



BS 5266 : Part 1 : 1975

UDC 628.978.6: 696.6: 621.32

Code of practice for
Emergency lighting

Part 1. Code of practice for the emergency
lighting of premises other than cinemas
and certain other specified premises used
for entertainment

British Standards Institution

AVA **Documents**
Document Sharing Hub

This British Standard, having been approved by the Illumination Industry Standards Committee, was published under the authority of the Executive Board on 31st July, 1975

© British Standards Institution, 1975

ISBN: 0 580 08607 0

Copyright

Users of British Standards are reminded that copyright subsists in all BSI publications. No part of this publication may be reproduced in any form without the prior permission in writing of BSI. This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols and size, type, or grade designations. Enquiries by post should be addressed to the Publications Manager, British Standards Institution, Linford Wood, Milton Keynes MK14 6LE. The number for telephone enquiries is 01-837 8801 and for telex 23218.

Contract requirements

Attention is drawn to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

Revision of British Standards

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. **It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.** Full information on all BSI publications, numbering over 6000, will be found in the *British Standards Yearbook*. This information is supplemented by details published each month in *BSI News* of new publications, revisions and amendments.

BSI News is available to Subscribing Members of the Institution. All other publications may be purchased direct from Sales Department. Enquiries concerning subscribing membership, which has considerable advantages, will be welcomed, and should be made to Subscriptions Department. Both departments are located at:

Linford Wood, Milton Keynes MK14 6LE (Telephone Milton Keynes (0908) 320066; Telex 825777).

The following BSI references relate to the work on this standard:
Committee reference LGE24 Draft for comment 72/26949 DC

Co-operating organizations

The Illumination Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Association of Public Lighting Engineers
British Glass Industry Research Association
British Railways Board
Building Research Station (Department of the Environment)
Civil Aviation Authority
Council of British Manufacturers of Petroleum Equipment
*Department of the Environment
*Electricity Supply Industry in England and Wales
Engineering Equipment Users' Association
Glass Manufacturers' Association

Health and Safety Executive, HM Factory Inspectorate
*Illuminating Engineering Society
Institution of Electrical Engineers
Institution of Electrical and Electronic Technician Engineers
*Institution of Municipal Engineers
*Lighting Industry Federation
London Transport Executive
Ministry of Defence
National Physical Laboratory (Department of Industry)
Royal Institute of British Architects
Society of British Gas Industries
Society of Glass Technology

The Government department and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Association of Ballrooms
Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA)
Association of British Theatre Technicians
Association of County Councils
Association of Metropolitan Authorities
British Battery Makers' Society
British Bingo Association
British Hotels, Restaurants and Caterers Association
Chief and Assistant Chief Fire Officers' Association
Cinematograph Exhibitors' Association of Great Britain and Ireland

Department of Health and Social Security
Department of Prices and Consumer Protection
Greater London Council
Home Office
Incorporated Association of Architects and Surveyors
National Association of Licensed Bingo and Social Clubs
Post Office (Telecommunications Headquarters)
Society of Engineers
Tenpin Bowling Proprietors' Association of Great Britain
Theatres' National Committee

**BS 5266 : Part 1 : 1975**

UDC 628.978.6:696.6:621.32

Code of practice for Emergency lighting

Part 1. Code of practice for the emergency
lighting of premises other than cinemas
and certain other specified premises used
for entertainment

Amendments issued since publication

Amd. No.	Date of issue	Text affected
1928	March 1976	Incorporated in this reprint
3112	December 1979	Incorporated in this reprint
3401	November 1980	Incorporated in this reprint
3889	September 1982	Incorporated in this reprint

British Standards Institution · 2 Park Street · London W1A 2BS

Telephone 01-629 9000

Telex 266933

**Documents**

Document Sharing Hub

BS 5266 : Part 1 : 1975

Contents

	Page		Page
Co-operating organizations	Inside front cover	10. Choice of appropriate emergency lighting systems	11
Foreword	2	11. Certificate and log book	13
Code		12. Servicing	14
1. Scope	3	Appendices	
2. References	3	A. Model completion certificate	17
3. Definitions	3	B. Model inspection and test certificate	18
4. Consultation and records	4	C. Model schedule	20
5. Emergency lighting design requirements	4	Figures	
6. Emergency lighting design procedure	6	1. Proportions and spacing of lettering	16
7. Emergency lighting systems	7	2. Recommended layout for 'emergency exit' signs	16
8. Marking	9		
9. Wiring systems	9		

Foreword

Safety legislation applicable to premises designated by the Home Secretary is intended to extend and encourage rationalization of fire precautions in many types of premises.

