



Marking and Application Guide

LUMINAIRES

JANUARY 2014

PREFACE

UL has developed this guide for use by code authorities, electric utilities, contractors, installers, users, system designers, and other interested parties to aid in understanding the basic components of luminaires and the applicable codes and standards in order to facilitate a reasonably safe and code-compliant installation.

This Luminaire Marking Guide contains information to make it easier to locate specific markings. The guide consists of 77 notes indexed by both luminaire type and subject matter. Each note describes a marking and briefly explains the meaning and terminology of the marking. This edition has been updated in accordance with the 2014 National Electrical Code (NEC)® and UL Luminaire Standards revisions through September 17, 2008.

UL Marking Guides are updated as necessary due to new product development, changes in the codes, or the need for clarification. To confirm the current status of any UL Marking Guide, please consult the Code Authorities page of the UL Web Site at <http://www.ul.com/codeauthorities>.



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INTRODUCTION

USE OF THIS GUIDE

This guide is intended to assist code authorities, designers, and installers in determining the suitability of specific luminaires in a particular installation and use, and to address concerns related to fire, shock, and mechanical hazards.

Products are Certified, Listed or Classified by UL under an appropriate product category. A four-letter code (shown in parenthesis) following every category title in this guide is the UL product category code designation.

Each UL product category code provides a direct link to the Guide Information for the product category. The Guide Information includes the scope of the products covered, information relating to limitations or special conditions applying to the product, the requirements used for the investigation of the products, installation and use information, and information on product markings and the UL Mark to be used on the product. Guide information is available in the UL White Book and online at www.ul.com/database.

The product markings identified in this Guide do not include every possible marking that could be provided either on a product or in its installation or operation instructions. The purpose of this Guide is to provide you with an indication of the type of text and location of markings that address features that may be critical in determining if a product is certified and / or if it is installed correctly. Refer to the specific Guide Information for the product category for additional marking information.

The numbering for code sections used in this document may change as the specific code is updated.

Additional information can be found at www.ul.com.

INFORMATION ON CERTIFICATION, LISTING AND CLASSIFICATION

Most codes and regulations require the certification of this equipment to applicable safety-related standards. They also may require this equipment to be certified to energy performance standards as well. Products that are certified to safety-related standards have been evaluated with regard to all reasonably foreseeable safety-related hazards, including fire, electrical shock and mechanical hazards. Such products are termed “UL Listed.” Products that are certified to a limited range of hazards, or for use under specific conditions are termed “UL Classified”. Alternatively, any of these products can be “UL Certified” and bear the UL Certification Mark.

It is important to distinguish the difference between “UL Listed” and “UL Classified” and the relation these terms have with the term “listed,” as used in various codes. The term “listed” in the codes generally indicates that the product is required to be evaluated in accordance with the appropriate standard(s) by an independent third party certification organization such as UL. The term “listed” in the codes should not be confused with the term “UL Listed,” as explained above. It is important to recognize that not all certification agencies make this distinction in their certification services.

INFORMATION ON UL MARKS

There are several types of UL Marks that can be found on luminaires. General information on each of these Marks is provided below. Each has its own specific meaning and significance. The only

way to determine if a product has been certified by UL is to look for the UL Mark on the product itself.

The UL Mark on a product means that UL has tested and evaluated representative samples of that product and determined that they meet the requirements in the applicable standard(s). Under a variety of UL programs, certified products are periodically checked by UL at the manufacturing facility to determine that they continue to comply with the standard(s).

The UL Marks may only be used on, or in connection with products certified by UL, and under the terms of a written agreement between the manufacturer and UL.

UL CERTIFIED PRODUCTS

Launched in mid-2013, the enhanced UL Certified Mark can be used on both UL Listed and Classified products and is intended to make it easier and simpler for stakeholders to understand the scope of UL's certifications of a specific product. The enhanced UL Certified Mark makes it possible to bundle multiple UL certifications for multiple geographies into a single Mark design. Today, this mark is used for products certified to U.S., Canadian, European and Japanese requirements. This Mark utilizes a unique identifier to enable stakeholders to search UL's Online Certifications Directory at www.ul.com/database to quickly review detailed certification information.

All currently existing versions of UL's Listing and Classification Marks remain valid and should continue to be accepted as an indication of certification.

UL expects the transition to the enhanced Mark to happen over time, so you may not see it in the immediate future. For more information on this important development, please go to www.ul.com/markshub > Resources. Access to the Marks Hub is free and open to all regulators, but registration to use it is required.



UL Listing Mark

This is one of the most common UL Marks. If a product carries this Mark, it means UL found that representative samples of this product met UL's *safety* requirements. These requirements are primarily based on UL's own published Standards for Safety, or other recognized third party standards. The UL Listed Mark includes the UL symbol, the word "Listed," the product or category name, and a control number assigned by UL.



