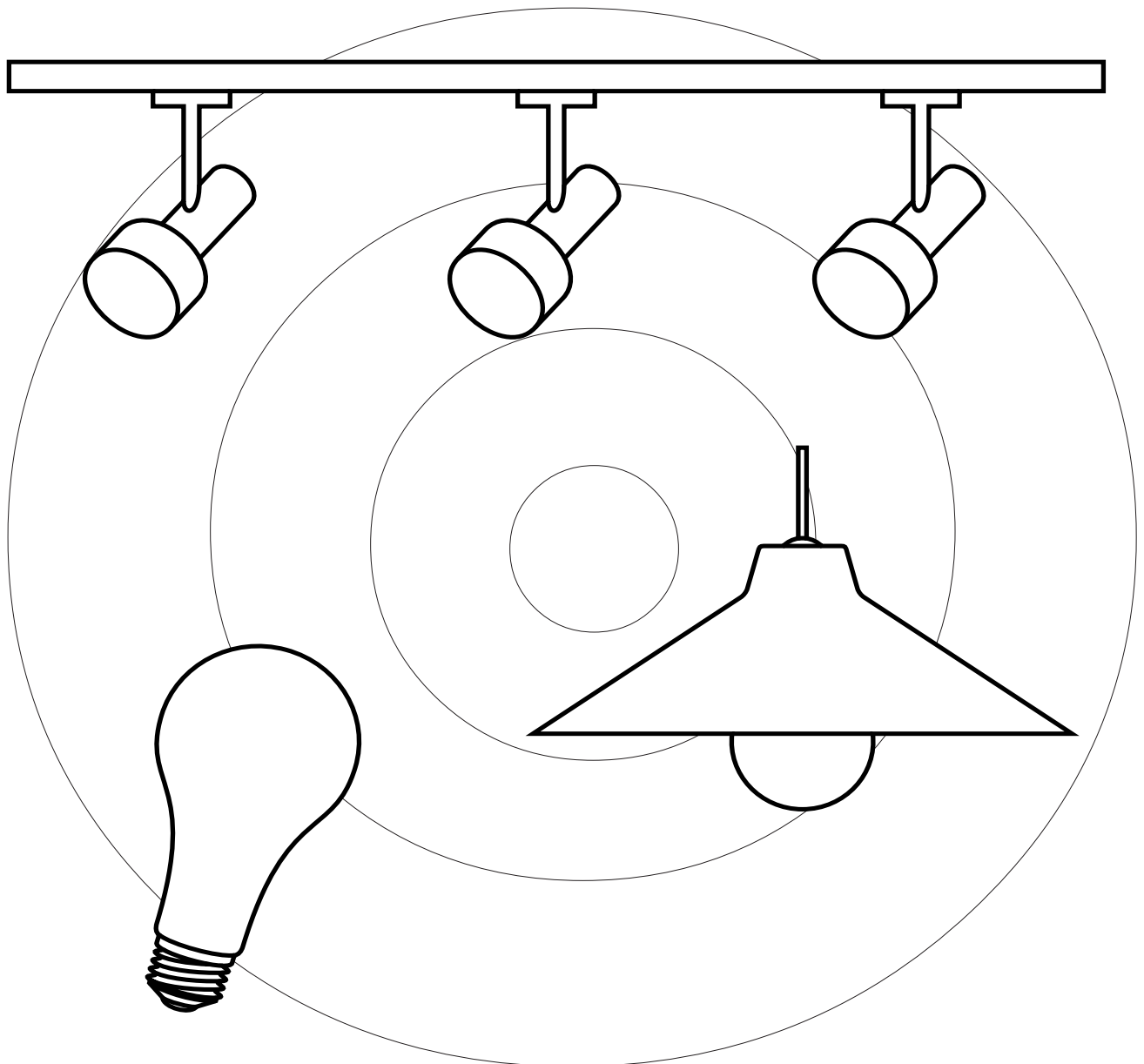


Marking Guide

Luminaires
July 2004



Preface to the Sixth Edition

This sixth edition of the Luminaire Marking Guide contains updated information to make it easier to locate specific markings. The guide consists of 84 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 1999 National Electrical Code (NEC) ® and UL Luminaire Standards revisions through May 1, 2000.

