

Lenart, Brett

From: Michael Rein <reinm@umich.edu>
Sent: Friday, August 27, 2021 7:14 AM
To: Lenart, Brett
Cc: Gott, Sue (U of M)
Subject: Re: Outdoor Lighting Measures

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Brett,

Good morning. Per your request:

Over the years and with technological advancements, the University of Michigan has continuously sought improvements within its exterior lighting systems. Lighting can be challenging to address, as there are often competing interests and design parameters - adjusting one parameter can affect others.

- Light Trespass - our Design Guidelines require designers to minimize light trespass and glare onto adjacent private properties. We direct designs to reposition fixtures, add shielding, or utilize different optic systems in order to achieve light trespass and glare goals. We remain especially vigilant in respecting University and City adjacencies.
- Night Skies - Our standard parking lot lights are classified as U0, or full cutoff - these fixtures have International Dark Sky (IDA) and Nighttime Friendly certifications. Our current pedestrian globe fixture specifications are rated U3, which represents a maximum upright component of 8%. We are working with the fixture and LED manufacturers directly to reduce the upright component and are currently piloting a prototype - this is a work in progress and has numerous challenges.
- Energy Usage - with the advent of LED technology, the University has been transitioning existing metal halide sources to LED sources via our on-going maintenance programs. All new projects use the latest LED sources, which are always improving lighting efficacy. All new lighting systems are controlled via contactors tied to DDC time systems or master photocells. The University has been piloting wireless mesh control systems in limited areas to better understand the technology's benefits and limitations - we've had mixed results to-date. All new projects meet, and often greatly exceed, the energy requirements of ASHRAE 90.1.
- Color Spectrum Parameters - All new fixtures have a CRI value of 70 or more. All new exterior fixtures have a correlated color temperature (CCT) of 4000 deg K - we have on-going discussions to balance the various dynamics of public safety (visual acuity), energy efficiency, and environmental aspects of CCT.

I hope this information proves useful. Take care.

Mike

On Tue, Aug 24, 2021 at 5:01 PM Lenart, Brett <BLenart@a2gov.org> wrote: