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Electric Vehicle Car Charging and Lighting Levels

Additional submitted attachment is included below.

Project Title: 2028 Energy Code Pre-Rulemaking: Electric Vehicle Car Charging and Lighting Levels

Subject: Proposed Code Modification to Section 130.2(c) – Outdoor Lighting Controls for Public EV Fast-Charging Infrastructure

Executive Summary:

Electric Vehicle car charging stations are distinct use applications and should be treated as such. Lighting should be implemented utilizing IES standard guidelines and practices for parking lots and motion sensors should be employed, consistent with previously established guidelines. IES guidelines outline lighting for security. California's Title 24 Part 6 building energy code addresses the ANSI/IES illumination requirements for different applications with extra wattage allowances for special use cases involving security lighting and implementation of security cameras. Title 24 also outlines specific target illuminance criteria for security lighting in Retail Areas. Careful consideration should also be given to eye adaptation, and every effort should be made to avoid extreme differences in proximate illumination levels from parking lot lighting to illumination for EV charging areas.

1. Illumination Levels:

1.1 Tesla Executive Summary

'Under the current 2025 Title 24, Part 6 Energy Code, public Electric Vehicle (EV) fast-charging stations are regulated under general parking lot lighting standards. This requires lighting to dim by 50 to 90 percent after 15 minutes of vacancy and assumes a baseline illumination of 0.2 footcandles.'

1.2 Clanton Response:

Baseline illumination of 0.2 footcandles is the criteria published in ANSI/IES RP-8-25 PART 2 Errata2³ for parking lots, including EV charging areas. The criteria in Table 17-1 states

"Recommended Maintained Illuminance Targets for Parking Lots (Drive Aisles/EV Stations/Parking Areas) is 0.2fc Target Horizontal (4:1 Max/Avg and 20:1 Max/Min uniformity ratios) and 0.1 fc Target Vertical (20:1 Max/Min uniformity ratio)".⁵

This criteria is based on research from Virginia Tech Transportation Institute for the safety of pedestrians and vehicle interactions in parking lots. Higher illumination levels did not increase pedestrian safety per the research.¹

ANSI/IES standards are developed by balanced expertise committees and follow set ANSI rules for development, public reviews, voting, comments addressed and final voting. Refer to ANSI/IES criteria rules for criteria legitimacy.

“The IES is dedicated to improving the lighted environment by bringing together those with lighting knowledge, and by translating that knowledge into actions that benefit the public. With nearly 50 technical committees comprised of over 1,000 volunteer subject matter experts, the IES provides stability and predictability to the lighting market for the benefit of the industry and the public through its standards development initiatives as an American National Standards Institute (ANSI) Accredited Standards Developer. The standards approval process is based on a rigorous consensus approach with several layers of oversight and public commentary — resulting in five collections of impartial, practical lighting guidelines and resources known as the IES Lighting Library.”

However, the criteria for lighting allowances in Title 24 are not only limited to those in ANSI/IES RP-8. Title 24 provides additional lighting power allowance for special security lighting applications for retail parking and pedestrian hardscape, as well as additional lighting power allowance when security cameras are in use. Lighting is allowed to be additive for General Hardscape, Special Security Lighting and Security Cameras. In the Addendum to this letter see the Title 24 outdoor lighting power allowances in Figure 2 for the table of general hardscape allowances and Figure 3 for the excerpts from the table of additional power allowances for special security lighting and for security cameras.⁶ As documented in *Outdoor Lighting Power Allowances – Results Report*⁷ general allowable wattages are based on illuminances provided ANSI/IES RP-8 and Special Security Lighting power allowances are based on ANSI/IES G-1. The report details the calculations to align the IES recommended illuminance values with the lighting power allowances in the California Energy Code.

