

**NIMR**

Group, Inc.

# Residential Lighting Shelf Survey and Pricing Analysis

FINAL REPORT

June 2, 2014

**Cape Light Compact**

**National Grid**

**NSTAR Electric**

**Unitil**

**Western Massachusetts Electric Company**

**Energy Efficiency Advisory Council Consultants**

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## Executive Summary

On behalf of the Massachusetts ENERGY STAR® Lighting program administrators (PAs), the evaluation team of Cadmus, DNV GL, and NMR Group, Inc. (collectively referred to as the Team) conducted a shelf stocking and price survey. For this study, the Team together with the program implementation contractor Lockheed Martin researched two types of stores: those that are currently participating in the program (participant stores) and those stores that participated in the program in a previous year but are no longer participating (former-participant stores). We analyzed lighting inventory data from a shelf survey to assess:

- CFL prices in the state relative to competing lighting products.
- The amount of shelf area dedicated to CFLs.
- The pricing, number of bulb packages, and shelf location of CFLs and LEDs relative to other lighting types.

The Team also compared the results of the current survey to those of similar surveys conducted in 2010 and 2012.

Using a shelf-stocking data collection tool designed by the Team, Lockheed Martin and DNV GL visited a representative sample of 130 stores in Massachusetts to collect data in November 2013. Note that this timing preceded the phase-out date for 40W and 60W incandescent bulbs; subsequently the data collection and reporting on incandescents focused on 75W and 100W bulbs, though the team does point out relevant findings regarding 60W bulbs where possible. Of the stores visited, 100 were current participants in the residential lighting program and 30 were former participants. In summary, we collected data on the following products:

- 38,410 CFL packages,
- 15,232 halogen packages,
- 52,088 incandescent packages, and
- 13,105 LED packages.

To compare advertised retailer discounts to the PA incentives for program bulbs, we matched the bulbs identified through the shelf inventory to the program tracking database. Additionally, we collected data on shelf space, shelf location, and pricing for all bulbs identified through the shelf survey. We compared the average price and number of packages displayed of the four major bulbs types (incandescents, halogens, LEDs, and CFLs) in both participant stores and former-participant stores.



## Key Findings

The Team's key findings are these:

- Participant stores continue to provide a wider variety, more inventory, and better prices of CFLs and LEDs (including discounts) than former-participant stores. Participant stores also offered more packages with multiple CFLs than did the former-participant stores.
- The majority of LEDs offered in participant stores are discounted through the program. The average price of A-line LEDs in participant stores is \$13.21 compared to \$20.82 in former participant stores, a difference of \$7.61.
- CFL inventory appears to be losing ground in 2013, compared to 2012, for both participant and former-participant stores, although the differences are not statistically significant. The program incented fewer bare spirals than in the past—completely eliminating incentives at a few retailers in part due to the market lift effort. Of the increased inventory shares by package shown in Figure 1 for incandescent bulbs, LEDs, and halogens, only the increased share of LED packages in participant stores is statistically significant, which is a desirable finding.
- The proportion of shelf space devoted to CFLs among participant stores has increased since 2010. In 2010, CFLs comprised 33% of all bulb shelf space, which then grew to 68% in 2012 and 62% in 2013.<sup>1</sup>
- Inventory shares of 75W and 100W incandescent packages have dropped from 8% in 2012 to 3% in 2013 for participant stores. 60W shares stayed relatively constant as EISA efficiency standards do not affect these bulbs until January 2014.
- Former-participant stores appear to have replaced CFL inventory primarily with incandescent bulbs. While the former-participant shares of 75 W and 100 W incandescent packages have dropped (11% to 2%), 60 W shares have increased slightly (13% to 17%) with the remainder of the difference primarily being specialty.

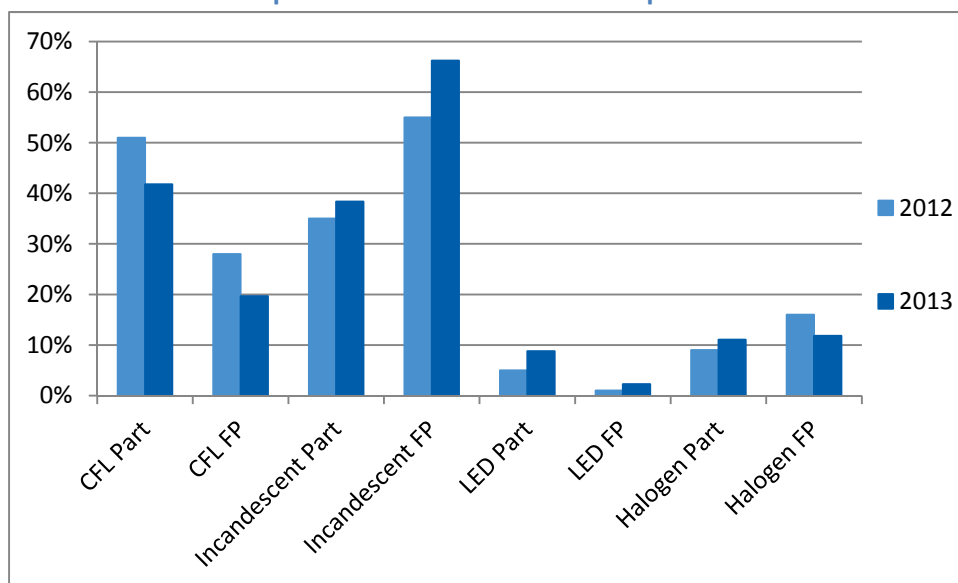
Figure 1 illustrates the allocation of the number of lightbulb packages in 2013 among both store types for various bulb types. The Team's research revealed that CFLs and LEDs comprise a larger share of the inventory among participant stores than former-participant stores.

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<sup>1</sup> Note that 2010 data were not weighted.



Figure 1. 2012 & 2013 Allocation of Bulb Type Packages for Participant Stores and Former-Participant Stores



- Average CFL prices for A-line bulbs in participant stores are almost double those of corresponding halogen bulbs. The average A-line CFL final price per bulb for consumers (discounted and non-discounted) across all wattages is \$4.24, as compared to \$2.41 for halogens. Bare spiral CFLs average \$2.08 compared to \$1.00 for incandescent bulbs in participant stores.
- Even though the EISA phase-out date had started for each, both 100W and 75W incandescent bulbs are widely available, with 57% of participating stores still stocking 100W incandescents and 63% stocking 75W incandescents. The rates for former-participant stores are lower, with 47% stocking 100W incandescent bulbs and 37% stocking 75W incandescent bulbs. The high presence of incandescent bulbs in general could indicate that retailers stockpiled incandescent bulbs manufactured before the implementation of EISA or that they are still importing incandescents, which could be possible since Congress has not funded EISA enforcement. Likewise, the fact that participant stores tend to be among the most common places to buy bulbs, it is not surprising that they would carry the still-popular incandescent if they have existing inventory or can gain access to them.
- The participant stores stock a wider variety of CFL bulb types and wattages than the former-participant stores. The majority (74%) of CFLs in the participant stores we sampled were discounted through the program.
- Overall, average discounted prices are less than non-discounted prices; however, the average PA incentive is larger than that difference, indicating that the full PA discount may not be passed through to consumers. This finding is consistent with findings from previous years, however



without knowing actual prices of individual bulbs before and after the discount, we base this conclusion solely on the comparison of discounted bulbs prices to non-discounted bulb prices. Program staff continuously work with retailers to review pricing and adjust accordingly.

## Introduction

On behalf of the Massachusetts ENERGY STAR® Lighting program administrators (PAs), the evaluation team of Cadmus, DNV GL, and NMR Group, Inc., (collectively referred to as the Team) conducted a shelf stocking and price survey. For this study, the Team together with program implementation contractor Lockheed Martin researched two types of stores: those that are currently participating in the program (participant stores) and those stores that participated in the program in a previous year but are no longer participating (former-participant stores). We analyzed lighting inventory data from a shelf survey to assess:

- CFL prices in the state relative to competing lighting products.
- The amount of shelf area dedicated to CFLs.
- The pricing, number of bulb packages, and shelf location of CFLs and LEDs relative to other lighting types.

The Team also compared the results of the current survey to those of similar surveys conducted in 2010 and 2012.

The Team designed a shelf-stocking survey and analyzed data collected from representative samples of Massachusetts stores (100) currently participating in the program and 30 stores that were former program participants for a total of 130 stores in Massachusetts. Both samples were stratified by retail channel<sup>2</sup> and unless otherwise noted are weighted to represent the population of Massachusetts stores. Lockheed Martin collected data from the participant stores, while the Team collected the information from the former-participant stores. In total, we collected data on the following products:

- 38,410 CFL packages,
- 15,232 halogen packages,
- 52,088 incandescent packages, and
- 13,105 LED packages.

We designed the shelf-stocking survey to gather price data, number of each bulb type, and the location of the bulb types. In addition, we measured the shelf space devoted to CFLs and LEDs versus other types of lightbulbs in each participant store. (We have provided the shelf survey data collection forms for both participant stores and former-participant stores in Appendix A.)

The Team's analysis provides a snapshot of the range of bulb types offered in both participant and former-participant stores. This information will enable program designers to assess the product

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<sup>2</sup> Retail channels include: discount, drug, grocery, large home improvement, mass merchandise, membership, and small hardware stores. However stratification varied between participant and former participant stores based on groupings of retail channels as discussed later in this report.



coverage and program impacts on stocking practices in participating stores relative to that of former-participant stores and to previous program years.

### Methodology

Lockheed Martin provided the Team with the shelf-survey data from a random sample of 100 stores from the 1,864 participant stores in the state. Lockheed Martin also provided the database of 430 former-participant stores.

The Team stratified the sample of former-participant stores by these retail channels:

- Discount
- Drug and grocery (combined for former participants due to the small population),
- Mass merchandise and membership (combined for former participants due to the small population),
- Large home improvement, and
- Small hardware.

The results for former-participant stores are weighted to reflect the overall mix.

For participant stores, Lockheed Martin also chose the sample so that it informed Lockheed Martin’s internal analysis of shelf data about bulbs, fixtures, and thermostats. Thus, the sample approach was different than that used in 2012, which segmented by retail distribution channel.

The store types were segmented into four categories as shown in Table 1 to satisfy the sampling method of the internal analysis. The implementer was pursuing an equal sample of large stores with and without lighting fixtures through this stratification approach. (Note that results for both participants and former participants are weighted to their respective populations.)

