

05 | CITY OF BEE CAVE OUTDOOR LIGHTING ORDINANCE

The City of Bee Cave worked with Freese and Nichols, Inc. to ensure that the lighting ordinance complies with the Dark Sky Association and the City's future lighting goals. To begin the process the City started with the Model Lighting Ordinance that was developed by the IDA and Illuminating Engineering Society of North America. The City's new lighting Ordinance was passed at the June 28, 2022 City Council Meeting. The city did receive feedback from our IDA Manager, Ashley Wilson, and Technical Director, Pete Stasser.

6.2 LIGHTING**6.2.1 PURPOSE AND APPLICABILITY****A. Purpose**

The purpose of these lighting regulations is to:

1. Permit the use of outdoor lighting that does not exceed the maximum levels specified in Illuminating Engineering Society (IES) recommended practices for night-time safety, utility, security, productivity, enjoyment, and commerce.
2. Minimize adverse offsite impacts of lighting such as Light Trespass and obtrusive light.
3. Curtail Light Pollution, reduce skyglow and improve the nighttime environment for astronomy.
4. Help protect the natural environment from the adverse effects of night lighting from gas or electric sources.
5. Conserve energy and resources to the greatest extent possible.

B. Applicability as to Location

This section applies within the City limits.

C. Applicability as to Type

1. Except as described below, all outdoor lighting installed after the date of effect of this UDC shall comply with these requirements. This includes, but is not limited to, new lighting, replacement lighting or any other lighting whether attached to structures, poles, the earth, or any other location.
2. Exemptions
 - (i) Lighting within public or private right-of-way or easement for the principal purpose of illuminating streets or roads. No exemption shall apply to any lighting within the public or private right-of-way or easement when the purpose of the luminaire is to illuminate areas outside the public or private right-of-way or easement, unless otherwise stated in separate regulation.
 - (ii) Lighting that is removed or destroyed less than 30% of the total value of all lighting on a property
 - (iii) Repairs to existing luminaires not exceeding twenty-five percent (25%) of total installed luminaires.
 - (iv) Temporary lighting for theatrical, filming on location, and performance areas with applicable City permits.
 - (v) Underwater lighting in swimming pools and other water features.
 - (vi) Temporary lighting and seasonal lighting, such as string, festoon, bistro, and similar lighting, provided that the emission of such lighting does not exceed 125 lumens per linear foot of line or square foot of space. These lights must be rated at or below 2700 Kelvin.
 - (vii) Lighting that is only used under emergency conditions.
 - (viii) Low Voltage Landscape Lighting.

3. Preemption

All lighting shall follow provisions in this ordinance; however, any special requirements for lighting listed below shall take precedence.

- (i) Lighting specified or identified in a Specific Use Permit.
- (ii) Lighting required by federal or state laws or regulations.

6.2.2 GENERAL REQUIREMENTS

ARTICLE 6 SUPPLEMENTAL DEVELOPMENT STANDARDS

A. Conformance with All Applicable Codes

All outdoor lighting shall be installed in conformance with the provisions of this Section, applicable Electrical and Energy Codes, and applicable sections of the Building Code.

B. Allowed Correlated Color Temperature

The allowable correlated color temperature of all lighting fixtures shall not exceed 3,000 Kelvins (K).

C. Lighting Control Requirements

1. Automatic Switching Requirements

- (i) Controls shall be provided that automatically extinguish all outdoor lighting when sufficient daylight is available using a control device or system such as a photoelectric switch, Astronomic Time Switch or equivalent functions from a programmable lighting controller, building automation system or lighting energy management system, all with battery or similar backup power or device.
- (ii) Exceptions
 - (1) Lighting under canopies.
 - (2) Lighting for tunnels, parking garages, garage entrances, and similar conditions, provided that the lighting source and luminaire are not visible from properties zoned R-1, R-2, R-3, R-4, or R-5 and developed as a Residential, Low-Density or Residential, Medium-Density use.

