



By Michael McCoy, IDSA

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Michael McCoy is the first recipient (with Katherine McCoy, FIDSA) of the Smithsonian's Design Minds National Design Award for "affecting a paradigm shift in design thinking" and is the former director of 3D design for the Cranbrook Academy of Art. His work has been exhibited internationally, and he has won more than 200 design awards for his work in furniture, interiors and product design.

Designing with a New Lighting Technology

BRINGING **FORM** TO

Rarely is a product form created from thin air; usually it has a long and interesting history of influences pulled from design, art, architecture, culture, nature, technology and the designer's own experiences. I believe it is useful for designers to talk about their form influences in the way that blues musicians often talk about their influences and mentors. Stories told by designers about the development of their designs are not only historically valuable but also enrich the thinking and process of future designers.

Designers love working with a new technology, especially when it opens up new form possibilities. Peter Stathis and I recently had that opportunity when we collaborated on the design of the new Humanscale Horizon Light. Peter and I have had a long relationship in design education and for years have continued a discussion about connecting design theory to practice. He was a graduate student at Cranbrook Academy of Art when I was director of the 3D Design program, and he later succeeded me as director.

The Horizon Light is the first use of thin-film LED technology in a task light. It eliminates the hard-edged, multiple-shadowed, glare-prone light common to conventional LED task lights. We both agreed that the thin luminous plane of light should be celebrated and floated above the desk in the most simple, elegant way possible.

Since we shared so many views about design, and Peter had helped develop the new technology, bringing a prototype light source with him, the conceptual design of the light only took a day collaborating in my studio in Denver. We worked with paper and fabric models to determine the configuration, scale and proportion of our concept. I liken the experience to two jazz musicians getting

together for a studio session and intuitively understanding and building on each other's ideas.

Because the scale and the presence of the object in the space is so important, we modeled it physically at full scale to get the figural quality and proportions we wanted. A task light is not a fixed frontal object, but exists in three-dimensional space as a dynamic composition viewed from different angles and often having its position changed in relationship to the viewer. Compositionally, you can think of it as a figure that is viewed against a ground, which may be a wall or office panel or a cluttered desktop; so physical full-scale modeling allowed us to quickly evaluate the design alternatives in real space.

In determining the form, we drew on our mutual interests in modern design history and the competing philosophies of Platonic minimalism and organic form exemplified in two distinct approaches to form and interior illumination. Mies van der Rohe used platonic form in his architectural and furniture compositions and often used rectilinear ceiling-mounted light sources. Eero Saarinen used organic form in much of his work (like the TWA Terminal at the Kennedy International Airport) and expressively organic ambient

LIGHT

light sources to illuminate the spaces. We joined the geometric forms of the rectangular lamp head and the circular base with organically shaped transitional surfaces interfacing with the platonic ball joints at the top and bottom of the support stem. The light illuminates the desktop with a rectangular light footprint but also illuminates the organic forms of the lens and base.

Our goal was to make the operation of the light self-evident and intuitive. We used a tactile, shape-coded, illuminated dimmer switch so that it could be located and intuitively operated by feel in the dark, especially important in a bed-side application. The dimmer has a last-setting memory and dims down to a 1-watt nightlight setting. At its highest setting it uses only 9 watts, and the light source lasts for 25 years of normal nine-to-five use. Mies van der Rohe famously observed, "Less is more." In this case, hiding the wires and fasteners was "more" design and engineering work than letting it all hang

out; it was important to simplify the profile to reduce visual clutter in the workspace. The thin-film LED technology uses nanofilms to project an even, glare-free, rectangular-light footprint on the desktop and documents with no hot spots or light falloff. Since people's desktops and documents are typically rectangular, we decided on a rectangular lamp head that would project an even smart-light footprint onto the reading material. The ultra-thin, glare-free lamp head allows colleagues sitting across from each other to maintain eye contact without a bulky lamp shade or pin-point glare getting in the way.

We presented a highly evolved working prototype to Humanscale, who quickly agreed to develop, manufacture and distribute the light. Peter and Virtual Studio's development work and Humanscale's existing good working relationship with the most advanced LED manufacturer, who contributed enormous amounts of R&D to this project, moved the product smoothly into production and global distribution.

The new technology, our longtime design relationship and the expertise of Humanscale made this a very satisfying collaboration resulting in an elegantly simple product that has won 14 international awards to date. ■