**Table 1. Participant Store and Population Sampling Allocation**

Store Type	Population	Percentage of Population	Stores Surveyed	Percentage of Sample	Weight
Large Chain Stores: Bulbs and Thermostats Only	1,287	69%	35	35%	1.97
Large Chain Stores: Bulbs, Lighting Fixtures, Thermostats	201	11%	32	32%	0.34
Small Chains Stores	65	3%	8	8%	0.44
Independent Stores	311	17%	25	25%	0.67
<b>Total</b>	<b>1,864</b>		<b>100</b>		

Table 2 shows the sampling distribution of the participant stores visited during the collection of shelf-stocking data.

**Table 2. Sampling Distribution for Participant Stores**

Store Type	Sample
<b>Discount</b>	9
Independent	2
Large Chain (Bulbs and Fixtures)	1
Large Chains (Bulbs Only)	6
<b>Drug Store</b>	15
Independent	1
Large Chains (Bulbs Only)	14
<b>Grocery</b>	12
Independent	2
Large Chains (Bulbs Only)	10
<b>Large Home Improvement</b>	16
Large Chain (Bulbs and Fixtures)	16
<b>Mass Merchandise</b>	13
Large chain (Bulbs and Fixtures)	8
Large Chains (Bulbs Only)	1
Small Chain	4
<b>Membership</b>	4
Large Chains (Bulbs Only)	4
<b>Small Hardware</b>	31
Independent	20
Large Chain (Bulbs and Fixtures)	7
Small Chain	4
<b>Total</b>	100

Table 3 shows the sample approach for former-participant stores, segmented by distribution channels.

**Table 3. Former-Participant Stores Population and Sample**

Store Type	Population	Percentage of Population	Stores Surveyed	Percentage of Sample	Weight
Discount	106	25%	2	7%	3.70
Grocery and Drug	69	16%	9	30%	0.53
Large Home Improvement	14	3%	5	17%	0.20
Membership and Mass Merchandise	137	32%	5	17%	1.91
Small Hardware	104	24%	9	30%	0.81
<b>Total</b>	<b>430</b>	<b>100%</b>	<b>30</b>	<b>100%</b>	



When comparing results between participant and former participant stores, it is helpful to note whether the populations vary significantly by distribution channel since some inventory and shelf space metrics vary by distribution channel. As shown in Table 4, former-participant stores have a higher proportion of larger stores of all types (33% versus 15%) and a higher proportion of small hardware stores (31% versus 13%), when compared to the participant stores sample. Since larger stores tend to have a higher proportion of CFLs than smaller stores, the overall differences of CFL shares between participant and former-participant stores may be less than if they were compared within each distribution channel.

**Table 4. Participant Store Population and Sample Compared to Former Participant Stores**

Store Type	Population	Percentage of Population	Stores Surveyed	Percentage of Participant Sample	Former Participant Sample Percentage
<b>Small Stores (Chains and Independents)</b>					
Discount	187	9%	9	10%	7%
Drug Store	516	15%	15	28%	30%
Grocery	651	12%	12	35%	
Small Hardware	242	31%	31	13%	30%
<b>Total</b>	<b>1,596</b>		<b>67</b>		
<b>Large Stores</b>					
Large Home Improvement	72	16%	16	4%	17%
Mass merchandise	163	13%	13	9%	17%
Membership	33	4%	4	2%	
<b>Total</b>	<b>268</b>		<b>33</b>		

Since the implementer sampled participants by large and small store segments, the evaluation team also considered whether distribution channels within the segments may vary and affect the results.

Table 5 shows the store type distribution for both the population and the sample within the large and small store segments. Within the large store segment, the membership category is represented similarly, however more large home improvement stores are represented in the sample than mass merchandise stores. While shelf survey metrics tend to show differences between membership and other large stores, the differences between mass merchandise and large home improvement are not as significant. Within the small store segment, drug and grocery stores have a higher proportion in the sample than the population and the small hardware channel has a greater percentage of stores in the sample than the population.

To test whether the weighting method changes the results significantly, the evaluation team compared Figure 1 results (see Executive Summary) using two different weighting approaches: 1) the sampled weights as shown in Table 1; and 2) post-stratification weights based on distribution channels. Figure 1 results were similar, although differences were slightly more exaggerated using the post-stratification weights.



**Table 5. Participant Stores Distribution**

Store Type	Population	Percentage of Segment	Stores Surveyed	Percentage of Segment Sample
<b>Small Stores (Chains and Independents)</b>				
Discount	187	12%	9	13%
Drug Store	516	32%	15	22%
Grocery	651	41%	12	18%
Small Hardware	242	15%	31	46%
<b>Total</b>	<b>1,596</b>		<b>67</b>	
<b>Large Stores</b>				
Large Home Improvement	72	27%	16	48%
Mass merchandise	163	61%	13	39%
Membership	33	12%	4	12%
<b>Total</b>	<b>268</b>		<b>33</b>	

Table 6, which shows results by utility, contains summary statistics for both the participant stores and former-participant stores. The largest number of stores was in NGRID's territory (collectively 49% of the sample and 43% of the total population of stores).

**Table 6. Store and Population Allocation by Utility (Part n=100, Former Part n=30)**

Utility Area	Participants		Former Participants	
	Percentage in Sample	Percentage in Population	Percentage in Sample	Percentage in Population
Cape Light Compact	9%	7%	3%	3%
National Grid (NGRID)	49%	43%	53%	50%
Non-Participating Utility (NPU)* NGRID	11%	7%	3%	5%
NPU NSTAR	1%	2%	3%	2%
NPU Western Massachusetts Electric Company (WMECo)	3%	2%	3%	2%
NSTAR	21%	30%	27%	30%
Unitil	1%	1%	0%	1%
WMECo	5%	7%	7%	7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* Stores located in a town with a municipal utility that doesn't participate in the program can still participate because they sell to utility sponsored customers. The location is attributed to the nearest participating utility.



The visits took place in November 2013. Note that this timing preceded the phase-out date for 40W and 60W incandescent bulbs; subsequently the data collection and reporting on incandescent bulbs focused on 75W and 100W bulbs, though the team does point out relevant findings regarding 60W and 40W bulbs where possible.

### ***Data Collection***

At each store, the Team's surveyors collected information about the product characteristics and the prices of individual packages of bulbs on the shelves. Each observation in our data represents a unique type of bulb package sold at a store. Thus, when counting identical CFL models in different package groupings (for example, a one pack and a two pack), each pack was counted as a separate observation.

In addition to making note of a bulb's special features (such as dimmability, three-way, or an ENERGY STAR designation), the Team collected the following information about each package:

- Bulb type (CFL, incandescent, specialty, etc.)
- Bulb style (A-line, bare-spiral, etc.)
- Wattage
- Lumens
- Number of bulbs in the package
- Number of packs on shelf



## Inventory Results

**Table 7** shows the recorded CFLs by wattage, package size, manufacturer, and retail channel for the four major bulb types: (1) standard bare-spiral, (2) A-line, (3) flood, and (4) globe. These types accounted for 95% of all CFLs in our shelf-stocking survey. Note that participant stores have a wider coverage of available bulb types and wattages, as compared to the former-participant stores. Participant stores also offered more packages with multiple CFLs than did the former-participant stores.

**Table 7. CFLs Recorded by Wattage, Package Size, Manufacturer, and Retail Channel**

	Participants				Former Participants				
	Standard Bare-Spiral	A-line	Flood	Globe	Standard Bare-Spiral	A-line	Flood	Globe	
<b>Wattage (%)</b>									
Less than 11 Watts	5%	18%	5%	54%	2%	19%	22%	100%	
11 to 15 Watts	64%	62%	41%	43%	46%	74%	38%	0%	
16 to 20 Watts	13%	10%	15%	1%	16%	6%	21%	0%	
21 to 25 Watts	12%	2%	17%	0%	29%	1%	17%	0%	
Greater than 25 Watts	6%	8%	22%	2%	4%	0%	1%	0%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	
<b>Number of CFLs in Package (%)</b>									
Quantity 1	5%	18%	5%	54%	33%	94%	96%	97%	
Quantity 2	64%	62%	41%	43%	44%	6%	4%	3%	
Quantity 3	13%	10%	15%	1%	20%	0%	0%	0%	
Quantity 4	12%	2%	17%	0%	1%	0%	0%	0%	
Quantity 5+	6%	8%	22%	2%	2%	0%	0%	0%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	
<b>Manufacturer/Brand (%)</b>									
ACE	1%	0%	0%	0%					
EcoSmart	12%	10%	11%	21%					
Feit	1%	1%	1%	0%	1%	0%	0%	0%	
GE	12%	32%	13%	15%	7%	25%	7%	0%	
Great Value	2%	3%	0%	4%					

	Participants				Former Participants			
	Standard Bare-Spiral	A-line	Flood	Globe	Standard Bare-Spiral	A-line	Flood	Globe
Greenlite	17%	19%	4%	9%				
Philips	2%	0%	9%	0%	0.5%	0%	0%	0%
Satco	0%	0%	0%	0%	0.2%	0%	0%	0%
Sylvania	32%	13%	32%	6%	66%	66%	41%	100%
Utilitech	6%	3%	6%	9%				
Other***	16%	19%	24%	35%	9%	9%	52%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Discount	21%	13%	20%	28%	11%	29%	0%	0%
Drug Store*	6%	4%	2%	2%	10%	11%	9%	12%
Grocery	5%	8%	3%	7%				
Large Home Improvement	24%	28%	33%	35%	3%	5%	3%	4%
Mass Merchandise	8%	15%	9%	11%	72%	31%	32%	84%
Membership**	26%	11%	24%	0%				
Small Hardware	11%	20%	10%	17%	4%	24%	57%	0%
Total	100%	100%	100%	100%	100%	100%	100%	100%
<b>Sample size (n)</b>	<b>52,163</b>	<b>6,089</b>	<b>11,253</b>	<b>2,519</b>	<b>2,558</b>	<b>117</b>	<b>262</b>	<b>48</b>

\* Drug stores are combined with grocery stores in the former-participant store sample.

\*\* Membership stores are combined with mass merchandise stores in the former-participant store sample.

\*\*\* 93 other manufacturers were listed.

The remaining bulb types, which we did not include in our pricing analysis, were these: three-way or dimmable bare-spiral, bug and party, flame and decorative, nightlights, torpedo and bullet, and tube CFLs.



The Team also noted whether the CFL bulbs were discounted by the PAs, had another discount<sup>3</sup>, or were ENERGY STAR-rated. Table 8 shows the percentages of CFLs of each type with these characteristics.

**Table 8. Percentage of CFLs with Discounts or ENERGY STAR Label**

	Participants				Former Participants			
	Standard Bare-Spiral	A-line Bulbs	Flood	Globe	Standard Bare-Spiral	A-line Bulbs	Flood	Globe
PA Discounted (%)	73%	72%	77%	86%				
Other Discounted (%) <sup>4</sup>	11%	6%	10%	0%	55% <sup>5</sup>	23%	0%	31%
ENERGY STAR labeled (%)	96%	69%	75%	91%	90%	86%	70%	100%

Note: Columns do not sum to 100% because categories are not mutually exclusive.

