

Questions & Answers from MaxLite's June 30th 2011 Webinar:

"Scotopic Lumens (Everything you always wanted to know about Scotopic Lumens)"

Q-James Guest from South Texas: IF you get the chance, explain the diff between Lux and Lumens, thnx

A- ML- ILLUMINANCE - Light arriving at a surface, expressed in lumens per unit area; 1 lumen per square foot equals 1 footcandle, while 1 lumen per square meter equals 1 lux.

Q- Daniel Rogers from Westfield, NJ: Will you reference the scotopic vision studies at the end of this presentation?

A- <http://www.lightresource.com/article9.html>

Veitch, J.A., and McColl, S.I., (1995) Modulation of fluorescent light: Flicker rate and light source effects on visual performance and visual comfort, *Lighting Research and Technology*, 27, 243-256.

<http://www.ergolight.com/articles/berman.html>

Boyce, P.R., Akashi, Y., Hunter, C.M., and Bullough, J.D., (2002) The impact of spectral power distribution on visual performance, LRC report to the US Department of Energy (to be published in *Lighting Research and Technology*)

Visual Performance and Light Spectrum: The Inadequacy of Conventional Photometry, S. Berman, G. Fein, D. Jewett, B. Benson, T. Law and A. Myers, December 1994, LBL-37861, Proceedings of the CIE Symposium on Advances in Photometry, Vienna, Austria, December 1994.

Q- James Nelson from woodstock: what is the s/p ratio of a 250 w mh

A- The S/P ratio for a 250W MH is 1.49

Q - Chris Ernst from Portland, Oregon: How long do you anticipate until the release on the multi voltage lamp and are there any plans to include a 480v option ?

A- We are beta testing a Universal 120-277V HighMax currently and plan to do so for at least another 6 months. We have no plans for a 480V HighMax at this time.

Q- LesKacev from San Diego: Thanks. Is there info on your website as to how color temp combined with CRI affects scotopic lumens?

A- www.maxlite.com/pdfs/communications/scotopicpiclumens-tu.pdf

Q- Julie Solger from Hartland, WI: You referenced studies on photopic & scotopic lighting in slide 2 or 3. Who were the studies done by and where can we find the published documents? Thanks.

A- Les et al, please see the answer above given to r. Rogers of Westfield NJ.

Q- Mark Duff from Prudential Lighting: Wouldn't a mix of the scotopic and photopic light levels be the most accurate measure rather than just a scotopic or photopic meter measurement?

A- I do believe so, this is one of the reasons a hand held light meter is not the total solution.

Q- ira horden: Your slides imply that you can meet code requirements using the calculated scotopic lumens number. Is this correct, or did I miss something?

A- Code varies greatly around the country. If you have a specific lumen requirement in your area I am sure they are photopic lumens.

Q- Daniel Rogers from Westfield, NJ: Is there an illuminance level above which the S/P Ratio is not applicable? The exterior lighting photos were compelling. What illuminance levels were measured in the parking lot? What about an interior (e.g. warehouse) requiring 30-50 footcandles?

A- I have run up against many facilities that have a foot candle requirement and found that unless I am given an opportunity to actually retro fit a fixture (or more) for them to see for themselves all the testimonials in the world will not help.

Q-DAVID RELYEA: SP RATIOS ARE NOT RECOGNIZED BY THE IES. SO, HOW CAN WE USE THIS DATA IN A PT X PT? WOULD THIS ARGUMENT HOLD UP IN COURT?

A- I would not say the IES does not recognize S/P ratio, they certainly do but the IES has not endorsed a specific set of S/P ratio numbers. Any layout I have done using scotopic lumens is always labeled as such and is always accompanied by a photopic layout for comparison. As far as hold out in court, I cannot say as I am not a attorney.