



**NRDC Comments on FTC Lighting Labeling Rule and the July 19, 2010 CFR**

**Lamp Labeling Amendments, Project No. P084206  
RIN 3084-AB03**

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On behalf of the Natural Resources Defense Council (NRDC), an environmental advocacy group with over 1.3 million members and on line activists, enclosed are our comments that were developed in response to the information requests made by the Federal Trade Commission (FTC) in the July 19, 2010 Code of Federal Register. NRDC has been an active participant throughout the FTC's rulemaking to update its labeling requirements for new lamps (more commonly referred to as light bulbs) and their packaging. As lighting represents approximately 15% of residential electricity use, it's critical to provide consumers with the facts about a bulbs light output, cost of operation, power use, etc when they are shopping for a bulb. Armed with accurate information, consumers will more easily be able to identify the more efficient model and select a product that will cut their energy use by up to 75% compared to today's inefficient incandescent light bulbs and save lots of money over the lifetime of the lamp.

Our comments supplement NRDC's December 22, 2010 submission to the FTC and focus on two areas which the FTC has requested additional input:

- Scope – which bulb types should be covered by the requirements? and
- Wattage equivalency claims – whether FTC should provide requirements that would apply to wattage equivalency claims made by the lamp manufacturer (e.g. 15W = 60W claim intended to convey the 15W CFL lamp is as bright as the 60W incandescent it is designed to replace.)

In summary, NRDC strongly recommends that FTC:

1. Require all screw bases lamps be covered by its rules, not just those with medium screw bases, and
2. Establish requirements that would govern manufacturer claims made on wattage equivalency. While manufacturers would not be required to make this type of claim on their package, the FTC rules would help ensure that these claims are accurate when manufacturers do choose to make them.

## I. Scope/Coverage

In our prior oral and written testimony, NRDC advocated for a comprehensive and easy to implement approach to the issue of scope. Simply stated, **all screw based lamps should be covered by the FTC's lamp labeling requirements**. It makes no difference whether the lamp: a) has the shape of a pear, globe, flame, or spiral; b) has a small, medium or large diameter screw base; or c) is based on a certain type of technology such as incandescent, halogen, LED, CFL, etc. In all cases, the lamp purchaser needs to be provided with the same basic information about the lamp such as its light output, cost of operation, life time, power use, etc. The information needs to be accurate to help ensure the consumer is getting the performance they are paying for and to ensure a level playing field for the lighting manufacturers and retailers.

In its July 19, 2010 CFR, the FTC reported that its labeling rules would indeed apply to all technologies and lamp shapes. We commend FTC for this decision. The FTC did not rule on whether its regulations would only apply to lamps with medium screw bases or include all types of screw based lamps, and requested additional input on this matter. Below we provide justification for FTC including all types of screw based lamps to the scope of its final rule.

While it is correct that medium screw bases are the most common “flavor” of screw based lamps, a wide variety of screw based lamps exist which use candelabra bases, intermediate bases and bases of other diameters. Our recent in person survey of the local Ace Hardware in downtown San Francisco revealed that there were over 20 different models of residential lamps for sale that had non medium screw bases. The shape of the lamps included round globes, candelabra and tube shape lamps. These products were designed for a wide range of applications including chandeliers, night lights, ceiling fans, and halogen fixtures, and utilized incandescent, halogen, CFL and LED technology. In addition the power used ranged from < 2W to > 100 W.

Below are a few photographs and text demonstrating the range of the products and screw bases we encountered during our research:

**Figure 1 – Comparison of two incandescent based night lights.** One model simply says 4 Watts, the other has more complete information shown on the package: 7W, 45 lumens and 3000 hours. The consumer has no way of comparing the light output, power use or cost of operation of these bulbs. It's possible that the 4W lamp may be providing the same or even more light than the 7W alternative. Alternately the 4W lamp may not be bright enough and the consumer will be disappointed by its performance.



**Figure 2 – Range of candelabra bases lamps offered by Westinghouse.** At the website: [http://www.elightbulbs.com/catalog\\_search\\_results.cfm](http://www.elightbulbs.com/catalog_search_results.cfm) we found a broad set of candelabra based lamps sold under the Westinghouse brand. Note the wide range of power use and shapes of these products. In addition, these products include incandescent, halogen, and CFL technologies.

