ONE STOP ENGINEERING

California Energy Commission
DOCKETED
12-BSTD-03
TN # 68186
OCT 25 2012

California Energy Commission
High Performance Buildings and Standards Office

Re: Docket number 12-BSTD-03
California Quality LED Lamp Specifications

Gentlemen,

Regarding new LED standards for California, I suggest the following:

To require a CRI over 80 almost doubles the power needed to pump the phosphors. Soraas in Fremont produces a MR-16 bulb with a CRI of 95, but it takes 12 watts of power to produce only 400 lumens! Color Stars Group also has a MR-16 at 80 CRI that only requires 7 watts to get the same 400 lumen output.

Energy Star does, however, use an alternate to the high CRI you propose by requiring a R9 value (bright Red) to be >0 in addition to a CRI value >80. This fixes the problem with true color rendering to the eye.

The promise of LEDs is saving power. We suggest you adopt the Energy Star Specification as is, with four changes:

1. Minimum efficiency should be 70 lumen/watt instead of the present 40
2. Power factor should be increased to 0.9 minimum.
3. Stem temperature of the external heat sink must not exceed 150 degree F.

4. Bulbs must be listed for safety by either UL, CSA or TUV.

Respectively submitted,

David R. Goodson

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10-25-12

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