

Alternatively, the luminaires may be fed by means of a spur off a protected ring. Slave luminaires may be designed to operate from either AC or DC power supplies. For an AC supply, the luminaire is normally AC, but may be DC with internal rectifiers. Supply voltage in emergency mode may not be the same as that in mains mode — if the luminaires are maintained, a changeover relay will be needed. For a DC supply, the luminaires may be DC or fitted with an inverter to operate on AC. Again, if they are maintained, a changeover relay will be required. In both cases, the designer must be clear as to the lumen output available from the luminaires in emergency mode.

#### 8.4.4 Luminaire classification

Table 8.2 shows an emergency lighting luminaire classification system. The resulting code identifies the type of system, mode of operation, facilities, and for self-contained luminaires, the rated duration. The classification of a specific emergency lighting luminaire is shown by the label attached.

**Table 8.2** Emergency lighting luminaire classification

Type	Mode of operation	Facilities	Duration for self-contained luminaires
X = Self-contained	0 = Non-maintained	A = Includes test device	10 = 10 minutes
Z = Central system	1 = Maintained	B = Includes remote test module	60 = 1 hour
	2 = Combined non-maintained	C = Includes inhibiting mode	120 = 2 hours
	3 = Combined maintained	D = High-risk task luminaire	180 = 3 hours
	4 = Compound non-maintained		
	5 = Compound maintained		
	6 = Slave		

#### 8.4.5 Light sources

To be suitable for use in emergency lighting luminaires, light sources need to have fast run-up and restrike times, and preferably a long life. Tungsten and tungsten halogen lamps are infrequently used because of their low efficiency and short life, except in low-temperature applications because in such conditions their light output is not affected.

The fluorescent lamp with hot cathodes, in either linear or compact form, is the lamp used for most emergency lighting applications because its high efficiency and long life are an ideal combination. However, cold-cathode lamps, despite lower efficiency, can be useful because of their even longer lamp life. Lamps with internal starters should not be used. Also, care must be taken when using amalgam versions of fluorescent lamps because these have slow run-up characteristics.