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

We welcome any comments or suggestions you may have regarding this new edition. Please direct your comments to:

David M. Belt
Conformity Assessment Services
Underwriters Laboratories Inc.
12 Laboratory Drive
Research Triangle Park, NC 27709
Phone: (919) 549-1628
Fax: (919) 547-6028
e-mail: david.m.belt@us.ul.com

INDEX BY LUMINAIRE TYPE

INCANDESCENT SURFACE MOUNTED LUMINAIRES

Guide (CCN) Designation: IEZR

Listing Mark ID: Luminaire

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

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS	NOTE
Dry Locations	1
Damp Locations	2
Wet Locations	3
Caiking Instructions	4
RESTRICTED LOCATION MARKINGS	
Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Combustible Ceilings Only	9
PERMISSIVE LOCATION MARKINGS	
Suitable For Under Cabinet Mounting	15
SPECIAL USE MARKINGS	
Elevated Ambient	16
Commercial Cooking Hood Use	17
INSTALLATION MARKINGS	
Adjustable Mounting Positions	21
Orientation	22
Chain Or Hook Suspension Only	23
Photo-Control Receptacle	25
INSTALLATION INSTRUCTIONS	
Circuit Diagram	31
Power Supply Cord	32
SUPPLY MARKINGS	
Supply Wire Temperature	37
Push Leads Into Box	38
Raceway	41
Proprietary Wiring System	42
Voltage Other Than 120 V	45
Transformer Voltage	46
A.C. Only	47
Ground ID	50
USER MARKINGS	
Lamp Replacement Markings	65
Double-Ended Lamps	68
Tungsten Halogen Lamps	69
Photoelectric-Controlled Switch	74
Convenience Receptacle	75
Fuseholder	76

INCANDESCENT RECESSED MOUNTED LUMINAIRES

Guide (CCN) 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”

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS	NOTE
Dry Locations	1
Damp Locations	2
Wet Locations	3
Caulking Instructions	4
RESTRICTED LOCATION MARKINGS	
Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Fire-Rated Recessed Ceilings Only	10
Fire Resistant Construction Only	11
Poured Concrete Only	12
PERMISSIVE LOCATION MARKINGS	
Suitable For Use In Poured Concrete	13
Suitable For Use In Suspended Ceilings	14
SPECIAL USE MARKINGS	
Commercial Cooking Hood Use	17
Air Handling Use	19
Air Handling Use - Excessive Openings	20
INSTALLATION MARKINGS	
Orientation	22
INSTALLATION INSTRUCTIONS	
Circuit Diagram	31
SUPPLY MARKINGS	
Supply Wire Temperature	37
Branch Conductors In Box	39
Access Required	40
Proprietary Wiring System	42
Voltage Other Than 120 V	45
Transformer Voltage	46
A.C. Only	47
Branch Circuit Greater Than 20 A	48
Ground ID	50
Air Handling Grounding	51
RECESSED LUMINAIRE MARKINGS	
Clearance And Installation	54
Non-Type IC	55
Type IC	56
Light Blinking, Thermal Protection	57
Inherently Protected	58
Trim Correlation	59
Rough-In And Finishing Sections	62

USERMARKINGS	NOTE
Lamp Replacement Markings	65
Double-Ended Lamps	68
Tungsten Halogen Lamps	69
Recessed Luminaire Lamp Replacement Markings	71
Classified Trims +	72
Adjacent Combustibles	73
Fuseholder	76

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

FLUORESCENT SURFACE MOUNTED LUMINAIRES

Guide (CCN) 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”