The aim of this code is to promote a wider understanding of the different types of emergency lighting system which may be employed and to give guidance on their correct application to the varied requirements of different categories of premises.

These recommendations have been drawn up to encourage uniformity of application, based on providing adequate safety to persons in the event of interruption of the normal lighting and having due regard to the hazard level and degree of familiarity of occupants with the particular premises.

The code recognizes that in addition to ensuring safe unobstructed means of escape from premises at all times, one important function of emergency lighting is to make possible the immediate location and operation of fire alarm points and fire fighting equipment, and another is to minimize the chance of panic arising in enclosed spaces, such as lifts.

This code is the first Part of a British Standard dealing with emergency lighting. Part 2 will also be a code and will constitute a revision of CP 1007 'Maintained lighting for cinemas' to include requirements for other similar types of premises to which the general provisions of CP 1007 are at present applied, e.g., dance halls, ballrooms, licensed bingo premises and ten-pin bowling establishments. Other Parts of the British Standard will comprise specifications for equipment intended for use in emergency lighting systems, e.g. relays.

Although the code makes recommendations for the provision of emergency lighting in a wide variety of premises, the fact that particular types of premises are mentioned in clause 10 does not necessarily mean that all such premises will be required by law to have emergency lighting installed.

For certain classes of premises the provisions of this code may be supplemented or replaced by alternative requirements at the discretion of the enforcing authority.

BS 5266 : Part 1 : 1975

British Standard Code of practice for

Emergency lighting

Part 1. Code of practice for the emergency lighting of premises other than cinemas and certain other specified premises used for entertainment

1. Scope

This code relates to the provision of electric emergency lighting in most types of premises, other than private domestic premises, cinemas, and existing premises to which the provisions of CP 1007 'Maintained lighting for cinemas' have been applied by the enforcing authority. This code does not apply to premises that will be covered in detail in a revision of CP 1007 which, when ready, will be published as Part 2 of this British Standard. Premises not covered are those used primarily as ballrooms and dance halls, cinemas licenced under the Cinematograph Acts of 1909 and 1952, bingo premises licenced under the Gaming Act 1968, premises used for ten-pin bowling.

Although the code does not cover private domestic premises, its provisions are applicable to common access routes within multistorey dwellings.

The code recommends standards for the clear indication and safe level of illumination of escape routes in the event of failure of the normal supply, and proposes minimum continuous periods of operation of such emergency lighting based on the size, type and usage of the premises.

NOTE. Should it be necessary to apply the code to any other type of lighting, the exact way in which each of its provisions is to be met should be the subject of agreement with the enforcing and/or other relevant authority before work is started.

2. References

The titles of the British Standards and code of practice referred to in this code of practice are listed on the inside back cover.

3. Definitions

For the purposes of this code the following definitions apply:

premises. The whole or part of a building which is to be treated as a single unit for the purposes of applying the recommendations of this code.

exit. A way out which is intended to be used at any time whilst the premises are occupied.

emergency exit. An exit which is intended to be used only during an emergency.

final exit. The terminal point of an escape route, beyond which persons are no longer in danger from fire.

escape route. A route forming part of the means of escape from a point in a building to a final exit.

normal lighting. All permanently installed artificial lighting operating from the normal supply which, in the absence of adequate daylight, is intended for use during the whole time that the premises are occupied.

*As amended
Sept. 1982*

NOTE. Also known as 'general lighting'

normal supply. That source of electrical energy used to provide normal lighting.

*As amended
Sept. 1982*

emergency lighting. Lighting provided for use when the normal lighting fails.

escape lighting. That part of emergency lighting which is provided to ensure that the means of escape can be safely and effectively used at all material times.

standby lighting. That part of emergency lighting which may be provided to enable normal activities to continue.

maintained emergency lighting. A lighting system in which all emergency lighting lamps are in operation at all material times.

non-maintained emergency lighting. A lighting system in which all emergency lighting lamps are in operation only when the normal lighting fails.

luminaire. Apparatus which distributes, filters or transforms the lighting 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.

NOTE. Internally illuminated signs are a special type of luminaire.

sustained luminaire. An emergency lighting luminaire containing two lamps, one of which is energized from the normal lighting supply and the other from an emergency lighting supply. Such a luminaire is intended to sustain illumination at all material times.

lighting point. A termination of a fixed wiring system intended for the attachment of a luminaire.

illuminance. The luminous flux density at a surface, i.e. the luminous flux incident per unit area.

