	Minimum colour rendering (Ra)
Practice / dressing rooms	300	22	80
Foyers	200	-	-
Auditoria	100	-	-



There are also some Lighting Guides from CIBSE that gives details for various building types, for example;

#### Lighting Guide 7 (2005): Office Lighting

The recommended design maintained illuminance over the task area in any room where office work is carried out is generally in the range 300 to 500 lux.

Where the tasks are mainly screen based, such as data retrieval or telephone sales, then illuminances at the lower end of this range should be used.

Where the tasks are mainly document based, such as writing or copy typing, then 500 lux will be required.

Where there are visually more onerous tasks, such as proof reading or technical drawing, even higher levels should be considered.

The minimum level set by the Health and Safety Executive for any permanently occupied area is 200 lux.

#### Lighting Guide 1 (1989): The Industrial Environment

For recommendations of illuminance, colour rendering and glare see Schedule in the Code for Lighting of which a summary of key values are given below.

Area	Illuminance (lux)
Lifts	100
Corridors and stairs	100
Toilets	100
Canteens	300
Mess rooms	150-300
Plant rooms	150-300
Store rooms	100

More illuminance values are given for a range of industrial buildings in the Guides.