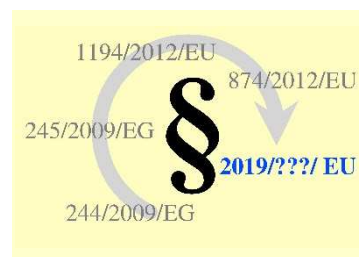


Texte zu den geplanten neuen EU-Regelungen zur umweltgerechten Produktgestaltung und zur Energieverbrauchs-kennzeichnung in der Beleuchtung – Zusammenstellung \* des Umweltbundesamtes (UBA), Deutschland



Entwürfe der EU-Kommission vom 13. November 2017

**Konsultationsforum am 7. Dezember 2017**

– Hintergrundinformationen von Herrn Michael Scholand,  
CLASP –

*Hinweis: Bitte beachten Sie, daß der angehängte Text nur in Englisch verfaßt ist.*

**EN:** Information on the coming EU Lighting Regulations – Ecodesign and Energy Labelling – Compilation \* of the Federal Environment Agency (UBA), Germany

The EU Commission's drafts of 13 November 2017

**Consultation Forum on 7 December 2017 —  
Background information by Mr. Michael Scholand, CLASP**

**FR:** Informations sur les futures réglementations de l'UE concernant l'éclairage – l'écoconception et l'étiquetage énergétique – Compilation \* de l'Agence Fédérale de l'Environnement (UBA), Allemagne

Les projets de la Commission Européenne du 13 novembre 2017

**Forum consultatif du 7 décembre 2017 —  
Informations de fond de M. Michael Scholand, CLASP**

*Indication: Veuillez noter que le présent texte n'est disponible qu'en anglais.*

\* <https://www.eup-network.de/de/eup-netzwerk-deutschland/offenes-forum-eu-regelungen-beleuchtung/dokumente/texte/>

## Liste der Dokumente zum Konsultationsforum am 7. Dezember 2017 und Kennzeichnung des vorliegenden Textes

**EN:** List of the documents on the Consultation Forum on 7 December 2017 and identification of the text at hand

**FR:** Liste des documents du forum consultatif du 7 décembre 2017 et marquage de le présent document

### **Diskussion** ◇ **EN:** Discussion ◇ **FR:** Discussion

- Protokoll ◇ **EN:** Protocol ◇ **FR:** Protocole
- Schwerpunkte der Diskussion; Notizen von Christoph Mordziol, UBA ◇ **EN:** Focuses of the discussion; notes by Christoph Mordziol, UBA ◇ **FR:** Thèmes principaux de la discussion; notes de Christoph Mordziol, UBA

### **Vorträge und Hintergrundinformationen** ◇ **EN:** Presentations and background information ◇ **FR:** Exposés et informations de fond

- Vortrag von Herrn Leo Wierda, Van Holsteijn en Kemna ◇ **EN:** Presentation by Mr. Leo Wierda, Van Holsteijn en Kemna ◇ **FR:** Exposé de M. Leo Wierda, Van Holsteijn en Kemna
- Vortrag von Frau Orsola Mautone, EU-Kommission ◇ **EN:** Presentation by Mrs. Orsola Mautone, EU Commission ◇ **FR:** Exposé de Mme. Orsola Mautone, Commission européenne
- Vortrag von Frau Ourania Georgoutsakou, Lighting Europe ◇ **EN:** Presentation by Mrs. Ourania Georgoutsakou, Lighting Europe ◇ **FR:** Exposé de Mme. Ourania Georgoutsakou, Lighting Europe
- Vortrag von Herrn Michael Scholand, CLASP (der Vortrag konnte aus Zeitgründen nicht mehr gehalten werden) ◇ **EN:** Presentation by Mr. Michael Scholand, CLASP (due to lack of time, the presentation could not been held) ◇ **FR:** Exposé de M. Michael Scholand, CLASP (faute de temps l'exposé n'a pas été donné)

Es folgt ein unveränderter Originaltext.