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS

Dry Locations	1
Damp Locations	2
Wet Locations	3
Cautioning Instructions	4

RESTRICTED LOCATION MARKINGS

Outdoor Use Only	5
Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Combustible Ceilings Only	9

PERMISSIVE LOCATION MARKINGS

Suitable For Under Cabinet Mounting	15
-------------------------------------	----

SPECIAL USE MARKINGS

Elevated Ambient	16
Commercial Cooking Hood Use	17
Germicidal Lamp Use	18

INSTALLATION MARKINGS

Adjustable Mounting Positions	21
Orientation	22
Chain Or Hook Suspension Only	23
Adaptor Plate	24
Photo-Control Receptacle	25
Reflector Kits++	26

INSTALLATION INSTRUCTIONS

Circuit Diagram	31
Power Supply Cord	32

SUPPLY MARKINGS

Supply Wire Temperature	37
Push Leads Into Box	38
Raceway	41
Proprietary Wiring System	42
Non-Integral Ballast	43
Transformer Voltage	46

	NOTE
A.C. Only	47
Line Volt-Amperes	49
Ground ID	50
Polarized Plug	53

USER MARKINGS

Integral Starters	66
Photoelectric-Controlled Switch	74
Convenience Receptacle	75
Fuseholder	76

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

FLUORESCENT RECESSED MOUNTED LUMINAIRES

Guide (CCN) 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”

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS

Dry Locations	1
Damp Locations	2
Wet Locations	3
Caiking Instructions	4

RESTRICTED LOCATION MARKINGS

Outdoor Use Only	5
Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Fire-Rated Recessed Ceilings Only	10
Fire Resistant Construction Only	11
Poured Concrete Only	12

PERMISSIVE LOCATION MARKINGS

Suitable For Use In Poured Concrete	13
Suitable For Use In Suspended Ceilings	14

SPECIAL USE MARKINGS

Commercial Cooking Hood Use	17
Germicidal Lamp Use	18
Air Handling Use	19
Air Handling Use - Excessive Openings	20

INSTALLATION MARKINGS

Orientation	22
Adaptor Plate	24
Reflector Kits	26

INSTALLATION INSTRUCTIONS	NOTE
Circuit Diagram	31
 SUPPLY MARKINGS	
Supply Wire Temperature	37
Branch Conductors In Box	39
Access Required	40
Proprietary Wiring System	42
Non-Integral Ballast	43
Transformer Voltage	46
A.C. Only	47
Branch Circuit Greater Than 20 A	48
Line Volt-Amperes	49
Ground ID	50
Air Handling Grounding	51
 RECESSED LUMINAIRE MARKINGS	
Clearance And Installation	54
Type Non-IC	55
Type IC	56
Light Blinking, Thermal Protection	57
Inherently Protected	58
Trim Correlation	59
 USER MARKINGS	
Integral Starters	66
Recessed Luminaire Lamp Replacement Markings	71
Adjacent Combustibles	73
Fuseholder	76

HID SURFACE MOUNTED LUMINAIRES

Guide (CCN) Designation: IEXT

Listing Mark ID: Luminaire

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

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS

Dry Locations	1
Damp Locations	2
Wet Locations	3
Caulking Instructions	4

RESTRICTED LOCATION MARKINGS

Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Combustible Ceilings Only	9

SPECIAL USE MARKINGS

Elevated Ambient	16
------------------	----

INSTALLATION MARKINGS

Adjustable Mounting Positions	21
Orientation	22
Chain Or Hook Suspension Only	23
Photoelectric-Controlled Receptacle	25

INSTALLATION INSTRUCTIONS	NOTE
Circuit Diagram	31
Power Supply Cord	32
SUPPLY MARKINGS	
Supply Wire Temperature	37
Push Leads Into Box	38
Raceway	41
Proprietary Wiring System	42
Non-Integral Ballast	43
Transformer Voltage	46
A.C. Only	47
Ground ID	50
Polarized Plug	53
USER MARKINGS	
Lamp Replacement Markings	65
Hid Lamp Voltage	67
Double-Ended Lamps	68
Photoelectric-Controlled Switch	74
Convenience Receptacle	75
Fuseholder	76

