

ORDINANCE NUMBER 2016-04

AN ORDINANCE OF THE TOWN OF PARADISE VALLEY, ARIZONA AMENDING THE PARADISE VALLEY ZONING ORDINANCE, ARTICLE X, SECTION 1023 OUTDOOR LIGHTING AND ILLUMINATION; ARTICLE XXII HILLSIDE DEVELOPMENT REGULATIONS, SECTION 2208 OUTDOOR LIGHTING; ARTICLE XXV SIGNS, SECTION 2506 LIGHTING; AND SPECIAL USE PERMIT GUIDELINES, SECTION 2 LIGHTING

BE IT ORDAINED BY THE MAYOR AND TOWN COUNCIL OF THE TOWN OF PARADISE VALLEY, ARIZONA:

Section 1. Paradise Valley Zoning Ordinance, Articles X, Section 1023; Article XXII, Section 2208; Article XXV, Section 2506; and Special Use Permit Guidelines, Section 2, are hereby amended (with deletions shown as ~~striketroughs~~ and additions shown in **bold type**):

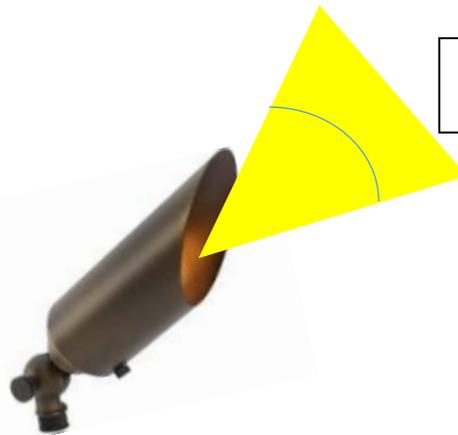
**Article X. HEIGHT AND AREA REGULATIONS**

Section 1023 Outdoor Lighting and Illumination.

**Definitions: For the purposes of this section, exterior lighting is defined and regulated by the following definitions and categories:**

1. **Beam Angle** – two times the vertical angle at which the intensity is 50% of the maximum.
2. **Footcandle (fc)** - A unit of illuminance equal to the light from one candle projected on a one foot square surface at a distance of one foot from the candle. One foot-candle equals one lumen.
3. **Fully Shielded Down Light (Full Cut-Off)** - A fixture shielded with an Opaque material so that light rays emitted by the fixture are projected only below a horizontal plane running through the lowest point on the fixture where light is emitted.

4. **Fully Shielded Up Light** - A fixture shielded with an Opaque material. The maximum beam angle shall not exceed forty five (45) degrees.



Beam Angle 45 degree  
maximum

5. **Fully Shielded (No Cut-Off)** - A fixture that allows light rays to be emitted up and down and shielded with an Opaque material in such a manner to prevent the lamp source from being seen.
6. **Lumens** – The Standard International (SI) unit of luminous flux
7. **Luminaire (Light Fixture)** - A complete lighting unit consisting of a lamp or lamps and ballast(s) (when applicable) together with the parts designed to distribute the light, position and protect the lamps, to connect the lamps to the power supply.
8. **Opaque** - Impervious to the passage of light.
9. **Safety Lighting** - Low-level lighting used to illuminate vehicular and pedestrian circulation.
10. **Security Lighting** - Fully Shielded Down Light that is intended to provide bright illumination during emergency situations only. Lighting shall be on a motion sensor.
11. **Translucent** – A material through which light can pass but the light source is obscured.
12. **Trespass Lighting** - Spill light that encroaches onto neighboring properties.
13. **Visual Enjoyment Lighting** - Lighting intended to illuminate outdoor living areas. Outdoor living areas include: a furnished patio, dining area, kitchen or cooking area, a fire pit or lounging area. Does not include outdoor, active recreation areas such as sport courts.

