

# David Lee Lights Up MADISON SQUARE GARDEN FOR ONE DIRECTION

*British-born David Lee may not have originally set his career sights on lighting design, but after spending his college years lighting shows for bands and nightclubs, his path was clear. Today, Lee's lightscapes leave lasting impressions. And with accolades including Westlife, Olly Murs, JLS, Lemar, and Swedish House Maffia, he has no regrets—especially after lighting the U.K. breakout pop band One Direction's first headlining show at New York's Madison Square Garden to the high-pitched screams of adoring fans.*





*The sold-out concert was exhilarating, and Lee's lighting greatly enhanced the pulsing One Direction music that has electrified its young fans.*

## Learning on the (Night) Job

Lee's ascent through the entertainment industry began in Liverpool, England, where he first learned about CAD software for a technical drawing class at New Heys Comprehensive School in the late 1980s. But it was his extracurricular activities later in college that unintentionally directed his future. In fact, it was while spending many nights mesmerized by the lights inside nearby nightclubs that Lee began to ponder how they worked and what impact they had on a stage, a performance, and the audience. When he realized he was spending more time under the lights than under the watchful eyes of his college professors, Lee taught himself how to create lighting sets for various nightclub shows, first by operating the venues' lights himself and then by renting extra equipment to energize scenes where the only visual entertainment emanated from one or two DJs spinning tunes. Something else needed to fill the void on stage, and this is where Lee employed and fine-tuned his talents.

---

*“Some of my best times are seeing a project through from the initial concept drawn on a beer coaster to the final show 10 months later.”*

*– David Lee, Lighting Designer with Lightscape Design, Ltd.*

---

He started creating customized shows for various club events, with each tailored to the unique sounds of the performers and the moods they were trying to achieve. As his reputation grew, he founded his own firm, Lightscape Design, Ltd., in the early 1990s. His contemporary designs remain influenced by his earlier days amid pulsating dance music when he first started using components like screens, projections, images, and colored drapes flushed with UV light and fluorescent elements to fill out a stage. Lee's lighting design for One Direction's Madison Square Garden concert was no different.

## One Direction Draws a Sold-Out Crowd

Expectations for One Direction's December 2012 concert in New York City ran high since it was the group's first big foray into the U.S. market. The British company Production North hired Lee to tackle the lighting design. Tapping into his dance music history, he envisioned multiple ways to invigorate the show. It was just a matter of making it a reality. Along the way, Lee faced two challenges. First, the production team tasked Lee with designing the light set around an 80'x30' video screen that could be installed into Madison Square Garden in just one day, between the hours of 8:00 a.m. and 6:00 p.m. Second, the timeline of the entire project was quick. Lee had only three weeks until show time to execute a plan.

Undaunted, Lee knew how to face these challenges, beginning with his flexible approach to clients. "You need to be fluid because elements in entertainment design change all the time—from schedules and artists' requests, to spatial constraints, and to the equipment that needs to be featured," says Lee. Consequently, designers need to think far beyond the proverbial box, keeping in mind that there is always a solution. "Nothing is impossible, and everything is achievable in some way, shape, or form," says Lee. "I hear so many times people with negative views about why a show producer can't have this or that." But rather than choosing to focus on why a show producer can't have certain things, he works to find that solution. "There is always a way—even if it entails meeting halfway or making slight compromises," he says.

Lee has confidence when he approaches such conversations because he relies on Vectorworks® Spotlight software, the industry standard for entertainment design. For the One Direction concert, the platform capably enabled Lee and all stakeholders—the clients and production team—to get an accurate visual of his overall plan. Lee also wanted to



*A clearly articulated design with accurate measurements ensured the installation of the light set in just one day and with time to spare.*

reassure the production team that everything would fit well by providing highly accurate measurements. Then, he solved the challenging time constraint, giving the production team the necessary paperwork, generated right inside the Vectorworks program, so they could schedule out proper installation times.