HID RECESSED MOUNTED LUMINAIRES

Guide (CCN) 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”

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS

Dry Locations	1
Damp Locations	2
Wet Locations	3
Caiking Instructions	4

RESTRICTED LOCATION MARKINGS

Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Fire-Rated Recessed Ceilings Only	10
Fire Resistant Construction Only	11
Poured Concrete Only	12

PERMISSIVE LOCATION MARKINGS

Suitable For Use In Poured Concrete	13
Suitable For Use In Suspended Ceilings	14

SPECIAL USE MARKINGS

Commercial Cooking Hood Use	17
Air Handling Use	19
Air Handling Use - Excessive Openings	20

INSTALLATION MARKINGS	NOTE
Orientation	22
 INSTALLATION INSTRUCTIONS	
Circuit Diagram	31
 SUPPLY MARKINGS	
Supply Wire Temperature	37
Branch Conductors In Box	39
Access Required	40
Proprietary Wiring System	42
Non-Integral Ballast	43
Transformer Voltage	46
A.C. Only	47
Branch Circuit Greater Than 20 A	48
Line Volt-Amperes	49
Ground ID	50
Air Handling Grounding	51
 RECESSED LUMINAIRE MARKINGS	
Clearance And Installation	54
Non-Type IC	55
Type IC	56
Light Blinking, Thermal Protection	57
Inherently Protected	58
Trim Correlation	59
Rough-In And Finishing Sections	62
 USER MARKINGS	
Lamp Replacement Markings	65
Hid Lamp Voltage	67
Double-Ended Lamps	68
Metal Halide Lamps	70
Recessed Luminaire Lamp Replacement Markings	71
Adjacent Combustibles	73
Fuseholder	76

INCANDESCENT RECESSED LUMINAIRES,
 CONVERTIBLE - NON-IC/IC
 Guide (CCN) 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”

MARKINGS

ENVIRONMENTAL LOCATION MARKINGS	
Dry Locations	1
Damp Locations	2
Wet Locations	3
 RESTRICTED LOCATION MARKINGS	
Not For Use In Dwellings	6
Wall Mounting Only	7
Non-Fire-Rated Recessed Ceilings Only	10
Fire Resistant Construction Only	11
Poured Concrete Only	12

	NOTE
PERMISSIVE LOCATION MARKINGS	
Suitable For Use In Poured Concrete	13
Suitable For Use In Suspended Ceilings	14
SPECIAL USE MARKINGS	
Commercial Cooking Hood Use	17
Air Handling Use	19
Air Handling Use - Excessive Openings	20
INSTALLATION MARKINGS	
Orientation	22
INSTALLATION INSTRUCTIONS	
Circuit Diagram	31
Convertible Incandescent Recessed Luminaires	33
SUPPLY MARKINGS	
Supply Wire Temperature	37
Branch Conductors In Box	39
Access Required	40
Proprietary Wiring System	42
Voltage Other Than 120 V	45
Transformer Voltage	46
A.C. Only	47
Branch Circuit Greater Than 20 A	48
Ground ID	50
Air Handling Grounding	51
RECESSED LUMINAIRE MARKINGS	
Clearance And Installation	54
Non-Type IC	55
Type IC	56
Light Blinking, Thermal Protection	57
Inherently Protected	58
Trim Correlation	59
Convertible Incandescent Recessed Luminaire (Type IC/Non-Type IC)	60
Convertible (Type Non-IC/IC) Trim Identification	61
Rough-In And Finishing Sections	62
USER MARKINGS	
Lamp Replacement Markings	65
Double-Ended Lamps	68
Tungsten Halogen Lamps	69
Recessed Luminaire Lamp Replacement Markings	71
Adjacent Combustibles	73
Photoelectric-Controlled Switch	74
Fuseholder	76