2. Automatic Lighting Reduction Requirements

(i) Lighting Curfew

Total outdoor lighting lumens shall be reduced by at least thirty percent (30%) or extinguished according to the most restrictive of the following:

- (1) A period beginning at midnight and continuing until 6 AM; or
- (2) From one (1) hour after business closing to one (1) hour before business opening; or
- (3) During any period when activity has not been detected for longer than fifteen (15) minutes.

(ii) Exceptions

- (1) Lighting for any property used as Residential, Low-Density or Residential, Medium-Density, including multiple residential properties not having common areas.
- (2) When the outdoor lighting consists of only one (1) luminaire.
- (3) Code required lighting for steps, stairs, walkways, and building entrances.
- (4) Motion-activated lighting.
- (5) Lighting governed by specific use permit in which times of operation are specifically identified.
- (6) When, in the opinion of the Planning Director, lighting levels must be maintained.

3. Adaptive Controls

All new publicly owned lights, including streetlights, will incorporate adaptive controls (e.g. timers, motion-sensors, and light-sensitive switches) to actively regulate the emission of light from light fixtures such that the lighting of areas is restricted to times, places and amounts required for safe occupancy.

D. Lumen Caps

- 1. The lumen per net acre value is an upper limit and not a design goal; design goals should be the lowest level that meets the requirement of the task.
- 2. Lumen per net acre values exclude governmental owned streetlights used for illumination of public rights-of-way and outdoor recreation facilities.

3. Nonresidential property. Total outdoor light output installed on any nonresidential property shall not exceed 50,000 lumens per net acre in any contiguous illuminated area.
4. Residential property. Total outdoor light output installed on any residential property shall not exceed 25,000 lumens per net acre in any contiguous illuminated area.

E. Shielding and Cut-off Standards for Lighting

Unless otherwise stated in this Section, all lighting shall be fully-shielded (full cutoff).

F. Streetlighting and Public Lighting

The purpose of these provisions is to control the light pollution of street lighting (public or private) and other forms of public lighting. It applies to all public and street lighting not governed by regulations of federal, state or other superceding jurisdiction.

1. Exception: lighting systems mounted less than 10.5 feet above ground level and having less than 1,000 initial lumens each.
2. Warranting: New installations of outdoor lighting will only be installed on public properties and right-of-way (public streets as well as private streets) upon determination by the city manager that a public safety hazard exists in the area to be lit, and that the hazard can only be effectively mitigated through the use of outdoor lighting and not through some other passive means, such as reflectorized roadway paint or markers.
3. All street lighting shall have no light emitted above 90 degrees (full cut-off).

G. Sign Illumination

1. All permanent signs may be non-illuminated, illuminated by internal, internal indirect (halo), or lit by external indirect illumination, unless otherwise specified. All illuminated signs shall be extinguished at 11:00 p.m. or within one hour of the end of normal business hours, whichever occurs later. All sign illumination must comply with the correlated color temperature (CCT) requirements of this Section.
2. Top-Down Lighting. Externally illuminated signs shall be lit only from the top of the sign, with fully shielded luminaires designed and installed to prevent light from spilling beyond the physical edges of the sign.
3. Outdoor internally illuminated signs (whether free standing or building mounted) shall be subject to all the following requirements:
 - (i) The sign must be constructed with an opaque background and translucent letters and symbols or with a colored background and lighter letters and symbols.
 - (ii) The internally illuminated portion of the sign cannot be white, cream, off-white, light tan, yellow or any light color unless it is part of a registered logo that does not have an alternate version with dark tones. Light tone colors such as white, cream, off-white, light tan, yellow or any light color are permitted in the logo only, provided that such colors in the logo shall represent not more than 33 percent of the total sign area permitted.
 - (iii) The internal illumination, between sunset and sunrise, is to be the lowest intensity needed to allow the sign to be visible for up to one-half mile from its installation and shall not exceed 100 nits.

