



Emergency Lighting Guide



Philip Payne



Emergency Lighting Guide

Emergency Lighting is provided to ensure that occupants of a building can be guided out in the event of a mains failure.

There are British, European and international standards to ensure manufacturers make product and building designers lay these out safely and effectively.

Building owners or their responsible persons are legally bound to test the emergency lighting, record test results and maintain their systems.

- *Regulatory Reform (Fire Safety) Order 2005*
- *Building Regulations Approved Document B*
- *BS EN 1838:1999/BS 5266-7:1999*
- *BS EN 50172:2004/BS 5266-8:2004*
- *BS 5266-1:2011*
- *BS EN 62034:2012*
- *BS 5499-4:2000*
- *BS ISO 7010:2012*
- *SLL Lighting Guide 12 (LG12)*

The emergency lighting design must take into account the following:

- *Escape route signs*
- *Stairs so that each flight receives direct light*
- *Changes in Level*
- *Changes of escape route direction*
- *Corridor intersections*
- *First aid posts*
- *Fire Alarm call points or pieces of fire fighting equipment*
- *External areas in the immediate vicinity of final exits*
- *Moving stairways and walkways*
- *Toilet facilities exceeding 8m² or any multiple closet facility without borrowed light*
- *Toilet facilities for disabled use*
- *Motor generator, control and plant rooms*
- *All other areas as deemed by the Risk Assessment*

Test Requirements

Self Contained Luminaires

Test schedules are specified in BS 5266-8:2004

Commission	Daily	Monthly	Annual
Full 3hr Battery Discharge	Visual Check	Energise lamp from battery (short duration)	Energise lamp from battery Full 3hr Battery Discharge

Self Monitoring Luminaires

BS EN 62034:2012 requires that devices must perform tests at specified intervals and indicate faults found

Commission	Daily	Monthly	Annual
Full 3hr Battery Discharge within 30 days	Not Applicable	Energise lamp from battery (short duration)	Energise lamp from battery Full 3hr Battery Discharge

Risk Assessment

The Regulatory Reform Order requires that design parties, building owners and occupants should consult at early stages to develop and manage the risk assessment process.

Risk assessments need to be conducted and measures identified to safeguard building occupants. Emergency Light must be included and maintained including a test regime with recorded results.



Emergency Lighting Design

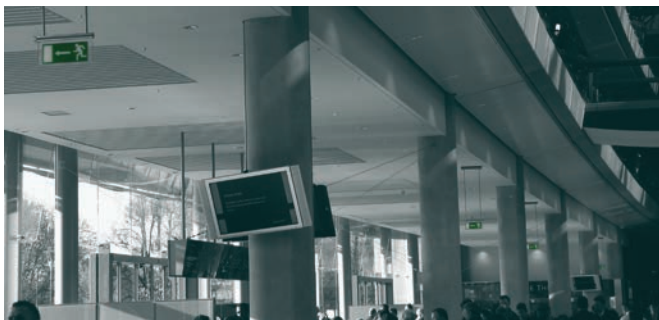
Observe Emergency Lighting Levels



1
LUX

Escape Routes (Up to 2 metre)

Not less than 1 Lux along centre line and a central band consisting of not less than half of the full width to 50% of that value. Substantially wider escape route to be treated as a number of 2m strips or be treated as an open area.



0.5
LUX

Open Area (Anti Panic)

Areas equal to or greater than 60m² require illumination at floor level to be not less than 0.5 Lux excluding a border of 0.5 metres from its perimeter. The ratio of maximum to minimum illuminance shall not be greater than 40:1.



15
LUX

High Risk Area

Areas considered to be high risk shall not be less than 10% of the required illuminance of the task being performed. It should not be less than 15Lux.





Emergency Lighting Design

Take Account of...



Escape Route Signs

Ensure there are sufficient and that they are illuminated when required.
(sleeping accommodation, where alcohol is consumed and where occupants are unfamiliar with surrounding).



Stairs

Ensure each tread receives light.