All types of outdoor ~~electrical lighting and electrical illumination~~ **Luminaires** are subject to the following limitations:

- ~~1. No lamp or lighting or~~ 1. **Exterior** illumination device shall **not** provide light in excess of 0.75 foot candles of projected brightness measured at the nearest property line (except for lighted entry marker as described in 2 below). ~~When a light source is indicated as twenty five (25) watt incandescent, it shall not exceed two hundred fifty (250) lumens and when a light source is indicated as seventy five (75) watt incandescent, it shall not exceed seven hundred fifty (750) lumens.~~
2. Each lighting or illuminating device shall be set back from the nearest property line a minimum of ten (10) feet or a distance equal to or greater than the height of the device above natural or excavated grade, whichever is greater.

**EXCEPTION:** A lighted entry marker may be placed on each side of a driveway entrance. The entry markers shall not be placed within the Town right-of-way or private road areas and the total height of the marker and light shall not exceed four (4) feet above finished grade adjacent to the driveway. The light source shall not exceed ~~the equivalent projected brightness of a twenty five (25) watt incandescent bulb~~ **300 Lumens and shall be partially shielded.**

3. The following light sources shall not exceed a height of thirty-six (36) inches above natural or excavated grade, whichever is lower, and shall not exceed **300 Lumens** ~~the equivalent projected brightness of a twenty five (25) watt incandescent bulb~~:
  - a. ~~All~~ Lighting or illumination of landscape **with the exception of Fully Shielded Down Light Luminaires in trees**);
  - b. Accent or aesthetic lighting of buildings or structures;
  - c. Any **Fully Shielded Up Light** illumination device that **only** directs light above a horizontal plane.
  - d. **Rope lighting shall not exceed 80 Lumens per lineal foot and must be shielded so the individual Luminaires are not visible.**
4. Lighting used for security and safety shall be an integral part of and attached to the building. The light source and reflecting device shall be shielded or hooded with an opaque cover so that it is not visible from off the property and shall not be higher than twenty (20) feet above natural or excavated grade, whichever is lower. ~~Each security/safety light is limited to the equivalent projected brightness of a seventy five (75) watt incandescent bulb.~~ **The light source shall not exceed 1200 Lumens. The light source must be motion activated and on a timer not to exceed five (5)**

**minutes per motion activation.** Limited use of security/safety lighting is encouraged to prevent excessive ambient light.

- 5. Required entry lighting at doors and garages shall be Fully Shielded (no cut off) Luminaires. However, this would not prohibit hanging chandelier type lights if they are shielded by the architecture of the building.**
- 6. Visual Enjoyment Lighting – Pole lights are only permitted when associated with an outdoor living area adjacent to the main residence. All Pole Lights shall be Full Shielded. Luminaire height cannot exceed 8.5 feet. All Pole Lights shall meet setbacks for the main house.**
- 7. Tree-Lighting – Exterior Luminaires affixed to trees shall not exceed 8.5 feet above the finished grade, shall not exceed 150 Lumens, shall be Fully Shielded down lights, and shall not exceed three (3) Luminaires per tree.**
- 8. Temporary holiday lighting shall be permitted between October 15<sup>th</sup> and January 15<sup>th</sup>. All other decorative colored Luminaires (with the exceptions of amber bulbs not to exceed 2700 kelvins and underwater Luminaires) or bulbs and string are prohibited.**
- ~~5.~~ **10. Tennis court lighting shall be hooded or shielded so that the light source and reflecting device is not visible from off the property. No lighting or illumination device shall project light in excess of 0.75 foot candles of brightness measured at the nearest property line. The maximum height of tennis court lighting shall not exceed twenty (20) feet above the court surface or natural grade whichever is lower.**
- ~~6.~~ **11. On Hillside lots there shall be no lighting permitted in the undisturbed areas of the property. Exterior lighting shall be kept to the minimum amount needed for the safe use of the property and all permitted lighting shall comply with all terms of this section. Additional regulations are listed in Article XXII Hillside Development Regulations, Section 2208 Outdoor Lighting.**

