SECTION 130.2 – OUTDOOR LIGHTING CONTROLS AND EQUIPMENT

Nonresidential, high-rise residential and hotel/motel buildings shall comply with the applicable requirements of Sections 130.2(a) through 130.2(c).

This value should be in lumens because the values in TABLES 130.2A&B are in lumens

(a) **Outdoor Incandescent Lighting.** All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c)2, shall be controlled by a motion sensor.

(b) **Luminaire Cutoff Requirements.** All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG" in accordance with IES TM-15-11, Addendum A) requirements as follows:

1. There are no Backlight requirements in Section 130.2 of Part 6; and
2. Maximum zonal lumens for Uplight shall be in accordance with TABLE 130.2-A; and
3. Maximum zonal lumens for Glare shall be in accordance with TABLE 130.2-B.

NOTE: ~~Note that~~ Title 24, Part 11, Section 5.106.8 includes additional restrictions on backlight, uplight and glare that may apply.

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15-BSTD-01
TN 75950
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EXCEPTION 1 to Section 130.2(b): Signs.

EXCEPTION 2 to Section 130.2(b): Lighting for building facades, public monuments, statues, and vertical surfaces of bridges.

EXCEPTION 3 to Section 130.2(b): Lighting not permitted by a health or life safety statute, ordinance, or regulation to be a cutoff luminaire.

EXCEPTION 4 to Section 130.2(b): Temporary outdoor lighting.

EXCEPTION 5 to Section 130.2(b): Replacement of existing pole mounted luminaires in hardscape areas meeting all of the following conditions:

A. Where the existing luminaire does not meet the luminaire BUG requirements in Section 130.2(b); and
B. Spacing between existing poles is greater than six times the mounting height of the existing luminaires; and
C. Where no additional poles are being added to the site; and
D. Where new wiring to the luminaires is not being installed; and
E. Provided that the connected lighting power wattage is not increased.

EXCEPTION 6 to Section 130.2(b): Luminaires that illuminate the public right of way on publicly maintained roadways, sidewalks, and bikeways.

(c) **Controls for Outdoor Lighting.** Outdoor lighting controls shall be installed that meet the following requirements as applicable:

EXCEPTION 1 to Section 130.2(c): Outdoor lighting not permitted by a health or life safety statute, ordinance, or regulation to be turned OFF.

EXCEPTION 2 to Section 130.2(c): Lighting in tunnels required to be illuminated 24 hours per day and 365 days per year.

1. All installed outdoor lighting shall be controlled by a photocontrol or outdoor-astronomical time-switch control, or other control capable of ~~that~~ automatically ~~turns~~ shutting OFF the outdoor lighting when daylight is available.
2. All installed outdoor lighting shall be ~~circuited and~~ independently controlled from other electrical loads by an automatic scheduling control.
3. All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls that meet all of the following requirements:

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A. Shall be motion sensors or other lighting control systems that automatically controls lighting in accordance with Item B in response to the area being vacated of occupants; and

Fix this sentence. The first half of the sentence is a reduction down from 100%, whereas the second half is a % of 100%.

B. Shall be capable of automatically reducing the lighting power of each luminaire by at least 40 percent but not exceeding ~~80~~ 90 percent, or provide continuous dimming through a range that includes 40 percent through ~~80~~ 90 percent, and

C. Shall employ auto-ON functionality when the area becomes occupied; and

D. No more than 1,500 watts of lighting power shall be controlled together.

EXCEPTION 1 to Section 130.2(c)3: Lighting for Outdoor Sales Frontage~~, Outdoor Sales Lots, and Outdoor Sales Canopies~~ complying with Section 130.2(c)4.

EXCEPTION 2 to Section 130.2(c)3: Lighting for Building Facades, Ornamental Hardscape and Outdoor Dining complying with Section 130.2(c)5.

EXCEPTION 3 to Section 130.2(c)3:, Outdoor lighting, where luminaire rated wattage is determined in accordance with Section 130.0(c), and which meet one of the following conditions:

A. Pole-mounted luminaires each with a maximum rated wattage of 75 watts; or

B. Non-pole mounted luminaires with a maximum rated wattage of 30 watts each; or

C. Linear lighting with a maximum wattage of 4 watts per linear foot of luminaire.

EXCEPTION 4 to Section 130.2(c)3: Applications listed as Exceptions to Section 140.7(a) shall not be required to meet the requirements of Section 130.2(c)3.

~~**EXCEPTION 5 to Section 130.2(c)3: Lighting for Commercial Vehicle Fuel Station Sales Canopies.**~~

4. For Outdoor Sales Frontage~~, Outdoor Sales Lots, and Outdoor Sales Canopies~~ lighting, an automatic lighting control shall be installed that meets the following requirements:

   A. A part-night outdoor lighting control as defined in Section 100.1; or

   B. Motion sensors capable of automatically reducing lighting power by at least 40 percent but not exceeding ~~80~~ 90 percent, and which have auto-ON functionality.

5. For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control shall be installed that meets one or more of the following requirements:

   A. A part-night outdoor lighting control as defined in Section 100.1; or

   B. Motion sensors capable of automatically reducing lighting power by at least 40 percent but not exceeding ~~80~~ 90 percent, and which have auto-ON functionality; or

   C. A centralized time-based zone lighting control capable of automatically reducing lighting power by at least 50 percent.

   D. Outdoor wall mounted luminaires having a bilaterally symmetric distribution as described in the IES Handbook (typically referred to as "wall packs") where the bottom of the luminaire is mounted 24 feet or less above the ground shall comply with the applicable requirements in Section 130.2(c)3.

TABLE 130.2-A Uplight Ratings (Maximum Zonal Lumens)

Secondary Solid Angle	Maximum Zonal Lumens per Outdoor Lighting Zone				
	LZ0	~~O~~LZ 1	~~O~~LZ 2	~~O~~LZ 3	~~O~~LZ 4
Uplight High (UH) 100 to 180 degrees	0	10	50	500	1,000
Uplight Low (UL) 90 to <100 degrees	0	10	50	500	1,000

TABLE 130.2-B Glare Ratings (Maximum Zonal Lumens)

	Glare Rating for Asymmetrical Luminaire Types (Type 1, Type II, Type III, Type IV)				
		Maximum Zonal Lumens per Outdoor Lighting Zone			
Secondary Solid Angle	LZ 0	~~0~~LZ 1	~~0~~LZ 2	~~0~~LZ 3	~~0~~LZ 4
Forward Very High (FVH) 80 to 90 degrees	10	100	225	500	750
Backlight Very High (BVH) 80 to 90 degrees	10	100	225	500	750
Forward High (FH) 60 to <80 degrees	660	1,800	5,000	7,500	12,000
Backlight High (BH) 60 to <80 degrees	110	500	1,000	2,500	5,000

	Glare Rating for Quadrilateral Symmetrical Luminaire Types (Type V, Type V Square)				
		Maximum Zonal Lumens per Outdoor Lighting Zone			
Secondary Solid Angle	LZ 0	~~0~~LZ 1	~~0~~LZ 2	~~0~~LZ 3	~~0~~LZ 4
Forward Very High (FVH) 80 to 90 degrees	10	100	225	500	750
Backlight Very High (BVH) 80 to 90 degrees	10	100	225	500	750
Forward High (FH) 60 to <80 degrees	660	1,800	5,000	7,500	12,000
Backlight High (BH) 60 to <80 degrees	660	1,800	5,000	7,500	12,000

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SECTION 130.2