

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

ULTRAVISION TECHNOLOGIES, LLC

Plaintiff,

v.

**LAMAR ADVERTISING COMPANY, LAMAR
MEDIA CORPORATION, THE LAMAR
COMPANY, L.L.C., LAMAR TEXAS LIMITED
PARTNERSHIP, LIGHTING TECHNOLOGIES,
INC., AND IRVIN INTERNATIONAL, INC.**

Defendants.

Civil Action No. 2:16-cv-374

JURY TRIAL REQUESTED

THIRD AMENDED COMPLAINT

Plaintiff Ultravision Technologies, LLC (“Ultravision”) files this Third Amended Complaint¹ for patent infringement against Defendants Lamar Advertising Company, Lamar Media Corp., The Lamar Company, L.L.C., Lamar Texas Limited Partnership (collectively, “Lamar”), American Lighting Technologies, Inc. d/b/a Lighting Technologies, Inc. (“Lighting Technologies”), and Irvin International, Inc. (“Irvin”) (collectively, “Defendants”) for infringement of U.S. Patent No. 8,870,410 (“the ’410 Patent”), entitled “Optical Panel for LED Light Source;” U.S. Patent No. 8,870,413 (“the ’413 Patent”), also entitled “Optical Panel for

¹ Ultravision has filed a Motion for Leave to File Its Third Amended Complaint to add newly issued, related patents. Dkt. No. 154. And, consistent with the Court’s practice, Ultravision filed a Third Amended Complaint, subject to the Court’s ruling. Ultravision also filed a separate complaint, with the newly issued, related patents. *Ultravision Technologies, LLC v. Lamar Advertising Company, et al.*, No. 2:17-cv-75 (E.D. Tex.). Should the Court grant Ultravision’s pending Motion, Ultravision will file a Fourth Amended Complaint, adding the newly issued, related patents.

LED Light Source;” U.S. Patent No. 9,212,803 (“the ’803 Patent”), entitled “LED Light Assembly with Three-Part Lens;” U.S. Patent No. 9,234,642 (“the ’642 Patent”), entitled “Billboard with light assembly for substantially uniform illumination;” and U.S. Patent No. 9,349,307 (“the ’307 Patent”), entitled “Forty-eight by fourteen foot outdoor billboard to be illuminated using only two lighting assemblies” (collectively, the “Patents-in-Suit”), pursuant to 35 U.S.C. § 271 (copies of the Patents-in-Suit are attached as Exhibits A, B, C, D, and E, respectively). In addition to claims for patent infringement against Defendants, Ultravision asserts claims for misappropriation of trade secrets against Lamar, and claims for misappropriation of trade secrets and tortious interference with prospective business relationship against Lighting Technologies. Ultravision further asserts claims for false marking, false advertising, and unfair competition against Irvin.

I. PARTIES

1. Plaintiff Ultravision is a corporation incorporated and existing under laws of the State of Delaware and is registered to do business in Texas. Ultravision has its principal place of business at 4542 McEwen Road, Dallas, Texas 75244.

2. Defendant Lamar Advertising Company is a publicly traded corporation incorporated and existing under laws of the State of Delaware, and has its principal place of business at 5321 Corporate Boulevard, Baton Rouge, Louisiana 70808. Lamar Advertising Company may be served through its registered agent, Capitol Services, Inc., at 1675 S State Street, Suite B, Dover, Delaware 19901.

3. Defendant Lamar Media Corp. is a corporation incorporated and existing under laws of the State of Delaware, and has its principal place of business at 5321 Corporate

Boulevard, Baton Rouge, Louisiana 70808. Lamar Media Corp. may be served through its registered agent, Capitol Services, Inc., at 1675 S State Street, Suite B, Dover, Delaware 19901.

4. Defendant The Lamar Company, L.L.C. is a corporation incorporated and existing under laws of the State of Louisiana, and has its principal place of business at 5321 Corporate Boulevard, Baton Rouge, Louisiana 70808. The Lamar Company, L.L.C. may be served through its Texas registered agent, Capitol Corporate Services, Inc., 206 E. 9th Street, Suite 1300, Austin, Texas 78701-4411.

5. Defendant Lamar Texas Limited Partnership is a limited partnership organized and existing in Texas with its principal place of business at 811 Dallas Avenue, Houston, Texas 77002. The Lamar Company, L.L.C. is its general partner. Lamar Texas Limited Partnership may be served through its registered agent, Capital Corporate Services, Inc., 206 E. 9th Street, Suite 1300, Austin, Texas 78701-4411.

6. Defendant Lighting Technologies has represented itself as a corporation doing business at 1810 Barrancas Avenue, Pensacola, Florida 32502. Lighting Technologies has also referred to itself as American Lighting Technologies when accepting delivery of imported LED lighting materials at 1810 Barrancas Avenue, Pensacola, Florida 32502. Upon information and belief, Lighting Technologies may be served at 1810 Barrancas Avenue, Pensacola, Florida 32502. Based on information and belief, Lighting Technologies may also be served by and through its principal, Michael Eugene McGehee, at 3819 Salem Church Road, Jarresttsville, Maryland 21084.

7. Defendant Irvin is a corporation incorporated and existing under the laws of Florida, and has its principal place of business at 8105 Krauss Boulevard, Suite 102, Tampa,

Florida 33619. Defendant Irvin may be served through its registered agent, Delia Irvin, at 8105 Krauss Boulevard, Suite 102, Tampa, Florida 33619.

II. JURISDICTION AND VENUE

8. This is an action for patent infringement under the patent laws of the United States, 35 U.S.C. §271. All non-patent claims are related to the same set of circumstances and are part of the same case and controversy as the asserted patent claims, and this Court has pendent jurisdiction of the non-patent claims under 28 U.S.C. § 1367.

9. This Court has personal jurisdiction over each Defendant. Upon information and belief, each Defendant has conducted and does conduct business within the State of Texas, directly and/or indirectly through intermediaries (including distributors, retailers, and other individuals or entities). Upon information and belief, each Defendant makes, uses, imports, ships, distributes, offers for sale, sells, installs, and/or advertises its products and/or services in the United States, the State of Texas, and the Eastern District of Texas.

10. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b).

11. Ultravision has its headquarters in the Dallas-Ft. Worth Metroplex in Texas and operates a modular assembly, repair, testing, and storage facility in Allen, Texas. Much of the design and developmental activity was conducted in and around the Dallas-Ft. Worth Metroplex. Ultravision's employees have handled and continue to handle the design, development, testing, modular assembly, repair, distribution, marketing, and sale of its products out of its headquarters and related facilities in and around Dallas, Texas. These employees developed trade secret and confidential information in Texas, which is protected by a Non-Disclosure Agreement between Lamar, Ultravision, and Active Media Services, Inc., doing business as Active International ("Active"), as discussed below. Ultravision's employees physically reside in the Dallas-Ft.

Worth Metroplex, including William Hall, Ultravision's Chief Executive Officer and an inventor, and David Auyeung, an inventor.²

12. Lamar installs, maintains, services, and/or operates billboards all over the United States, including hundreds of billboards in towns, communities and on major thoroughfares in Texas and in the Eastern District of Texas. As one of the major players in outdoor advertising, upon information and belief, Lamar purchases and makes or has made, uses, offers for sale or lease, sells and leases lighting fixtures, billboards, and other products charged with infringement throughout the United States, including Texas.

13. Upon information and belief, Lamar's investment in billboards located in the Eastern District of Texas is significant. The Eastern District of Texas has extensive land area and is geographically located between significant population centers and, therefore, serves as a major crossroad with multiple major thoroughfares and interstate highways traversing East Texas.

14. Upon information and belief, Lamar installs or arranges to have installed the lighting fixtures that are charged with infringement on billboards that it owns, leases, and/or operates in Texas and throughout the United States. According to its website, <http://www.lamar.com>, Lamar has employees and hires local contractors to service and maintain billboards in Texas, including contractors (e.g., electrical contractors) who install the lighting fixtures and other products that are charged with infringement herein.

15. Lamar operates a website, <http://www.lamar.com>, that is viewable in the Eastern District of Texas and elsewhere that, among other things, allows customers (and potential

² Ultravision, the assignee of the Patents-in-Suit, has filed a petition to add William Hall and Dr. Simon Magarill, as inventors of the Patents-in-Suit.

customers) to review Lamar's "Products," which include billboards of various sizes. Lamar's website provides a "Browse Inventory" function, which allows users to peruse its inventory throughout the United States. The "Browse Inventory" function on Lamar's website identifies thousands of billboards offered by Lamar that are available for advertising, along with "specifications," "pricing," "contacts," and potential "package" information that group multiple billboards together into a single purchase. Lamar's website also includes photographs of the billboards owned or operated by Lamar that are available for use or purchase for advertising. For example, according to its website, Lamar owns or operates several dozen billboards in and around Marshall, Texas alone. Lamar also owns or operates hundreds more billboards along major thoroughfares, such as Interstate Highway-20 or Interstate Highway-30, and even more billboards in other communities in the Eastern District of Texas.

16. Lamar also provides sales contacts located in the Eastern District of Texas and has offices at 4520 W. Cardinal Dr., Beaumont, TX 77705, and 2301 E. Erwin, Tyler, TX 75702.

17. Lighting Technologies operates <http://www.lightingtechnologies.com>, a website that is viewable in the Eastern District of Texas and elsewhere. Lighting Technologies offers to sell its products through its website and its distributors. These products include the products charged with infringement herein, hereinafter referred to as "Lighting Technologies' Accused Products". Its distributor Irvin states on its website, <http://www.marqueeled.com>, that Lighting Technologies is the supplier of the products sold under the name Marquee LED that are charged with infringement herein, and that it is the exclusive distributor of such products. Thus, upon information and belief, Lighting Technologies' endeavors to serve the market for LED billboard lighting in the Eastern District of Texas directly or through its distributor(s).

18. Upon information and belief, Irvin offers for sale and distributes its products, including the Marquee LED products supplied by Lighting Technologies, all over the United States, including the State of Texas and the Eastern District of Texas. Irvin's website, <http://www.marqueeled.com>, has an (800) contact number, and an online form that prospective customers can fill out to obtain more information or a quote for the infringing Marquee LED (and other products), or to "refer a friend." These interactive features are not restricted by geography. In fact, the website specifically targets customers in Texas by providing a link to a brochure for the Marquee LED that touts the annual savings that can be achieved from purchasing and installing Marquee LED products on various sizes of billboards in different regions throughout the United States. The brochure includes specific annual savings calculations for the "West South Central" region, which includes Texas. Upon information and belief, Irvin also designs and installs billboards for its customers, such as Lamar. Upon information and belief, those billboards include Irvin's Marquee LED products and/or Lighting Technologies' Accused Products.

19. Therefore, Lighting Technologies, together with Irvin as the distributor of its LED billboard lighting products, have offered to sell, have sold, and have intentionally and voluntarily placed infringing products into the stream of commerce with the expectation and understanding that those products will be sold, purchased, and/or used by its customers, such as Lamar and other billboard owners and operators, in the State of Texas and the Eastern District of Texas.

20. Upon information and belief, Lamar has met with Irvin about purchasing Marquee LED products to install on its billboards that it owns or operates. Upon information and belief, these billboards include billboards in the Eastern District of Texas and along

Interstate Highway-20 and Interstate Highway-30—major thoroughfares in the Eastern District of Texas, by which millions of people drive every year.

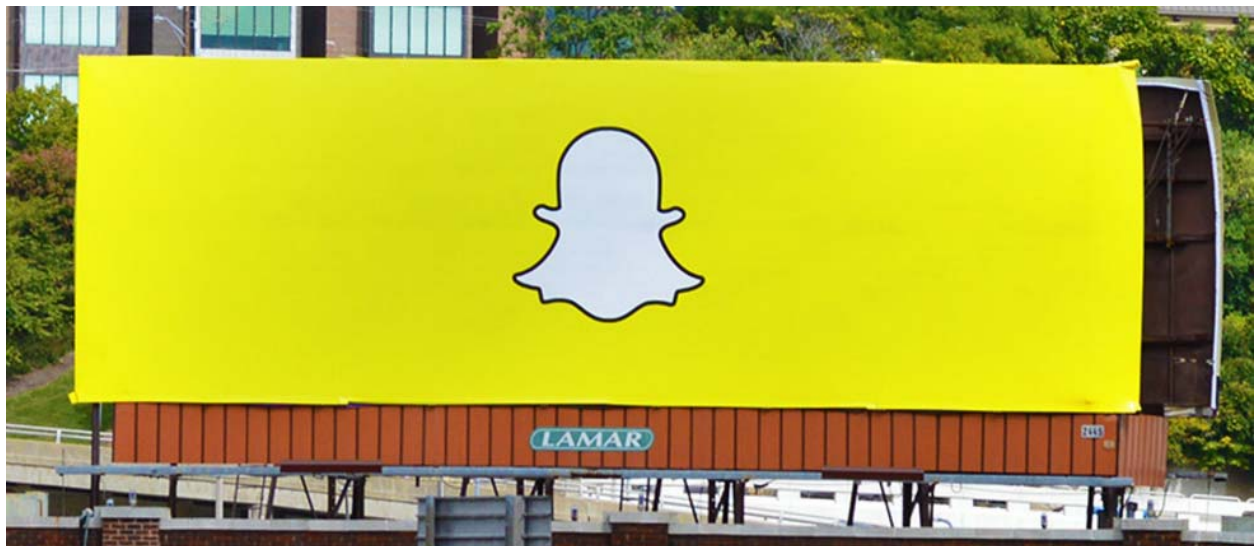
21. Lamar prominently features other billboards on the home page of its website, <http://www.lamar.com>. Based upon these photographs and upon information and belief, as shown and explained below, Lamar has installed the Marquee LED products and/or Lighting Technologies' Accused Products to illuminate these billboards as well. The photograph below shows two assemblies at the base of the billboard.



22. The next photograph from the home page of Lamar's website shows that Lamar has installed what, upon information and belief, are Marquee LED products and/or Lighting Technologies' Accused Products on the rear-facing billboard—shown against the sky at the bottom of the photograph.



23. And, here, another photograph shows, upon information and belief, that Lamar has installed the Marquee LED products and/or Lighting Technologies' Accused Products on the bottom front side of the billboard.



24. Upon information and belief, Lamar has and is in the process of installing the Marquee LED products and/or Lighting Technologies' Accused Products on other billboards that it owns or operates throughout the Eastern District of Texas.

25. As a result, each Defendant has committed the tort of patent infringement throughout the United States, within the State of Texas and, particularly, within the Eastern District of Texas.

III. FACTUAL BACKGROUND

A. Ultravision Invested Substantial Money and Time to Design, Develop, and Test a New LED Billboard Light.

26. The Chief Executive Officer of Ultravision, William Hall, has a long-standing career in the commercial lighting and video billboard industry. Mr. Hall formed Ultravision's predecessor, Ultravision Holdings, LLC ("Ultravision Holdings"), in 2010 to focus on LED displays and lights for the billboard industry. Ultravision was formed in 2014 to formalize a joint venture arrangement with Active. Active is one of the world's largest purchasers of media advertising. Pursuant to the joint venture transaction, Ultravision Holdings contributed substantially all of its assets, including all of its intellectual property (e.g., patents and trade secrets) and contract rights, to Ultravision. The Patents-in-Suit have been assigned to Ultravision, and Ultravision owns the rights and interests pertaining thereto. Ultravision has become a leading innovator, designer, manufacturer, and distributor of high-efficiency digital video displays, LED lighting, and electronic scoreboards.