	<p><b>Westinghouse</b> 04767 100 watt 120 volt T4 Candelabra Screw Base Clear 100Q/CD <b>\$4.55</b></p>		<p><b>Westinghouse</b> 04423 50 watt 120 volt T3 Candelabra Screw Base Clear 50Q <b>\$4.49</b></p>		<p><b>Westinghouse</b> 06261 60 watt 120 volt T3 Candelabra Screw Base Frosted HKX60FR/E11 <b>\$7.99</b></p>
	<p><b>Westinghouse</b> 22380 Candelabra Base Black 1 Light Harness Set Socket 1 LITE HARNESS SET CAND BLAC <b>\$2.00</b></p>		<p><b>Westinghouse</b> 03671 10 watt 130 volt CA7 Candelabra Screw Base Clear 10CA7 <b>\$0.99</b></p>		<p><b>Westinghouse</b> 03272 10 watt 120 volt CA7 Candelabra Screw Base Clear 10CA7 <b>\$0.99</b></p>
	<p><b>Westinghouse</b> 03831 10 watt 120 volt G12.5 Candelabra Screw Base Clear 10G121/2 <b>\$1.19</b></p>		<p><b>Westinghouse</b> 37948 13 watt 120 volt T2 Candelabra Screw Base 2700K 2 Pack 13MINITWIST/CB/27/2PK <b>\$6.78</b></p>		<p><b>Westinghouse</b> 04768 150 watt 120 volt T4 Candelabra Screw Base Clear 150Q/CD <b>\$5.99</b></p>
	<p><b>Westinghouse</b> 04804 150 watt 120 volt T4 Candelabra Screw Base Frosted 150Q/F <b>\$11.99</b></p>		<p><b>Westinghouse</b> 03681 15 watt 130 volt B9.5 Candelabra Screw Base Clear 15B91/2 <b>\$0.89</b></p>		<p><b>Westinghouse</b> 03230 15 watt 120 volt B9.5 Candelabra Screw Base Clear 15B91/2 <b>\$0.89</b></p>

**Figure 3 – 60W chandelier bulbs.** On display at the local Walgreens we observed two 60W flame shaped lamps being sold next to each, one with a conventional medium screw base, the other with a smaller, candelabra base which is commonly used in chandeliers. *Why would FTC chose to require labeling requirements for one of these products and not the other?*



**Figure 4 – Assortment of candelabra based lamps shown in display at Ace Hardware store.** These models were prominently displayed and located next to equivalent models with medium screw based sockets. Note, some of the lamps were flame shaped, others had round globes, etc. Again, all of these lamps should be covered by FTC’s final labeling rule, not just those with a medium screw base.



**Figure 5 –Examples of globe and flame shaped LED products with candelabra screw bases.** LED based lamps containing candelabra screw bases are rapidly entering the market. There are wide differences in the light output, and efficacy of these offerings, and requiring accurate labeling for these products is essential to prevent customer confusion and to maximize the probability that consumers will purchase the model that provides the desired amount of light and uses the least amount of energy.

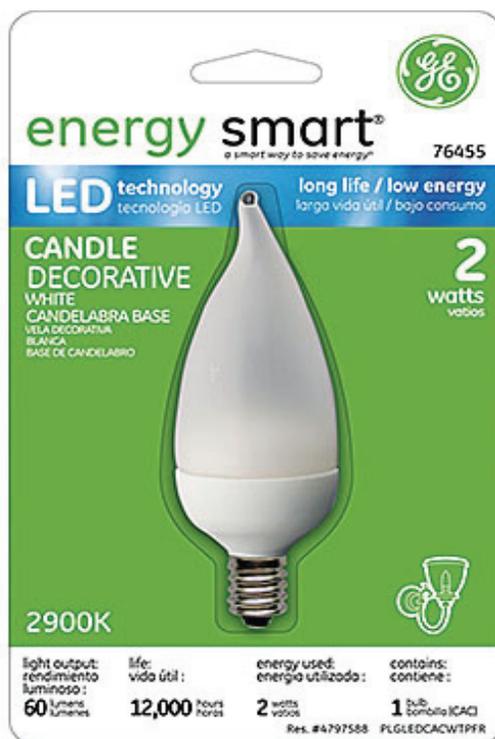


**Figure 6 – CFL lamps with medium and candelabra bases sold at [www.buylighting.com](http://www.buylighting.com).** These lamps span a wide range of light outputs and the 14 W lamp provides up to 75% energy savings or roughly 45 Watts of savings compared to conventional lamps. While the producer of the candelabra based CFL lamps will likely provide the consumer with the information on its energy savings benefits, the producer of the inefficient candelabra based model is unlikely to provide information on the product’s power use or operating costs on the package unless required to by law. Also if these lamps are not covered by FTC’s rules, follow-up enforcement action for false claims may not be possible or as successful.

Other Products in this Category...

<p>7 Watt Decorative Flame Tip Compact Fluorescent Price Each: \$6.59</p> 	<p>14 Watt Decorative Torpedo Compact Fluorescent Price Each: \$7.95</p> 	<p>9 Watt Decorative Torpedo CFL 2700K Med Base Price Each: \$6.95</p> 	<p>Standard to Candelabra Reducer E26 to E12 White Price Each: \$2.55</p> 
<p>4 Watt Decorative Torpedo CFL Candelabra Base Price Each: \$6.95</p> 	<p>8 Watt Decorative Flame Tip Compact Fluo Price Each: \$13.95</p> 	<p>4 Watt Decorative Torpedo CFL Medium Base Price Each: \$6.95</p> 	<p>9 Watt Decorative Torpedo CFL 2700K Cand Base Price Each: \$6.95</p> 

**Figure 7 – Example of LED candelabra based lamp with light output and other disclosures already on the package.** The GE candelabra based lamp shown below is offered for sale on Amazon.com and provides information on the lamp’s light output, power use and lifetime. We commend GE for including this information. This package also provides an illustration of the amount of real estate that is readily available for including the information required by the FTC labeling requirements. Regarding this point, we also refer the reader to figures 1, 3, and 4 that show the amount of unused space that is available on the front for printing the labeling information to be required by FTC. The back side of the cardboard package already contains printed material on it and provides ample space for the manufacturer to provide the “lighting facts” or second label that will be required by FTC.



## II. Wattage Equivalency Claims

The 2007 Energy Bill EISA will phase-out the 130 year inefficient incandescent light bulb that consumers know simply as the 25, 40, 60, 75, 100 and 150 Watt light bulbs beginning in January 2012. Consumers will then be faced with the challenge of having to figure out what lamp they should purchase to replace the one that just burned out.

As has been made clear throughout this rulemaking by many stakeholders, consumers should be shopping for the amount of light, expressed in lumens, and not simply by the power the product consumes. In recognition of this point, the FTC will no longer require the lamp’s power use to be included in the label shown on the front of the

package.<sup>1</sup> While this is a positive development, the reality is most manufacturers will continue to prominently display on the front of the package: a) the power use of their product, and b) a means to compare the reported light output of their product to the traditional incandescent lamp they are trying to replace.

Ever since the introduction of CFLs, the industry has provided claims on the front of their packages that state something to the effect: 60W equivalent, 13W = 60W, replaces 60W, etc and may also use a pictorial means to convey that the efficient lamp replaces the incandescent lamp. A good example of this is shown below in Figure 8. This technique is commonly used on major websites that advertise the CFL based on a comparison to the incandescent lamp. For example, GE's 26 watt CFL is listed at amazon.com as:

## GE 26 Watt Energy Smart CFL - 6 Pack - 100 Watt output

[http://www.amazon.com/GE-Watt-Energy-Smart-CFL/dp/B000UYF80S/ref=pd\\_bxgy\\_hi\\_text\\_b](http://www.amazon.com/GE-Watt-Energy-Smart-CFL/dp/B000UYF80S/ref=pd_bxgy_hi_text_b)

When done accurately this type of comparison will be very helpful for consumers who will need this type of information in the near to mid-term to guide them to the bulb that provides the amount of light they are accustomed to.

**Figure 8 – Example of CFL packaging with wattage equivalency claim of 13W = 60W.** Note the prominence of the 60 in the upper right hand corner, and the 13W spiral shaped CFL shown being = to a 60 W incandescent shaped lamp.



<sup>1</sup> Note the FTC rules do not however prevent the manufacturer from displaying the product's power use or limit the size/prominence of this disclosure on the front of the package. Just because the FTC does not require power use to be displayed on the package, one should likely assume this practice will continue to be a prominent part of the package's label.