ANSI/IES G-1 criteria on Parking Areas when security is not an issue Section 8.14.4 states:

“When security is an issue, lighting for parking structures or open parking areas should be consistent with recommendations contained in Section 8.7 and Section 8.8. In low-risk conditions, the lighting should be in accordance with the recommendations contained in ANSI/IES RP-8-22, Recommended Practice: Lighting Roadway and Parking Facilities.”⁴

ANSI/IES G-1 criteria on Retail Stores and centers when security is an issue Section 8.10 states:

“When Security is an issue, illuminance levels should be at least 32 lx (3.0 fc) on the pavement, with an average-to-minimum uniformity ratio not greater than 4:1 in parking lots, including parking and support areas used by employees and vendors. To conserve energy and provide additional security for stores with a late-night or 24-hour operation, additional illumination should be provided closer to the entrances where customers will be parking during these low-

activity, high-vulnerability hours.”⁴

The ANSI/IES G-1 criteria recommendation of 3.0 fc is at the upper end of mesopic vision and lower end of photopic vision. If lighting levels are greater than 3.0 fc, transient adaptation time to visually adapt to 0.2 fc in the parking lot may take 5 minutes or more which can be a safety issue.

The importance of lighting the entire parking lot in the mesopic range of vision (including both cones and rod photoreceptors in our vision), is for better visibility with our on axis and peripheral vision.

ANSI/IES LS-7-20 Vision: Eye and Brain states:

“5.3 Mesopic Vision: This operating state of the visual system is intermediate between the photopic and scotopic states. In the mesopic state both cones and rod photoreceptors are active.”

Research on the Visual Performance as a Function of Spectral Power Distribution of Lighting Sources at Luminances Used for General Outdoor Lighting – Illuminating Engineering Society, 1999, 28: 37-42 by Dr. Alan Lewis, consistently shows that photopic vision starts at a luminance of about 3 cd/sq.m. This research data is based on visual performance.

The California Title 24 part 6 energy standards mirrors the recommendations in RP-8 and G-1 by having a lower set of illumination requirements for parking areas where security is not an issue and higher illumination requirements where security is deemed an issue. As will be discussed below both ANSI/IES RP-8 and ANSI/IES G-1 standards recommend to the use of motion sensing to save energy, reduce lighting trespass and increase safety.

2. Definition and application of EV charging stations as point of sale terminals:

2.1 Tesla Notes

‘However, public EV fast-charging stations are not standard parking spaces; they are 24/7, unstaffed, high-voltage fueling and financial transaction kiosks. Applying standard parking lot dimming rules to these sites compromises user safety, conflicts with state and federal infrastructure requirements, and ignores established lighting standards for point-of-sale (POS) terminals.’

2.2 Clanton Response:

ANSI/IES RP-8-25 PART 2 Errata2 have determined that EV charging stations are classified as standard parking spaces with the addition of an internally lighted display. EV fast charging stations are the same as standard parking spaces which also can be 24/7 unstaffed lots.

ANSI/IES RP-8-25 PART 2 Errata2 2025 states:

“17.3.3.2 Electric Vehicle (EV) Charging Stations, EV charging stations are typically located at the front of a parking stalls, or in between stalls on a stripe in a parking area. Illuminated charging ports and cords help increase awareness of the cords. Display screens and buttons should be self-illuminated or backlit. Surround lighting is important to avoid dark areas around EV stations. Minimum horizontal and vertical illuminance criteria are stated in Table 17-1 for parking lots and Table 17-2 for covered parking garages.”

High voltage charging stations are electrically safe for users with Ground Fault Circuit Interruption (GFCI) protection. With this protection, if a ground fault were to occur, the electrical feed is automatically de-energized to avoid electrical shock to users. The majority of transactions are performed on cell phones. Other transactions are completed on a lighted display which is viewed easier without excess glare reflecting off the screens.

3. Proposed code modification and controls

3.1 Tesla notes

‘This proposal requests a formal exception to Section 130.2(c) for publicly accessible, 24/7 EV fast-charging stations, supported by industry-wide data demonstrating the permanence of these installations and the critical safety requirements of unstaffed fueling environments.