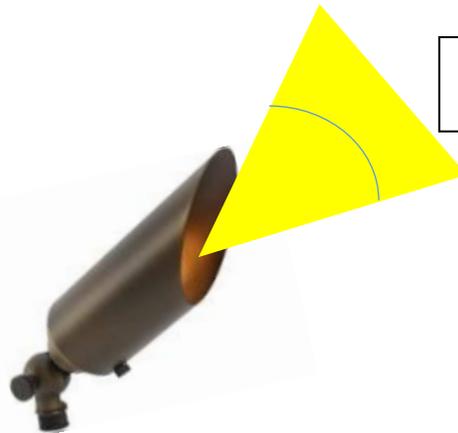
## **Article XXII. HILLSIDE DEVELOPMENT REGULATIONS**

### **Section 2208      **OUTDOOR LIGHTING****

- A. Purpose: The intent of these lighting requirements is to preserve the low light level conditions that are inherently characteristic of the desert. The objective is to allow only the quantity and level of lighting necessary for safety, security and the enjoyment of outdoor living while protecting against direct glare and excessive lighting; protecting the ability to view the night sky; and preventing light trespass.

B. Definitions: For the purposes of this section, exterior lighting is defined and regulated by the following definitions and categories:

1. **Beam Angle** – **Beam angle is the angle of the cone of light where the intensity is 50% of the maximum intensity at center beam.**
2. **Footcandle (fc)** - A unit of illuminance equal to **the light from one candle project on a one foot square surface at a distance of one foot from the candle. One foot-candle equals one lumen ÷  $\text{lm}/\text{ft}^2$  (lumen / sq. ft.) or 10.76 lx (lux).**
3. **Fully Shielded down light (Full Cut-Off)** - A fixture shielded with an **Opaque** material so that light rays emitted by the fixture are projected only below a horizontal plane running through the lowest point on the fixture where light is emitted.
4. **Fully Shielded Up Light** - A fixture shielded with an **Opaque** material. The maximum beam angle shall not exceed forty five (45) degrees.



Beam Angle 45 degree maximum

5. **Fully Shielded (No Cut-Off)** - A fixture that allows light rays to be emitted up and down and shielded with an **Opaque** material in such a manner to prevent the lampsource from being seen.
6. **Lumens** – The Standard International (SI) unit of luminous flux.
7. **Luminaire (Light Fixture)** - A complete lighting unit consisting of a lamp or lamps and ballast(s) (when applicable) together with the parts designed to distribute the light, position and protect the lamps, to connect the lamps to the power supply.

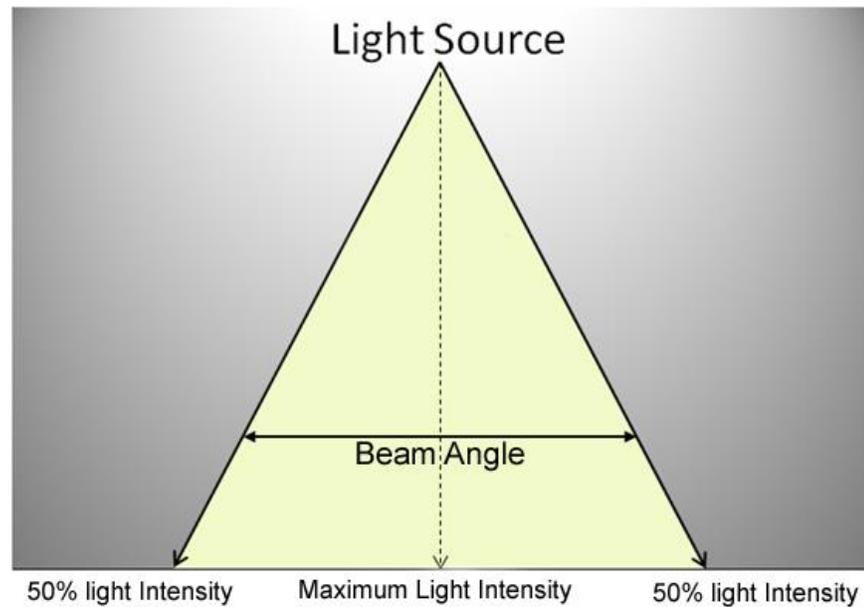
8. Opaque - Impervious to the passage of light.
9. Safety Lighting - Low-level lighting used to illuminate vehicular and pedestrian circulation.
10. Security Lighting - Lighting that is ~~fully shielded~~ **Shielded** that is intended to provide bright illumination during emergency situations only. Lighting shall be on a motion sensor.
- ~~11. Spill Light - The amount of light that illuminates beyond the range or primary area that the fixture is intended to light.~~
10. Translucent - A material through which light can pass but the light source is obscured.
12. Trespass Lighting - Spill light that encroaches onto neighboring properties.
13. Visual Enjoyment Lighting - Lighting intended to illuminate outdoor living areas. **Outdoor living areas include: a furnished patio, dining area, kitchen or cooking area, a fire pit or lounging area. Does not include active, outdoor recreation areas such as sport courts.**

