

HILCLARE

LIGHTING MANUFACTURER

— LED BY DESIGN —



Emergency Lighting

Qualified, experienced
emergency lighting design.





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LED Solutions For Emergency Environments

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At Hilclare we have over 30-years' experience supplying a wide range of high-quality, robust, and fully compliant emergency luminaires designed to meet the exacting demands of specifiers, contractors, facilities managers and end users.

Our energy efficient, maintenance free lighting is suitable for a range of applications. It is fully compliant with the British standards, meeting base design guidelines and those relating to manufacturing, test and use.



British Standards

We supply luminaires in accordance with the relevant industry standards as listed below.

Base Guidance Document

(BS 5266-1: 2016): Code of practice for emergency lighting of premises. Gives general rules and guidance on the provision and operation of emergency lighting in most premises other than dwelling houses.

System Standards

BS EN 50172/ BS 5266-8: Emergency escape lighting systems. Specifies the minimum provision and testing of emergency lighting for different premises.

BS EN 1838: Lighting applications – emergency lighting. Specifies the illumination to be provided by emergency lighting (including luminance, duration and colour).

What Is Emergency Lighting And Why Do You Need It?

Emergency lighting ensures that lighting is provided rapidly, automatically, and for a suitable length of time in the event that the main power supply is cut, and normal electrical illumination fails. This helps to ensure the safety of building occupants, including ones in external areas up to the place of safety as defined by BS EN 1838.

What Are The Different Types Of Emergency Lighting?

There are several areas where emergency lighting is required within a building design, from escape routes to high-risk task areas and open areas.





Escape Route

Escape route lighting illuminates' routes to fire escapes and emergency exits, guiding occupants quickly and safely out of a building to help reduce panic and save lives.

Exit signs provide information on the direction of travel that must be followed to reach a place of safety during the evacuation of a building in an emergency situation, and therefore are critical elements of an emergency lighting installation.

Escape lighting is required to fulfil the following function:

- 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 firefighting equipment provided along escape routes can be readily located.
- d) To permit operations concerned with safety measures.

Minimum of 1 Lux on the centre line of escape routes.
Uniformity of 40:1 must not be exceeded.

Once the points of emphasis have been covered, additional luminaires must be provided to ensure that minimum illuminance levels of 1 lux are met, thus allowing safe use of escape routes. Further to this, every compartment on the escape route requires at least two luminaires, so that some light is provided if luminaire failure occurs. In terms of uniformity, the ratio of maximum light to minimum light should not exceed 40:1.

In areas where machines are in operation and hazardous equipment is located, light levels should not be less than 10% of maintained illuminance at the reference plane and shouldn't be less than 15 lux.

Point Of Emphasis

It is required that luminaires are placed at points of emphasis on escape routes and open (anti-panic) areas.

Illuminating these locations (points of emphasis) helps to reveal specific hazards, highlight safety equipment and signs in addition to assisting with safe travel along the escape route. Mandatory points of emphasis include:

- ✓ Change of direction
- ✓ Near first aid posts
- ✓ Change in floor level (trip hazards)
- ✓ At each designated exit and outside to a place of safety
- ✓ Near firefighting equipment
- ✓ Near call points
- ✓ Near the intersection of escape routes

General

Other areas, which require emergency lighting but are not on the escape route area include:

- ✓ Lift car
- ✓ Toilet (above 8m² floor area)
- ✓ Escalators
- ✓ Plant room

Minimum of 0.5 lux of the core open area.

High risk areas shall not be less than 10% of maintained illuminance at the reference plane, and shall not be less than 15 lux.

Further to this, any area that is above 60 meters squared requires emergency lighting, areas below this don't require emergency lighting unless specified.

Additional factors of consideration in deciding what areas require escape route lighting include:

- ✓ Underground and windowless areas
- ✓ High levels of occupancy
- ✓ If there is a need to switch off equipment before leaving



Design

The first stage of installing emergency escape lighting is carrying out a risk assessment. Depending on the use of the facilities, employers may be required to carry out a risk assessment to determine the correct emergency lighting is achieved.

Stage two is consultation. At this stage, the needs of the end client can be specified thinking about the maintenance, servicing, complete cost of ownership, budget and application.

If areas are identified as high risk, for example functional kitchens and school kitchens where there's potential for injury, emergency escape routing must be used.

The British standard for escape route lighting provides the lighting designer with clear guidelines to work within, recommending the types and durations of emergency lighting systems relating to each type of property. It must be kept in mind, however, that these standards are the minimum safety standards for this class of building and that a higher standard may be required for individual installations.