Proposed Code Modification

Note: Exact regulatory text will need to be finalized by the engineering/legal teams, but the framework should be:

Modify Section 130.2(c) (Outdoor Lighting Controls) to add a new Exception:

EXCEPTION [X] to Section 130.2(c): Outdoor lighting directly illuminating publicly accessible, 24- hour Direct Current Fast Charging (DCFC) stations, including the charging equipment, point-of-sale interfaces, and the immediate vehicle charging spaces, is exempt from the motion-sensing reduction requirements and automatic scheduling control requirements, provided the lighting is controlled by a photocell or astronomical timeswitch to ensure dusk-to-dawn operation.’

3.2 Clanton Response:

EV charging areas are classified as the same as standard parking areas in ANSI/IES RP-8-25 PART 2 Errata2 and are recommended to be controlled with motion sensing, the same as standard parking in order to save energy and reduce light trespass.

The ANSI/IES G-1-22⁴ security lighting standard recommends on/off switching to be controlled

by motion sensors to enhance security functions:

“7.3 Lighting Controls

... Lighting levels and on/off switching can be controlled through vacancy, motion, or dimming controls. These options could enhance security functions.”

“7.3.3 Motion Based Controls

... Motion detectors can be effective in introducing an element of surprise. When used to control luminaires intended to produce unexpected light or glare for intruders, this same light alerts personnel and directs their attention to the location of the threat. “

4. Infrastructure Permanence and Safety and Illumination Standards

4.1 Tesla notes

Justification Part A: Infrastructure Permanence

During pre-rulemaking discussions for the 2028 code cycle, CEC staff raised concerns that EV charging stations, often located within larger retail parking lots, might be temporary installations that could be dismantled and reverted to standard retail parking, leaving behind non-compliant lighting. Industry-wide data and government programs demonstrate that DCFC stations are permanent, multi-year infrastructure.

- a. Federal & State Operational Mandates: Publicly funded charging infrastructure is legally required to remain operational for extended periods.
 - i The Federal NEVI Program (23CFR§680.106(i)) mandates a minimum five-year operational period.
 - i The CEC’s own CALeVIP2.0 program requires DC fast chargers to remain operational for a minimum of six years and explicitly mandates as a baseline eligibility condition that sites be “well-lit [and] secure.”
- b. Industry Financial & Lease Norms: Public SEC filings from major network operators prove these are long-term capital investments.
 - i EVgo Inc. assigns a 12-year amortizable life to site host relationships and a 40-year useful life to building improvements in its Form 10-K.
 - i Electrify America is executing a \$2 billion, 10-year infrastructure build-out under a federal consent decree.
 - i Industry real estate norms for EV charging ground leases have shifted to 15- to 25-year terms to match the 10- to 15-year useful lifespan of the DCFC equipment itself.

Justification Part B: Safety & Illumination Standards

Standard parking lots are designed for low activity and require only 0.2 footcandles (IES RP-20). In contrast, an EV fast-charger functions as a 24/7, unstaffed, outdoor financial transaction kiosk, requiring user interaction with payment credentials and charging equipment at night.'

4.2 Clanton Response:

IES RP-20 is no longer a current standard. This has been replaced with ANSI/IES RP-8-25 PART 2 Errata2 which has criteria for EV charging of 0.2 fc. The EV charging areas are not classified the same as ATM machines. EV charging areas do not involve obtaining currency such as at an ATM location. Also, all EV charging apps are set up as cell phone apps.

Per Tesla's website²

"Payment – How do I pay for Supercharging?

You can pay at any Supercharger using the Tesla app by adding a payment method to your Tesla Account. At a limited number of sites, you can pay directly at the Supercharger using a major credit card, a mobile payment service or text to pay."

5 Motion Sensing Controls

5.1 Tesla notes

c. 'The ATM Analogy (Cal. Fin. Code § 13041): California law already dictates strict lighting standards for 24/7 unstaffed electronic point-of-sale kiosks. The California ATM Safety Act requires a minimum of 10 footcandles at the face of the machine and 2 footcandles within a 50-foot radius. EV chargers are functionally similar to ATMs, yet the current energy code forces them to operate at a fraction of this established safety baseline.

d. Federal Recognition of Lighting as Security: The Federal Highway Administration (23 CFR § 680.106(e) and (h)) mandates that NEVI-funded stations be accessible 24/7/365 and explicitly categorizes station lighting as a "physical security [strategy]" to prevent tampering and ensure driver safety. Vacancy-based dimming is fundamentally inconsistent with continuous security lighting.'

