

A. General Requirements

For residential properties including multiple residential properties not having common areas, all outdoor luminaires shall be fully shielded and shall not exceed the allowed lumen output in Table G, row 2.

Exceptions

1. One partially shielded or non-unshielded luminaire at the main entry, not exceeding the allowed lumen output in Table G row 1.
2. Any other partially shielded or non-unshielded luminaires not exceeding the allowed lumen output in Table G row 3.
3. Low voltage landscape lighting aimed away from adjacent properties and not exceeding the allowed lumen output in Table G row 4.
4. Shielded directional flood lighting aimed away so that direct glare is not visible from adjacent properties and not exceeding the allowed lumen output in Table G row 5.
5. Open flame gas lamps.
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 Section III (B).

B. Requirements for Residential Landscape Lighting

1. Shall comply with Table G.
2. Shall not be aimed onto adjacent properties.

#14 - So if my neighbor has 8 unshielded lights all next to one another on the outside of his garage and each bulb is below the 450 lumen limit called out in Table G, row 3, am I stuck with this situation and visual clutter as it is viewed from my property? I did not see anything in the MLO that limited the number of external lights that a person can have on the outside of his house for a residential area.

I also did not see anything for "reflected" light for residential lighting. My situation deals with lights posted outside the neighbors garage. I not only get the effect of the unshielded lights itself but 2 out of 3 of these lights are "reflected" off windows that make up part of the garage door and are reflected when the garage door is closed. Give me a call to discuss.



RESPONSE: Rejected. 450 lumens is less light than is produced by a typical 40 watt incandescent lamp. Unshielded luminaires with more than one lamp in the fixture would be noncompliant unless the collective lumen output was less than 450 lumens for all lamps combined.

While reflected light can also be visible from a neighbor's yard, it is the glare and subsequent shielding that will address the most serious light trespass issues involving residential property.

V. RESIDENTIAL LIGHTING - Ordinance Text

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#25 - A.3 on page 19 permits "low voltage" landscape lighting in the strengths indicated in Row 4 of Table G. However, there is no reference to "low voltage" in the table. If that's what's intended, Table G should specify "low voltage." But if that's what's intended, and if "low voltage" is defined as 750 lumens or less, why does Table G permit up to 3000 lumens? Much clarification needed!

RESPONSE: Accepted. A new Row 6 has been added to Table G to make the 750 lumen limit consistent with the 750 lumen limit contained in the Definitions section for Low Voltage Lighting.

35 - On "Ordinance side" the text describes excluded lights that are aimed a way from other properties. How do you decide which side of the property it's aimed away from? One's property is bounded by other properties in all directions, so "away" from one side is "towards" another...Ironically, the only way to aim away from ALL property boundaries is to aim towards the sky!

Do streets, roadways, and other publicly-owned land count as "adjacent properties"?

RESPONSE: Accepted. The word "away" is deleted and replaced with new wording to clarify.

#25 - A.2 and A.3 both refer to lighting "aimed away from adjacent properties." This might suffice for low-voltage landscape lighting. But directional floodlights? Unless they're aimed at the street, wouldn't they nearly always be aimed in the direction of an adjacent property? We believe this language needs clarification. Perhaps there could be an admonition that such lighting not cast light off the property or into the sky. Or perhaps there could be some concrete limit that directional floodlights be aimed no higher than 45 degrees and lower than that if located within X feet of a road or other residential property.

RESPONSE: Accepted. The word "away" is deleted and replaced with new wording to clarify.

#16: This requirement came as a surprise to me. A 70 year old widow living alone can no longer have a fully shielded dusk to dawn HID security light installed in her back yard. As I read the requirement a maximum of 1800 lumens as outlined in table G that is fully shielded is allowed. A 70w HPS is rated at 6300 lumens, a 50w at 4000 lumens and a 35 watt at 2250 lumens by Philips Lighting. This provision may be the hardest of all the provisions in the MLO to accept by towns and will most likely get the most comments and complaints from citizens. A repeal of this provision is likely for many towns if enacted.

RESPONSE: Rejected. We agree that a 70 year old widow can no longer have a fully shielded dusk-to-dawn HID security light for residential applications. Light reflected off the ground also contributes to light pollution, and is magnified with HID lighting. The MLO intentionally discourages the use of HID lighting for residential applications.

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General Comment on Residential

#35 -

Terminology: fully shielded, partially shielded, and non-shielded. Why not use the LCS terminology, including BUG Ratings, for clarity, instead of these somewhat vague terms?

RESPONSE: Fully shielded, partly shielded and non-shielded are common terms more likely to be understood by officials implementing the MLO than TM-15 terms such as full cutoff, as applied to residential outdoor lighting.

V. RESIDENTIAL LIGHTING - User's Guide

This section applies to single family home, duplexes, row houses, and low rise multi-family buildings ~~that do not have interior hallways, common parking lots or other common spaces~~ of 6 dwelling units or less.

RESIDENTIAL LIGHTING EXCEPTIONS

The exceptions allow for typical lighting that might exceed the specified limits.

Landscape Lighting - While not common in residential areas, it can cause light pollution and light trespass if it is not controlled.

Lighting controlled by Vacancy (Motion) Sensor - Reduces light pollution and light trespass and should be encouraged.

RESIDENTIAL LIGHTING EXAMPLE

In this example on the following page, five different luminaires are used on a residential property. Each luminaire must comply to meet the requirements. The site plan following shows luminaire types followed by a tabulation of each luminaire, whether or not it is fully shielded, lamp type, and initial luminaire lumens. If the luminaire lumens are not known, multiply the initial lamp lumens by the luminaire efficiency. If the efficiency is not known, multiply the initial lamp lumens by 0.7 as a reasonable assumption. The maximum allowable lumen values come from Table G, based on the shielding classification and location on the site. In this case, each luminaire complies with the requirements of Table G.

Comparison of efficacy by power
(120 Volt Incandescent lamps)

Output (Lumens)	Power (Watt)		
	Incan	CFL	LED
500	40	8 - 10	9
850	60	13 - 18	6 - 7
1,200	75	18 - 22	15
1,700	100	23 - 28	18

#35 - Section B Page 19

On the User's guide, this text is confusing: "...and low-rise multi-family buildings that do not have interior hallways, common parking lots or other common spaces." Don't all buildings have interior hallways, etc.? It is not clear what is intended by this statement. On the Ordinance side, the text does not distinguish common areas as interior or exterior, nor does it define them. Don't all buildings have common spaces? What are you trying to allow/exclude and why?

RESPONSE: ACCEPTED - Deleted reference to hallways and inserted a limit of 6 dwelling units or less.

25 - We recommend inclusion of a small table in the Guide portion of Section V providing watt-lumen equivalents for common incandescent and compact fluorescent lamps. This section will be of particular interest to homeowners, many of whom do not have that information at hand.

RESPONSE - ACCEPTED - New Table inserted as guideline