

EXHIBIT 2006

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

ELECTRALED, INC.,
Plaintiff,

v.

CHAUVET & SONS, LLC,
Defendant.

Case No. 2:24-cv-00511-JRG-RSP

JURY TRIAL DEMANDED

DEFENDANT'S PRELIMINARY INVALIDITY CONTENTIONS

I. Introduction

On July 10, 2024, Plaintiff ElectraLED, Inc. (“ElectraLED” or “Plaintiff”) filed this lawsuit against Chauvet & Sons, LLC (“Chauvet” or “Defendant”), alleging infringement of U.S. Patent No. 7,651,245 (the “’245 Patent” or “Asserted Patent”).

ElectraLED served its Preliminary Infringement Contentions pursuant to this Court’s Docket Control Order (Dkt. 17) (the “Order”) on September 4, 2024, asserting claim 21 of the ’245 Patent against Defendant (the “Asserted Claim”).

Now, pursuant to Local Patent Rules in the Eastern District of Texas (“P.R.”) 3-3 and 3-4 and the Order, Defendant hereby provides the following Preliminary Invalidity Contentions and accompanying document production.

II. Preliminary Statement and Reservation of Rights

These contentions are subject to the reservations stated herein and are subject to revision and amendment, including pursuant to Rule 26(e) of the Federal Rules of Civil Procedure and any local rules, orders, and the like of the Court or this District, including to the extent appropriate in light of, among other things, further investigation and discovery regarding the defenses asserted by Defendant; the Court’s claim construction related to the Asserted Claim; analyses and opinions of ElectraLED or its expert witnesses concerning claim construction, infringement, invalidity, and unenforceability issues; and/or positions that ElectraLED may take concerning any of the foregoing.

Defendant provides these Preliminary Invalidity Contentions for only the Asserted Claim that ElectraLED has identified in its Preliminary Infringement Contentions. Defendant’s exclusion from these Preliminary Invalidity Contentions of patent claims that ElectraLED has not asserted in its Preliminary Infringement Contentions is not an admission that those unasserted patent claims

are valid. Defendant reserves the right to amend and supplement these Preliminary Invalidity Contentions in the event ElectraLED later asserts any of those currently-unasserted claims by way of amendment or supplementation of its Infringement Contentions.

It is early in this action and Defendant's investigation of ElectraLED's claims and Defendant's defenses is ongoing. Defendant make these disclosures based on information currently available to it. Defendant may locate, discover, or otherwise learn of additional prior art, or other information, all of which Defendant reserves the right to rely on and amend, supplement, and otherwise modify these Preliminary Invalidity Contentions in view of. For example, ElectraLED (or its counsel) may be in possession of prior art, or other information (such as U.S. and foreign prosecution records), bearing on the invalidity of the Asserted Claim. As another example, Defendant continues to investigate third parties including, without limitation, the authors, inventors, and assignees of prior art identified in these Invalidity Contentions, other third parties selling LED products before the priority date of the Asserted Patent, and third parties that ElectraLED may be aware of but has not yet disclosed that may have relevant prior art. Defendant reserves the right to subpoena such third parties, and to supplement its invalidity contentions should relevant information or documents be received. Defendant further reserves the right to amend, supplement, and otherwise modify these contentions and its accompanying document production should ElectraLED provide any documents or information that it failed to provide in its disclosures or other discovery or should ElectraLED amend its disclosures in any way or provide additional discovery.

The Court has not yet construed any claim, term, or phrase of the '245 Patent. These Preliminary Invalidity Contentions are based on the Defendant's present understanding of the Asserted Claim and the apparent interpretations and constructions thereof by Plaintiff in its

Preliminary Infringement Contentions. Defendant reserves the right to modify or supplement these Preliminary Invalidity Contentions in response to the Court's construction of any claim, term, or phrase of the '245 Patent.

Defendant's Preliminary Invalidity Contentions, including the attached invalidity claim charts, may reflect alternative positions dependent upon claim construction and scope. These Preliminary Invalidity Contentions are not an admission by Defendant that the accused products, including any current or past or future versions of these products, are covered by or infringe the Asserted Claim. Furthermore, by including prior art that anticipates or renders obvious claims based on Plaintiff's apparent claim construction(s), Defendant does not thereby adopt Plaintiff's apparent claim construction(s). These Preliminary Invalidity Contentions do not represent an agreement with Plaintiff's views as to the meaning, definiteness, written description support for, or enablement of any Asserted Claim.

