



COSINE DEVELOPMENTS

LEADERS IN LIGHTING TECHNOLOGY

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GENERATORS & UPS SYSTEMS VERSUS INDIVIDUAL EMERGENCY LUMINAIRES

By Stirling Marais (23/5/2017)

There are numerous instances where generators and UPS systems are installed instead of individual self-contained emergency luminaires. The argument may be that these generators and UPS's still supply power to the light fixtures whilst there is a power failure. However, SANS 0114-2 indicates that the lighting shall not only operate in case of a general power failure but also in situations of localized failures. This is a shortfall for the UPS and generator systems. The below information are legally prosecutable regulations that have to be abided by.

1. The OHS Act: Act 85 of 1993 states:

"An employer shall ensure that the emergency lighting sources:

- > Are capable of being operated within 15 seconds.
- > Last long enough for the safe evacuation of all indoor workplaces.
- > Are kept in good working order and tested for efficient operation at intervals of not more than three months.
- > Directional luminaires shall be directed between 10 and 45 degrees below horizontal."
- > The requirement of functioning within 15 seconds and testing at least every three months must be met with any system.

2. Building Regulations (SABS 0400-1990)

(Code of Practice for the application of the National Building Regulations)

This code of practice states: "In the case of central battery or generator sets, fire retardant wiring must be used."

Also, "In any building of more than 100 persons the emergency route must be illuminated by emergency lighting whose power is independent of the mains power:

- > for not less than 60 minutes
- > with an illuminance along the route of not less than 0.3 lux and
- > a uniformity ration of not greater than 40:1."

Therefore, fire retardant wiring is required for both generator and UPS systems. Individual emergency luminaires do not require this. Any system must be able to provide at least an hour's worth of emergency lighting.

3. Emergency Lighting Code of Practice (SANS 0114-2)

This specification states that: "The emergency lighting shall be activated not only on complete failure of normal power but also in the case of a localised failure if such a failure would present a hazard, for example, if a single sub-circuit on a stairway were to fail."

- > This may present a challenge to centrally supplying generators or UPS systems where a power outage in only, say, a store room would require emergency light.

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