**EN:** The following is an unmodified original text.

**FR:** Ce qui suit est un texte original.

# Scope of Coverage - Definition of 'light source'

- Light sources and separate control gear for light sources

(1) 'light source' means an electrically operated product intended to emit and/or be possibly tuned to emit light with all of the following optical characteristics:

Criterion (1)(a)

(a) chromaticity coordinates  $x$  and  $y$  in the range  
 $0,270 < x < 0,530$  and  
 $-2,3172 x^2 + 2,3653 x - 0,2199 < y < -2,3172 x^2 + 2,3653 x - 0,1595$ ;

(b) a luminous flux  $< 1000 \text{ lm per mm}^2$  of projected light-emitting surface area as defined in Annex II;

(c) a luminous flux between 60 and 82 000 *lumen*;

(d) a colour rendering index  $\text{CRI} > 0 \text{ Ra}$ ;

using incandescence, fluorescence, high-intensity discharge, light emitting diodes or their combinations as lighting technology.

High-pressure sodium light sources (HPS, as defined in Annex II) that do not fulfil condition (1)(a) are anyway considered light sources in the sense of this Regulation.

If a containing product is itself a light source, the light source to be considered for the purpose of this Regulation is the smallest physical unit that can be readily removed from the containing product without permanent mechanical damage and that meets the definition for light source.

# The Commission's current proposal covers a narrow scope of white-light.

- White-light in EC No. 244/2009 was originally quite broad...

The requirements set out in this Regulation shall not apply to the following household and special purpose lamps:

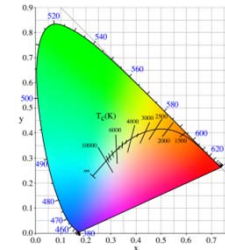
- (a) lamps having the following chromaticity coordinates  $x$  and  $y$ :

$$x < 0,200 \text{ or } x > 0,600$$

$$y < -2,3172 x^2 + 2,3653 x - 0,2800 \text{ or}$$

$$y > -2,3172 x^2 + 2,3653 x - 0,1000;$$

Three important differences reduce the scope



EC No. 244/2009

- ....but later narrowed to align with other lighting regulations:

2. Special purpose lamps shall comply with the following requirements:

- (a) If the chromaticity coordinates of a lamp always fall within the following range:

$$x < 0,270 \text{ or } x > 0,530$$

$$y < -2,3172 x^2 + 2,3653 x - 0,2199 \text{ or } y > -2,3172 x^2 + 2,3653 x - 0,1595;$$

the chromaticity coordinates shall be stated in the technical documentation file drawn up for the purposes of conformity assessment in accordance with Article 8 of Directive 2009/125/EC, which shall indicate that these coordinates make them a special purpose lamp.