27. Ultravision's management and design team has extensive experience in the LED lighting and LED digital advertising industry. Its displays have been installed throughout the world, including at New York's Times Square and London's Piccadilly Circus. Most recently, one of Ultravision's projects for a customer won an award for Europe's best LED display and the Best Original Digital Billboard by the Daily Digital Out of Home ("DOOH") on-line publication in London in December 2015.

28. In 2011, Lamar approached Ultravision about designing an LED lighting assembly that could replace existing billboard lighting with advanced LED technology. Advanced LED fixtures offer substantial savings in electricity and in longevity, but LED lighting fixtures available to Lamar at the time did not light the billboard in a satisfactory manner. Lamar wanted Ultravision to develop something new that would meet Lamar's needs and the needs of other industry participants. Lamar asked Ultravision to design and develop an improved LED lighting fixture that would surpass existing LED technology.

29. Ultravision dedicated significant technical effort and money to invent, design, develop, manufacture, assemble, test, and calibrate a number of improved LED lighting fixtures that surpassed existing LED technology. As a result of Ultravision's investment, it developed certain valuable trade secrets relating to the design, development, manufacture, assembly, and testing of LED light fixtures, and to the distribution and sale of such LED light fixtures to Lamar and other billboard industry participants. And, as discussed below in paragraphs 68–74, Ultravision filed patent applications to protect some aspects of these improved LED light fixtures, associated processes, and related billboards. Those filings have resulted in multiple issued patents.

30. Ultravision's improved LED designs represented a departure from prior approaches, as Ultravision used optical elements to refract the light emitted from the LED in a desired manner, as opposed to using reflective mirrors or other ways of directing light. Through this and other improvements, Ultravision's designs addressed and overcame a number of challenges that previous technology had not solved. For example, Ultravision's improved LED designs distribute light onto the flat surface of a billboard in a controlled manner to reduce the effects of "hot spots" or "dark spots," which are areas of a billboard that are brighter or darker,

respectively, than other areas of the same billboard. Both “hot spots” and “dark spots” limit visibility. Ultravision’s improved LED designs also reduce light spillage beyond edges of the billboard, which not only conserves energy but also limits environmentally harmful light pollution. In addition, Ultravision’s improved designs addressed and overcame the problem of dissipating the substantial heat generated by LEDs. Ultravision’s improved designs have other benefits as well, such as decreased need for maintenance and replacement.

31. Ultravision and Lamar had a confidential relationship, pursuant to which Lamar received Ultravision’s confidential and trade secret information. Lamar’s officers and other representatives were intimately involved in discussions between Ultravision and Lamar. Lamar representatives received Ultravision’s confidential and trade secret information, including multiple prototypes.

32. Ultravision’s employees made multiple trips from Dallas, Texas, to Lamar’s Pensacola facility to show Lamar its designs and to test its prototypes. Ultravision made additional trips to Lamar’s headquarters in Baton Rouge, Louisiana, again to show and discuss its designs and to test its prototypes. Ultravision representatives and Lamar representatives met in person on multiple occasions to disclose, discuss, and test Ultravision’s designs and to disclose its development activities. At each of its meetings with Lamar, Ultravision provided prototypes for on-site test and measurement, which continued until Lamar was satisfied with the end result. Lamar has had full access to and possession of Ultravision’s confidential, physical prototypes from their delivery until the present. Ultravision left its confidential, physical prototypes with Lamar for further testing, evaluation, and review.

33. Throughout Ultravision’s relationship with Lamar, Lamar representatives repeatedly recognized Ultravision’s efforts in an improved LED design for billboard light

assemblies. On one occasion, Lamar cited Ultravision's "considerable work" that Ultravision's "professional team" had provided to develop a "quality product." Later, Lamar emailed another large player in the billboard industry, saying, "The design appears robust and well considered both from a heat management perspective, which is critical with LEDs, and also from a weather protection perspective, which is also critical, as all the electronics need to be well protected. . . . As best I can tell at this time, all the components and the manufacturing methods are first rate, and the fixture should be suitable for use in our industry. . . . Active was very responsive in getting us the optical design we needed. . . . Their chief engineer, David AuYueng, is also very capable and considerate and will work very closely with you to resolve any issues or questions you may have." Despite this praise, Lamar rejected multiple proposals from Ultravision and Active, and refused to commit to purchase the product that Ultravision had developed.

34. Despite Lamar's praise throughout Ultravision's development of LED lighting products for Lamar, Ultravision later learned that Lamar was going to purchase LED lighting products from Lighting Technologies. When Ultravision inquired about the reason, Lamar representatives referenced the personal and business relationship between Lamar representatives—individuals with whom Ultravision had met and to whom it disclosed its confidential information—and representatives of Lighting Technologies.

35. Upon information and belief, Lamar representatives have since endorsed Lighting Technologies' products, and have actively promoted Lighting Technologies' products at trade shows, on Lamar's website, on Irvin's website and in other promotional activities.

36. Ultravision has since learned that on October 19, 2012, one of the Lamar representatives with whom Ultravision had met and to whom it disclosed its confidential information, filed Articles of Organization for a Limited Liability Company named 1810

Barrancas, LLC in the state of Florida, listing himself as the registered agent and the manager of 1810 Barrancas, LLC. According to official records, 1810 Barrancas LLC is located at P.O. Box 1313, Pensacola Florida 32591. 1810 Barrancas LLC owns the property and pays the taxes at 1810 Barrancas Ave, Pensacola, Florida 32502. Upon information and belief, the Lamar representative and/or 1810 Barrancas, LLC purchased that property in October 2012. Thus, upon information and belief, 1810 Barrancas, LLC is an entity that is related to Lamar through its representative.

37. Upon information and belief, Lighting Technologies moved its operations from Atlanta, Georgia to 1810 Barrancas Avenue, Pensacola, Florida 32502, about the same time that the Lamar representative formed 1810 Barrancas, LLC. As shown below, 1810 Barrancas Avenue, Pensacola, Florida 32502 is the address currently listed on its website, <http://www.lightingtechnologies.com>. In addition, Lighting Technologies also shows a photograph of a building above its 1810 Barrancas address, on its website, <http://www.lightingtechnologies.com>.



Lighting Technologies, Inc.
1810 Barrancas Avenue
Pensacola, FL 32502
850-462-1790 phone
850-462-1794 fax

Lighting Technologies actually resides at the 1810 Barrancas address, but the photograph on the website does not accurately depict the building that presently exists on the property. The building that actually is located at 1810 Barrancas Avenue, with the “Lighting Technologies” sign and logo, is shown below.



38. As shown and discussed above in paragraphs 19–24 and also as shown and discussed below in paragraphs 45–47, Lamar has purchased and continues to purchase products, directly or indirectly, from Lighting Technologies. Upon information and belief, Lamar representative(s), directly or through 1810 Barrancas, LLC, and/or Lamar receives financial benefit from Lighting Technologies. Specifically, upon information and belief, Lamar representative(s) and/or Lamar receives financial benefit derived from Lighting Technologies’ sale of the products at issue, including the sale of such products to distributors like Irvin.

B. Lighting Technologies, Irvin, and Lamar Make, Use, Sell, Offer for Sale, or Import LED Light Fixtures for Billboards.

39. Upon information and belief, Lighting Technologies has arranged to have LED products manufactured in Taiwan by Hergy Lighting Technology Corporation, having its address as 9F-1, No. 13, Sec. 2, Beitou Road, Beitou District, Taipei 112, Taiwan, and to have the

products imported into the United States. Upon information and belief, numerous container(s), pallet(s), crate(s) and thousands of pounds of LED products have been imported from Kaohsiung Port to Miami, Florida, for delivery to Lighting Technologies at 1810 Barrancas Avenue, Pensacola, Florida 32502.

40. Upon information and belief, Lamar representative(s) and/or others improperly shared Ultravision's confidential information with Lighting Technologies and/or Irvin. This disclosure and misuse of Ultravision's confidential information enabled Lighting Technologies, working in conjunction with Irvin, to bring its products to market quickly. Upon information and belief, Lamar representative(s) engaged in these activities despite Lamar's policies regarding conflicts of interest, confidentiality, honesty, and integrity, published on its website as a "Code of Ethics,"

<http://www.lamar.com/~media/5B2751B4CD9041AE9F494A18CE34DA1F.pdf>.

41. In fact, Lighting Technologies' products include an optical element positioned over each LED that is very similar to Ultravision's confidential designs that were shared with Lamar and, as described below in detail, are intended to operate in a similar fashion. Upon information and belief, Lighting Technologies started selling its competing LED lighting assembly for billboards after Ultravision developed and shared its multiple prototypes and confidential information with Lamar. Also, upon information and belief, Lighting Technologies developed its competing LED lighting assembly for billboards only after Lamar improperly disclosed Ultravision's proprietary information to Lighting Technologies and its representatives.

42. Lighting Technologies' Accused Products include, but are not limited to, products having the following part numbers: LTBB-7022-NRA-1-3, LTBB-7044-NRA-1-1,

LTBB-7044-NRA-1-2, LTBB-7044-NRA-1-3, LTBB-7022-NRB-1-3, LTBB-7044-NRB-1-1, LTBB-7066-NRB-1-4, LTBB-7022-NRA-1-1, and LTBB-7022-NRA-1-4.

43. Irvin sells a line of Lighting Technologies' products under the name "MarQueue LED." Based on representations made by Irvin on its website, MarQueue LED is a marketing name for Lighting Technologies' Accused Products. Irvin represents on its website that it and Lighting Technologies have signed an "exclusive agreement that makes Irvin the exclusive distributor [of Lighting Technologies' products] to the outdoor advertising industry." Irvin's website states that its MarQueue LED is "manufactured by Lighting Technologies, Inc." And, under the caption "Lighting Technologies," Irvin states that:

The team at Lighting Technologies (LTI) is comprised of experts with decades of experience specifically in LED. That's an important fact because LED is nothing like traditional lighting. Moreover, designing an LED that meets the unique challenges of billboard lighting is no easy task. But with input from one of the industry's largest and most respected billboard companies, LTI's team has put its knowledge and skills to work. The result: MarQueue LED.

44. Irvin's website also shows the same name and logo that appears on the sign on the building located at 1810 Barrancas, Pensacola, Florida, 32502, which is owned by Lamar representative's company, 1810 Barrancas, LLC.

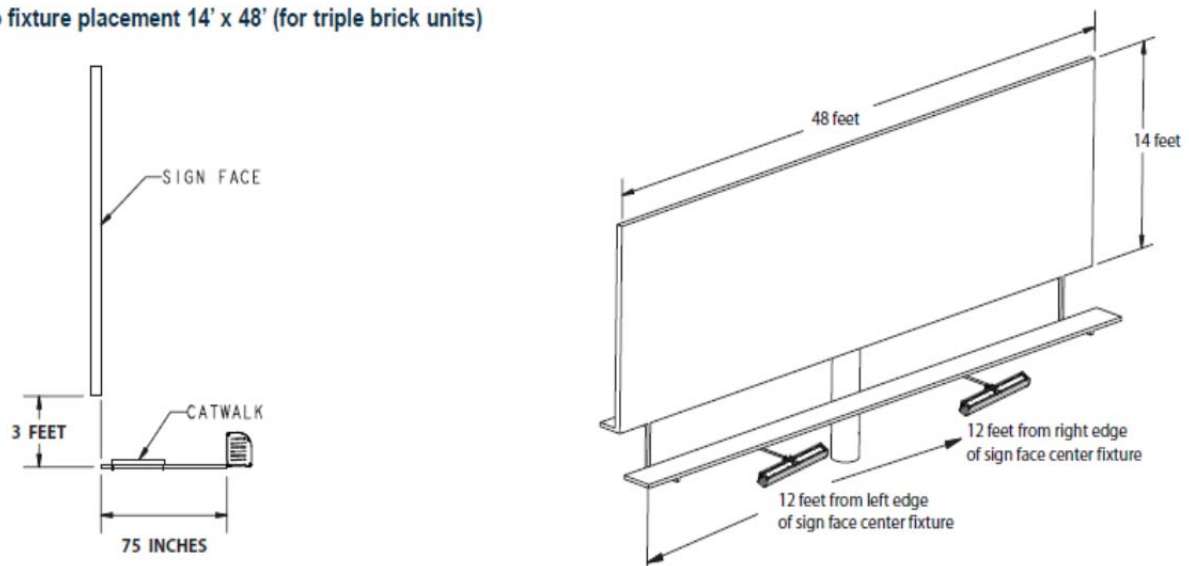
45. Irvin touts that the MarQueue LED was "developed with input from one of the largest and most respected billboard companies in the U.S." Upon information and belief, that billboard company was Lamar. Irvin further claims that the MarQueue LED was "built . . . for billboards, with the help of some of the most respected names in Outdoor" that resulted in a "one-of-a-kind billboard light for the industry." Again, upon information and belief, those "most respected names" includes Lamar and its representatives. Lamar has repeatedly endorsed the

MarQueue LED, and a Lamar representative is actually quoted on Irvin's website touting its purchase and use of the MarQueue LED and/or Lighting Technologies' Accused Products.

46. Upon information and belief, Lamar has purchased MarQueue LED and/or Lighting Technologies' Accused Products from Irvin and/or from Lighting Technologies and installed it on billboards that Lamar owns and/or operates. Upon information and belief, Lamar has purchased the bulk of the MarQueue LED products and/or Lighting Technologies' Accused Products sold by Irvin and/or by Lighting Technologies to date. In fact, Irvin states on its MarQueue LED website that it has "OVER 50,000 BILLBOARD LED LIGHTS IN THE FIELD."

47. Like Ultravision's LED designs, the MarQueue LED and/or Lighting Technologies' Accused Products is installed on billboards to illuminate the billboard display, such as the Lamar Billboards. As shown below, the installation guide for MarQueue LED instructs purchasers how to install MarQueue LED on billboards:

Two fixture placement 14' x 48' (for triple brick units)



First fixture is 12' centered from left edge of sign face. Second is 12' from right edge centered. 24' center to center.

http://www.marqueeled.com/pdf/Irvin_MarQueueLED_Install_Guide.pdf

48. The installation guide for the MarQueue LED further instructs purchasers how to install MarQueue LED on billboards of various sizes as follows:

MarQueue Board Sizes and Corresponding MarQueue Options

Size of Board	Skirted	MarQueue Style	Total Watts*	Quantity	Total Lumens*	DLC Compliant #
12' x 24'	No	Single Brick	48W	1	4,650 lm	LTBB-7022-NRA-1-3-SLU
12' x 24'	No	Double Brick	98W	1	8,200 lm	LTBB-7044-NRA-1-1-SLU
12' x 24'	Yes	Single Brick	48W	1	4,650 lm	LTBB-7022-NRB-1-3-SLU
12' x 24'	Yes	Double Brick	98W	1	8,200 lm	LTBB-7044-NRB-1-1-SLU
10' x 32"/40"	Yes	Single Brick	96W	2	9,300 lm	LTBB-7022-NRB-1-3-SLU
10'6" x 36'	Yes	Double Brick	196W	2	16,400 lm	LTBB-7044-NRB-1-1-SLU
14' x 48'	Yes	Double Brick	300W	3	32,800 lm	LTBB-7044-NRB-1-1-SLU
14' x 48'	Yes	Triple Brick	300W	2	26,000 lm	LTBB-7088-NRB-1-4-SLU

http://www.marqueeled.com/pdf/Irvin_MarQueueLED_Install_Guide.pdf

49. According to the specification sheets taken from the MarQueue LED website, MarQueue LED products have multiple rows or groupings of LEDs. These LEDs have been designed such that, when installed on the billboard, they are directed toward the display surface of the billboard, as in the Lamar billboards.



http://www.marqueeled.com/pdf/Irvin_MarQueue_LED_Spec_Sheet.pdf

50. Also, as shown above in paragraph 50 and described below, the MarQueue LED has optical elements that are also positioned into two rows. And each optical element is positioned over each LED in order to cover each LED. As stated on Irvin’s website, these optical elements, described by Irvin as a “Total Internal Reflectance” optic and the “Tiny, Mighty TIR Optic,” direct the light toward the billboard surface. Further, as repeatedly explained on Irvin’s website, the optic was designed “with the sole purpose of ensuring that EACH individual LED’s light covers an extremely large portion of the billboard face (in some instance, the ENTIRE face),” such that there are “no hot spots,” “no dark spots,” “just seamless, even coverage—side to side, top to bottom,” as in the Lamar billboards.