5.2 Clanton Response:

Parking lots typically will have vehicles parked 24/7/365 and EV charging stations are treated with the same criteria for safety and security per ANSI/IES RP-8-25 PART 2 Errata2. When activity has not been detected for at least 15 minutes, the lighting is allowed to dim to save energy and minimize light trespass. When activity is detected, the lighting will resume back to full

illumination levels. This increase in lighting level also sends a visual signal of activity to alert occupants and law enforcement. Continuous lighting level is not recommended to alert occupants of activity.

ANSI/IES RP-8-25 Part 2 Errata 2 Table 17-1 notes criteria on EV Stations and controls. Application note 4 in Table 17-1 Parking Lots states:

“Motion sensing should be used to reduce lighting levels when no one is present.”⁵

ANSI/IES RP-8-25 Part 2 Errata 2 Table 17-2 notes criteria on EV Stations and controls. Application note 4 in Table 17-1 Parking Garages states:

“Luminaires should have lighting controls, except in areas where security concerns are paramount, such as in elevator lobbies. In other areas, lighting controls should be used to increase illuminance to "Active" level when activity is sensed.”⁵

6 IES Standard Illumination Levels for Outdoor Fueling and Point of Sale

6.1 Tesla Notes

‘IES Standards for Fueling & Security:

- Established IES and PEI illumination benchmarks for comparable outdoor fueling and point -of-sale environments range from 10 to 75 footcandles, significantly exceeding the 0.2 footcandle parking lot baseline. ‘

6.2 Clanton Response:

EV charging is not the same as outdoor fueling areas which use hazardous materials such as gasoline or diesel. EV charging uses a Ground Fault Circuit Interruption (GFCI) for the user electrical connectors which are safe and involving hazardous materials.

EV charging is not the same as point-of-sale environment, but are located within a parking lot environment. Higher illuminance levels mentioned would have a safety issue of visual readaptation from the bright area to darker surround area. The example used of 10fc for EV charging and adapting to 0.2fc for all other parking areas including drive aisles would be decreasing lighting levels by 50 times. This change may take 30 to 60 seconds to adapt completely for normal eyes.

ANSI/IES RP-8-25 PART 2 Errata2 states:

“17.3.2.2 Visual Adaptation. Our visual systems are constantly adjusting to the light level in a given scene; this is called visual adaptation. The human visual system can process information over an enormous range of luminances, ... but not all at once.

Exactly how long it takes to adapt to a change in retinal illumination depends on the magnitude of the change, the extent to which it involves different photoreceptors, and the direction of the change. For changes in retinal illumination of approximately 2 to 3 log steps, neural adaptation is sufficient and relatively fast, so adaptation occurs in less than a second. For larger changes, photochemical adaptation is necessary. The speed of adaptation varies depending on the extent of cone and rod photoreceptor involvement. If the change in retinal illumination lies completely within the range of operation of the cone photoreceptors, a few minutes is sufficient for adaptation to occur. If the change in retinal illumination covers from cone photoreceptor operation to rod photoreceptor operation, tens of minutes can be required. During the period when the visual system is not completely adapted to the prevailing retinal illumination, its capabilities are limited. This state of changing adaptation is called transient adaptation.”

7 IES Standard Illumination Levels for Parking Areas where Security is an issue

7.1 Tesla Notes

- For parking areas where security is an issue, IES G-1-22 recommends an average of 3 footcandles.
- Crime Prevention and Vandalism: EV charging sites are increasingly targets for vandalism. Industry data shows that copper cable theft at EV stations more than doubled between 2023 and 2024. Consistent, undimmed lighting is a core tenet of Crime Prevention Through Environmental Design (DPTED) guidelines published by the U.S. DOG to deter such activity.

7.2 Clanton Response:

Copper cable theft will not be deterred with higher lighting levels. It may provide thieves with more light to conduct thefts.

