



Is Your Outdoor Lighting Improving Safety?

What the science and standards actually say — and how to measure it yourself.

The “More Light = Safer” Myth

Eyes adapt to low light levels quickly — **2 lux is genuinely sufficient for safe pedestrian passage** on a walkway once your eyes have adjusted.

The common instinct to flood a driveway with 50–100 lux creates glare that actually makes the surrounding area **harder to see**. Glare forces the eye to lock onto the brightest object in view, leaving everything else in relative darkness.

IES Recommended Illuminance Levels

The **Illuminating Engineering Society** sets the industry-standard benchmarks to be used by lighting professionals, municipalities, and dark-sky advocates worldwide. The levels are measured at ground surface in footcandles (fc) or lux (Lumens per square meter).

Area	Recommended Average	Maximum	Notes
Building entrance (active)	2 fc / 22 lux	5 fc / 54 lux	Entrance and immediate threshold
Building approach	0.2 fc / 2 lux	—	Path from parking to door
Sidewalks & walkways	0.2 fc / 2 lux	5 fc / 54 lux	Residential and low-traffic pedestrian paths
Residential driveways	~0.5–1 fc / 5–10 lux	—	Vehicle maneuvering areas

Unit Conversion: 1 footcandle (fc) = 10.76 lux | The brightest moonlight = 0.01 fc (0.1 lux)

Light Trespass Limits

Light that crosses a property line onto neighboring land is called light trespass. IES guidelines set firm limits:

At a neighboring **business** property boundary: **no more than 0.1 fc (1 lux)**

At a neighboring **residential** property boundary: **no more than 0.05 fc (0.5 lux)**

What This Means in Practice



If you measure a walkway or entrance at **20–30 lux**, it is **almost certainly over-lit**.

A well-aimed 2700K LED downlight pulling **5–8 watts** is typically all that is needed to hit the 2–5 lux target for a residential walkway or entrance — with better visibility and far less glare than a typical 40–65W fixture.

There Is An App For That

You can use a smartphone App to obtain reliable light level and color temperature estimates. A few things to keep in mind:

- Phone sensors measure **lux** — how much light falls on a surface. Lux at a point is exactly what you need to determine whether an area is within safety recommendations.
- Kelvin (color temperature) readings from a phone app are **reliable estimates** and accurate enough to flag fixtures well above the 2700K threshold.

Some Example Apps

Platform	App Name
iOS	Photone, Luxmeter, Lux Light Meter for Mobile, Light Meter LM-3000, Lumu Light Meter
Android	Photone, Light Meter – Lux & Kelvin (BTI), Light Meter – Lux, Exposure, Lux Light Meter

Sources

- [IES — Guidelines for Good Exterior Lighting Plans \(2020\), Dark Sky Society](#)
- [IES Recommended Lighting Levels Guide \(Foot-Candle Table\) — Electrical Marketplace](#)
- [Pedestrian/Walkway & Bike Path Lighting Design Guide — SOLTECH Solar Lighting](#)