C. Design Standards:

- ~~1. All building mounted light fixtures shall be fully shielded. Recessed lights in exterior soffits, eaves, or ceilings shall have a 45° cutoff. At the main entry of the primary structure, a maximum of two (2) translucent fixtures may be permitted as long as the total lumens, per fixture, do not exceed a maximum of 750 lumens. All other entrances, excluding garage doors, shall be limited to no more than one (1) fixture.~~
1. **All building mounted Luminaires shall be Fully Shielded. Following are the only building mounted luminaires permitted:**
  - **Recessed lights in exterior soffits, eaves, or ceilings - shall have a Beam Angle not greater than 90 degrees. A hanging chandelier light may be permitted if it is fully shielded by the architecture of the building.**

- **Entry Lighting** -at the main entry of the primary structure a maximum of two (2) Translucent Luminaires may be permitted as long as the total Lumens, per Luminaire, do not exceed a maximum of 1200 Lumens. All other entrances shall be limited to no more than one (1) Fully Shielded downlight Luminaire, with the exception of garage doors which may have additional Luminaires. Maximum illuminance per fixture is not to exceed 1200 Lumens.
- **Security lighting** – mounted no higher than twelve (12) feet above finished grade and on a motion sensor.

**FIGURE 9 – Light Source Beam Angle**



2. All **Luminaires** fixtures, unless otherwise allowed, shall be directed downward and properly aimed on the targeted areas to maximize their effectiveness and minimize the total number of lighting fixtures.
3. Building mounted **Luminaires** lighting must be directed downward away from adjacent lots, streets, undisturbed areas, and

open spaces, and may not be used to light walls or building elements for decorative purposes.

4. There shall be no lighting permitted in areas identified as “undisturbed areas” of the property pursuant to the plans submitted under Section 2207 III.A.
5. The maximum lighting intensity shall not exceed 0.25 **Footcandle** ~~footeandle~~ when measured at the property line **except for lighted entry markers described in six (6) below.**
6. **Lighted entry markers may be placed on each side of the driveway entrance and one side of an entry walkway with Hillside Committee approval. Repetitive rows of Luminaires along driveways or walkways accessing public streets are not allowed. Random placement of Luminaires along entry driveways and walkways may be allowed. Driveway/walkway Luminaires must be located on the "downhill" side and aimed toward the "uphill" side, must be Fully Shielded and only light the driveway or walkway surface. Entry markers shall not be placed within the Town right-of-way or private road areas and the total height of the marker and Luminaire shall not exceed four (4) feet above finished grade adjacent to the driveway and walkway. The light source shall not exceed 300 Lumens.**
6. ~~A repetitive line up of lights along driveways or walkways accessing public streets shall not be allowed. Some random lighting of driveways or walkways accessing public streets may be allowed by the Hillside Building Committee. Driveway lights must be located on the "downhill" side and aimed toward the "uphill" side, must be fully shielded from below and only light the driveway surface. Driveway and walkway lights shall not exceed a maximum of 0.25fc at any point beyond 10 feet from the fixture.~~
7. **Luminaires** ~~Each lighting or illuminating device shall be set back from the nearest property line a minimum of ten (10) feet except for entry marker lighting. or a distance equal to or greater than the height of the device above natural or excavated grade, whichever is greater. As an exception a lighted entry marker may be placed on each side of the driveway entrance. The entry marker shall not be placed within the Town right-of-way or private road areas and the total height of the marker and light shall not exceed four (4) feet above finished grade adjacent to the driveway. The light source shall not exceed the equivalent projected brightness of 250 lumens.~~

