



REGULATION SUMMARY

California Code of Regulations, Title 20:
Division 2, Chapter 4, Article 4, Sections 1601 – 1608:
Appliance Efficiency Regulations

- Effective Date: September 10, 2010



Applicable Sections:

- Section 1602 (j): Fluorescent lamp ballasts
 - Section 1602 (k): Lamps
 - Section 1604 (j): Fluorescent lamp ballasts – Test methods follow 10 CFR 430
 - Section 1604 (k): Lamps – Test methods follow 10 CFR 430
 - Section 1605 (j): Fluorescent lamp ballasts – Energy Performance Standards
 - Section 1605 (k): Fluorescent lamps – Energy Performance Standards
- ❖ Title 20 has not yet adopted the new EPCACT requirements of 10 CFR 430!



Title 20 follows the EPCA definition of “general service fluorescent lamp” as follows:

- ❑ Fluorescent lamps which can be used to satisfy the majority of fluorescent applications, but does not include any lamp designed and marketed for the following non general lighting applications:
 - Fluorescent lamps designed to promote plant growth.
 - **Fluorescent lamps specifically designed for cold temperature installations.**
 - Colored fluorescent lamps.
 - Impact-resistant fluorescent lamps.
 - Reflectorized or aperture lamps.
 - Fluorescent lamps designed for use in reprographic equipment.
 - Lamps primarily designed to produce radiation in the ultra-violet region of the spectrum.
 - **Lamps with a color rendering index of 87 or greater**



Title 20 REQUIREMENT
(NOT equivalent to EPACKT)

2-foot medium bi-pin U-shaped lamps

➤ Requirement:

Nominal Lamp Watts	Minimum Color Rendering Index (CRI)	Minimum Average Lamp Efficacy (LPW)
>35	69	68.0
≤ 35	45	64.0

- ✓ **Voltarc U-series lamps (includes the TriLightMax[®], TriLight[®], Tufstraight[®] and Tufbend[®]-U series of T12, T8 and T5 lamps) ...**



Title 20 REQUIREMENT

4-foot medium bi-pin (MBP) Lamps

➤ Requirement:

Nominal Lamp Watts	Minimum Color Rendering Index (CRI)	Minimum Average Lamp Efficacy (LPW)
>35	69	75.0
≤ 35	45	75.0

- ✓ ***Voltarc F48T5, F48T8 and F48T12 lamps (includes the TriLightMax[®], TriLight[®] and Tufstraight[®] series of T12, T8 and T5 lamps) are not affected by these requirements due to use of RDC base configuration¹***



Title 20 REQUIREMENT

8-foot single pin (SP), instant start, slimline lamps

➤ Requirement:

Nominal Lamp Watts	Minimum Color Rendering Index (CRI)	Minimum Average Lamp Efficacy (LPW)
>65	69	80.0
≤ 65	45	80.0

✓ **This requirement does not apply to lamps currently manufactured by Voltarc**



Title 20 REQUIREMENT

8-foot High Output (HO) Lamps

➤ Requirement:

Nominal Lamp Watts	Minimum Color Rendering Index (CRI)	Minimum Average Lamp Efficacy (LPW)
>100	69	80.0
≤ 100	45	80.0

- ✓ ***Voltarc F96T12 (8') lamps (includes the TriLightMax[®], TriLight[®], Tufstraight[®], Tufbend[®]-U and Cold Climate / Diffuser jacketed straight lamp series of T12 lamps) are exempt from this regulation as a result of their design for cold temperature installations.²***
- ✓ ***Voltarc F96T12 (8') DSN 50 series lamps are exempt from this regulation as a result of their high color-rendering index (CRI) of 90.³***



Title 20 REQUIREMENT

8-foot High Output (HO) Lamps

➤ Requirement:

Nominal Lamp Watts	Minimum Color Rendering Index (CRI)	Minimum Average Lamp Efficacy (LPW)
>100	69	80.0
≤ 100	45	80.0

- ✓ **Voltarc F96T8 (8') TriLightMax[®] CW/841 lamps exceed the LPW requirements!**
- ✓ **Voltarc F96T8 (8') TriLightMax[®] WW/830 lamps exceed the LPW requirements!**
- ✓ **Voltarc F96T8 (8') TriLight[®] CW/841 lamps exceed the LPW requirements!**
- ✓ **Voltarc F96T8 (8') TriLightMax[®] DL/865 lamps exceed the LPW requirements!**
- ✓ **Voltarc F96T8 (8') TriLight[®] DL/865 lamps exceed the LPW requirements!**
- ✓ **Voltarc F96T8 (8') TriLightMax[®] 5000 and DSN 50 series lamps are exempt from this regulation as a result of their high color-rendering index (CRI) of 90.³**



FOOTNOTES

- ¹ - 10 CFR 430 Section III g “various other fluorescent lamps” – DOE does not extend coverage to GSFL with alternate lengths, diameters, bases or shapes
- ² - **Cold Temperature fluorescent lamp means a fluorescent lamp specifically designed to start at -20°F when used with a ballast conforming to the requirements of ANSI Standard C78.1-1991 and is expressly designated as a cold temperature lamp both in markings on the lamp and in marketing materials (including but not limited to catalogs, sales literature and promotional material)**
- ³ - Colored fluorescent lamp means a fluorescent lamp designed and marketed as a colored lamp and with either of the following characteristics:
 - A CRI less than 40 (as determined according to the method given in CIE Publication 13.2 (see 10 CFR 430.22))
 - A lamp correlated color temperature less than 2500K or greater than 6600K