ANSI/IES G1 criteria directly addresses illumination levels at parking lots where security is an issue. Section 8.7 Parking Lots states:

“When security is an issue, the recommended security and safety illuminance for open parking facilities should be at least a maintained average of 32 lx (3.0 fc) on the pavement and to a height of 1.5 m (5.0 ft). A uniformity ratio not greater than 4:1, average-to-minimum, should be maintained throughout the hardstand.”⁴

Mesopic lighting levels should be maintained throughout the parking lot including EV charging stations in order to reduce visual transient adaptation issues in order to improve driver and pedestrian safety.

ANSI/IES G-1 criteria on Parking Areas when security is not an issue Section 8.14.4 states:

“When security is an issue, lighting for parking structures or open parking areas should be consistent with recommendations contained in Section 8.7 and Section 8.8. In low-risk conditions, the lighting should be in accordance with the recommendations contained in ANSI/IES RP-8-22, Recommended Practice: Lighting Roadway and Parking Facilities.”⁴

Title 24 provides additional lighting power allowance for special security lighting applications for retail parking and pedestrian hardscape, as well as additional lighting power allowance when security cameras are in use. Lighting is allowed to be additive for General Hardscape, Special Security Lighting and Security Cameras. The general allowable wattages are based on illuminances provided ANSI/IES RP-8 and G-1. See Figure 3 and Figure 4 in the addendum.⁶

Title 24 reiterates the ANSI/IES G1 and RP-8 criteria on Retail Stores and centers when security is an issue. See Figure 5 in the addendum.⁶

8 Motion Sensing Controls

8.1 Tesla Notes

Conclusion

Applying standard parking lot vacancy controls to 24/7 EV fueling infrastructure creates a direct conflict with established safety standards. Because these sites are permanent, multi-decade installations, granting an exception to Section 130.2(c) will not create a loophole for standard retail parking. We respectfully request the CEC adopt this modification for the 2028 code cycle to ensure a safe, secure, and accessible charging network for all California drivers.’

8.2 Clanton Response:

The current standards to Section 130.2 (c) meet current ANSI/IES standards which provide safe and secure lighted environments for all parking areas (EV and standard) based on research from Virginia Tech Transportation Institute and a panel of experts meeting ANSI/IES criteria.

Title 24 criteria on motion sensing for parking lots, Section 130.2(c)3.A-C states:

“A. Motion sensing controls shall be installed for outdoor luminaires providing lighting for general hardscape, parking lots, outdoor sales lots, vehicle service station hardscape, service station canopies, sales canopies, and non-sales canopies, where the bottom of the luminaire is mounted 24 feet above grade or lower.”

B. Motion sensing controls shall be capable of reducing the outdoor lighting power of each controlled luminaire by 50 to 90 percent, and separately capable of turning the luminaire OFF, during unoccupied periods.

C. Motion sensing controls shall be capable of reducing the lighting to its dim or OFF state no longer

than 15 minutes after the area has been vacated, and of returning the lighting to its ON state when the area becomes occupied.”⁶

Conclusion

Parking lot lighting, security lighting, and Electric Vehicle lighting guidelines have been carefully established through ANSI/IES research and protocols by professional lighting experts. These protocols, and those of Title 24, should continue to be utilized as the baseline for illumination at Electric Vehicle car charging stations. Lighting should be implemented utilizing IES standard guidelines and practices for parking lots and motion sensors should be employed, consistent with previously established guidelines.