Some highlights of the Team’s inventory analysis are as follows and—unless otherwise noted—these highlights apply to the combined results for participant and former-participant stores:

- Standard, bare-spiral CFLs accounted for 77% of all the CFL bulb styles on shelves. In 2012, standard, bare-spiral CFLs accounted for 55% of all of the CFL bulb styles on shelves. Thus, retailers have reduced the percentage of shelf-space devoted to specialty CFLs<sup>6</sup>.
- Floods, the next largest share of the estimation sample, accounted for 14% of all CFL bulb styles.
- In 2013, home improvement stores had the highest percentage of bare-spiral CFLs, where 46% of all CFLs displayed were bare-spiral CFLs, the next largest display was in membership and mass-merchandise stores (25%), followed by small hardware stores (13%). In 2012, the largest display space was in small hardware stores (36%). Small hardware stores inventory shares of incandescents, halogens, and LEDs have all increased relative to CFLs since 2012.
- The majority (73%) of standard, bare-spiral CFLs in participating stores received a PA incentive, while 11% received a non-program discount.

<sup>3</sup> Other discounts were noted when the final retail price was marked down from the original, as stated on a displayed sign. Unless a package was linked to the Mass Save database or there was a sign indicating a PA discount, the Team assumed that the other discounts were retailer promotions.

<sup>4</sup> For participant data, a bulb is flagged as having a non-PA discount when our survey team member recorded a sale price for the bulb but did not observe a PA sign. It is also important to note that the sale price recorded is not always different from the regular price recorded.

<sup>5</sup> These bulbs always had a sale price that was lower than the regular price.

<sup>6</sup> Reasons for this change are unknown and may be uncovered in the supplier interview questions regarding specialty CFLs.

- Among former-participant stores, 55% of standard, bare-spiral CFLs received a non-program discount.<sup>7</sup>
- At program stores, about 77% of all bulb types received a PA discount.<sup>8</sup>

Among the CFLs in the participant-store sample, we found significant variation in the wattage, the quantity of CFLs per package, the manufacturer, and the sales channel. However, the CFLs we encountered most often had the following characteristics:

- Rated between 11W and 15W (typically assumed to have the equivalent lumens rating as a 60W incandescent bulb)
- Packaged singly or in a four-pack
- Manufactured by Sylvania

The Team also collected data on bulb types other than CFLs and compared them to the CFL stocking levels. Table 9 shows the wattage, package size, manufacturer, and retail channel for each bulb type our data collectors observed at participant stores and former-participant stores combined.<sup>9</sup> The wattages for incandescent and halogen bulbs are reported as the CFL lumen equivalent.

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<sup>7</sup> Although it appears that a much higher percentage of CFLs at former participant stores received non-program discounts, some of the bulbs that were flagged as having received a program discount at participant stores may have also received a non-program discount. Unfortunately, it was not possible to distinguish between participant bulbs that received just a program discount and participant bulbs that received a program discount and a non-program discount.

<sup>8</sup> Spiral bulbs=73%, A-line bulbs=72%, Flood bulbs =77%, and Globe bulbs=86%.

<sup>9</sup> The former participant data are not weighted in this chart as they were sampled based on proportions in the participant database.



**Table 9. Wattage, Package Size, Manufacturer, and Retail Channel by Bulb Type**

	CFL	Incandescent	LED	Halogen
<b>Lumen-Equivalent CFL Wattage (%)</b>				
<11W	9%	33%	59%	11%
11W to 15W	58%	50%	32%	25%
16W to 20W	12%	12%	7%	23%
21W to 25W	12%	2%	1%	30%
>25W	9%	3%	1%	11%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Number of Bulbs in Package (%)</b>				
Quantity 1	32%	11%	77%	22%
Quantity 2	18%	16%	18%	32%
Quantity 3	8%	8%	4%	4%
Quantity 4	15%	31%	0%	32%
Quantity 5+	26%	34%	2%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Manufacturer (%)</b>				
ACE	1%	4%	0.0%	0.5%
EcoSmart	14%	0.1%	20%	0.0%
Feit	1%	0.2%	0.0%	0.5%
GE	0.2%	0.3%	0.2%	0.3%
Great Value	2%	0.2%	1%	3%
Greenlite	16%	0.0%	4%	0.0%
Philips	3%	16%	8%	18%
Satco	0.2%	1%	0.0%	3%
Sylvania	34%	62%	24%	61%
Utilitech	6%	1%	19%	9%
Other	21%	16%	23%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Retail Channel (%)</b>				
Discount	18%	5%	0%	2%
Drug Store& Grocery	11%	18%	5%	18%
Large Home Improvement	27%	41%	62%	34%
Mass Merchandise & Membership	32%	21%	21%	28%
Small Hardware	12%	16%	12%	19%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Sample size (n)</b>	<b>81,367</b>	<b>175,149</b>	<b>14,218</b>	<b>30,303</b>

<11W includes incandescents rated <=40W and halogens rated <=29W

11W-15W includes incandescents rated from 41W to 60W and halogens rated from 30W to 43W

16W-20W includes incandescents rated from 61W to 75W and halogens rated from 44W to 53W

21W-25W includes incandescents rated from 76W to 100W and halogens rated from 54W to 72W

>25W includes incandescents rated >100W and halogens rated >72W

The largest share of CFL packages found during the Team’s survey were those rated from 11W to 15W. While CFLs and incandescents were most commonly found in the 11W-to-15W category, the majority of LEDs were less than 11W (59%). This is close to the program’s planning assumptions. Among bulbs with lumens equivalent to those of an 11W CFL or less, incandescents and LEDs comprised the largest shares, perhaps pointing to specialty applications for lower-light settings. We also found that halogens comprised the largest share (23%) of bulb types in the 16W-to-25W category. (Table 15, shown later in this document, shows the variation of CFLs between A-line and other bulb shapes.)

In summary, by store type:

- Large home improvement stores had the highest proportion of incandescent bulbs (41%), LEDs (62%), and halogens (34%).
- Mass merchandise and membership stores had a slightly higher percentage of CFLs, as compared to large home improvement stores (32% versus 27%).

Table 10 shows the percentages of stores in the sample by retail channel that stocked incandescent bulbs rated at either 100W or 75W, both of which were subject to EISA phase-out at the time of data collection.

**Table 10. Percentage of Stores with 100W and 75W Incandescent Bulbs <sup>10</sup>**

Distribution Channel	2012 Participant 100W	2013 Participant 100W	2013 Participant 75W*	2012 Former Participant 100W	2013 Former Participant 100W	2013 Former Participant 75W
Discount	61%	22%	11%	75%	0%	100%
Drug Store	N/A	40%	47%	100%	22%	33%
Grocery	70%	50%	50%	100%		
Large Home Improvement	100%	75%	88%	100%	100%	80%
Mass Merchandise	88%	62%	77%	100%	80%	0%
Membership	20%	0%	0%	N/A		
Small Hardware	83%	74%	81%	100%	33%	22%
All Stores	76%	57%	63%	96%	47%	37%

\*In the 2012 analysis, only stores with 100W incandescent bulbs were analyzed, not 75W incandescent bulbs.

Approximately 57% of participant stores and 47% of former-participant stores had at least one 100W incandescent bulb still in stock. This represents a decrease from the 2012 study, in which 76% of participant stores and 96% of former-participant stores had at least one 100W incandescent bulb on

<sup>10</sup> Note that, because the sampling approach differed, both years are not weighted to the population level and are therefore not statistically comparable though it does appear that the stocking of 100W incandescent bulbs is on the decline among participant stores.



their shelves. Additionally, 63% of participant stores and 47% of former-participant stores had at least one 75W incandescent bulb. The weighted inventory share of 100W and 75W packages among participant stores has dropped from 2012 (8%) to 2013 (3%) likely reflecting the impact of EISA regulation.

We also looked at the participant store types that had 60W incandescent bulbs on their shelves during the site visits. As shown in Table 11, all of the stores types had 60W bulbs and the percentage of those stores with 60W bulbs was always greater than the percentage of store types with 75W bulbs. In fact, all of the membership stores had 60W bulbs though none of them carried 100W or 75W bulbs.

**Table 11. Percentage of Participant Stores with 100W, 75W, and 60W Incandescent Bulbs**

Distribution Channel	100Watt	75Watt	60Watt
Discount	22%	11%	78%
Drug Store	40%	47%	67%
Grocery	50%	50%	83%
Large Home Improvement	75%	88%	100%
Mass Merchandise	62%	77%	92%
Membership	0%	0%	100%
Small Hardware	74%	81%	87%

### ***Shelf-Space Analysis***

To analyze the share of shelf space dedicated to different lighting types in participant stores and former-participant stores, the Team collected information on the dimensions (height, width, and depth) of the shelves and display areas dedicated to each of the following lightbulb types:

- CFL
- Incandescent
- Halogen
- LED
- Fluorescent
- Krypton
- Metal halide
- Neon
- High-pressure sodium

Table 12 shows the percentage of shelf space allocated to lighting products in participant and former participant stores. Because we segmented results by distribution channel, there are fewer than 20 sample points in each category (except for small hardware, n=30), which results in wider precision levels. For instance average LED shares of shelf space in mass membership stores dropped from 44% to 4%; however data also indicate that average lighting display space increased from 345 cu ft to 1,378 cu



ft in the same type of stores, so it is challenging to conclude the importance of these changes. The percentage of CFL shelf space decreased (from 69% to 26%) in large home improvement stores, however average lighting display space also decreased significantly (from 962 to 150 cu ft). The LED increased shelf space percentage in large home improvement stores (9% to 18%) was higher than the increased bulb allocation (15% to 19%) shown in



Table 13. This could be due to fewer multipacks of LEDs relative to other bulb types, or larger package sizes.

Among the participant stores we sampled in 2013, membership stores (82%) and discount stores (71%) allocated the greatest percentage of lighting shelf space to CFLs. In contrast, among the participant stores surveyed in 2012, small hardware stores allocated the largest proportion of shelf space to CFLs (86%), followed by discount stores (73%). It also appears that shelf space for incandescent bulbs in 2013 was greater than that for CFLs in two types of participant stores, large home improvement and small hardware, however approximately 20% of the bulb types recorded for participant stores were missing shelf space measurements. Correspondingly while our inventory counts show a slight increase in incandescent bulb proportions between 2012 and 2013, the difference was not statistically significant.

In all of the former-participant stores—other than those in the small hardware category—the proportion of shelf space dedicated to incandescent bulbs was greater than that dedicated to CFLs and LEDs combined.