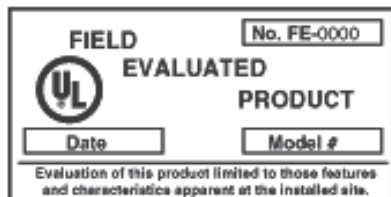
UL Classification Mark

This Mark appears on representative samples of products that UL has evaluated but only with respect to specific properties, a limited range of hazards, or suitability for use under limited or special conditions. The UL Classified Mark includes the UL symbol, the word "Classified," a statement of the scope of evaluation, the product or category name, and a control number assigned by UL.



FIELD EVALUATIONS

You may encounter situations in which you are unable to determine if a product has been listed by a third-party organization. Or in other situations you might encounter a product bearing a listing label that may have been modified in the field, and now you question whether or not the product still complies with the applicable standard. UL offers a field evaluation service that provides data to assist you in making your decision whether to accept the product and/or approve the installation. Anyone directly involved with a product – including manufacturers, owners, contractors, and regulatory authorities – can request a Field Evaluation. Detailed information for this program can be found on UL's Web site at www.ul.com/field.



INDEX BY LUMINAIRE TYPE

INCANDESCENT SURFACE MOUNTED LUMINAIRES

Category Code Guide Designation: IEZR

Listing Mark ID: Luminaire

In addition, specific type marked elsewhere on the product; e.g. "Incandescent"

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INCANDESCENT RECESSED MOUNTED LUMINAIRES

Category Code Guide Designation: IEZX

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. “Recessed Incandescent”, “Recessed Incandescent Type IC”, “Rough-In Section For Recessed Type IC”, or “Finishing Section For Recessed”

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+ Note: Classified Trims are covered under the category Recessed Luminaire Trims (IFGW)

FLUORESCENT SURFACE MOUNTED LUMINAIRES

Category Code Guide Designation: IEUZ

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. “Fluorescent”, “Wired Fluorescent Channel”, “Wired Fluorescent Reflector”, or “Wired Fluorescent Channel”

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++ Note: Reflector Kits are covered under the category Luminaire Conversions, Retrofit (IEUQ)

FLUORESCENT RECESSED MOUNTED LUMINAIRES

Category Code Guide Designation: IEVV

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. "Recessed Fluorescent", "Recessed Fluorescent Channel", "Wired Recessed Fluorescent Reflector", "Wired Recessed Fluorescent Channel" or "Wired Fluorescent Recessed Section"

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HID SURFACE MOUNTED LUMINAIRES

Category Code Guide Designation: IEXT

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. “HID”, or “Wired HID Section”

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USER MARKINGS

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HID RECESSED MOUNTED LUMINAIRES

Category Code Guide Designation: IEXZ

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. “Recessed HID”, “Recessed HID Type IC”, “Rough-In Section For Recessed HID”, “Rough-In Section For Recessed HID Type IC”, “Finishing Section for Recessed HID”, or Wired Recessed HID Section”

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INCANDESCENT RECESSED LUMINAIRES, CONVERTIBLE - NON-IC/IC

Category Code Guide Designation: IFAH

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. "Recessed Incandescent Convertible Non-IC/IC", "Recessed Incandescent Convertible Non-IC/IC Rough-In Section", "Recessed Incandescent Convertible Non-IC/IC Finishing Section"

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LIGHT-EMITTING DIODE SURFACE MOUNTED LUMINAIRES

Category Code Guide Designation: IFAM

Listing Mark ID: Luminaire

In addition, specific type marked elsewhere on the product; e.g. "LED"

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LIGHT-EMITTING DIODE RECESSED MOUNTED LUMINAIRES

Category Code Guide Designation: IFAO

Listing Mark ID: Luminaire

In addition, specific product identifier marked elsewhere on the product; e.g. “Recessed LED”, “Recessed LED Type IC”, “Rough-In Section For Recessed Type IC”, or “Finishing Section For Recessed”

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+ Note: Classified Trims are covered under the category Recessed Luminaire Trims (IFGW)

TRACK LIGHTS AND TRACKS

Category Code Guide Designation: IFFR

Listing Mark ID: Track Lighting Fittings”

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ENVIRONMENTAL LOCATION MARKINGS

1. **DRY LOCATIONS** — A luminaire intended for use in a location not normally subject to dampness, but may include a location subject to temporary dampness, as in the case of a building under construction, provided ventilation is adequate to prevent an accumulation of moisture is marked “DRY LOCATIONS ONLY.”
2. **DAMP LOCATIONS** — Only luminaires marked “SUITABLE FOR DAMP LOCATIONS” or “SUITABLE FOR WET LOCATIONS” are intended to be installed in damp locations. A damp location is an exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to, electrical equipment, and includes partially protected locations.
3. **WET LOCATIONS** — Only luminaires marked “SUITABLE FOR WET LOCATIONS” are intended to be installed in wet locations. A wet location is a location in which water or other liquids may drip, splash or flow on or against electrical equipment. A luminaire marked “SUITABLE FOR WET LOCATIONS” may be additionally marked as specified below:
 - a. **Covered Ceiling Mount Only** — A wet locations luminaire marked “COVERED CEILING MOUNT ONLY” is intended for locations such as a vehicle washing area where the luminaire will not be subjected to water and precipitation from the back side. A ceiling mounted luminaire not identified for covered ceiling mount only is suitable for mounting in locations where it may be subjected to precipitation from the back side, such as under a metal grate-type catwalk.
 - b. **Less Than 1.2 M (4 Feet) Above Ground Level** — A wet locations wall or post mounted luminaire may be installed within 1.2 m (4 feet) of ground level if it is marked “SUITABLE FOR MOUNTING WITHIN 1.2 M (4 FEET) OF GROUND.” luminaires with this marking are intended to be subjected to water from lawn and garden sprinkler systems, but are not intended to be installed at or below ground level where they may be subjected to immersion in water.