6.2.3 URBAN RESIDENTIAL, NON-RESIDENTIAL, AND MIXED-USE LIGHTING REQUIREMENTS

- A. For all High-Density Residential, Non-Residential, and Mixed-Use zoning districts (zoning districts R-4, R-5, MU-N, MU-C, MU-TC, CR, P, and PDDs with one or more allowed uses consistent with these districts) or any residential development other than Single-Family Residential with seven residential units or more and having common outdoor areas, all outdoor lighting shall comply either with **6.2.4. Prescriptive Method of Regulatory**

Compliance or 6.2.5. Performance Method of Regulatory Compliance. Two methods are provided for assessing regulatory compliance:

- 1. Prescriptive Method**
 - (i) The Prescriptive Method of Regulatory Compliance contains precise and easily verifiable requirements for luminaire light output and fixture design that limit glare, upward projected light (uplight), light trespass, and the amount of light that can be used.
 - (ii) The prescriptive method constrains total installed initial luminaire lumens based on compliant luminaires and project property conditions and features.
 - (iii) The prescriptive method is most suitable for outdoor lighting projects that do not involve a lighting professional because they are simple and do not require engineering expertise.
- 2. Performance Method**
 - (i) The performance method allows greater flexibility and creativity in meeting the intent of this Section **6.2. Lighting**.
 - (ii) The performance method establishes system performance metrics for the system as a whole detailing photometric calculations in addition to individual luminaire compliance.
 - (iii) An engineer or lighting professional generally will be required to design within the performance method.
 - (iv) The performance method is most suitable for projects with the following characteristics:
 - (1) Lighting must be evaluated under complex requirements not suitable under the Prescriptive Method;
 - (2) The applicant wants or needs more flexibility in lighting design;
 - (3) The lighting designer plans to aim or direct any light fixture upward (above 90 degrees); or
 - (4) The project requires higher lighting levels compared to typical area lighting.

6.2.4 PRESCRIPTIVE METHOD OF REGULATORY COMPLIANCE

A. Total Site Lumen Limit

The total installed initial luminaire lumens of all outdoor lighting shall not exceed the total site lumen limit.

- 1.** The total site lumen limit shall be determined using either subsection **6.2.9B** (Parking Space Method) or subsection **6.2.9C** (Hardscape Area Method).
- 2.** Only one method shall be used per permit application, and for sites with existing lighting, existing lighting shall be included in the calculation of total installed lumens.
- 3.** The total installed initial luminaire lumens is calculated as the sum of the initial luminaire lumens for all luminaires.

B. Limits to Off-Site Impacts

All luminaires shall be rated and installed according to subsection 6.2.9. Lighting Design Standards and Metrics. All parking lot lighting shall have no light emitted above 90 degrees.

C. Ornamental Lighting

Ornamental parking lighting shall be permitted by special permit only, and shall meet the requirements of subsection **6.2.9D** without the need for external field-added modifications.

6.2.5 PERFORMANCE METHOD OF REGULATORY COMPLIANCE

A. Total Site Lumen Limit

The total installed initial luminaire lumens of all lighting systems on the site shall not exceed the allowed total initial site lumens. The allowed total initial site lumens shall be determined using the applicable metric listed in subsection **6.2.9. Lighting Design Standards and Metrics**. For sites with existing lighting, existing lighting shall be included in the calculation of total installed lumens. The total installed initial luminaire lumens of all luminaires is calculated as the sum of the initial luminaire lumens for all luminaires.

B. Limits to Off Site Impacts

All luminaires shall be rated and installed using one of the options below:

1. Categorical Assessment Option. All luminaires shall be rated and installed according to **Section 6.2.2**.
2. Software Modeling Option. The entire outdoor lighting designs shall be analyzed using industry standard lighting software including interreflections in the following manner:
 - (i) Input data shall describe the lighting system including luminaire locations, mounting heights, aiming directions, and employing photometric data tested in accordance with IES guidelines. Buildings or other physical objects on the site within three object heights of the property line must be included in the calculations.
 - (ii) Analysis shall utilize an enclosure comprised of calculation planes with zero reflectance values around the perimeter of the site. The top of the enclosure shall be no less than 33 feet (10 meters) above the tallest luminaire. Calculations shall include total lumens upon the inside surfaces of the box top and vertical sides and maximum vertical illuminance (Footcandles or lux) on the sides of the enclosure.
3. The design complies if:
 - (i) The total lumens on the inside surfaces of the virtual enclosure are less than 15 percent of the total site lumen limit; and
 - (ii) The maximum vertical illuminance on any vertical surface is less than the allowed maximum illuminance per **Section 6.2.9G**.

