

# Shedding Some Light...

Pathway Lighting's Newsletter – July / August 2020

## welcome to our newsletter

This issue will focus on three topics: Fun facts about one of our staff, product news, and tech information from our Engineering Dept.

## what's up at Pathway

First and foremost, all of our staff is well. Management was swift to enforce safety protocols even before mandated by the state of Connecticut.

Although business was slow for six weeks, it has certainly picked up since the reopening of industries across the country and the launch of our new LumiCube line of fixtures.



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## Human Centric Lighting

By Russell Budzilek, Director of Engineering

'Human Centric Lighting' has become of great interest to the lighting community in the past couple of years. Lighting designers cannot escape the 'buzz' in the industry surrounding it. Although there are numerous definitions of exactly what it is, in my opinion, LightingEurope's definition seems to sum up the concept well. It states: "Human centric lighting is a type of lighting that can benefit the biological, emotional, health and well-being of people."

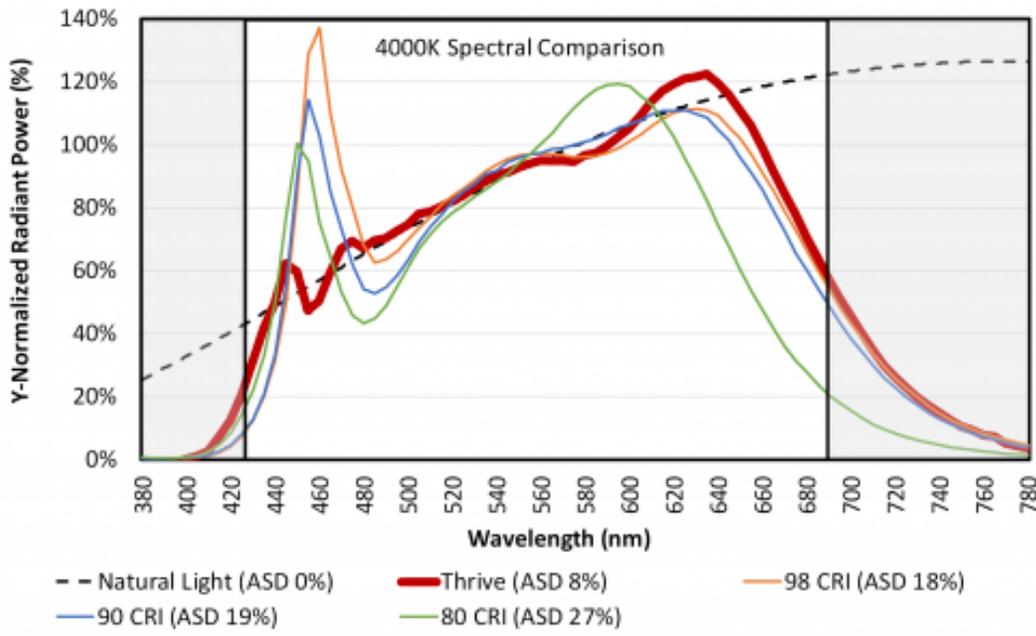
There are two broad categories to approach human centric lighting: circadian rhythm simulation using tunable light sources; and simulating daylight with tailored spectrum lighting.

Both methods are the focus of extensive research and each has its benefits. Pathway Lighting already has a series of tunable white fixtures to support applications requiring color tuning throughout the day. The next approach, involving simulating daylight, is now being addressed by our team of engineers at Pathway.

Advances in spectrum tuning using enhanced phosphors by several LED chip manufacturers has enabled a rather straightforward method of implementation of daylight simulation or 'daylighting.' This ease of implementation, along with a minimal cost impact, will enable us to soon offer a daylight spectrum version in many of our downlight and cylinder fixtures. These fixtures, with a daylight-oriented spectrum, will promote well-being in our MultiCare™ Healthcare Lighting Solutions line of products – as well as improve the quality of light and even increase productivity in architectural, commercial, and school environments.

Pathway Lighting has chosen to utilize the Bridgelux Thrive™ series of tailored daylight spectrum LED chips in its products. A comparison of the Thrive LED spectrum, a 4000K natural light spectrum, and spectra from typical 80 CRI, 90 CRI, and 98 CRI LEDs can be seen on the next page. Notice how the typical LED Spectra have an exaggerated spectral peak in the blue range while the Thrive spectrum closely matches the natural light spectrum.

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The Thrive spectrum is more natural, and objects viewed in this light appear as they would in natural daylight with a CRI exceeding 97. This spectrum also has extremely high TM-30 metrics. In addition to the quality of the light, this spectrum has been shown to have positive health benefits and a general enhancement of worker productivity and attitude.

On a more technical note, researchers in 2001 discovered a photoreceptor, melanopsin, in the eye that communicates circadian rhythm information to the brain. This receptor does not affect color vision as the RGB cones do. The peak area of sensitivity for this photoreceptor is in the

vicinity of 490 nm, an area where the spectrum of most warm white LEDs is severely deficient. The Equivalent Melanopic Lux (EML) indicates the amount of Lux illumination that contributes to the melanopic spectral region. The Well Building Standard specifies that 150 EML is required for a healthy lighting environment. This EML level can be achieved by providing: very high lumen levels; high color temperature light; and tailored spectral distribution of the LED source.

Using high lumen levels can make the environment uncomfortably bright and glary, while high color temperature light (very bluish) is visually unappealing.

