



# Emergency Lighting Product Developments

Property of the  
Lighting Industry  
Federation

## Brief background:

- Historically a major problem with emergency lighting **conversions** was a lack of any standards. The technology was emerging without any British or European standards being in place.



- Reputable manufacturers within BEAMA and LIF decided to set up a self-regulating committee and the Industry Committee for Emergency Lighting (ICEL) was formed under the umbrella of LIF



- ICEL worked closely with the BSI and created working standards that would ensure the new emergency lighting products could be manufactured to comply with suitable safety and performance criteria:



- The various ICEL standards were adopted and then developed as British and European Standards which resulted in products manufactured to these standards being safe, efficient and reliable.



## Current and future product trends:

- With good safety and performance standards in place the development of products could concentrate on added features and benefits

- Testing systems (EN62034)
  - Self-test
    - Products now available with integral circuits that automatically operate the emergency circuit monthly to check function and annually to check duration. Faults are automatically identified and recorded – important in the context of the earlier Regulations presentation:



- Testing systems (EN62034)
  - Central test
    - Systems are now available with a central controller (computer or panel) that communicate via individual addresses to intelligent modules within each emergency luminaire and maintain records (Regulations presentation)



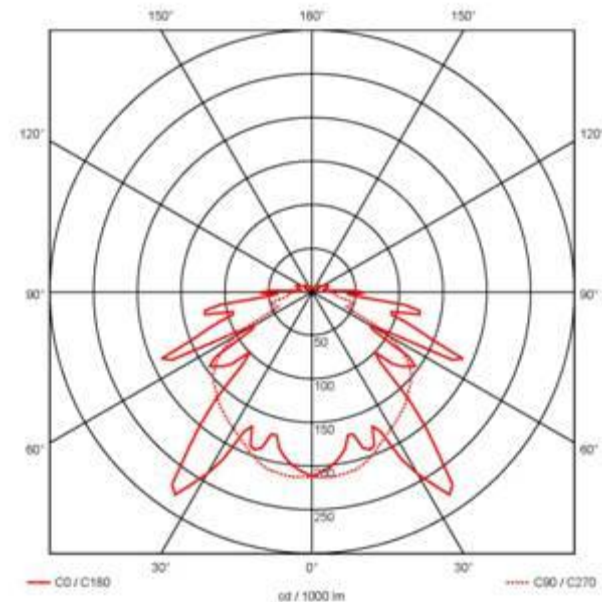
- Improved performance
  - Efficiency
    - The latest luminaires incorporate more efficient inverter circuits and less losses on battery charging circuits resulting in smaller battery packs and reduced overall circuit watts



- Improved performance

- Photometry

- Many luminaires now utilise fresnel lenses and optical reflectors to increase the spacing between emergency luminaires while still achieving the minimum required illuminance



- New light sources
  - Cold Cathode
    - The small physical size, long life and good lumens per watt performance offered by cold cathode lamps (similar to those used in laptop computer screens) have made them a good alternative to conventional T5 fluorescent



- New light sources
  - Light Emitting Diode LED
    - The very small physical size, robustness, long life and low voltage operation offered by the latest white LED's makes them an ideal replacement for conventional T5 fluorescent lamps in exit signs and low lumen luminaires (bulkheads, etc.)

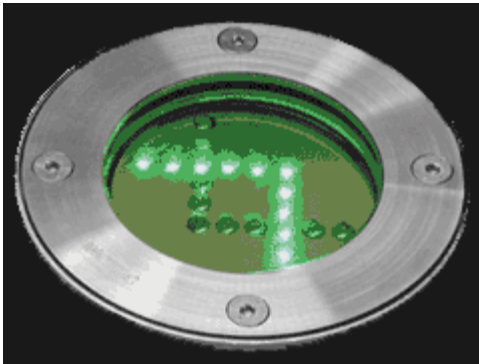


A futuristic cityscape with tall skyscrapers and a monorail track in the foreground, set against a dark sky with various planets and moons. The scene is a composite image where a modern city is superimposed on a space-themed background. The sky is dark with several large, glowing celestial bodies of various colors (grey, blue, orange) and a ringed planet. The city buildings are rendered in shades of blue, grey, and white, with some having a grid-like facade. A monorail track with a blue railing runs along the bottom right of the frame.

**THE FUTURE....**

- Manufacturers are now starting to manufacture products specifically designed around the new light sources (instead of using new light sources to replace lamps in conventional luminaire enclosures)

- The new light sources and associated emergency lighting control gear allow smaller emergency lighting products and a new approach to the provision of emergency lighting.



- Emergency luminaires in the future will continue with utilisation of more energy efficient circuits, new battery technologies (including Lithium Ion), integral control and testing circuits and further use of the new high power white LED



## Summary:

- The emergency lighting products of the future will be smaller, more energy efficient and require less maintenance.
- Also make compliance more assured through auto-testing and record-keeping.
- The basic safety application remains the same! These products save lives and therefore only the highest quality products should be considered.
- Reputable manufacturers, such as the members of ICEL provide products offering good quality, reliability and technical features, including those needed to ensure compliance with Regulations and Standards.



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Thank you