

Once you know the BUG rating of a light fixture, you need to determine if the light fixture is appropriate for the location, aka, the Lighting Zone (LZ). The LZ may be specified by regulation or by preference. You may choose to use a light fixture appropriate for the application. First, select the correct LZ. Then use the light fixture's BUG rating to see if it is less than the maximum allowable backlight, up light, and glare for the LZ.

Lighting Zones and Recommended Uses or Areas

heights to any property line of concern

Lighting Zone 0 should be applied to areas in which permanent lighting is not expected and when used, is limited in the amount of lighting and the period of operation. LZ-0 typically includes undeveloped areas of open space, wilderness parks and preserves, areas near astronomical observatories, or any other area where the protection of a dark environment is critical. Special review should be required for any permanent lighting in this zone. Some rural communities may choose to adopt LZ-0 for residential areas.

Lighting Zone 1 pertains to areas that desire low ambient lighting levels. These typically include single and two family residential communities, rural town centers, business parks, and other commercial or industrial/storage areas typically with limited nighttime activity. May also include the developed areas in parks and other natural settings.

Lighting Zone 2 pertains to areas with moderate ambient lighting levels. These typically include multifamily residential uses, institutional residential uses, schools, churches, hospitals, hotels/motels, commercial and/or businesses areas with evening activities embedded in predominately residential areas, neighborhood serving recreational and playing fields and/or mixed use development with a predominance of residential uses. Can be used to accommodate a district of outdoor sales or industry in an area otherwise zoned LZ-1.

Lighting Zone 3 pertains to areas with moderately high lighting levels. These typically include commercial corridors, high intensity suburban commercial areas, town centers, mixed use areas, industrial uses and shipping and rail yards with high night time activity, high use recreational and playing fields, regional shopping mails, car dealerships, gas stations, and other nighttime active exterior retail areas.

Lighting Zone 4 pertains to areas of very high ambient lighting levels. LZ-4 should only be used for special cases and is not appropriate for most cities. LZ-4 may be used for extremely unusual installations such as high density entertainment districts, and heavy industrial uses.

Maximum Allowable Backlight	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
Greater than 2 mounting heights from property line	B1	В3	B4	B5	В5
1 to less than 2 mounting heights from property line and ideally oriented	B1	B2	В3	B4	B4
0.5 to 1 mounting heights from property line and ideally oriented	В0	B1	B2	B3	В3
Less than 0.5 mounting height to property line and properly oriented	В0	В0	В0	B1	B2

Maximum Allowable Uplight	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
Allowed Uplight Rating	UO	U1	U2	U3	U4
Allowed % light emission above 90° for street or area lighting	0%	0%	0%	0%	0%
Maximum Allowable Glare	Lighting Zone 0	Lighting Zone 1	Lighting Zone 2	Lighting Zone 3	Lighting Zone 4
Allowed Glare Rating	G0	G1	G2	G3	G4
Any luminaire not ideally oriented with 1 to less than 2 mounting heights to any property line of concern	G0	G0	G1	G1	G2
Any luminaire not ideally oriented with 0.5 to 1 mounting heights to any property line of concern	G0	G0	G0	G1	G1
Any luminaire not ideally oriented with less than 0.5 mounting	G0	G0	G0	G0	G1

The information provided above is based on the recommendations for regulation developed by DarkSky and IES. Be sure to check your local lighting regulations to ensure compliance. If you have any questions about dark sky lighting or want to work with a lighting specialist to develop a dark sky friendly lighting plan for your project or property, contact Access Fixtures.