51. The following excerpts and images are all taken from Irvin’s website, <http://www.marqueeled.com>:

Without reflectors, how does MarQueue LED direct light to the billboard face?

The workhorse of the MarQueue LED is a highly engineered, acorn sized lens cover that fits over each LED. Known as a TIR (Total Internal Reflectance) optic, this patented/patent-pending feature was precision crafted with the sole purpose of ensuring that EACH individual LED's light covers an extremely large portion of the billboard face (in some instance, the ENTIRE face). It is the only lens of its kind in the industry.

http://www.marqueeled.com/MarQueue_LED_FAQ.html

The MarQueue LED Difference



The Tiny, Mighty TIR Optic

The jewel of MarQueue LED is in a small prismatic lens no bigger than an acorn. This highly engineered, patented and patent-pending element is comprised of hundreds of angles and covers each of the MarQueue LED's individual LEDs. These Total Internal Reflectance (TIR) Optics (patented optics and other patents pending) were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).

Our novel approach to LED billboard lighting is counter to our competitors, who standardly utilize a combination of reflectors and LEDs with jobs specific to a small portion of the board. With such designs, should an LED go out, a portion of the billboard would go noticeably dark. Our approach ensures that should an LED go out, that outage would be unrecognizable to the naked eye because the remaining LEDs are covering the same area.

http://www.marqueeled.com/MarQueue_LED_Difference.html#Providing

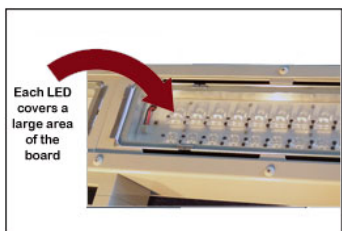


No Reflectors – by Design

MarQueue LED has no reflectors. Why? With 20 years of experience working with LEDs, the manufacturer learned first-hand that reflectors can offer challenges when utilized in conjunction with LEDs. The tremendous heat generated by LEDs can melt reflectors and/or corrode the reflective material. So to be clear, if reflective material starts to bake and chip off and the reflector has been relied upon to do part of the work, a unit's performance can be diminished over time.

MarQueue LED strictly utilizes Total Internal Reflectance (TIR) Optics to direct light onto the billboard. These highly engineered, patent pending lenses are comprised of hundreds of angles and cover each of the MarQueue LED's individual LEDs. They were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face). No reflectors needed here.

http://www.marqueeled.com/MarQueue_LED_Difference.html#Providing

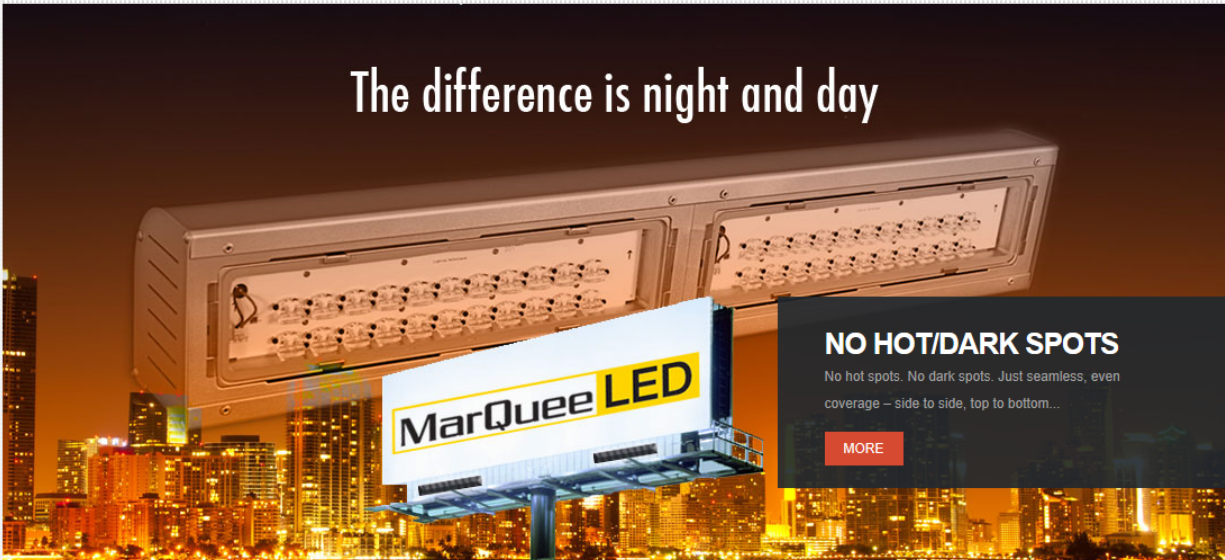


No Hot Spots or Dark Spots. Ever.

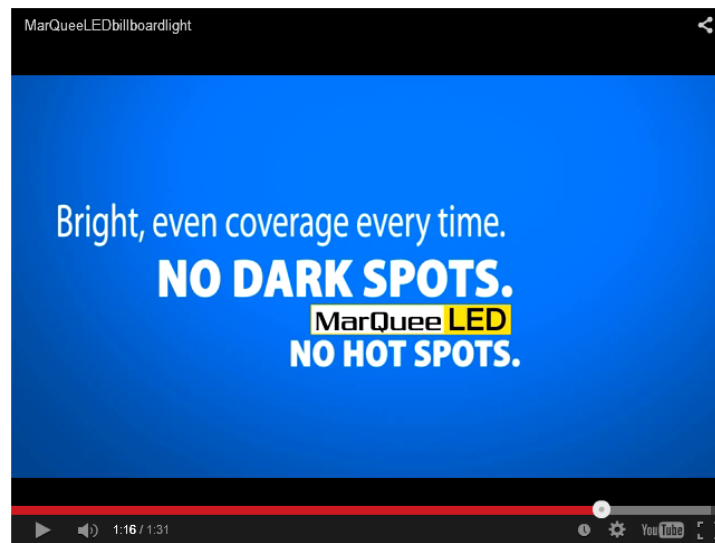
The dreaded hot spots and dark spots can be seen on billboards when light is so specifically placed that it renders one portion of the board with too much light and other portions wanting for more. With MarQueue LED's novel approach to LED billboard lighting, hot spots and dark spots vanish. Other lighting options have specific LEDs lighting smaller, specific portions of the billboard. Not MarQueue LED.

Highly engineered, patent-pending lenses (known as TIR or Total Internal Reflectance Optics) are comprised of hundreds of angles and cover each of the MarQueue LED's individual LEDs. They were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face). No hot spots. No dark spots. Just seamless, even coverage – side to side, top to bottom.

http://www.marqueeled.com/MarQueue_LED_Difference.html#Providing



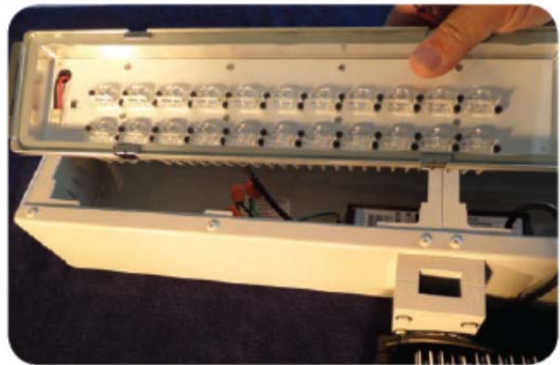
<http://www.marqueeled.com/index.html>



http://www.marqueeled.com/MarQueue_LED_Videos.html

The Tiny, Mighty TIR Optic

The jewel of MarQueue LED is in a small prismatic lens no bigger than an acorn. This highly engineered, patent-pending element is comprised of hundreds of angles and covers each of the MarQueue LED's individual LEDs. These Total Internal Reflectance (TIR) Optics (patented optics and other patents pending) were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).



<http://www.marqueeled.com/pdf/MarQueueLEDBrochureLowres.pdf>

No Reflectors – by Design

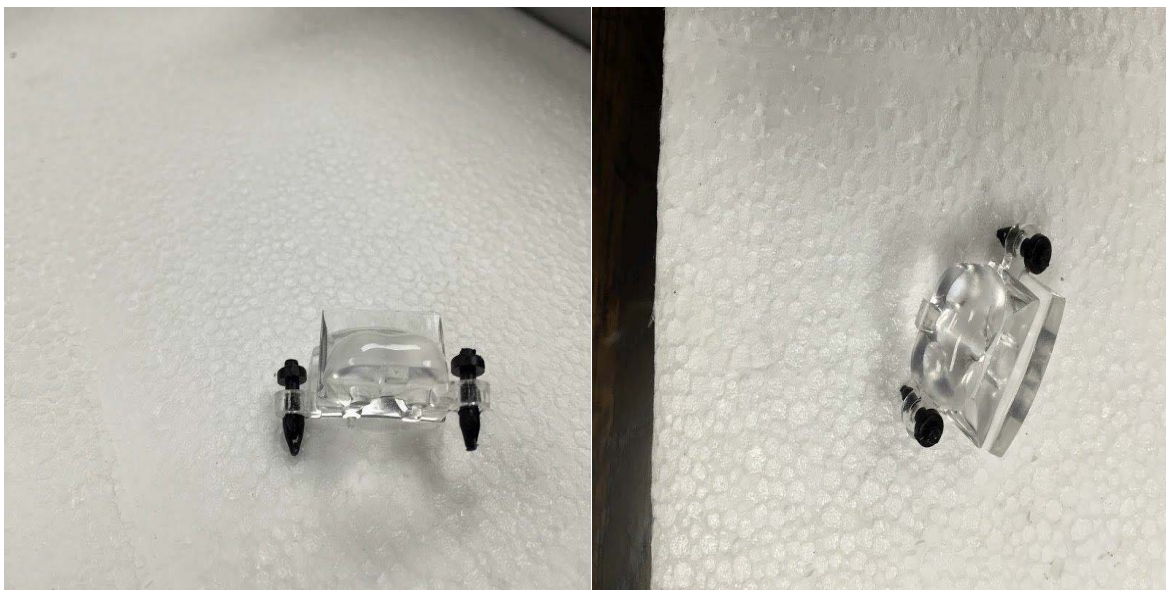
MarQueue LED has no reflectors. Why? With 20 years of experience working with LEDs, the manufacturer learned first-hand that reflectors can offer challenges when utilized in conjunction with LEDs. The tremendous heat generated by LEDs can melt reflectors and/or corrode the reflective material. So to be clear, if reflective material starts to bake and chip off and the reflector has been relied upon to do part of the work, a unit's performance can be diminished over time.

No Hot Spots or Dark Spots. Ever.

The dreaded hot spots and dark spots can be seen on billboards when light is so specifically placed that it renders one portion of the board with too much light and other portions wanting for more. With MarQueue LED's novel approach to LED billboard lighting, hot spots and dark spots vanish. Other lighting options have specific LEDs lighting smaller, specific portions of the billboard. Not MarQueue LED. Highly engineered, patented lenses (known as TIR or Total Internal Reflectance Optics) are comprised of hundreds of angles and cover each of the MarQueue LED's individual LEDs. They were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face). No hot spots. No dark spots. Just seamless, even coverage – side to side, top to bottom.

<http://www.marqueeled.com/pdf/MarQueueLEDBrochureLowres.pdf>

52. Actual examples of “Total Internal Reflectance Optics” found in the Marquee LED and/or Lighting Technologies’ Accused Products are shown below.



53. Irvin states on its website and in the technical specification for the Marquee LED, shown below, that Marquee LED is designed such that areas beyond edges of the display surface receive substantially no illumination from each of the LEDs, so there is “virtually no light spillage.”

- Dark Skies design, virtually no light spillage

http://www.marqueeled.com/pdf/Irvin_MarQueue_LED_Spec_Sheet.pdf

- Dark Skies design, virtually no light spillage

http://www.marqueeled.com/pdf/Irvin_MarQueueLED_Solar_Promo.pdf

54. The accused products include heat sinks, as shown below.

What is a heat sink and why is it important?

The heat sink helps to circulate and dissipate the large amount of heat created by LEDs. Most solidly performing units opt for “passive” heat sinks, meaning there no moving parts so no chance of the cooling mechanism failing. However, most heat sinks lay flat at the bottom of the unit, under the LED mechanism. In such positioning, gravity takes hold and the air moves up first, directly into the backside of the LED mechanism. It will eventually disperse, but not without needlessly heating the LED first. MarQueue LED is different, because the LED and heat sink are perpendicular to the bottom of the unit, air moves more freely and the LED mechanism remains cooler.

http://www.marqueeled.com/MarQueue_LED_FAQ.html

The secret to such LED longevity is a solidly performing heat sink to disperse heat. Most units opt for “passive” heat sinks, meaning there are no moving parts so no chance of the cooling mechanism failing. But where many units have issue is in the direction the air is allowed to flow. Heat sinks are typically positioned under the LED mechanism, and most LED mechanisms sit on the bottom of a unit’s housing. When air wants to move and gravity takes hold, the first place the air moves is up, directly into the backside of the LED mechanism. It will eventually disperse the heat throughout the housing but not without needlessly heating the LED first. Remember: As temperature goes up, LED life goes down.

MarQueue LED is different. Rather than lying horizontally, our LED mechanism (and thereby heat sink) is perpendicular to the bottom of the unit. When the unit creates heat and gravity pulls it up, the heat move throughout the housing and not first onto the backside of the LED mechanism. The LED remains as cool as possible while the heat circulates and dissipates within the housing and then out.

http://www.marqueeled.com/MarQueue_LED_Difference.html#Providing



http://www.marqueeled.com/MarQueue_LED_Gallery.html

55. As described above, Irvin has made a number of claims about its products that describe the same technology, know-how and benefits of prototypes that Ultravision developed and shared with Lamar. Irvin’s marketing and physical products therefore reflect design details contained in confidential information Ultravision shared with Lamar.

56. Irvin repeatedly states on its website that its MarQueue LED products are “patented” and that it has “patents pending.” For instance, as shown above in paragraph 52, Irvin references “patented optics and other patents pending” in relation to and under the caption “The Tiny, Mighty TIR Optic” and “Total Internal Reflectance (TIR) Optics.” In addition, Irvin

refers to the “[h]ighly engineered, patent-pending lenses (known as TIR or Total Internal Reflectance Optics).” Upon information and belief, the MarQueue LED products contain no marks or other notices identifying any United States patents that pertain or relate to the MarQueue LED products. No patent numbers relating to the MarQueue LED products are found on the MarQueue LED product website. And, upon information and belief, there are no such patents or any issued patents pertaining to the optics.

57. Irvin states on its website that the MarQueue LED products, which it purchases from Lighting Technologies, are “Made in America.”

58. Lighting Technologies’ Accused products, including the MarQueue LED, are collectively called the “LED Accused Products” herein. Upon information and belief, Lamar has purchased LED Accused Products and installed them on billboards that it owns or operates. Billboards that have LED Accused Products installed on them are hereinafter called the “Accused Billboards.”

C. Industry Standards Incorporate Ultravision’s Technology and Procedures.

59. Industry groups, such as the Outdoor Advertising Association of America (“OAAA”), have made recommendations about the illumination used for billboards.

60. The OAAA, of which Lamar is a member, states it represents the “Nation’s Out of Home Advertising Industry.” Upon information and belief, Lamar representatives and employees actively participate in the OAAA as well on the committee that prepared, reviewed, adopted and offered LED Lighting Guidance for Outdoor Advertising Owners and Operators in 2013 (hereafter referred to as “OAAA Guidelines”). Upon information and belief, Lamar has followed these OAAA Guidelines in the testing, selection, purchase, installation, and use of the LED Accused Products from Lighting Technologies and Irvin.

61. Consistent with the advantages of Ultravision's technology, the OAAA Guidelines emphasize the value of "Uniformity of Illumination" and the need for "a smooth, even plane of lighting across the face of the display, sufficient to satisfactorily illuminate the display under normal conditions, and with no hot spots, shadows, flares, striations, banding or gradients visible to the naked eye at typical viewing distances during typical viewing interval." Also, consistent with Ultravision's technology and multiple claims of the Patents-in-Suit, the OAAA Guidelines also emphasize the importance of the optical design, stating:

Superior optical design drives every aspect of fixture design. A superior optic, satisfying the criteria outlined in the Basic Lighting Guidance, has several functions:

- Provides a uniform plane of illumination, free of shadows, hot spots, flares or other errors.
- Limits stray light. This is crucial in mitigating future Dark Skies initiatives.
- Directs the output of every LED onto the target, so that every possible watt is used for illumination.
- Reduces the number of LEDs, requiring less wattage compared to less sophisticated designs.
- Reduced wattage and fewer LED's require a smaller heat sink capacity thus allowing a smaller form factor.

62. The OAAA Guidelines go on to state as follows:

The optical design shall be such, that in the event of LED failure, only the overall illumination level of the display is reduced, not specific areas within the display. Each optic should direct the output of each individual LED onto the entire display (holistic approach), rather than individual LEDs being aimed or directed at individual sections of the display (zoned approach). Failure of up to 15% of the LEDs in a fixture shall not result in a readily apparent reduction in display illumination.

LED failures in zoned designs without sufficient coverage overlap will result in corresponding areas of reduced illumination within the display, which will be apparent to the public and to the advertiser. In a zoned rather than holistic optical design scenario, the photometric evaluation shall, in addition to showing the buyer

the full-power performance of the fixture, also show projections of billboard target illumination in various partial LED failure modes, so that full lighting coverage can be demonstrated even in the event of partial failure.

The nature of the custom optic shall be such that extensions (cutouts) are fully illuminated, with no apparent visible color difference between the extension and the main body of the display. Additionally, sufficient light shall be directed onto the skirt (apron) of the display such that the display is appropriately framed, and the operators' brand is visible and identifiable. Downlight and glare to oncoming traffic shall be minimized to the extent possible.

It cannot be stressed strongly enough that advanced optical design is an absolutely critical element in choosing a lighting fixture. Not only is this a technical and practical necessity upon which the overall fixture design is dependent, but the ability to understand the requirement and produce the optic demonstrates both technical expertise on the part of the vendor, and the willingness of the vendor to make the quite significant commitments necessary to satisfy the requirements specific to our industry. This commitment is a necessary factor as we choose long-term suppliers to our industry.

63. Regarding the need for a heat sink, the OAAA Guidelines emphasize the need for a heat sink to dissipate heat, stating:

Although LEDs generate very little heat compared to other light sources, heat produced at the semiconductor level must be dissipated for the LED to reach its design lifespan. Thus, thermal management is a critical element in fixture design, and an inferior or underperforming heat sink design will dramatically shorten the life of the light engine.

The circuit board containing the LEDs shall be thermally coupled to the heat sink either by means of heat-conductive compound or adhesive (acceptable) or by precise machining of the heat sink in the circuit board mounting area such that there are no voids between the heat sink and the circuit board (preferred).

64. The OAAA Guidelines also state that a photometric chart and actual readings from an actual billboard should be provided. And the OAAA Guidelines further recommend that:

Prior to viewing the fixture on the street, a white board test should be performed to identify any banding, striations, shadows, hot spots, etc. These inaccuracies will be much more apparent on a full-size white board than on a street location with copy. If at all possible, this test should be done in a controlled warehouse environment so that any competing light sources can be eliminated.

65. The OAAA Guidelines also recommend that “once all due diligence is complete, commence actual field tests. Nothing beats the trained eye.”

66. The OAAA Guidelines further state in summary:

Industry-specific LED lighting has the ability to dramatically improve the viewing experience for advertisers and consumers, and to also manifest advantages to operators. Conformance with basic guidelines will guarantee that owners and operates in the outdoor industry receive full value for the considerable investment involved.

To recap the primary considerations when researching and evaluating LED lighting, the following are musts:

- Conformance with the Basic Lighting Guideline
- Superior optical design
- Minimum number of fixtures per structure

67. Upon information and belief, the LED Accused Products comply with the OAAA Guidelines. Further, in view of the foregoing, upon information and belief, Lighting Technologies and/or Irvin provided information that showed the LED Accused Products conformed with the OAAA Guidelines to Lamar representatives who were involved in the adoption of those Guidelines, such as “photometric charts or white board tests that identify ‘any banding, striations, shadows, hot spots, etc.’” Upon information and belief, Lamar has followed

the OAAA Guidelines, particularly, but not limited to, in the selection, testing and evaluation of LED Accused Products for installation and use on the Accused Billboards.

D. Ultravision Filed Patent Applications for the Novel LED Billboard Lighting Assemblies and the Patent Office Has Issued Multiple Patents.

68. Ultravision filed patent applications that have resulted in the issuance of the Patents-in-Suit.

69. On October 28, 2014, the United States Patent and Trademark Office issued U.S. Patent No. 8,870,410 (“the ’410 Patent”), entitled “Optical Panel for LED Light Source,” after full and fair examination. Ultravision is the assignee of all rights, title, and interest in and to the ’410 Patent and possesses all rights of recovery under the ’410 Patent, including the right to recover damages for present, past, and future infringement. A true and correct copy of the ’410 Patent is attached as Exhibit A. The ’410 Patent is valid and enforceable.

70. On October 28, 2014, the United States Patent and Trademark Office issued U.S. Patent No. 8,870,413 (“the ’413 Patent”), entitled “Optical Panel for LED Light Source,” after full and fair examination. Ultravision is the assignee of all rights, title, and interest in and to the ’413 Patent and possesses all rights of recovery under the ’413 Patent, including the right to recover damages for present, past, and future infringement. A true and correct copy of the ’413 Patent is attached as Exhibit B. The ’413 Patent is valid and enforceable.

71. On December 15, 2015, the United States Patent and Trademark Office issued U.S. Patent No. 9,212,803 (“the ’803 Patent”), entitled “LED Light Assembly with Three-Part Lens,” after full and fair examination. Ultravision is the assignee of all rights, title, and interest in and to the ’803 Patent and possesses all rights of recovery under the ’803 Patent, including the right to recover damages for present, past, and future infringement. A true and correct copy of the ’803 Patent is attached as Exhibit C. The ’803 Patent is valid and enforceable.

72. On January 12, 2016, the United States Patent and Trademark Office issued U.S. Patent No. 9,234,642 (“the ’642 Patent”), entitled “Billboard with Light Assembly for Substantially Uniform Illumination,” after full and fair examination. Ultravision is the assignee of all rights, title, and interest in and to the ’642 Patent and possesses all rights of recovery under the ’642 Patent, including the right to recover damages for present, past, and future infringement. A true and correct copy of the ’642 Patent is attached as Exhibit D. The ’642 Patent is valid and enforceable.

73. On May 24, 2016, the United States Patent and Trademark Office issued U.S. Patent No. 9,349,307 (“the ’307 Patent”), entitled “Forty-eight by Fourteen Foot Outdoor Billboard to be Illuminated using only Two Lighting Assemblies,” after full and fair examination. Ultravision is the assignee of all rights, title, and interest in and to the ’307 Patent and possesses all rights of recovery under the ’307 Patent, including the right to recover damages for present, past, and future infringement. A true and correct copy of the ’307 Patent is attached as Exhibit E. The ’307 Patent is valid and enforceable.

74. All of the Patents-in-Suit can be viewed at the website for the United States Patent and Trademark Office. In addition, Ultravision has issued one or more press releases pertaining to the Patent-in-Suit. Ultravision also lists its patents on its website, <http://www.ultravisioninternational.com>, and also references its patents and its website in the product packaging for its products.

COUNT I: PATENT INFRINGEMENT OF THE ’410 PATENT

75. Paragraphs 1–74 are incorporated by reference as if fully stated herein.

76. Lamar, Lighting Technologies, and Irvin, individually and collectively, have been and are now directly infringing and/or indirectly infringing the ’410 Patent by way of

inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, selling, and/or offering for sale in the United States or importing into the United States infringing products, namely the LED Accused Products, and/or related services using the LED Accused Products. As explained in paragraphs 78–90 below, these products and services are covered by at least one claim of the ’410 Patent, including, but not limited to, Claims 10, 12, 14, and 27–32. The LED Accused Products have been designed, marketed, and sold to illuminate billboards and have no substantial non-infringing use.

77. Upon information and belief, each of the Defendants derives revenue from the activities relating to the LED Accused Products.

78. As shown above in paragraphs 20–24 and 47–50, the LED Accused Products have an optics panel that is intended to be used in an LED lighting assembly to illuminate billboards. Upon information and belief, Lamar has purchased the LED Accused Products and installed them on billboards that it owns and operates and, once the LED Accused Products are installed, Lamar has operated them on its billboards to infringe at least one claim of the ’410 Patent.

79. As shown above in paragraphs 20–24 and 47–52, the LED Accused Products have a plurality of LEDs directed toward the billboard display surface. Also, as shown above in paragraph 50, the LED Accused Products have a plurality of lens or optical elements.

80. As shown above in paragraphs 49–52, Irvin has represented that a separate lens “covers each of the MarQueue LED’s individual LEDS” and, thus, is disposed over only one associated LED. Each lens is configured to direct light from that LED toward the display surface of the billboard.

81. As shown above in paragraph 51 and consistent with OAAA Guidelines discussed in paragraphs 59–67, Irvin has represented that the lenses were “designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).” Irvin’s website also states that the LED Accused Products have:

- “NO HOT/DARK SPOTS”
- “No Hot Spots or Dark Spots. Ever”
- “No hot spots. No dark spots. Just seamless, even coverage—side to side, top to bottom.”
- “Bright, even coverage every time. No Dark Spots. MarQueen LED. No Hot Spots.”

82. As shown above in paragraph 51 and consistent with OAAA Guidelines discussed in paragraphs 59–67, Irvin has also stated “[o]ur approach ensures that should an LED go out, that outage would be unrecognizable to the naked eye because the remaining LEDS are covering the same area.” As shown above in paragraph 51 and consistent with OAAA Guidelines discussed in paragraphs 59–67, Irvin has further touted the benefits of the LED Accused Products:

The dreaded hot spots and dark spots can be seen on billboards when light is so specifically placed that it renders one portion of the board with too much light and other portions wanting for more. With MarQueen LED’s novel approach to LED billboard lighting, hot spots and dark spots vanish. Other lighting options have specific LEDs lighting smaller, specific portions of the billboard. Not MarQueen LED.

Consequently, light from the LED Accused Product is directed from each lens of the LED Accused Products across the entire display surface of the billboard, wherein the light intensity from each lens is substantially uniform across the entire display surface.

83. Further, as discussed above in paragraphs 59–67, the OAAA has made certain recommendations regarding the configuration needed to have a uniform distribution of light. Consequently, light is directed from each lens of the LED Accused Products across the entire

display surface of the billboard, wherein the light intensity from each lens is substantially uniform across the entire display surface.

84. As shown above in paragraph 54 and consistent with OAAA Guidelines discussed in paragraph 61, the LED Accused Products are designed such that edges or areas beyond the display surface of the billboard receive substantially no illumination from each of the LEDs. Specifically, this design feature is consistent with Irvin's representations that the LED Accused Products have "Dark Skies design, virtually no light spillage." And, as shown above in paragraph 54, the LED Accused Products also have a heat sink "to circulate and dissipate the large amount of heat created by LEDs."

85. As shown above in paragraphs 20–24 and 45–46, upon information and belief, Lighting Technologies and Irvin have activated the LED Accused Products by installing one or more on billboards and turning them on. And, as shown above in paragraphs 20–24 and 45–46, Lamar has activated the LED Accused Products to illuminate its Accused Billboards.

86. As shown above in paragraphs 49–51, the LED Accused Products/Accused Billboards are comprised of a plurality of LEDs and a plurality of lenses, such that each lens is disposed over only one associated LED. As shown above in paragraphs 50–51, when used or operated, the LED Accused Products/Accused Billboards direct a plurality of LEDs toward the display surface and illuminate the display by directing light from each LED toward and across the display surface, such that the light intensity from each lens is substantially uniform.

87. As shown above in paragraph 53 and consistent with OAAA Guidelines discussed in paragraph 61, when the LED Accused Products/Accused Billboards are activated, substantially no illumination is directed towards areas beyond edges of the display surface from each of the LEDs.

88. As shown above in paragraphs 49–51 and upon information and belief, the LED Accused Products/Accused Billboards illuminate the display by directing light from each LED toward the display surface. The LED Accused Products, when properly installed, maintain a ratio of the average illumination from each LED across the entire display surface to the minimum illumination from that LED at any point on the display surface of 3:1.

89. As shown above in paragraph 54, when LED Accused Products/Accused Billboards are activated, they also extract the heat generated during the operation of the plurality of LEDs using a heat sink attached to a substrate comprising the plurality of LEDs. The heat sink has a plurality of fins.

90. Upon information and belief, Lighting Technologies and Irvin have installed LED Accused Products on billboards to test them for internal purposes or for Lamar. As shown above in paragraphs 20–24 and 45–46, Lamar has also installed LED Accused Products on its Accused Billboards. As shown above in paragraphs 20–24 and 45–46, these activities have created an apparatus that has a billboard, a plurality of LEDs, and a plurality of optical elements. As shown above in paragraphs 50–51, each optical element is disposed over only one associated LED and configured to direct light from that LED toward the display surface. As shown above in paragraph 51, consistent with OAAA Guidelines discussed in paragraphs 59–67 and upon information and belief, the light from each LED is directed across the entire display surface of the billboard so that, for each LED, a ratio of the average illumination from that LED across the entire display surface to the minimum illumination from that LED at any point on the display surface is 3:1. As shown above in paragraph 54 and consistent with OAAA Guidelines discussed in paragraph 63, the apparatus has the plurality of LEDs and a heat sink attached to the circuit

board. The heat sink has a plurality of fins that extend along the plurality of LEDs and the plurality of fins overlaps with the plurality of LEDs.

91. Upon information and belief, Defendants have had actual knowledge of the '410 Patent and actual knowledge that their activities constitute either direct or indirect infringement of the '410 Patent, yet they have not ceased their infringing activities. Defendants' infringement of the '410 Patent has been and continues to be willful and deliberate. Defendants also have knowledge of the '410 Patent by way of this complaint and, to the extent they do not cease their infringing activities, their infringement is and continues to be willful and deliberate.

92. Ultravision has no adequate remedy at law against Defendants' individual and collective acts of infringement, and, unless Defendants are enjoined from their infringement of the '410 Patent, Ultravision will suffer irreparable harm.

93. Defendants, by way of their infringing activities, have caused and continue to cause Ultravision to suffer damages, the exact amount to be determined at trial.

COUNT II: PATENT INFRINGEMENT OF THE '413 PATENT

94. Paragraphs 1–93 are incorporated by reference as if fully stated herein.

95. Lamar, Lighting Technologies and Irvin, individually and collectively, have been and are now directly infringing and/or indirectly infringing the '413 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, selling, and/or offering for sale in the United States or importing into the United States infringing products, namely the LED Accused Products and/or related services using the LED Accused Products. As explained in paragraphs 97–103 below, these products and services are covered by at least one claim of the '413 Patent, including, but not limited to, Claims 1–2, 4 and 16–17. The LED Accused Products

have been designed, are intended, have been marketed and have been sold to illuminate billboards and have no substantial non-infringing use.

96. Upon information and belief, each of the Defendants derives revenue from the activities relating to the LED Accused Products.

97. As shown above in paragraphs 47–51, the LED Accused Products have an optics panel that is intended to be used in an LED lighting assembly to illuminate billboards. Each billboard has a display surface extending between the outer edges of the billboard. As shown above in paragraphs 20–24 and 45–46, Lamar has purchased the LED Accused Products and installed them on billboards that it owns and operates and, once the LED Accused Products are installed, Lamar has operated them on its billboards to infringe at least one claim of the '413 Patent.

98. As shown above in paragraph 49, the LED Accused Products have a plurality of LEDs directed toward the billboard display surface. Also, as shown above in paragraphs 50–51, the LED Accused Products have a plurality of optical elements.

99. As shown above in paragraphs 50–51, Irvin has represented that a separate optical element “covers each of the MarQuee LED’s individual LEDS” and, thus, is disposed over only one associated LED. Each optical element is configured to direct light from the LED toward that display surface of the billboard.

100. As shown above in paragraph 51 and consistent with the OAAA Guidelines discussed in paragraphs 59–67, Irvin has represented that the optical elements were “designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).” Irvin’s website also states that the LED Accused Products have:

- “NO HOT/DARK SPOTS”
- “No Hot Spots or Dark Spots. Ever”
- “No hot spots. No dark spots. Just seamless, even coverage—side to side, top to bottom.”
- “Bright, even coverage every time. No dark Spots No Hot Spots.”

101. As shown above in paragraph 51, Irvin has also stated “[o]ur approach ensures that should an LED go out, that outage would be unrecognizable to the naked eye because the remaining LEDS are covering the same area.” As shown above in paragraph 51 and consistent with OAAA Guidelines discussed in paragraphs 59–67, Irvin has further touted the benefits of the LED Accused Products:

The dreaded hot spots and dark spots can be seen on billboards when light is so specifically placed that it renders one portion of the board with too much light and other portions wanting for more. With MarQueue LED’s novel approach to LED billboard lighting, hot spots and dark spots vanish. Other lighting options have specific LEDs lighting smaller, specific portions of the billboard. Not MarQueue LED.

102. Further, as shown above in paragraphs 59–67, the OAAA has made certain recommendations regarding the configuration needed to have a uniform distribution of light. Further, as shown above in paragraphs 50–51, light is directed from each lens of the LED Accused Products across the entire display surface of the billboard, wherein the light intensity from each lens is substantially uniform across the entire display surface, preferably in such a manner that the average illumination to the minimum illumination from each LED is 3:1.

103. As stated above at paragraph 53, the LED Accused Products are designed such that edges or areas beyond the display surface of the billboard receive substantially no illumination from each of the LEDs. This design feature is consistent with Irvin’s representations that the LED Accused Products have “Dark Skies design, virtually no light

spillage.” This design feature is also consistent with the OAAA Guidelines discussed at paragraph 61.

104. Upon information and belief, Defendants have had actual knowledge of the ’413 Patent and actual knowledge that their activities constitute either direct or indirect infringement of the ’413 Patent, yet they have not ceased their infringing activities. Defendants’ infringement of the ’413 Patent has been and continues to be willful and deliberate. Defendants also have knowledge of the ’413 Patent by way of this complaint and, to the extent they do not cease their infringing activities, their infringement is and continues to be willful and deliberate.

105. Ultravision has no adequate remedy at law against Defendants’ individual and collective acts of infringement; and, unless Defendants are enjoined from their infringement of the ’413 Patent, Ultravision will suffer irreparable harm.

106. Defendants, by way of their infringing activities, have caused and continue to cause Ultravision to suffer damages, the exact amount to be determined at trial.

COUNT III: PATENT INFRINGEMENT OF THE ’803 PATENT

107. Paragraphs 1–106 are incorporated by reference as if fully stated herein.

108. Lamar, Lighting Technologies, and Irvin, individually and collectively, have been and are now directly infringing and/or indirectly infringing the ’803 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, selling, and/or offering for sale in the United States or importing into the United States infringing products, namely the LED Accused Products and Accused Billboards, and/or related services using the LED Accused Products or Accused Billboards. As explained in paragraphs 110–119 below, these products and services are covered by at least one claim of the ’803 Patent, including, but not limited to, Claims

1–4 and 6–8, 10–18. The LED Accused Products have been designed, are intended, have been marketed and have been sold to illuminate the Accused Billboards and other billboards on which the LED Accused Products are not yet installed, and have no substantial non-infringing use.

109. Upon information and belief, each of the Defendants derives revenue from the activities relating to the LED Accused Products and Accused Billboards.

110. As shown above in paragraphs 50–51 and 53, the LED Accused Products are lighting assemblies for illumination of a billboard. The LED Accused Products comprise a plurality of means for emitting light; means for mounting the plurality of means for emitting light; and means for conducting heat thermally coupled to a first surface of the means for mounting the plurality of means for emitting light. As shown above in paragraph 54, the means for conducting heat includes a plurality of fins extending away from the means for mounting a plurality of means for emitting light. As shown above in paragraphs 50–51, the plurality of means for emitting light is attached to a second surface of the means for mounting a plurality of means for emitting light. Similarly, as shown above in paragraphs 50–51, the second surface is opposite the first surface. And, as shown above in paragraphs 50–51, the plurality of means for emitting light is arranged in two rows and each row includes more than one of the plurality of means for emitting light that have the same structure. As shown in paragraphs 50–51, each means for directing light of the plurality of means for directing light is proximate one associated means for emitting light of the plurality of means for emitting light such that light from each means for emitting light of the plurality of means for emitting light is configured to exit towards the billboard from an associated means for directing light. As shown in paragraphs 50–51, each of the associated means for directing light comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side, a first element disposed

at the first side, a second element disposed at the second side, and a third element disposed at the third side. As shown in paragraphs 50–51, the third element extends beyond the first element and the second element in a direction away from the means for emitting light. Upon information and belief, in the direction away from the associated means for emitting light, the first element includes a first outer surface protruding outwards and a first inner surface that has a concave-like curvature, and the second element includes a second outer surface protruding outwards and a second inner surface that has a concave-like curvature, the second outer surface being different than the first outer surface and the second inner surface being different than the first inner surface. As shown in paragraphs 50–51 and upon information and belief, the first outer surface joins with the second outer surface at a joint having an outer surface different from the first and the second outer surfaces, wherein the first inner surface joins with the second inner surface at the joint having an inner surface different from the first and the second inner surfaces.

111. As shown above in paragraphs 49 and 50–51, the means for emitting light includes light emitting diodes, and each row of the plurality of means for emitting light includes at least eight light emitting diodes.

112. As shown above in paragraphs 49 and 50–51, the LED Accused Products also include an apparatus comprising a lighting assembly for illumination of an area that is comprised of a plurality of light emitting diodes (LEDs) and a plurality of optical elements. Each optical element of the plurality of optical elements is proximate an associated LED of the plurality of LEDs. Each optical element of the plurality of optical elements comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side and a second element is disposed at the second side, and a third element is disposed at the third side. The third element extends beyond the first element

and the second element in a direction away from the associated LED of the plurality of LEDs. Upon information and belief, in the direction away from the associated LED, the first element includes a first convex outer surface and the second element includes a second convex outer surface different than the first outer convex surface. The first convex outer surface has a first peak at a first distance from a point on the associated LED, and the second convex outer surface has a second peak spaced from the first peak, the second peak being at a second distance from the point on the associated LED. The first convex outer surface and the second convex outer surface connect at a connection region that is at a third distance from the point on the associated LED, wherein the third distance is shorter than the first distance as well as the second distance.

113. As shown above in the paragraphs 49–52, each optical element of the plurality of optical elements in the LED Accused Products is separate from all of the other optical elements of the plurality of optical elements. The LEDs in the LED Accused Products are arranged in only two rows, each row comprising a plurality of LEDs.

114. As shown above in the paragraphs 49–52, the Accused Billboards have a billboard that has the area, wherein the light assembly is located adjacent the billboard to evenly illuminate the area. The light assembly is located adjacent the billboard to evenly illuminate the area when a subset of the LEDs is not generating any light. Each optical element of the plurality of optical elements is associated with only one LED of the plurality of LEDs and is configured to direct light from that one LED toward an area such that the light from each optical element of the plurality of optical elements is directed across all of the area, wherein light intensity from each optical element of the plurality of optical elements is substantially even across all of the area. A heat sink comprises a plurality of fins thermally coupled to the plurality of LEDs. The light assembly includes a thermally conductive substrate comprising a plurality of fins and a circuit

board attached to the thermally conductive substrate, wherein the plurality of LEDs are secured to the circuit board and the plurality of fins extend away from the thermally conductive substrate in a direction opposite to the circuit board.

115. As shown above in paragraphs 20–24 and 47–52, the Accused Billboards comprise a support structure; a display surface mounted on the support structure; and a lighting assembly coupled to a structural member of the billboard at a position angled with respect to the display surface. The lighting assembly comprises a plurality of light emitting diodes (LEDs) and a plurality of optical elements. Each optical element of the plurality of optical elements is proximate an associated LED of the plurality of LEDs. Each optical element of the plurality of optical elements comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first element comprises a first convex-shaped surface disposed at the first side. The second element comprises a second convex-shaped surface disposed at the second side, wherein the second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element, and wherein the light from the associated LED exits the optical element through the first and the second convex-shaped surfaces. A third element is disposed at the third side, wherein the third element extends beyond the first element and the second element in a direction away from the associated LED.

116. As shown above in paragraphs 20–24 and 47–52, the LED Accused Products have a plurality of LEDs that are spaced on the light assembly so that overlapping light from adjacent LEDs does not create interference patterns or result in dead spots on the display surface. In certain configurations, the lighting assembly is located to illuminate a portion of the display surface, wherein the portion of the display surface comprises substantially all of the display

surface. In certain configurations, the lighting assembly is located to illuminate a portion of the display surface, wherein the portion of the display surface comprises a first half of the display surface.

117. As shown above in paragraphs 20–24 and 47–52, in certain configurations the Accused Billboards also comprise a second lighting assembly located to illuminate a second portion of the display surface. The second lighting assembly comprises a plurality of LEDs and a plurality of optical elements. Each optical element of the plurality of optical elements of the second lighting assembly is disposed over an associated LED of the plurality of optical elements of the second lighting assembly. Each optical element of the plurality of optical elements in the LED Accused Products comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the LED of the plurality of LEDs of the second lighting assembly. The second portion of the display surface comprises a second half of the display surface. The display surface has a width of forty-eight feet and the lighting assembly and the second lighting assembly are configured to generate sufficient uniform illumination so that all of the display surface can be illuminated using only the lighting assembly and the second lighting assembly.

118. Upon information and belief, the light reaching the display surface of the Accused Billboards has intensity that is provided with a uniformity across the display surface that achieves a 3:1 ratio of average illumination to minimum illumination.

119. As shown above in paragraphs 20–24 and 47, the Accused Billboards also have a walkway disposed between the lighting assembly and the display surface. The first lighting

assembly and the second lighting assembly are mounted to the walkway at different locations. The lighting assembly and the second lighting assembly are located at a same height but are laterally spaced from each other along the walkway.

120. Plaintiff Ultravision has no adequate remedy at law against Defendants' acts of infringement; and, unless Defendants are enjoined from their infringement of the Patents-in-Suit, Ultravision will suffer irreparable harm.

121. Upon information and belief, Defendants have had actual knowledge of the '803 Patent, and actual knowledge that their activities constitute either direct or indirect infringement of the '803 Patent, yet they have not ceased their infringing activities. Defendants' infringement of the '803 Patent has been and continues to be willful and deliberate. Defendants also have knowledge of the '803 Patent by way of this complaint; and, to the extent they do not cease their infringing activities, their infringement is and continues to be willful and deliberate.

122. Defendants, by way of their infringing activities, have caused and continue to cause Ultravision to suffer damages, the exact amount to be determined at trial.

COUNT IV: PATENT INFRINGEMENT OF THE '642 PATENT

123. Paragraphs 1–122 are incorporated by reference as if fully stated herein.

124. Lamar, Lighting Technologies, and Irvin, individually and collectively, have been and are now directly infringing and/or indirectly infringing the '642 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, selling, and/or offering for sale Accused Billboards in the United States. As explained in paragraphs 126–146 below, these Accused Billboards are covered by at least one claim of the '642 Patent, including, but not limited to, Claims 1–4, 6–11, 13–19, and 21–24. The LED Accused Products have been

designed, are intended to, have been marketed and have been sold to illuminate Accused Billboards and have no substantial non-infringing use.

125. Upon information and belief, each of the Defendants derive revenue from the activities relating to the making, using, selling, and/or offering for sale the Accused Billboards or LED Accused Products for use and installation on Accused Billboards.

126. As shown above in paragraphs 20–24, Lamar owns or operates billboards, including the Accused Billboards. As shown above in paragraphs 45–46, Lighting Technologies makes, imports, offers for sale, and sells LED Accused Products that are intended to be installed and operated on billboards, such as the Accused Billboards owned or operated by Lamar. Irvin makes, offers for sale, and/or sells LED Accused Products for use and installation on billboards, including the Accused Billboards owned or operated by Lamar. Lamar has, directly or indirectly, purchased LED Accused Products from Lighting Technologies or Irvin and has installed them and used them on its Accused Billboards.

127. As shown above in paragraphs 20–24 and 47–50, the Accused Billboards have a support structure and a display surface mounted to the support structure and a walkway attached to the support structure. As shown above, in paragraph 47, in certain configurations the display surface may have a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface. The display surface has a first portion that extends from the lower edge to the upper edge near the left side edge and a second portion that extends from the lower edge to the upper edge near the right side edge. The first and second portions together extend from the left side edge to the right side edge. As shown above in paragraphs 20–24 and 47, a walkway attached to the support structure is adjacent the lower edge of the display surface, wherein an uppermost

surface of the walkway is vertically spaced at a distance lower than a lowermost portion of the display surface.

128. As shown above in paragraphs 20–24 and 47–50, in view of Lighting Technologies and Irvin’s representations, in certain configurations the LED Accused Products (and, when used on the Accused Billboards, the Accused Billboards) include a first lighting assembly and a second lighting assembly. The first lighting assembly can include a plurality of light emitting diodes (LEDs) and a plurality of optical elements. As shown above in paragraph 51, Irvin has represented that a separate optical element “covers each of the MarQueue LED’s individual LEDS.” As shown above in paragraph 51, each optical element in the MarQueue LEDs is disposed over only one associated LED. As shown above in paragraph 52, each optical element includes a first portion, a second portion and a third portion arranged to direct light toward the display surface so that each LED of the first lighting assembly can illuminate the first portion of the display surface. As shown above in paragraphs 20–24 and 47, all of the LEDs of the first lighting assembly are mounted in a single assembly attached to the walkway and the first lighting assembly including a first heat sink. As shown above in paragraph 49, a second lighting assembly includes a plurality of LEDs and a plurality of optical elements. Again, as shown in paragraph 51, each optical element is disposed over only one associated LED. And, as shown in paragraph 52, the optical elements in the second lighting assembly include a first portion, a second portion and a third portion arranged to direct light toward the display surface so that each LED of the second lighting assembly can illuminate the second portion of the display surface, the first portion and the second portion comprising all of the display surface. As shown above in paragraphs 20–24 and 47, all of the LEDs of the second lighting assembly are mounted in a single assembly attached to the walkway. As shown in paragraph 54, the second lighting

assembly also includes a second heat sink. As shown above in paragraph 51, all of the display surface can be illuminated using only the first lighting assembly and the second lighting assembly.

129. In addition, as shown above in paragraph 51 and upon information and belief, all of the display surface can be illuminated using only the first lighting assembly and the second lighting assembly such that an intensity of light directed across all of the display surface is provided with a uniformity that achieves a 3:1 ratio of average illumination to minimum illumination. Further, as shown above in paragraph 49, the first lighting assembly used in the LED Accused Products/Accused Billboards includes an optics panel that comprises the plurality of LEDs and the plurality of optical elements. Upon information and belief, the first lighting assembly is configured to direct light from each LED toward the display surface with a uniformity that achieves, for each LED, a 3:1 ratio of the average illumination from that LED across the first portion of the display surface to the minimum illumination from that LED at any point on the first portion of the display surface.

130. As shown above in paragraph 49, the second lighting assembly used in the Accused Billboard also comprises an optics panel that comprises the plurality of LEDs and the plurality of optical elements. Upon information and belief, the second lighting assembly is configured to direct light from each LED toward the display surface with a uniformity that achieves, for each LED, a 3:1 ratio of the average illumination from that LED across the second portion of the display surface to the minimum illumination from that LED at any point on the second portion of the display surface.

131. As shown above in paragraph 49, the Accused Billboard also includes optical elements of the first lighting assembly that are arranged in two rows on a circuit board, each row

comprises one of the LEDS of the plurality of LEDs, and wherein the optical elements of the second lighting assembly are arranged in two rows on a second circuit board, each row comprises one of the LEDS of the plurality of LEDs. Further, as shown in paragraph 56, each of the plurality of optical elements comprises a dome-shaped protrusion, one of the plurality of LEDs disposed within each protrusion.

132. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first portion comprises a first element comprising a first convex-shaped surface disposed at the first side. The second portion comprises a second element comprising a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element, wherein light from an associated LED exits the optical element through the first and the second convex-shaped surfaces; and wherein the third portion comprises a third element disposed at the third side, wherein the third element extends beyond the first element and the second element in a direction away from the associated LED.

133. As shown above in paragraph 52, in the Accused Billboards, each optical element of the plurality of optical elements of the first and the second lighting assemblies comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first portion comprises a first element disposed at the first side. The second portion comprises a second element disposed at the second side. The third portion comprises a third element disposed at the third side. The third element extends beyond the first element and the second element in a direction away from an associated LED. The first element includes a

first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED, wherein the third nearest distance is shorter than either the first nearest distance or the second nearest distance.

134. As shown above in paragraphs 20–24 and 47, the accused Billboards also comprise a support structure, a display surface and one or more lighting assemblies. The display surface is mounted on the support structure. As shown above in paragraphs 47–49, in certain configurations the display surface has a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface. The display surface has a first area extending from the lower edge to the upper edge near the left side edge and a second area extending from the lower edge to the upper edge near the right side edge. The first and second areas together extend from the left side edge to the right side edge.

135. As shown above in paragraphs 20–24 and 49, the first lighting assembly is directed toward the display surface and comprises a first carrier and a first lighting unit, a second lighting unit, and a third lighting unit, secured thereto. The first lighting unit comprises a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The first lighting unit is configured to direct light toward the display surface such that the light from each LED of the first lighting unit is directed across the first area of the display surface. A

second lighting unit secured to the first carrier comprises a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The second lighting unit is configured to direct light toward the display surface such that the light from each LED of the second lighting unit is directed across the first area of the display surface.

136. As shown above in paragraphs 20–24 and 48–49, the third lighting unit of the LED Accused Products/Accused Billboards comprises a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The third lighting unit is configured to direct light toward the display surface such that the light from each LED of the third lighting unit is directed across the first area of the display surface.

137. As shown above in paragraphs 20–24 and 48–49, the second lighting assembly directed toward the display surface of the LED Accused Products/Accused Billboards comprises a second carrier, a fourth lighting unit and a fifth lighting unit, and a sixth lighting unit, secured thereto. The fourth lighting unit is secured to the second carrier, the fourth lighting unit comprising a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements, wherein each optical element is disposed over only one associated LED, wherein the fourth lighting unit is configured to direct light toward the display surface such that the light from each LED of the fourth lighting unit is directed across the second area of the display surface. A fifth lighting unit is secured to the second carrier, the fifth lighting unit comprising a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements, and wherein each optical element is disposed over only one associated LED, and wherein the fifth lighting unit is

configured to direct light toward the display surface such that the light from each LED of the fifth lighting unit is directed across the second area of the display surface. The sixth lighting unit comprises a planar circuit board, a plurality of light emitting diodes (LEDs) attached to the circuit board, and a plurality of optical elements, wherein each optical element is disposed over only one associated LED, wherein the sixth lighting unit is configured to direct light toward the display surface such that the light from each LED of the sixth lighting unit is directed across the second area of the display surface.

138. As shown above in paragraph 54, the first carrier is formed from a thermally conductive material, wherein a plurality of fins extend away from the first, second and third lighting units.

139. As shown above in paragraph 51, the first lighting assembly is configured to uniformly illuminate the first area of the display surface, and wherein the second lighting assembly is configured to uniformly illuminate the second area of the display surface.

140. As shown above in paragraphs 20–24 and 47–49 and upon information and belief, all of the display surface in the Accused Billboards can be illuminated using only the first lighting assembly and the second lighting assembly such that an intensity of the light directed across all of the display surface is provided with a uniformity that achieves a 3:1 ratio of average illumination to minimum illumination. Each optical element of the plurality of optical elements of the first lighting assembly is configured to direct light from the associated LED toward the display surface, such that the light from each LED is directed across the first area of the display surface so that, for each LED, a ratio of an average illumination from that LED across the first area of the display surface to a minimum illumination from that LED at any point on the first area of the display surface is 3:1. Each optical element of the plurality of optical elements of the

second light assembly is configured to direct light from the associated LED toward the display surface, such that the light from each LED is directed across the second area of the display surface so that, for each LED, a ratio of an average illumination from that LED across the second area of the display surface to a minimum illumination from that LED at any point on the second area of the display surface is 3:1.

141. As shown above in paragraph 52 and upon information and belief, each optical element of the plurality of optical elements of the first and the second lighting assemblies in the LED Accused Products/Accused Billboards comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED. The third nearest distance is shorter than either the first nearest distance or the second nearest distance.

142. As shown above in paragraphs 20–24 and 47 and upon information and belief, the Accused Billboards also comprise a support structure and a display surface mounted on the support structure. In certain configurations, the display surface has a width of forty-eight feet. A first lighting assembly includes a plurality of light emitting diodes (LEDs) arranged in a first row

and a second row. The first lighting assembly also includes a plurality of optical elements arranged in the first row and the second row over the plurality of LEDs such that each optical element overlies only one associated LED. A second lighting assembly includes a plurality of LEDs arranged in a first row and a second row. The second lighting assembly also includes a plurality of optical elements arranged in the first row and the second row over the plurality of LEDs such that each optical element overlies only one associated LED. The first lighting assembly is mounted at a first location. The second lighting assembly is mounted at a second location. The first location is laterally spaced from the second location along the width of the display surface; and each of the first and second lighting assemblies are configured to illuminate the entire display surface of the billboard without any additional lighting so that the entire display surface can be illuminated using only the first lighting assembly or the second lighting assembly. As shown above in paragraphs 50–51 and upon information and belief, the first and second lighting assemblies are configured to uniformly illuminate the entire display surface such that a light intensity across the display surface is provided at a uniformity ratio of average illumination to minimum illumination, the uniformity ratio being at most 3:1.

143. As shown above in paragraph 53, the optical elements of the first and the second lighting assemblies are arranged so that areas beyond edges of the display surface receive minimum illumination.

144. As shown above in paragraph 51, the plurality of optical elements and the associated LEDs of the first and the second lighting assemblies are spaced to avoid hot spots on the display surface.

145. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a

first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first element has a first convex-shaped surface disposed at the first side. The second element has a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element. The light from the associated LED exits the optical element through the first and the second convex-shaped surfaces and a third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED.

146. As shown above in paragraph 52 and upon information and belief each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED. The third nearest distance is shorter than either the first nearest distance or the second nearest distance.

147. Upon information and belief, Defendants have had actual knowledge of the '642 Patent and actual knowledge that their activities constitute either direct or indirect infringement

of the '642 Patent, yet they have not ceased their infringing activities. Defendants' infringement of the '642 Patent has been and continues to be willful and deliberate. Defendants also have knowledge of the '642 Patent by way of this complaint and, to the extent they do not cease their infringing activities, their infringement is and continues to be willful and deliberate.

148. Ultravision has no adequate remedy at law against Defendants' individual and collective acts of infringement, and, unless Defendants are enjoined from their infringement of the '642 Patent, Ultravision will suffer irreparable harm.

149. Defendants, by way of their infringing activities, have caused and continue to cause Ultravision to suffer damages, the exact amount to be determined at trial.

COUNT V: PATENT INFRINGEMENT OF THE '307 PATENT

150. Paragraphs 1–149 are incorporated by reference as if fully stated herein.

151. Lamar, Lighting Technologies, and Irvin, individually and collectively, have been and are now directly infringing and/or indirectly infringing the '307 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, selling, and/or offering for sale Accused Billboards in the United States. As explained in paragraphs 153–185 below, these Accused Billboards are covered by at least one claim of the '307 Patent, including, but not limited to, Claims 1–5, 7–18, and 20–30. The LED Accused Products have been designed, are intended to, have been marketed and have been sold to illuminate Accused Billboards and have no substantial non-infringing use.

152. Upon information and belief, each of the Defendants derive revenue from the activities relating to the making, using, selling, and/or offering for sale the Accused Billboards or LED Accused Products for use and installation on Accused Billboards.

153. As shown above in paragraphs 20–24, Lamar owns or operates billboards, including the Accused Billboards. As shown above in paragraphs 45–46, Lighting Technologies makes, imports, offers for sale, and sells LED Accused Products that are intended to be installed and operated on billboards, such as the Accused Billboards owned or operated by Lamar. Irvin makes, offers for sale, and/or sells LED Accused Products for use and installation on billboards, including the Accused Billboards owned or operated by Lamar. Lamar has, directly or indirectly, purchased LED Accused Products from Lighting Technologies or Irvin and has installed them and used them on its Accused Billboards.

154. As shown above in paragraphs 20–24 and 47–50, the Accused Billboards have a support structure and a display surface mounted to the support structure and a walkway attached to the support structure, the display surface having visual media content displayed thereon, the visual media content comprising a picture and/or text. As shown above, in paragraph 51, in certain configurations the display surface may have a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface. The display surface has a first portion that extends from the lower edge to the upper edge adjacent the left side edge and a second portion that extends from the lower edge to the upper edge adjacent the right side edge. The first and second portions together extend from the left side edge to the right side edge. As shown above in paragraphs 20–24 and 48, a walkway attached to the support structure is adjacent the lower edge of the display surface, wherein an uppermost surface of the walkway is vertically spaced at a distance lower than the lower edge of the display surface.

155. As shown above in paragraphs 20–24 and 47–50, in view of Lighting Technologies and Irvin’s representations, in certain configurations the LED Accused Products

(and, when used on the Accused Billboards, the Accused Billboards) include a first lighting assembly and a second lighting assembly. The first lighting assembly includes a plurality of light emitting diodes (LEDs) and a plurality of optical elements. The plurality of LEDs being thermally coupled to a first heat sink, wherein the LEDs are arranged in a plurality of rows, each row including a plurality of LEDs mounted so that all of the LEDs of the first lighting assembly are arranged in a common orientation. As shown above in paragraph 51, Irvin has represented that a separate optical element “covers each of the MarQueue LED’s individual LEDs.” As shown above in paragraph 51, each optical element in the MarQueue LEDs is disposed over only one associated LED. As shown above in paragraph 52, each optical element includes a first portion, a second portion and a third portion arranged to direct the light across the first portion of the display surface. As shown above in paragraphs 20–24 and 47, all of the LEDs of the first lighting assembly are mounted in a single assembly attached to the walkway. As shown above in paragraph 49, a second lighting assembly includes a plurality of LEDs and a plurality of optical elements. The second plurality of LEDs being thermally coupled to a second heat sink, wherein the LEDs of the second plurality of LEDs are arranged in a plurality of rows, each row including a plurality of LEDs mounted so that all of the LEDs of the second lighting assembly are arranged in a common orientation. Again, as shown in paragraph 51, each optical element is disposed over only one associated LED. And, as shown in paragraph 52, the optical elements in the second lighting assembly include a first portion, a second portion and a third portion arranged to direct the light across the second portion of the display surface. As shown above in paragraphs 20–24 and 47, all of the LEDs of the second lighting assembly are mounted in a single assembly attached to the walkway. As shown above in paragraph 51, the display surface can be

illuminated using only the first lighting assembly and the second lighting assembly so that the visual media content can be viewed without additional light.

156. In addition, as shown above in paragraph 51 and upon information and belief, all of the display surface can be illuminated using only the first lighting assembly and the second lighting assembly such that an intensity of light directed across all of the display surface is provided with a uniformity that achieves a 3:1 ratio of average illumination to minimum illumination. Further, as shown above in paragraph 49, the first lighting assembly used in the LED Accused Products/Accused Billboards includes an optics panel that comprises the plurality of LEDs and the plurality of optical elements. Upon information and belief, the first lighting assembly is configured to direct light from each LED across the display surface with a uniformity that achieves, for each LED, a 3:1 ratio of average illumination to minimum illumination.

157. As shown above in paragraph 49, the second lighting assembly used in the Accused Billboard also comprises an optics panel that comprises the plurality of LEDs and the plurality of optical elements. Upon information and belief, the second lighting assembly is configured to direct light from each LED across the display surface with a uniformity that achieves, for each LED, a 3:1 ratio of average illumination to minimum illumination.

158. As shown above in paragraph 49, the Accused Billboards also includes optical elements of the first lighting assembly that are arranged in groups on a first plurality of circuit boards, each circuit board including two rows of LEDs and optical elements, and wherein the optical elements of the second lighting assembly are arranged in groups on a second plurality of circuit boards, each circuit board including two rows of LEDs and optical elements.

159. As shown above in paragraph 49, the first lighting assembly of the Accused Billboard also includes two circuit boards arranged in a first row that extends in a direction parallel to the lower edge of the display surface, and wherein the second lighting assembly includes two circuit boards arranged in a second row that extends in the direction parallel to the lower edge of the display surface.

160. As shown above in paragraph 49, the first lighting assembly of the Accused Billboard also includes three circuit boards arranged in a first row that extends in a direction parallel to the lower edge of the display surface, and wherein the second lighting assembly includes three circuit boards arranged in a second row that extends in the direction parallel to the lower edge of the display surface.

161. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first portion comprises a first element comprising a first convex-shaped surface disposed at the first side. The second portion comprises a second element comprising a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element, wherein light from an associated LED exits the optical element through the first and the second convex-shaped surfaces; and wherein the third portion comprises a third element disposed at the third side, wherein the third element extends beyond the first element and the second element in a direction away from the associated LED.

162. As shown above in paragraph 52, in the Accused Billboards, each optical element of the plurality of optical elements of the first and the second lighting assemblies comprises a

first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first portion comprises a first element disposed at the first side. The second portion comprises a second element disposed at the second side. The third portion comprises a third element disposed at the third side. The third element extends beyond the first element and the second element in a direction away from an associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. A region between the first inner surface and the second inner surface is at a third nearest distance from the associated LED, wherein the third nearest distance is shorter than either the first nearest distance or the second nearest distance.

163. As shown above in paragraphs 20–24 and 47, the Accused Billboards also comprise a support structure, a display surface and one or more lighting assemblies. The display surface is mounted on the support structure, the display surface having visual media content displayed thereon, the visual media content comprising a picture and/or text. As shown above in paragraphs 50–52, in certain configurations the display surface has a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface. The display surface has a first area extending from the lower edge to the upper edge adjacent the left side edge and a second area extending from the lower edge to the upper edge adjacent the right side edge. The first and second areas together extend from the left side edge to the right side edge.

164. As shown above in paragraphs 20–24 and 49, the first lighting assembly is directed toward the display surface and comprises a first carrier and a first lighting unit, a second lighting unit, and a third lighting unit, secured thereto. The first lighting unit comprises a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The first lighting unit is configured to direct light across the first area of the display surface. A second lighting unit secured to the first carrier comprises only a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The second lighting unit is configured to direct light across the first area of the display surface.

165. As shown above in paragraphs 20–24 and 48–49, the third lighting unit of the LED Accused Products/Accused Billboards comprises only a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements. Each optical element is disposed over only one associated LED. The third lighting unit is configured to direct light across the first area of the display surface.

166. As shown above in paragraphs 20–24 and 48–49, the second lighting assembly directed toward the display surface of the LED Accused Products/Accused Billboards comprises a second carrier, a fourth lighting unit and a fifth lighting unit, and a sixth lighting unit, secured thereto. The fourth lighting unit is secured to the second carrier, the fourth lighting unit comprising only a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements, wherein each optical element is disposed over only one associated LED, wherein the fourth lighting unit is configured

to direct light across the second area of the display surface. A fifth lighting unit is secured to the second carrier, the fifth lighting unit comprising only a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements, and wherein each optical element is disposed over only one associated LED, and wherein the fifth lighting unit is configured to direct light across the second area of the display surface. The sixth lighting unit comprises only a single planar circuit board, a plurality of light emitting diodes (LEDs) attached to the single planar circuit board, and a plurality of optical elements, wherein each optical element is disposed over only one associated LED, wherein the sixth lighting unit is configured to direct light across the second area of the display surface. The display surface of the LED Accused Products/Accused Billboards can be illuminated using only the first lighting assembly and the second lighting assembly so that the visual media content can be viewed without any light other than light from the first lighting assembly and the second lighting assembly.

167. As shown above in paragraph 54, the first carrier is formed from a thermally conductive material, wherein a plurality of fins extend away from the first, second and third lighting units.

168. As shown above in paragraph 51, the first lighting assembly is configured to uniformly illuminate the first area of the display surface, and wherein the second lighting assembly is configured to uniformly illuminate the second area of the display surface.

169. As shown above in paragraph 51, each and every LED of the first lighting assembly is configured to uniformly illuminate the first area of the display surface, and wherein each and every LED of the second lighting assembly is configured to uniformly illuminate the second area of the display surface.

170. As shown above in paragraphs 20–24 and 47–49 and upon information and belief, the first lighting assembly is configured such that the light from the first lighting assembly is directed across the first area with a uniformity that achieves a 3:1 ratio of average illumination to minimum illumination; and wherein the second lighting assembly is configured such that the light from the second lighting assembly is directed across the second area with a uniformity that achieves a 3:1 ratio of average illumination to minimum illumination.

171. As shown above in paragraph 52 and upon information and belief, the optical elements of the first lighting assembly each include a first portion, a second portion and a third portion arranged to direct the light across the first area of the display surface; and wherein the optical elements of the second lighting assembly each include a first portion, a second portion and a third portion arranged to direct the light across the second area of the display surface.

172. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first element comprising a first convex-shaped surface disposed at the first side. The second element comprising a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element, wherein light from an associated LED exits the optical element through the first and the second convex-shaped surfaces; and wherein the third element disposed at the third side, wherein the third element extends beyond the first element and the second element in a direction away from the associated LED.

173. As shown above in paragraph 52 and upon information and belief, each optical element of the plurality of optical elements of the first and the second lighting assemblies in the

LED Accused Products/Accused Billboards comprises a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED. The third nearest distance is shorter than either the first nearest distance or the second nearest distance.

174. As shown above in paragraphs 20–24 and 47 and upon information and belief, the Accused Billboards also comprise a support structure and a display surface mounted on the support structure. In certain configurations, the display surface has a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface, the display surface comprising a first portion extending from the lower edge to the upper edge adjacent the left side edge and a second portion extending from the lower edge to the upper edge adjacent the right side edge, the first and second portions together extending from the left side edge to the right side edge. A first lighting assembly includes a plurality of light emitting diodes (LEDs) arranged in a first row and a second row. The first lighting assembly also includes a plurality of optical elements arranged in the first row and the second row over the plurality of LEDs such that each optical element

overlies only one associated LED. The optical elements each including a first portion, a second portion and a third portion arranged to direct light from the first plurality of LEDs across the first portion of the display surface. A second lighting assembly includes a plurality of LEDs arranged in a first row and a second row. The second lighting assembly also includes a plurality of optical elements arranged in the first row and the second row over the plurality of LEDs such that each optical element overlies only one associated LED. The optical elements each including a first portion, a second portion and a third portion arranged to direct light from the second plurality of LEDs across the second portion of the display surface. The first lighting assembly is mounted at a first location. The second lighting assembly is mounted at a second location. The first location is laterally spaced from the second location along the width of the display surface. The display surface of the billboard can be illuminated using only the first lighting assembly and the second lighting assembly so that visual media content on the display surface can be viewed without additional lighting.

175. As shown above in paragraphs 50–51 and upon information and belief, the first and second lighting assemblies are configured to uniformly illuminate the entirety of the display surface such that a light intensity across the display surface is provided at a uniformity ratio of average illumination to minimum illumination, the uniformity ratio being at most 3:1.

176. As shown above in paragraph 53, the optical elements of the first and the second lighting assemblies are arranged so that areas beyond edges of the display surface receive minimum illumination.

177. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a first side, a second side opposite the first side, and a third side perpendicular to the first side and

the second side. The first element has a first convex-shaped surface disposed at the first side. The second element has a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element. The light from the associated LED exits the optical element through the first and the second convex-shaped surfaces and a third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED.

178. As shown above in paragraph 52 and upon information and belief each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED. The third nearest distance is shorter than either the first nearest distance or the second nearest distance.

179. As shown above in paragraphs 20–24 and 47–50, in certain configurations, a forty-eight by fourteen foot outdoor billboard may be illuminated using only two lighting assemblies. As shown above, in paragraph 48, in certain configurations the display surface may

have visual media content displayed thereon, the visual media content comprising a picture and/or text, wherein the display surface has a width of forty-eight feet along an upper edge and a lower edge of the display surface and a height of fourteen feet along a left side edge and a right side edge of the display surface, the display surface comprising a first area extending from the lower edge to the upper edge near the left side edge and a second area extending from the lower edge to the upper edge near the right side edge, the first and second areas together extending from the left side edge to the right side edge.

180. As shown above in paragraphs 20–24 and 47–50, in view of Lighting Technologies and Irvin’s representations, in certain configurations the LED Accused Products (and, when used on the Accused Billboards, the Accused Billboards) illuminate the first area of the display surface by emitting light from a first plurality of LEDs mounted in a common plane in a first assembly and redirecting the light across the first area using a first plurality of optical elements, each optical element being disposed over only one associated LED and including a first portion, a second portion and a third portion arranged to direct the light across the first area of the display surface so that the visual media content of the first area is visible without any additional light. As shown above in paragraph 51, Irvin has represented that a separate optical element “covers each of the MarQueue LED’s individual LEDS.” As shown above in paragraph 54, each optical element in the MarQueue LEDs is disposed over only one associated LED. As shown above in paragraph 55, each optical element includes a first portion, a second portion and a third portion arranged to direct the light across the first portion of the display surface. At the same time, the LED Accused Products (and, when used on the Accused Billboards, the Accused Billboards) illuminate the second area of the display surface by emitting light from a second plurality of LEDs mounted in a common plane in a second assembly and redirecting the light

across the second area using a second plurality of optical elements, each optical element being disposed over only one associated LED and including a first portion, a second portion and a third portion arranged to direct the light across the second area of the display surface so that the visual media content of the second area is visible without any additional light.

181. As shown above in paragraph 51, illuminating the first area and illuminating the second area comprises uniformly illuminating all of the display surface.

182. In addition, as shown above in paragraph 51 and upon information and belief, illuminating all of the display surface comprises illuminating the entire display surface such that a light intensity across the display surface is provided at a uniformity ratio of average illumination to minimum illumination, the uniformity ratio being 3:1.

183. As shown above in paragraph 53, illuminating the first area and illuminating the second area comprises illuminating the first area and illuminating the second area so that areas beyond edges of the display surface receive minimum illumination.

184. As shown above in paragraph 52, each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. The first element has a first convex-shaped surface disposed at the first side. The second element has a second convex-shaped surface disposed at the second side. The second convex-shaped surface intersects with the first convex-shaped surface at an acute angle in a region between the first element and the second element. The light from the associated LED exits the optical element through the first and the second convex-shaped surfaces and a third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED.

185. As shown above in paragraph 52 and upon information and belief each optical element of the plurality of optical elements of the first and the second lighting assemblies of the Accused Billboards comprise a first side, a second side opposite the first side, and a third side perpendicular to the first side and the second side. A first element is disposed at the first side. A second element is disposed at the second side. A third element is disposed at the third side. The third element extends beyond the first element and the second element in a direction away from the associated LED. The first element includes a first outer surface and a first inner surface facing the associated LED and the second element includes a second outer surface and a second inner surface facing the associated LED. The first inner surface is located at a first nearest distance from the associated LED and the second inner surface is located at a second nearest distance from the associated LED. The first inner surface and the second inner surface connect at a connection region that is at a third nearest distance from the associated LED. The third nearest distance is shorter than either the first nearest distance or the second nearest distance.

186. Upon information and belief, Defendants have had actual knowledge of the '307 Patent and actual knowledge that their activities constitute either direct or indirect infringement of the '307 Patent, yet they have not ceased their infringing activities. Defendants' infringement of the '307 Patent has been and continues to be willful and deliberate. Defendants also have knowledge of the '307 Patent by way of this complaint and, to the extent they do not cease their infringing activities, their infringement is and continues to be willful and deliberate.

187. Ultravision has no adequate remedy at law against Defendants' individual and collective acts of infringement, and, unless Defendants are enjoined from their infringement of the '307 Patent, Ultravision will suffer irreparable harm.

188. Defendants, by way of their infringing activities, have caused and continue to cause Ultravision to suffer damages, the exact amount to be determined at trial.

COUNT VI: MISAPPROPRIATION OF TRADE SECRETS BY LAMAR AND LIGHTING TECHNOLOGIES

189. Paragraphs 1–188 are incorporated by reference as if fully stated herein.

190. Ultravision is the owner of certain valuable trade secrets consisting of documents and papers reflecting its confidential manufacturing processes, research, inventions, designs, drawings, engineering information, hardware configuration information, costing and pricing information, market pricing and testing procedures and results related to LED lighting technology, as well as certain confidential physical prototypes.

191. Ultravision made reasonable efforts to protect the secrecy of its trade secrets. These trade secrets were not otherwise ascertainable by third parties, and thus provided significant value and competitive advantage to Ultravision in the LED lighting industry.

192. Upon information and belief, Lamar and Lighting Technologies jointly and severally have wrongfully appropriated Ultravision's trade secrets by acquiring, using, and/or disclosing those trade secrets without Ultravision's authorization.

193. The misappropriation of Ultravision's trade secrets by Lamar and Lighting Technologies has resulted in damages to Ultravision, including significant lost sales by Lighting Technologies to Lamar. Lamar's and Lighting Technologies' wrongful use of Ultravision's trade secrets will continue unless enjoined by this Court.

COUNT VII: TORTIOUS INTERFERENCE WITH PROSPECTIVE BUSINESS RELATIONS BY LIGHTING TECHNOLOGIES

194. Paragraphs 1–193 are incorporated by reference as if fully stated herein.

195. Upon information and belief, there was a reasonable probability that Lamar would have entered into an agreement to purchase LED light fixtures that Ultravision developed for use on Lamar's billboards.

196. Upon information and belief, Lighting Technologies intentionally interfered with that prospective relationship by misappropriating for its own use Ultravision's proprietary information and by infringing Ultravision's patents.

197. Lighting Technologies' wrongful and intentional interference caused Ultravision to suffer actual damages from lost sales to Lamar.

COUNT VIII: FALSE MARKING UNDER 35 U.S.C. § 292 BY IRVIN

198. Paragraphs 1–197 are incorporated by reference as if fully stated herein.

199. Irvin repeatedly stated on its website, in product brochures, and in other marketing materials that the optical element incorporated in the MarQueue LED product is “patented” and “patent-pending.” Irvin's website is posted on the internet and viewable by the public, including actual and prospective customers. Irvin's MarQueue LED product brochures are also posted on the website and intended to be viewed by the public and are distributed to actual and prospective customers. For example, Irvin's website states:

The jewel of MarQueue LED is in a small prismatic lens no bigger than an acorn. This highly engineered, **patented and patent-pending** element is comprised of hundreds of angles and covers each of the MarQueue LED's individual LEDs. These Total Internal Reflectance (TIR) Optics (**patented optics and other patents pending**) were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).

http://www.marqueeled.com/MarQueue_LED_Difference.html (emphases added). Similarly, in addition to repeating the above representation, Irvin's product brochure states under the captions “The MarQueue LED Difference” and “Why MarQueue LED?”

Because it works. Created with input from some of the most respected names in Outdoor, MarQueue LED offers a one-of-a-kind approach to billboard lighting. Its **patented and patent-pending** features produced unparalleled performance.

<http://www.marqueeled.com/pdf/MarQueueLEDBrochureLowres.pdf> (emphasis added).

200. Upon information and belief, these statements are not true. In fact, Irvin's answer to Ultravision's First Amended Complaint states that Irvin "is without knowledge or information sufficient to form a belief as to the content or extent of LTI's patent portfolio." Dkt. 75, ¶ 60.

201. Further, upon information and belief, Irvin and the manufacturer of the MarQueue LED products, Lighting Technologies, did not own any patent applications in the United States with one or more claims directed toward the optical lenses of the MarQueue LED products. Upon information and belief, Irvin and the manufacturer of the MarQueue LED products, Lighting Technologies, did not own any issued patents in the United States with one or more claims directed toward the optical lenses of the MarQueue LED products. Yet, Irvin, on its website and in its product brochures, stated otherwise through its use of the words "patented" and "patent-pending."

