



Lines at the Subaru dealership...



...and circles at Hyundai.

Comparison Shopping

A Subaru or a Hyundai? Different lighting systems in these adjacent showrooms may help buyers decide

BY PAUL TARRICONE

The Curry Subaru-Hyundai dealership in Cortlandt Manor, NY, takes sustainability seriously, so much so that it extends beyond the cars they sell to the ones driven by potential customers as they pull into the lot. Curry provides preferred parking spaces for customers who drive low fuel-efficient vehicles to encourage them to keep thinking green. That's just the customer's first exposure to a LEED-registered facility that's also been named a "Subaru Eco-Friendly Dealer" for meeting requirements in energy efficiency, water conservation, recycling, waste management and community involvement.

The building boasts everything from locally manufactured steel containing 92 percent recycled content to a roof coated with a special insulating spray foam. A lighting system well below 90.1-2007 targets has also chipped into the environmental effort, but not at the expense of aesthetic quality. Bonny Whitehouse, Whitehouse Lighting Design, LLC, Mahopac, NY, took the double-dealership concept to heart by crafting separate lighting systems for each showroom that come together in common areas. "We had to provide an inviting, well-designed space for car retail sales. The fact that two dealerships are housed in one building increased the complexity of the project. Each dealership was located at opposite ends of the building. We decided to give each showroom its own lighting style, then incorporate each lighting style into one that's carried into different areas of the building," she says.

Whitehouse's design concept called for pendant-mounted circular domes in the Hyundai showroom and pendant track-mounted linear fluorescent fixtures and LED accent lights in the Subaru showroom.

The owner was immediately receptive to the dual approach, says Whitehouse, who received a 2013 IES Illumination Award of Merit for her work.

The Hyundai showroom was the more difficult design for two reasons. First, the project team had to work around LED track heads that are the corporate standard for highlighting "showcase cars," says Whitehouse. The mandated linear track was a main reason why the circular dome luminaires (each containing four 40-W CFL bi-x lamps) were used in the Hyundai space. If Whitehouse had used linear luminaires in this showroom, the two lighting systems



The fixture layout had to accommodate a hanging gold fish-style ceiling element required by Hyundai corporate.

would visually clash. However, she did specify a silver gray color for the domes in an effort to match the track. Second, Whitehouse had to design around a dropped ceiling element—resembling a large goldfish—also required by Hyundai. The hovering goldfish pierces the space necessitating the domes be placed around it.

Whitehouse, meanwhile, complemented Hyundai's circular fixtures with T5 linear fluorescent luminaires in the Subaru showroom. The lighting in the Subaru space is somewhat more energy efficient, slicing the ASHRAE/IESNA 90.1-2007 requirement in half, as opposed to the Hyundai lighting which is 34 percent below the 90.1 target.

MERGING SHAPES

The circles and lines from the separate showrooms come together in two areas of the building. In the employee café/break room, recessed round Solatube units bring in daylight and further reduce the need for electric lighting. During a building tour, unsuspecting corporate executives from Subaru and Hyundai thought they were looking at very bright LED lights in the café, not natural lighting. The Solatube products are paired with recessed linear T5 lens fixtures. The customer lounge/children's area outside of the service department also incorporates the circular and linear fixture styles using CFLs and T5s, respectively. The children's area, since it's not always in use, has a wall-mounted occupancy sensor to manage energy use (.40 watts per sq ft).

Adjacent to the showrooms is the service drive-in and work area where pendant-mounted 250-W pulse-start metal halide high-bay luminaires have replaced T12 fluorescents, virtually doubling the illuminance level from 25-30 footcandles to 40-53 fc depending on the area. "I did a lot of research for this and went to other Curry dealerships to speak to the mechanics and see what they liked," says Whitehouse. "They were covered in grease, and I went over with my light meter and asked a few questions." What she learned was that the technicians liked "more light along the perimeter where the tools are kept."