EC No. 245/2009

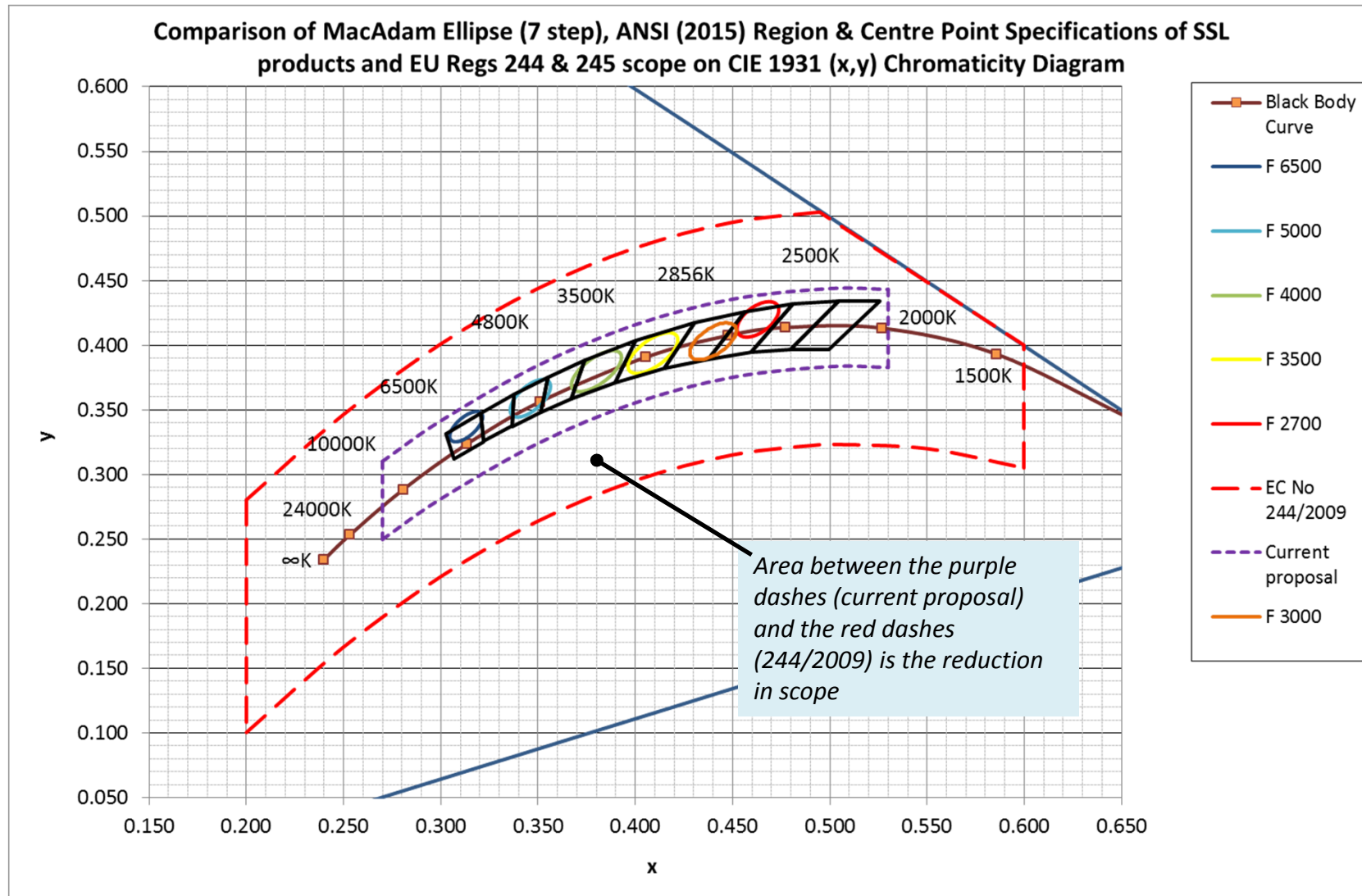
EU No. 1194/2012

EU No. 1428/2015

EU No. XXX/2018

Today's draft

# clasp Comparison of chromaticity area covered by EC No 244/2009 and current proposal

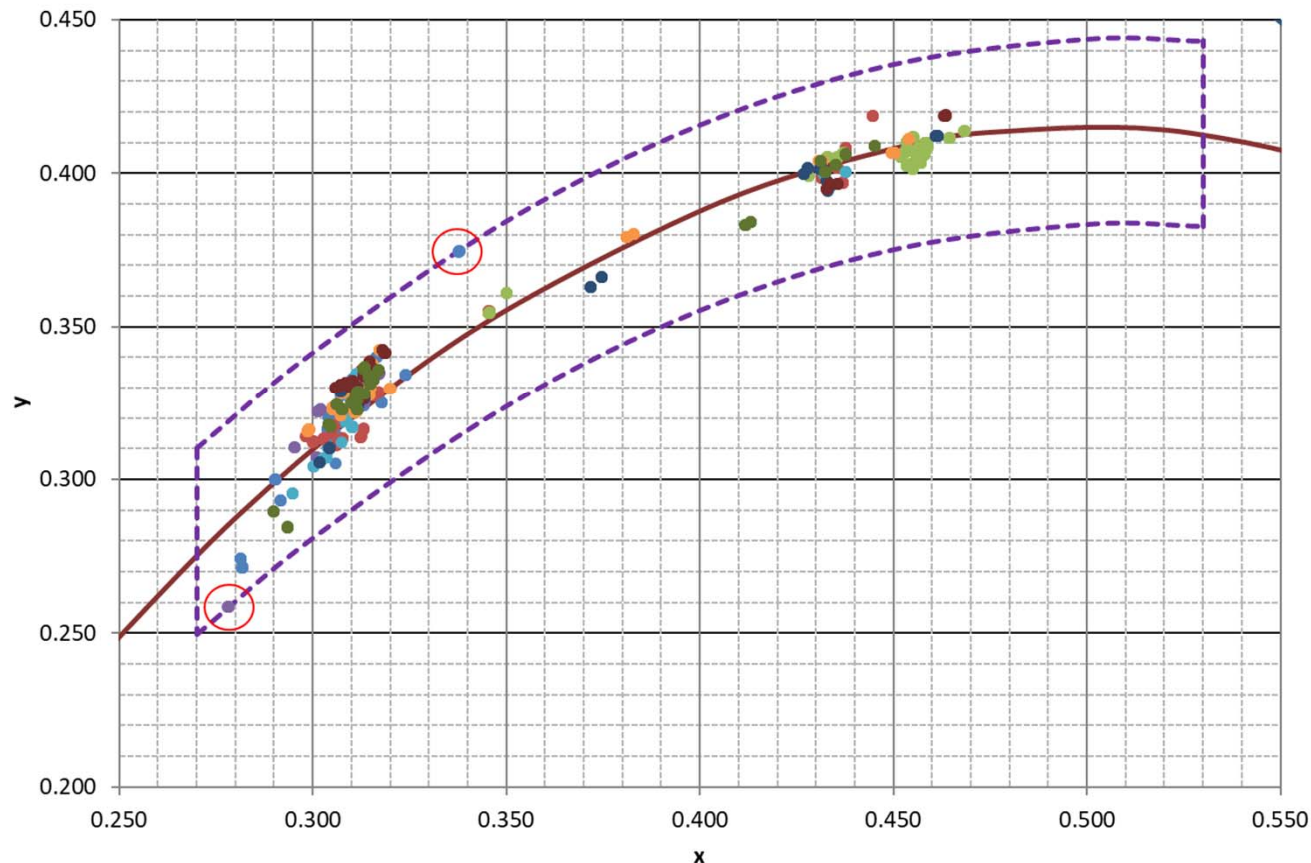




# Why is this reduction a problem? Dancing on the edge...

- Current proposal with scatter plot of several models of white light LED lamps from South East Asia.... 2 are on the cusp.

EU Reg 245 scope on the CIE 1931 (x,y) Chromaticity Diagram  
with benchmarking of LED lamp products purchased from the retail market