6.2.6 RESIDENTIAL LIGHTING

A. General Requirements

For individual residential properties, or multiple residential properties not having common areas, such as a Townhouse, all outdoor luminaires shall be fully shielded and shall not exceed the allowed lumen output in subsection **6.2.9H**, row 2.

B. Exceptions

1. One partly shielded or unshielded luminaire at the main entry, not exceeding the allowed lumen output in subsection **6.2.9H**, row 1.
2. Any other partly shielded or unshielded luminaires not exceeding the allowed lumen output in **Section 6.2.9H**, row 3.
3. Low Voltage Landscape Lighting aimed away from adjacent properties and not exceeding the allowed lumen output in subsection **6.2.9H**, row 4.
4. Shielded directional flood lighting aimed so that direct glare is not visible from adjacent properties and not exceeding the allowed lumen output in subsection **6.2.9H**, row 5.
5. Open flame gas Lamps.

ARTICLE 6 SUPPLEMENTAL DEVELOPMENT STANDARDS

6. Lighting installed with a vacancy sensor, where the sensor extinguishes the lights no more than 15 minutes after the area is vacated.
7. Lighting exempt per subsection 6.2.1C.2.

6.2.7 LIGHTING BY SPECIAL PERMIT ONLY

A. High Intensity and Special Purpose Lighting

The following lighting systems are prohibited from being installed or used except by special lighting permit:

1. Temporary lighting in which any single luminaire exceeds 20,000 initial luminaire lumens or the total lighting load exceeds 160,000 lumens.
2. Aerial lasers.
3. Searchlights.
4. Other very intense lighting defined as having a light source exceeding 200,000 initial luminaire lumens or an intensity in any direction of more than 2,000,000 candelas.

B. Non-traditional and Complex Lighting

Upon issuance of a Special Lighting Permit issued by the City Council, lighting not complying with the technical requirements of this 6.2. Lighting but consistent with its intent may be installed for complex sites or uses or special uses.

C. Special Lighting Permit Application and Criteria

1. Applicants shall demonstrate that the proposed lighting installation:
 - (i) Has sustained every reasonable effort to mitigate the effects of light on the environment and surrounding properties, supported by a signed statement describing the mitigation measures. Such statement shall be accompanied by the calculations required for the Performance Method.
 - (ii) Employs lighting controls to reduce lighting at a Project Specific Curfew ("Curfew") time to be established in the Permit.
 - (iii) Complies with the Performance Method after Curfew.
2. Approval Process
 - (i) The Planning Director shall review and provide a recommendation to the Planning and Zoning Commission.
 - (ii) The City Council may grant the permit if, upon review of the Director and Commission's recommendations, Council finds that the proposed lighting will not create unwarranted glare, sky glow, or Light Trespass.

6.2.8 EXISTING LIGHTING

Lighting installed prior to the effective date of this Section shall comply with the following.

A. New Uses or Structures, or Change of Use

Whenever the use of a property changes or a Site Plan is required per subsection 3.5.4, all outdoor lighting on the property shall be brought into compliance with this 6.2. Lighting before the new or changed use commences.

B. Additions or Alterations

This subsection **6.2.8B** applies to additions or alterations for property in High-Density Residential, Non-Residential, and Mixed-Use zoning districts (zoning districts R-4, R-5, MU-N, MU-C, MU-TC, CR, P, and PDDs with one or more allowed uses consistent with these districts).

(i) Major Additions

If a major addition occurs on a property, lighting for the entire property shall comply with the requirements of this Section. For purposes of this section, the following are considered to be major additions:

- (1) Additions of twenty-five percent (25%) or more in terms of additional dwelling units, gross floor area of a use, seating capacity, or parking spaces, either with a single addition or with cumulative additions after the effective date of this Ordinance.
- (2) Single or cumulative additions, modification, or replacement of twenty-five percent (25%) or more of installed outdoor lighting fixtures existing as of the effective date of this Ordinance.