Table 12. Allocation of Space by Retail Distribution Channel

Distribution Channel	# of Participants	Avg Display Space (CuFt)	CFL	Incandescent	LED	Halogen	Other ****
<b>2013 Participants *</b>							
Discount	9	28	71%	28%	0%	0%	
Drug Store	15	5	58%	33%	1%	8%	
Grocery	12	15	32%	48%	10%	10%	
Large Home Improvement	16	150	26%	47%	18%	8%	
Mass Merchandise	13	20	56%	35%	3%	6%	
Membership	4	1,378	82%	10%	4%	4%	
Small Hardware	30	19	21%	48%	11%	19%	
<b>All Stores</b>	<b>99**</b>	<b>93</b>	<b>62%</b>	<b>24%</b>	<b>8%</b>	<b>6%</b>	
<b>2013 Former Participants</b>							
Discount	2	114	13%	69%	5%	13%	
Drug Store & Grocery	9	12	25%	59%	10%	6%	
Large Home Improvement	5	11	26%	51%	0%	24%	
Mass Merchandise & Membership	5	313	31%	55%	2%	12%	
Small Hardware	9	20	22%	19%	35%	24%	
<b>All Stores</b>	<b>30</b>	<b>71</b>	<b>28%</b>	<b>53%</b>	<b>5%</b>	<b>13%</b>	
<b>2012</b>							
Discount	18	34	73%	19%	2%	6%	0%
Drug Store	0	-	-	-	-	-	-
Grocery	10	23	36%	57%	2%	5%	0%
Large Home Improvement	17	962	69%	16%	9%	7%	0%
Mass Merchandise	8	88	56%	39%	1%	4%	0%
Membership	5	345	47%	7%	44%	2%	0%
Small Hardware	12	169	86%	9%	0%	4%	0%
<b>All Stores</b>	<b>70</b>	<b>143</b>	<b>68%</b>	<b>16%</b>	<b>5%</b>	<b>10%</b>	<b>0%</b>
<b>2010 ***</b>							
Discount	8	101	50%	34%	3%	11%	2%
Drug Store	7	20	41%	58%	0%	1%	0%
Grocery	11	113	27%	64%	2%	8%	0%
Large Home Improvement	3	955	34%	40%	4%	14%	7%
Mass Merchandise	11	844	30%	46%	1%	10%	14%
Membership	2	542	73%	20%	5%	3%	0%
Small Hardware	12	378	29%	40%	3%	15%	13%
<b>All Stores</b>	<b>61</b>	<b>369</b>	<b>33%</b>	<b>43%</b>	<b>2%</b>	<b>11%</b>	<b>10%</b>

\* Shelf space measurement data were missing for about 20% of bulb types in participant stores in 2013 (Out of all of the packages, 10% were missing for incandescent bulbs and 7% were missing for CFLs. Among store types, 10%



Distribution Channel	# of Participants	Avg Display Space (CuFt)	CFL	Incandescent	LED	Halogen	Other ****
<p>were missing for small hardware stores and 5% were missing for large home improvement stores.). **One entire store was missing which brings the sample count down to 99. ***2010 data were unweighted. **** No data were recorded as “Other” in 2013.</p>							

### ***Inventory Shares Analysis***

To assess inventory shares of different lighting products in a store type, the Team also compared the total number of packs displayed for each bulb type (

Table 13)<sup>11</sup>. Taken as a whole across store types, participant stores had a higher percentage of CFL packages than did former-participant stores, which suggests that current PA support is associated with the increased availability of efficient lighting on store shelves.<sup>12</sup> In some individual retail channels, however, there were more incandescent packages available than CFL packages: drug and grocery stores, large home improvement stores, and small hardware stores. This was consistent between 2013 and 2012 except for small hardware stores which had more incandescent inventory than CFLs in 2013, a reversal since 2012.

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<sup>11</sup> These data were not available for 2010.

<sup>12</sup> This may reflect either program influence or that those stores emphasizing energy-efficient lighting products are more likely to be participants—or this may be the combination of these factors.



**Table 13. Allocation of Packages by Bulb Type and Retail Distribution Channel**

Store Type	Participants					Former Participants				
	Count	CFL	Incand escent	LED	Halogen	Count	CFL	Incand escent	LED	Halogen
<b>2013</b>										
Discount	6,521	80%	19%	0%	0%	505	13%	58%	2%	27%
Drug Store & Grocery	5,699	36%	50%	3%	11%	2,292	21%	72%	1%	6%
Large Home Improvement	59,653	25%	43%	19%	13%	2,303	17%	64%	0%	19%
Mass Merchandise & Membership	14,422	49%	27%	11%	13%	3,806	23%	67%	2%	9%
Small Hardware	21,184	36%	45%	4%	15%	2,450	15%	68%	5%	12%
<b>All Stores</b>	<b>107,479</b>	<b>42%</b>	<b>38%</b>	<b>9%</b>	<b>1%</b>	<b>11,356</b>	<b>20%</b>	<b>66%</b>	<b>2%</b>	<b>12%</b>
<b>2012</b>										
Discount	17,775	76%	18%	1%	5%	416	17%	77%	0%	6%
Drug Store	0	-	-	-	-	122	35%	62%	0%	2%
Grocery	5,054	38%	56%	0%	6%	16	0%	100%	0%	0%
Large Home Improvement	55,710	31%	40%	15%	14%	2,008	26%	59%	2%	13%
Mass Merchandise	8,998	33%	59%	1%	7%	3,307	23%	70%	1%	6%
Membership	2,450	53%	11%	29%	7%	0	-	-	-	-
Small Hardware	11,281	54%	33%	1%	12%	1,133	32%	43%	0%	25%
<b>All Stores</b>	<b>101,268</b>	<b>51%</b>	<b>35%</b>	<b>5%</b>	<b>9%</b>	<b>7,002</b>	<b>28%</b>	<b>55%</b>	<b>1%</b>	<b>16%</b>

Typically, end-caps and middle shelves are the most desirable locations in a store because these areas are most easily seen by consumers. Thus, the products they contain are more likely than not to be purchased. Table 14 shows the allocation of total packs of bulbs by shelf location.

**Table 14. Allocation of Packages by Shelf Location and Bulb Type**

Shelf Location	Participants				Former Participants			
	CFL	Incandescent	LED	Halogen	CFL	Incandescent	LED	Halogen
End cap	14%	5%	19%	2%	0%	0%	16%	0%
High shelf	25%	26%	17%	27%	6%	21%	45%	15%
Lower shelf	20%	24%	18%	21%	63%	46%	14%	65%
Middle shelf	25%	31%	34%	46%	30%	32%	23%	20%
Other*	16%	14%	12%	5%	0%	1%	2%	0%

\* Other types of locations include at the register and wing stacks.

Among participant stores, the displays of CFLs and incandescent bulbs were distributed comparatively evenly between high shelves, middle shelves, and low shelves; CFLs and LEDs were also frequently found on end caps. Interestingly, among former-participant stores, the Team found that LEDs were the bulb type most likely to be displayed on end caps. In contrast, CFLs, incandescent bulbs, and halogens were most commonly displayed on lower shelves in former participant stores.



### Bulb Counts Analysis

Table 15 shows the allocation of total bulbs by type and style of bulb. Approximately 77% of A-lines were incandescent bulbs, while only 5% were CFLs (down from 20% in 2012). This drop is offset by the increase in halogen bulbs found in participant stores (from 5% in 2012 to 13% in 2013). Among all other bulb styles, the allocation of CFLs did not change between 2012 and 2013; during both survey periods, these bulbs comprised approximately 65% of non-A-line bulbs.

**Table 15. Allocation of Bulbs by Style and Type**

Store Type	A-line Bulbs					All Other Bulb Styles				
	Count	CFL	Incan- descent	LED	Halo- gen	Count	CFL	Incan- descent	LED	Halo- gen
<b>2013</b>										
Participants	125,564	5%	77%	4%	13%	122,829	65%	24%	4%	7%
Former Participants	7,807	1%	82%	1%	16%	6,316	44%	41%	3%	13%
<b>All</b>	133,371	4%	78%	4%	14%	129,145	63%	26%	3%	8%
<b>2012</b>										
Participants	31,240	20%	72%	3.0%	5%	70,028	66%	18%	6%	11%
Former Participants	2,835	6%	91%	0.6%	2%	4,167	40%	37%	0.6%	23%
<b>All</b>	34,075	18%	74%	2%	4%	74,195	64%	20%	5%	12%



## Price Comparisons

The Team's analysis of the data collected on site at the 130 stores in the sample included a comparison of the CFL bulb prices. This information provides insight into how retailers are utilizing the incentives.

### Methodology

As part of the inventory survey, the Team collected the following information on CFL bulb prices, as displayed on packages and/or on shelves:

- Register price (the price paid by customers at the register);
- Full or original price if the bulb was discounted *and* the original price was observable;
- The amount of discount (if observable) on each package; and
- Whether there was point-of-purchase signage indicating that the CFLs were discounted by Mass Save.

### Definition of PA-Discounted Bulbs

Although many CFLs in the stores in our sample were labeled as "PA discounted," the Team knew from experience that the PAs supported some additional bulbs that were not labeled as such on store shelves. Moreover, the amount of the discount was usually not displayed.

In instances where the retailer displayed both the original price and the discounted retail price on the sales tag, the Team was uncertain as to the incentive amount because retailers were able to discount the CFLs by an amount that was different from that of the PA incentive. Therefore, we needed information other than an in-store label to identify both the program-discounted bulbs and the amount of discount offered.

Based on the data available, we used the lighting program tracking database supplied by the fulfillment contractor Parago and applied the following approach to identify the CFLs for each of these three categories: discounted by a PA, discounted through another source, or not discounted. (Note that this approach parallels that used in the 2012 shelf stocking effort.)

- If a bulb was advertised in the store as having a discount sponsored by the PAs, it was counted as PA-discounted.
- If a bulb was matched to one of those in the Parago database, it was counted as PA-discounted.
- If a CFL did not satisfy either requirement, it was considered not discounted by the program.



- If a CFL was noted to be discounted but that reduction was not labeled as PA-discount—or if the discount could not be matched to the PA incentive data—the bulb was classified as an “other discounted” CFL.<sup>13</sup>

Typically, for the Team to match a CFL from the survey to a CFL in the Mass Save database, the bulb had to have the same manufacturer, model number, wattage, and store location. However, we determined that the same CFL was sometimes listed under two model numbers. For CFLs without corresponding model numbers in either the sample or Mass Save data, we matched them on such factors as manufacturer, wattage, and store location. Unless the characteristics clearly indicated that the CFLs were different from the information in the database, we treated these CFLs as successful matches.