Exception: A luminaire with an integral post (bollard type luminaire) needs to be so marked.
 - c. **Below Ground Level** — A wet locations recessed luminaire may be installed at or below ground level if it's marked “SUITABLE FOR GROUND-MOUNTED RECESSED.” A luminaire with this marking is intended to be subjected to infrequent immersion under water which may occur because of heavy precipitation. The luminaire is provided with instructions for its proper installation.
4. **INSTALLATION INSTRUCTIONS** — Installation instructions shall be provided for luminaires that require specific methods for sealing the mounting surface or specific fittings for supply connections.

RESTRICTED LOCATION MARKINGS

5. **OUTDOOR USE ONLY** — A fluorescent luminaire that is intended for outdoor use only is marked “OUTDOOR USE ONLY”. It is not required to have a Class P protected ballast.
6. **NOT FOR USE IN DWELLINGS** — An electric discharge luminaire that has a ballast with an output open circuit voltage greater than 1000V is marked “NOT FOR USE IN DWELLINGS”.

A luminaire marked for supply wire rated over 90°C is also marked “NOT FOR USE IN DWELLINGS.”

7. **WALL MOUNTING ONLY** — A luminaire that may be mounted only to a wall because of temperature, or other considerations, is marked “WALL MOUNT ONLY.”
8. **CEILING MOUNT ONLY** — track lighting luminaire assemblies intended for use with ceiling mounted track lighting systems only are marked “FOR USE WITH CEILING-MOUNTED TRACK ONLY.”
9. **NON-COMBUSTIBLE SURFACE ONLY** — A ceiling mounted or ground-mounted recess luminaire that is permitted to be mounted only to a noncombustible ceiling because of temperature or other considerations is marked “NONCOMBUSTIBLE SURFACE ONLY.”
10. **NON-FIRE-RATED RECESSED CEILINGS ONLY** — A recessed luminaire with a thermoplastic housing, or a housing with openings that exceed the maximum number or size permitted is marked “FOR USE IN NON-FIRE-RATED INSTALLATIONS ONLY.”
11. **FIRE RESISTANT CONSTRUCTION ONLY** — A recessed luminaire that produces a temperature rise greater than 65°C (117°F) on a mounting surface or recessed housing is marked “INSTALL IN BUILDINGS OF FIRE RESISTANT CONSTRUCTION - MOUNT ON NONCOMBUSTIBLE MATERIAL.”
12. **CONCRETE ONLY** — A recessed luminaire that is exempted from being thermally protected because it is intended for use only in a fire-resistant medium, such as concrete, is marked “FOR USE IN CONCRETE ONLY.”

PERMISSIVE LOCATION MARKINGS

13. **SUITABLE FOR USE IN POURED CONCRETE** — A recessed luminaire or track lighting system marked “SUITABLE FOR USE IN POURED CONCRETE” may be installed in poured concrete as well as in normal building materials.
14. **SUITABLE FOR USE IN SUSPENDED CEILINGS** — A recessed luminaire provided with means for mounting in a suspended ceiling may be installed in a suspended ceiling if marked “SUITABLE FOR SUSPENDED CEILINGS.”
15. **SUITABLE FOR UNDER CABINET MOUNTING** — A luminaire that is intended for mounting under a cabinet is marked “SUITABLE FOR UNDER-CABINET MOUNT.”

SPECIAL USE MARKINGS

16. **ELEVATED AMBIENT** — A luminaire intended for use in locations that experience a continuous elevated ambient temperature is marked “SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING (____°C),” where the blank is filled in with the maximum ambient temperature.
17. **COMMERCIAL COOKING HOOD USE** — A luminaire intended for installation in non-residential occupancies in exhaust or hood ducts or hoods above cooking equipment, in accordance with the National Electrical Code and the Standard for Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment, NFPA 96, is marked with the minimum temperature rating of the supply wiring, and with the wording

“SUITABLE FOR USE WITHIN COMMERCIAL COOKING HOODS,” or the equivalent, and “MOUNT A MINIMUM OF 1.2 M (4 FEET) ABOVE COOKING SURFACE.” A recessed luminaire is additionally marked with the minimum acceptable spacing between the centers of adjacent units, the minimum spacing from the center of the luminaire to side building member, and the minimum spacing above the luminaire (see Item 55).