Tailoring the spectral distribution of the LED light source is the preferred method of achieving the required level of EML and is the method that Pathway Lighting has adopted using the Thrive series of LEDs. With the Thrive LED chips, the spectrum of all color temperature LEDs (even warm color temperatures) contains sufficient flux in the melanopic range and thereby provides light meeting the Well Building Standards without being excessively bright or bluish.

Stay tuned for Pathway Lighting's upcoming announcement on our human centric, Thrive LED-based series of light fixtures. Our knowledgeable sales team will be available to provide more detailed product information shortly.

## bridgelux thrive

Humans have evolved and thrived for millions of years under the sun's natural daylight.

Bridgelux Thrive™ is engineered to provide the closest match to natural light using a proprietary technology.

The light that Thrive produces is the result of proprietary chip, phosphor, and packaging technologies developed exclusively by Bridgelux. It is the combination of these three elements, optimized to interoperate effectively, which produces the natural spectral characteristics.



## customizable options

- ✓ 4 lengths
- ✓ 6 mounting options
- ✓ 3 beam spreads
- ✓ up- or down-light
- ✓ bi-directional light
- ✓ wall wash
- ✓ type II forward throw
- ✓ deco sleeve
- ✓ acrylic cube
- ✓ honeycomb louver
- ✓ open-faced or lens
- ✓ powder coat finishes
- ✓ custom colors
- ✓ woodgrain finishes
- ✓ metallic finishes



woodgrain finishes



Pathway's new 4.38-inch square fixture is available in four lengths, six mounting options, three beam spreads, and up- or down-light, bi-directional, wall wash and Type II forward throw. The output of 3000 lumens (a total of 6000 lumens up/down) presents ample light for any space.

The construction of the LumiCube line is comprised of quality extruded aluminum housing and diecast components that have been designed to complement nearly any décor. With an IP65 rating, these fixtures have double gaskets at the housing apertures and the heavy UV-rated powder coat paint provides the best protection available when used in an exterior setting.

Optional decorative elements are available for a wide variety of aesthetically pleasing components. The basic offering is an open-faced fixture. Add a lens for a clean contemporary look.

Other options include an acrylic cube that gives the fixture a soft glow, or a honeycomb louver to cut down on glare.



Additionally, a Deco sleeve can be included and painted in any color giving the fixture a sophisticated two-tone appearance. This decorative sleeve can mimic a woodgrain finish, metallic finish, or any custom color to suit your design requirements.

View our [LumiCube Video and Spec Sheets](#) for more information.

## LumiCube

a new collection of square lighting products with many customizable options

LumiCube is available with CentralDrive®, Pathway Lighting's remote driver system, and EM can be configured in our new IRD (in-ceiling remote driver) system. The fixture incorporates a 0-10V @ 1%, forward and reverse phase dimming.

CentralDrive's remote driver system extends the life of LED drivers and makes replacement easy and more economical should there be a failure. CentralDrive is available with most of our LED architectural lighting fixtures from 1,000 to 10,000 lumens and comes with a 10-year warranty.

[CentralDrive brochure](#)



[Wall Mount](#)  
(Integral and Remote Driver)

[Surface Mount](#)  
(Remote Driver)



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## Get to Know – Nick Ross

The hard-working and ever-optimistic Nick Ross joined Pathway Lighting's Inside Sales team in 2017 and was recently promoted to Inside Sales Manager. He's a good-natured guy who doesn't mind a hearty laugh, even if he's the brunt of the joke. Nick is very motivated in everything he does, a sports enthusiast, and a proud dad. Here are some fun facts none of us knew about him:

**What is the most embarrassing thing that happened to you at work?** Emailing reps that their order is freight "aloud" instead of "allowed". Or sending reps their estimated "shi\*\*ing" date, instead of "shipping" date. (Spelling is truly NOT one of Nick's strong suits.)

**Hobby you could never give up:** Napping!

**Funny adult-beverage story:** While in college, I was challenged to a drinking game called "40 Hands." My buddies taped a 40oz beer bottle to each hand and then revealed that I could not use the bathroom until I was done drinking both beers. I finished in nine minutes and my friends never played that game with me again.

**What do you like to do in your spare time?** Sports, but I also enjoy wood-working.

**The most remote place you have ever been?** Fishing in a shack by the San Souci Islands in Georgina Bay, Ontario, Canada.

**Any broken bones or injuries?** Broken wrist, sprained ankles, dislocated kneecap, sprained thumb, torn ACL, torn Achilles, shoulder AC joint separation, hyper-extended knee, partially-torn hamstring, and a large gash in the bottom of the foot – all occurred while playing sports!



**One thing on my bucket list:** Seeing the northern lights with my wife.

**What is one unusual thing about your childhood:** I was born at the U.S. Submarine Base in Groton, CT. I am one of the few military brats that can say that I never moved – I grew up in the same house throughout my entire childhood.

**Favorite movie:** Shawshank Redemption.

**The weirdest thing you can do with your body:** My wife says my feet are weird because I can give a "thumbs up" with my big toes.

**Something you were embarrassingly late to realize:** On a family vacation in Canada, a relative gave me a "Weather Stone" which became my prized possession at eight years old. He told me if this stone is wet, it's raining outside; if it's cold, it'll be cold outside; if it's hot, it'll be hot outside; if it's in the air, you're in a tornado! It wasn't until I was the ripe age of 23 when I showed it to a friend and then realized that ALL stones are "Weather Stones".