Table 16 contains a summary of our efforts to match CFLs in the shelf-stocking survey to the PA incentives.<sup>14</sup> The Team matched 14,635 out of 24,124 CFLs packages from the shelf-stocking data to the PA tracking database. The percentage of matches was 60% of bulbs found and 35% of unique bulb pack offerings (980 /2,826) in the shelf-stocking survey.<sup>15</sup> This is up from a 21% unique bulb pack offering match rate in 2012, which may indicate that in-store program signage is improving. We found that 75% of the packages we matched with the PA incentives were observed during the site visits as having signs that identified them as PA-supported bulbs.

**Table 16. CFL Packages of Bulbs Linked to PA Incentive Data**

	Bare-Spiral	A-line Bulbs	Flood	Globe
PA in-store sign only	12,083	1,514	3,065	889
Matched to Mass Save database only	5,476	584	2,118	543
PA sign and matched to Mass Save database	3,366	395	1,654	499
No sign and not in Mass Save database	2,643	528	454	91
n in shelf-stocking survey	16,885	2,231	3,984	1,024

### Summary of Average Prices

In the summary of average CFLs prices prepared by the Team, the mean prices per bulb are presented for each of the four CFL types considered. To control for bulb characteristics that are correlated with price, we distinguished the prices by wattage category. For example, the average price of an undiscounted standard, bare-spiral CFL having less than 11W was \$3.43. With the average PA incentive,

<sup>13</sup> We assume that these “other discounts” are promotional discounts offered by the retailer and are unrelated to the PA discounts.

<sup>14</sup> Because the model numbers did not match between the PA-incentive database and the shelf-stocking inventory, we matched bulbs based on retailer, manufacturer, wattage, and bulb style.

<sup>15</sup> Unique bulb pack offerings by store.

the same type of CFL cost \$2.13 (a decrease in register price of \$1.30). In general, most price differences are less than the average incentive for that type of bulb.



Table 17 and Table 20 show the final register prices for participant PA-discounted, other-discounted, and undiscounted CFLs in the dataset. In the last column of each table, we report the average PA incentive, which was obtained by matching CFLs to the PA program tracking database, as described above.

The average PA incentive for standard, bare-spiral bulbs was \$1.39, while the average difference in retail prices between program bulbs and non-discounted bulbs was \$0.72, indicating that approximately 52% of the incentive is passed on to the customer. The most notable difference occurs with 11W-to-15W CFLs, for which the average price differential is only \$0.24, while the average incentive is \$1.36. Interestingly, many of the other discounted bulbs have lower average prices than the PA discounted bulbs (those 11 W or greater). It is possible that some are program discounted bulbs, but just not labeled correctly.

**Table 17. Standard Bare-Spiral CFL Average Prices and PA Average Incentives by Wattage**

Wattage	n <sup>16</sup>	Price: All CFLs	Price: PA Discounted Bulbs	Price Other Discounted Bulbs	Price: Not Discounted Bulbs	Difference Between Undiscounted Bulbs & PA Discounted	Average PA Incentive Per Bulb
<11W	4,477	\$2.40	\$2.13	\$4.58	\$3.43	\$1.30	\$1.33
11W to 15W	28,851	\$1.53	\$1.52	\$1.30	\$1.75	\$0.24	\$1.36
16W to 20W	6,524	\$2.47	\$2.46	\$1.95	\$3.54	\$1.08	\$1.35
21W to 25W	7,731	\$2.70	\$2.73	\$1.92	\$3.56	\$0.83	\$1.41
>25W	4,364	\$5.55	\$5.02	\$4.37	\$7.03	\$2.01	\$1.76
<b>Total</b>	<b>51,917</b>	<b>\$2.08</b>	<b>\$2.01</b>	<b>\$1.67</b>	<b>\$2.73</b>	<b>\$0.72</b>	<b>\$1.39</b>

<sup>16</sup> Count of bulbs.

Table 18 and Table 19 show the average prices of A-line LEDs and flood LEDs. Most of the higher wattage LEDs had a PA discount which explains why average differences between undiscounted and PA discounted bulbs are negative. The sample of undiscounted LEDs is small and may consist of non ENERGY STAR bulbs, which tend to be less expensive. A-line LEDs tend to be less expensive than flood LEDs.

**Table 18. A-line LED Average Prices by Wattage**

Wattage	n	Price: All LEDs	Price: PA Discounted Bulbs	Price Other Discounted Bulbs	Price: Not Discounted Bulbs	Difference Between Undiscounted Bulbs & PA Discounted
<11W	1,931	\$11.14	\$11.10	\$8.89	\$12.36	\$1.26
11W to 15W	623	\$17.83	\$17.93	\$12.99	-	-
16W to 20W	79	\$24.89	\$24.89	-	-	-
21W to 25W	16	\$25.61	\$25.61	-	-	-
>25W	1	\$40.00	\$40.00	-	-	-
<b>Total</b>	<b>2,649</b>	<b>\$13.21</b>	<b>\$13.25</b>	<b>\$11.35</b>	<b>\$12.36</b>	<b>\$(0.89)</b>

**Table 19. Flood LED Average Prices by Wattage**

Wattage	n	Price: All LEDs	Price: PA Discounted Bulbs	Price Other Discounted Bulbs	Price: Not Discounted Bulbs	Difference Between Undiscounted Bulbs & PA Discounted
<11W	802	\$18.89	\$19.69	\$13.56	\$14.28	\$(5.41)
11W to 15W	998	\$17.34	\$18.82	\$16.96	\$8.34	\$(10.48)
16W to 20W	304	\$32.11	\$32.11	-	\$32.99	\$0.88
21W to 25W	33	\$38.71	\$38.71	-	-	-
>25W	72	\$12.01	\$12.01	-	-	-
<b>Total</b>	<b>2,209</b>	<b>\$20.10</b>	<b>\$21.29</b>	<b>\$13.84</b>	<b>\$9.93</b>	<b>\$9.32</b>



Table 20 shows our survey results for specialty CFLs.

**Table 20. Specialty CFL Prices and PA Incentives by Wattage**

CFL Type	Watt Category	N	Price All CFLs	Price PA Discounted Bulbs	Price Other Discounted Bulbs	Price Not Discounted Bulbs	Difference Between PA Discounted And Undiscounted Bulbs	Average PA Incentive Per Bulb
A-line	<11 Watts	1,202	\$4.10	\$5.39	\$9.99	\$2.17	\$3.23	\$2.07
	11-15 Watts	3,328	\$3.43	\$3.23	\$2.40	\$5.36	-\$2.13	\$2.29
	16-20 Watts	649	\$6.52	\$6.14	\$3.77	\$8.28	-\$2.14	\$2.36
	21-25 Watts	191	\$8.25	\$8.25	-	-	-	-
	>25 Watts	719	\$7.22	\$6.95	-	\$11.43	-\$4.48	-
<b>A-line</b>	<b>Total</b>	<b>6,089</b>	<b>\$4.24</b>	<b>\$4.31</b>	<b>\$2.56</b>	<b>\$4.60</b>	<b>\$0.30</b>	<b>\$2.29</b>
Flood	<11 Watts	173	\$1.04	\$1.04	-	-	-	-
	11-15 Watts	4,416	\$3.09	\$2.81	\$2.95	\$4.41	-\$1.60	\$3.69
	16-20 Watts	1,251	\$3.40	\$3.67	\$1.93	\$3.49	\$0.17	\$3.27
	21-25 Watts	1,234	\$3.74	\$3.79	\$3.38	\$6.31	-\$2.52	\$4.14
	>25 Watts	4,179	\$3.74	\$3.49	\$14.99	\$11.32	-\$7.84	\$3.18
<b>Flood</b>	<b>Total</b>	<b>11,253</b>	<b>\$3.29</b>	<b>\$3.13</b>	<b>\$3.03</b>	<b>\$4.75</b>	<b>\$1.62</b>	<b>\$3.71</b>
Globe	<11 Watts	896	\$1.42	\$1.43	-	\$1.28	\$0.15	\$2.24
	11-15 Watts	1,520	\$4.76	\$4.88	\$7.50	\$4.27	\$0.61	\$2.30
	16-20 Watts	24	\$6.23	\$4.91	\$10.00	\$7.99	-\$3.08	-
	21-25 Watts	3	\$9.00	\$9.00	-	-	-	-
	>25 Watts	76	\$5.99	\$5.99	-	-	-	-
<b>Globe</b>	<b>Total</b>	<b>2,519</b>	<b>\$2.96</b>	<b>\$2.86</b>	<b>\$8.33</b>	<b>\$3.66</b>	<b>-\$0.79</b>	<b>\$2.26</b>

Note: All prices are per bulb at the register. PA incentives are only for CFLs matched to PA tracking database.

Note that we do not know the pre-discounted prices of discounted bulbs, so we cannot account for all of the factors that impact price. Thus, our comparison of the average incentive to the difference in the average retail prices of discounted and non-discounted bulbs is intended to approximate the net impact of the program incentives on lowering the retail prices.

Table 21 reports average price by year for standard bare-spiral CFL bulbs for both participant stores and former-participant stores. It appears that the average price of standard CFLs at both types of stores has decreased since 2012. While it appears that 2012 prices spiked higher than either 2010 or 2013 for former participants, this may be due to the relatively smaller sample size and variation in stores and bulb samples between inventory periods.



Table 22 shows the difference in the number of standard CFLs observed during the 2012 and 2013 site visits at participant stores.

**Table 21. Average Price of Standard CFLs by Wattage and Year**

Watt Category	2013			2012			2010		
	Participants	Former participants	Difference	Participants	Former participants	Difference	Participants	Former participants	Difference
<11 W	\$2.40	\$4.48	-\$2.08	\$4.04	\$6.08	-\$2.04	\$3.96	\$5.02	-\$1.06
11-15 W	\$1.53	\$4.39	-\$2.86	\$4.79	\$7.20	-\$2.42	\$4.41	\$4.89	-\$0.48
16-20 W	\$2.47	\$4.34	-\$1.87	\$4.86	\$7.76	-\$2.89	\$4.69	\$5.50	-\$0.81
21-25 W	\$2.70	\$5.71	-\$3.01	\$4.59	\$7.04	-\$2.45	\$5.24	\$6.33	-\$1.09
>25 W	\$5.55	\$8.09	-\$2.54	\$8.59	\$10.89	-\$2.30	\$6.62	\$7.67	-\$1.05
<b>Total</b>	<b>\$2.08</b>	<b>\$5.02</b>	<b>-\$ (2.94)</b>	<b>\$5.34</b>	<b>\$7.69</b>	<b>-\$2.35</b>	<b>\$4.91</b>	<b>\$5.73</b>	<b>-\$0.82</b>



Table 22. Number of Standard CFL Packages in Participant Stores<sup>17</sup>

Wattage	2012 n	2013 n
<11 Watts	92	1,528
11-15 Watts	474	12,199
16-20 Watts	176	2,340
21-25 Watts	228	2,765
>25 Watts	221	2,347
<b>Total</b>	<b>1,191</b>	<b>21,179</b>

The Team also collected retail price data in participant stores for bulb types other than CFLs, as shown in

---

<sup>17</sup> The large difference could be due to the fact that we inventoried more stores (including large stores) in 2013 versus 2012.



