



Consumer Federation of America

CONSUMER VIEWS AND BEHAVIOR RELATING TO LIGHT BULBS: FINDINGS OF A NATIONAL SURVEY

**Report on Survey Undertaken
By Consumer Federation of America and ORC International**

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Summary

In June 2016, ORC International surveyed, for the Consumer Federation of America, 1,007 representative adult Americans about their views and behavior related to socket light bulbs typically used in their homes. The survey revealed that most consumers:

- know little or have modest knowledge about the different types of light bulbs;
- value light bulb quality and longevity most highly but also value price and electricity usage;
- consider \$2-\$3 a reasonable price for a 60 watt or equivalent light bulb;
- purchase bulbs from a general retailer like Walmart or home supply store like Home Depot;
- do not have LEDs (light-emitting diodes) as the “main type of light bulb” in their living room or bedroom; and
- when their current bulbs burn out, do not plan to replace them with LEDs.

The most pronounced (statistically significant) demographic differences in responses related to income.

The survey data indicate that information is important in consumer decisions about light bulb purchase and use: The more knowledgeable consumers say they are, the more likely they are to use LEDs and the more likely they are to say they will purchase LEDs in the future. The survey data also suggest that consumer education has the potential to increase sales of LEDs that major retailers can play an important role in this education, and that messaging should emphasize similar light quality, greater longevity, less electricity usage, and lower cost over the life of the bulb.

Methods

The Consumer Federation of America worked with the survey research firm, ORC International, to develop survey questions that ORC asked 1,007 representative adult Americans (at least 18 years of age) by cell phone or landline on the weekend of June 1, 2016. Respondents were asked questions about the importance they placed on specific light bulb characteristics, the price they expected to pay for a 60 watt or equivalent bulb,

when or how often they had to purchase replacement bulbs, and where they were most likely to purchase any needed bulbs. Respondents then were given information about different types of bulbs – incandescent, halogen, compact fluorescent, and light-emitting diode – then asked how much they knew about these bulbs, which was the main type in their living room and bedroom, and which would be the main type of replacement bulb. Respondents were also asked for demographic information that included gender, age, income, and education. The survey margin of error was plus or minus three percentage points.

Findings

Valued Light Bulb Characteristics

Respondents were asked – on a 1 to 5 scale with 1 being ‘not important’ and 5 being ‘very important’ -- how important certain characteristics were in the light bulbs they purchase. The characteristics were price, quality of light, how long the light bulbs last, appearance, and electricity usage of the light bulbs. As the table below shows, respondents indicated that the quality of light (63% at 5) and life of the bulb (62% at 5) were the most important. Cost was also valued, with 45% rating price a 5 and 53% rating electricity use a 5, though the latter rating could reflect environmental concerns as well as cost. Only 18% rated appearance a 5.

Table 1: Importance of Light Bulb Characteristics

	5 Rating	4 or 5 Rating
Quality of light	63%	84%
How long bulbs last	62	82
Electricity use	53	72
Price of bulbs	45	64
Appearance	18	27

Among all respondents, those with lower incomes rated price the most highly, with 56% of those with incomes under \$25,000 rating it a 5, and 50% of those with incomes between \$25,000 and \$50,000 rating it a 5. Among respondents, those at least 55 years of age rated quality of light the most highly, with 70% giving this factor a 5.

Respondents were also asked what they considered a reasonable price for a single 60 watt bulb for a table or floor lamp. The mean response was \$3.30 while the median response was \$2.00. Those 65 years and older (\$2.50 mean/\$2.00 median) and those with incomes below \$25,000 (\$3.20/\$2.00) expect lower prices than those under 35 years of age (\$3.90/\$3.00) and those with incomes at least \$100,000 (\$3.50/\$3.00).

Shopping for Light Bulbs

Respondents were asked about their stock of light bulbs -- a large stock at home that should last more than two years, a stock that should last one to two years, a few light bulbs for immediate replacement, or no stock, requiring the immediate purchase of new bulbs when existing ones burn out. More than one-third (34%) said their stock should last at least one year, and 19% indicated immediate purchase. Those with incomes above \$75,000 (42%) were most likely to have a year's stock of bulbs, and those with incomes under \$25,000 (25%) and those under the age of 35 (26%) were most likely to need immediate purchase.

Respondents were also asked where they were most likely to purchase new bulbs. Nearly two-fifths (38%) indicated a general retailer like Walmart, Costco, or Target, while 32% said a home supply store like Home Depot or Lowe's. Twelve percent said a discount retailer like Family Dollar or Dollar General. Only 2% said online from a retailer or another online source such as Amazon.

Income helps account for differences in shopping preference. Nearly one-quarter (23%) of those with incomes below \$25,000, and 18% of those with incomes between \$25,000 and \$50,000, indicated a discount retailer. Those with incomes of at least \$75,000 were the most likely (46%) to prefer a home supply store.

Knowledge of Different Types of Light Bulbs

Before being asked several questions that required some knowledge of different types of light bulbs, respondents were given basic information about four types of light bulbs – incandescent, halogen, compact fluorescent (CFL), and light-emitting diode (LED). (LEDs were described as lasting a long time but usually costing more than the other three types of light bulbs.) Respondents were then asked – on a 1 to 5 scale with 1 being 'know nothing at all' to 5 being 'know a great deal' -- how much they know about these types of light bulbs and the differences between them.

Keeping in mind that survey researchers agree that, when asked to assess their own knowledge about a practical matter, respondents tend to exaggerate their own knowledge: Slightly over one-third (34%) indicated they knew little or nothing (1 or 2 rating) while 36% said they had good knowledge (4 or 5 rating). Nearly half (47%) of those under 35 years of age, 39% of those with incomes below \$50,000, and 43% of those with incomes below \$25,000 said they know little or nothing.

Light Bulb Types Used and Preferred

Respondents were then asked about the type of light bulb they have in their living room and bedroom. The responses were 34% incandescents or halogens, 32% CFLs, and 28% LEDs. The group who said they were most likely to have incandescent or halogen bulbs (39%) and least likely to have LEDs (21%) were those with incomes between \$50,000 and \$75,000.

Finally, respondents were asked, when their light bulbs burn out, which will be the main type of replacement light bulb. The responses were 31% incandescents or halogens, 28% CFLs, and 36% LEDs. Among respondents, those with incomes between \$50,000 and \$75,000 said they were most likely to purchase incandescent or halogen bulbs (41%) and least likely to purchase LEDs (27%).

Correlating perceived knowledge with light bulbs used and preferred reveals that the more knowledgeable respondents say they are, the more likely they are to use and purchase LEDs. These correlations are significant at the 0.001 level.

Implications for Consumer Education

Individual surveys are never definitive, only suggestive. Yet, the CFA light bulb survey has particular value because most of its questions have not been asked by others who have released data to the public.

The survey suggests that consumer education has the potential to increase consumer sales of energy-efficient LEDs. By their own admission, most of the public does not know much about different types of light bulbs. Moreover, this self-reported knowledge is highly correlated with current LED use and future purchases. Thus, it is likely that increasing consumer knowledge about LEDs will increase their attractiveness and purchase.

What should be the content of this knowledge? The finding that consumers value quality, longevity, and cost suggests messages such as the following:

- There are LEDs whose quality of light can be virtually indistinguishable from the quality of traditional incandescent bulbs.
- These LEDs last much longer than other types of bulbs and use much less electricity.
- So the LEDs, even if the purchase price is slightly higher, cost much less over time than do other types of bulbs. Specific examples of cost differences would be helpful.

Efforts should be made to persuade those selling light bulbs to inform purchasers. Consumer educators agree that the most effective education is when consumers are considering a purchase, and point-of-sale information can be especially persuasive. Since a large majority of bulbs are purchased in the stores of major retailers like Walmart and Target or in home suppliers like Home Depot or Lowe's, they should be encouraged to improve their dissemination of light bulb information. And since consumers with incomes between \$50,000 and \$75,000 are less willing than other groups to purchase LEDs and also are most likely to purchase light bulbs from major retailers, these stores should receive particular attention.