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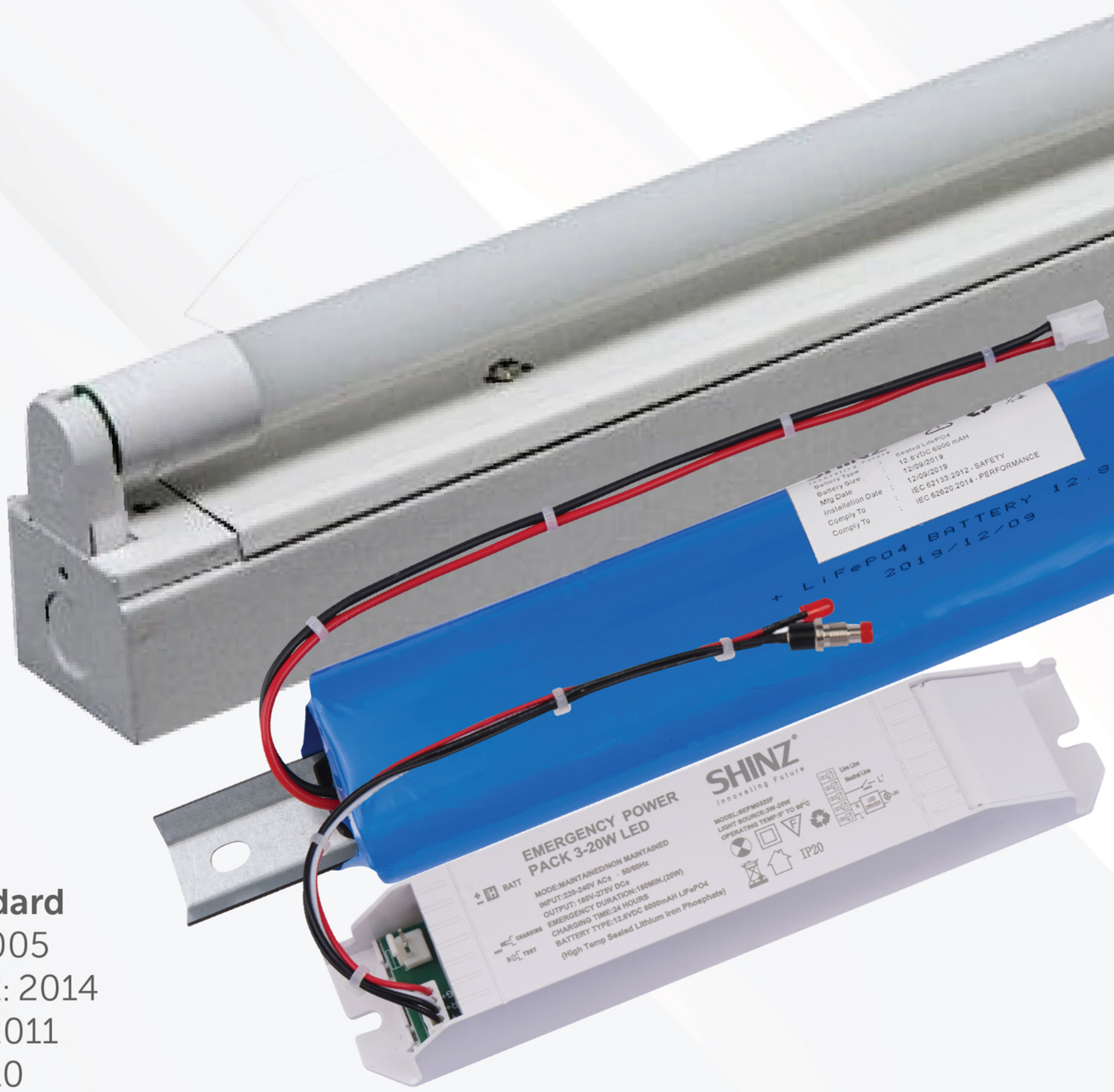
Innovating Future

