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**From:** Edmond Daniels <edaniels@cordelia.com>  
**Sent:** Wednesday, January 14, 2015 4:27 PM  
**To:** lighting@energystar.gov  
**Subject:** Luminaires V2.0 Draft 1 Cordelia comments

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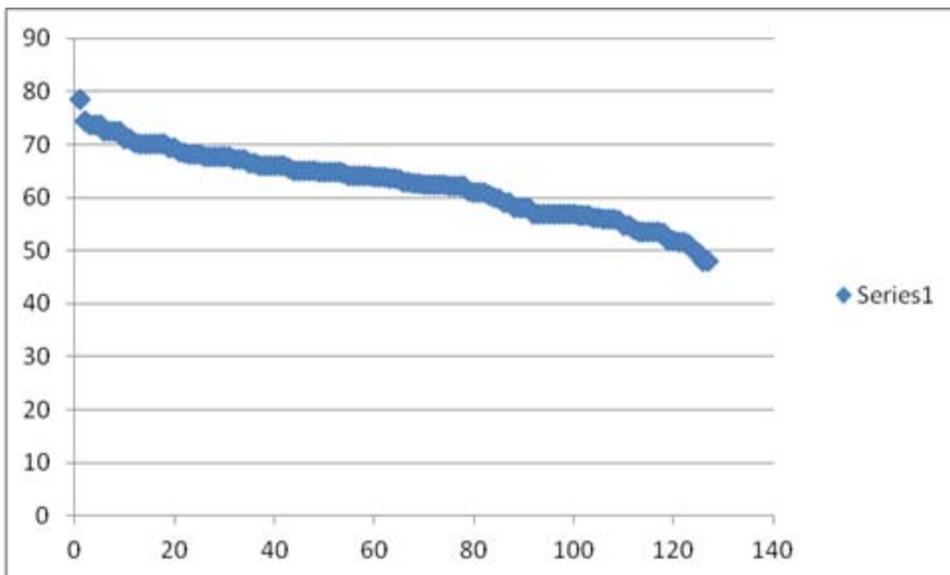
**Categories:** PD

Hi Taylor and Austin,

My comments about the 70 lumens per watt efficacy requirement for recessed downlights retrofits.

In addition to meeting the Energy Star requirements, our products also need to meet the California Title 24 and VOLUNTARY CALIFORNIA QUALITY LIGHT-EMITTING DIODE (LED) LAMP SPECIFICATION requirements. The latter, in addition to 90 CRI, requires an R9>50. So meeting the new Luminaires V2.0 proposed 70 lm/w at 90 CRI and R>50 at low CCTs of 2700K/3000K, makes it very challenging based on the latest available and highest efficacy LEDs coupled with reasonably priced high efficiency drivers.

Just to see what products are currently available on the Energy Star website, I filtered the list of products for LED downlight recessed retrofit at 2700K and 90 CRI. There are 127 models of which, only 8 are above 70 lm/w, so the overwhelming majority are below 70 at an average of 62.5 lm/w, see graph below.



As far as I can tell, the 70 lm/w products (not sure of R9 values) are C&I type, made to order and are not retail products, so I would assume that cost is probably high in comparison with retail products and have limited adoption in the market. If the new requirement is indeed set at 70 lm/w, it would give an unfair advantage to the few luminaire manufacturers who also manufacture their own LEDs and therefore, can pick and choose the LEDs to meet the strictest requirements. The rest of us don't have that luxury and have to rely on what's commonly available in the market.

Based on the components available today and to meet the various national lighting requirements and to enable us to provide reasonably priced products in the mass market, I ask that the efficacy of recessed downlights retrofits be the same as recessed downlights at 60 lm/w.

Thanks,

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