According to Lee, the stage dimensions of many shows can grow large quickly. At Madison Square Gardens, the top of the screen was several stories high. Lee, therefore, carefully reviewed all measurements on his CAD design's front views to make sure that the items on the stage didn't look disproportional or too far removed from each other and that the audience's sight lines wouldn't be compromised. Lee adds that the screen dominated much of the canvas he wished to design a lighting system around. This fact, coupled with the time constraints for setup, forced a design that was simple to put together, quick to install, and, most importantly, provided the best look for the show. Consequently, Lee's fixture selection became critical. "I chose fixtures that were compact, yet powerful, so that you didn't see a big junkyard of moving lights hanging from the roof, but instead saw light beams against the backdrop of the big screen."

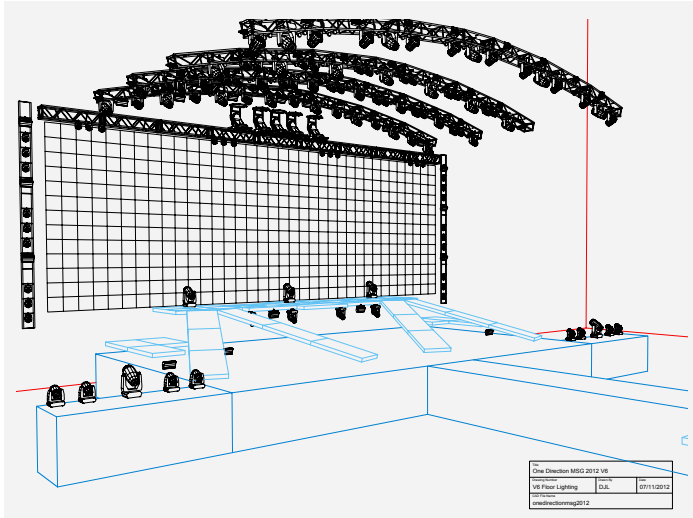
Once all of these elements were put into place, Lee prepared for the next challenge, but it never came. The only surprise for this show was the entire lack of surprises. "Most shows that I work on have some unknown element that springs up and catches us, but this time around, it was all rock solid," Lee says. He attributes that to the fact that he's collaborated with the same team for several years, so the One Direction show went smoothly because they knew how to work collaboratively.

The sold-out concert was exhilarating, and Lee's lighting greatly enhanced the pulsing One Direction music that has electrified its young fans. The show opened with a video of the band leaving



*David Lee's fixture placement, seen here rendered in the Vectorworks software, verified that sight lines and fixture selection were coordinated with the 80'x30' video screen.*

## Spotlight Case Study: Lightscape Design, Ltd.



U.K.-based Lee emailed his complete Vectorworks drawings to production personnel in the U.S., providing the precision and detail they needed to guarantee a smooth installation of his light plot.

London's Heathrow Airport and heading across the ocean for the concert. Band members revealed themselves "toaster style" out of five traps to perform their first song. "The screaming was so loud," recalls Lee. "It was like Beatle Mania all over again!"

Lee was very pleased with the overall results. "With every show and design there is always a little part of me that wonders if it will all look and go together right, even if it looks fine on paper or my screen. After four busy days of put-in, it was great to see the show at full trim height with everything fitting into place—mission accomplished." Lee clearly enjoys life in the entertainment industry. "Some of my best times are seeing a project through from the initial concept drawn on a beer coaster to the final show 10 months later," he notes.

### The Right Tools for the Job

Lee achieves such results because he has taken the time to properly hone his workflow and identify the best tools for the job, and the Vectorworks Spotlight program remains his tool of choice.

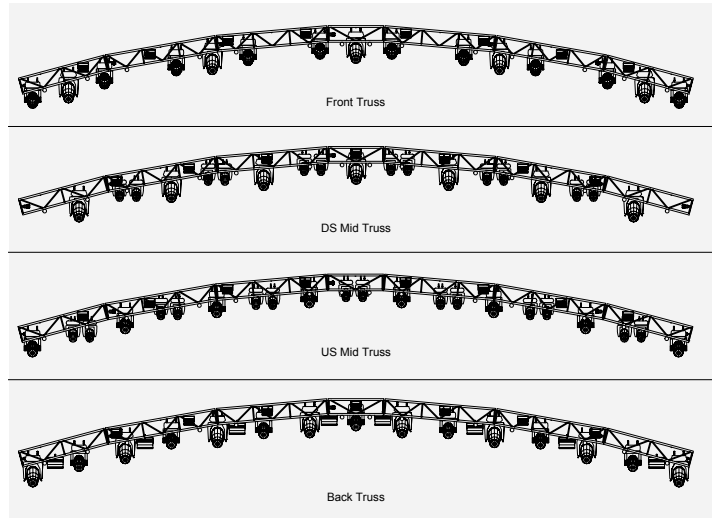
Lee creates all of his light plots in 2D and loves wowing his clients with the highly professional 3D models he produces, which allow him to easily and directly share measurements and detailed instructions with the team that builds his designs. Being able to create, troubleshoot, present, and provide building direction through one comprehensive software program is very important to Lee. "From the initial concept of a show and early sketches to the final rendered proof, Vectorworks

