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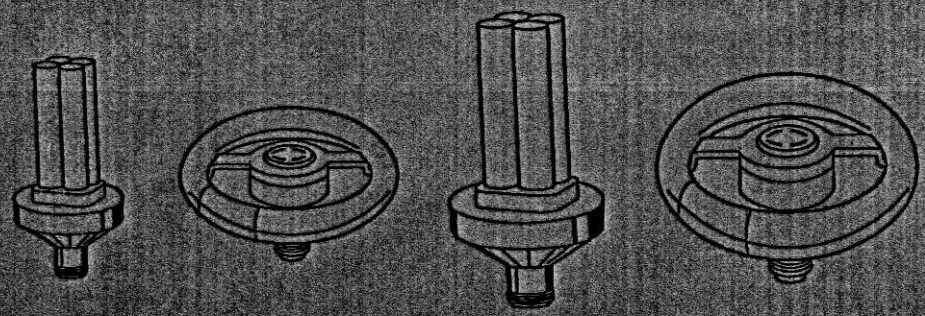
RESIDENTIAL APPLIANCE EFFICIENCY INCENTIVES: COMPACT FLUORESCENTS

1993 RETAIL SALES STUDY



MIAP-93-P09-S01-R329
CEC no. 206
September 1993

SAN DIEGO GAS & ELECTRIC

Residential Appliance Efficiency Incentives: Compact Fluorescents - 1993 Retail Sales Study

SUMMARY:

In order to evaluate the May-July phase of the 1993 Retail Compact Fluorescent (cf) Program, three research methods were employed: (1) store intercept interviews -- to determine respondent awareness of program advertising, previous experience with cf bulbs, perceptions of advantages of cf bulbs, effectiveness of store cf displays, and the level of out-of-service-territory purchases; (2) store audits -- to track program cf bulbs, competitive brands, prices, location of displays, and competitive promotional activity; and (3) customer reply ("bounceback") cards -- to determine customer prior experience, installation rates, hours of operation, and customer addresses and phone numbers.

Overall, there was a sell-through rate of 53% of the total number of bulbs shipped between May and August. Of the total cf purchases, about 7-9% of the sales were made to commercial customers (per store intercept interviews and bounceback cards). It also appears, based on the store intercept interviews, that the out-of-service-territory sales was 8.6% of the total sales.

Over half of the store intercept and bounceback card respondents revealed that they had prior experience with cf bulbs. About 12-14% of the respondents had obtained their prior cf bulbs from SDG&E.

The program advertising was apparently very effective. Nearly half of the store intercept purchasers were aware of the lighting sale before coming to the participating stores. Twenty-two percent of the purchasers learned about the sale through the radio and newspapers. The lighting displays informed customers of the special price and value of the cf bulbs. It appears that price and value were the major drivers in the sales decision.

The return rate for the bounceback cards was determined to be 13%. The bounceback cards revealed that 91% of the purchased cf bulbs were installed. The average wattage replaced was 89.8 watts and the average wattage installed was 65.4 watts per bulb. The customers tended to replace their old bulbs with a wattage lower than the indicated "replacement" wattage, thus gaining more lumens. The average annual operation reported was 4.6 hours per day.

This study was not designed to measure *ex post* savings.

RESIDENTIAL APPLIANCE EFFICIENCY INCENTIVES: COMPACT FLUORESCENTS

1993 RETAIL SALES STUDY

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Evaluation and Analysis

September 1993

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EXECUTIVE SUMMARY

Since 1990, SDG&E has been educating residential customers about the benefits of compact fluorescent (**cf**) lighting. As part of this effort, **cf** bulbs were distributed and installed by SDG&E in customer homes at no direct cost (27,000 **cf** bulbs were distributed in 1990, 86,000 in 1991, and 120,000 in 1992). In 1993, in order to help the technology receive widespread customer adoption, SDG&E and Lights Of America implemented a two-phased program that offered **cf** bulbs at reduced costs ("buy down") through widespread retail distribution. Lights Of America used radio, newspaper, and point-of-purchase materials to inform customers about the campaign, and to build awareness of the special discounted offer and the technology's energy saving potential. An additional goal was to emphasize SDG&E's program sponsorship. Thereby gaining a "value added" benefit of increased customer satisfaction.

In order to evaluate the May-July phase of the 1993 retail **cf** program, three research methods were employed: store intercept interviews, store audits, and customer reply ("bounceback") cards. Additionally, store sales data were analyzed.

Store intercept interviews were conducted at seven retail chains between June and July 1993. Stores south of Interstate 8 were deliberately over sampled in order to fully measure out-of-service-territory purchases. The purpose of the interviews was to determine respondent: awareness of program advertising, previous experience with **cf** bulbs, perceptions of the major advantages of **cf** bulbs, effectiveness of store lighting displays, and the level of out-of-service-territory purchases.

Customer bounceback cards were affixed to all bulbs sold through SDG&E's program. The cards requested information on prior experience with **cf** bulbs, installation and hours of operation of purchased **cf** bulbs, as well as customer addresses and phone numbers.

Participating stores provided shipping (from May 12 through July 13) and sales data (from May 15 through August 15). Store sales data were used to validate bounceback data and provide weighting for intercept data.

Thirteen participating retail chains were audited prior to the mid-May program start and also at the end of the first phase (late July). The audits tracked program **cf** bulbs, competitive brands, prices and locations within the stores, and competitive promotional activity. The 13 store lighting managers were also interviewed at each audit.

The followings are the key results from the present study:

- **Store Sales Rate:** Overall, 52,852 **cf** bulbs (out of 99,696 shipped) were sold in participating stores from May through August, representing a sell-through rate of 53% (from store sales data). The most popular **cf** bulb was the 27 watt Quad (from bounceback cards). It appears that the stores will have a carryover of the least popular 20 watt Circular (from bounceback cards).

- **"Out of Service Territory" Sales:** To reconcile the store intercept survey and store audits results, store sales data were used to weight the store intercept data. The results suggest that 8.6% of the total **cf** bulbs purchased were taken out of SDG&E's service territory. The potential for such "out of service territory" sales may warrant the consideration of limiting **cf** bulb sales in stores close to the border.

- **Prior Experience:** Over half of the store intercept respondents (64% purchasers and 56% non-purchasers) and bounceback card respondents (50%) had prior experience with **cf** bulbs. About 12-14% respondents had obtained **cf** bulbs previously from SDG&E. Store intercept respondents with prior experience indicated that they had paid about $9.00 for their prior bulbs. Since the store audits identified the average price of **cf** bulbs to be about $14.00, the store intercept population may be shopping at different outlets or purchasing mainly low-end, on-sale **cf** bulbs. The reported $9.00 price point provides support for the suspicion that there is a $10.00 price ceiling in the **cf** market.

- **Program Advertising Effectiveness and Store Lighting Displays:** The program advertising was apparently very effective. Nearly one-half of the store intercept purchasers (47%) were aware of the lighting sale before coming into participating stores. Over 22% of purchasers earned about the lighting sales through newspapers and radio. The major importance of the store lighting displays was to inform customers of the special price and value of the **cf** bulbs. Price and value appeared to be the major drivers in the sales decision.

- **Installation Rate:** Only the bounceback cards measured the installation rate for **cf** bulbs. Bounceback card respondents reported that 91% of their **cf** bulbs were installed. This installation rate may be artificially high, as customers who installed **cf** bulbs may be more likely to respond through the bounceback cards than those who did not. A more accurate installation rate should be available when the store intercept respondents are surveyed (by phone) at a later date.

- **Wattage Replacement:** The average wattage of **cf** bulbs installed was 24.6 (from bounceback cards). The average wattage replaced was 89.8. This yielded an average savings of 65.2 watts per bulb. Customers tended to replace a wattage lower than that indicated as the "replacement wattage", thus gaining lumens (lighting output).

- **Hours of Operation:** The average annual hours of operation (from bounceback cards) was 4.6 per day.

- **Total Savings:** The average estimated annual savings for **cf** bulbs was 109 kWh per bulb (from bounceback cards). Total program savings will be calculated with revised sales and installation rates from research scheduled for later this year.

- **Residential vs. Commercial Purchases:** About 7%-9% of **cf** purchases went to commercial customers (per store intercept and bounceback card surveys), but this estimate may be low, since business customers may be somewhat disinclined to respond to surveys of this type.

Price (@$5.69) appeared to be the major driver in respondent purchase decisions. The point-of-purchase materials provided an excellent means of drawing respondent attention to the price.

RECOMMENDATIONS

Program advertising by Lights of America was very effective. Point-of-purchase materials and store lighting displays played an important part in pointing out the price and value of the **cf** bulbs. The majority of sales, however, appeared to be predicated on the low sales price. If **cf** bulbs are to be sold at prices approaching $10.00, advertising and point-of-purchase materials will become increasingly important in stimulating product sell-through.

Stores south of Interstate 8 were the major sources for "out of service territory" sales (which accounted for 8.6% of the total **cf** bulbs purchased). This may warrant limiting **cf** bulb sales in stores close to the border.

Because of a customer tendency to trade-up in replacement wattage, thereby realizing "non-comparable levels of service", having a 60-watt replacement wattage bulb in the program would serve to optimize savings. The C2020TPMPF (85 watt) could be eliminated because of customer unfamiliarity with 85-watt bulbs and a below average purchase rate.

LIMITATIONS

The intercept interviews, bounceback cards, and store audits represented only "snap shots" of the entire retail sales program. Potential non-response biases may exist in each. For example, the bounceback cards provided good hours of operation data, but probably produced biased data on installation and net-to-gross. More information on these two factors will be obtained from other sources. Therefore, the present data should be interpreted with caution and should be viewed only in conjunction with all the available data (i.e., store sales data, store intercept surveys, bounceback card surveys, and store audits).

Additional studies (survey of store intercept respondents and analyses of pre-program sales data) are scheduled that should provide an additional level of reliability to the present data.

In order to fully measure out-of-service-territory purchases, stores south of Interstate 8 were deliberately over sampled in the store intercept surveys (3 out of 7 stores, compared with 6 out of 38 participating stores). To mitigate this potential sampling bias, all the data analyses excluded the respondents who reported taking purchased **cf** bulbs out of SDG&E's service territory, except for analyses to determine out-of-service-territory purchases.

INTRODUCTION

Since 1990, SDG&E has been educating residential customers about the benefits of **cf** lighting, and installing these bulbs in customer homes (at no direct cost). In 1993, in order to help the technology receive widespread customer adoption, SDG&E and Lights Of America implemented a two-phase program offering reduced price **cf** bulbs through widespread retail distribution.

Four types of **cf** bulbs: 18 watt Quad (75 watt equivalent), 20 watt Circular (85 watt equivalent), 27 watt Quad (100 watt equivalent), and 30 watt Circular (150 watt equivalent) were made available in four major retail chains (i.e., do-it-yourself, warehouse, lumber, and merchandising store) with thirty-eight stores located throughout SDG&E's service territory. These bulbs were offered to customers at a special discounted price of about $5.99 each ("bought down" by SDG&E). The annual program goal is to sell 100,000 **cf** bulbs by December 15, 1993.

Lights Of America used radio, newspaper, and point-of-purchase materials to inform customers about the campaign, to build awareness of the special discounted offer and the technology's potential energy savings. An additional goal was to emphasize SDG&E's program sponsorship.

The first phase of the 1993 retail **cf** bulb program ran from mid-May to the end of July. In order to evaluate the first phase, three research methods were employed: store intercepts, store audits, and customer reply ("bounceback") cards. In addition, store sales data were also analyzed.

DATA SOURCES

Store Intercept Surveys

Store intercept interviews were conducted at seven retail chains during June and July 1993. The purpose of these interviews was to determine respondent: awareness of program advertising, previous experience with **cf** bulbs, perceptions of the major advantages of **cf** bulbs, the effectiveness of store lighting displays, and the level of out-of-service-territory purchases. Altogether, 362 **cf** bulb purchasers and 373 non-purchasers were interviewed.

Customer Bounceback Card Surveys

Customer bounceback cards were affixed to all **cf** bulbs sold through SDG&E's program. The cards requested information on prior experience with the **cf** bulbs, installation rates and hours of operation of purchased **cf** bulbs, as well as customer addresses and phone numbers. As of July 31, 1993, SDG&E received 6,908 completed cards.

Store Sales Data

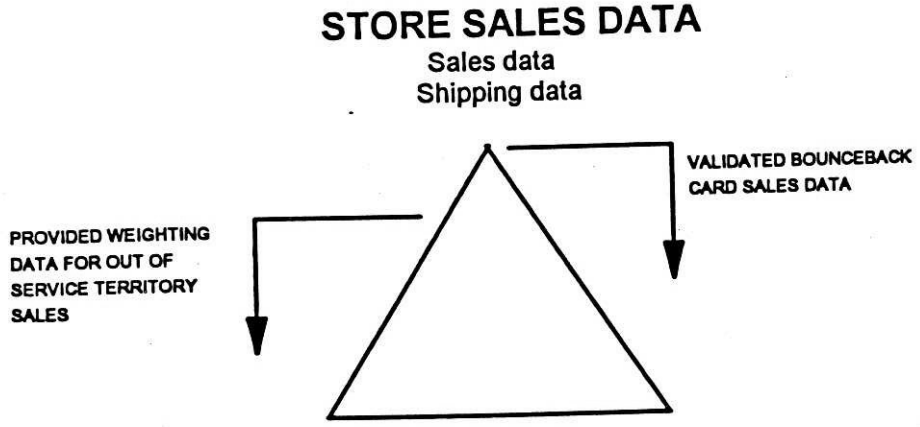
Participating stores provided shipping (from May 12 through July 13) and sales data (from May 15 through August 15). Store sales data were used to validate bounceback data and provide weighting criteria for intercept data.