(ii) Minor Modifications, Additions or New Lighting Fixtures

- (1) All additions, modifications, or replacement of less than twenty-five percent (25%) of outdoor lighting fixtures existing as of the effective date of this Ordinance shall require the submission of a complete inventory and site plan detailing all existing and any proposed new outdoor lighting. Any new lighting shall meet the requirements of this Ordinance.
- (2) Additions of twenty-five percent (25%) or less in terms of additional dwelling units, gross floor area of a use, seating capacity, or parking spaces, either with a single addition or with cumulative additions after the effective date of this Ordinance, shall not be required to replace existing fixtures with fixtures compliant with this ordinance, however any new fixtures installed as part of the addition shall meet the requirements of this Ordinance.

1. Resumption of Use after Abandonment

- (i) If a property with non-conforming lighting is determined to be abandoned for a period of one hundred eighty (180) days or more (see Section 3.4.11), the Planning Director or Building Official may require that all outdoor lighting shall be brought into compliance with this **6.2. Lighting**.
- (ii) Plans for conforming lighting shall be included with a Site Plan or Building Permit submittal and shall be reviewed and approved by the City before any further use of the property is initiated.

ARTICLE 6 SUPPLEMENTAL DEVELOPMENT STANDARDS

6.2.9 LIGHTING DESIGN STANDARDS AND METRICS

A. Applicability

- 1. Development in the Hill Country Overlay shall comply based on the underlying zoning district.
- 2. Planned Developments shall comply based on the underlying zoning district.
- 3. If the applicable standard is unclear based on the underlying zoning regulations of a Planned Development, the Planning Director shall determine the applicable standard.

B. Allowed Total Initial Luminaire Lumens per Site, Per Parking Space Method

This method applies only to properties with up to 10 parking spaces (including handicapped accessible spaces)

AG, R-1, R-2, R-3 Zoning Districts	R-4, R-5, MU-N, MU-C and P Zoning Districts	MU-TC and CR Zoning Districts
IES Lighting Zone 1	IES Lighting Zone 2	IES Lighting Zone 3
490 lumens per space	630 lumens per space	840 lumens per space

C. Allowed Total Initial Lumens per Site, Hardscape Area Method

May be used for any project. When lighting intersections of site drives and public streets, a total of 600 square feet for each intersection may be added to the actual Hardscape area to provide for intersection lighting.

1. Base Allowance

AG, R-1, R-2, R-3 Zoning Districts	R-4, R-5, MU-N, MU-C and P Zoning Districts	MU-TC and CR Zoning Districts
IES Lighting Zone 1	IES Lighting Zone 2	IES Lighting Zone 3
1.25 Lumens per square foot of Hardscape	2.5 Lumens per square foot of Hardscape	5.0 Lumens per square foot of Hardscape

2. Additional Allowance

	AG, R-1, R-2, R-3 Zoning Districts	R-4, R-5, MU-N, MU-C and P Zoning Districts	MU-TC and CR Zoning Districts
	IES Lighting Zone 1	IES Lighting Zone 2	IES Lighting Zone 3
Outdoor Sales Lots. This allowance is lumens per square foot of uncovered sales lots used exclusively for the display of other merchandise for sale, and may not include driveways, parking, or other non-sales areas. To use this allowance, luminaires must be within 2 mounting heights of sales lot area.	0	8 lumens per square foot	N/A
Outdoor Sales Frontage. This allowance is for lineal feet of sales frontage immediately adjacent to the principal viewing location(s) and unobstructed for its viewing length. A corner sales lot may include two adjacent sides provided that a different principal viewing location exists for each side. In order to use this allowance, luminaires must be located between the principal viewing location and the frontage outdoor sales area.	0	1,000 per linear foot	1,500 per linear foot
Drive-Up Windows or Guard Stations. In order to use this allowance, luminaires must be within 20 feet horizontal distance of the center of the window.	2,000 lumens per drive-up window	4,000 lumens per drive-up window	8,000 lumens per drive-up window
Vehicle Service Station. This allowance is lumens per installed fuel pump.	n/a	8,000 lumens per pump (based on 10 Footcandles horizontal)	16,000 lumens per pump (based on 20 Footcandles horizontal)

D. Maximum Allowable Backlight, Uplight and Glare (BUG) Ratings

May be used for any project. A luminaire may be used if it is rated for the lighting zone of the site or lower in number for all ratings B, U, and G. Luminaires equipped with adjustable mounting devices permitting alteration of luminaire aiming in the field shall not be permitted.