202. At the time that Irvin first used the phrases "patented" and "patent-pending" in connection with the MarQueue LED products on its website, product brochures, and in other marketing materials, upon information and belief, Irvin knew or reasonably should have known that neither it nor Lighting Technologies had filed or caused to be filed any patent application in the United States with one or more claims covering the optical lenses of the MarQueue LED products. And, upon information and belief, Irvin knew or reasonably should have known that neither it nor Lighting Technologies owned any patents in the United States with one or more claims covering the optical lenses of the MarQueue LED products. Upon information and belief, Irvin knew or reasonably should have known that the use of the words "patented" and "patent-

pending” in reference to the optics of the MarQueue LED products was false marking in violation of 35 U.S.C. § 292. Upon information and belief, Irvin has control over the representations made on its website, in its product brochures, and in other marketing materials, including its representations that the optical element of the MarQueue LED product was “patented” and “patent pending.” Upon information and belief, Irvin’s statements were intended to deceive the public and induced the public to believe that the optical element of the MarQueue LED products are patented and patent-pending. Irvin is thus acting with the purpose and intent of deceiving the public in violation of 35 U.S.C. § 292.

203. Upon information and belief, Irvin’s acts, described above, have damaged and irreparably injured and, if permitted to continue, will further damage and irreparably injure Ultravision. Upon information and belief, Irvin’s intentional false markings on its website have promoted its own products unfairly and also resulted in loss of sales by Ultravision.

COUNT IX: FALSE ADVERTISING UNDER THE LANHAM ACT BY IRVIN

204. Paragraphs 1–203 are incorporated by reference as if fully stated herein.

205. Irvin repeatedly stated on its website, in product brochures, and in other marketing materials that the optical element incorporated in the MarQueue LED products is “patented” and “patent-pending.” Irvin’s website is posted on the internet and viewable by the public, including actual and prospective customers. Irvin’s MarQueue LED product brochures are also posted on the website and intended to be viewed by the public and are distributed to actual and prospective customers. For example, Irvin’s website states:

The jewel of MarQueue LED is in a small prismatic lens no bigger than an acorn. This highly engineered, **patented and patent-pending** element is comprised of hundreds of angles and covers each of the MarQueue LED’s individual LEDS. These Total Internal Reflectance (TIR) Optics (**patented optics and other patents pending**) were designed with the sole purpose of ensuring that EACH

LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).

http://www.marqueeled.com/MarQueue_LED_Difference.html (emphases added). Similarly, in addition to repeating the above representation, Irvin's product brochure states under the captions "The MarQueue LED Difference" and "Why MarQueue LED?"

Because it works. Created with input from some of the most respected names in Outdoor, MarQueue LED offers a one-of-a-kind approach to billboard lighting. Its **patented and patent-pending** features produced unparalleled performance.

<http://www.marqueeled.com/pdf/MarQueueLEDBrochureLowres.pdf> (emphasis added).

206. Upon information and belief, these statements are misrepresentations, as the optical element of the MarQueue LED products was not "patented" and there were no "patents pending."

207. Irvin's answer to Ultravision's First Amended Complaint states that Irvin "is without knowledge or information sufficient to form a belief as to the content or extent of LTI's patent portfolio." Dkt. 75, ¶ 60. Irvin made this statement on July 15, 2016. Consequently, it is evident that Irvin did not take any steps to investigate the representation made on its website about alleged "patents pending" and/or certain features of the MarQueue LED product being "patented" at the time that statements identified above were made.

208. Consequently, upon information and belief, Irvin has mislead actual and prospective customers by stating that the optical element, "the jewel of the MarQueue LED," had patents pending that covered the design and/or were patented, when these statements were not true and/or that Irvin did not know whether or not these statements were true.

209. In addition, Irvin states on its website that it is the "exclusive distributor" of the MarQueue LED products to the outdoor advertising industry.

<http://www.marqueeled.com/IrvinandLightingTechnologiesSignExclusiveAgreement.html>.

Specifically, Irvin states that Irvin and Lighting Technologies “have signed an exclusive agreement that makes Irvin the exclusive distributor to the outdoor advertising industry” *Id.*

Irvin has stated in its Answer:

Irvin admits that its website indicates that ‘Irvin, Inc. and Lighting Technologies have signed an exclusive agreement that makes Irvin the exclusive distributor to the outdoor advertising industry’ and that the MarQueue LED product is manufactured by LTI.

Dkt. 75, ¶ 47. Yet, upon information and belief, this statement is not true—at least not today and has not been true for quite some time. Irvin has repeatedly represented that it has not sold LTI [Lighting Technologies] MarQueue LED products to Lamar. Dkt. 39, ¶¶ 49, 50, and 51. Yet, upon information and belief, the MarQueue LED products (or comparable Lighting Technologies products) have been sold to Lamar. Lighting Technologies has represented in court documents that Lamar has purchased LED products for use with Lamar billboards from Lighting Technologies and that Lamar has installed such LED products on Lamar billboards. Dkt. 42, ¶ 50. Irvin has stated in other court documents that “Irvin is not the only distributor of Lighting Technologies’ Accused Products,” though it claims that it was the “only distributor of Lighting Technologies’ Accused Products when the products were first introduced to the market.” Dkt. 116 at 3.

210. Irvin’s actions and statements, as described above, constitute false, confusing and/or misleading representations of fact, which in commercial advertising and promotion, misrepresent the nature, characteristics, and/or qualities of the MarQueue LED products, in violation of Section 43(a) and other sections of the Lanham Act, 15 U.S.C. § 1125 *et seq.* Among other things, Irvin’s statement created a false and confusing impression to the marketplace that its MarQueue LED products were novel, unique, exclusive, and/or had been patented (or would be patented) and could only be obtained from Irvin.

211. Upon information and belief, Irvin's acts, described above, have damaged and irreparably injured and, if permitted to continue, will further damage and irreparably injure Ultravision. Upon information and belief, Irvin's wrongful acts have promoted its own products unfairly and also resulted in loss of sales by Ultravision.

212. Irvin's acts, described above, have irreparably injured, and, if permitted to persist, will continue to irreparably injure the public, who has an interest in being free from confusion, mistake, and deception.

213. As a direct and proximate result of the willful actions, conduct, and practices of Irvin, Ultravision has been damaged in an amount to be determined at trial and will continue to be irreparably harmed, and therefore is entitled to recover Irvin's profits, Ultravision's damages, and the costs of the action and any applicable enhancements pursuant to 15 U.S.C. § 1117.

COUNT X: UNFAIR COMPETITION UNDER TEXAS LAW BY IRVIN

214. Paragraphs 1–213 are incorporated by reference as if fully stated herein.

215. Irvin repeatedly stated on its public website and in product brochures that the optical element incorporated in the MarQueue LED products is “patented” and “patent-pending.” Irvin's website is posted on the internet and viewable by the public, including actual and prospective customers. Irvin's MarQueue LED product brochures are also posted on the website and intended to be viewed by the public and distributed to actual and prospective customers. For example, Irvin's website states:

The jewel of MarQueue LED is in a small prismatic lens no bigger than an acorn. This highly engineered, **patented and patent-pending** element is comprised of hundreds of angles and covers each of the MarQueue LED's individual LEDS. These Total Internal Reflectance (TIR) Optics (**patented optics and other patents pending**) were designed with the sole purpose of ensuring that EACH LED covers an extremely large portion of the billboard face (in some instance, the ENTIRE face).

http://www.marqueeled.com/MarQueue_LED_Difference.html (emphases added). Similarly, in addition to repeating the above representation, Irvin’s product brochure states under the captions “The MarQueue LED Difference” and “Why MarQueue LED?”

Because it works. Created with input from some of the most respected names in Outdoor, MarQueue LED offers a one-of-a-kind approach to billboard lighting. Its **patented and patent-pending** features produced unparalleled performance.

<http://www.marqueeled.com/pdf/MarQueueLEDBrochureLowres.pdf> (emphasis added).

216. In addition, Irvin states on its website that it is the “exclusive distributor” of the MarQueue LED products to the outdoor advertising industry.

<http://www.marqueeled.com/IrvinandLightingTechnologiesSignExclusiveAgreement.html>.

Specifically, Irvin states that Irvin and Lighting Technologies “have signed an exclusive agreement that makes Irvin the exclusive distributor to the outdoor advertising industry” *Id.*

Irvin has stated in its Answer:

Irvin admits that its website indicates that ‘Irvin, Inc. and Lighting Technologies have signed an exclusive agreement that makes Irvin the exclusive distributor to the outdoor advertising industry’ and that the MarQueue LED product is manufactured by LTI.

Dkt. 75, ¶ 47. Yet, upon information and belief, this statement is not true—at least not today and not for quite some time. Irvin now repeatedly represents that it has not sold LTI [Lighting Technologies] MarQueue LED products to Lamar. Dkt. 39, ¶¶ 49, 50, and 51. Yet, upon information and belief, the MarQueue LED products (or comparable Lighting Technologies products) have been sold to Lamar. Lighting Technologies has represented in court documents that Lamar has purchased LED products for use with Lamar billboards from Lighting Technologies and that Lamar has installed such LED products on Lamar billboards. Dkt. 42, ¶ 50. Irvin has stated in other court documents that “Irvin is not the only distributor of Lighting Technologies’ Accused Products,” though it claims that it was the “only distributor of Lighting

Technologies' Accused Products when the products were first introduced to the market." Dkt. 116 at 3.

217. Upon information and belief, Irvin has willfully broadcast via the internet its false and misleading statements to businesses and prospective customers throughout Texas. Upon information and belief, Irvin intended to mislead the public and lead to confusion and mistake.

218. Upon information and belief and by so doing, Irvin has unfairly competed against Ultravision by engaging in unlawful, unfair, and fraudulent practices in soliciting and maintaining customers for its MarQueue LED products, for example, by advertising that the optical element and other aspects have patent applications pending in the United States and are patented in the United States and that its MarQueue LED products could only be obtained from Irvin.

219. Upon information and belief, Defendants' wrongful conduct has caused Ultravision injury by competition and restraining trade in the manufacture and sale of Ultravision's competing products, diverting business from Ultravision, and interfering with Ultravision's prospective business relationships.

220. Irvin's actions, as described above, constitute common-law unfair competition in Texas, including in this judicial district, and are violations of the common law of Texas, by reason of which Ultravision has suffered, and will continue to suffer, irreparable injury.

221. As a direct and proximate result of the willful actions, conduct, and practices of Irvin, Ultravision has been damaged in an amount to be determined at trial and will continue to be irreparably harmed, and therefore is entitled to recover Irvin's profits, Ultravision's damages, and the costs of the action and any applicable enhancements.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for the following relief:

222. A judgment in favor of Plaintiff that Defendants, jointly and severally, have infringed, directly and indirectly, by way of inducement and/or contributory infringement, literally and/or under the doctrine of equivalents, the Patents-in-Suit;

223. A preliminary and permanent injunction, enjoining Defendants and their officers, directors, agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or privity with any of them from infringing, inducing the infringement of, or contributing to the infringement of the Patents-in-Suit;

224. An award of damages to which Plaintiff is entitled under 35 U.S.C. § 284 for Defendants' past infringement and any continuing or infringement post-trial up until the date Defendants are finally and permanently enjoined from further infringement and a final judgment is entered, including both compensatory damages and treble damages for willful infringement;

225. A preliminary and permanent injunction prohibiting further use or disclosure of any trade secrets or other confidential information obtained from Plaintiff;

226. A preliminary and permanent injunction compelling Defendants to return to Plaintiff all of the confidential information and trade secrets obtained by Defendants from Plaintiff;

227. A preliminary and permanent injunction prohibiting further use by Defendants of the accused LED light fixtures presently used by them;

228. A judgment and order against Defendants Lamar and Lighting Technologies, jointly and severally, for Plaintiff's non-patent damages;

229. A judgment and order against Defendants Lamar and Lighting Technologies, jointly and severally, for exemplary damages as determined by the trier of fact;

230. A judgment that Defendants' infringement has been willful;

231. Pre- and post-judgment interest as allowed by law on any damages awarded to Plaintiff;

232. A judgment and order requiring Defendants to pay the costs of this action (including all disbursements), as well as attorneys' fees as provided by 35 U.S.C. § 285;

233. A judgment and order requiring that, in the event a permanent injunction preventing future infringement is not granted, the Defendants pay to Plaintiff compulsory ongoing licensing fees, as determined by the Court in equity; and

234. A judgment and order against Defendant Irvin for damages adequate to compensate Plaintiff for the commercial and other economic injury suffered by Plaintiff as a result of Irvin's false marking as provided by 35 U.S.C. § 292 and which enjoins Defendant Irvin from further false marking;

235. A judgment and order that requires Defendant Irvin to pay Plaintiff all of its profits, damages, costs, attorneys' fees, and other enhanced or just damages, pursuant to 15 U.S.C. § 1117 and other applicable laws;

236. A judgment and order that requires Defendant Irvin to pay Plaintiff compensatory as well as treble and/or punitive damages and/or interest based on Irvin's wrongful conduct against Plaintiff in violation of Texas unfair competition law;

237. A judgment and order that permanently restrain and enjoin Defendant Irvin, its directors, officers, employees, servants, agents, affiliates, subsidiaries, or others controlled by any of them, and all persons in active concert or participation with any of them, from publishing,

producing, commissioning, printing, distributing, or disseminating false and misleading claims regarding its products or business including, but not limited to, the false and misleading claims regarding its MarQueue LED products outlined above;

238. A judgment and order requiring Defendant Irvin, its directors, officers, employees, servants, agents, affiliates, subsidiaries, or others controlled by any of them, and all persons in active concert or participation with any of them, to immediately recall all product brochures, advertisements, and other materials containing any false or misleading claims regarding its products;

239. A judgment and order requiring Defendant Irvin to immediately issue to all its customers, and publish on all its websites, a written statement approved by Plaintiff that Defendant Irvin's materials contain false and misleading statements and misrepresent the quality, nature, characteristics, and/or performance of the MarQueue LED products; and

240. Such other and further relief in law or in equity to which Plaintiff may be justly entitled.

DEMAND FOR JURY TRIAL

Plaintiff demands a trial by jury of any and all issues triable of right before a jury, except for future patent infringement, which is an issue in equity to be determined by the Court.

Dated: April 7, 2017.

McKool Smith, P.C.

/s/ Samuel F. Baxter

Samuel F. Baxter
Texas State Bar No. 01938000
sbaxter@mckoolsmith.com

McKool Smith, P.C.
104 East Houston, Suite 300
Marshall, Texas 75670
Telephone: (903) 923-9000
Facsimile: (903) 923-9099

R. Darryl Burke
Texas State Bar No. 03403405
dburke@McKoolSmith.com

Jennifer Henry
Texas State Bar No. 24013790
jhenry@mckoolsmith.com

Gretchen Kleinman
Texas State Bar No. 24055979
gkleinman@mckoolsmith.com

McKool Smith, P.C.
300 Crescent Court Suite 1500
Dallas, TX 75201
Telephone: (214) 978-4000
Telecopier: (214) 978-4044

Kevin Burgess
Texas State Bar No. 24006927
kburgess@mckoolsmith.com

Seth R. Hasenour
Texas State Bar No. 24059910
shasenour@mckoolsmith.com

McKool Smith, P.C.
300 W. 6th Street, Suite 1700
Austin, Texas 78701
Telephone: (512) 692-8704
Facsimile: (512) 692-8744

ATTORNEYS FOR PLAINTIFF
ULTRAVISION TECHNOLOGIES, LLC

CERTIFICATE OF SERVICE

The undersigned hereby certifies that counsel of record who are deemed to have consented to electronic service are being served with a copy of this PLAINTIFF'S THIRD AMENDED COMPLAINT via the Court's CM/ECF system per Local Rule CV-5(a)(3).

Dated: April 7, 2017

By: /s/ Samuel F. Baxter
Samuel F. Baxter