Store Audits

Thirteen retail chains were audited prior to the mid-May program start and also at the end of the first phase (late July). The audits tracked program **cf** bulbs, competitive brands, **cf** bulb prices, locations within the stores, and competitive promotional activity. The 13 store lighting managers were also interviewed during the audits.

RECONCILIATION OF DATA SOURCES

Data from store intercept surveys represented only a "snap shot" of two weeks of the entire retail sales program. Data from bounceback card surveys covered **cf** bulb purchasers during the first wave of sales (from mid-May through the end of July). Store sales data (for the first wave) were considered to be the most reliable source of information about the **cf** bulb sell-through. Therefore, in the present study, store sales data were viewed and analyzed in conjunction with data from other sources (as the triangle below indicates). Store sales data were used to validate bounceback card sales and to provide weighting for intercept data, to aid in calculating "out of service territory" sales.



STORE INTERCEPT SURVEYS

INTRODUCTION

Four types of **cf** bulbs: 18 watt Quad (75 watt equivalent), 20 watt Circular (85 watt equivalent), 27 watt Quad (100 watt equivalent), and 30 watt Circular (150 watt equivalent) were made available in four major retail chains (i.e., do-it-yourself, warehouse, lumber, and merchandising store) with thirty-eight stores located throughout SDG&E's service territory. These bulbs were offered to customers at a special discounted price of about $5.99 each (bought down by SDG&E).

Store intercept interviews were conducted at seven retail chains (two warehouses, two do-it-yourself, two lumber, and one merchandising store) during June and July 1993.

EVALUATION OBJECTIVES

The primary objectives of the study were to determine the following:

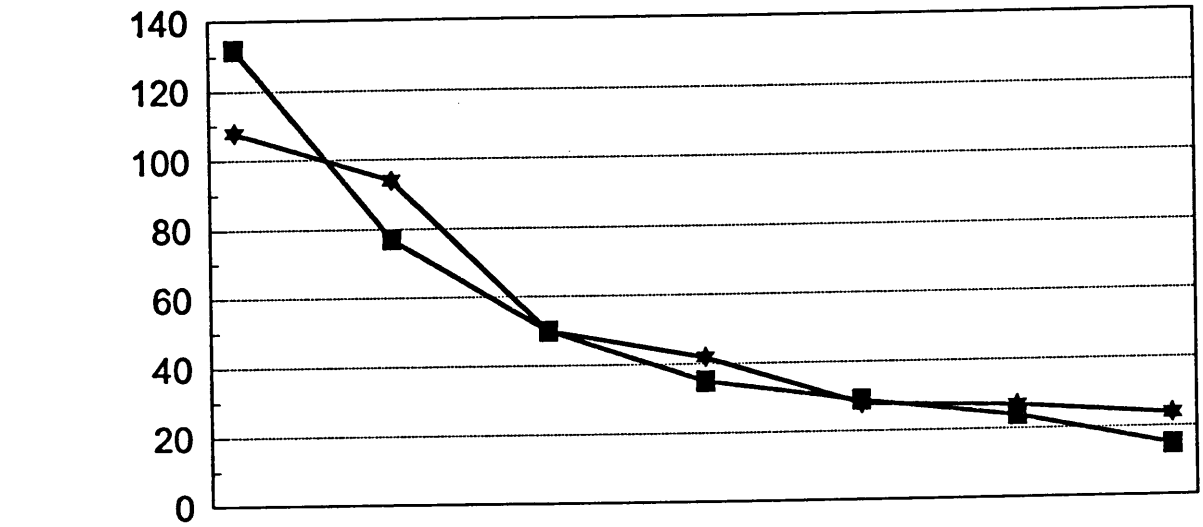
- Respondent awareness of program advertising;
- Previous experience with **cf** bulbs;
- Major advantages of **cf** bulbs;
- The effectiveness of the lighting displays; and
- The level of **cf** bulbs taken out of SDG&E's service territory.

METHODOLOGY

The present study consisted of store intercept interviews designed by SDG&E (see Appendix B for the annotated survey instruments) and conducted by Taylor Research, Inc. The interviews were conducted on the following dates: June 30, July 3, July 5, July 7, July 10 and July 11 at seven retail stores. Efforts were made to interview two types of customers, those who purchased **cf** bulbs (referred to as "Purchasers") and those who stopped at store lighting displays, looked at the displays or **cf** bulbs, but did not purchase prior to their interviews (referred to as "Non-Purchasers"). Altogether, 362 purchasers and 373 non-purchasers responded to the interviews.

More than half of the purchasers (58%) and non-purchasers (55%) were conducted in two stores south of Interstate 8 (warehouse and do-it-yourself store). To mitigate this potential sampling bias, all the data analyses excluded the respondents who reported taking purchased **cf** bulbs out of SDG&E's service territory, except for those to determine out-of-service-territory purchases. Figure 1, next page, shows the distributions of the purchaser and non-purchaser interviews, by store type.

FIGURE 1
DISTRIBUTION OF INTERVIEWS BY STORES



	WAREHOUSE (S)	DO-IT-YOURSELF (S)	DO-IT-YOURSELF (N)	WAREHOUSE (N)	LUMBER (N)	LUMBER (S)	MERCHANDISING (N)
PURCHASER ■	132	77	50	35	29	24	15
NON-PURCHASER ★	108	94	50	42	28	27	24

In the three stores south of Interstate 8, Spanish speaking interviewers were made available to respondents. Overall, 126 purchaser interviews (35%) and 132 non-purchaser interviews (35%) were conducted in Spanish. Table 1, below, shows the language (Spanish, English) used for purchaser and non-purchaser interviews.

TABLE 1
INTERVIEW LANGUAGE

Language	Purchasers		Non-Purchasers		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
English	236	65.2%	241	64.6%	477	64.9%
Spanish	126	34.8%	132	35.4%	258	35.1%
TOTAL	362	100.0%	373	100.0%	735	100.0%

PROGRAM ADVERTISING CAMPAIGN

Lights Of America launched a major radio campaign from June 17 through June 30 on the following radio stations (See Appendix A-1 for the content of the radio advertising):

KCBQ	105.3 FM and 1170 AM
KFMB	100.7 FM and 760 AM
KIFM	89.1 FM
KJOY	103.7 FM
KKLQ	106.5 FM and 600 AM
KYXY	96.5 FM
XTRA	91.1 FM and 690 AM

Advertising was also conducted in the following newspapers (See Appendix A-2 for the advertising text used in the newspapers):

San Diego Union Tribune	June 20, June 22
North County Combination:	
Escondido Times-Advocate	
Oceanside Blade Citizen	June 22

In addition, SDG&E informed its employees about the campaign (n = 2,000) through a DNS article written by Marketing Communications on May 24 (See Appendix A-3 for a copy of the May 24 insertion).

The primary messages delivered to the customers were:

- *You can save 75% off the price of compact fluorescent lights under a special offer to you by SDG&E and Lights Of America. Hurry to your local Home Depot, Dixieline Lumber, Target or Price Club today!*

- *Compact fluorescent light bulbs use 75% less energy than normal incandescent light bulbs and last 10 times longer!*

PURCHASERS - SPECIFIC FINDINGS

Respondent Awareness of the cf Lighting Sale

Overall, nearly half of the purchasers (47%) were aware that cf bulbs were on sale before they came into participating stores. Respondents from lumber and do-it-yourself stores were more likely to be aware of the sale than respondents from other stores. The lumber stores mailed ads to residential homes, which may have increased respondent awareness of the sales. Relatively less respondents (17%) from the warehouse south of Interstate 8 were aware of the sale. The English-only signage probably impacted respondent awareness from this store. All the advertising materials were in English, and the large number of Spanish speaking respondents were interviewed in this store (78%). The language barriers and fewer channels of general advertising may cause their lower awareness of the lighting sale. Table 2 shows sale awareness by store type. Overall, program advertising was very effective.

TABLE 2
RESPONDENT AWARENESS OF THE LIGHTING SALE, BY STORE TYPE

Store Type	Location*	Frequency	Percent
Lumber	(N)	15	62.5%
Lumber	(S)	16	55.2%
Do-It-Yourself	(N)	27	54.0%
Do-It-Yourself	(S)	30	51.7%
Warehouse	(N)	14	41.2%
Merchandising	(N)	5	33.3%
Warehouse	(S)	5	16.7%
TOTAL		126	46.7%

* N=NORTH OF INTERSTATE 8, S=SOUTH OF INTERSTATE 8.

Respondents who were aware of the sale (n=112) reported that they learned about it mainly from their previous visits to participating stores, or through newspapers (San Diego Union Tribune, Times Advocate) or radio (Q106, FM 103.7). Those who learned about the sale from program advertising on newspapers or radio accounted for 22% of the total purchasers. This awareness level indicated that the program advertising was very effective. A few respondents (3%) reported that they learned about the lighting sale from TV (on which SDG&E did not advertise). Table 3 shows the top three sources of disseminating information that were provided by respondents.

TABLE 3
HOW DID RESPONDENTS LEARN ABOUT THE LIGHTING SALE?*

Top Three Sources	Frequency	% Respondents Who Were Aware	% Total Purchasers
Previous visit	38	33.9%	15.8%
Newspaper	33	29.5%	13.8%
Radio	20	17.9%	8.3%

* MULTIPLE RESPONSES WERE AVAILABLE.

Among the respondents who were aware of the lighting sale (n=112), 61% planned to buy cf bulbs, compared with only 9% of the respondents who were unaware of the sale. Awareness of the sale increased reported "intentions to buy". It was also noted that 71% of the respondents who were aware of the sale had previous experience with **cf** bulbs. Respondents with previous experience appeared to pay more attention to the lighting sales ads. Table 4, below, shows respondent awareness of the lighting sale by intention to buy and previous experience.

TABLE 4
PURCHASER AWARENESS OF LIGHTING SALE, BY INTENTION TO BUY AND PREVIOUS EXPERIENCE

Awareness of the Lighting Sale	Planned to Buy cf Bulbs	Did Not Plan to Buy cf Bulbs	With Previous Experience	Without Previous Experience
Aware of the Sale	60.7%	39.3%	70.5%	29.5%
Unaware of the Sale	9.4%	90.6%	59.4%	40.6%

Respondents who planned to buy **cf** bulbs before they came into participating stores provided the following reasons: energy savings, previous experience with **cf** bulbs, good price, and the need for light bulbs. Other reasons included money savings and a desire to try out the technology. Table 5 demonstrates the top four reasons respondents provided for buying **cf** bulbs.

TABLE 5
REASONS* FOR PLANNING TO BUY cf BULBS BEFORE COMING TO STORES

Top Four Reasons	Frequency	Percent
Energy Savings	20	27.0%
Previous Experience	17	23.0%
Good Price	14	18.9%
Needed Light Bulbs	12	16.2%

* MULTIPLE RESPONSES WERE AVAILABLE.

Previous Experience With cf Bulbs

Approximately two-thirds (65%) of the respondents had used **cf** bulbs before. This figure was significantly higher than the 22% (for free **cf** bulb installation and distributions) reported in the 1992 Process Evaluation for Residential Compact Fluorescent Lighting Program (Boutwell, 1993). Of course, this number represented a stratified sample of residential customers, versus the **cf** bulb purchasers in the present study. In a previous retail study (1992 Retail Pilot Program, Besa, 1993), customers with prior experience were more likely to buy more **cf** bulbs than those who did not have prior experience.

In general, respondents reported that they obtained their previous **cf** bulbs from do-it-yourself stores, SDG&E or warehouses. Other sources included lumber stores or other hardware stores. Table 6, below, lists the top three sources respondents provided for obtaining their previous **cf** bulbs.

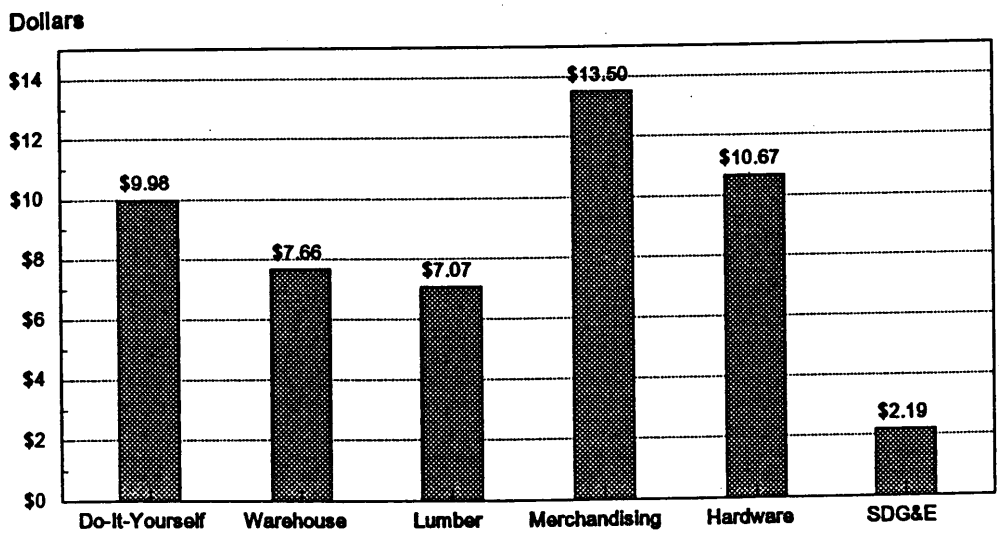
TABLE 6
TOP THREE SOURCES FOR OBTAINING PREVIOUS cf BULBS*

Top Three Sources	Frequency	Percent
Do-It-Yourself Store	50	34.7%
SDG&E	26	18.1%
Warehouse	13	9.0%

* MULTIPLE RESPONSES WERE AVAILABLE.