TRACK LIGHTS AND TRACKS
Guide (CCN) Designation: IFFR
Listing Mark ID: Track Lighting Fittings”

MARKINGS

	NOTE
RESTRICTED LOCATION MARKINGS	
Ceiling Mount Only	8

INSTALLATION MARKINGS	NOTE
Correlation Markings For Track Systems	27
Non-Pendant	28
Integral To Suspended Ceilings	29
Clip Mount	30
 INSTALLATION INSTRUCTIONS	
Track Systems	34
Drill Guide For Track Systems	35
Cut Track Sections	36
 SUPPLY MARKINGS	
Supply Wire Temperature	37
“X” Or “T” Track Connectors	44
Voltage Other Than 120 V	45
A.C. Only	47
Ground ID	50
Neutral ID	52
 RECESSED LUMINAIRE MARKINGS	
Recessed Track For Recessed Luminaire Assemblies	63
Recessed Luminaire	64
 USER MARKINGS	
Lamp Replacement Markings	65
Integral Starters	66
Hid Lamp Voltage	67
Double-Ended Lamps	68
Tungsten Halogen Lamps	69
Metal Halide Lamps	70
Adjacent Combustibles	73

INDEX BY SUBJECT

NOTE	PAGE
 ENVIRONMENTAL LOCATION MARKINGS	
1. Dry Locations	13
2. Damp Locations	13
3. Wet Locations	13
4. Caulking Instructions	14
 RESTRICTED LOCATION MARKINGS	
5. Outdoor Use Only	14
6. Not For Use In Dwellings	14
7. Wall Mounting Only	14
8. Ceiling Mount Only	14
9. Non-Combustible Ceilings Only	14
10. Non-Fire-Rated Recessed Ceilings Only	14
11. Fire Resistant Construction Only	14
12. Poured Concrete Only	14
 PERMISSIVE LOCATION MARKINGS	
13. Suitable For Use In Poured Concrete	14
14. Suitable For Use In Suspended Ceilings	14
15. Suitable For Under Cabinet Mounting	14

NOTE	PAGE
SPECIAL USE MARKINGS	
16. Elevated Ambient	14
17. Commercial Cooking Hood Use	1
18. Germicidal Lamp Use	15
19. Air Handling Use	15
20. Air Handling Use - Excessive Openings	15
INSTALLATION MARKINGS	
21. Adjustable Mounting Positions	15
22. Orientation	15
23. Chain Or Hook Suspension Only	15
24. Adaptor Plate	15
25. Photoelectric-Controlled Receptacle	15
26. Reflector Kits	15
27. Correlation Markings For Track Systems	16
28. Non-Pendant	16
29. Integral To Suspended Ceilings	15
30. Clip Mount	15
INSTALLATION INSTRUCTIONS	
31. Circuit Diagram	16
32. Power Supply Cord	16
33. Installation Instruction For Convertible Incandescent Recessed Luminaires	16
34. Installation Instructions For Track Systems	16
35. Drill Guide For Track Systems	16
36. Cut Track Sections	17
SUPPLY MARKINGS	
37. Supply Wire Temperature	17
38. Push Leads Into Box	17
39. Branch Conductors In Box	17
40. Access Required	17
41. Raceway	17
42. Proprietary Wiring System	17
43. Non-Integral Ballast	17
44. "X" Or "T" Track Connectors	17
45. Voltage Other Than 120 V	17
46. Transformer Voltage	17
47. A.C. Only	17
48. Branch Circuit Greater Than 20 A	18
49. Line Volt-Amperes	18
50. Ground ID	18
51. Air Handling Grounding	18
52. Neutral ID	18
53. Polarized Plug	18
RECESSED LUMINAIRE MARKINGS	
54. Clearance And Installation	18
55. Type Non-IC	19
56. Type IC	19
57. Light Blinking, Thermal Protection	19
58. Inherently Protected	19
59. Trim Correlation	19
60. Convertible Incandescent Recessed Luminaire (Type IC/Type Non-IC)	19
61. Convertible (Type Non-IC/IC) Trim Identification	19