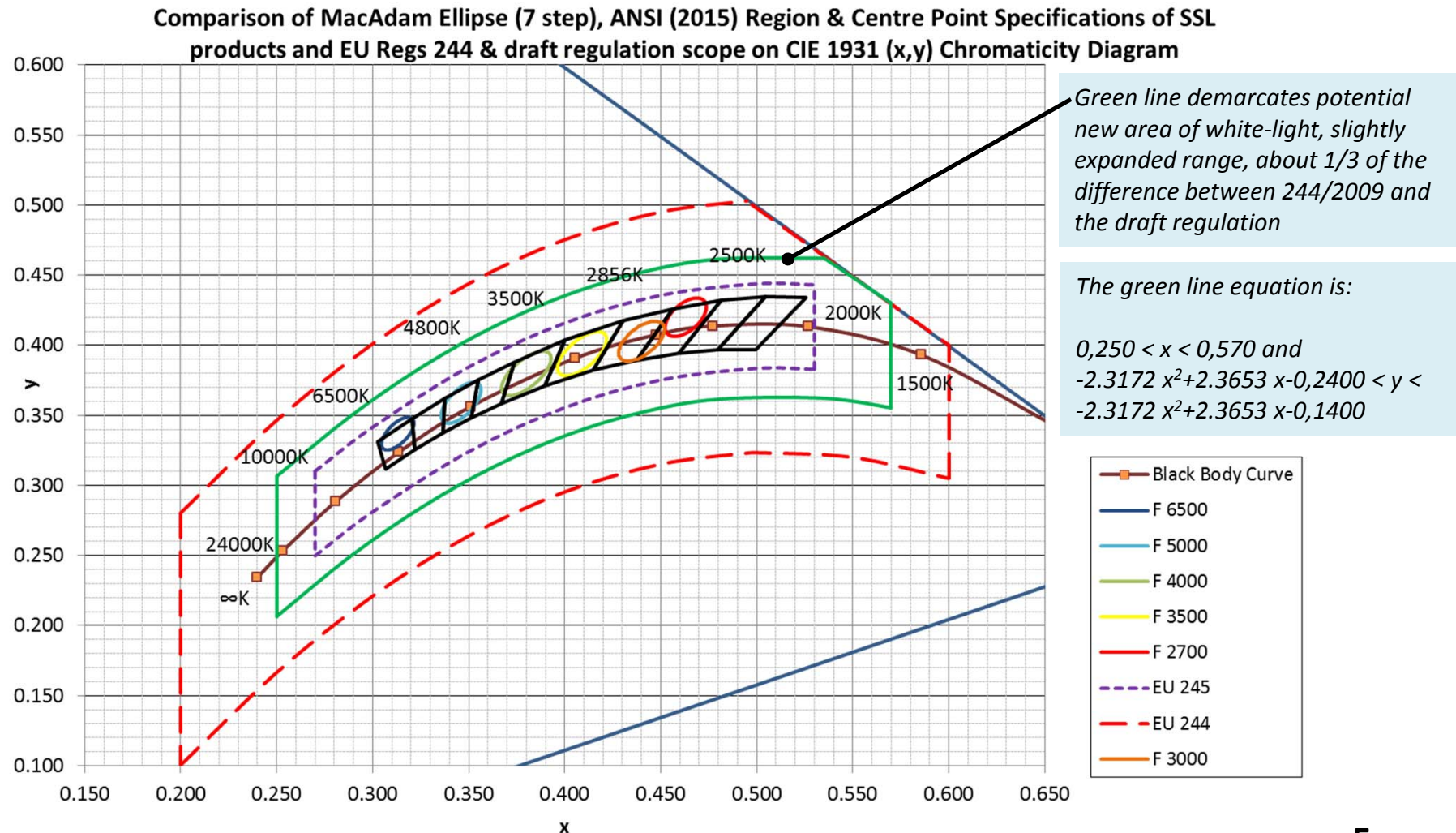


Our concern is that the limits of this parameter are too close to white-light and could create confusion or a loophole. The risk is that someone could make and sell a lamp just outside this 'white-light' region and they would be exempted from the regulation, but the lamp could still be used for general lighting.

Credit: Steve Coyne, Light Naturally

# Option #1 - Slightly Expanded Scope

- Expand the scope about 1/3 of the difference...



## Option #2 - Use this opportunity to switch to $u'v'$ uniform colour space

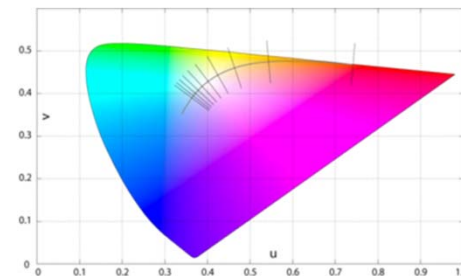
- Option #2. Consider revising the definition of white-light to be based on  $u'v'$  uniform colour space
- CIE (1931) chromaticity coordinates  $(x,y)$  are complex equations, difficult to understand, not friendly for market surveillance – e.g., what CCT does the equation below represent?

(a) chromaticity coordinates  $x$  and  $y$  in the range

$$0,270 < x < 0,530 \text{ and}$$

$$-2,3172 x^2 + 2,3653 x - 0,2199 < y < -2,3172 x^2 + 2,3653 x - 0,1595;$$

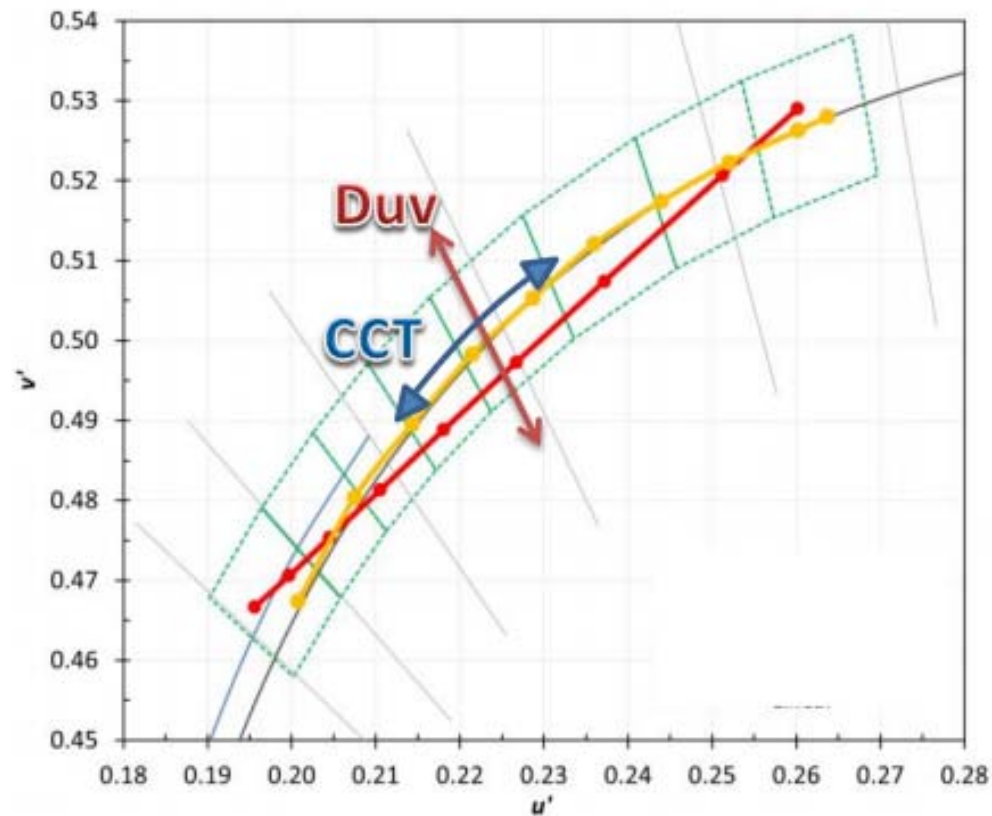
- CIE (1960) uniform colour space much clearer – you simply define the range of CCT you want to cover and the distance from the blackbody locus. (see next slide)