Respondents were also asked to estimate the cost of previous **cf** bulbs. Respondents who purchased **cf** bulbs in lumber stores and warehouses reported the lowest average cost, while purchasers in merchandising stores reported the highest. It was surprising to note that four respondents who obtained **cf** bulbs from SDG&E reported some costs associated with their **cf** bulbs. Of course, they may have provided the costs of **cf** bulbs purchased after SDG&E's give-away, or simply estimated the value of the **cf** bulbs given them. The overall price range reported was $3.00 - $20.00 (average $9.72). Figure 2 shows the average costs of **cf** bulbs reported by the respondents, by store type.

FIGURE 2
AVERAGE cf BULB COST,*
BY STORE TYPE



* INCLUDED ONLY THOSE PROVIDING COST DATA.

Major Advantages of cf Bulbs

Respondents were asked to provide the major advantages of **cf** bulbs. Almost all (97%) were able to recall at least one. The most often mentioned advantage (67%) was energy savings, followed by money savings, longer bulb life, better light quality, low heat, and better lighting color quality. Table 7 lists the top four advantages of **cf** bulbs provided by the respondents.

TABLE 7
TOP FOUR ADVANTAGES OF cf BULBS*

Top Four Advantages	Frequency	Percent
Energy Savings	161	67.1%
Money Savings	112	46.7%
Longer Bulb Life	66	27.5%
Better (Brighter) Light	41	17.1%

* MULTIPLE RESPONSES WERE AVAILABLE.

Respondents with previous **cf** bulb experience were more likely to report better light quality as one of the major advantages of **cf** bulbs. However, previous experience with **cf** bulbs had no significant impact on the awareness of other major **cf** bulb advantages, such as energy savings, money savings, and longer bulb life. Table 8 shows respondent recollection of **cf** bulb advantages (with previous **cf** bulb experience).

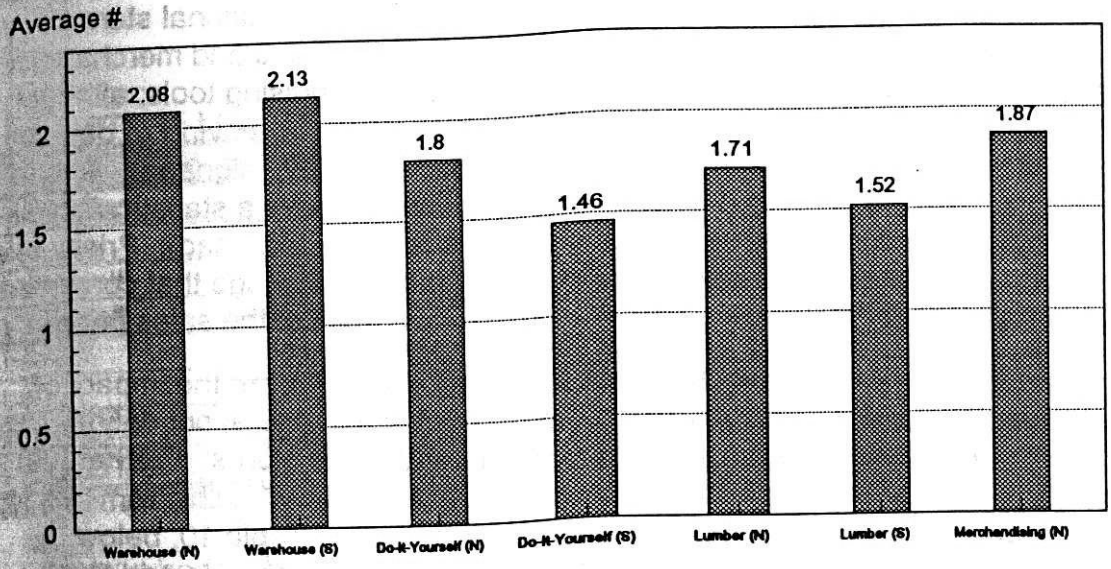
TABLE 8
TOP FOUR ADVANTAGES OF cf BULBS*, BY PREVIOUS EXPERIENCE WITH cf BULBS

Top Four Advantages	HAD USED cf BULBS	HAD NOT USED cf BULBS
Save Energy	65.2%	70.6%
Save Money	47.7%	44.7%
Longer Bulb Life	27.1%	28.2%
Better (Brighter) Light	21.3%	9.4%

* MULTIPLE RESPONSES WERE AVAILABLE.

The respondents from both warehouses were better able to recall the advantages of **cf** bulbs, while respondents from two stores south of Interstate 8 (Do-It-Yourself and Lumber stores) were significantly less able to do so. Figure 3 demonstrates the average number of **cf** bulb advantages reported per respondent, by store type.

FIGURE 3
AVERAGE cf BULB ADVANTAGES REPORTED*
PER RESPONDENT BY STORE TYPE



*MULTIPLE RESPONSES WERE AVAILABLE.

Only 18% (n=44) of the respondents looked at other competing brands before purchasing SDG&E's **cf** bulbs. Deciding factors in their choice of the **cf** bulbs are shown in Table 9. Approximately three quarters (75%) of respondents reported "good price" was a major factor in their choice of **cf** bulbs. They were apparently conscious of regular **cf** bulb cost and took advantage of the sale. The lack of a competitive search would indicate the presence of some impulse buying behavior.

TABLE 9
FACTORS IN RESPONDENT CHOICE OF cf BULBS

Factors	Frequency	Percent
Good Price	33	75.0%
cf Bulb Attributes (bright, color, cool)	2	4.5%
Others	9	20.5%
TOTAL	44	100.0%

Lighting Display Effectiveness

Several methods were utilized by stores to attract customer attention to lighting displays. In general, stores provided high exposure merchandising areas ("end caps") and displayed point-of-purchase materials (which showed 75% energy savings and the special pricing). Some stores also provided lighting displays to show lighting quality. Brochures were also provided at store displays (except the warehouses) to educate customers about the technology and the benefits of **cf** bulbs. (Please see Appendix C for store lighting display details).

The do-it-yourself and lumber stores provided SDG&E signage, additional store signs, lit bulb displays, and attractive end-cap locations. The warehouses and merchandising stores chose not take advantage of all of the available merchandising tools; although the warehouses made some improvements in the second week by moving **cf** bulbs to 1/2 end-caps within the stores (better locations and added SDG&E signage). The combined "quality" of store lighting displays did not appear to have a statistically significant impact on product sell-through (merchandising store excluded). Price appeared to be the driver in the sales decision. Even minimal signage that conveyed the cost of the bulbs appeared to be sufficient to motivate sales at the sales price.

Too many confounding variables were present to adequately analyze the impact of signage in the single merchandising store in the present study. Here, not only was the display quality poor, but the location was the worst of any of the stores. Further, the poor sales may reflect that customers generally do not purchase **cf** bulbs from this type of store (See Table 6 for major sources for obtaining **cf** bulbs). Table 10, below, indicates display types, locations, and other merchandising methods. In addition, store facings (from store audits) and display ratings of overall display "quality" are also provided. The most important impact of the displays was to make customers aware of the price and value of the **cf** bulbs, and they appeared to be successful in this role.

TABLE 10
STORE LIGHTING DISPLAYS AND LEVEL OF SELL-THROUGH, BY STORE TYPE

Store Type	SDG&E Sign	Store Sign	Lit Bulbs	End Cap	Loca-tion	# of Facings[1]	% cf Sold[2]	*3
Do-It-Yourself (N)	Yes	Yes	Yes	Yes	Good	12/24		
Do-It-Yourself (S)	Yes	Yes	Yes	Yes	Good	0/11	59.1%	G
Lumber (N)	Yes	Yes	Yes	Yes	Good	5/24		
Lumber (S)	Yes	Yes	Yes	Yes	Good	N/A	56.5%	
Warehouse (N)	Yes	Yes	No	Yes	Fair	N/A		M
Warehouse (S)	Yes	Yes	No	1/2	Fair	14/0	60.1%	
Merchandising (N)	No	Small	No	Yes	Poor	0/30	31.8%	P

1: STORE AUDIT DATA FOR FIRST WEEK OF INTERCEPT (FIRST # = AISLE FACINGS, SECOND # = END CAP FACINGS).
2: STORE SALES DATA (PERCENTAGE OF cf BULBS SHIPPED THAT WERE SOLD).
3: STORE DISPLAY RATINGS (G = GOOD, M = MODERATE, P = POOR).

A majority (83%) of the respondents felt the lighting displays were helpful. However, more than half (53%) of respondents from the warehouse south of Interstate 8 were less sure of the helpfulness of the displays. Once again, language barriers (i.e., English versus Spanish) may have influenced this response. However, it should be noted that the quality of store lighting displays did not appear to have significant impact on respondent feelings about the helpfulness of the lighting displays. All of the respondents from the merchandising store, which had the poorest lighting displays and worst location, reported that store lighting displays were helpful to them. Table 11 provides the percentage of respondents who felt store lighting displays were helpful by store type.

TABLE 11
WAS STORE LIGHTING DISPLAYS HELPFUL TO RESPONDENTS (YES/NO)?

Store Type	Location*	Frequency (Yes)	Percent
Merchandising	(N)	15	100.0%
Warehouse	(N)	30	88.2%
Do-It-Yourself	(N)	44	88.0%
Do-It-Yourself	(S)	51	87.9%
Lumber	(S)	20	83.3%
Lumber	(N)	24	82.8%
Warehouse	(S)	14	46.7%
TOTAL		198	82.5%

* N=NORTH OF INTERSTATE 8, S=SOUTH OF INTERSTATE 8.

Respondents, who felt the store displays were helpful (n=198), were asked to list the most important things they learned from store displays and to provide suggestions to make the displays more helpful. Sales price was the most important thing the respondents learned from store displays. The top four things they learned from the store displays and the top three suggestions they provided are shown in Table 12.

TABLE 12
WHAT DID RESPONDENTS LEARN FROM STORE DISPLAYS?*

Top Four Things Learned**	Frequency	Percent
Sales Price	58	29.4%
Energy Savings	45	22.8%
Helping to Find cf Bulbs	32	16.2%
Bulb Variety	29	14.7%
Top Three Suggestions	**Frequency**	**Percent**
More Visible (Larger) Displays	7	17.9%
More Colorful Displays	5	12.8%
Show Comparison	4	10.3%

* INCLUDING ONLY THOSE WHO FELT STORE DISPLAYS WERE HELPFUL (N=198).
** MULTIPLE RESPONSES WERE AVAILABLE.

Cf Bulbs Taken Out Of SDG&E's Service Territory

Overall, intercept respondents purchased 775 **cf** bulbs (an average 2.2 bulbs per respondent). Over a third (35%) of the respondents reportedly were going to take their **cf** bulbs out of SDG&E's service territory. These **cf** bulbs accounted for approximately 30% of the total **cf** bulbs purchased. Respondents from Mexico accounted for 34% of the total respondents. However, their **cf** bulb purchases were slightly lower (1.8 **cf** bulbs compared to 2.3 respectively). Table 13 shows the reported destination of **cf** bulbs.

TABLE 13
DESTINATION OF PURCHASED cf BULBS

Destination of cf Bulbs Purchased	Percent of Respondents (n=262)	Percent of cf Bulbs Purchased (n=775)	Average # of cf Bulbs Per Respondent
SDG&E Area	64.6%	70.2%	2.3
Mexico	33.7%	27.4%	1.8
Other	1.7%	2.4%	3.2

In general, do-it-yourself and warehouses were the major stores where respondents purchased their **cf** bulbs. Two stores (do-it-yourself and warehouse) south of Interstate 8 were the major sources for Mexican/Hispanic purchasers. Territory wide, 27% of the **cf** bulbs purchased were reportedly taken to Mexico. Table 14, below, shows the average number of **cf** bulbs purchased, percent of total **cf** bulbs purchased, and their destinations by store type.

TABLE 14
DESTINATION OF PURCHASED cf BULBS, BY STORE TYPE

Store Type	Location*	Average # cf Bulbs Per Respondent	Percent cf Bulbs Purchased (n=775)	Percent cf Bulbs to Mexico
Do-It-Yourself	(N)	3.6	23.5%	0%
Lumber	(N)	2.9	10.8%	0%
Merchandising	(N)	2.3	4.1%	0%
Lumber	(S)	2.2	6.6%	0%
Warehouse	(N)	1.8	8.0%	0%
Do-It-Yourself	(S)	1.8	17.6%	17.0%
Warehouse	(S)	1.7	29.4%	83.0%
TOTAL		2.2	100.0%	100.0%
		Percent Total cf Bulbs to Mexico ==>		27.4%

* N=NORTH OF INTERSTATE 8, S=SOUTH OF INTERSTATE 8.

It is important to note, that the intercept interviews represent only a "snap shot" of the entire SDG&E program. Therefore, care should be taken in interpreting data such as those just presented. These data should be viewed in conjunction with other available sources of data (e.g., store sales data or purchase "bounceback" cards).

The majority of respondents (91%) purchased **cf** bulbs for residential use, for business use (6%), and for both home and business (3%). Total **cf** bulbs purchased for business use accounted for only 9% of the total **cf** bulbs. The majority of **cf** bulbs purchased for business use were obtained from do-it-yourself stores (62%) and warehouses (26%). Table 15 shows the distribution of **cf** bulbs purchased for business use, by store type.

TABLE 15
DISTRIBUTION OF PURCHASED cf BULBS FOR BUSINESS USE, BY STORE TYPE

Store Type	Location*	Number Respondent	Number cf Bulbs Purchased	% cf Purchased for Business Use
Do-It-Yourself	(N)	2	32	43.8%
Do-It-Yourself	(S)	4	13	17.8%
Warehouse	(S)	10	14	19.2%
Lumber	(N)	2	9	12.3%
Warehouse	(N)	2	5	6.9%
TOTAL		20	73	100.0%
		% Total cf Bulbs For Business Use ==>		9.4%

* N=NORTH OF INTERSTATE 8, S=SOUTH OF INTERSTATE 8.

NON-PURCHASERS - SPECIFIC FINDINGS

Non-purchasers (customers who stopped at store lighting displays, but did not purchase **cf** bulbs) were also interviewed. Altogether, 373 non-purchasers responded to the intercept interviews. Twenty-three purchasers (9%) eventually purchased **cf** bulbs after their interviews.

Respondent Awareness of the cf Lighting Sale

Overall, 23% of the non-purchasers were aware of the **cf** lighting sale before they came into the participating store (comparing to 47% purchasers). Respondents from stores north of Interstate 8 were generally more aware of the sale than those from stores south of Interstate 8. Table 16 shows sale awareness by store type.

TABLE 16
AWARENESS OF THE LIGHTING SALE, BY STORE TYPE

Store Type	Location*	Frequency	Percent
Merchandising	(N)	7	29.2%
Warehouse	(N)	12	28.6%
Do-It-Yourself	(N)	13	26.0%
Do-It-Yourself	(S)	16	23.9%
Lumber	(N)	6	21.4%
Warehouse	(S)	5	16.1%
Lumber	(S)	3	11.1%
TOTAL		62	23.1%

* N=NORTH OF INTERSTATE 8, S=SOUTH OF INTERSTATE 8.

Respondents who were aware of the sale (n=62), reported that they learned about it mainly from previous visits to participating stores and through radio and newspaper advertising. Those who learned about the sale from program advertising on radio or newspapers accounted for 11% of the total non-purchasers. Table 17 shows the top three sources for disseminating sales data the respondents provided.

TABLE 17
HOW DID RESPONDENTS LEARN ABOUT THE LIGHTING SALE?*

Top Three Sources	Frequency	% Respondents Who Were Aware	% Total Non-Purchasers
Radio	18	29.0%	6.7%
Previous visit	13	21.0%	4.8%
Newspaper	11	17.7%	4.1%

* MULTIPLE RESPONSES WERE AVAILABLE.

Among non-purchasers **who were aware** of the lighting sale, only 10 respondents (16%) planned to buy **cf** bulbs when they came into the participating stores. The reasons provided for not buying **cf** bulbs focused on: (1) Not the right type/size; (2) not needed at the present time; or (3) other reasons (e.g., forgot the wattage, etc.).

The majority of the non-purchasers (83%) did not plan to buy any types of lights when they came into the store. However, 85% (n=193) reported that they would have chosen **cf** bulbs, had they planned to buy. Table 18 shows the top four reasons they provided for using **cf** bulbs.

TABLE 18
WHY WOULD RESPONDENTS HAVE CHOSEN cf BULBS*?

Top Four Reasons	Frequency	Percent
Energy Savings	84	43.5%
Money Savings	36	18.7%
Better Light Quality	33	17.1%
Sales Price	22	11.4%

* MULTIPLE RESPONSES WERE AVAILABLE.

Only 15% of non-purchasers (n=35) who did not plan to buy any types of lights, said they would **not** have chosen **cf** bulbs, even if they had planned to buy. Their reasons included: (1) Don't like them; (2) don't need them now; and (3) would not fit.

Previous Experience With cf Bulbs

Over half of the non-purchasers (55%) reported having used **cf** bulbs prior to their interviews. While consistent with the purchasers' responses (65%), it is highly likely that shoppers in these types of stores may be more prone to purchasing and using **cf** bulbs. Non-purchasers with previous experience obtained their **cf** bulbs from do-it-yourself stores, SDG&E or warehouses. Other sources included hardware stores, lumber stores, or merchandising stores. Table 19, below, lists the top three sources of previous **cf** bulbs.

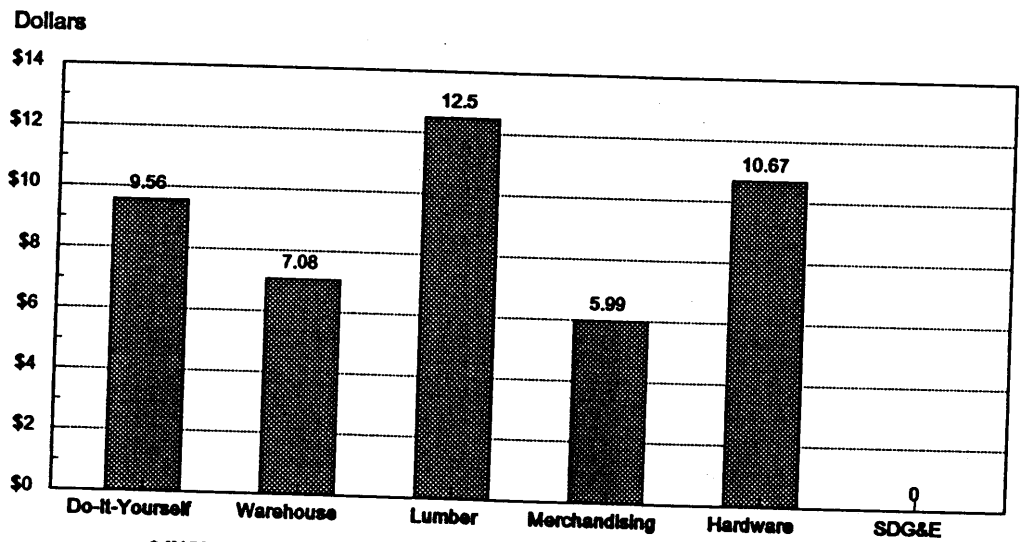
TABLE 19
WHERE DID NON-PURCHASERS OBTAIN PREVIOUS cf BULBS?*

Top Three Sources	Frequency	Percent
Do-It-Yourself Store	54	40.3%
SDG&E	27	20.1%
Warehouse	19	14.2%

* MULTIPLE RESPONSES WERE AVAILABLE.

For respondents who provided cf bulb cost data, the average estimated cost was $9.21 per cf bulb. As expected, non-respondents who had been given cf bulbs by SDG&E reported that they obtained them at no cost. The overall price range reported was $2.50-$35.00. Figure 4 illustrates the average estimated costs of previous cf bulbs obtained by store type.

FIGURE 4
AVERAGE cf BULB COST*, BY STORE TYPE



* INCLUDES ONLY THOSE WHO PROVIDED COST DATA.

Major Advantages of cf Bulbs

The majority of non-purchasers (92%) were able to report at least one of the major advantages of cf bulbs (energy savings, money savings, longer bulb life, and better lighting quality). Non-purchasers appeared to be as aware of cf bulb advantages as purchasers (as compared with Table 7 for top four advantages provided by purchasers). Table 20 lists the top four advantages of cf bulbs provided by the non-purchasers.

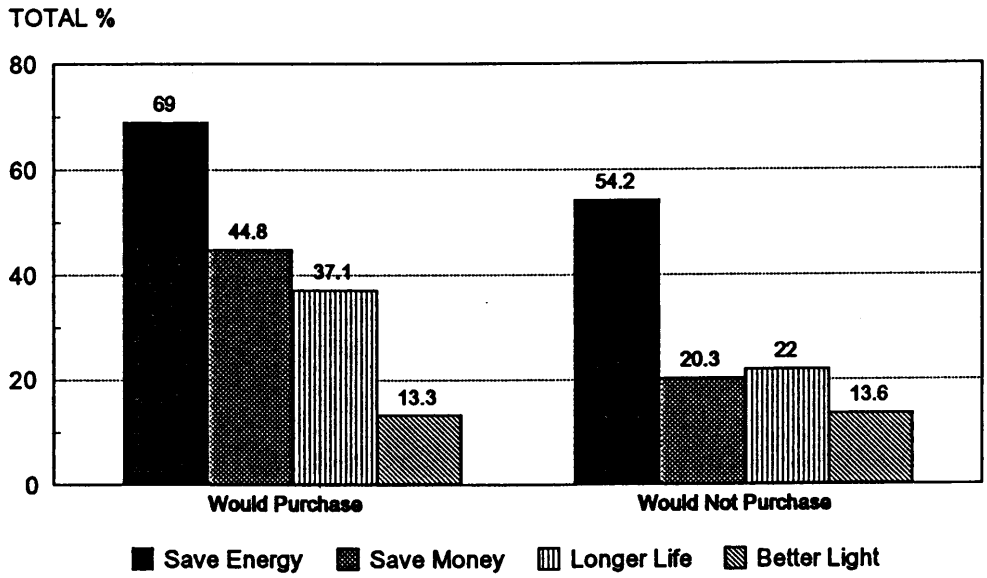
TABLE 20
TOP FOUR ADVANTAGES OF cf BULBS*

Top Four Advantages	Frequency	Percent
Energy Savings	177	65.8%
Money Savings	102	39.4%
Longer Bulb Life	91	33.8%
Better (Brighter) Light	36	13.4%

* MULTIPLE RESPONSES WERE AVAILABLE.

Respondent awareness of the advantages of **cf** bulbs was higher for those who reported they would have chosen **cf** bulbs had they planned to buy, than those reporting they had no such intention. This strongly suggests that awareness of **cf** bulb advantages may have a significant impact on future **cf** bulb purchase decisions. Figure 5 shows the percentages of respondents who reported the top four advantages of **cf** bulbs, by their intention to buy **cf** bulbs in the future.

FIGURE 5
TOP FOUR ADVANTAGES OF cf BULBS
BY WHETHER RESPONDENTS WOULD BUY cf BULBS



The Effectiveness of the Lighting Display

In general, most non-purchasers still felt the lighting displays were helpful. The major factors that attracted them to the lighting displays are shown in Table 21, below.

TABLE 21
WHAT ATTRACTED RESPONDENTS TO THE LIGHTING DISPLAYS?*

Top Four Things	Frequency	Percent
Sales Price	43	16.0%
Have Seen It Before	43	16.0%
Energy Savings	38	14.1%
Interested in Information	21	7.8%

* MULTIPLE RESPONSES WERE AVAILABLE.

About 19% of the respondents (n=51) felt that the information in the lighting displays was questionable or unclear. Their major areas of concerns were: no information on how cf bulbs worked, no information on how to install or replace them, or whether there was a three-way function. Table 22, below, shows the top four problems they noted and their suggestions for improving the lighting displays.

TABLE 22
TOP FOUR PROBLEMS ASSOCIATED WITH STORE LIGHTING DISPLAYS AND SUGGESTIONS FOR IMPROVEMENT*

Top Four Problems	Frequency	Percent
No Information on How cf Bulbs Work	16	31.4%
Broken Switch (one store)	11	21.6%
Display Not Visible	6	11.8%
Confused Prices	6	11.8%
Top Four Suggestions	**Frequency**	**Percent**
Fix the Switch (Broken on one display)	12	23.5%
Larger/More Visible Display	10	19.6%
Provide More Information on cf Bulbs	8	15.7%
Lit Up Bulbs / Show Comparison	6	11.8%

* MULTIPLE RESPONSES WERE AVAILABLE (FOR THOSE WHO PROVIDE DATA).

BOUNCEBACK CARDS

INTRODUCTION AND METHODOLOGY

The first wave of subsidized **cf** bulb sales began on May 24, 1993 and extended through July 31, 1993. During this period, four types of subsidized **cf** bulbs were sold. They were:

C2004MPF-1	(18 watt ---- 75 watt equivalent)
C2020TPMPF-1	(20 watt ---- 85 watt equivalent)
C2027MPF-1	(27 watt ---- 100 watt equivalent)
C2030TPMPF-1	(30 watt ---- 150 watt equivalent)

To supply SDG&E with a database of participants for the retail **cf** bulb program, SDG&E designed a customer reply card ("bounceback") requesting customer name, address, and phone number along with previous experience with **cf** bulbs, installation rates, wattage of replacement, and hours of operation. Lights Of America affixed a bounceback card to each **cf** bulb shipped in conjunction with the SDG&E program (See Appendix D for a copy of the bounceback card.). Customers returned their bounceback cards to SDG&E, where the information provided was databased.

This portion of the present study covers data from bounceback cards received during the first wave of sales. A total of 6,908 cards were returned during this period, representing a preliminary return rate of 13%.

EVALUATION OBJECTIVES

The primary objectives were:

- To develop a program database of **cf** bulb purchasers;
- To assess prior experience with **cf** bulbs; and
- To assess installation rates and hours of operation.

SPECIFIC FINDINGS

Cf Bulb Sales

A total of 55% of the **cf** bulbs represented by bounceback cards were sold at do-it-yourself stores, while lumber stores accounted for 20%, merchandising stores for 18%, and warehouses for less than eight percent of sales. Table 23 provides a complete breakdown of sales by store and bulb type.

TABLE 23
SALES OF cf BULBS

Store Type	Bulb Type				Total
	C2004MPF	C2020TPMPF	C2027MPF	C2030TPMPF	
Do-It-Yourself	15.0%	8.6%	18.3%	12.7%	54.6%
Lumber	4.8%	1.8%	7.3%	5.6%	19.6%
Merchandising	4.0%	2.6%	7.0%	4.5%	18.1%
Warehouse	0.1%	0.0%	7.6%	0.0%	7.7%
TOTAL	23.9%	13.1%	40.0%	22.9%	100%

As can be seen from Table 23, the most popular type of **cf** was the 27-watt (100-watt equivalent) bulb with 40% of the sales. The least popular was the 20-watt (85-watt equivalent) bulb with 13% of overall sales.

Of the 6,908 **cf** bulbs represented by bounceback cards, 93% were purchased for residential use. The remaining seven percent were purchased for commercial use. The average number of **cf** bulbs purchased per household was 1.5, while sales to businesses averaged 2.9 **cf** bulbs per site.

Prior Experience With cf Bulbs

According to the bounceback survey, 50% of the purchasers had used **cf** bulbs before. Of these, 39% had previously purchased the bulbs at stores, 14% had received them from SDG&E, and 2% had obtained them from other sources (multiple responses on sources of prior **cf** bulbs were possible). Thirty-four percent of the respondents who had used **cf** bulbs in the past purchased the bulbs from stores instead of receiving them through SDG&E or from other sources.

Installation Rates and Hours of Operation

The percentage of cf bulbs reported installed was 91.3%, with an average estimated daily usage of 4.57 hours. Both of these figures are somewhat higher than numbers reported in the March 1993 Process Evaluation (80% overall installation and 3.7 hours average use). It should be noted that the method of distribution was considerably different in the current evaluation. Bulbs distributed in the Spring were provided and installed at no cost, while the bounceback responses represent purchases of bulbs at a subsidized cost. It can be surmised that the purchase of a cf bulb, even at a low cost, provides additional incentive to install. It is also suspected that customers have a tendency to return cards when bulbs are installed rather than prior to installation. Table 24 gives the installation rates and hours of use by bulb type.

TABLE 24
INSTALLATION RATES AND HOURS OF USE, BY BULB TYPE

	Bulb Type				Total
	C2004MPF	C2020TPMPF	C2027MPF	C2030TPMPF	
Installation Rate	90.0%	93.1%	90.1%	94.0%	91.3%
Hours of Operation	4.7	4.4	4.6	4.5	4.6

Replacement Wattages and Estimated Savings

When a conventional light bulb is replaced with a compact fluorescent bulb, two energy-related factors should be considered: (1) the *actual* wattage of the replacement, and (2) the *equivalent* wattage of the replacement. The *actual* wattage of the cf bulb reflects the amount of energy *savings*, whereas the *equivalent* wattage of the cf bulb reflects the purchaser's desired *level of lighting* (lumens). For example, a customer replacing a 60-watt incandescent bulb with an 18-watt (75-watt equivalent) compact fluorescent bulb saves 42 watts in energy, but experiences an *increase* in the level of lighting. Table 25 provides a summary of replacement wattages, as reflected by the bounceback responses.

TABLE 25
REPLACEMENT EQUIVALENT WATTAGES

Bulb Type	cf Actual Wattage	cf Equivalent Wattage	Installed Same Level of Light	Installed Lower Level of Light	Installed Higher Level of Light
C2004MPF	18	75	38.9%	27.9%	33.3%
C2020TPMPF	20	85	2.3%	37.8%	59.9%
C2027MPF	27	100	52.2%	6.4%	41.4%
C2030TPMPF	30	150	25.6%	2.3%	72.1%
TOTAL			36.2%	14.7%	49.1%

Table 25 shows that more than 72% of the 30-watt (150-watt equivalent) **cf** bulbs were purchased to replace conventional light bulbs that had lower lighting levels. This reflects a desire to increase the level of lighting, while at the same time decreasing overall energy usage. Only 2% of the purchasers of these bulbs replaced standard bulbs with higher lighting levels.

The majority (52%) of purchasers of the 27-watt (100-watt equivalent) bulbs were after the same lighting level, while more than 41% wanted additional lighting output.

Only about two percent of the respondents who bought the 20-watt (85-watt equivalent) bulbs reported replacing conventional bulbs with the same lighting level. This was probably due to the unavailability of conventional 85-watt bulbs. The majority of these purchasers opted for more light.

Purchasers of the 18-watt (75-watt equivalent) **cf** bulbs were divided evenly between replacement lighting levels. If the 28% of these purchasers who replaced higher-watt bulbs did not realized that they were opting for a lower level of lighting, there exists a potential source of dissatisfaction with the **cf** bulbs in this program.

Table 25 also reveals that in 49.1% of the cases where incandescent bulbs were replaced by **cf** bulbs, the energy savings were less than anticipated because the purchasers opted for higher levels of lighting. For example, a purchaser replacing a 100-watt incandescent bulb with a 30-watt (150-watt equivalent) **cf** bulb would experience only a 100 - 30 = 70 watt savings rather than the anticipated 100 - 27 = 73 watt savings. This loss of savings may be related to the mix of bulbs that were available. If the 85-watt and 150-watt equivalent **cf** bulbs were eliminated and a 60-watt equivalent bulb added, purchasers may be more inclined to buy replacement bulbs with same levels of lighting, hence maximizing energy savings.

Bounceback responses also provided an estimate of the energy savings which were produced by the replacement of conventional light bulbs with **cf** bulbs. Overall, the average *actual* **cf** installed watts was 24.6. The average watts replaced was 89.8. This yielded an average savings of 65.2 watts per bulb. When combined with the 4.57 hours of use per day, the average estimated savings for **cf** bulbs was 109 kWh per bulb, per year. Table 26, next page, gives the estimated savings by bulb type.

TABLE 26
ESTIMATED SAVINGS, BY BULB TYPE

	Bulb Type				Total
	C2004MPF	C2020TPMPF	C2027MPF	C2030TPMPF	
Installed Watts	18	20	27	30	24.6
Replaced Watts	78.0	82.4	90.1	106.1	89.8
Savings	60.0	62.4	63.1	76.1	65.2

Other Comments from cf Purchasers

Although there was no space provided on the bounceback survey cards for comments, 188 purchasers included comments with their responses. Many of these comments (n=52) were positive and appreciative of the subsidy provided by SDG&E. The most frequently stated negative comments (n=136, 2% of the total respondents), included the following:

- Bulb and/or harp extender did not fit in intended location (41% of all negative comments)
- Not bright enough / not bright in comparison to incandescent (13%)
- Affected TV remote control/radio static (7%)
- Broke/blew out (7%)
- Unavailability of certain types of bulbs (2%).

STORE SALES DATA

INTRODUCTION AND METHODOLOGY

Participating stores (do-it-yourself, lumber, merchandising store and warehouse) provided Lights Of America two separate "Retail Movement Reports" for the periods from May 15 through June 27, and from June 27 through August 15. The sales data summarized overall **cf** bulb sales for each of the four participating retail chains, as well as the sales data broken down by each store.

Shipping data from May 12 through July 13 for each store were also provided. The shipping data included the quantity of each of the four **cf** bulb types (C2004MPF, C2020TPMPF, C2027MPF and C2030TPMPF), date of shipping order, date order shipped, store name, P.O. number, invoice number, and carrier name.

Participating merchandising stores provided data covering only the first period of the sales program. Sales data for warehouses were not broken down by stores. Thus, the second period sales data for merchandising stores were estimated, based on the first period. The sales data for each individual warehouse were assumed to be equal.

EVALUATION OBJECTIVES

The primary objectives of this study were to:

- Track the **cf** bulb shipping and receiving data;
- Estimate sell-through rates;
- Validate sales data reported from store intercept and bounceback card surveys; and
- Estimate total "out of service territory" sales.

SPECIFIC FINDINGS

Cf Bulb Shipping Data and Sell-Through Rate

During the first wave of the program, 38 participating retail stores (10 do-it-yourself, 10 lumber, 12 merchandising stores and 6 warehouses) received total shipments of 99,696 **cf** bulbs. Approximately 53,000 of these were sold, representing a sell-through rate of 53%. Do-It-Yourself, lumber stores, and warehouses were almost equal in **cf** bulbs sold, (59%, 57% and 60%, respectively). Merchandising stores had the lowest sell-through rate (32%).

More than half of the total **cf** bulbs (58%) were sold in do-it-yourself stores. Warehouses had the lowest sales volume, accounting for only 11% of the total sales (they also received smaller **cf** bulb shipments). Table 27, below, shows store shipment and sales data, sell-through rates and percentages of total **cf** bulbs sold, by store type.

TABLE 27
STORE SHIPMENT AND SALES DATA, BY STORE TYPE

Store Type	Total cf Bulbs Shipped	Total cf Bulbs Sold	% cf Shipped That Were Sold	% of Total cf Sold
Do-It-Yourself	52,112	30,806	59.1%	58.3%
Lumber	17,440	9,845	56.5%	18.6%
Warehouse*	9,216	5,539	60.1%	10.5%
Merchandising*	20,928	6,662	31.8%	12.6%
TOTAL	99,696	52,852	53.1%	100.0%

*PROJECTED SALES DATA..

The largest shipment was for 27-watt C2027MPF **cf** bulbs. This type of bulb accounted for 38% of the total shipments. Per bounceback cards, the C2027MPF was also the most popular type of **cf** bulb, with 40% of the total sales. It was noted that there was a potential for retail carryover of C2020TPMPF bulbs, as they accounted for 20% of the shipments, but only 13% of the overall sales. Difficulties in replacing the equivalent wattage (85 watt) may have influenced the respondent decision to purchase this type of **cf** bulb.

TABLE 28
STORE SHIPMENT AND SALES DATA, BY cf BULB TYPE

Cf Bulb Type	Percent Total cf Bulbs Shipped*	Percent Total cf Bulbs Sold**
C2004MPF (≈ 75 Watt)	25.7%	23.9%
C2020TPMPF (≈ 85 Watt)	19.5%	13.1%
C2027MPF (≈ 100 Watt)	37.5%	40.0%
C2030TPMPF (≈ 150 Watt)	17.3%	22.9%

*SHIPPING DATA.
**BOUNCEBACK CARDS.

Validation of Store Intercept and Bounceback Card Survey Data

The store intercept surveys represented a "snap shot" of only 12 days in the first wave of the retail sales program (from June 30 through July 11). Bounceback card surveys covered **cf** bulb purchases during the entire sales (from the end of May through July 31). It was not surprising to note that the sales data reported in bounceback cards represented more closely the store sales data. Table 29 shows the comparison between sales data reported in store intercept surveys and bounceback cards, and store sales.

TABLE 29
COMPARISON BETWEEN STORE INTERCEPT, BOUNCEBACK CARD AND STORE SALES DATA

Store Type	Store Intercepts (June 30-July 11) (bulbs=775)	Bounceback Cards (May-July 31) (bulbs=6,908)	Total Store Sales (May-Aug) (bulbs=52,853)
Do-It-Yourself	41.0%	54.6%	58.3%
Lumber	17.5%	19.6%	18.6%
Warehouse	37.4%	18.1%	10.5%*
Merchandising	4.1%	7.7%	12.6%*
TOTAL	100.0%	100.0%	100.0%

*PROJECTED SALES DATA.

Total "Out Of Service Territory" Sales

Based on the store intercept surveys, no **cf** bulbs purchased from stores north of Interstate 8 were reportedly taken to Mexico. Thus, intercept survey data from stores south of Interstate 8 and from the second period of the first wave of the retail program were used to derive an "out-of-service territory" sales rate. In order to estimate the territory-wide total number of **cf** bulbs purchased and taken to Mexico, second period sales data for stores south of Interstate 8 (only source of Mexican/Hispanic purchases), and the percentage of intercept **cf** bulbs to Mexico were used. The following formula was utilized:

Weighted store sales data **X** **% cf** bulbs to Mexico (intercepts) =
Estimated percentage of total **cf** bulbs to Mexico.

Table 30 shows that **a total of 8.6% of all purchased cf bulbs were taken to Mexico.** The warehouse south of Interstate 8 had the highest "out of service territory" sales (7% of the total sales).

TABLE 30
TOTAL cf BULBS TAKEN TO MEXICO (WEIGHTED DATA)*

Store Type	WEIGHTED % cf Bulbs Sold in South (June-Aug.)		% Intercept cf Bulbs Sold in South to Mexico		TOTAL ESTIMATED % of cf Bulbs to Mexico
Do-It-Yourself	18.8%	X	8.7%	=	1.6%
Lumber	13.5%	X	0.0%	=	0.0%
Warehouse	16.6%**	X	42.4%	=	7.0%
Merchandising	11.4%**	X	0.0%	=	0.0%
TOTAL	16.8%	X	51.1%	=	8.6%

* APPLIED TO ENTIRE SDG&E SERVICE TERRITORY.
** PROJECTED SALES DATA.

STORE AUDITS

EVALUATION OBJECTIVES

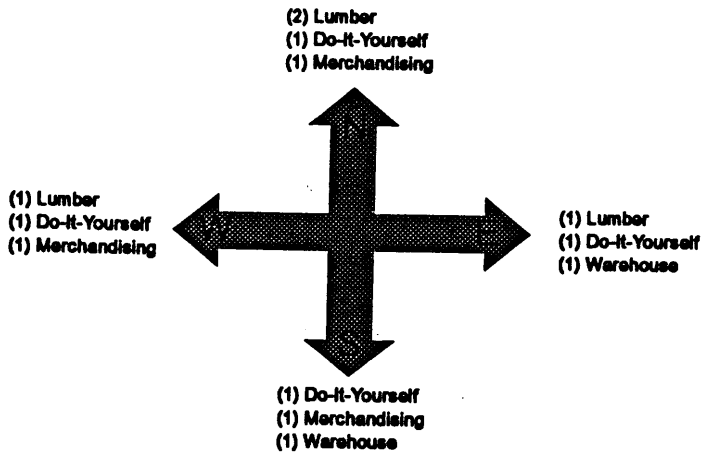
The primary objectives of the store audits were to determine:

- The range of **cf** bulbs available to customers at the target stores;
- **Cf** bulb prices and in-store promotions during the audit; and
- Perceptions of lighting managers about **cf** bulb sales and purchasers.

METHODOLOGY

A store auditing plan was designed by SDG&E and implemented by Volt/ViewTech of San Diego. Thirteen of the 40 stores participating in SDG&E's **cf** bulb program were audited, balanced by geographical location, and type of store (do-it-yourself, lumber, warehouses and merchandising). Audits were conducted prior to the start of the SDG&E program in mid-May, and at the end of the first wave (last week in July).

The types of stores and their geographical locations were:



For each audit, the auditor listed all **cf** bulb/ballast combinations available in the store, along with the **cf** bulb prices, number of facings (rows of product on the shelf), location within the store, and in-store promotions. **Cf** replacement bulbs were not tracked in the store audit.