- 18. GERMICIDAL LAMP USE** — A luminaire intended for use with germicidal lamps is marked, “THIS LUMINAIRE IS DESIGNED FOR USE WITH GERMICIDAL LAMPS AND MUST BE INSTALLED IN COMPLIANCE WITH COMPETENT TECHNICAL DIRECTIONS SO THAT THE USER’S EYE AND BARE SKIN WILL NOT BE SUBJECTED TO INJURIOUS RAYS.”
- 19. AIR HANDLING USE** — A luminaire for use with heating, ventilating, and air conditioning systems in accordance with the National Electrical Code and the Standard for Installation of Air-Conditioning and Ventilating Systems of Other than Residence Type, ANSI/NFPA 90A, is marked, “SUITABLE FOR AIR HANDLING USE.” An air handling luminaire intended for cool air only is marked “COOLED AIR ONLY”. If the luminaire is shipped without a light diffuser, the luminaire is marked “USE WITH LISTED LIGHT DIFFUSER”. A plastic light diffuser or lens that depends on the luminaire for the provision of a frame and that is shipped separately from the luminaire is marked “USE WITH (manufacturer’s name) (catalog designation) LUMINAIRE.” For information on the use of air handling luminaires in fire rated constructions, refer to the design information section in the Fire Resistance Directory.
- 20. AIR HANDLING USE - EXCESSIVE OPENINGS** — A recessed luminaire intended for use as an air handling register and having a recessed housing with holes or openings that exceed the limits in size or number is marked “FOR NONCOMBUSTIBLE CEILING PLENUM ONLY.” A recessed luminaire that is intended for optional use as an air handling register and having a recessed housing with holes or openings that exceed the limits in size or number that are closed off by a removable cover or knockout is marked “ONLY FOR USE IN CEILING PLENUM OF NONCOMBUSTIBLE CONSTRUCTION OR WITH AIR HANDLING PARTS THAT COVER VENT OPENINGS.”

INSTALLATION MARKINGS

- 21. ADJUSTABLE MOUNTING POSITIONS** — A luminaire with adjustable or alternate mounting positions is marked to indicate the limits of adjustment or mounting positions necessary to comply with test requirements.
- 22. ORIENTATION** — If a luminaire that may be installed in more than one position has been evaluated for use only in one orientation, the luminaire is marked to indicate its proper orientation. This marking is typically provided on wet location and wall mount luminaires.
- 23. CHAIN OR HOOK SUSPENSION ONLY** — A luminaire with power supply cord that is not provided with hooks or chain is marked “FOR CHAIN OR HOOK SUSPENSION ONLY.”
- 24. ADAPTOR PLATE** — A recessed luminaire with an opening for an adapter plate but not shipped with the plate is marked with the catalog number or similar product identifier of the intended adapter plate.

- 25. CABLE WIRING METHOD ONLY** — A recessed luminaire with a wiring compartment (junction box) that is not suitable for pulling individual conductors into it and is intended for cable wiring methods only is marked “FOR CABLE USE ONLY - NOT FOR PULLING WIRES.”
- 26. PHOTOELECTRIC-CONTROLLED RECEPTACLE** — A luminaire provided with a receptacle for a photoelectric-controlled switch but not shipped with the photoelectric-controlled switch or with a shorting or open circuit plug is marked “INSTALL PHOTOCONTROL OR SHORTING PLUG.”
- 27. REFLECTOR KITS** — A reflector kit intended for installation in a fluorescent lighting luminaire sometime after the initial installation of the luminaire may consist of reflectors, electrical components and the like. A reflector kit that requires drilling or punching of holes into the luminaire is marked “WARNING — RISK OF FIRE OR ELECTRIC SHOCK. LUMINAIRE WIRING, BALLASTS, OR OTHER ELECTRICAL PARTS MAY BE DAMAGED WHEN DRILLING FOR INSTALLATION OF REFLECTOR KIT HARDWARE. CHECK FOR ENCLOSED WIRING AND COMPONENTS.”
- 28. CORRELATION MARKINGS FOR TRACK SYSTEMS** — Track systems are composed of many individual sections. Each track section is marked “CAUTION — TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, USE ONLY LUMINAIRE ASSEMBLIES MARKED FOR USE WITH _____ TRACK.” The luminaire assemblies are marked “CAUTION — TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, USE ONLY WITH _____ TRACK.” The blank space is replaced by the manufacturer’s name and series number of the track.
- 29. NON-PENDANT** — A track lighting system that is not intended to be pendant mounted is marked “DO NOT PENDANT MOUNT THIS TRACK SUCH AS BY STEMS OR WIRES.”
- 30. INTEGRAL TO SUSPENDED CEILINGS** — A recessed track system intended to be an integral part of a building construction (for example, the recessed track is an integral part of a suspended ceiling grid) is marked “FOR USE IN _____.” The first blank is replaced by the name of the manufacturer making the building structural component. The second blank is replaced by the model number or other descriptive name of the building structural component.
- 31. CLIP MOUNT** — A track lighting system may be provided with track sections that are intended to be secured to the building structure only by clips. These sections are marked “FOR CLIP MOUNTING ONLY.”