Similarly examples of wattage equivalency claims are very common in the packaging and advertising for today's new LED products that are increasingly entering the market. In figure 9, we provide content from an online vendor for a LED lamp that is advertised as a 30W replacement that provides 130 lumens of light. This claim is misleading as today's conventional 25W incandescent lamps give off 235 lumens. The LED below gives off 45% less light than a 25W incandescent light bulb, let alone the claim of 30W.

**Figure 9 – LED light bulb with inaccurate wattage equivalency claim**

[http://www.polar-ray.com/4W-Candelabra-LED-Bulb--Replaces-30W\\_p\\_158.html&catid=96](http://www.polar-ray.com/4W-Candelabra-LED-Bulb--Replaces-30W_p_158.html&catid=96)



## **4W Candelabra LED Bulb - Replaces 30W**

Item Id: 1283

- Color: **2700K (Warm White)**
- Base Type: Candelabra (E12)
- Clear Bulb
- Dimmable
- Life: 50,000 Hours
- Warranty: 3 Years
- Input Voltage: 120V
- Length: 4"
- Light Output: 130 Lumens

In our prior comments, NRDC showed examples of new incandescent and halogen based lamps that are being introduced to comply with the new EISA requirements. The Philips package shown below makes a wattage equivalency claim of 43W = 60W even though it only provides 630 lumens of light. This is roughly 25 % dimmer than the conventional 60W incandescent lamp (810 lumens) the consumer is used to buying. One has to look in the fine print to see they are comparing the power use of this bulb to an older daylight type bulb, which is very misleading as most consumers base wattage comparisons against the everyday soft white incandescent, the bulb they are most accustomed to.

**Figure 10 – Philips EcoVantage bulb that claims 43W = 60W**



After just a few minutes of web surfing, we were able to find numerous examples of LED products that claim to be equivalent to or replace a 60W lamp even though they produce only 50% of the 800 lumens that a standard 60W soft white incandescent provides. The 7W LED lamp shown below is listed as a 60 watt replacement even though it produces between 350 and 450 lumens.

**Figure 11 – Example of overstated wattage equivalency claim for a LED lamp.**  
(Source: <http://www.earthtechproducts.com/p2637.html>)

[Home»LED Light Bulbs - LED Lights](#) »7 Watt LED Light Bulb - 60 Watt Replacement

**7 WATT LED LIGHT BULB - 60 WATT REPLACEMENT**

### Save BIG With a 7 Watt LED Light Bulb



- The 7 Watt LED Light Bulb is efficient and cost less than \$2.00 a year running for 8 hours per day.
- 7 Watt LED Bulb provides light equivalent to a 60 Watt incandescent light bulb
- The 7 Watt LED Light Bulb fits standard sockets and is virtually unbreakable
- Uses the latest in LED light engine technology from CREE wasting very little light achieving over 95% luminary efficiency

Item#: LEDZLX



### Product Features:

- Light Engines: CREE LED Light engine
- Powered by CREE LED Light the most advanced light engines available. CREE is the world leader in advanced LED modules
- Luminous Flux: 450 lumens (Cool White) 350 lumens (Warm White)
- Physical Dimensions: Overall Length: 5.46 inches. Diameter: 2.71 inches. Weight: 6 Ounces
- Beam Angle: 180 degrees overall

All of the above examples demonstrate that the lighting industry has a long track record of providing lumen equivalency claims on their packaging and that this trend will only accelerate as today's conventional incandescent light bulbs and their well known wattages begin to disappear starting in 2011. These examples also show that the manufacturers and retailers, in particular web-based retailers, are using a wide range of light levels to base their lumen equivalency claims. While some manufacturers are doing a good job, many are overstating things. In other words, some products are marketed as replacing a 60W bulb even though their light output is more comparable to a 40W bulb.

**To ensure a level playing field and to remove any uncertainty in the future, we urge FTC to establish a table that manufacturers and retailers must use when making wattage equivalency claims.** The equivalency charts shown below are being used by ENERGY STAR to govern their labeling programs for CFL and LED products. The same tables should be equally applicable to other technologies such as incandescent and halogens. As you will see the values are essentially identical, the only difference being the LED table includes an entry for 35 W products and has a lower value for the 25 W replacement lamps. Using this approach, a product providing 1100 to 1599

lumens would be able to claim 75 watt equivalence. A 1099 lumen product would have to claim 60 watt equivalence.