Each time an auditor visited a participating store, he/she also interviewed the store lighting manager (if available), or a staff person working the lighting section. The store employee was questioned about sales activity in the **cf** lighting section, typical customer questions, commercial sales, and competitive promotional activity. (A copy of the interview guide is in Appendix E.)

SPECIFIC FINDINGS

The marketplace in which the subsidized Lights Of America (LOA) bulbs were competing contained only two other manufacturers - General Electric (GE) and Feit. The Feit bulbs were not carried by the merchandising stores.

Bulb Prices

Prior to SDG&E's program at Audit 1, the average price of **cf** bulbs in these stores was $14.16. At the time of Audit 2, the average price was $11.64, impacted only by the price drop in the LOA bulbs. The average price of the non-LOA bulbs remained the same over the first phase of SDG&E's program: $14.70.

The range of prices prior to and during the subsidy period was $4.77-$27.42. The lowest priced **cf** bulb ($4.77) was a 22w Circular LOA bulb which the do-it-yourself stores had on special. The highest price **cf** bulb ($27.42) was offered by Feit, a 13w tubular bulb. Table 31 shows the average prices and ranges by **cf** bulb grouping.

TABLE 31
AVERAGE PRICE AND RANGE, BY BULB GROUPING

Bulb Group	Audit 1	Audit 2	Range
All Bulbs	$14.16	$11.64	$4.77 - $27.42
Non-LOA Bulbs	$14.70	$14.70	$9.98 - $27.42
LOA Bulbs	$13.47	$ 9.35	$4.77 - $19.99
Subsidized LOA Bulbs	N/A	$ 5.86	$5.69 - $ 5.99

Bulb Locations and Facings

LOA's presence in the audited stores doubled during the first phase of SDG&E's program. Prior to the program, LOA bulbs averaged 1.8 facings; during the subsidy period, they averaged 3.5 facings. This was not due to takeover of space occupied by competing **cf** bulbs, but by adding new space.

The new spaces added were generally in prime locations, e.g., pallets in the fronts of stores, end caps, etc. At the time of Audit 1, Feit and LOA bulbs occupied some end cap space in the lumber stores, and in one do-it-yourself store, the $4.77 LOA bulbs were placed on an end cap. However, by the time of Audit 2, LOA commanded end cap and front-of-store stand-alone space at the lumber stores and do-it-yourself stores, and end cap space at the merchandising stores. At the warehouse, LOA bulbs were only found in lighting aisles at the time of the audit. (See Appendix C for typical store set-ups.)

In-Store Promotional Activity

During the first phase of the program, the display for the subsidized LOA bulbs included signage about the sale in all outlets except the warehouse. Coincident with the subsidy period, more in-store promotional activity appeared for FEIT (shelf and overhead signage, bulb display).

Interviews with Lighting Personnel

Compact Fluorescent Activity:

At the time of Audit 1, the lighting personnel interviewed, except in one or two of the thirteen stores, did not have much to report about **cf** bulb activity. By Audit 2, the lighting personnel were well aware that outside promotional activity was bringing customers in to buy the subsidized LOA bulbs.

Typical Customer Questions:

At both Audit 1 and Audit 2, the lighting personnel reported two main types of questions asked by customers about **cf** bulbs:

- Are there any real energy savings?
- Where do these bulbs fit?

In cases where there was a meter demonstrating energy use differences between **cf** and incandescent bulbs, lighting personnel could direct customers skeptical about savings to the display. The "fit" question was answered in some locations by displaying **cf** bulbs within fixtures, e.g., a circular bulb in a lamp with half the lampshade cut away.

By Audit 2, lighting personnel reported two other types of questions:

- Why aren't **cf** bulbs as bright as incandescents?
- Why isn't there a better selection of **cf** bulbs?

Customers asking the question about brightness may be confusing lighting output (lumens) versus wattage.

Residential vs. Commercial Sales:

At the time of Audit 1, lighting personnel offered percentages for commercial sales of cf bulbs which ranged from none (in a merchandising store) to 45% (in a do-it-yourself store). A separate phone survey of do-it-yourself stores, conducted earlier in the year, had yielded an estimate of about 20%-25% for cf bulb sales to commercial customers. By Audit 2, this estimate went from none to 60% (in another do-it-yourself store). Both of these estimates are higher than actual field experience (7% to 9%).

"Out of Service Territory" Sales:

In the three stores south of Interstate 8, lighting personnel were asked about the percentage of compact fluorescent sales that go across the border (Audit 2). Estimates ranged from 50-75%.

APPENDIX A

PROGRAM ADVERTISING CAMPAIGN MATERIALS

APPENDIX A-1

Compact Fluorescent Radio

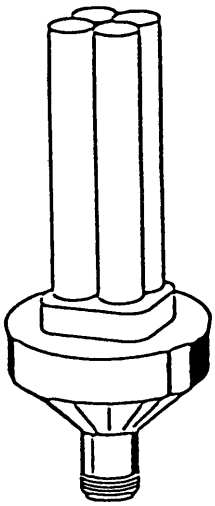
Talent/Not Announcer-read:

BING!!!...

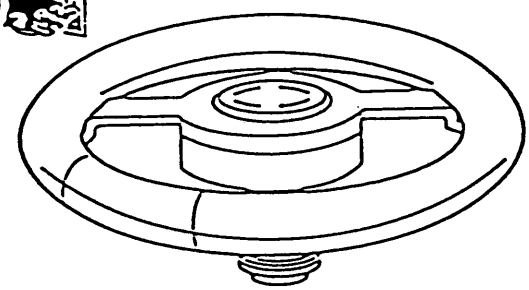
Ever heard that sound in your head? It's the sound of a bright idea hitting home... BING!!! Better get used to it (BING's start to go off like popcorn. VO continues over SFX) because SDG&E has a new program that saves you money every time you turn on a light. BING! They're working with a leading lighting manufacturer to bring you energy efficient light bulbs that use 75% less energy and last up to ten times longer than normal bulbs. BING! And now, for a limited time, you can get these bulbs at 75% off the normal retail price! Just look for the special displays at your local Home Depot, Dixieline Lumber, and Target stores. Better hurry through (furious BINGing in the BG) because it sounds like a lot of people are getting the bright idea and switching on to BIG savings with energy efficient lighting.

APPENDIX A-2

Save 75% On Energy Saving Lights



For a limited time, you can buy compact fluorescent light bulbs for the special low price of $5.99 each. Just visit your participating retail store and look for the SWITCH ON TO SAVINGS display. These bulbs use 75% less energy and last up to ten times longer than regular incandescent light bulbs. So, you'll keep on saving every time you turn on the light! You can use these light bulbs just about anywhere you need a light bulb. Simply screw them in like regular incandescent bulbs.



Quad

$5.99 OR LESS

18 watts
Replaces 75 watt regular incandescent light bulb

27 watts
Replaces 100 watt regular incandescent light bulb

Circular

$5.99 OR LESS

20 watts
Replaces 85 watt regular incandescent light bulb

30 watts
Replaces 150 watt regular incandescent light bulb

Look for the display at your local Home Depot, Dixieline Lumber, and Target Stores

A special program from SDGE *and* LOA Lights of America

APPENDIX A-3

New Compact Fluorescent Lighting DSM Program Kicks Off This Week

The company kicks its compact fluorescent lighting program this week and brings specially priced energy efficient lighting into retail distribution.

"I'm very excited about the wide distribution we're going to get with our participating retailers," says Marion Stille, Sr. Marketing Program Manager. In a combined network of forty store locations, Home Depot, Costco, Price Club, Dixieline Lumber and Target will be stocking four types of compact fluorescent bulbs. Customers can expect to see all stores fully stocked within the next few weeks.

Priced at 75% off the normal retail price, each bulb will sell for $5.99. "This is an excellent value," says Stille. "Not only are the bulbs priced to sell, but they last ten times longer than normal incandescent bulbs and cost 25% less to use!"

The purpose of this DSM program is to educate customers about the technology and help to stimulate their interest in the product. "In the past, we've been giving these bulbs to customers through energy audits," stated Stille. "But our objective is to help accelerate the adoption of the product and bring it to normal distribution."

Customers will be informed about the program in a multi-media campaign sponsored by the lighting manufacturer, Light of America. Radio, newspaper, a bill insert and point-of-sale materials will appear within the next few weeks. All communications will encourage customers to visit a store location near them.

APPENDIX B

ANNOTATED SURVEY INSTRUMENTS

Date: _____ Interviewer Initials: _____ Store: _____

COMPACT FLUORESCENT LIGHTING SURVEY (PURCHASER)

Hello, I'm conducting a brief survey for San Diego Gas & Electric. We would very much like your opinions about the compact lights you just selected. Please take the next five minutes to help us.

1. Before you came into the store today, were you aware that these compact lights were on sale?

   [126] YES (ASK QUESTIONS 1a and 1b)

   1a. How did you learn about the sale? (Previous visit - 37%; Newspaper - 26%; Radio - 17%)

   1b. Did you plan to buy these compact lights before you came into the store?

   [76] YES, Why? (Save energy - 26%; Previous experience - 23%; Good price - 18%)
   [42] NO, Did you plan to buy lights of any type? [5] YES [35] NO [2] DK
   [8] Don't know

   [236] NO (ASK QUESTION 1c)

   1c. Did you plan to buy lights of any type when you came into the store today?

   [74] YES, What type? (CF bulbs - 74%; Incandescent - 15%; Fluorescent tube - 4%)
   [161] NO [1] Don't Know

2. Have you ever used compact lights before?

   [231] YES, Where did you obtain them? (DON'T READ OPTIONS)

   2a. [26] SDG&E [64] Home Depot [141] Other(Price Club-56; Dixieline-15; Hardware stores-16)

   2b. Approximately how much did they cost per light? Mean: $8.39

   [131] NO

3. What are the major advantages of compact lights like these? (DON'T READ OPTIONS)

   [261] SAVE ENERGY
   [142] SAVE MONEY
   [94] LONGER BULB LIFE
   [11] Don't Know
   [150]OTHER (Better light - 91; Color - 26; Cooler - 24);

4. Did you look at other competing brands of lights before deciding on the one(s) you selected?

   [57] YES, What was the deciding factor in your choice of bulbs? (Good price - 67%; Light advantages - 11%; Others - 23%)

   [305] NO

5. Was the store lighting display helpful to you?

   [279] YES, What were the most important things you learned from the store displays? (Save energy - 26%; Sales price - 25%; Help to find CF bulbs - 19%; Bulb variety - 13%)

   [83] NO, What could have been done to make them more helpful? (More visible - 26%; Lit up bulbs - 13%; More colorful - 11%; Show comparison - 9%)

6. Are these compact lights for your home or business? (DON'T READ OPTIONS)

[331] HOME
[21] BUSINESS
[10] BOTH

RESPONDENT NAME: _____ PHONE #:_____
RESPONDENT ZIP CODE: 122(34%) Mexico RESPONDENT GENDER: [217] MALE [89] FEMALE [56]COUPLE
LIGHTING BROCHURE? [12] YES [350] NO # COMPACT LIGHTS: Mean: 2.2 # OTHER LIGHTS Mean: 3.0
INTERVIEW CONDUCTED IN: [126] SPANISH [236] ENGLISH

Date: _____ Interviewer Initials: _____ Store: _____

COMPACT FLUORESCENT LIGHTING SURVEY (NON-PURCHASER)

Hello, I'm conducting a brief survey for San Diego Gas & Electric. I noticed that you were looking at the display of compact fluorescent lights. Could you please help us, by taking the next five minutes to give us your opinions about this type of lighting product?

1. What first attracted you to the lighting display?
   (Save energy - 18%; Sales price - 12%; Have seen it before - 13%; Shape - 12%)

2. Was any of the information in the lighting display questionable or unclear?

   [72] YES (ASK QUESTIONS 2a and 2b)

   2a. What was the problem? (No info on how CF bulbs work - 23%; English display only - 21%; Broken switch - 15%; Display not visible - 12%)

   2b. How could we improve the display? (English & Spanish display - 21% ; Larger/visible display - 17%; Fix the switch - 15%; More info on CF bulbs - 13%)

   [290] NO
   [11] Don't Know

3. Before you came into the store today, were you aware of the sale on these compact lights?

   [72] YES (ASK QUESTIONS 3a and 3b)

   3a. How did you learn about the sale?(Previous visit-26%; Radio-25%; Newspaper-15%)

   3b. Did you plan to buy these lights when you came into the store today?

   [12] YES, Why didn't you? (Not right size-34%; Will buy later-33%; Others-33%)
   [56] NO [4] Don't know

   [301] NO

4. Have you ever used compact lights before?

   [209] YES, Where did you obtain them? (DON'T READ OPTIONS)

   2a. [27] SDG&E [77] HOME DEPOT [105] Other (Price Club-37; Hardware stores-14)

   2b. Approximately how much did they cost per light? Mean: $8.12

   [164] NO

5. Did you plan to buy any type of lights when you came into the store today?

   [59] YES, What type? (CF bulbs - 50.8%; Incandescent - 19%; Fluorescent tube - 7%)

   [313] NO, If you had, do you think you would have chosen these compact lights?

   [263] YES, Why? (Save energy-38%; Light quality-22%; Save money-21%; Price-9%)

   [50] NO, Why not? (Don't need it-16%; Don't fit-16%; Don't like it-16%; Not right type-12%)

   [1] Don't Know

6. What do you feel are the major advantages of compact lights? (DON'T READ OPTIONS)

[263] SAVE ENERGY
[134] SAVE MONEY
[124] LONGER BULB LIFE
[25] DON'T KNOW
[141] Others (Better light-44%; Color-16%; Cooler-8%)

RESPONDENT ZIP CODE: 104 (28%) Mexico GENDER: [228] MALE [103] FEMALE [42] COUPLE
LIGHTING BROCHURE: [22] YES [351] NO # CF LIGHTS Mean:1.9 # OTHER LIGHTS Mean: 4.3
INTERVIEW CONDUCTED IN: [132] SPANISH [241] ENGLISH

SDG&E QUESTIONNAIRE TRANSLATED Participant

Buenos (dias, tardes) estoy haciendo una breve intrevista para SDG&E. Queremos incluir sus opiniones acerca de los focos compactos que usted seleccionó. La intrevista tomará unos cinco minutos cuando mucho.