Prior art not included in this disclosure may also become relevant. Defendant is currently unaware of the extent, if any, to which Plaintiff may contend that certain limitations of the Asserted Claim are not disclosed in the prior art identified by Defendant. Defendant reserves the right to identify other relevant prior art with respect to such allegedly missing limitation(s).

Defendant's claim charts attached hereto as exhibits cite to particular portions, teachings, and disclosures of certain prior art references as applied to features of the Asserted Claim. Persons skilled in the art, however, may view an item of prior art in the context of other publications, literature, products, and understanding. The cited portions of prior art identified herein are exemplary only. Defendant may rely on the entirety of the prior art references listed herein, including uncited portions of those prior art references, as well as additional information including products, documents, materials, and expert testimony.

Defendant further intends to rely on admissions concerning the scope of the prior art relevant to the '245 Patent found in, inter alia: the patent prosecution history for the '245 Patent and any related patents and/or patent applications, as well as any post-grant proceedings (including *inter partes* reviews) of the '245 Patent or any related patent; any deposition testimony of the named inventor(s) on the '245 Patent and any related patents and/or patent applications in this action or any other action; and the papers filed and any evidence submitted by Plaintiff in connection with this action.

The references cited herein disclose the elements of the Asserted Claim explicitly or inherently, and they also demonstrate the state of the art in the relevant time frame. The suggested alternative obviousness combinations are provided in the alternative to Defendant's anticipation contentions and are not to be interpreted to suggest that any reference included in the combinations is not by itself anticipatory. Further, the combinations listed herein are exemplary and not exhaustive. There are many possible invalidating combinations of the references listed herein, and it is not practical, at this early stage, to identify and list all potentially relevant combinations without the benefit of further factual investigation and prior to the claim construction proceedings.

In addition to the prior art identified below and in the accompanying invalidity claim charts, Defendant hereby incorporates by reference all invalidity positions, prior art, and claim charts that have been or will be disclosed in any other action related to the '245 Patent, including *ElectraLED, Inc. v. Astera LED Technology GmbH*, No. 2:24-cv-00512 (E.D. Tex., July 10, 2024) and *ElectraLED, Inc. v. Traxon Technologies Limited*, No. 2:24-cv-00741 (E.D. Tex., Sept. 10, 2024), or patents to which the '245 Patent claims priority to, which claim priority from the '245 Patent, or which are otherwise related to the '245 Patent, including U.S. Patent Nos. 9,410,690, 9,618,187, 8,235,555, 9,134,019, 9,897,269 and 8,888,325. Defendant's incorporation by reference also

includes any *inter partes* review and *ex parte* reexamination proceedings that have been or may be filed at the U.S. Patent and Trademark Office related to the '245 Patent or any related patent.

Defendant reserves the right to assert that the Asserted Claim are invalid under 35 U.S.C. § 102(f) in the event Defendant obtains evidence that the inventor(s) named in the '245 Patent did not themselves invent the subject matter claimed in the respective patents, or that the '245 Patent otherwise fails to name the correct inventor(s). Should Defendant obtain such evidence, it will provide the name of any person from whom, and the circumstances under which, the alleged invention or any part of it was derived, or the name of any person who Defendant contends is inappropriately named or not named as an inventor. ElectraLED has failed to produce documents regarding the conception and reduction to practice of the invention, and Defendant reserves the right to further supplement these contentions.

Defendant also reserves the right to challenge any terms of any Asserted Claim under 35 U.S.C. § 112 beyond the grounds outlined herein, including by arguing that they are indefinite, not supported by the written description, or not enabled. Nothing stated herein shall be construed as a waiver of any argument available under 35 U.S.C. §§ 101, 102, 103, and/or 112.

III. P.R. 3-3(a) Identification of Prior Art

A. Priority Date

The Asserted Claim is entitled to a priority date of June 13, 2007, the filing date of the '245 Patent. It is subject to pre-AIA law.

B. Identification of Prior Art

Defendant identifies the following prior art that anticipates and/or renders obvious the Asserted Claim of the '245 Patent. Defendant also incorporates by reference each and every prior art reference of record in the prosecution of the '245 Patent, and patents or patent applications related to the '245 Patent, including U.S. Patent Nos. 9,410,690, 9,618,187, 8,235,555, 9,134,019,

9,897,269 and 8,888,325, as well as the prior art referred to in the specification of the '245 Patent and any prior art identified in any past, present, or future lawsuits involving or otherwise relating to the '245 Patent family.