Unit: lux.

NOTE. The term 'illumination' is now used only to describe the general process of lighting.

uniformity ratio. The ratio of the minimum illuminance to the maximum illuminance applied to values on the working plane.

NOTE. Throughout this code the floor is taken to be the working plane.

BS 5266 : Part 1 : 1975

spacing height ratio. The ratio of spacing between the geometric centres of adjacent luminaires to their height above the working plane.

NOTE. Throughout this code the floor is taken to be the working plane.

mounting height. The vertical distance between a luminaire and the working plane.

NOTE. Throughout this code the floor is taken to be the working plane.

4. Consultation and records

4.1 Consultation. Consultation between the owner and/or occupier of the premises, the architect, the lighting engineer, the installation contractor, the enforcing authority, the electricity authority and any others concerned should be arranged at a very early stage. It is important that the requirements of any national and/or local legislation which may apply to the premises in question be fully recognized and discussed at this time.

4.2 Supply of plans. Plans showing the layout of the building and of all existing or proposed escape routes, fire alarm call points and fire fighting equipment and indicating the positions of all items, structural or otherwise, which may offer obstruction to escape, should be provided at an early stage for use during the consultations referred to in 4.1.

4.3 Records. On completion of the work, drawings of the emergency lighting installation should be provided and retained on the premises. Such drawings should be continuously up-dated to keep them in line with any subsequent changes to the system.

*As amended
Nov. 1980*

In addition and in accordance with 11.3, a log book should be provided for the recording of routine examinations, tests, defects and alterations.

5. Emergency lighting design requirements

When the normal lighting of occupied premises fails, irrespective of the cause, escape lighting is required to fulfil the following functions:

- (a) to indicate clearly and unambiguously the escape routes;
- (b) to provide illumination along such routes to allow safe movement towards and through the exits provided;
- (c) to ensure that fire alarm call points and fire fighting equipment provided along escape routes can be readily located.

In addition to escape lighting, there may be a requirement in some categories of premises for standby lighting to continue in operation beyond the maximum time required to evacuate buildings. Such standby lighting may be necessary, for example, to allow early reoccupation of the premises should this be practicable.

Throughout this code reference to 'emergency lighting' covers escape lighting in particular, but also includes any element of standby lighting which may be essential for safety. It is assumed that requirements for such standby lighting will be met

by extending the design duration of the emergency lighting supply system beyond the minimum requirement for safe evacuation of the premises (see clause 10).

The standby lighting which may be considered desirable but which is not an essential element of the emergency lighting scheme is not covered in this code. However, such a standby system may well meet some or all of the requirements of this code or may be modified to do so.

Emergency lighting is required not only on a complete failure of the normal lighting, but also on a localized failure, if such a failure would present a hazard.

5.1 Identification of exits and escape routes by signs. Signs are required to ensure that escape routes from any position within the premises may be easily recognized and followed in an emergency.

All exits and emergency exits should be indicated by a sign bearing the legend 'exit' or 'emergency exit' as appropriate.

Where direct sight of an exit or emergency exit is not possible and there could be any doubt as to the direction of the appropriate exit, a directional sign or series of signs should be provided, so placed that a person moving towards each sign will be progressed towards an exit or emergency exit. Directional signs should bear the legend 'exit' or 'emergency exit' as appropriate, together with a supplementary arrow which may be either integral with the sign or placed adjacent to it.

5.1.1 Mounting height of signs. Signs should be positioned between 2 m and 2.5 m above floor level measured to the base of the sign. If this is not practicable the relevant authority should be consulted (see 4.1).

5.2 Requirements for signs

5.2.1 Illumination of signs. All exit, emergency exit, and escape route signs should be illuminated so that they are legible at all material times. In the event of failure of the normal supply, such signs should be illuminated by the emergency lighting supply. Any of the following methods of illumination may be used:

- (a) Lamps external to the sign, usually associated with painted or applied lettering.
- (b) Lamps contained within the sign.

NOTE. It is usual to require that this type of illumination be used within any area where the normal lighting may be deliberately dimmed or extinguished, e.g. places of entertainment.

- (c) A combination of (a) and (b).

- (d) Self-luminous signs in accordance with BS 4218.

5.2.2 Visibility of signs. Visibility depends upon contrast, so that the legibility of a sign, under any lighting conditions, depends upon the degree of contrast between the letters and their background. Effective contrast may therefore be in brightness or in colour, or both.

Where coloured signs are used, the legend of the signs should preferably be green and all such signs

BS 5266 : Part 1 : 1975

within the premises should be of the same colour.