1. Maximum Allowed Backlight Rating

For property lines that abut public walkways, bikeways, plazas, and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways, the property line may be considered to be the centerline of the public roadway for the purpose of determining compliance with this section.

ARTICLE 6 SUPPLEMENTAL DEVELOPMENT STANDARDS

	AG, R-1, R-2, R-3 Zoning Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Zoning Districts IES Zone 2	MU-TC and CR Zoning Districts IES Zone 3
Greater than 2 mounting heights from property line	B3	B4	B5
1 to less than 2 mounting heights from property line and ideally oriented*	B2	B3	B4
0.5 to 1 mounting heights from property line and ideally oriented*	B1	B2	B3
Less than 0.5 mounting height to property line and properly oriented*	B0	B0	B1

* To be considered *ideally oriented*, the luminaire must be mounted with the Backlight portion of the light output oriented perpendicular and towards the property line of concern.

2. Maximum Allowed Uplight Rating

	AG, R-1, R-2, R-3 Zoning Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Zoning Districts IES Zone 2	MU-TC and CR Zoning Districts IES Zone 3
Allowed Uplight Rating	U1	U2	U3
Allowed percentage light emission above 90 degrees for street or area lighting	0%	0%	0%

3. Maximum Allowable Glare Rating

	AG, R-1, R-2, R-3 Zoning Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Zoning Districts IES Zone 2	MU-TC and CR Zoning Districts IES Zone 3
Allowed Glare Rating	G1	G2	G3
Any luminaire not ideally oriented* with 1 to less than 2 mounting heights to any property line of concern	G0	G1	G1
Any luminaire not ideally oriented* with 0.5 to 1 mounting heights to any property line of concern	G0	G0	G1
Any luminaire not ideally oriented* with less than 0.5 mounting heights to any property line of concern	G0	G0	G0

* Any luminaire that cannot be mounted with its Backlight perpendicular to any property line within two times the mounting heights of the luminaire location shall meet the reduced Allowed Glare Ratings described in the table above

E. Performance Method Allowed Total Initial Site Lumens

May be used for any project.

	AG, R-1, R-2, R-3 Zoning Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Zoning Districts IES Zone 2	MU-TC and CR Zoning Districts IES Zone 3
Allowed Lumens Per Square Foot	1.25	2.5	5.0
Allowed Base Lumens Per Site	3,500	7,000	14,000

ARTICLE 6 SUPPLEMENTAL DEVELOPMENT STANDARDS

F. Performance Method Additional Initial Luminaire Lumen Allowances

All of the following are allowances that, if not used, cannot be applied for other purposes. All area and distance measurements are based on plan view unless otherwise noted.

Lighting Application	AG, R-1, R-2, R-3 Zoning Districts	R-4, R-5, MU-N, MU-C and P Zoning Districts	MU-TC and CR Zoning Districts
	IES Zone 1	IES Zone 2	IES Zone 3
Additional lumens allowances for all buildings. A maximum of three (3) allowances are permitted.			
Building Entrances or Exits. This allowance is per door. In order to use this allowance, luminaires must be within 20 feet of the door.	1,000	2,000	4,000
Building Facades. This allowance is lumens per unit area of building façade that are illuminated. To use this allowance, luminaires must be aimed at the façade and capable of illuminating it without obstruction.	0	8 per square foot	16 per square foot
Sales or Non-sales Canopies. This allowance is lumens per unit area for the total area within the drip line of the canopy. In order to qualify for this allowance, luminaires must be located under the canopy.	3 per square foot	6 per square foot	12 per square foot
Guard Stations. This allowance is lumens per unit area of guardhouse plus 2000 sf per vehicle lane. In order to use this allowance, luminaires must be within 2 mounting heights of a vehicle lane or the guardhouse.	6 per square foot	12 per square foot	24 per square foot
Outdoor Dining. This allowance is lumens per unit area for the total illuminated Hardscape of outdoor dining. In order to use this allowance, luminaires must be within 2 mounting heights of the Hardscape area of outdoor dining	1 per square foot	5 per square foot	10 per square foot
Drive-Up Windows. This allowance is lumens per window. In order to use this allowance, luminaires must be within 20 feet of the center of the window.	0	4,000 lumens per drive-up window	8,000 lumens per drive-up window

