

Study Lights the Way

research shows how lighting affects shopper behavior

Want proof that an illuminated merchandise display will more than double sales? Such documentation may be closer than ever.

A recent study shows that in-store display lighting does, in fact, affect shopper traffic and behavior and drive sales. It causes people to slow down, make eye contact, enter the store, browse longer at the display, pick up the product and handle it and then buy it.

And if landmark research conducted by Hera Lighting (Norcross, Ga.) on behalf of General Nutrition Centers (Pittsburgh) takes a quantum leap toward statistically proving these points, frustration may have been the mother of invention.

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Hera president Christian Bollrath was frustrated. In early 2002, the company's SlimLite integrated lighting system for display shelving had been approved for a GNC prototype store. But it was cut from the final contract because the health care products retailer was simply not convinced that the aesthetic benefits of lighted fixtures would transfer to the bottom line.

Bollrath's response not only changed GNC's mind, it may well have initiated an industry-wide shift toward more rigorous scientific observation and analysis of shopper behavior in general.

"This wasn't the first time our products had been specified for the prototype but excluded from the rollout because of budgetary reasons," says Bollrath. "We needed to find a way to show that display lighting isn't really an

added cost, but rather an investment that adds revenue. Unfortunately, nothing like that was available."

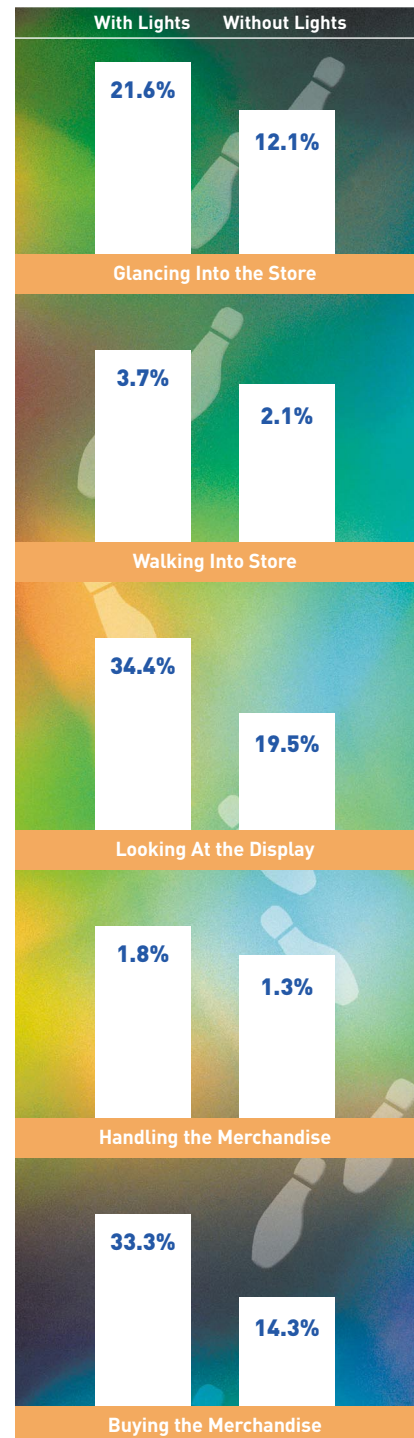
Formal research data didn't exist to support this conviction, so Hera commissioned an independent study. Designed and executed by Merchant Mechanics (Lawrence, Mass.), the study was conducted at two GNC mall-based locations with the blessing of GNC construction vp Art McSorely.

Bollrath says the solid statistical evidence the study generated surprised even Hera. The project documented the movements and behavior of more than 13,500 adult shoppers over two consecutive days at a pair of regional malls in New England. The study's physical targets were identical endcap displays, a single copy of which was located approximately 8 feet inside the concourse entrance of each store. SlimLite plug-in modular fluorescent lighting systems were installed in each display unit, illuminating a selection of multi-vitamin products on the shelves.

For the purposes of the test, the endcaps were lighted on alternate days, effecting a "mirrored" control scenario intended to balance variables such as traffic and weather. The test protocol also standardized as many other conditions as possible, including ambient lighting, product selection and product placement.