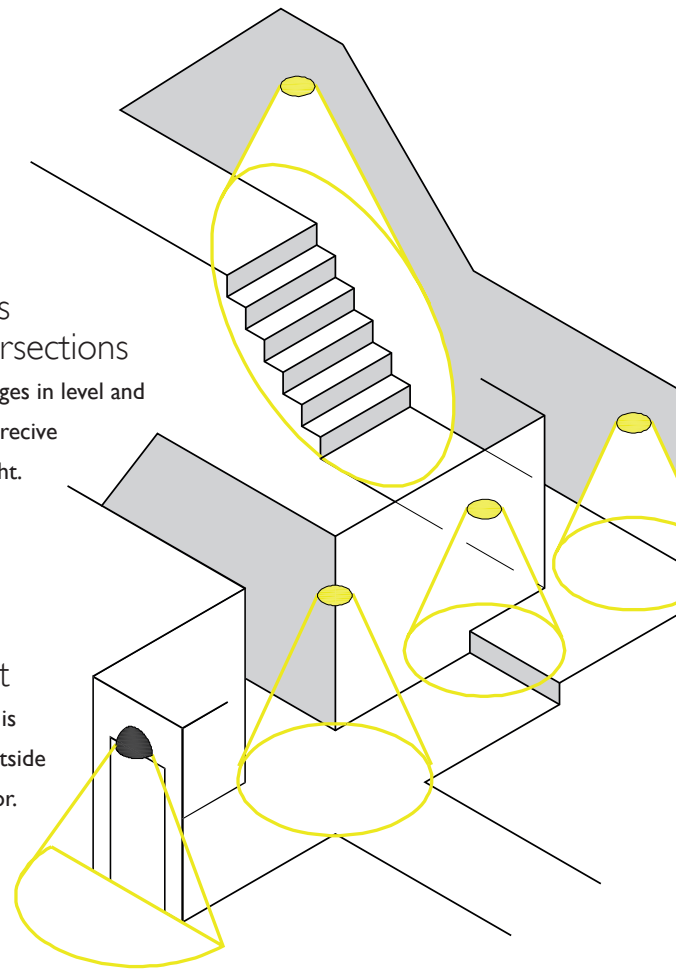
Junctions and Intersections

Ensure changes in level and in direction receive adequate light.



Final Exit

Ensure light is provided outside the final door.



Refuges	
5LUX	3hrs

Plant Rooms	
15LUX	3hrs

Fire Control Equipment	
15LUX	3hrs

Security Devices	
5LUX	3hrs



Emergency Lighting Design

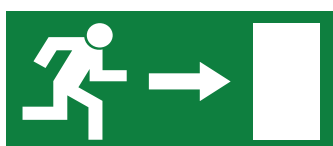
Escape Legend Requirements...

To Comply with European and British requirements Legends MUST:

- Have a green background (Safety Colour) and White Pictograms (Contrast Colour)
- Have a minimum illuminance of 2cd/m^2 on the safety colour
- Have a contrast between safety Colour and Contrast Colour of $>5:1$ but $<15:1$
- Have ratio of the max-min luminance within Contrast or Safety Colours of $<10:1$
- Have graphics to one of the following formats:-BS EN 62034:2012



BS5499



BS 5266-EN 1838 (EC92/58)



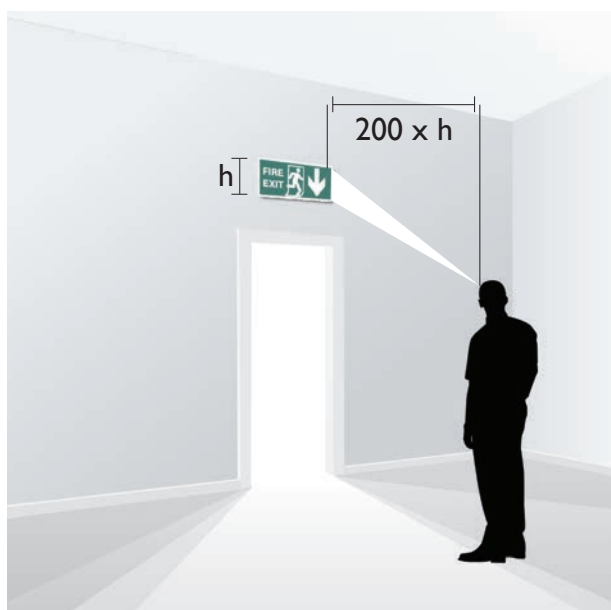
BS EN ISO7010

Any of the above meet legislative requirements but may not be mixed on any single installation.

Maximum viewing distance:

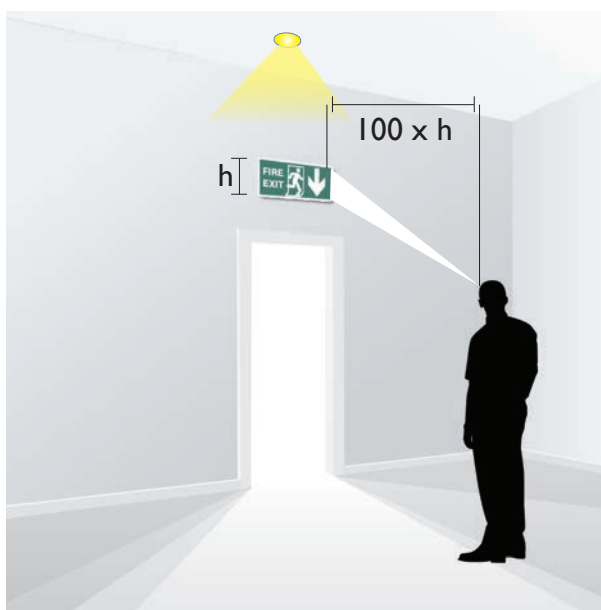
Internally illuminated signs

200 x the panel height



Externally illuminated signs

100 x the panel height





Philip Payne Ltd

A SUBSIDIARY OF F.W. THORPE PLC

Thornhill Road
Lode Lane
Solihull
B91 2HB
England.

Tel: 0121 705 2384
Fax: 0121 711 2469

e-mail: mail@p-payne.co.uk
www.philippayne.co.uk

Philip Payne Ltd registered in England No. 1361523
We reserve the right to alter specifications without prior notice.