Table 23.

- For A-line bulbs, incandescents are the least expensive category by wattage, followed by halogens. (Prices of A-line CFLs are almost double that of corresponding halogens.)
- For non-A-line bulbs—which includes the standard bare spirals—CFLs are the least expensive, followed by incandescent bulbs.

Table 23. Participant Stores, Average Consumer Price per Bulb by Bulb Type and Wattage

CFL Lumen-Equivalent Wattage Category	A-line Bulbs				Spiral	All Other Bulb Styles*			
	CFL	Incan-descent	LED	Halogen	CFL	CFL	Incan-descent	LED	Halogen
<11W	\$4.10	\$1.14	\$11.14	\$2.56	\$2.40	\$1.30	\$2.43	\$18.32	\$6.32
11-15W	\$3.43	\$0.76	\$17.83	\$2.39	\$1.53	\$3.37	\$3.08	\$17.34	\$7.01
16-20W	\$6.52	\$0.96	\$24.89	\$2.47	\$2.47	\$3.43	\$3.36	\$-	\$7.16
21-25W	\$8.25	\$1.82	\$25.61	\$2.24	\$2.70	\$3.74	\$7.42	\$25.82	\$7.84
>25W	\$7.22	\$3.78	\$40.00	\$3.20	\$5.55	\$3.78	\$8.78	\$-	\$10.46
<b>All</b>	<b>\$4.24</b>	<b>\$1.00</b>	<b>\$13.21</b>	<b>\$2.41</b>	<b>\$2.08</b>	<b>\$3.23</b>	<b>\$3.02</b>	<b>\$14.96</b>	<b>\$7.91</b>

<11W includes incandescents rated <=40W and halogens rated <=29W

11W-15W includes incandescents rated from 41W to 60W and halogens rated from 30W to 43W

16W-20W includes incandescents rated from 61W to 75W and halogens rated from 44W to 53W

21W-25W includes incandescents rated from 76W to 100W and halogens rated from 54W to 72W

>25W includes incandescents rated >100W and halogens rated >72W

\*"Other" includes globe and flood-style bulbs

Table 24 reports average price by bulb type for the former-participant stores. CFLs and LEDs are less expensive, on average, at participant stores, while halogens are less expensive at former-participant stores.



**Table 24. Former-Participant Stores, Average Consumer Price per Bulb by Bulb Type and Wattage**

CFL Lumen-Equivalent Wattage Category	A-line Bulbs				All Other Bulb Styles			
	CFL	Incan-descent	LED	Halogen	CFL	Incan-descent	LED	Halogen
<11W	\$2.52	\$1.29	\$8.55	\$2.02	\$3.42	\$2.04	\$18.61	\$5.15
11-15W	\$4.47	\$0.89	\$25.88	\$2.12	\$4.30	\$2.55	\$-	\$6.56
16-20W	\$12.64	\$0.19	\$56.99	\$1.80	\$4.69	\$4.65	\$-	\$3.03
21-25W	\$-	\$2.07	-	\$1.79	\$5.79	\$4.04	-	\$7.35
>25W	-	\$2.72	-	\$3.85	\$8.08	\$6.58	-	\$5.21
<b>All</b>	<b>\$4.56</b>	<b>\$1.17</b>	<b>\$20.82</b>	<b>\$1.91</b>	<b>\$4.97</b>	<b>\$2.56</b>	<b>\$8.62</b>	<b>\$5.54</b>

<11W includes incandescents rated <=40W and halogens rated <=29W

11-15W includes incandescents rated from 41W to 60W and halogens rated from 30W to 43W

16-20W includes incandescents rated from 61W to 75W and halogens rated from 44W to 53W

21-25W includes incandescents rated from 76W to 100W and halogens rated from 54W to 72W

>25W includes incandescents rated >100W and halogens rated >72W

## Appendix A

### Participant Store Shelf Survey Data Fields

Table 25. [CFL] Compact Fluorescent Lightbulb

Data Name	Description	Form Field Name
ProductType	Product Type (CFL)	cbo_ProductType
Model	Model number	cbo_Model
Brand	Brand	txt_Brand
UnitsDisplayed	Products Displayed (#)	txt_UnitsDisplayed
ESTAR	This model is in the ESTAR Qualified List for this Survey	txt_ESTAR
ESTARLabeled	ESTAR label appears on the product or product packaging	cbo_ESTARLabeled
RegPrice	Regular Price (\$\$) (Exclude rebate)	txt_RegPrice
SalePrice	Sale Price (\$\$)(Exclude rebate)	txt_SalePrice
UnitsPerPack	For fixtures, this is the number of bulbs/units required, otherwise it is the number of bulbs in the package.	txt_UnitsPerPack
WattsPerUnit	For 3-way bulbs enter highest.	txt_WattsPerUnit
HrsLife	Hours of expected life.	txt_HrsLife
ColorTemp	Specified by Kelvins indicated on packaging.	txt_ColorTemp
Lumens	Lumens indicated on packaging	txt_Lumens
LumensPerWatt	Lumens per watt indicated on packaging (if Lumens & watts are given this will be calculated.)	txt_LumensPerWatt
CRI	Color Rendering Index	txt_ColorRenderingIndex
WarrantyYears	Number of Years indicated by packaging.	txt_WarrantyYears
LightingFactsLabeled	Indicates if a Lighting Facts Label on the packaging.	cbo_LightingFacts
BulbTypeNotice	(Aka "Program Sponsored") Indicates if product is labeled as Program sponsored	cboBulbTypeNoted
EISANotice	Do you see an EISA Notice displayed?	cbo_EISANotice
EISA Compliant	Is this incandescent EISA Compliant? (Y or N)	txt_EISA
Style	Selected a Style from dropdown list.	cbo_Style
BaseType	Select a Base Type from dropdown list.	cbo_BaseCde
Display Location	Indicates where this product was displayed.	cbo_DisplayLocation
InsulationContactRating	Select the insulation contact rating as indicated on the packaging.	cbo_InsulationContact
Programable	For Thermostats (1;1week,2;5+2day,3;5+1+1day,7;7day;0;None)	cbo_Programable
TouchScreen	Indicate if so equipped.	cbo_TouchScreen
WiFi	Indicate if so equipped.	cbo_WiFi
Energy Star Qualified	This model is on the E* qualified model list	N/A

Notes:

1. Field descriptions in red are added during QC process of master db.
2. Cells filled in yellow are not used with the indicated product type(s).



**Table 26. [LED] Solid-State Lighting**

Data Name	Description	Form Field Name
ProductType	Product Type (CFL)	cbo_ProductType
Model	Model number	cbo_Model
Brand	Brand	txt_Brand
UnitsDisplayed	Products Displayed (#)	txt_UnitsDisplayed
ESTARLabeled	ESTAR label appears on the product or product packaging	cbo_ESTARLabeled
RegPrice	Regular Price (\$\$) (Exclude rebate)	txt_RegPrice
SalePrice	Sale Price (\$\$)(Exclude rebate)	txt_SalePrice
UnitsPerPack	For fixtures, this is the number of bulbs/units required, otherwise it is the number of bulbs in the package.	txt_UnitsPerPack
WattsPerUnit	For 3-way bulbs enter highest.	txt_WattsPerUnit
HrsLife	Hours of expected life.	txt_HrsLife
ColorTemp	Specified by Kelvins indicated on packaging.	txt_ColorTemp
Lumens	Lumens indicated on packaging	txt_Lumens
LumensPerWatt	Lumens per watt indicated on packaging (if Lumens & watts are given this will be calculated.)	txt_LumensPerWatt
CRI	Color Rendering Index	txt_ColorRenderingIndex
WarrantyYears	Number of Years indicated by packaging.	txt_WarrantyYears
LightingFactsLabeled	Indicates if a Lighting Facts Label on the packaging.	cbo_LightingFacts
BulbTypeNotice	(Aka "Program Sponsored") Indicates if product is labeled as Program sponsored	cboBulbTypeNoted
EISANotice	Do you see an EISA Notice displayed?	cbo_EISANotice
EISA Compliant	Is this incandescent EISA Compliant? (Y or N)	txt_EISA
Style	Selected a Style from dropdown list.	cbo_Style
BaseType	Select a Base Type from dropdown list.	cbo_BaseCde
Display Location	Indicates where this product was displayed.	cbo_DisplayLocation
InsulationContactRating	Select the insulation contact rating as indicated on the packaging.	cbo_InsulationContact
Programable	For Thermostats (1;1week,2;5+2day,3;5+1+1day,7;7day;0;None)	cbo_Programable
TouchScreen	Indicate if so equipped.	cbo_TouchScreen
WiFi	Indicate if so equipped.	cbo_WiFi
Energy Star Qualified	This model is on the E* qualified model list	N/A

Notes:

1. Field descriptions in red are added during QC process of master db.
2. Cells filled in yellow are not used with the indicated product type(s).

Table 27. [ I ] Incandescent or [H] Halogen

Data Name	Description	Form Field Name
ProductType	Product Type (CFL)	cbo_ProductType
Model	Model number	cbo_Model
Brand	Brand	txt_Brand
UnitsDisplayed	Products Displayed (#)	txt_UnitsDisplayed
ESTARLabeled	ESTAR label appears on the product or product packaging	cbo_ESTARLabeled
RegPrice	Regular Price (\$\$) (Exclude rebate)	txt_RegPrice
SalePrice	Sale Price (\$\$)(Exclude rebate)	txt_SalePrice
UnitsPerPack	For fixtures, this is the number of bulbs/units required, otherwise it is the number of bulbs in the package.	txt_UnitsPerPack
WattsPerUnit	For 3-way bulbs enter highest.	txt_WattsPerUnit
HrsLife	Hours of expected life.	txt_HrsLife
ColorTemp	Specified by Kelvins indicated on packaging.	txt_ColorTemp
Lumens	Lumens indicated on packaging	txt_Lumens
LumensPerWatt	Lumens per watt indicated on packaging (if Lumens & watts are given this will be calculated.)	txt_LumensPerWatt
CRI	Color Rendering Index	txt_ColorRenderingIndex
WarrantyYears	Number of Years indicated by packaging.	txt_WarrantyYears
LightingFactsLabeled	Indicates if a Lighting Facts Label on the packaging.	cbo_LightingFacts
BulbTypeNotice	(Aka "Program Sponsored") Indicates if product is labeled as Program sponsored	cboBulbTypeNoted
EISANotice	Do you see an EISA Notice displayed?	cbo_EISANotice
EISA Compliant	Is this incandescent EISA Compliant? (Y or N)	txt_EISA
Style	Selected a Style from dropdown list.	cbo_Style
BaseType	Select a Base Type from dropdown list.	cbo_BaseCde
Display Location	Indicates where this product was displayed.	cbo_DisplayLocation
InsulationContactRating	Select the insulation contact rating as indicated on the packaging.	cbo_InsulationContact
Programable	For Thermostats (1;1week,2;5+2day,3;5+1+1day,7;7day;0;None)	cbo_Programable
TouchScreen	Indicate if so equipped.	cbo_TouchScreen
WiFi	Indicate if so equipped.	cbo_WiFi
Energy Star Qualified	This model is on the E* qualified model list	N/A

Notes:

1. Field descriptions in red are added during QC process of master db.
2. Cells filled in yellow are not used with the indicated product type(s).
3. EISA compliance only applies to incandescent.
4. Incandescent are never ESTAR labeled.