LED BATTEN EQUIPPED WITH SEPM0320F

SB140E



Reference Standard

MS 619-2-22: 2005

IEC 60598-2-22: 2014

IEC 61347-2-7:2011

IEC 61347-1:2010

TECHNICAL CHARACTERISTIC

Model	: SB140E
T8 LED Tube Power Consumption	: 1x20W
Luminaire Flux (LM) - Normal	: 2000 lumens
Luminaire Flux (LM) - Emergency	: 1500 lumens
Colour Temperature (CCT)	: 6500K
Power Factor	: 0.86
Light Fitting Construction-Material	: Epoxy Metal Sheet
Light Fitting Construction-Diamensions	: 1200mm x 40mm x 28mm
Compatible To T8 Led Driver type	: Internal LED driver (Non Insulated)
Mode of Operation	: Maintained/Non-maintained
Input Supply Voltage	: 220-240VA
Output Supply Voltage	: DC 180V-275V
Frequency	: 50Hz
Emergency Powerpack Module Mode	: SEPM0320F
Emergency Powerpack Module Material	: Flame Retardant Polycarbonate
Module Size (L x W x H) mm	: 195mm x 40mm x 28mm
Ingress Protection	: IP20
Charge Indications	: Red LED
Test Facility	: Push-To-Test Switch
Ambient Temperature	: ta 35°C
Teminals-Push Wire	: 0.2mm^2- 0.75mm^2
Battery Type	: 12.8VDC 6000mAH *(LiFePO4)*
Battery Protection	: PCM
Charging Time	: 24 hours.
Backup Time	: 20W-minimum 180 minutes
Mounting Type	: Surfaced
Warranty	: 1 Year
Installation Wiring Guide	: Refer to Fig.A
Reference Standard-EPM *(Emergency Powerpack Module)*	: IEC 61347-2-7:2011 IEC 61347-1:2010
Reference Standard-Emergency Luminaire	: MS 619-2-22:2005 (IEC 60598-2-22:1997 and AMD.1:2022, MOD)

Figure A

** All informations are subject to change without prior notice*

SB SERIES

T8 TUBE LED BATTEN LUMINAIRE EQUIPPED WITH SEPM0320F

SB140E

It is a Main Luminaire Conversion with T8 LED tube integarted with SEPM0320F (Emergency powerpack modules). A sustained or combined emergency luminaires designed higher lumens output with maintained or non-maintained mode to ensure that people can orientate themselves & find their way confidently & safely through a building to a place of safety.

Main Luminaire Conversion

An emergency powerpack modules are available to convert main luminaires for emergency use. The conversion kits comprises of an emergency module and for **self contained** conversions a rechargeable batteries. In instances where the main luminaires contain more than one lamp, it is usual to convert just one of the lamp for emergency use.

Sustained or Combined Emergency Luminaire

Luminaire containing two or more lamps, at least one of which is energized from the emergency lighting supply and the others from the normal lighting supply. A combined emergency luminaire is either maintained or non-maintained.

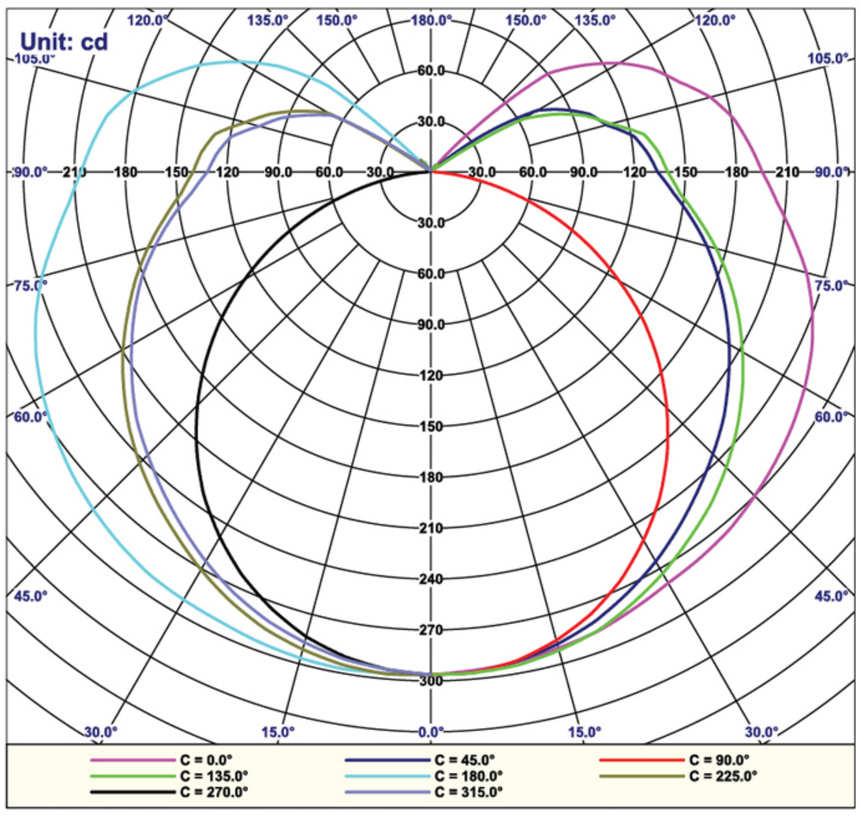
	Mains Mode	Emergency Mode
Non-maintained (NM)	Lamp is off	Lamp is on
Maintained (M)	Lamp is on	Lamp is on
Sustained / Combined (C) or (S)	Mains lamp is on	Emergency lamp is on

