

## 502.03 Elevators and Escalators

For all new buildings:

**A. Escalators** - Escalators must be fitted with controls to reduce speed or to stop when no traffic is detected. Escalators shall be designed with energy savings features as described below:

1. **Reduced speed control:** The escalator shall change to a slower speed when no activity has been detected for a period of a maximum of three (3) minutes. Detection shall be by photocell activation at the top and bottom landing areas.
2. **Use on demand:** The escalator shall shut down when no activity has been detected for a period of a maximum of fifteen (15) minutes. Use on demand escalators must be designed with energy efficient soft start technology. The escalator shall start automatically when required; the activation shall be by photocells installed in the top and bottom landing areas.

**B. Elevators (lifts)** - Elevators (lifts) must be provided with controls to reduce the energy demand. To meet this requirement, the following features must be incorporated in traction drive elevators:

1. Use of AC Variable-Voltage and Variable-Frequency (VVVF) drives on non-hydraulic elevators.
2. Energy efficient lighting inside the elevator including controls to turn lights off when the elevator has been inactive for a period of a maximum of five (5) minutes.

## 502.04 Lighting Power Density - Interior

For new buildings, the average Lighting Power Density for the interior connected lighting load for specific building types must be no more than the watts per square metre of gross floor area given in Table 502.04 (1).

**Table 502.04(1) – Interior Lighting Power Density**

Building Type	Maximum average Watts per square metre (W/m <sup>2</sup> ) across total building area
Commercial/Public: Offices, Hotels, Resorts, Restaurants	10
Educational Facilities	12
Manufacturing Facility	13
Retail Outlets, Shopping Malls, Workshop	14
Warehouses	8

Lighting Power Densities for building types not listed in Table 502.04 (1) should be no greater than those values given in ASHRAE 90.1-2007 Table 9.5.1 or equivalent as approved by DEWA.

