

Leo Smith, Illuminating Engineering Society Roadway Lighting Committee new Residential Guidelines

The IES has released a new Design Guide on Residential Street Lighting (DG-21).

Section **5.0 When Street Lighting May Not Be Needed** contains very useful information that can be used to present municipal officials with reasons not to light residential streets.

Of particular importance are the conclusions stated under **5.2 Non-Compliant Pole Spacing**. Utility companies, particularly in the eastern half of the country, make it their practice to use utility poles intended for wire distribution as mounting poles for attaching streetlights. DG-21 states on page 6

Another municipal streetlight practice that often creates a uniformity problem involves luminaires mounted intermittently on existing utility poles to reduce installation expense. Utility pole spacing is determined by wire distribution considerations, without regard for meeting street lighting needs, which often prevents achieving the minimum recommended level of uniformity for street lighting. Any street lighting practice that fails to use the necessary spacing to achieve recommended illumination levels and uniformity ratios will inevitably result in mediocre to adverse lighting conditions, forcing the eye to adapt to very pronounced shadows and very high contrast in the field of view.

Section 5.2 concludes by stating

Reductions in the lighting levels stated in this Design Guide and **ANSI/IES RP-8-14**, or meeting some of the criteria and not others, will not result in “slightly less” visibility. Simply put, providing half the criteria will not result in half the benefit. **In fact, reductions in uniformity or increases in the allowed veiling luminance ratio may produce results that are more detrimental to minimum visibility than not providing any lighting.** (my emphasis)

A sound argument can be made to municipal officials that streetlights attached to utility poles create a greater detriment to driver safety than would be the case if there were no lighting at all, because the spacing of the utility poles is based on the wire distribution consideration, where the pole spacing is too far apart to achieve the minimum uniformity ratios.

Having this Design Guide could be very valuable in supporting the reasons why streetlights not improving safety should be removed from service.

A case could even be made to utility regulators that streetlight practices of utility companies should not be permitted if the practice creates a detriment to driver safety. Attached is the excerpt from Section 5 of the new Design Guide for Residential Street Lighting. The IES Design Guide on Residential Street Lighting (DG-21), that can be ordered online at

<http://www.ies.org/store/product/design-guide-for-residential-street-lighting-dg2115-6373.cfm> for \$45 (member price is \$31.50)

Leo Smith