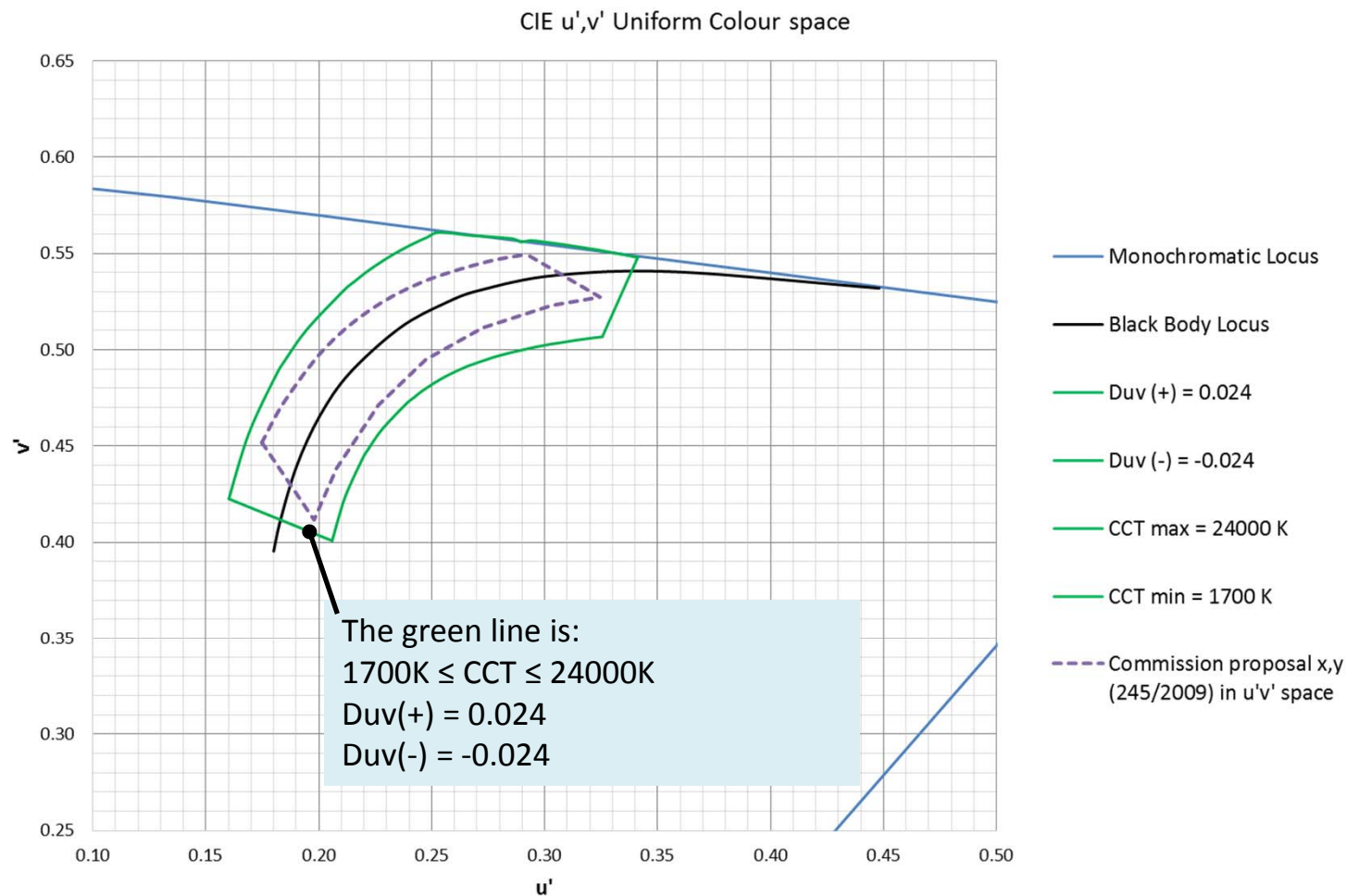
# Scope of Coverage

- Just declare your range of CCT and the distance above and below the blackbody locus in the CIE uniform colour space...



# Scope of Coverage

- The Commission's current proposal (i.e., 245/2009) and an "Option #2" which is defined in  $u'v'$  space instead.



# Thank you

- Questions and comments are welcome.
- Please also check out the LED filament lamp on the right....



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+44 7931 701 568

Philips [DubaiLamp](#)  
Announced Oct. 2016 for 2017 release  
200 lumens/Watt - 3W model  
600 lumens (~ 60W incandescent)  
4 x better than CFL  
15 x better than halogen  
25,000 hours rated life