INSTALLATION INSTRUCTIONS

- 32. CIRCUIT DIAGRAM** — luminaires are provided with instructions and a circuit diagram showing the proper method for making supply connections, including polarity and grounding, unless the luminaire carton is marked “THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.”
- 33. POWER SUPPLY CORD** — A luminaire having a power supply cord that is electrically unconnected or unassembled to the luminaire is provided with instructions for the correct field assembly, including a means of strain relief and a wiring diagram.

34. INSTALLATION INSTRUCTION FOR CONVERTIBLE INCANDESCENT RECESSED

LUMINAIRE— A convertible recessed incandescent luminaire housing (rough-in section) is provided with instructions that tell the installer to remove the peel-off label with the text described in note 64, for Type IC installations.

35. INSTALLATION INSTRUCTIONS FOR TRACK SYSTEMS —Each smallest unit package or carton of track assemblies is provided with installation instructions that contain (a) a product description, (b) a statement identifying which track system is to be used with the individual part, and (c) instructions on how the part or parts are to be installed in relation to the track system. Each track section is provided with installation instructions that identify the track system series number or model name, and the model catalog number of the track. The installation instructions also specify the electrical ratings of the track system and identify the mounting means (pendant, surface, etc.), and the distance between mounting clips, screws, stems, etc. Additional instructions and limitations of the use of track lighting systems are specified in the Important Safety Instructions provided with each track section.

36. DRILL GUIDE FOR TRACK SYSTEMS — Those track systems designed such that mounting holes in each track section are to be drilled out by the installer are provided with a drill guide in the center of each track section. The proper location of the mounting holes is to be included in the accompanying installation instructions for the track system.

37. CUT TRACK SECTIONS — Only those track systems with track sections that may be cut to length in the field by the installer are provided with installation instructions that indicate the proper method of cutting.

SUPPLY MARKINGS

38. SUPPLY WIRE TEMPERATURE — luminaires that require greater than 60 °C supply wire are marked “MIN ____ °C SUPPLY CONDUCTORS” for which blank space is replaced with the temperature.

Luminaires intended to be installed in a dwelling, connected to or over an outlet box, and marked for supply wire rated 75°C or 90°C are additionally marked on the luminaire and on the carton “CAUTION - RISK OF FIRE. CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR,” or just the carton may be marked “CAUTION – RISK OF FIRE. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.”

Track lighting systems that require supply wire with minimum temperature ratings are marked “FOR SUPPLY CONNECTIONS, USE WIRE RATED FOR AT LEAST ____ °C (____ °F)” for which the “(____ °F)” is optional and the blank space is replaced with the temperature.

39. PUSH LEADS INTO BOX — Some surface-type wall mounted luminaires require the installer to push the supply leads into the outlet box to avoid contact with high luminaire temperatures, and are marked “PUSH CONDUCTORS INTO JUNCTION BOX”.

40. THROUGH CONDUCTORS IN A WIRING COMPARTMENT — A luminaire that is suitable for use with through branch conductors is marked “MAXIMUM OF ____ NO. ____ AWG THROUGH

BRANCH CIRCUIT CONDUCTORS SUITABLE FOR ____°C PERMITTED IN BOX.”