Very Often , People, even in familiar buildings, may become frightened & disorientated during an emergency. The occupants' reaction times, speed of adaptation, chance of panicking & ability to walk in a straight line may be different (e.g. users have disabilities or have taken alcohol or drugs).

It is also designed for High-Risk Task Area which usually are hazardous area or workplaces involving risk assessment It is also designed for High-Risk Task Area which usually are hazardous area or workplaces involving risk assessment will identify any hazardous work processes and locations needing special consideration. A proper shut-down procedures are needed for the safety of operations and all the other occupants of the premises. For example in places such as plant or production lines where machines are running , in laboratories handling hazardous , control rooms that such as plant or production lines where machines are running , in laboratories handling hazardous , control rooms that manage dangerous processes.

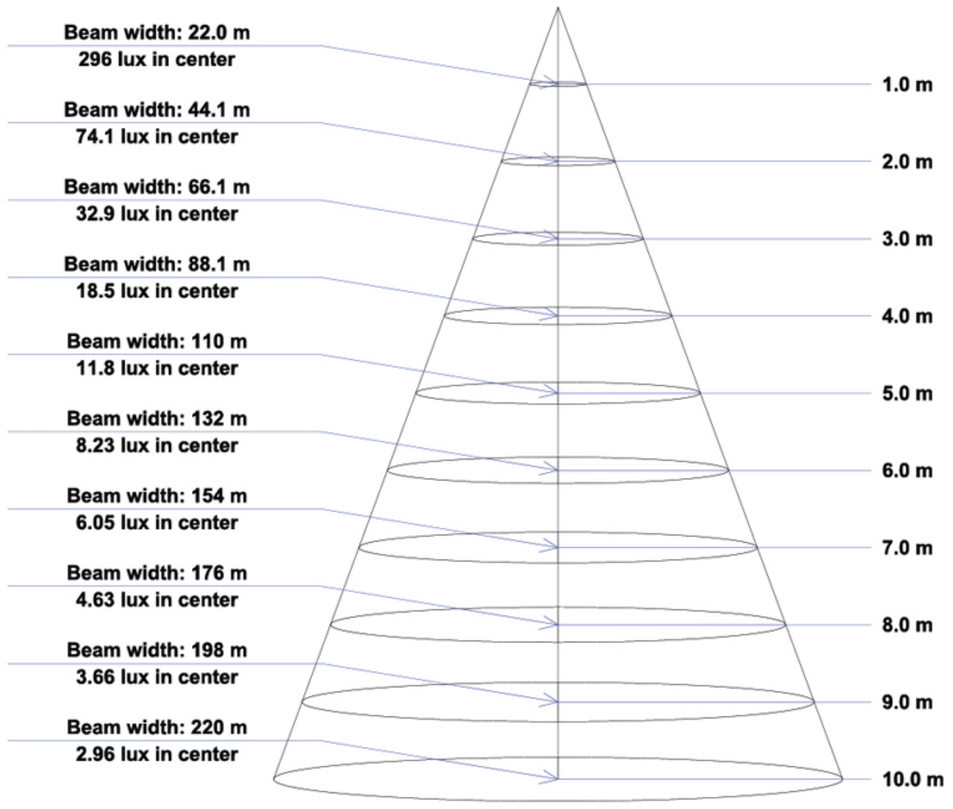
For EN1838:2013 details that the maintained illuminance on the reference plane shall not be less than 10% of the required maintained illuminance for that task and never less than 15 lux. This may require emergency luminaire to be operated in **maintained mode** for **high-risk task area**.