*[S] Suspended/Pendant,*

*[CM] Ceiling mounted,*

*[W] Wall mounted,*

*[R] Recessed Fixture,*

*[T,F] Torchieres / Floor Lamp,*

*[D,TL] Desk / Table Lamp,*

*[E] Exterior Fixture,*

*[CL] Ceiling Fans with Lights,*

*[CK] Ceiling Fan Light Kits,*



Table 28. [VL] Ventilation Fans with Lights

Data Name	Description	Form Field Name
ProductType	Product Type (S, C, W, R,T,F,D,TL,E,CL,CK,VL)	cbo_ProductType
Model	Model number	cbo_Model
Brand	Brand	txt_Brand
UnitsDisplayed	Products Displayed (#)	txt_UnitsDisplayed
ESTARLabeled	ESTAR label appears on the product or product packaging	cbo_ESTARLabeled
RegPrice	Regular Price (\$\$) (Exclude rebate)	txt_RegPrice
SalePrice	Sale Price (\$\$)(Exclude rebate)	txt_SalePrice
UnitsPerPack	For fixtures, this is the number of bulbs/units required, otherwise it is the number of bulbs in the package.	txt_UnitsPerPack
WattsPerUnit	For 3-way bulbs enter highest.	txt_WattsPerUnit
HrsLife	Hours of expected life.	txt_HrsLife
ColorTemp	Specified by Kelvins indicated on packaging.	txt_ColorTemp
Lumens	Lumens indicated on packaging	txt_Lumens
LumensPerWatt	Lumens per watt indicated on packaging (if Lumens & watts are given this will be calculated.)	txt_LumensPerWatt
CRI	Color Rendering Index	txt_ColorRenderingIndex
WarrantyYears	Number of Years indicated by packaging.	txt_WarrantyYears
LightingFactsLabeled	Indicates if a Lighting Facts Label on the packaging.	cbo_LightingFacts
BulbTypeNotice	Indicates if product is labeled as Program sponsored	cboBulbTypeNoted
EISANotice	Do you see an EISA Notice displayed?	cbo_EISANotice
EISA Compliant	Is this incandescent EISA Compliant? (Y or N)	txt_EISA
Style	Selected a Style from dropdown list.	cbo_Style
BaseType	Select a Base Type from dropdown list.	cbo_BaseCde
Display Location	Indicates where this product was displayed.	cbo_DisplayLocation
InsulationContactRating	Select the insulation contact rating as indicated on the packaging.	cbo_InsulationContact
Programable	For Thermostats (1;1week,2;5+2day,3;5+1+1day,7;7day;0;None)	cbo_Programable
TouchScreen	Indicate if so equipped.	cbo_TouchScreen
WiFi	Indicate if so equipped.	cbo_WiFi
Energy Star Qualified	This model is on the E* qualified model list	N/A

Notes:

1. Field descriptions in red are added during QC process of master db.
2. Insulation Contact Rating is applicable only to Ventilation Fans.
3. Tan cells are optional and data only needs to be captured if they are obvious on the labeling.
4. Cells filled in yellow are not used with the indicated product type(s).



**Table 29. Product Type Code**

ProductTypeCode	Description	ProductTypeName
CFL	Compact Fluorescent Light Bulb	CFL
CK	Ceiling Fan Light Kit	Ceiling Fan Kit
CL	Ceiling Fans with Lights	Ceiling Fan
CM	Ceiling Mounted Light	Ceiling Light
D	Desk Lamp	Desk Lamp
E	Exterior Fixture	Exterior Light
F	Floor Lamp	Floor Lamp
H	Halogen	Halogen Light
I	Incandescent (EISA)	Incandescent Light
LED	Solid-State Lighting	LED Light
R	Recessed Fixture	Recessed Fixture
S	Suspended-Pendant Light	Suspended Light
T	Torchieres	Torchieres
TL	Table Lamp	Table Lamp
VL	Ventilation Fan with light	Ventilation Fan
W	Wall Mounted Light	Wall Mount Light
TST	Programmable Thermostat	Thermostat

**Table 30. Base Type Codes**

Base Code	Base Type
CA	Candelabra
ED	Edison
GU	GU24
OT	Other
PN	Pin Based - Not GU24

**Table 31. StyleCodes**

Style Code	Style Name	CFL Style	SSL Style	Incandescent	Halogen
AB	A Bulb	TRUE	TRUE	TRUE	TRUE
AB3	A Bulb 3-way	TRUE	FALSE	FALSE	FALSE
AB30	A Bulb 3-way (NON-Edison)	FALSE	TRUE	FALSE	FALSE
ABD	A Bulb dimmable	TRUE	TRUE	FALSE	FALSE
ABDO	A Bulb dimmable (NON-Edison)	FALSE	TRUE	FALSE	FALSE
ABO	A Bulb (NON-Edison)	FALSE	TRUE	FALSE	FALSE
BG	Bug Lamp	TRUE	FALSE	TRUE	TRUE
BL	Bullet	TRUE	FALSE	TRUE	TRUE
BL3	Bullet 3-wqy	TRUE	FALSE	TRUE	TRUE
BLD	Bullet dimmable	TRUE	FALSE	FALSE	FALSE
BO	Bollards - Lamp mounts on post	TRUE	TRUE	FALSE	FALSE
CL	Circline	TRUE	FALSE	FALSE	FALSE
CL3	Circline 3-way	TRUE	FALSE	FALSE	FALSE
CLD	Circline dimmable	TRUE	FALSE	FALSE	FALSE
CM	Ceiling Mounted Lights	TRUE	TRUE	FALSE	FALSE
CV	Cove Lighting	TRUE	TRUE	FALSE	FALSE
DT	Double Tube	TRUE	FALSE	FALSE	FALSE
DT3	Double Tube 3-way	TRUE	FALSE	FALSE	FALSE
DTD	Double Tube dimmable	TRUE	FALSE	FALSE	FALSE
DWN	Down Lights-Recessed, Surface & Pendant Mounts	FALSE	TRUE	TRUE	TRUE
FL	Flood Lamp	TRUE	TRUE	TRUE	TRUE
FL3	Flood Lamp 3-way	TRUE	TRUE	TRUE	TRUE
FL30	Flood Lamp 3-way (NON-Edison)	FALSE	TRUE	TRUE	TRUE
FLD	Flood Lamp dimmable	TRUE	TRUE	FALSE	FALSE
FLDO	Flood Lamp dimmable (NON-Edison)	FALSE	TRUE	FALSE	FALSE
FLO	Flood Lamp (NON-Edison)	FALSE	TRUE	FALSE	FALSE
GL	Globe	TRUE	TRUE	TRUE	TRUE
GL3	Globe 3-way	TRUE	TRUE	TRUE	TRUE
GL30	Globe 3-way (NON-Edison)	TRUE	TRUE	TRUE	TRUE
GLD	Globe dimmable	TRUE	TRUE	FALSE	FALSE
GLDO	Globe dimmable (NON-Edison)	FALSE	TRUE	FALSE	FALSE
GLO	Globe (NON-Edison)	FALSE	TRUE	TRUE	TRUE
MR	Multifaceted reflector lamp	FALSE	TRUE	TRUE	TRUE
OWP	Outdoor Wall Mounted Porch Lights	FALSE	TRUE	TRUE	TRUE
PDL	Portable Desk Lamp	FALSE	TRUE	FALSE	FALSE
PL	Outdoor Pole Lamp	FALSE	TRUE	FALSE	FALSE



PTH	Outdoor Pathway	FALSE	TRUE	TRUE	TRUE
QT	Quad Tube	TRUE	FALSE	FALSE	FALSE
QT3	Quad Tube 3-way	TRUE	FALSE	FALSE	FALSE
QTD	Quad Tube dimmable	TRUE	FALSE	FALSE	FALSE
SLF	Shelf-mounted Lights	TRUE	TRUE	TRUE	TRUE
SMD	Surface Mounted Directional Head Lights	TRUE	TRUE	TRUE	TRUE
SP	Spiral	TRUE	FALSE	FALSE	FALSE
SP3	Spiral 3-way	TRUE	FALSE	FALSE	FALSE
SPD	Spiral dimmable	TRUE	FALSE	FALSE	FALSE
STP	Outdoor Step Lights	FALSE	TRUE	FALSE	FALSE
TCC	Torpedo cold cathode	TRUE	FALSE	FALSE	FALSE
TP	Torpedo	TRUE	FALSE	TRUE	TRUE
TP3	Torpedo 3-way	TRUE	FALSE	TRUE	TRUE
TPC	Torpedo candelabra base	TRUE	FALSE	TRUE	TRUE
TPD	Torpedo dimmable	TRUE	FALSE	FALSE	FALSE
TT	Triple Tube	TRUE	FALSE	FALSE	FALSE
TT3	Triple Tube 3-way	TRUE	FALSE	FALSE	FALSE
TTD	Triple Tube dimmable	TRUE	FALSE	FALSE	FALSE
UC	Under Cabinet Kitchen Light	FALSE	TRUE	TRUE	TRUE
WW	Wall Wash	FALSE	TRUE	FALSE	FALSE

Figure 2. Bulb Types















 A bulb	AB	 Flood lamp	FL	 Spiral	SP
 A bulb, 3-way	AB3	 Flood lamp, 3-way	FL3	 Spiral, 3-way	SP3
 A bulb, dimmable	ABD	 Flood lamp, dimmable	FLD	 Spiral, dimmable	SPD
 Bug lamp	BG	 Globe	GL	 Torpedo	TP
 Bullet	BL	 Globe, 3-way	GL3	 Torpedo, 3-way	TP3
 Bullet, 3-way	BL3	 Globe, dimmable	GLD	 Torpedo, dimmable	TPD
 Bullet, dimmable	BLD	 Quad tube	QT	 Torpedo, candelabra base	TPC
 Circline	CL	 Quad tube, 3-way	QT3	 Torpedo, cold cathode	TCC
 Circline, 3-way	CL3	 Quad tube, dimmable	QTD	 Triple tube	TT
 Circline, dimmable	CLD			 Triple tube, 3-way	TT3
 Double tube	DT			 Triple tube, dimmable	TTD
 Double tube, 3-way	DT3				
 Double tube, dimmable	DTD				

Figure 3. Input Screen Sample

**Foodmaster**  
51 Austin Street, Charlestown

**1512 Abromowicz**

Date: 8/20/2012 Contact Name/Title: [First Name] [Last Name] [Title]

This store Provides EISA/Lumens Education: [Dropdown] This store Provides CFL Recycling: [Dropdown]

This Store Provides Interactive Lighting Display: [Dropdown]

If the retailer finds that offering this service is beneficial, if you can, INDICATE HOW above.