Sincerely,



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REFERENCES

- 1 T Bhagavathula R, Gibbons RB. (Publish Date: 2020, April 02). (Retrieval Date: 2026, July 31). *Light Levels for Parking Facilities Based on Empirical Evaluation of Visual Performance and User Perceptions*. Scispace Journal. Leukos. 2020 ;16(2) :115-36 <https://scispace.com/papers/light-levels-for-parking-facilities-based-on-empirical-5609j4stbh>
- 2 Tesla (Publish Date: © 2026). (Retrieval Date : 2026, July 31). *Frequently Asked Questions*. <https://www.tesla.com/support/charging/supercharging-other-evs#pay-supercharging>
- 3 Illuminating Engineering Society. (Publish Date: © 2026). *ANSI/IES RP-8-25+E2 - Recommended Practice: Lighting Roadway and Parking Facilities*.
- 4 Illuminating Engineering Society. (Publish Date: © 2022). *ANSI/IES G-1-22 – Guide for Security Lighting for People, Property, and Critical Infrastructure*.
- 5 Illuminating Engineering Society. (Publish Date: © 2026) *Errata to ANSI/IES RP-8-25+E2 - Recommended Practice: Lighting Roadway and Parking Facilities – Corrected Table 17-1* (see Figure 1 below)
- 6 California Building Standards Commission. (Publish Date: © 2025, July 01). *California Energy Code - Title 24*.
- 7 *Nonresidential Outdoor Sources – Results Report* Codes and Standards Enhancement (CASE) Initiative 2022 California Energy Code December 2022. https://title24stakeholders.com/wp-content/uploads/2023/01/T24-2022-CASE-Study-Results-Reports-Outdoor-Lighting_Final-1.pdf

ADDENDUM – EXCERPTS FROM STANDARDS

The Parking Lot Illuminance Table ~~17-2~~ 17-1 is corrected as follows:

ANSI/IESRP-8: Ch. 17: Parking Facilities										
Table 17.1 Open Parking Lots										
Recommended Maintained Illuminance Targets ^(b,c,d,f)										
APPLICATION TASK/AREA ^(a)	TS=Task Surface: Recommended illuminances are at height of task surface above finished grade (AFG)									
	Horizontal (E _h)					Vertical (E _v)				
	Target E _h @ Height AFF			Uniformity Ratio		Target E _v @ Height AFF			Uniformity Ratio ^(e)	
	Lux @ m	(Fc @ Ft)	Max Avg Min	Ratio	Ratio Basis	Lux @ m	(Fc @ Ft)	Max Avg Min	Ratio	Ratio Basis
PARKING LOTS (and Top Floor of Parking Garages) ¹										
Drive Aisles / EV Stations / Parking Areas ^{2,3,4}										
All Parking Lots										
All Parking Lots	2 @ 0.0	(0.2 @ 0.0)	Avg Min	4:1	Max Avg	1 @ 1.5	(0.1 @ 5.0)	Avg Min	20:1	Max Avg
Transaction Areas (Pedestrian & Vehicle) ⁴										
General Areas ^{3,5}										
Pre-curfew	10 @ 0.0	(0.9 @ 0.0)	Min	15:1	Max Min	5 @ 1.5	(0.5 @ 5.0)	Min	15:1	Max Min
Post-curfew	2 @ 0.0	(0.2 @ 0.0)	Min	15:1	Max Min	1 @ 1.5	(0.1 @ 5.0)	Min	15:1	Max Min
Transaction Machines ^{6,7}										
Pre-curfew						30 @ TS	(2.8 @ TS)			
Post-curfew						15 @ TS	(1.4 @ TS)			
General Notes										
a. Applications, tasks, or viewing specifics encountered on any given project may be different than these and may necessitate different criteria. The designer is responsible for making final determinations of applications, tasks, and illuminance criteria.										
b. Codes, ordinances, or mandates may supersede these values; designers should design accordingly.										
c. Values cited are to be maintained over time on the area of coverage.										
d. Target illuminance values are intended to apply to the respective plane or planes of the task.										
e. Illuminance criteria are for typical conditions. During periods of non-use, the illumination of certain parking facilities may be turned off or reduced to conserve energy. If reduced lighting is to be used only for the purpose of property security, it is desirable that the minimum illuminance be not less than 1 lux horizontal.										
f. Illuminance uniformity targets offer best results when planned in conjunction with luminance ratios and surface reflectances.										
g. Values are current as of February 15, 2026 and include Errata & Addenda. For additional details, contact IES standards staff, standards@ies.org .										
Application Task/Area Notes										
1. Applies to LZ1 through LZ4. No electric lighting is used in LZ0.										
2. Lighting should address drive aisles and adjacent parking with mixed pedestrian and vehicular activity.										
3. Vertical illuminance criteria are measured in the primary directions of vehicular travel, in the center of the drive lane; vertical calculations are to account for the visibility of the pedestrian face and are defined by an imaginary vertical plane oriented perpendicular to the primary direction of vehicular travel. Illuminances on each side of the plane are assessed separately.										
4. Motion sensing should be used to reduce lighting levels when no one is present.										
5. Lighting should address an area extending 3 meters (10 feet) beyond the transaction area in all directions or to curb, property line, or structure, whichever is less.										
6. Vertical illuminance over entire front faces of pay machines. Coordinate with any machine display lighting requirements.										
7. Fuel pumps or short-time (DC Fast Charge) charging stations.										