Polar Luminous Intensity Distribution



Luminous intensity values are shown radially from centre.
Elevation angle values are shown around the outside of the graph.

Cone Lux Levels



Average Beam Half-Angle = 85°

DATA SHEET EMERGENCY LIGHTING

Model

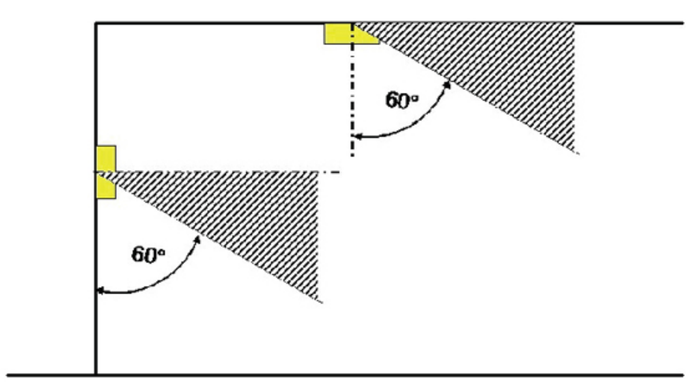
SB140E

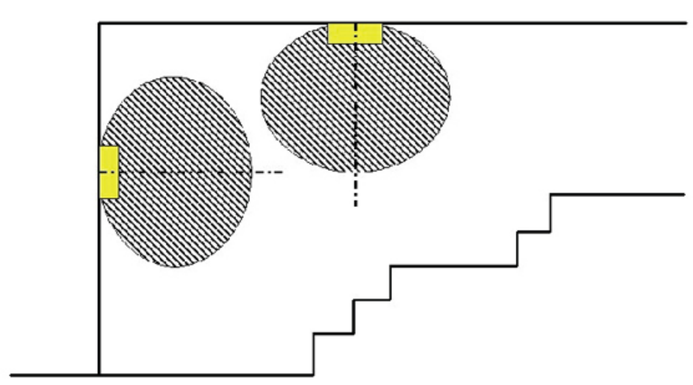
Lamps: 1 x LED

Luminous Flux	: 1625 lm
Correction Factor	: 1.000
Emergency Lighting Factor	: 1.00
Emergency Lighting Luminous Flux	: 1625
Light Output Ratio	: 100.00
Light Output Ratio (Lower Hemisphere)	: 78.35
Light Output Ratio (Upper Hemisphere)	: 21.65

GLARE VALUATION (Maximum Luminous Intensity [cd])

Model		C0	C90	C0 - C360
SB140E	Gamma 60° - 90°	254.4	128.1	263.8
	Gamma 0° - 180°	296.2	296.2	297.8



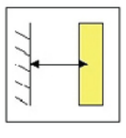
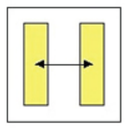
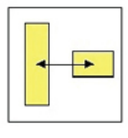
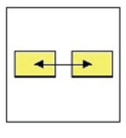
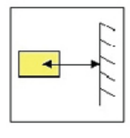


DISTANCE TABLE FOR EVEN ESCAPE ROUTES

The spacing tables show the distance from the wall or door to the first luminaire and then the distance that must not be exceeded for spacing between subsequent luminaires.

This is shown for the luminaires being mounted either parallel to the route(Axial) or at right angles to the route (Transverse) for different mounting heights.

In addition to values for escape routes, figures are also given for the coverage of open areas by regular arrays of luminaires.

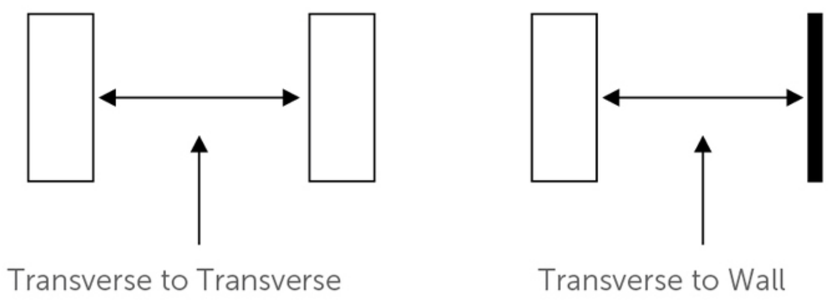
Model	Mounting Height [m]					
SB140E	2.00	6.10	15.57	12.92	10.68	4.45
	3.00	7.45	19.22	16.22	13.69	5.62
	4.00	7.99	20.90	17.97	15.47	6.25
	5.00	8.31	22.15	19.30	16.86	6.68
	6.00	8.47	23.07	20.31	17.93	6.93
	7.00	8.47	23.70	21.05	18.75	7.05
	8.00	8.33	24.08	21.51	19.35	7.04
	9.00	8.05	24.26	21.75	19.72	6.89
	10.00	7.59	24.22	21.80	19.91	6.60

