

Relevant Extract From Code of Practice for Energy Efficiency of Building Services Installation

5.4 Lighting Power Density

Lighting Power Density and Automatic Lighting Control for Various Types of Space		
Types of Space	Maximum Allowable LPD (W/m ²)	Automatic Lighting Control Required (Yes/No)
Atrium / Foyer with headroom over 5m	17	Yes
Bar / Lounge	14	No
Banquet Room / Function Room / Ball Room	20	No
Canteen	11	No
Car Park	5	Yes, at parking spaces only
Classroom / Training Room	12	Yes
Clinic	15	No
Computer Room / Data Centre	15	Yes
Conference / Seminar Room	14	Yes
Corridor	8	Yes
Court Room	15	Yes
Dormitory	8	Yes
Entrance Lobby	14	Yes
Exhibition Hall / Gallery	17	No
Guest room in Hotel or Guesthouse	13	No
Gymnasium / Exercise Room	13	Yes
Kitchen	13	No
Laboratory	15	No
Lecture Theatre	13	Yes
Library - Reading Area, Stack Area or Audio Visual Centre	15	No
Lift Car	11	Yes
Lift Lobby	11	Yes
Loading & Unloading Area	8	Yes
Office, enclosed (Internal floor area at or below 15m ²)	13	Yes
Office open plan or with internal floor area above 15m ²	12	Yes
Passenger Terminal Building		
• Arrival Hall / Departure Hall, with headroom not exceeding 5m	14	No
• Arrival Hall / Departure Hall, with headroom over 5m	18	No
• Passenger circulation area	13	No
Patient Ward / Day Care	15	No
Plant Room / Machine Room / Switch Room	10	No
Public Circulation Area	13	Yes
Railway Station		
• Concourse / Platform / Entrance / Adit / Staircase, with headroom not exceeding 5m	14	No
• Concourse / Platform / Entrance / Adit / Staircase, with headroom over 5m	18	No

Lighting Power Density and Automatic Lighting Control for Various Types of Space

Types of Space	Maximum Allowable LPD (W/m ²)	Automatic Lighting Control Required (Yes/No)
Refuge Floor	11	Yes
Restaurant	17	No
Retail	17	No
School Hall	14	Yes
Seating Area inside Theatre / Cinema / Auditorium / Concert Hall / Arena	10	No
Server Room / Hub Room	10	No
Sports Arena, Indoor, for recreational purpose	17	No
Staircase	7	No
Storeroom / Cleaner	9	Yes
Toilet / Washroom / Shower Room	11	Yes (occupant sensing control not applicable)
Workshop	13	No

Multi-functional Space

See below

LPD of each combination of function-specific luminaires should not exceed the maximum allowable value corresponding to the type of space illuminated by that combination of luminaires, detailed as follows:

LPD_{F1} not to exceed LPD_{S1} ,

LPD_{F2} not to exceed LPD_{S2} ,

LPD_{Fn} not to exceed LPD_{Sn} ,

where LPD_{F1} , LPD_{F2} , ..., LPD_{Fn} respectively refers to the lighting power density corresponding to function F1, F2, ..., Fn, and

LPD_{S1} , LPD_{S2} , ..., LPD_{Sn} respectively refers to the maximum allowable value of lighting power density corresponding to the classified Space S1, S2, ..., Sn based on the respective function F1, F2, ..., Fn.

5.6 Automatic Lighting Control

- 5.6.1.1 Automatic lighting control should be provided to the space given in Table 5.4 unless the total electrical power consumed by the completed fixed lighting installations in the space does not exceed 150 W. The control should be able to shut off or reduce the general lighting power by at least 50% automatically of the lighting zone being controlled.
- 5.6.1.2 For any space requiring automatic lighting control, the requirements on daylight responsive control are applicable when the space is provided with fenestrations on exterior wall or overhead skylight.
- 5.6.1.3 The control devices or system should provide independent control which -
- (a) control the lighting for an area of no more than 2000 m²;
 - (b) include no more than one floor except for spaces at multiple floors with similar configurations, lighting layouts and the lighting installations are under the same ownership; and
 - (c) cater for weekend and holidays operation pattern except the lighting installation designed for such a space is required of 24 hours a day and 7 days a week operation.
- 5.6.1.4 Any manual control installed to provide override of the automatic lighting control by the occupant of the space should not turn the lighting on for more than two hours per activation and should not control more than 500 m².
- 5.6.1.5 For space deploying occupant sensors, the reduced lighting power control should activate within 15 minutes of all occupants leaving the space.