- 41. ACCESS REQUIRED** — A luminaire so constructed that the supply connections are accessible only from behind the luminaire is marked, “ACCESS ABOVE CEILING REQUIRED” or “ACCESS BEHIND WALL REQUIRED.”
- 42. RACEWAY** — A luminaire may also be intended for use as a raceway if marked “SUITABLE FOR USE AS A RACEWAY.”
- 43. PROPRIETARY WIRING SYSTEM** — A luminaire designed to be connected to a proprietary wiring system is marked with the following information:
- a. The name and part number of the proprietary system to which the luminaire is to be connected.
 - b. All cautionary or other markings required by the system.
- 44. REMOTE BALLAST** — A fluorescent or HID luminaire designed for use with a remote ballast is marked “USE BALLAST FOR ____ WATT ____ TYPE LAMP” where the blanks are filled with the lamp wattage and type, respectively. Additionally, a fluorescent luminaire designed for use with a remote ballast is marked “USE THERMALLY PROTECTED BALLAST FOR TYPE LAMP”.
- 45. “X” OR “T” TRACK CONNECTORS** — An “X” or “T” shaped intercept track connector (a) provided with breakaway ground tabs, (b) provided with a connector not prewired, or (c) intended for field rewiring and reconfiguration is marked “WARNING — RISK OF FIRE AND ELECTRICAL SHOCK. THIS PRODUCT REQUIRES PROPER FIELD WIRING AND IS INTENDED TO BE INSTALLED BY A QUALIFIED ELECTRICIAN ONLY.”
- 46. VOLTAGE OTHER THAN 120 V** — An incandescent luminaire designed for connection to other than a nominal 120 V supply is marked with its input voltage.
- 47. TRANSFORMER VOLTAGE** — A luminaire that employs a device (such as a transformer) that is designed to operate only at a specified voltage is marked with its input voltage.
- 48. A.C. ONLY** — A luminaire that employs a device (such as a transformer) for use only in an alternating-current circuit is marked “____VOLTS ____ HERTZ” or “____ V ____HZ” or “AC ONLY.”
- 49. BRANCH CIRCUIT GREATER THAN 20 A** — A recessed luminaire intended to be connected to a branch circuit in excess of 20 amperes is marked “CONNECT TO A BRANCH CIRCUIT SUPPLY RATED ____ AMPS MAX” where the indicated ratings are 30 or 40.
- 50. LINE VOLT-AMPERES** — Instead of the current in amperes, a fluorescent luminaire employing a high power-factor, reactor-type ballast or ballasts for bi-pin lamps (preheat or rapid start types) may be marked “FOR LINE VOLT-AMPERES, MULTIPLY TOTAL LAMP WATTAGE BY 1.5.” Similarly, a fluorescent luminaire employing a low-power-factor, reactor-type ballast or ballasts for bi-pin lamps may be marked “FOR LINE VOLTAMPERES, MULTIPLY TOTAL LAMP WATTAGE BY 2.5.” Instead of the current in amperes, a fluorescent luminaire employing single-pin lamps (instant start type) and a high-power-factor ballast or ballasts may be marked “FOR LINE VOLT-AMPERES, MULTIPLY THE TOTAL LENGTH OF ALL LAMPS IN INCHES BY ...” The multiplying factor may be “0.6,” “0.8,” “1.2” or “1.5.”

- 51. GROUND ID** — A luminaire and track system feed connector having a pressure wire terminal for the connection of an equipment ground conductor is marked, adjacent to the terminal or screw, “G”, “GR”, “GRD”, “GND”, “GRND”, “GROUND”, or with the grounding symbol. A wire binding screw used to connect an equipment ground conductor is colored green or provided with a grounding abbreviation adjacent to the screw.
- 52. AIR HANDLING GROUNDING** — Recessed luminaires intended for installation only in environmental air handling spaces other than ducts or plenums that rely on a conductive connection to a metal-enclosed wiring system for equipment grounding are marked “INSTALL ONLY IN ENVIRONMENTAL AIR HANDLING SPACES WHERE A COMPLETE METAL ENCLOSED WIRING SYSTEM IS PROVIDED.”
- 53. NEUTRAL ID** — A luminaire and track system feed connector having a terminal for the connection of the neutral supply conductor is marked, adjacent to the terminal or screw, “N”, “NEUTRAL”, “W” or “WHITE”, or is colored white.
- 54. POLARIZED PLUG** — A luminaire with cord and a polarized attachment plug is marked “TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT.”

RECESSED LUMINAIRE MARKINGS

- 55. CLEARANCE AND INSTALLATION** — Recessed luminaires may be installed in insulated or uninsulated ceilings (or walls when marked for wall mounting) depending on their type of Listing as follows:
- a. Suitable for Installation in Direct Contact with Insulation** — These luminaires are marked “TYPE IC,” or “INHERENTLY PROTECTED,” and may be installed where thermal insulation is placed in direct contact with the sides and top of the luminaire. They are protected against overheating by either thermal protection (See Note 58), or are inherently protected (See Note 59).
 - b. Suitable for Installation Only in Poured Concrete** — These luminaires are restricted to use only in a fire resistant medium such as concrete, and are marked “FOR USE IN CONCRETE ONLY.” An in-ground recessed luminaire may alternately be marked “SUITABLE FOR GROUND MOUNTED RECESSED ONLY”.
 - c. Luminaires Requiring Minimum Spacing from Thermal Insulation and Combustibles (Type Non-IC)** — luminaires that are NOT marked “TYPE IC,” “INHERENTLY PROTECTED,” are referred to as Type Non-IC Recessed luminaires. The luminaires are intended to be installed where minimum spacings are maintained between the luminaire and combustibles, side walls, and overhead building members, and may be identified by the spacing-to-thermal insulation marking as specified in Note 63. There are different purposes for the spacings. The minimum spacing to combustibles reduces the risk of the luminaire heat igniting combustibles. This spacing is always a minimum of ½ inch, unless the luminaire is marked: “INSTALL WITH MINIMUM SPACINGS BETWEEN (a) CENTER-TO-CENTER OF ADJACENT LUMINAIRES: ____ mm (____ in.); (b) TOP OF LUMINAIRE-TO-OVERHEAD BUILDING MEMBER: ____ mm (in); and (c) LUMINAIRE CENTER-TO-SIDE BUILDING MEMBER: ____ mm (in.).” The blank spaces will be replaced by the minimum distances required.