D. Luminaire (Light Fixture) All **Luminaires** ~~luminaires~~ shall be subject to the following limitations:

1. Shall not exceed **1200 Lumens** ~~750 lumens~~ when attached to a structure and confined to the immediate vicinity of a building entrance or outdoor living area of the residence.
2. Shall not exceed **300 Lumens** ~~250 lumens~~ for all other uses.
3. Shall not exceed **300 Lumens** ~~150 lumens~~ for **Fully Shielded** landscape **Up-Lighting** ~~up-lighting~~.
4. **Security Luminaire shall be on only when needed and shall be controlled by a timer that limits operation to 5 minutes per incident. The light source shall not exceed 1200 Lumens.** ~~Motion sensor/detector light fixtures are permitted for security lighting. Security lighting must be controlled separately from all other lighting. Security lights must be on timers that regulate their operation time to a maximum of 10 minutes and limited to lamps with a maximum of 750 lumens. The light source and reflecting device shall be Fully Shielded Down Light with an Opaque cover so that it is not visible from off the property.~~
5. Rope lighting shall not exceed **80 Lumens** ~~3.6 watts~~ per lineal foot for an ~~incandescent rope light~~ **and 36 inches from grade.**

E. Mounting Luminaires ~~Exterior fixtures shall be mounted:~~

1. ~~In the ground or on a post not to exceed 36 inches above the ground. When exterior fixtures are affixed to existing trees, the height of the fixture shall not exceed 8 feet above the finished grade.~~
  2. ~~In or on a building wall not to exceed 8 feet above finished grade and shielded in such a manner as to avoid creating concentrated light (hot spots) on the structures to which they are mounted. Security lighting may be mounted on the structure to a height of not more than twelve (12) feet.~~
1. **Post-mounted Luminaires shall not exceed 36 inches above the ground (with the exception of driveway markers).**
  2. **Tree mounted Luminaires shall not exceed 8.5 feet above the finished grade, shall not exceed 150 Lumens, shall be Fully**

**Shielded down lights, and shall not exceed three (3) lights per tree.**

- 3. Wall mounted entry Luminaires not to exceed 8.5 feet above finished grade and shielded in such a manner as to avoid creating concentrated light (hot spots) on the structures to which they are mounted.**
- 4. Security Luminaires shall not exceed 12 feet above finished grade and shall be an integral part of and attached to the building.**

F. Landscape Up-lighting:

1. The number of fixtures is limited to one fixture per 1000 square feet of allowable disturbed area.
2. **The Light Source Beam Angle shall not exceed 45 degrees.** ~~The lamp must be recessed to provide a minimum 45° cut-off from the vertical plane.~~

G. Prohibitions In addition to the limitations noted above, the following **Luminaires** ~~lights or lighting effects~~ are strictly prohibited:

1. **Decorative colored** ~~Colored~~ lamps or bulbs (**with the exceptions of amber bulbs not to exceed 2700 kelvins and underwater Luminaires**) and string and unshielded rope lights; except ~~that~~ temporary holiday lighting ~~shall be permitted~~ between **October November 15<sup>th</sup>** and January 15<sup>th</sup>.
2. Tennis court and sport court lighting.
3. ~~Any temporary~~ **Temporary** lighting that violates the provisions of this lighting section.
4. Exterior **Luminaires** ~~lights~~, except **Security Lighting** ~~security lighting~~, that illuminate the adjoining mountainside such that the mountainside is visible from off the property **at any time between sunset and sunrise.**

H. Amendments:

Should the applicant desire to substitute outdoor light fixtures or lamps after a permit has been issued, the applicant must submit all changes to the Town Engineer for approval, with adequate information to assure compliance with this ordinance.