Types of Lighting Signage on Display (check all that apply)

- Manufacture\_A
- Manufacture\_B
- Manufacture\_C
- Retailer
- Program
- Other

Types of Thermostat signage on display (check all that apply)

- Manufactures
- Retailer
- Program

NOTES: [Text Area]

[Close] [Enter Inventory]

Figure 4. Input Screen Sample

**2838 Ocean State Job Lot**  
28 Main Street, Chatham MA

**Dunlap**

Prod. Type	Model	Brand	Products Displayed	Reg. Price	Sale Price
[Dropdown]	[Dropdown]	[Dropdown]	1		

Number of Bulbs	Watts Per Bulb	Hours Of Life	Color Temp	Lumens	Lumens Per Watt	CRI	Waranty Years	Lighting Facts Card
1								[Dropdown]

Sponsor Signage [Dropdown] Style [Dropdown] Base Code [Dropdown] Display Location [Dropdown] ESTAR Labeled [Dropdown]

Style Key → [Dropdown]

Insulation Contact [Dropdown] EISA Comp. Noted [Dropdown]

Program Type [Dropdown] WiFi Capable [Dropdown] Touch Screen [Dropdown]

Select product type from dropdown list.

[DISPLAY AREA]

Qualified Product Lists [Dropdown] [CLOSE] [Next] [New]\*\*

Prod. Type	Model	Brand	Products Dis	Number of E	Reg. Price	Sale Price	Style	Base Code	Watts	Hours Of Lif	Color Temp	War
[Dropdown]	[Dropdown]	[Dropdown]	1	1								
*			1	1								



Figure 5. Input Screen Sample

pop\_DisplayArea

RetailerID: **1756**      Model No.: **00007**      Product Type: **CFL**

Display area recorded for this product:

RecID	Prod	SampleType	A	B	C	Quant	SqInches	CuInches
-------	------	------------	---	---	---	-------	----------	----------

**3D Box Diagram:** A 3D box with dimensions A (height), B (width), and C (depth).  
A:   
B:   
C:   
Occurrences:   
Cu.Inches:

---

**2D Diagrams:**  
A:  B:   
- OR  
C:   
Quan:   
Sq Inches:



## *Former Participant Store Shelf Stocking Survey*

ID #:	Field staff name:
Store name:	Date & Time:
Store street address:	Store city and state:
Store type:	Store zip code:
Contact name:	Sponsor:
Notes:	

The NMR Group, along with the Cadmus Group Inc. and DNV GL, is conducting a study on behalf of the energy efficiency program administrators in the State of Massachusetts regarding compact fluorescent lighting in an effort to evaluate and improve their energy efficiency programs. As part of this study, we are going to retail stores across the state to learn about their sales and stocking practices for lightbulbs and lighting fixtures. Your responses are confidential and will not be linked to your particular store by name or address.

### *Section I. CFL, LED, Halogen, and Incandescent Inventory Data Collection*

The table below describes each of the fields of information to be gathered on all CFL, LED, Halogen, and Incandescent bulbs found in the store.



**Table 32. Shelf Survey Data Collected**

<b>Bulb Type</b>	<b>CFL, LED, or Halogen</b>	<b>Watts/Bulb</b>	<b>Bulb Wattage</b>
Bulb Type on Pack?	Is the bulb type noted on the package?	Lumens	Lumens listed on package
Mfg.	Manufacturer	Lifetime Hrs	Lifetime hours listed on package
Model #	Model Number	Color Temp in Kelvin	Color Temp in Kelvin listed on package
ESTAR Label?	In the ENERGY STAR label on the package?	Warranty	Warranty years listed on package
Bulbs/Pack	Number of bulbs per package	CRI #	Color Rendering Index number listed on package
# of packs	Number of packs with same manufacturer & model number	Light Facts?	Is there a lighting facts label on the package?
Bulb Style	Bulb shape, spec features (use codes sheet)	Sponsor Sign?	Is there a sponsor sign in the area of these packages?
Base Type	Pin, Screw, GU...write in any other type you find	Loc	Location of packages: End cap, low, middle or high shelf, wing stack, register, clearance
Reg. Price	Regular Store Price	EISA Comp?	Energy Independence and Securities Act of 2007 Compliance noted on package? (For Incandescent Bulb Only)
Sale Price	Sale Price		



Table 33. Data Collection Sheet

Bulb Type	Bulb Type on Pack?	Mfg	Model #	ESTAR Label?	Bulbs /Pack	# of Packs	Bulb Style (see codes)	Base Type (Pin, Screw, GU)	Reg. Price	Sale Price	Watts /Bulb	Lum-ens	Life-time Hrs	Color Temp in Kelvin	Warranty (in years)	CRI #	Light Facts?	Sponsor Sign?	Loc	EISA Comp?
									\$	\$										
									\$	\$										
									\$	\$										



**Section II. Fixture Inventory Data Collection**

The table below describes each of the fields of information to be gathered on all fixtures found in the store.

**Table 34. Data Collection Sheet**

<b>Fixt Type</b>	<b>Fixture Type</b>	<b>Lumens</b>	<b>Lumens listed on package</b>
Bulb Type on Pack	Is the bulb type noted on the package? If so, write in type of bulb noted. If not, leave blank.	Lifetime Hrs	Lifetime hours listed on package
Mfg.	Manufacturer	Color Temp in Kelvin	Color Temp in Kelvin listed on package
Model #	Model Number	Warranty	Warranty years listed on package
ESTAR Label?	In the ENERGY STAR label on the package?	CRI #	Color Rendering Index number listed on package
Bulbs/Fixt	Number of bulbs per fixture	Light Facts?	Is there a lighting facts label on the package?
# of Fixt	Number of fixtures with same manufacturer & model number	Sponsor Sign?	Is there a sponsor sign in the area of these packages?
Reg. Price	Regular Store Price	Loc	Location of packages: End cap, low, middle or high shelf, wing stack, register, clearance
Sale Price	Sale Price	Insul Contact	Only applicable to ventilation fans. Choices: IC=Insulation Contact, ICAT=Insulation Contact Air Tight, or N/A.
Watts/Bulb	Bulb Wattage		








Table 35. Data Collection Sheet

Fixt Type Codes: S=Suspended/Pendant, CM=Ceiling Mount, W=Wall Mount, R=Recessed Can, T=Torchiere, F=Floor Lamp, TL=Table Lamp, E=Exterior Fixture, CL=Ceiling Fan With Lights, CK=Ceiling Fan Light Kits, VL=Ventilation Fan With Lights																		
Fixt Type	Bulb Type on Pack	Mfg	Model #	ESTAR Label?	Bulbs /Fixt	# of Fixt	Reg. Price	Sale Price	Watts /Bulb	Lum-ens	Life-time Hrs	Color Temp in Kelvin	Warr-anty (in years)	CRI #	Light Facts?	Spon-sor Sign?	Loc	Insul Contact
							\$	\$										
							\$	\$										
							\$	\$										
							\$	\$										
							\$	\$										



Table 36. Style Codes

Style Code	Style Name	Image
AB	A Bulb (Screw based)	
ABO	A Bulb (Pin-based)	
AB3	A Bulb 3-way (Screw based)	
AB3O	A Bulb 3-way (Pin-based)	
ABD	A Bulb dimmable (Screw based)	
ABDO	A Bulb dimmable (Pin-based)	
BO	Bollards (LED)	
BG	Bug Lamp	
BL	Bullet	
BL3	Bullet 3-way	
BLD	Bullet dimmable	
CM	Ceiling Mounted Lights	Any ceiling fixture
CL	Circline	
CL3	Circline 3-way	
CLD	Circline dimmable	
CV	Cove Lighting (LED)	
DT	Double Tube	
DT3	Double Tube 3-way	
DTD	Double Tube dimmable	
DWN	Down Lights (LED)	
FL	Flood Lamp (Screw based)	
FLO	Flood Lamp (Pin-based)	
FL3	Flood Lamp 3-way (Screw based)	
FL3O	Flood Lamp 3-way (Pin-based)	
FLD	Flood Lamp dimmable (Screw based)	
FLDO	Flood Lamp dimmable (Pin-based)	
GL	Globe (Screw based)	
GLO	Globe (Pin-based)	
GL3	Globe 3-way (Screw based)	
GL3O	Globe 3-way (Pin-based)	
GLD	Globe dimmable (Screw based)	
GLDO	Globe dimmable (Pin-based)	

Style Code	Style Name	Image
MR	Multifaceted reflector lamp	
PTH	Outdoor Pathway	
PL	Outdoor Pole Lamp	Self-Explanatory
STP	Outdoor Step Lights	Says "step lights" on package
OWP	Outdoor Wall Mounted Porch Light	Self-Explanatory
PDL	Portable Desk Lamp	Self-Explanatory
QT	Quad Tube	
QT3	Quad Tube 3-way	
QTD	Quad Tube dimmable	
UC	Under Cabinet	Self-Explanatory
RB	Replacement Bulb -Edison Base	Says "replacement bulb" on package
SLF	Shelf-mounted Lights	Says "shelf lights" on package
SP	Spiral	
SP3	Spiral 3-way	
SPD	Spiral dimmable	
SMD	Surface Mounted Lights (LED)	
TP	Torpedo	
TP3	Torpedo 3-way	
TPC	Torpedo candelabra base	
TCC	Torpedo cold cathode	
TPD	Torpedo dimmable	
TT	Triple Tube	
TT3	Triple Tube 3-way	
TTD	Triple Tube dimmable	
WW	Wall Wash	