

Article Overview

Use properly rated fixtures, such as wet-location T8 or LED lights, mounted on supports adjacent to cable trays rather than directly on the tray itself, ensuring compliance with NEC and safety standards.

Key Considerations

1. NEC Compliance: Cable trays are primarily designed to support cables, not lighting fixtures. According to NEC Article 392, attachments to cable trays must not obstruct cables or create sharp points that could damage insulation . While some exceptions exist, lights should generally be mounted on supporting structures like unistrut or brackets rather than directly on the tray. 2. Fixture Type: For industrial or utility environments, wet-location rated fixtures (e.g., T8 fluorescent or LED) are recommended if the area may be exposed to moisture or condensation . LED fixtures are preferred for energy efficiency, long life, and reduced heat output, which is important to avoid overheating cables in the tray. 3. Mounting Method: Lights should be attached to the supporting structure of the tray system, such as strut channels or brackets, rather than the tray itself. This ensures the tray remains dedicated to cable support and avoids mechanical stress on the cables . Custom brackets or standard hardware can be used depending on the installation environment. 4. Environmental Considerations: In corrosive or high-moisture environments, use fixtures and supports made of corrosion-resistant materials like aluminum or stainless steel. Ensure that all metallic components are properly grounded if the tray is metallic, maintaining electrical safety . 5. Clearance and Safety: Maintain adequate clearance between lights and cables to prevent heat buildup and allow for maintenance. Avoid obstructing cable access or violating fill capacity limits specified in NEC 392.22 .

Practical Recommendations

- o Use LED or T8 fluorescent fixtures rated for wet or damp locations.
- o Mount lights on adjacent supports (unistrut, brackets) rather than directly on the tray.
- o Ensure grounding and bonding of metallic trays and fixtures are maintained.
- o Verify that the installation does not interfere with cable tray fill, ventilation, or maintenance access.
- o For specialized environments like wind turbine towers or industrial plants, consult the Authority Having Jurisdiction (AHJ) to confirm NEC applicability . By following these guidelines, lighting installations near cable trays can be safe, code-compliant, and efficient while preserving the integrity and accessibility of the cable system.

Cable tray accessories including light, medium, and heavy duty cable tray. Durable cable tray

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If not designed and installed properly, wiring inside cable trays may pose hazards such as

These documents: ANSI/NEMA VE-1, Metal Cable Tray Systems; NEMA VE-2, Cable Tray Installation Guidelines; and NEMA FG-1,

Cable Trays and Accessories are designed to meet most requirements of cable and electrical wire installations and comply to local

The Cable Tray Institute (CTI) was founded in 1991 to support the cable tray industry by engaging in research, development,

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This article provides a comprehensive framework that governs various aspects of cable tray installations, including

Many electrical systems employ cable trays. They route cables safely & efficiently. NEC defines minimum cable tray

Whenever cable support systems are exposed to the elements and/or caustic substances (such as petrochemical applications), they

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been

The tray, in general, is for exclusive support of tray cables and necessary attachments required for the distribution of

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