**Article XXV. SIGNS**

Section 2506. Lighting:

- A. Signs may be illuminated with illumination confined to the area of the sign.**  
~~Lighting shall not be flashing, intermittent or scintillating; shall not be moving, animated or create noise in any manner.~~
- B. All light sources shall be Fully Shielded so they do not create a nuisance or hazard.**
- ~~B. C.~~ **C. Back lighting of freestanding letters mounted on a wall shall be limited to 100 Lumens lumens per square foot of sign area and the letters shall be fabricated so that the illumination source is not visible.** ~~light source cannot be seen from off the property.~~
- ~~C. D.~~ **D. External sign lighting shall be shielded so that the illumination source is not visible from any adjacent street or property and does not shine beyond the sign area it is intended to illuminate.** ~~Indirect lighting of signs shall be limited to two (2) seventy-five (75) watt incandescent bulbs per sign. If the sign is double faced, the same type and amount of lighting may be used on each side. The seventy-five (75) watt incandescent bulbs shall be limited to seven hundred fifty (750) lumens per bulb, and shall be completely shielded from view at the nearest property line, and shall not exceed 0.75 foot candles of projected illumination measured at the nearest property line.~~
- E. Signs that are illuminated shall not exceed 0.75 foot candles of projected brightness measured at the nearest property line.**
- F. On externally lit signs, the color temperature of lighting shall be no more than 3000 Kelvins.**
- G. Lighting shall not be flashing, intermittent, or fluttering; shall not be moving, animated or create noise in any manner.**
- H. Signs may be illuminated only during the hours that the associated establishment is open for business.**

~~D~~. **I.** Signs that are internally illuminated shall not exceed 0.75 foot candles of projected brightness measured at the nearest property line. **Backlit non-Opaque panels are not permitted.**

## SPECIAL USE PERMIT GUIDELINES

### Section 2 Lighting

The following lighting guidelines shall apply to all non-residential properties requiring a Special Use Permit.

- a. Outdoor lighting shall be permitted so long as:
  - i. the light emitting element is shielded so that no beam of light extends above a horizontal plane placed at the lowest level of any exposed portion of the light emitting element; and
  - ii. the light emitting element and reflecting device of all lighting or illumination units is hooded or shielded so that it is not visible from any adjacent lot or real property; and
  - iii. such outdoor lighting or illuminating units do not direct light, either directly or through a reflecting device, upon any adjacent real property.
  - iv. uplighting shall be permitted so long as no **Luminaire** is greater than **300 Lumens** ~~25 watts or emits more than 250 lumens.~~

Section 2. If any section, subsection, sentence, clause, phrase or portion of this ordinance or any part of these amendments to the Town Code adopted herein by reference is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

Section 3. This ordinance shall become effective in the manner provided by law.

PASSED AND ADOPTED by the Mayor and Council of the Town of Paradise Valley, Arizona, this \_\_\_\_ day of \_\_\_\_\_ 2016.

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Michael Collins, Mayor

ATTEST:

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Duncan Miller, Town Clerk

APPROVED AS TO FORM:

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Andrew M. Miller, Town Attorney

**CERTIFICATION**

I, Duncan Miller, Town Clerk, certify that the foregoing is a true copy of Ordinance Number 2016-04 duly passed and adopted by affirmative vote of the Town Council of Paradise Valley at a meeting held on the \_\_\_\_ of \_\_\_\_\_ 2016. Passage of this Ordinance appears in the minutes of the meeting. The Ordinance has not been rescinded or modified and is now in effect. I further certify that the municipal corporation is duly organized and existing, and has the power to take the action called for by the Ordinance.

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Duncan Miller, Town Clerk