Requirements of EN 1838: illuminance of 5 lx for safety equipment

The aim of emergency lighting is to enable people to exit a room or building safely. It must also ensure that fire fighting and safety equipment can be easily found and operated when needed. This equipment includes (but not exclusively):

- First aid stations
- · All fire fighting equipment and all alarm devices

Lighting is required near each first aid kit, near each alarm and piece of fire fighting equipment, as well as each sign indicating a fire alarm system. In accordance with EN 1838, "near" generally means a distance of no greater than 2 metres, measured horizontally (this corresponds with Distance a in the diagram below).

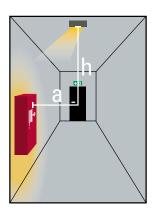
The required level of illuminance on the equipment is 5 lx measured vertically- i.e. perpendicular to the usual horizontal illuminance measurements on one level.

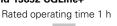
In comparison to the escape route requirement for 1 lx horizontally, different requirements apply in this situation for the light distribution from the safety luminaires, due to the flatter light angle of incidence.

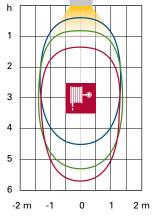
GuideLed SL 13851 and 13852 CGLine+ meet the specific requirements of EN 1838

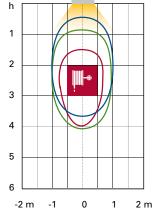
In order to meet the requirements of EN 1838, the new GuideLed SL 13851 and 13852 CGLine+ have special optics to guarantee the required illuminance of 5 lx vertically over a wide area. Hence mounting at heights of up to 5.6 m, and a breadth of illumination of up to 2.8 metres, are possible.

Engineering help, GuideLed SL 13851 and 13852 CGLine+

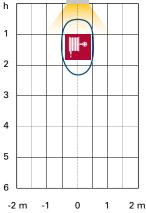












Area in which a minimum illuminance of 5 lx (maintenance factor 0.8) is achieved, depending on distance a and the rated operating time:

a = 1.5 m

a = 2.0 m



GuideLed SL 13851, 13852 CGLine+

Ceiling recessing, ceiling surface-mounting for illuminance of 5 lx vertically

GuideLed SL 13851, 13852 CGLine+

- LED self-contained safety luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- · Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (up to 50,000 hours)
- Special asymmetric optics for illumination of 5 lx vertically for first aid stations, fire fighting equipment and safety equipment acc. to EN 1838
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+WEB-Controller)

Luminous flux $\Phi_{\scriptscriptstyle \sf N}$ (mains operation)	310 lm
Luminous flux $\Phi_{\rm E}/\Phi_{\rm N}$ at end of rated operating time	100 % at 1 h; 65 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate, aluminium
Housing colour	White, similar to RAL 9010
Weight	0.62 kg (13851 CGLine+) 0.86 kg (13852 CGLine+)
Type of mounting	Ceiling recessing, ceiling surface-mounting
Terminals	Through-wiring from mains (L, L`, N, PE) to 2.5 mm ² CGLine+ Bus through wiring to 1.5 mm ²
Connection voltage	220- 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	6.9 VA / 6.7 W
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	HighPower LEDs 2 x 1.6 W

Ordering details

Scope of supply	Order No.
GuideLed SL 13851 1-8h/D CGLine+, ceiling recessed with asymmetric optics for illuminance of 5 lx vertically, clamping range for ceiling thickness 0-20 mm	40071353280
GuideLed SL 13852 1-8h/D CGLine+, ceiling surface-mounted with asymmetric optics for illuminance of 5 lx vertically	40071353282

195

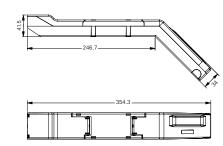
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GuideLed SL 13851 CGLine+ Alignment escape route Ceiling cut-ou IC <u>]</u>₿ 0_<u>18.5</u>

GuideLed SL 13852 CGLine+

172

130

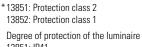


Required height in cavity ceiling for recessing through ceiling cut-out: 150 mm

· 130

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13851: IP41 Degree of protection of the housing: IP20



GuideLed SL 13851, 13852 CGLine+



GuideLed SL 13852 CGLine+

CG⁺

P41

LED

EN 1838

Light distribution curve