



## **Outdoor Agricultural Operations During Hours of Darkness Frequently Asked Questions**

The California Occupational Safety and Health Standards Board adopted a new standard for “Outdoor Agricultural Operations During Hours of Darkness” in February. The California Office of Administrative Law approved the regulation as adopted by the Standards Board in early June. As a result, the standard takes effect on July 1, 2020.

As initially proposed and in several subsequent versions, the standard might have required farmers to provide excessive amounts of light that would have disturbed neighbors and nocturnal wildlife, created issues related to operating gasoline- or diesel-powered light towers, required site traffic plans to direct vehicle traffic away from work areas and employees to be warned about snakes, insects and other nocturnal animals, and included a variety of ideas ultimately rejected by the Standards Board. Employer stakeholders engaged the Board to make numerous revisions to the various versions of the proposed standard to make it more workable for farm employers.

### **Required Illumination for Operations between Sunset and Sunrise:**

Poultry harvesting or catching:	0.09-0.19 Foot-Candles	1-2 Lux
Meeting areas/Meal or rest areas:	3 Foot-Candles	32.29 Lux
Outdoor agricultural operations except as specified below; paths to and around restrooms and drinking water; inside restrooms; storage areas	5 Foot-Candles	53.82 Lux
Task lighting for agricultural operations involving use of sharp tools; Exposed points of operation (Group 8) or visible parts of machinery (Group 6); Power Transmission, Prime Movers and Machine Parts (General Industry Safety Orders)	10 Foot-Candles	107.64 Lux
Task lighting for maintenance work in machinery	20 Foot-Candles	215.30 Lux

### **What's a Foot-Candle? What's a Lux? What's the difference?**

A foot-candle is a measurement of brightness of a light-measurement point one foot away from the source. Lux is a standardized unit of measurement of light-level intensity, commonly referred to as "illuminance" or "illumination." Lights are rated by the manufacturer as providing a specified level of light measured in foot-candles, lux or both. Some are also rated by a different measurement (lumens) that is not used in this regulation.

### **How will Cal/OSHA measure light? How should I measure light?**

- Illumination levels for task lighting are measured at the task/working surface, in the plane in which the task/work surface is present.
- Illumination levels for area lighting are measured at approximately 30 inches above the floor or other horizontal, vertical or sloped surface on or through which the employee walks, works or gains access to a work area.

### **Do I Need to Purchase a Light Meter?**

Because the standard requires specific levels of light for specific tasks and situations, employers should use a light meter to assure compliance when and where employees are working. Cal/OSHA has indicated that its staff will use commonly available brands of light meters that can be purchased from various online and brick-and-mortar sources like Grainger for between \$100 and \$200. Standard light meters measure light levels in foot-candles, lux, or lumens.

### **How do I Provide Light?**

- Required illumination levels may be provided by any one light source or a combination of light sources (e.g., equipment lighting, vehicle lighting or personal hands free portable lighting like a head-light).
- The employer must provide and maintain hands-free portable personal lighting or area lighting or both.
- Tractors, self-propelled farm equipment, and trucks used between sunset and sunrise must be equipped with at least one headlight that must be used to illuminate the area in front of the equipment or truck at least 50 feet. At least one light must illuminate equipment at the rear.

### **Am I Required to Position Lighting to Reduce Glare?**

Area lighting should be provided and positioned to minimize glare experienced by employees. This will entail careful selection of lamps, shielding, proper adjustment of the beam angle, and glare avoidance screens. To prevent glare while vehicles are traveling on farm roads, additional lighting installed to meet the requirements of the standard does not need to be activated.

### **Is High-Visibility Clothing Required?**

The employer must provide and require employees to wear Class 2 high-visibility garments conforming to specifications of American National Standard for High-Visibility Safety Apparel and Accessories, (ANSI/ISEA) 107-2015, for work activities between sunset and sunrise. These garments must be of such design, fit and durability as to provide adequate protection against the hazards for which they are designed. They must be reasonably comfortable and may not unduly encumber the employee's movements necessary to perform work.

### **Am I Required to Have Safety Meetings?**

At the beginning of each shift, you must conduct a safety meeting to inform employees of the location of restrooms, drinking water, designated break areas, nearby bodies of water, and high-traffic areas.

### **What if I'm Already Doing What the Standard Requires?**

Most employers who have been conducting night operations have incorporated night-work safety into the implementation of their Injury and Illness Prevention Programs. Incorporation of additional elements of the standard (particularly measurement of light in working areas and provision of supplemental light where needed) will help you improve your worksite safety performance.