Excessive brightness should be avoided as it can cause glare, and veiling reflections should be minimized by making all surfaces matt.

5.2.3 Detail of signs. The style, size and spacing of the lettering of the word 'exit' in exit and emergency exit signs should be in accordance with the requirements of figure 1. A slope of up to 8° to the right may be permitted for painted signs but internally illuminated signs should comply with the style of figure 1 without deviations. Smaller sizes than those of figure 1 are not permitted but in certain circumstances it may be necessary to provide signs for use at greater maximum viewing distances; in such cases the lettering of these signs should be as for the larger of the signs detailed in figure 1, but with all dimensions increased by multiplying them by $(d + 9)/45$; where d is the maximum viewing distance in metres.

The style, size and spacing of lettering of the word 'emergency' should be similar to that of the word 'exit' but the letters should be one-third of the height of the letters of the associated exit sign. For emergency exit signs, the words should be laid out to occupy the spaces, and with the separation between words, given in figure 2.

Directional arrows should be of such a shape and size that the direction which they are intended to indicate is immediately apparent when they are seen at the maximum viewing distance for which the accompanying exit or emergency exit sign has been designed. The type of arrow adopted should also be compatible with the rest of the sign. A form of arrow generally similar to that used on road signs and described in the Traffic Signs Regulations and General Directives is recommended but other forms of arrow are acceptable provided that they meet the requirements of this clause. Where the arrow is separate from the exit or emergency exit sign, the distance between the sign and the nearest part of the arrow should not exceed 150 mm and should preferably lie between 25 mm and 50 mm.

Internally illuminated exit signs complying with the requirements of BS 2560 fully meet the requirements of this clause. For self-luminous signs see 7.3.

NOTE. Where it is known that premises are to be used regularly by persons of poor sight, the maximum distances between signs, and the size of the letters, should be carefully considered.

5.3 Illumination for safe movement

5.3.1 Illuminance. Vision varies considerably from one person to another with regard to both the amount of light required to perceive an object clearly and the time taken to adapt to changes in the level of illumination (visual adaptation). In general, older people need more light to follow an escape route and have longer visual adaptation periods.

The determination of the maximum period which may be allowed to elapse between failure of the normal supply and the switch-on of the

emergency lighting depends upon the rate at which panic may be expected to mount in such circumstances and upon the time taken to adapt to the new, and normally much lower, illuminance provided by the emergency lighting.

Taking all these factors into consideration, it has been determined from experience and practical tests that the horizontal illuminance on the centre line of any escape route should never be less than 0.2 lux and that this level of emergency lighting should be provided within 5 s of failure of the normal lighting; except that, in premises likely to be occupied for the most part by persons who are familiar with them, this period may be extended to a maximum of 15 s at the discretion of the enforcing authority. In places of entertainment it is normal practice to require the use of a maintained emergency lighting system (see 7.4.1).

If within an open area, e.g. a small hall, there is no obviously defined escape route, the minimum illuminance required should apply to any part of the floor where people may tread on the way to the exit, other than along seatways in closely seated auditoria.

The value of illuminance given in this clause should be regarded as an absolute minimum at any time during the specified duration of the system. In designing emergency lighting systems to these requirements, allowances should be made for voltage drops in circuit wiring and for those factors which could lead to reduced light output with age, e.g. the effect of dirt, lamp ageing and battery performance.

For some theatre auditoria where the recommended maintained level of illuminance of 0.2 lux is likely to affect normal working, it is considered acceptable to reduce this level to not less than 0.02 lux, provided the system is so arranged that in the event of failure of the normal system of lighting within the auditoria the level of escape lighting illuminance shall be immediately and automatically restored to a minimum of 0.2 lux. Complete or substantially complete blackouts, which may be required for production reasons, may be permitted by the enforcing authority.

In places where it is desired to reduce the artificial lighting for effects purposes (e.g. a discotheque), it is permissible to extinguish the emergency lighting, provided that the switching for this arrangement is under continuous management control and that the area is visible from the switching position. It is essential that the circuit and equipment adopted be such that the emergency lighting is automatically restored in the event of the failure of the normal supply. Exit signs should remain illuminated at all material times.

5.3.2 Visibility of hazards. By itself, illuminance is not a sufficient criterion of visibility, since it refers only to the light falling on a surface and not the amount reflected back to the eye. As well as the influence of contrast, referred to in 5.2.2, a white object can be seen with much less light than a

*As amended
Sept. 1982*