NOTE

PAGE

62. Rough-In And Finishing Sections	19
63. Recessed Track For Recessed Luminaire Assemblies	19
64. Recessed Luminaire	20

USER MARKINGS

65. Lamp Replacement Markings	20
66. Integral Starters	20
67. Hid Lamp Voltage	20
68. Double-Ended Lamps	20
69. Tungsten Halogen Lamps	20
70. Metal Halide Lamps	20
71. Recessed Luminaire Lamp Replacement Markings	20
72. Classified Trims	20
73. Adjacent Combustibles	20
74. Photoelectric-Controlled Switch	20
75. Convenience Receptacle	21
76. Fuseholder	21

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” is intended to be installed at least 1.2 m (4 feet) above the ground where it is not likely to be subjected to water from a lawn or garden sprinkler system.

a. Covered Ceiling Mount Only — A 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 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 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 exempt from being Class P because it is intended for outdoor use only is marked “OUTDOOR USE ONLY”.

6. NOT FOR USE IN DWELLINGS — A fluorescent luminaire that has 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 — luminaire assemblies of track lighting systems intended for ceiling mount only are marked “FOR USE WITH CEILING-MOUNTED TRACK ONLY.”

9. NON-COMBUSTIBLE CEILINGS ONLY — A ceiling mounted luminaire that may 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 that does not completely close off a hole in a ceiling 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 BUILDING OF FIRE-RESISTANT CONSTRUCTION - MOUNT ON NONCOMBUSTIBLE MATERIAL.”

12. POURED 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 POURED CONCRETE ONLY.”

PERMISSIVE LOCATION MARKINGS

13. SUITABLE FOR USE IN POURED CONCRETE — A recessed luminaire or track marked “SUITABLE FOR INSTALLATION 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 AMBIENTS 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.

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." 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 excessive holes or openings in the recessed housing is marked "ACCESS NONCOMBUSTIBLE CEILING PLENUM ONLY" A recessed luminaire that is intended for optional use as an air handling register and that has excessive holes or openings that are in its recessed housing and 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. 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."

26. 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.”

27. 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.

28. 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.”

29. INTEGRAL TO SUSPENDED CEILING — 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.

30. 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

31. 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.”

32. 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.

33. INSTALLATION INSTRUCTION FOR CONVERTIBLE INCANDESCENT RECESSED LUMINAIRES — 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.

34. 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.

35. 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.

36. 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

37. 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 “CAUTION - RISK OF FIRE. CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR.”

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.

38. 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” .

39. BRANCH CONDUCTORS IN BOX— 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.” A luminaire intended for use only with a cable type wiring means is marked “FOR CABLE USE ONLY - NOT FOR PULLING WIRES.”

40. 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.”

41. RACEWAY— A luminaire may also be intended for use as a raceway if marked “SUITABLE FOR USE AS A RACEWAY.”.

42. 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.

43. NON-INTEGRAL BALLAST— A fluorescent or HID luminaire not provided with an integral ballast is marked “USE BALLAST FOR ___ WATT ___ TYPE LAMP” where the blank is filled with the lamp wattage and type, and “USE THERMALLY PROTECTED BALLAST FOR TYPE LAMP” .

44. “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.”

45. 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.

46. 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.

47. A.C. ONLY— A luminaire that employs a device (such as a transformer) for use only in an alternating-current circuit is marked “AC ONLY.”

48. 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.

49. 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 VOLT-AMPERES, 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.”

50. 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.

51. 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.”

52. 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.

53. 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

54. 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 57), or are inherently protected (See Note 58).