The spacing table is based on the following parameters:

- *Light loss factor: 0.72*
- *Emergency lighting factor: 1.00*
- *Minimum illuminance on center line: 1.00 lx*
- *Minimum illuminance on half of escape route width: 0.50 lx*
- *Diversity on the center line max. 40 : 1*
- *Width of escape route: 2.00 m*

APPLICATIONS

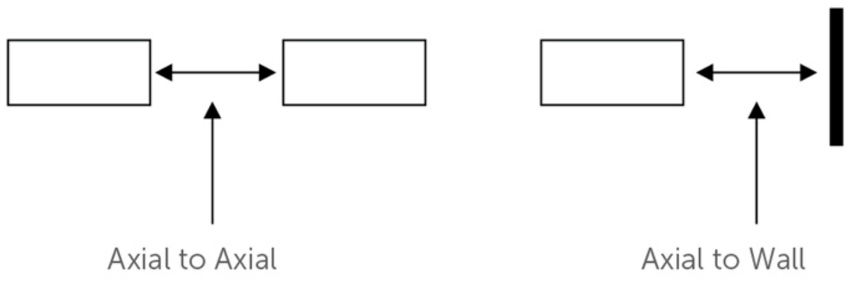
Transverse Mounting Positions



Transverse to Transverse

Transverse to Wall

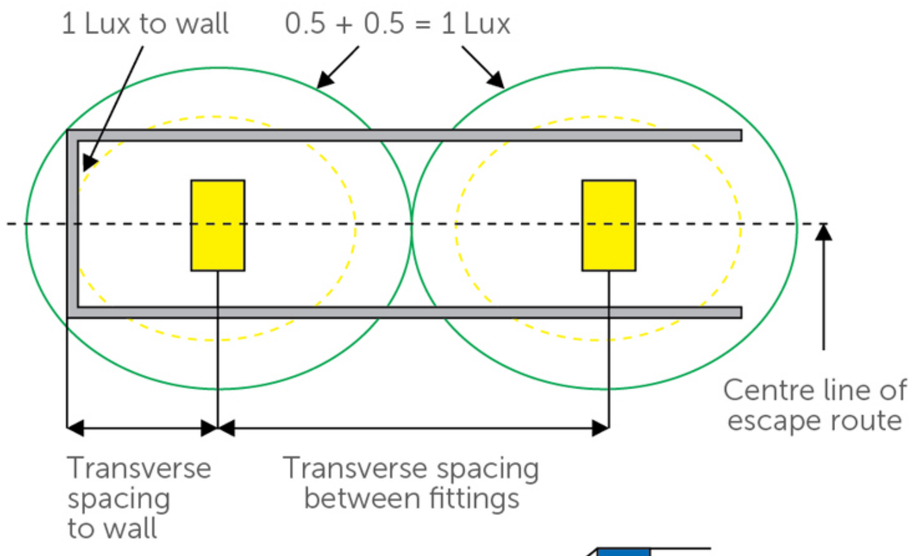
Axial Mounting Positions



Axial to Axial

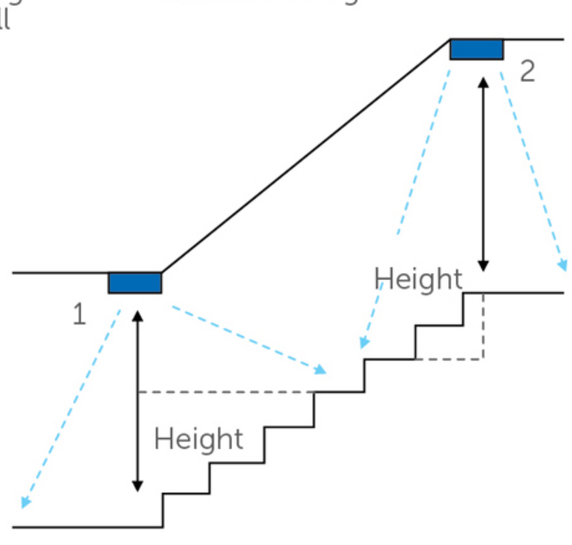
Axial to Wall

Escape Routes



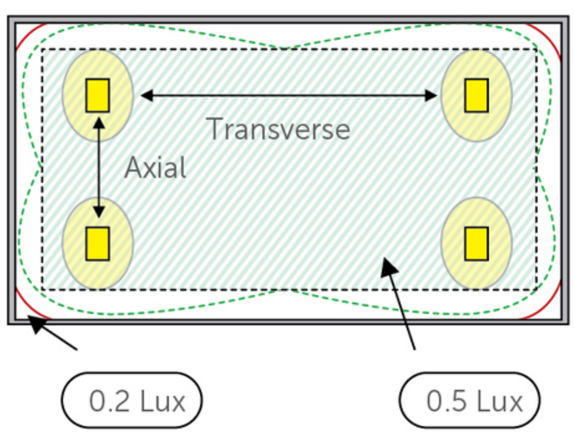
When designing the lighting for an emergency escape route it is advised that achieving even distribution of illuminance throughout the escape route with 1 lux as a minimum level on the centre of line.

When placing luminaires near stairs or any other change of level, the luminaires must be located so each tread receives direct light. Generally at least two luminaries will be needed to provide the 1 lux minimum level on the centre of each tread.



