

### 1. Lamps shall exhibit color rendering index scores of $Ra \geq 80$ and $R9 > 0$ .

Normally, R9 of 2700K and 3000K CFLs lie within -10 --- -15. If they have to be over 0, there will be a negative effects on lumen output, lumen efficiency, SDCM, CCT and 7-step. During mass production, it is very difficult to control the performance.

### 2. Luminous efficacy requirements

Directional lamp needs to be no less than 45lm/W if the wattage is over 10W.

This won't work on R20

Comments: remain V4.2 requirement. 33lm/W instead of 45lm/W

### 3. Stated lumen output on package.

In V4.2, it requires stated lumen needs to be no less than tested initial lumen – 100, and 97% of stated lumen needs to be less than tested initial lumen.

Question: in this new version, if the tested initial lumen difference of base up and based down within 5%, what stated lumen should be put on package? How if the difference is over 5%?

### 4. Rapid cycle stress test

Now, all manufacturers can do 4000-6000. If products need to meet 10000 new requirement, all lamps need to be redesigned. Which means all current products can not be Energy Star. This will take too much time to get all skus to test.

Comments: half of rated life, at least 5000

### 5. Life testing

Cover lamps are more difficult than spare lamps. So it needs to be a difference on life requirements.

Comments: cover lamps, min life 8000hours

### 6. Starting time &run up tme

To achieve previous 10000 times rapid cycle stress test, the whole circuit needs to be changed to preheat circuit. But preheat circuit will prolong the starting time.

Comments: less than 1second

### 7. Run up time

In V4.2, it requires to reach 80% of lumen at 180S for covered lamp.

Comments: for covered lamp, new requirement should be less than 100second to achieve full stabilized light output

### 8. Power factor for CFL

Now, over 99% products in the market are 0.5-0.6PF.

To meet the new requirement( $\geq 0.7$ ), all lamps need to be redesigned.

And this will bring a negative effect on lamp life and cycle time.

Comments: stay with current requirement in V4.2

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