Figure 1: Corrected Parking Lot Illuminance Table (without stricken values) and footnotes from the errata to ANSI/IES RP-8-25+E2 (see Reference 5)

TABLE 140.7-A GENERAL HARDSCAPE LIGHTING POWER ALLOWANCE

Type of Power Allowance	Lighting Zone 0 ³	Lighting Zone 1 ³	Lighting Zone 2 ³	Lighting Zone 3 ³	Lighting Zone 4 ³
Area Wattage Allowance (AWA)	No allowance ¹	0.016 W/ft ²	0.019 W/ft ²	0.021 W/ft ²	0.024 W/ft ²
Linear Wattage Allowance (LWA)	No allowance ¹	0.13 W/lf	0.15 W/lf	0.20 W/lf	0.29 W/lf
Initial Wattage Allowance (IWA)	No allowance ¹	150 W	200 W	250 W	320 W

Figure 2: Title 24, part 6 - Power Allowance Table for General Hardscape Lighting Applications (see Reference 6)

Table 140.7-B Additional Lighting Power Allowance for Specific Applications

Lighting Application	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
Special Security Lighting for Retail Parking and Pedestrian Hardscape. This additional allowance is for illuminated retail parking and pedestrian hardscape identified as having special security needs. This allowance shall be in addition to the building entrance or exit allowance.	Not applicable	0.004 W/ft ²	0.005 W/ft ²	0.010 W/ft ²	No Allowance
Security Cameras. This additional allowance is for illuminated general hardscape area. This allowance shall apply when a security camera is installed within 2 mounting heights of the general hardscape area and mounted more than 10 feet away from a building.	Not applicable	No Allowance	0.018 W/ft ²	0.018 W/ft ²	0.018 W/ft ²

Figure 3: : Title 24, part 6 - Excerpts from Additional Power Allowance Table for Specific Applications (see Reference 6)

Table 113: Lighting Criteria Mapping

	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
Area Wattage Allowance (AWA); Linear Wattage Allowance (LWA); and Initial Wattage Allowance (IWA)	Not Applicable	RP-8-18 Chapter 17 Parking Facilities, Addendum 1 0.2 Horizontal FC Min, 0.1 Vertical FC Min, 20:1 Max:Min	RP-8-18 Chapter 17 Parking Facilities, Addendum 1 0.2 Horizontal FC Min, 0.1 Vertical FC Min, 20:1 Max:Min	RP-8-18 Chapter 17 Parking Facilities, Addendum 1 0.2 Horizontal FC Min, 0.1 Vertical FC Min, 20:1 Max:Min	RP-8-18 Chapter 17 Parking Facilities, Addendum 1 0.2 Horizontal FC Min, 0.1 Vertical FC Min, 20:1 Max:Min
Special Security Lighting for Retail Parking and Pedestrian Hardscape. This additional allowance is for illuminated retail parking and pedestrian hardscape identified as having special security needs. This allowance shall be in addition to the building entrance or exit allowance.	Not Applicable	G-1-16 "Retail Stores and Centers - Parking Lot" 3.0 Horizontal FC Avg; 4:1 Avg:Min	G-1-16 "Retail Stores and Centers - Parking Lot" 3.0 Horizontal FC Avg; 4:1 Avg:Min	G-1-16 "Retail Stores and Centers - Parking Lot" 3.0 Horizontal FC Avg; 4:1 Avg:Min	NO ALLOWANCE

Figure 4: Target Illuminance Criteria for the Lighting Power Allowances for General Hardscape and Special Security Lighting (see Reference 7)