1. Antes de entrar a la tienda, TENIA UD. CONOCIMIENTO de que estos focos compactos estaban en oferta?
   [1] Si. (Preguntar Q1a y Q1b)
   1a. Como supo de la oferta? _____
   1b. Iba a comprar estos focos compactos antes de entrar a la tienda hoy? _____
   [2] No. (Preguntar Q1c)
   1c. Iba a comprar algun tipo de foco antes de entrar a la tienda hoy? _____

2. Ha usado los focos compactos antes?
   [1] Si. Donde los obtuvo? (Favor de NO leer las opciones)
   2a. [1] SDG&E [2] Home Depot [9] Otro especifique _____
   2b. Aproximadamente cuanto le costó cada foco? _____
   [2] No.

3. Cuales son las ventajas mas importantes de los focos compactos? (Favor de NO leer las opciones)
   [1] Ahorrar energia [0] No se.
   [2] Ahorrar dinero [9] Otro Especifique _____
   [3] El foco dura mas

4. Vió a otras marcas de focos antes de decidirse a comprar estos?
   [1] Si. Que fue el factor mas importante en su decisión para comprar estos focos? _____
   [2] No.

5. Fue una ayuda para ud. la exhibición de focos? _____
   [1] Si. Que fueron las cosas mas importantes que aprendió de la exhibición? _____
   [2] No.

6. Va a usar esos focos compactos para su casa o para su negocio?
   [1] Casa
   [2] Negocio. Favor de describir su uso. _____

ZIP CODE = Codigo Postal

SDG&E QUESTIONNAIRE TRANSLATED. Non-participant N

Buenos (dias, tardes) estoy haciendo una breve intrevista para SDG&E. Observé que ud. estaba mirando la exhibición de focos compactos. Queremos incluir sus opiniones acerca de este tipo de foco.

1. Qué fue lo primero que le atrajo a ver la exhibición?
_____

2. La información que se encuentro en la exhibición fue difícil de entender?
   [1] Si (preguntar Q2a y Q2b)
      2a. Qué fue lo difícil de entender?_____
      2b. Como podemos mejorar la exhibición? _____

3. Hoy, antes de entrar a la tienda, sabia ud. de la oferta de estos focos compactos?
   [1] Si. (preguntar Q3a y Q3b)
      3a. Como se entero de la oferta? _____
      3b. Cuando entró a la tienda hoy, pensaba en comprar estos focos? _____
      [1] Si. Porque no lo hizo? _____
      [2] No.

4. Ha usado los focos compactos antes?
   [1] Si. Donde los obtuvo? (Favor de NO leer las opciones)
      2a. [1] SDG&E [2] Home Depot [9] otro _____
      2b. Aproximadamente cuanto costó cada foco? _____
   [2] No.

5. Pensaba usted en comprar un tipo de foco cuando entro a la tienda hoy? _____
   [1] Si. Que tipo de foco? _____
   [2] No. Si hubiera pensado en comprar focos, hubiera escogidos estos focos compactos? _____
      [1] Si. Porque? _____
      [2] No. Porque no? _____

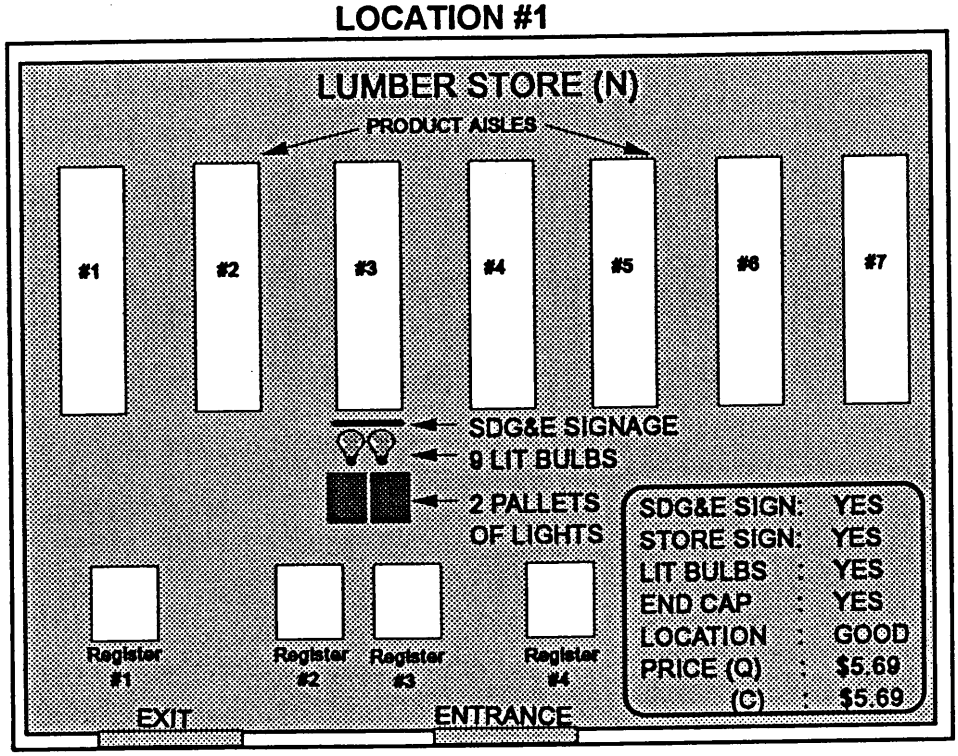
6. Cuales piensa ud. que son las ventajas mas importantes de los focos compactos? (Favor de NO leer las opciones)
   [1] Ahorrar energia
   [2] Ahorrar dinero
   [3] El foco dura mas
   [0] No se.
   [9] Otro, Describe _____