- d. **Suitable for Installation Only in Environmental Air Handling Spaces** — These luminaires are restricted for use only in an environmental air handling space and are marked “INSTALL ONLY IN ENVIRONMENTAL AIR HANDLING SPACES WHERE A COMPLETE METAL ENCLOSED WIRING SYSTEM IS PROVIDED.”
56. **TYPE NON-IC** — Recessed luminaires that are NOT suitable for installation in direct contact with combustible materials or thermal insulation, including insulation installed over the top of the luminaire that entraps heat (Type Non-IC) are marked “DO NOT INSTALL INSULATION WITHIN 76 mm (3 in) OF ANY PART OF THE LUMINAIRE.”
57. **TYPE IC** — A luminaire marked “TYPE IC” may be installed where insulation and combustible materials are placed in direct contact with the sides and the top of the luminaire.
58. **LIGHT BLINKING, THERMAL PROTECTION** — Recessed luminaires provided with thermal protection to sense overheating conditions are marked “BLINKING LIGHT OF THIS THERMALLY PROTECTED LUMINAIRE MAY INDICATE OVERHEATING” to alert the user of a potential overheating condition.
59. **INHERENTLY PROTECTED** — luminaires that are intended for installation in direct contact with thermal insulation and combustible material, and are designed so that overheating conditions cannot be caused by overlamping or mislamping, are not thermally protected and are marked “INHERENTLY PROTECTED.”
60. **TRIM CORRELATION** — A recessed luminaire is marked “USE WITH (manufacturer’s name) (catalog number) TRIMS ONLY.” The trims are marked with the trim manufacturer’s name and catalog number.
61. **CONVERTIBLE INCANDESCENT RECESSED LUMINAIRE (TYPE IC/NON-TYPE IC)** — Convertible recessed incandescent luminaires can be installed in either insulated (Type IC) or non-insulated (noninsulated Type IC) applications. The Same luminaire housing (rough-in section) is used for both Type IC and Non-Type IC applications. The trim (finishing section) and light source determine the Type IC or Non-IC application of the luminaire. Convertible luminaires have been evaluated with respect to risk of fire by performance testing under conditions of misapplication of lamps or trims. Installation instructions are provided that tell the installer to remove the marking relating to spacing to thermal installation when the luminaire is installed as intended as a Type IC luminaire in an insulated ceiling application. (See note 34).
62. **CONVERTIBLE (TYPE NON-IC/IC) TRIM IDENTIFICATION** — The trim (finishing section) for a convertible recessed incandescent luminaire is provided with correlation markings which identify the trim/ luminaire (finishing/rough-in section) combinations that are suitable for either Type IC or Non-Type IC installation.
63. **ROUGH-IN AND FINISHING SECTIONS** — Some recessed luminaires are intended to be installed in two parts. The Rough-In Section usually consists of the plaster frame and junction box, and is marked “ROUGH-IN SECTION FOR USE WITH FINISHING SECTION _____”, or ROUGH-IN SECTION _____ FOR CONVERTIBLE RECESSED LUMINAIRE.” The blanks are replaced by catalog numbers or series designations. The Finishing Section usually consists of the recessed housing and trim; it is marked with the manufacturer’s identification and catalogue number. A convertible recessed luminaire trim/finishing section is also marked “FINISHING-SECTION FOR USE WITH ROUGH-IN SECTION _____.” The blanks are replaced by the catalog number or series designations. If a light diffuser is not

provided, an additional marking on the finishing section indicates that the luminaire must not be used with a light diffuser.

- 64. RECESSED TRACK FOR RECESSED LUMINAIRE ASSEMBLIES** — A recessed track channel for recessed luminaire assemblies and intended for installation in a wall or ceiling cavity where thermal insulation is spaced at least 3 inches away from the recessed channel is marked “WARNING — RISK OF FIRE. DO NOT INSTALL INSULATION WITHIN 3 INCHES OF RECESSED CHANNEL IN SUCH A MANNER TO ENTRAP HEAT” or equivalent. In addition, a recessed track channel for recessed luminaire assemblies is marked “NOTICE — THERMALLY PROTECTED TRACK (OR LUMINAIRES). BLINKING LIGHTING MAY INDICATE INSULATION TOO CLOSE TO TRACK (OR OTHER CONDITION CAUSING OVERHEATING)”.
- 65. RECESSED LUMINAIRE ASSEMBLIES** — A recessed luminaire assembly intended for use with a recessed track system is marked with its minimum spacing to adjacent assemblies.