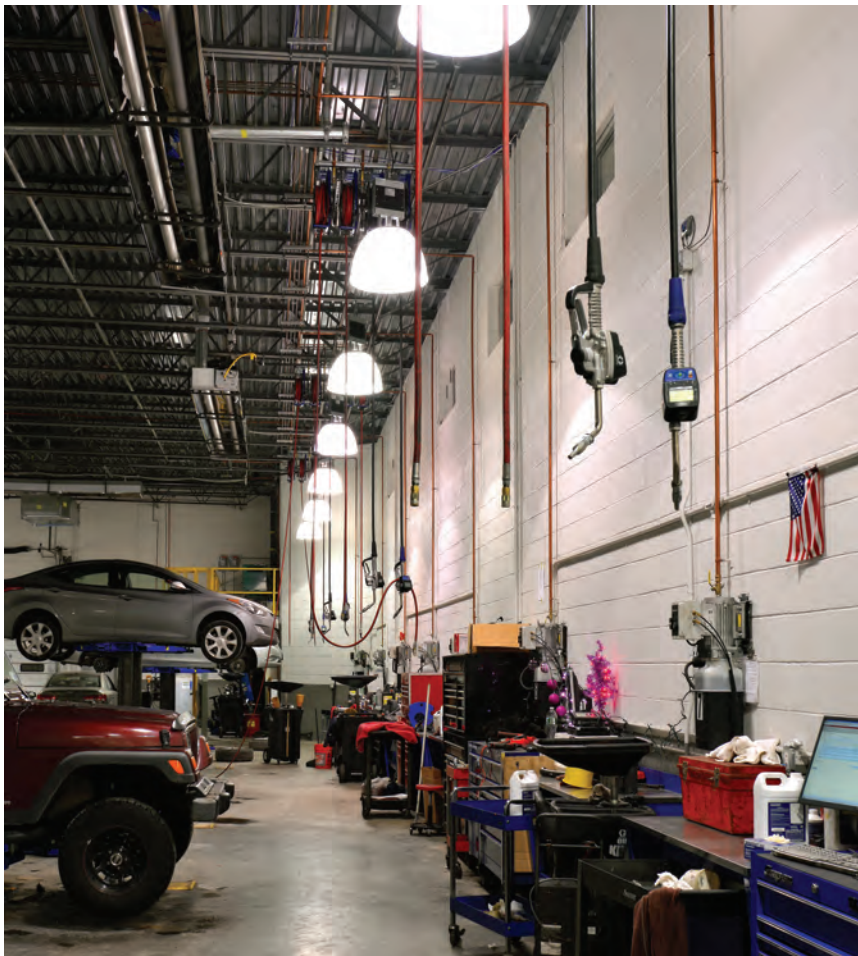
DRIVE IT DOWN

With the specter of LEED hovering in the background, Whitehouse also had to micromanage energy usage. Each area of the two-story, 28,675-sq ft dealership—from the showrooms, conference rooms, service area and café, right down to stairwells,

CURRY SUBARU-HYUNDAI



Lines and circle converge in the employee cafe. The circular daylighting units bring in natural light.



In the service area, the mechanics requested more light on the perimeter where tools are kept.

janitor's closet, restrooms and some areas with just one fixture—was broken out on a spreadsheet with columns showing the 90.1 LPD recommendation, a design target 30 percent under 90.1, a target 40 percent under 90.1 and the actual LPD in Whitehouse's design. In some cases, it was impossible for Whitehouse to hit the 30 or 40 percent target, but in others her design came in well under those benchmarks. For example, the Subaru showroom uses .85 watts per sq ft, half the level set forth in 90.1; the customer lounge uses .40 watts per sq ft, 66 percent below the 90.1 target; while the employee café uses .59 watts per sq, 55 percent under 90.1. Rolling all the spaces together, the project shaves more than 30 percent in energy use off the 90.1 target.

That's a nice operational savings for the owner. Maybe they can pass it along to the buyer. Head to Cortlandt to begin negotiations. ■

METRICS THAT MATTER

Curry Subaru-Hyundai

Watts per sq ft: .66 (more than 30 percent below ASHRAE/IESNA 90.1-2007)

Illuminance Levels: showrooms = 60 fc; customer lounge/children's area = 45 fc; employee café = 35 fc; service drive = 54 fc; service area = 48-53 fc; offices = 52 fc

Lamp Types: 8

Fixture Types: 21

LEED Silver registered

THE DESIGNER



Bonny Whitehouse, LC, Member IES, (1998), is principal of Whitehouse Lighting Design, LLC, Mahopac, NY, and a past-president of the IES New York City Section.