



**Requirements for Self-contained Luminaires**  
**Emergency Lighting Systems**

**A. Definition**

1. Luminaire means an apparatus which distributes, filters and transforms the light given by a lamp or lamps and which includes all the items necessary for fixing and protecting these lamps and for connecting them to the supply circuit.
2. Self-contained emergency lighting luminaire means a luminaire providing maintained or non-maintained emergency lighting in which all the elements, such as battery, the lamp, the control unit and the test and monitoring facilities, where provided, are contained within the luminaire or adjacent to it (that is, within 1 metre).

**B. Specification**

3. Emergency lighting luminaires shall comply with the non-flammability (resistance to flame and ignition) provisions specified in BS EN 60598-2-22:1999 and external parts shall also be subjected to the 850°C glowing/hot wire test; any burning parts should self-extinguish within 30 seconds.
4. All power cables extended outside the enclosure of a self-contained emergency lighting luminaire, other than the wiring connecting the luminaire to normal supply, shall conform to BS EN 60702-1:2002, BS EN 60702-2:2002 and BS 6207-3:2001 as appropriate or to BS 6387:1994 Cat. CWZ or other international standards acceptable to the Director of Fire Services.
5. An automatic trickle charger with a 220-volt input and suitable output and fitted with pilot lights or other indicating device shall be provided for the batteries. The charger shall be capable of re-charging the battery to 100% of the rated capacity in not more than 12 hours.
6. The self-contained luminaires emergency lighting systems shall be capable of maintaining the stipulated lighting levels for a period of not less than one hour (rated duration).
7. Upon failure of the main lighting system or in the event of power failure, the emergency lighting shall automatically light up to at least 90% of the stipulated illumination level within 5 seconds.
8. Each unit shall be provided with a properly labelled 'TEST' switch and charge monitor light. A low voltage cut out shall also be provided to disconnect the batteries when fully discharged.

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**C. Other Requirements**

9. Each luminaire shall be so designed as to provide a broad non-glare illumination when in use. At least two sets of emergency lighting luminaire shall be provided in the premises so that the premises will not be plunged into total darkness in the event of a luminaire failure. (If the area of the premise is less than 16m<sup>2</sup>, only one set of emergency lighting will be required.)
10. The minimum illumination provided at floor level by the emergency lighting systems shall be:-
- |  |                      |
|--|----------------------|
| Staircase/exit route   | not less than 2 lux. |
| Night club, restaurant, dance hall, or premises where people have freedom of movement and there are loose fixtures and fittings. | not less than 1 lux. |

The measurements shall be taken at the mid-point between any two emergency lighting luminaires. All readings shall be taken by an illuminance meter and a discretionary tolerance of minus 10% is permitted.

11. Facilities exceeding 8m<sup>2</sup> gross area and facilities of less than 8m<sup>2</sup> without borrowed light should be provided with escape lighting complying as if they were part of an escape route. (For clarity, escape route means a route forming part of the means of escape from a point in a building to a final exit. Borrowed light means the light from other emergency lighting source. Escape lighting means that part of emergency lighting which is provided to ensure that the escape route is illuminated at all material times).
12. The emergency lighting system shall be installed and certified by a Registered Fire Service Installation Contractor.
13. Relevant test report(s)/certificate(s) issued by a testing organization recognized by the Fire Services Department or a local university laboratory competent to certify the properties regarding resistance to flame and ignition and performance of the emergency lighting shall be submitted to the Fire Services Department.
14. Periodical tests shall be carried out to each luminaire according to the following procedures :-
- Each luminaire shall be energized from its battery by simulation of a failure of the supply to normal lighting for the period as specified below :-

Monthly	-	not exceeding one quarter of the rated duration as required in clause 6 above.
Six-monthly	-	one quarter of the rated duration.
Three-yearly	-	full duration.
  - The luminaire shall be functioning properly to maintain the stipulated lighting level and the normal power supply shall be restored after the test.
  - The test results shall be recorded in a register.