---

*"Using Vectorworks software saves me so much time in the run up to preproduction rehearsals."*

*– David Lee, Lighting Designer with Lightscape Design, Ltd.*

---



software is crucial to all of my designs," he says. "It helps me plan and develop all elements of the show, from positions of a set and scenery to ensuring that sight lines are not obstructed."

Lee's workflow combines both manual and digital techniques. He maps out his initial drawings on paper and then creates a rough design on the screen, which he further develops into a more precise 3D drawing. In this way, he can easily see potential engineering or aesthetic issues that may arise during production and make any adjustments to overcome them. "Using Vectorworks software saves me so much time in the run up to preproduction rehearsals because I'm able to nail most of the snags before we hang a single piece of truss," he notes.

Vectorworks Spotlight software helps Lee create shows and projects ranging from smaller corporate sales conferences to 20,000+ capacity pop concerts. "It's just as crucial for the little shows as it is for the big shows," he adds, remarking that specific tools within the program make his job easier. For example, 90 percent of the time, his drawings are symmetrical, so he uses the Mirror tool to reverse and repeat symmetrical patterns and cut down significant time spent in the drawing. The Select Similar tool, which Lee lovingly refers to as the "Magic Wand" because of its graphic icon, is another favorite. "There are many instances of the same object in my designs, so selecting them all one-by-one can take forever. The Magic Wand is just magic!"

In addition, Lee draws from a series of custom libraries stored on a cloud-based storage utility, so he can access them from his office or laptop when out on the road. He also uses Field Template's SoftSymbols™, the high-quality theatrical lighting symbol package constructed within the Vectorworks environment that features an extensive library of lighting symbols from many top lighting equipment manufacturers. Lee says they are "especially handy for those, 'Oh, I don't have one of those in my library moments.'"



*Fans benefitted from Lee's careful fixture selection, ensuring they saw light beams against the back drop of the large screen rather than the moving lights themselves hanging from the roof.*

Having been a part of this exciting industry for more than two decades, Lee thinks back fondly on his college years and how they launched an exciting career, including the opportunity to execute stunning light shows for the likes of One Direction. Looking back at that project, in particular, Lee is proud of the seamless way all the elements, such as working with U.S. suppliers, came together. Even though the project was initiated in the U.K. and the concert took place in New York City, Lee didn't have to make a single phone call overseas because he handled everything by emailing his detailed and complete Vectorworks drawings to the production personnel. "Now that's progress," he says. We couldn't agree more, and we're happy to enable that progress. So what's next for Lee? "I'll keep aiming higher and will do it again for an even bigger crowd," he laughs.

## Acknowledgements

### Profiled firm:

Lightscape Design, Ltd.  
Northamptonshire, England  
Phone: +44 (0) 7973 31 31 15  
Fax: +44 705 347 0781  
davejee@mac.com  
www.lightscapedesign.co.uk

### Images:

Courtesy of Lightscape Design, Ltd.

### Original text and publication by:

Nemetschek Vectorworks, Inc.  
7150 Riverwood Drive  
Columbia, MD 21046 USA

Tel: 410-290-5114  
Fax: 410-290-8050  
www.vectorworks.net

### Find your distributor:

For sales information and to identify your local distributor, visit [www.vectorworks.net/international](http://www.vectorworks.net/international)

© 2013 Nemetschek Vectorworks, Inc.  
Vectorworks is a registered trademark  
of Nemetschek Vectorworks, Inc.  
All rights reserved.