Testing

Regulations states each system should have means of simulating failures and records of servicing and testing should be provided.

Function Test

All emergency lighting systems must be tested monthly. This is a short, functional test where luminaires are tested to ensure they are present, clean and that they illuminate when mains supply is broken to them.

Discharge Test

This is an annual test where luminaires are tested to their full rated duration when mains supply is broken to them and charge indicators are checked. The results of the monthly and annual tests must be recorded and, if failures are detected, these must be remedied as soon as possible.

Types Of Emergency Lighting Technology

3-hour Integral Emergency – Manual Check

3-hour integral emergency fittings are continually charged during normal operation and are capable of powering the luminaire for at least 3 hours should the power fail, as required by British standards. This ensures that the occupants have time to exit the building in the event of an evacuation.

Self-Test – Visual check

Self-test is an intelligent emergency luminaire that carries out routine, functional and duration testing in-time with the standards required. This module is a highly cost-effective luminaire option as it eliminates the need for manual testing, alerting faults that require attention through visible flashes and beeps.

DALI Addressable Emergency – Digital Check

DALI Emergency works in a similar way to self-test, with the exception being that the fault reporting is communicated centrally through the DALI system to a PC. This allows the status of emergency fittings to be monitored remotely, negating the need for someone to be on site to view faults. This type of emergency lighting does however have a higher initial cost due to the additional components and wiring required.

Central Battery

With central battery source lighting, the power isn't generated in every lamp like in self-contained luminaires, but rather from a central location. This central battery system supplies slave emergency safety and escape sign luminaires with reliable power. Because there is only one location to consider, maintenance and route testing is much easier. Furthermore, design life of these batteries tends to be 10 years.

This type of emergency lighting is an ideal choice for installations with longevity and low maintenance as priorities, making it common in universities, warehouses, train stations, mills, and a range of high-bay environments.



Standalone Downlights

At Hilclare, our range of LED emergency downlights offer the perfect balance of price and quality. Ideal for commercial and industrial facilities where unobtrusive emergency lighting is required. The optically efficient lenses ensure optimum performance for corridor or open area applications.



EFD-3

Adjustable Recessed Downlight

- 150 & 200 Lumen output
- IP44, with IP65 optional
- Non maintained
- Standard and self-test technology
- Interchangeable lens - Open Area & Escape Route
- Lithium battery



XD-3

Recessed Downlight

- 150 & 270 Lumen output
- IP42
- Open Area or Escape Route lens options
- Standard and self-test technology
- White or black colour options
- Nickel Cadmium (NiCd) Battery



XDS-3 IP20

IP20 Surface Mounted Downlight

- 260 Lumen output
- IP44
- Open Area and Escape Route lens
- Self-test as standard
- White or black body options
- Nickel Cadmium (NiCd) Battery



XDS-3 IP65

IP65 Surface Mounted Downlight

- 260 Lumens
- IP65
- Open Area and Escape Route lens
- Self-test as standard
- Lithium Iron Phosphate (LiFe) battery





Exit

Our Hilclare range of LED emergency exit signs combine advanced technology with aesthetic design, to offer robust, fully functional emergency lighting solutions helping to provide safe evacuation from a building. We supply luminaires suitable for a range of mounting options from wall or ceiling mounting to angled surfaces, offering you maximum flexibility.



XE-36

Surface Mounted Exit Sign

- Wall mounted
- 36m viewing distance
- IP20
- Standard and DALI/Self-test technology
- Supplied with signage integrated
- Nickel Cadmium (NiCd) battery



CBH-20 BLADE

IP65 Hanging Blade Exit Sign

- 'Hanging Blade' exit sign
- 20m viewing distance
- IP65
- Standard and DALI/Self-test technology
- Legend options available
- Nickel Cadmium (NiCd) Battery



FXE-20

Dual Mounted Exit Sign, Wall Or Ceiling Mounted

- 'Dual' concept exit sign
- Wall or ceiling mounted
- 20m viewing distance
- Self-test technology
- IP43
- LifePo battery



CWE-25/30

Architectural Exit Sign

- 20m or 30m viewing distance
- Wall, ceiling or suspension mounted
- IP42
- Self-test technology
- Lithium-ion battery



MXE-25/30

Bladed Exit Sign

- 25m or 30m viewing distance
- Wall, ceiling or suspension mounted
- IP40
- Standard and DALI/Self-test technology
- LifePo battery
- Legend options available
- Supplied with ISO format legends



