INTERNATIONAL DARK-SKY ASSOCIATION

IDA-Criteria for Community-Friendly Outdoor Sports Lighting v1.2

1. Compliance with all applicable Codes and Standards (e.g. Underwriter Laboratories, CEC, National Building Codes with Local Amendments)

2. **Target Illumination** – Measured on-field illuminance values appropriate for the application per IESNA RP-6-20 Sports and Recreational Area Lighting criteria CIE: 57-1983 together with modeled initial illuminance targets. To limit over-lighting, the design may vary by no more than 10% above the average target illuminance levels for each Class.

3. A modified approach to controlling backlight, uplight, and glare is applied with the following metrics:

   A. **Backlight** – Directionality and application efficiency will be addressed indirectly through two methods that quantify off-site performance, one using the design luminance and another using measured illuminance. Backlight criteria will be difficult to meet without sufficient and appropriate setback of sports fields from the property line.

      a. Total designed lumens not contained within the area encompassing the field perimeter and an area immediately adjacent to that area that has a 33 foot (10 meter) offset. As modeled, no more than 15% of the total lumens may be outside of this region.

      b. Measured spill illuminance values, as measured with the light meter aimed in the direction of the brightest reading, shall not exceed criteria for the respective Environmental Zone nor shall it exceed the maximum initial spill illuminance values as modeled and specified in the design process. These measurements shall be taken a distance equal to 150' (45 meters) beyond the edge of the field. Measurements should be conducted with and without the facility lighting operating so that the sports facility lighting can be isolated from other natural and artificial light sources. For fields demanding higher illuminance levels and taller poles, the distance at which compliance is evaluated shall be 150' beyond the edge of the field or one pole height distance from the field, whichever is greater. If access to the 150' distance perimeter is inaccessible, The field should be evaluated from representative locations as practicable.

B. **Uplight** – All luminaires must be designed such as to not emit direct light above the horizon, unless required for the activity (i.e. aerial sports) being played. In those cases, only 8% of the total (directly) applied lumens as modeled may be in this zone. For fields that have multiple kinds of sports, those not requiring aerial illumination, e.g. baseball, soft ball, the uplight component must not be active, turned off, or otherwise detectable.For modeling purposes, a horizontal ceiling grid shall be placed 5 feet (1.5 meters) above the top of the tallest pole, extending out to 150 feet (45 meters) beyond the edge of the field to determine compliance. Installation shall not deviate from the design.

C. **Glare** – Modeled luminous intensity from any luminaire for any viewing angle at 5' above grade level, at a distance equal to 150' beyond the edge of the field shall not exceed 1000 candela (absolute). For fields demanding higher illuminance levels and taller poles, the distance at which compliance is evaluated shall be 150' beyond the edge of the field or one pole height distance from the field, whichever is greater. If access to the 150' distance perimeter is inaccessible, The field should be evaluated from representative locations as practicable. This shall be verified through a luminaire photometric report and aiming summary report and visual inspection, or through an equivalent software application and visual inspection. CIE 150-2017

4. **Lighting Zoning** – Community-Friendly Outdoor Sports Lighting will only be certified if located in IES environmental zones E2 through E4, CIE E1 through E4,or MLO lighting zone LZ1 through LZ4. Areas especially sensitive to lighting such as E1 or LZ0 are not appropriate for this award program.

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5. **Controls** – Provide advanced controls and documentation for the following:

    a. Automatic and/or remote control system via smartphone apps, or direct remote communication to the company facility responsible for handling the lighting controls, to enforce shut-off at locally established curfew time, not to be later than 11:00 PM (2300 hrs).

    b. On-site manual and/or remote control system shall also be provided to allow for the lights to be turned on or off at will (before curfew) to assure that only active sports fields are lighted.

    c. Provide readily accessible controls to implement uniform and variable adaptive illumination levels for different task lighting needs on field, e.g. class of play, competition athletics, band practice, striping, mowing, sports practice, etc.

Adaptive dimming shall be possible across the range of 25% to 100% of full illumination.[2]

d. A formal policy defining the appropriate level of illumination necessary for the specific activities and curfew times must be established and enforced. A copy of the policy will be included in the application for the Award of Excellence.

6. **Other Lighting** – The installed field lighting is not to be used for illuminating other area tasks. For example, if parking and concession areas lighting is desired, those areas shall be illuminated by separate luminaires and systems not associated with sports field illuminance needs. Other outdoor lighting at the site must, at a minimum, meet the lighting standards and lighting codes established by the community, and demonstrate how they are consistent with IDAs Values-Centered Lighting Policy.

References - List of References Standards

CIE 150 link:
https://www.techstreet.com/cie/standards/cie-150-2017?gateway_code=cie&product_id=1997388

CIE 057-1983 Lighting for football:
https://www.techstreet.com/cie/standards/cie-057-1983?product_id=1209990

Ref IES tm-15, LM-79, CIE: S 025, CIE: 126, CIE: 150-2017, CIE: 057-1983