The diagram left shown the spacing from luminaire 1 to luminaire 2 is reduced as their mounting height is being reduced as the point's illuminated rise up the stairs.

Open Areas



The diagram shows the area that needs to be covered for open area lighting. The main area is illuminated to a level of 0.5 lux. This excludes the area 0.5m away from the walls indicated by the dotted line.

POINT OF EMPHASIS

Point of Emphasis is known for locating luminaires correctly to reveal specific hazards and highlight safety equipment and signs. Whether it is for an emergency escape route , open area (anti-panic) or hazardous area (high-risk task area)

It is necessary to identify and needed to be highlighted to ensure people do not trip or fall during evacuation.

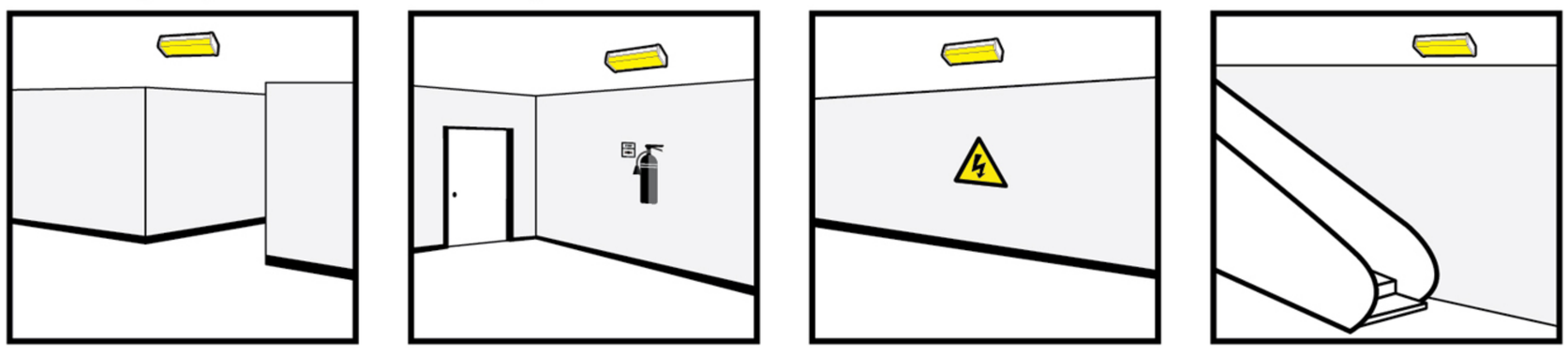
At every exit door planned to be used in an emergency.

Near the stairs so that each step receives direct light.

Near every first-aid zone.

Near every change in floor level.

High-risk forms moving machinery or chemical workshops & substances in the laboratory



At every corridor intersection.

Near every fire safety device and call point.

Near the safety equipment

At the escalator

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