ELC Emergency Lighting Controller for LED General Lighting Fixtures

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ELC SPECIFICATION GUIDE

STEP 1

Determine Initial Light Loss Factor (LLF): ELC models are designed to operate the luminaire at optimum power for emergency lighting, known as the Emergency Power Rating (EPR), which is set at the factory when the optimum level has been calculated based on the lumen output required. To determine EPR, apply an initial Light Loss Factor (LLF) to the IES photometric file using the following values:

(a) For high bay luminaires with normal power range above 100W, use LLF of 15%
(b) For troffer type luminaires with normal power range up to 100W, use LLF of 20%
(c) For standard type down lights with power range up to 30W, use LLF of 40%

STEP 2

Initial Photometric Calculation: Download the IES photometric file and set up fixture at the specified height above floor with required reflectivity criteria and, when specified, the work area defined by the building layout. For example, some projects may require open area illumination with no restrictions, or the work area may be a defined corridor or a marked zone for means of egress. Having defined the work area, run an initial calculation using the above values for LLF to show the area covered at 1 fc average with 0.1 fc minimum as the boundary, with the max/min ratio not to exceed 40:1. Note the boundary distance from the fixture to the 0.1fc point ("BD").

STEP 3

Set Luminaire Spacing: Using the photometric results above, typical spacing between multiple fixtures will be twice the value "BD". To minimize total battery power and number of emergency luminaires required, the LLF value should be adjusted to the lowest emergency power level that results in 1 fc average on the pathway. For example, some fixtures with wide distribution and high Lm/watt may be operated at LLF well below the initial estimates.

STEP 4

Total Emergency Power:
EMERGENCY POWER RATING (EPR) = LLF x NORMAL POWER (watts)
Using values for LLF determined above, calculate EPR for all fixtures and sum the total to determine total watts required to be supplied from CBS panels.

STEP 5

Complete ELC Catalog Number: See ELC spec sheets. Required information in the order required for the Cat. No. logic is as follows:

1) EMERGENCY POWER (from 4. above).
2) PACKAGE TYPE (P1-P4): Determine from emergency power required, output voltage of normal driver, and space available in mounting enclosure
3) NORMAL POWER (from Luminaire data)
4) DC OUTPUT VOLTAGE: Same as specified for the normal driver, the value shown on the driver label. If fixture or label is not available, refer to luminaire specifications data or contact manufacturer.
5) NUMBER of NORMAL DRIVERS: Up to four (4) drivers may be wired to an ELC, requiring the CHx option, where x = number of normal drivers.

DESIGNED & MADE IN THE USA

·See www.signtexinc.com/ELCluminairedatabase

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