



## INSTALLATION INSTRUCTIONS

FOR

### LUMINOUS EGRESS PATH MARKINGS LISTED TO UL1994

You have purchased an EverGlow® Photoluminescent (Luminous) Egress Path Marking System manufactured to the highest quality standards. These signs and markings have been certified by Underwriters Laboratories to comply with the UL 1994 and CAN/ULC-S572 performance standards. Stair nosings have also been tested to and comply with UL 410. These EverGlow® Egress Path Marking System components contain no toxic, radioactive or vinyl (PVC) materials. Our signs, stair nosings & markings are made with safety grade photoluminescent pigments, durable construction and where appropriate, supplied with stainless steel fasteners. Each component will provide an infinite number of recharge-glow cycles and the special protective coating will resist moisture.

An Egress Path Marking System (also known as Exit Path Marking System, Stair Markers, etc.) is designed to provide clear, floor level markings that direct evacuees into an exit and show them a safe, continuous path through and out of that exit. Exit components which should be signed or marked include:

- The door(s) into the exit and the door(s) & door hardware out of the exit.
- Stair nosings and handrails.
- The perimeter of each landing and corridor within each exit.
- Obstacles within the exit which project into the exit path.
- Directional markers where the exit path changes direction, dead ends, or avoid confusion.
- Signage as required or appropriate.

**CAUTION: EXTERNAL ILLUMINATION SOURCE REQUIRED.** Install only in a location where a minimum of 1 foot candles (10.8 lux) of illumination from fluorescent, LED, soft white incandescent, halogen, metal halide and mercury vapor lighting is available on the face of the sign or marker at all times of building occupancy.

**Do not use this photoluminescent egress path marking system where the ambient illumination level is less than 1 foot candle.**

**The external lighting source must be deemed reliable and supplied by a circuit not controlled by automatic timers or sensors that turn off the charging light when the building is occupied, and whose controls are accessible only to authorized personnel.**

#### MAINTENANCE

Lighting levels on the signs or markings are to be reassessed after any changes in external lighting types or levels to determine that each system component is still being illuminated in accordance with its listing.

The face of the sign or marker should be kept clean with a periodic wipe with a damp cloth or common household cleaner.

Perform periodic visibility tests in accordance with local code requirements.

#### INSTALLATION

The mounting height of floor proximity egress path markers is to be in accordance with local and national codes or requirements, but is not to exceed 18 inches (45.7 cm) above the finished floor height.

The maximum spacing between luminous (photoluminescent) segments is not to exceed 4 inches (10.2 cm).

The maximum spacing between the corner of a change in direction of the path of egress and the luminous segment is not to exceed 4 inches (10.2 cm).

#### SAVE THESE INSTRUCTIONS FOR FIRE SAFETY INSPECTIONS



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# TECHNICAL INFORMATION

FOR

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Underwriters Laboratories has completed a review of all EverGlow (Photoluminescent) Luminous Egress Path Markings components listed to the UL 1994 and CAN/ULC-S572 performance standards. The results of their testing are summarized in the table below. The most appropriate luminaires to properly charge photoluminescent signs and markings are at the top of this table. The energy emitted by the luminaire type, and absorbed by the EverGlow sample, decreases toward the bottom of this table. This data is valid for all UL 1994 listed path markings with EverGlow HI150, EverGlow HI300 and EverGlow TL300 luminance levels.

Luminaire Type	Minimum Charging Illumination	Maximum Afterglow Duration	Minimum Color Temperature	Lighting Industry Nomenclature		
Fluorescent	1 ft-c	90 minutes	4,000 K	cool white		
Metal Halide			4,000 – 4,500 K			
Mercury-Vapor			3,500 – 4,000 K			
LED (blue LED with phosphor)					2,700 – 4,500 K	soft or warm white to bright or cool white
Halogen					2,700 – 3,000 K	soft or warm white to bright or cool white
Incandescent					2,700 – 3,000 K	
Sodium-Vapor			does not reliably charge SrAl pigments		1,800 - 2,700 K	warm white
Neon		various		various		

EverGlow uses strontium aluminate (SrAl) photoluminescent pigments that absorb and store energy from appropriate artificial lighting and sunlight. Appropriate artificial lighting is any luminaire that emits sufficient energy in the visible blue or invisible UV portion(s) of the electromagnetic spectrum, or both. Fluorescent, Mercury Vapor and Metal Halide lamps all produce energy in the blue and UV regions of the spectrum; they create light making a blue spark between two electrodes. Incandescent and Halogen lamps create light by heating a wire filament until it glow red, in a vacuum or halogen gas atmosphere. Halogen lamps emit more blue light than standard incandescent lamps; they emit no energy in the UV region.

LED luminaires made with a blue LED and phosphor coating emit energy in the visible blue region of the spectrum but no energy in the UV. This discussion does not include LED luminaires using an RGB configuration. Because LED luminaires emit suitable energy only in the visible blue region of the spectrum, these luminaires do not charge photoluminescent signs and markings as well as cool white fluorescent lighting. EverGlow has tested LED luminaires from several manufacturers, typically advertised with color temperatures of 4,000 – 5,000 K and with advertised CRI of 80 or higher. The measured luminance on all photoluminescent samples charged using any LED luminaire is measurably lower than samples charged with our control fluorescent lamp (4,000 K, 48 inches long). In general, higher quality LEDs, optically transparent diffusers and luminaires with higher color temperatures and CRI values charge photoluminescent signs and markers better than LED luminaires with lower numbers.

EverGlow recommends that all projects using LED luminaires as the primary charging source for code approved photoluminescent egress path markings be designed very carefully so they provide minimum illumination of 1 ft-c when measured at floor level. If original fluorescent lighting is being replaced with LED luminaires, more LED luminaires may need to be installed or the spacing between luminaires may need to be changed or LED luminaires with higher lumen output may need to be installed to provide greater than the minimum illumination when measured at floor level.