USER MARKINGS

- 66. LAMP REPLACEMENT MARKINGS** — Incandescent and HID type luminaires and track lighting luminaire assemblies are required to be marked with lamp replacement markings. This marking may be used in combination with the trim correlation marking in recessed luminaires (See Note 72). Generally, most fluorescent luminaires are not provided with lamp replacement markings (See Note 67 for compact fluorescent lamps). The lamp replacement marking for incandescent luminaires will state, “CAUTION - RISK OF FIRE. MAX ____ W(ATTS) TYPE ____”, where the blanks are filled in with lamp type and wattage, and may include the word “SHIELDED” if intended for use with a tungsten-halogen lamp which has an integral shield. HID-type luminaires are provided with a lamp replacement marking identifying the replacement lamp wattage and ANSI designation.
- 67. COMPACT FLUORESCENT LAMPS** — luminaires that employ a compact fluorescent lamp with a ballast that is not Class P are marked with the following or equivalent: “USE ONLY ____ TYPE ____ WATT LAMPS. “
- 68. HID LAMP WITH NO ANSI DESIGNATION** — An HID luminaire with a ballast designed to operate a lamp that does not have an ANSI designation is marked “USE MAX ____ WATTS TYPE ____ ONLY” and, if applicable, “USE ____ VOLT LAMPS.”
- 69. DOUBLE-ENDED LAMPS** — A luminaire that employs a double-ended tungsten halogen or HID lamp without an interlock switch is marked “CAUTION — RISK OF SHOCK. DISCONNECT POWER BEFORE SERVICING.” In addition, if the end contact may be energized and accessible during removal of the lamp, the luminaire is additionally marked “CAUTION — RISK OF ELECTRIC SHOCK. INSERT LAMP IN THIS LAMPHOLDER FIRST,” unless provided with an interlock switch. A track lighting luminaire is marked “NOT FOR USE IN DWELLINGS” and “CAUTION — RISK OF ELECTRIC SHOCK. REMOVE FROM TRACK BEFORE RELAMPING.”

- 70. TUNGSTEN HALOGEN LAMPS** — An incandescent luminaire with a tungsten halogen lamp and that does not have a lamp containment barrier is marked “CAUTION — RISK OF FIRE. MAX ___ WATTS TYPE ___ SHIELDED” or “CAUTION – RISK OF FIRE. MAX ___ WATTS TYPE ___ USE LAMP MARKED “SUITABLE FOR IS IN OPEN LUMINAIRES”.
- 71. METAL HALIDE LAMPS** — HID luminaires with Metal Halide (MH) lamps may be provided with a marking if the lamp enclosure is either: not provided or is inadequate for containing lamp particles. The marking is “CAUTION — RISK OF FIRE. DO NOT INSTALL A LAMP IDENTIFIED FOR USE ONLY IN ENCLOSED LUMINAIRES.” A luminaire with a lamp containment barrier that is removed during user maintenance is marked “KEEP PROTECTIVE BARRIER IN PLACE.” A luminaire with a UV attenuation barrier that is removed during user maintenance is marked “CAUTION – RISK OF PERSONAL INJURY. UV LIGHT SOURCE KEEP PROTECTIVE BARRIER IN PLACE”.
- 72. RECESSED LUMINAIRE LAMP REPLACEMENT MARKINGS** — Recessed luminaire housing or rough-in section may employ a marking system where the lamp replacement marking is dependent upon the trim or finishing section used. A luminaire housing is marked “USE ONLY WITH [Manufacturer] [Catalog Number] TRIMS”. A rough-in section is marked “ROUGH-IN SECTION FOR USE WITH FINISHING SECTION ____”. The blanks are filled in with manufacturer and trim or finishing section number as appropriate. All recessed luminaires are marked for lamp replacement “CAUTION – RISK OF FIRE. MAX ___ WATTS ___ TYPE”. A recessed luminaire that requires a different lamp wattage or type for an alternate trim or finishing section is marked “CAUTION – RISK OF FIRE” and a table specifying the trim or finishing section and the maximum lamp wattage and type permitted for use with it. Alternately the lamp replacement information can be included on the trim or finishing section. The lamp replacement markings can be concealed providing the trim or finishing section must be removed for relamping or it is additionally marked where visible during relamping “SEE OTHER (BACK) SIDE FOR RELAMPING INFORMATION.”
- 73. CLASSIFIED TRIMS** — A trim intended for field installation in specified incandescent recessed luminaires is provided with a lamp replacement marking (See Note 72) and identifies the luminaire for which the trim is suitable.
- 74. ADJACENT COMBUSTIBLES** — A track lighting luminaire assembly that produces a temperature greater than 90°C (194°F) on any exterior surface is marked “CAUTION — HOT SURFACE. KEEP AWAY FROM CURTAINS AND OTHER COMBUSTIBLES.”
- 75. PHOTOELECTRIC-CONTROLLED SWITCH** — A luminaire with a single-pole photoelectric controlled switch that is designed for connection to a line-to-line branch circuit is marked “CAUTION — RISK OF ELECTRIC SHOCK. DISCONNECT POWER BEFORE SERVICING.”
- 76. CONVENIENCE RECEPTACLE** — A luminaire provided with a convenience receptacle is marked “MAX___ W(ATTS)” or “MAX ___ A(MPS)” for its maximum load rating.
- 77. FUSEHOLDER** — A luminaire provided with a fuseholder is marked “MAX ___ A(MPS) with its fuse replacement rating.