SBE-28

Wall, Ceiling Or Suspended Exit Sign

- 28m viewing distance
- IP20
- Standard & DALI/Self test technology
- Silver or white body options
- Nickel Cadmium (NiCd) Battery
- Legend options available
- Supplied with ISO format legends

ISO FORMAT SIGNAGE

Exit signs must conform to a single format, as per ISO 7010. To conform, exit and first aid signs must be white with green with a ratio of between 5:1 and 15:1. The minimum luminance of any 10mm area must be greater than 2cd/m² and the ratio of illuminance shall be less than 10:1.

| Direction Arrows | Meaning | Application |
|------------------|---|---|
| | <ul style="list-style-type: none"> • Progress forward from here • Progress from here and through • Progress forward and up from here | <ul style="list-style-type: none"> • Suspended in a corridor • Suspended in open area • Positioned above a door • At foot of stair/ramp |
| | <ul style="list-style-type: none"> • Progress down from here | <ul style="list-style-type: none"> • Top of stairs or ramp • Positioned at changed of level |
| | <ul style="list-style-type: none"> • Progress left from here | <ul style="list-style-type: none"> • On corridor walls • Adjacent to right of exit • Change of direction |
| | <ul style="list-style-type: none"> • Progress right from here | <ul style="list-style-type: none"> • On corridor wall • Adjacent to the left of the exit • Change of direction |

Bulkheads

Our Hilclare range of emergency bulkheads have been designed using the latest LED and optic technology to deliver an attractive, robust, and fully functional lighting solution for both indoor and outdoor applications. Our sleek designs are centered on ensuring easy installation and a uniform lighting distribution, whilst conforming with all required British standards.



FXB-65

Slimline High Performance Bulkhead

- Escape Route lens
- 600 Lumens 1Hr Emergency
- 200 Lumens 3 Hr Emergency
- IP43, IP65 optional
- Self-test technology
- LifePo battery



CBH-20

Compact Emergency Bulkhead

- 150 Lumen output
- IP65
- Standard and DALI/Self-test technology
- Self adhesive legends options
- Nickel Cadmium (NiCd) Battery
- 'Hanging Blade' exit sign accessory



AVH-800

High Output Bulkhead

- 800 Lumen output
- IP65
- Fresnel lens diffuser
- Standard and DALI/Self-test technology
- Nickel Cadmium (NiCd) Battery



ZEB-20/30

Large And Small IP65 Bulkhead

- 150 Lumen output
- 20m & 30m viewing distances
- IP65 (IP42 large version)
- Cone diffuser accessory option
- Self adhesive legend options
- Standard & DALI/Self-test technology
- Nickel Cadmium (NiCd) battery



Industrial

At Hilclare we supply a range of LED emergency luminaires developed specifically for industrial environment requirements, offering IP protection ratings up to IP65 and IK impact resistance ratings of up to IK08. Our industrial emergency luminaires have been designed using the latest LED and special optic technology to deliver an attractive, robust, and fully functional lighting solution for a variety of industrial applications.

Industrial environments are often classified as high-risk areas, with these areas requiring emergency luminaires with higher levels of light output above 1 lx, for example so that tasks can be safely stopped in the event of a reduction of illuminance. All of our Hilclare emergency industrial luminaires provide lx levels suitable for these application requirements. Our fittings are designed to be used in settings with high ambient temperatures up to 40 °C and can be used reliably in settings where machines or processes cause increased temperatures.



HBE-65

Highbay Lens Bulkhead

- Suitable for high mounting heights
- 510 & 380 Lumen output
- IP65
- Open Area and Escape Route lens
- Standard and DALI/Self-test technology
- Nickel Cadmium (NiCd) battery



TSP-20

IP20 Twinspot Projector

- 2 x 380 Lumens
- Twin adjustable heads
- IP20
- Standard and DALI/Self-test technology
- Nickel Cadmium (NiCd) Battery



ITSP-65

IP65 Twinspot Projector

- 2 x 470 Lumens
- Twin adjustable heads
- IP65
- Standard and DALI/Self-test technology
- Nickel Cadmium (NiCd) Battery

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Professional Lighting Solutions

Our Hilclare emergency lighting offering creates an effective balance of energy efficiency, sleek design, high optics, visual comfort and affordability.

Our lighting designers and engineers have completed advanced LIA training, ensuring your lighting design is completed by highly skilled individuals and compliance is prioritised.

In addition, each Hilclare luminaire is rigorously tested using an advanced Photometric machine that stimulates real-life conditions prior to release.

We offer the complete solution for your emergency lighting needs, with a free site audit included in our service.



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