"This was an objective, real time, on-site test of how display lighting affected consumer behavior, not a focus group or opinion poll," says Merchant Mechanics president Matthew Tullman. "That meant we had to hold these factors constant in order to isolate a 'pure play' analysis of what the display itself was doing."

Cameras mounted outside the storefront entrances recorded the actions of every passerby for nine hours on each test day. Armed with this footage, the Merchant Mechanics team analyzed eight categories of behavior. The result-



In-store research that tracked shoppers from the sidewalk to the cashwrap determined that many more of them entered the store, browsed the merchandise and bought something when the display was lighted than when it was not.

ing research data built a dramatic statistical argument for the positive influence of white light illumination in display fixtures. Among the gems generated by the analysis were the following:

Glancing into the store: 21.6 percent of passersby turned their heads to glance into the storefront when the endcap display was illuminated, compared to 12.1 percent when it wasn't.

Entering the store: 3.7 percent of all passing mall shoppers were drawn into the store when the endcap was lit, compared to 2.1 percent when it wasn't.

Browsing the display: 4.6 percent of customers who entered the store browsed the endcap display when it was illuminated, compared to only 2.6 percent when it was not. (Despite the seemingly small numbers, this is a relative increase of nearly 77 percent.)

Buying: Of the 4.6 percent sample of all shoppers who stopped to browse at the endcap display, more than twice as many purchased when the display shelves were illuminated (33.3 percent) as did when they were *not* illuminated (14.3 percent). (Again, a relative increase of nearly 133 percent.)

The fact that light attracts our attention and draws us to its source is a basic component of our mammalian makeup. Less intuitive but possibly more consequential, though, is the fact that illumination appears to have a powerful positive effect on immediate purchasing decisions (i.e., at the time the customer is physically positioned at the display). This may be attributed to profound psychological triggers embedded within the human psyche; or more pragmatically, to the fact that customers were simply better able to read the label; or most likely, to a combination of several factors.

According to Tullman, it is the sum total of these behavior categories that tells the full story of the study. "All these



behaviors affect one another in a linear fashion," he says. "If you can elicit a given behavior, you have increased the chance of someone engaging in the subsequent behavior. For instance, if you can get someone to look at a display, you've increased the chances she is going to move toward it. If you can increase the chances she will stop at the display, you've increased the chances she will buy from it. In the final analysis, by adding lighting as a controlled variable, we were able to confirm that retailers can enhance an environment to facilitate the exploration of the product, and make the decision-making process that much easier for the consumer."

What this initial Hera study does *not* provide is hard numerical proof that the cost of incorporating lighting into display fixtures is justified by the related revenue lift. While it leaves little doubt that traffic and sales increased when white display lighting was employed, more data are required to show that the incremental lift in dollar value mathematically offsets the expense of the lighting fixtures.

Also hidden in this "phase one" initiative is the fact that new lighting technology has transformed the economics of feature lighted displays – for the better. While conventional components require professional hardwiring and extended installation times, modular systems such as this one can be installed in a few minutes by a store employee. (Bollrath estimates that the cost of the units used in the test was less than \$100 per display.) Factored into a complete analysis of return on investment, numbers like this could be extremely persuasive.

General Nutrition Center used the lighting on these endcaps to study how lighting affects shopping behavior. The endcaps were lighted on alternate days, and differences in shoppers' behavior during the test were observed and analyzed.

Hera expects to employ a more detailed financial model in the next phase of the project. In addition, such a study could attempt to capture previously unobserved behavioral data, such as the value of additional products purchased in other parts of the store. "If we have shown that applied display lighting gets more people into the store, then we have also shown that it's really performing the same function as advertising," Bollrath points out. "That implies a different financial model altogether."

Given the evidence derived from even a smaller-scale research project such as this, it isn't a stretch to expect that retailers will begin to embrace more rigorous and direct observation models for determining the effects of store environments on shoppers. GNC is incorporating a modified version of Hera's original prototype system into all new mall store packages. "We're also talking about employing the same methods to begin testing the effects of other types of feature lighting options in our stores," says McSorley. "Unbiased testing results are a great information tool to make a case to upper management."

"It's the difference between what consumers say they do and what they really do," says Tullman. "Which is more relevant to retailers?" ➔

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