ZIP CODE = Codigo Postal

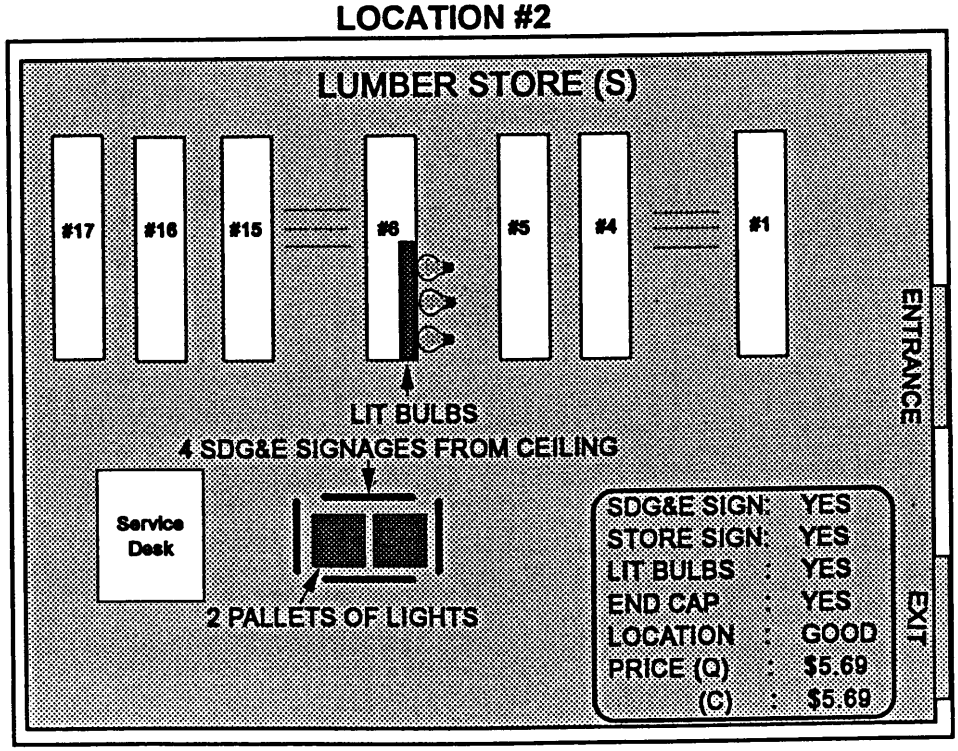
APPENDIX C

LOCATION OF THE LIGHTING DISPLAYS

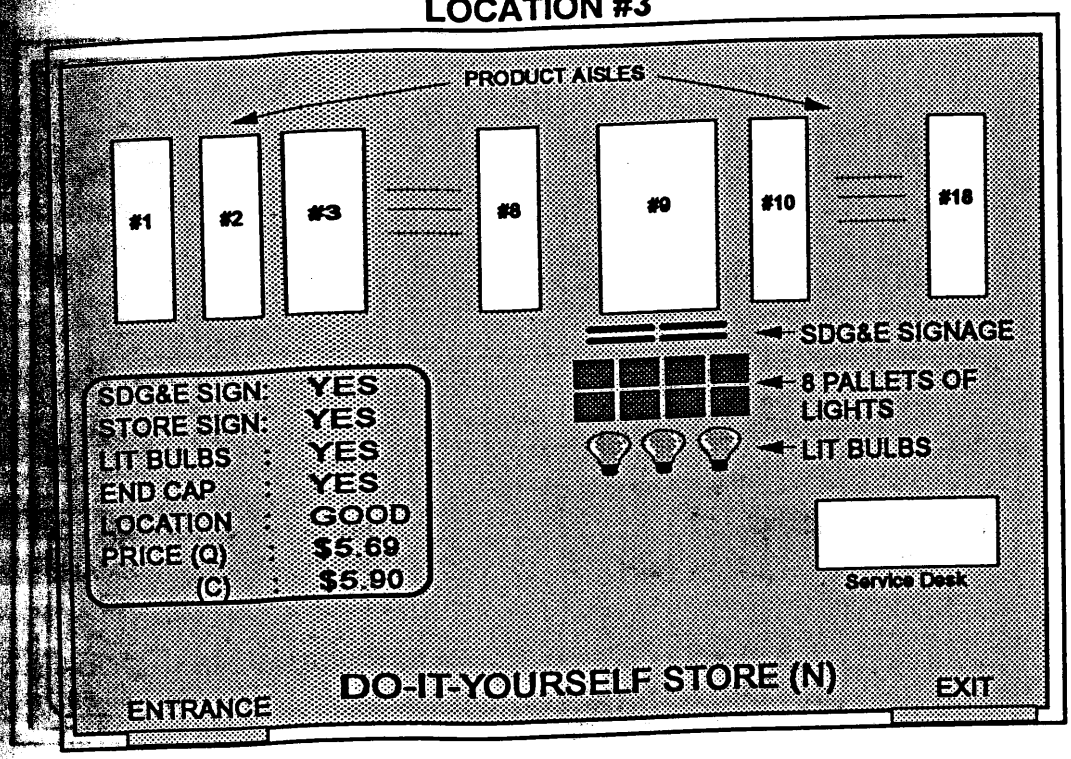
LOCATION #1



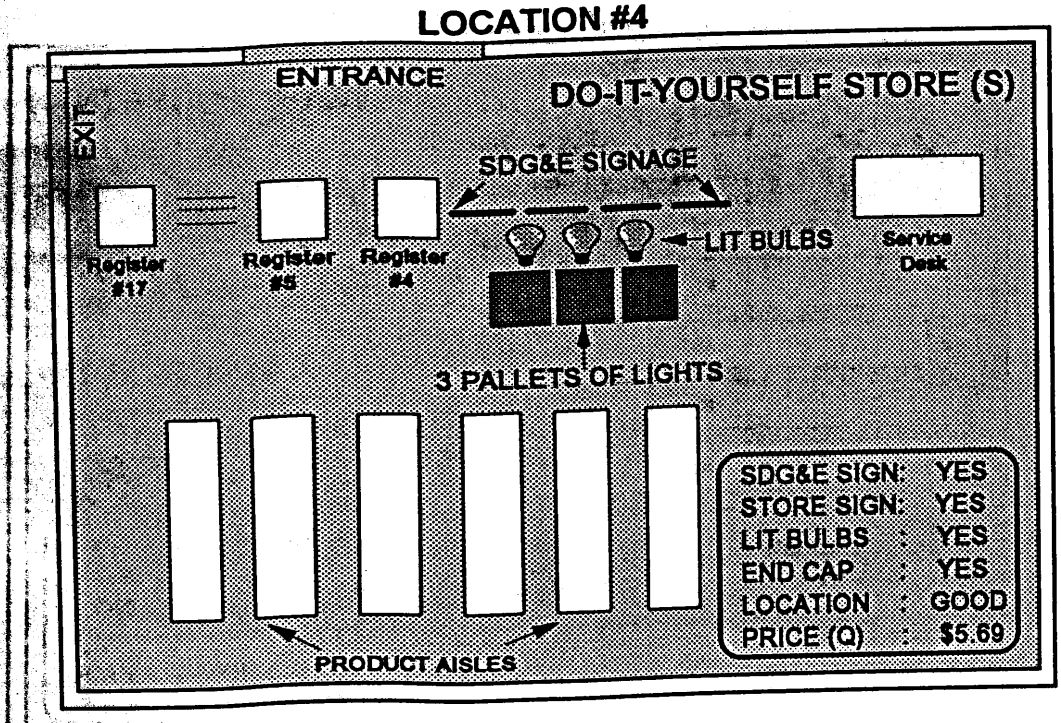
LOCATION #2



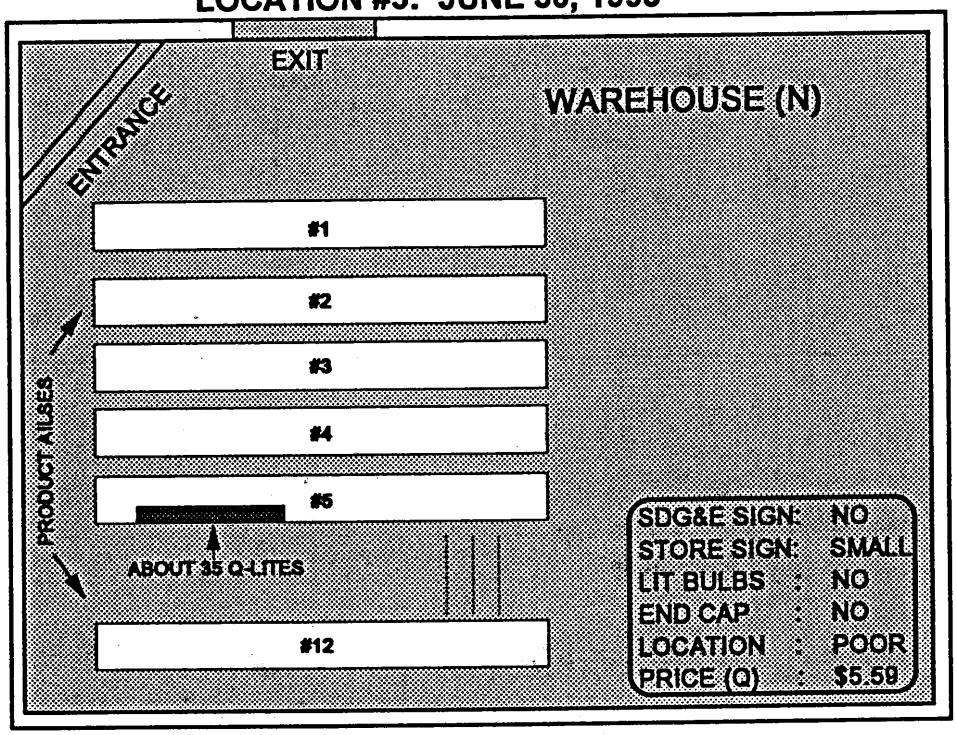
LOCATION #3



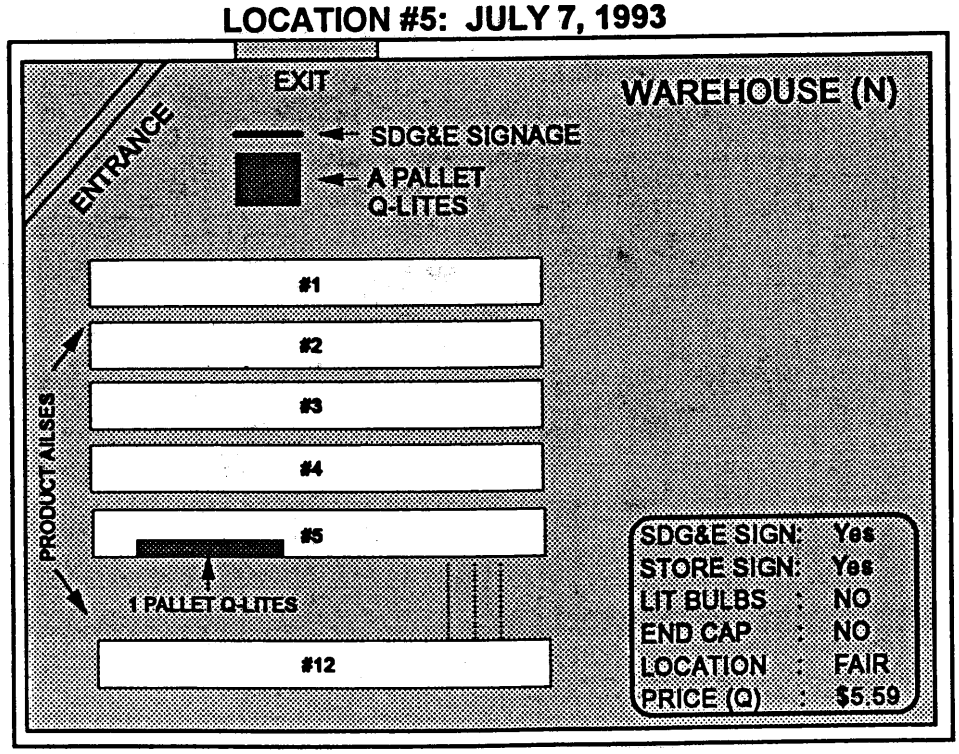
LOCATION #4



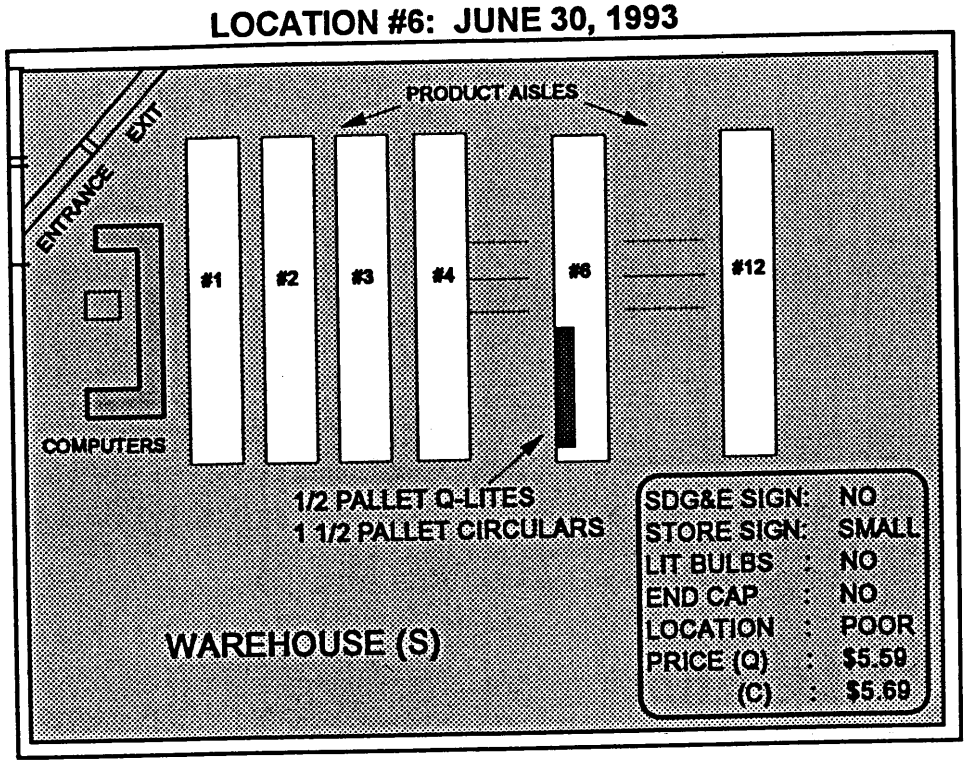
LOCATION #5: JUNE 30, 1993



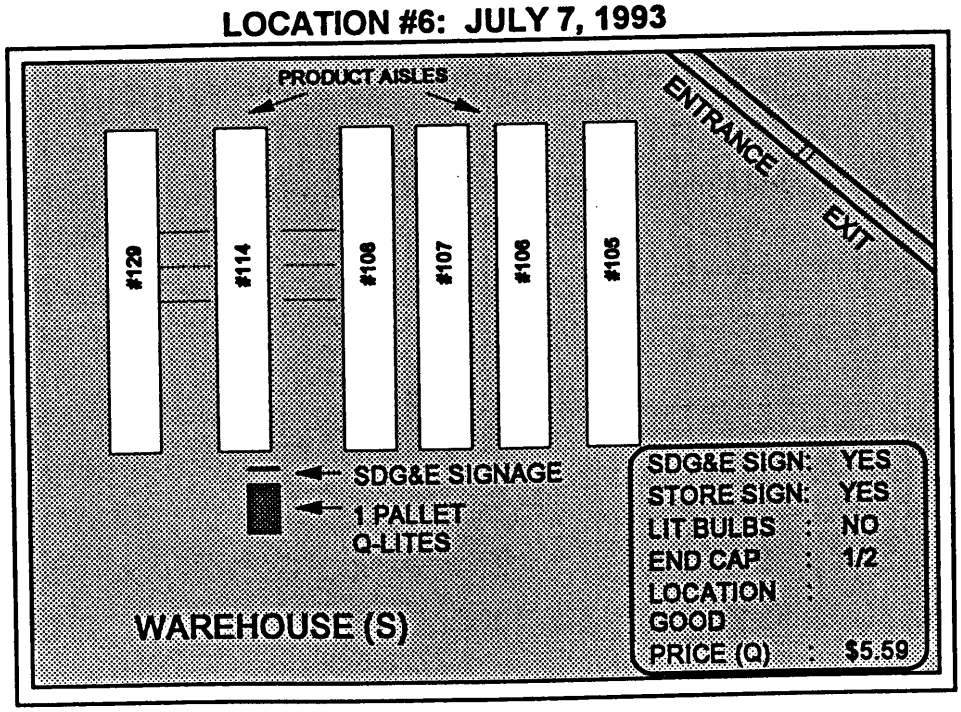
LOCATION #5: JULY 7, 1993



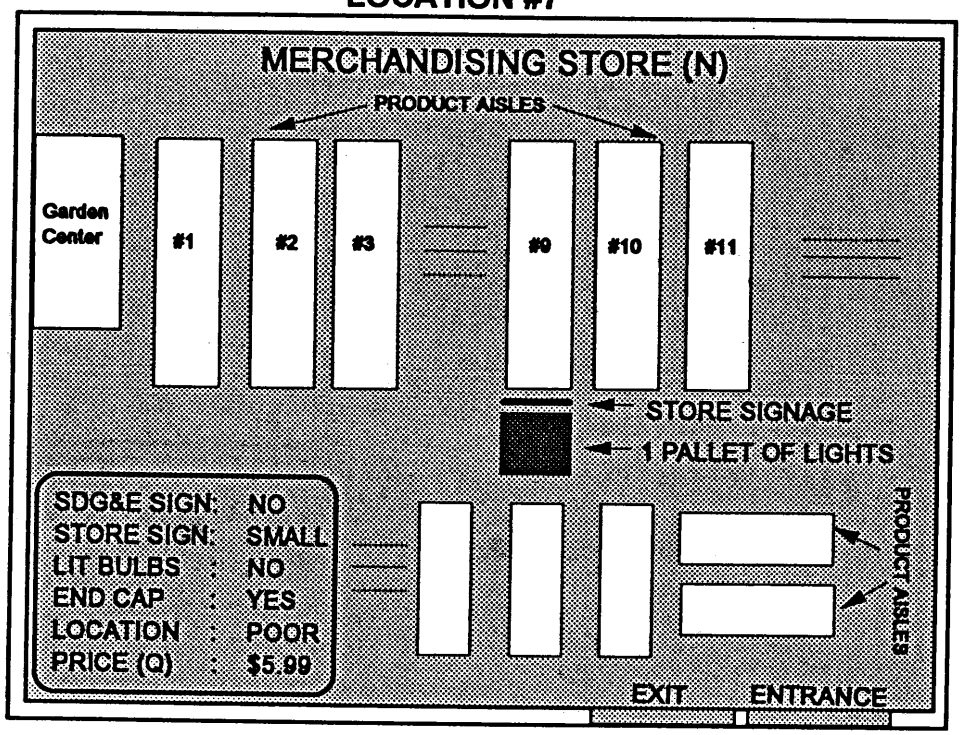
LOCATION #6: JUNE 30, 1993



LOCATION #6: JULY 7, 1993



LOCATION #7


MERCHANDISING STORE (N)
PRODUCT AISLES
Garden Center
#1
#2
#3
#9
#10
#11
STORE SIGNAGE
1 PALLET OF LIGHTS
SDG&E SIGN: NO
STORE SIGN: SMALL
LIT BULBS : NO
END CAP : YES
LOCATION : POOR
PRICE (Q) : $5.99
PRODUCT AISLES
EXIT
ENTRANCE

APPENDIX D

BOUNCEBACK CARD SURVEY INSTRUMENT

SDG&E®

WE NEED YOUR HELP! Please take the next few minutes to answer the questions below. Thank you.

1. Is this bulb for a household or business?
   ☐household ☐business
2. Where was this bulb purchased? (Store name:)
   _____
3. Has your household/business used this type bulb before?
   ☐Yes/Where did you obtain them?
   ☐Purchased at a store ☐Given by SDG&E ☐Other
   ☐No
4. Has this bulb been installed? ☐Yes ☐No
5. If installed: What was the wattage of the bulb it replaced?
   ☐40w ☐60w ☐75w ☐100w ☐150w
   ☐Other wattage *(specify)*:_____
6. If installed: How many hours a day is this bulb on? _____

Your satisfaction with this bulb is very important to us. We may want to contact you some time in the future to discuss this bulb, please provide the following information (which we will keep confidential).

Name:_____

Address:_____

City: _____ State: _____

Zip Code: _____ Phone No. (____) _____

C2027MPF-1

APPENDIX E

STORE AUDIT INTERVIEW GUIDE FOR LIGHTING MANAGERS

1. How have compact fluorescent bulbs been selling in the last month?

2. Have you noticed any changes in **cf** movement (since last visit)?

3. What other promotions are running besides the LOA bulb sale?

4. What questions are customers asking about **cf** bulbs?

5. What percentage of the **cf** bulbs sold are going to commercial customers, in your estimation?

6. (For border stores only) What percentage of the **cf** bulbs sold are going to Mexico, in your estimation?

REFERENCES

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Besa, A. (1993) Appliance Efficiency Incentives: Compact Fluorescents, 1992 Retail Pilot Program (Report No. MIAP-92-P09-S01-R308). SDG&E.