We also want to point out that ENERGY STAR’s thresholds for claiming incandescent wattage equivalence are all comfortably (about 5 to 8%) below the lumen levels typically achieved by a standard lifetime soft white incandescent. This gives some room for manufacturers to extend lamp lifetime or modify their spectrum efficiently or employ “super soft white” coatings and still be able to claim wattage equivalence to a standard incandescent. Clear, unfrosted lamps would have an even easier ability to meet the minimum wattage equivalency requirements.

**Table 1 – Wattage equivalency table used by ENERGY STAR for CFLs**

<b>ENERGY STAR QUALIFIED CFL/INCANDESCENT EQUIVALENCY CHART</b>	
<b>A-Shaped Incandescent bulb (Watts)</b>	<b>Typical Luminous Flux (Lumens)<sup>†</sup></b> <i>† Lumens must be 100 hr, initial values for CFLs</i> <i>Note: excludes globes, reflectors, or decorative CFLs. Lumens for 3-way lamps correspond to maximum equivalency shown.</i>
25	Minimum of 250
40	Minimum of 450
60	Minimum of 800
75	Minimum of 1,100
100	Minimum of 1,600
125	Minimum of 2,000
150	Minimum of 2,600
30-70-100	Minimum of 1,200
50-100-150	Minimum of 2,150

**Table 2 – Wattage equivalency table used by ENERGY STAR for LED replacement lamps**

<b>Nominal wattage of lamp to be replaced (watts)</b>	<b>Minimum initial light output of LED lamp (lumens)</b>
25	200
35	325
40	450
60	800
75	1,100
100	1,600
125	2,000
150	2,600

Going forward we urge the FTC to publish wattage equivalency requirements based on the tables already developed by ENERGY STAR. Any claims made by the manufacturers would need to comply with these requirements. NRDC recommends applying these tables across the board with the exception of reflector lamps which would have their own table. In other words all lamps, except directional/reflector lamps would be subject to the values in the table regardless of their bulb design ( technology, shape, screw base, standard or modified spectrum, etc.) For screw based reflector lamps, FTC in consultation with key stakeholders such as the manufacturers, energy efficiency advocates, DOE and Energy Star should develop a similar table for screw based reflector lamps which historically have different “standard” wattages and associated light output levels.

We also want to point out to FTC that the lumen bins that were created as part of EISA established power limits of certain ranges of light output. These ranges should not however be confused with wattage equivalencies, and must not be the determinant of whether a product is judged to be in compliance or not with FTC’s labelling rules. Table 3 below illustrates the extremely wide ranges of light output that the standard provides, especially when considering the lower values allowed for modified spectrum lamps. In a few cases the lumen range may be as large as a factor of two.

**Table 3 – Range of light output levels allowed under EISA compared to today’s standard incandescents.**

EISA Deadline	Power (watts)		Light Output (lumens)		Efficiency (lumens/watt)	
	Std. Incan.	EISA Maximum	Std. Incan.	EISA Ranges	Std. Incan.	EISA Minimum
1/1/2012	100	72	1690	1118 - 2600	16.9	15.5 – 36
1/1/2013	75	53	1170	788 - 1489	15.6	14.9 – 28
1/1/2014	60	43	840	563 - 1049	14.0	13.1 – 24
1/1/2014	40	29	490	232 - 749	12.3	8.0 – 26

While we appreciate FTC’s stated commitment to monitor the market and pursue exaggerated claims, as they most recently did with the Lights of America LED products, we think it is prudent to proactively develop clear requirements governing wattage equivalency claims. This will remove all uncertainty in the future of what is and isn’t an exaggerated claim and one subject to enforcement actions by the FTC.

### III. Recommendations

Based on our experience with energy labeling programs and our recent research on the state of lighting products and packaging, NRDC recommends that FTC:

1. Require all screw based lamps to be covered by its lamp labeling requirements. There is no justifiable reason to exclude the myriad of products sold that contain other sized screw bases such as candelabra and intermediate bases.
2. Allow manufacturers to make wattage equivalency claims if they want to. These claims must however be subject to meeting the wattage equivalency tables finalized by the FTC. We encourage FTC to use the tables already developed by the ENERGY STAR program and to apply them to all products except reflector lamps. FTC in consultation with key stakeholders should also develop a similar table for reflector lamps.

Respectfully submitted,

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