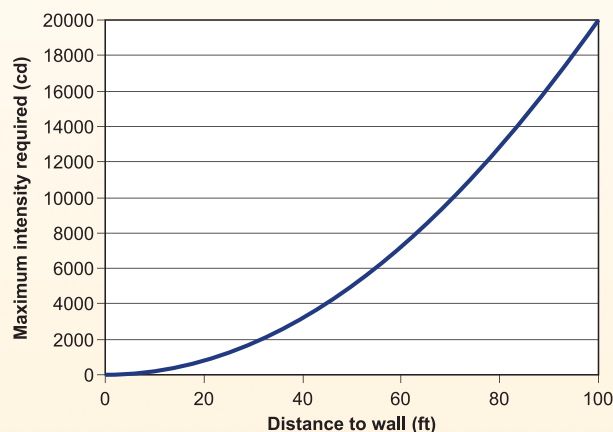


Flashing Light Sources for Emergency Alarm Systems

LEDs are rapidly entering the visual emergency alarm marketplace. Existing requirements for the performance and application of visual alarms are based on relatively short duration, high peak intensity flashing lights — xenon strobe lights. National Fire Protection Association (NFPA) 72, the *National Fire Alarm and Signaling Code*, defines a method for calculating the equivalent or effective intensity of a flashing light source. It has worked because all of the lights approved using the standard all are relatively similar and have short pulse durations. Thus, the peak intensities have been similar.



Maximum instantaneous luminous intensity required to produce a vertical illuminance of 2 footcandles (fc) on a wall located at different distances from the signal.

To assist the Fire Protection Research Foundation (FPRF) of the NFPA in assessing the extent to which effective intensity, or other metrics describing the photometric performance of visual signaling appliances, can be used to characterize the utility of these appliances, LRC researchers developed methods and criteria to evaluate performance of light sources used in emergency notification appliances for inclusion in NFPA 72. For example, a maximum peak intensity sufficient to increase the vertical light level on a wall by 2 fc was suggested as a possible criterion for indirect viewing of the visual alarm.

Sponsor

NFPA Fire Protection Research Foundation

Bullough JD and Zhu Y. 2012. Performance objectives used in emergency notification appliances. The Fire Protection Research Foundation. www.nfpa.org/assets/files/research%20Foundation/RFLightSources.pdf.