Lighting Application	AG, R-1, R-2, R-3 Zoning Districts	R-4, R-5, MU-N, MU-C and P Zoning Districts	MU-TC and CR Zoning Districts
	IES Zone 1	IES Zone 2	IES Zone 3
Additional Lumens Allowances for Service Stations only. Service stations may not use any other additional allowances.			
Vehicle Service Station Hardscape. This allowance is lumens per unit area for the total illuminated Hardscape area less area of buildings, area under canopies, area off property, or areas obstructed by signs or structures. In order to use this allowance, luminaires must be illuminating the Hardscape area and must not be within a building, below a canopy, beyond property lines, or obstructed by a sign or other structure.	0	8 per square foot	16 per square foot
Vehicle Service Station Canopies. This allowance is lumens per unit area for the total area within the drip line of the canopy. In order to use this allowance, luminaires must be located under the canopy.	0	16 per square foot	32 per square foot
Additional Lumens Allowances for Outdoor Sales facilities only. Outdoor Sales facilities may not use any other additional allowances. NOTICE: lighting permitted by these allowances shall employ controls extinguishing this lighting after curfew time.			
Outdoor Sales Lots. This allowance is lumens per square foot of uncovered sales lots used exclusively for the display of merchandise for sale, and may not include driveways, parking, or other non-sales areas and shall not exceed 25% of the total Hardscape area. To use this allowance, Luminaires must be within 2 mounting heights of the sales lot area.	0	8 per square foot	12 per square foot
Outdoor Sales Frontage. This allowance is for lineal feet of sales frontage immediately adjacent to the principal viewing location(s) and unobstructed for its viewing length. A corner sales lot may include two adjacent sides provided that a different principal viewing location exists for each side. In order to use this allowance, luminaires must be located between the principal viewing location and the frontage outdoor sales area.	0	1,000 per linear foot	1,500 per linear foot

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G. Maximum Vertical Illuminance at Any Point in the Plane of the Property Line

AG, R-1, R-2, R-3 Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Districts IES Zone 2	MU-TC and CR Districts IES Zone 3
0.1 Footcandle or 1 lux	0.3 Footcandle or 3 lux	0.8 Footcandle or 8 lux

H. Residential Lighting Limits

	AG, R-1, R-2, R-3 Zoning Districts IES Zone 1	R-4, R-5, MU-N, MU-C and P Zoning Districts IES Zone 2	MU-TC and CR Zoning Districts IES Zone 3
Row 1 Maximum Allowed Luminaire Lumens* for Unshielded Luminaires at one entry only	420 lumens	630 lumens	630 lumens
Row 2 Maximum Allowed Luminaire Lumens* for each Fully Shielded Luminaire	1,260 lumens	1,260 lumens	1,260 lumens
Row 3 Maximum Allowed Luminaire Lumens* for each Unshielded Luminaire excluding main entry	315 lumens	315 lumens	315 lumens
Row 4 Maximum Allowed Luminaire Lumens* for each Landscape Lighting luminaire	Not allowed	1,050 lumens	2,100 lumens
Row 5 Maximum Allowed Luminaire Lumens* for each Shielded Directional Flood Lighting	Not allowed	1,260 lumens	2,100 lumens
Row 6 Maximum Allowed Luminaire Lumens* for each Low Voltage Landscape Lighting luminaire	Not allowed	525 lumens	525 lumens

* Luminaire lumens equals Initial Lamp Lumens for a Lamp, multiplied by the number of lamps in the luminaire