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 (Non-Type IC) — luminaires that are not marked “TYPE IC,” “INHERENTLY PROTECTED,” “FOR USE IN CONCRETE ONLY,” or “INSTALL ONLY IN ENVIRONMENTAL AIR HANDLING SPACES WHERE A COMPLETE METAL ENCLOSED WIRING SYSTEM IS PROVIDED” 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.”

55. TYPE NON-IC — Recessed luminaires that are not suitable for installation in direct contact with thermal insulation or combustible materials (Type Non-IC) are marked “DO NOT INSTALL INSULATION WITHIN 76 mm (3 in) OF ANY PART OF THE LUMINAIRE.”

56. TYPE IC — A luminaire marked “TYPE IC” may be installed where insulation is placed in direct contact with the sides and the top of the luminaire. Recessed luminaires not marked “TYPE IC” are intended to be installed where insulation is kept at least 3 inches from its sides and from its top such that heat is not entrapped (See Note 62).

57. LIGHT BLINKING, THERMAL PROTECTION— Recessed luminaires provided with thermal protectors 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.

58. INHERENTLY PROTECTED— luminaires that are intended for installation in direct contact with thermal insulation, and are designed so that overheating conditions cannot be caused by overlamping or mislamping, are not thermally protected and are marked “INHERENTLY PROTECTED.”

59. 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.

60. CONVERTIBLE INCANDESCENT RECESSED LUMINAIRE (TYPE IC/NON-TYPE IC) — Convertible recessed incandescent luminaires can be installed in either insulated (Type IC) or non-insulated (non-insulated 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 33).

61. 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.

62. 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.

63. 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)”.

64. 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

65. 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 71). Generally, most fluorescent luminaires are not provided with lamp replacement markings (See Note 66 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

66. INTEGRAL STARTERS — luminaires that employ a compact fluorescent lamp with a simple reactance ballast are marked with the following or equivalent: “USE ONLY ___ TYPE _____ WATT LAMPS. ”

67. HID LAMP VOLTAGE— An HID luminaire intended to be operated with a lamp that does not have an ANSI designation is marked “USE _____ VOLT LAMPS.”

68. 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.”

69. TUNGSTEN HALOGEN LAMPS — A luminaire that does not have an adequate lamp compartment to contain lamp particles for certain tungsten halogen lamps is marked “CAUTION — RISK OF FIRE. DO NOT USE LAMP IDENTIFIED FOR USE IN ENCLOSED LUMINAIRES.”

70. 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 employing a metal halide lamp without an integral outer envelope is marked “CAUTION — RISK OF PERSONAL INJURY. KEEP PROTECTIVE BARRIER IN PLACE.”

71. RECESSED LUMINAIRE LAMP REPLACEMENT MARKINGS — Recessed luminaire and rough-in and finishing sections may employ a marking system where the lamp replacement marking is dependent upon the trim used. The luminaire housing or rough-in section is marked “CAUTION - RISK OF FIRE. FOR USE WITH (mfg name) TRIMS ONLY - SEE TRIM FOR NO.” and “TRIM NO. ____, MAX LAMP WATTAGE ___ AND TYPE” ____. The blanks are filled in with trim number, lamp wattage and type as appropriate. The trim or finishing section is provided with manufacturer’s name and trim number.

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 is additionally marked where normally visible during relamping “SEE OTHER (BACK) SIDE FOR RELAMPING INFORMATION.”

72. 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.

73. 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.”

74. PHOTOELECTRIC-CONTROLLED SWITCH — A luminaire provided with a single-pole photoelectric-controlled switch used on a line-to-line supply is marked “CAUTION — RISK OF ELECTRIC SHOCK. DISCONNECT POWER BEFORE SERVICING.”

75. CONVENIENCE RECEPTACLE — A luminaire provided with a convenience receptacle is marked “MAX ___ W(ATTS)” or “MAX ___ A(MPS)” for its maximum load rating.

76. FUSEHOLDER — A luminaire provided with a fuseholder is marked “MAX ___ A(MPS)” with its fuse replacement rating.