In these contentions, Defendant identifies each item of prior art, including: (1) each patent or patent application constituting prior art under pre-AIA 35 U.S.C. §§ 102(a), (b), and/or (e), by its patent or publication number, country of origin, and date of issue/publication; and (2) each non-patent publication constituting prior art under pre-AIA 35 U.S.C. §§ 102(a) and/or (b), by its title, date of publication, and, where feasible, author, and publisher.

Defendant further may rely on inventor admissions concerning the scope of the prior art relevant to the '245 Patent found in, inter alia: the specification and figures of the '245 Patent; the patent prosecution histories for the '245 Patent and related patents, patent applications, and/or re-examinations, as well as any post-grant proceedings; any deposition testimony of the named inventor(s) on or otherwise relevant to the '245 Patent family; and the papers and any evidence submitted by Plaintiff in this action.

Defendant identifies the following patents, patent applications, and non-patent publications as anticipating the Asserted Claim of the '245 Patent under pre-AIA 35 U.S.C. § 102 or rendering the Asserted Claim of the '245 Patent obvious, either alone or in combination with one or more other prior art references under pre-AIA 35 U.S.C. § 103:

Country of Origin	Patent No./Publication No.	Filing/Publication/Issue Date	Prior Art Status (pre-AIA)
Taiwan	TWM277876U ("Lin")	Filed March 24, 2005; Published October 11, 2005	102(a), (b)
United States	US7,465,066 ("Chen '066")	Filed February 21, 2006; Issued December 16, 2008	102(e)

Taiwan	TWI224402B (“Chen ’402”)	Filed December 26, 2003; Issued November 21, 2004	102(a), (b)
United States	US2008/0025028 (“Gloisten”)	Filed July 31, 2006; Published January 31, 2008	102(e)
Germany	DE202004003793U1 (“Hella”)	Filed March 11, 2004; Published May 13, 2004	102(a), (b)
Australia	AU2005100101 A4 (“Maitland”)	Filed February 3, 2005; Issued March 3, 2005	102(a), (b)
United States	US2007/0076413 (“Mingozzi”)	Filed September 28, 2006; Published April 5, 2007	102(a), (e)
WIPO	WO2004/100624 (“Roberge”)	Filed May 5, 2004; Published November 18, 2004	102(a), (b), (e)
United States	US7,549,772 (“Wang”)	Filed March 31, 2006; Issued June 23, 2009	102(e)
United States	US2007/0242461 (“Reisenauer”)	Filed October 30, 2006; Published October 18, 2007	102(a), (e)
United States	Chauvet LED-PAR83 COLORsplash™ JR. User Manual (“LED- PAR83”)	Published September 29, 2005 by Chauvet, 3000 N 29th Ct, Hollywood, FL	102(a), (b)

* Where a complete date is not provided the last date in the provided time period is assumed, but Defendant reserves the right to more accurately determine the date of any publication, including as discovery progresses.

In addition, the Defendant identifies the following actual and potential prior art products (or sources of the same):

- Chauvet LED-PAR83, including as evidenced by the LED-PAR83 User Manual.

Defendant is in the process of locating additional technical and other documentation

regarding the LED-PAR83 product, and those will be provided as located and the contentions supplemented as necessary.

Investigation into the foregoing and other actual and potential prior art products, as well as sources of the same is still ongoing, and Defendant reserves the right to provide more detailed contentions related to these products upon further discovery. In this respect, Defendant specifically notes that additional third-party companies may likewise be sources or have knowledge of relevant prior art light fixture, and Defendant expects to subpoena such third parties in due course. Defendant will supplement its contentions accordingly as needed with any information provided by any such third parties.

IV. P.R. 3-3(b) and (c): Anticipation, Obviousness, and Claim Charts

A. Anticipation Grounds

The references and systems in the tables above independently anticipate the Asserted Claim under 35 U.S.C. §§ 102(a), (b), (e), (f) and/or (g), as set forth in the charts attached as Exhibits 1-A through 11-A.

These charts, however, are exemplary. The claimed features are similarly described and suggested in other places (including in all of the documents cited during prosecution of each piece of prior art), and also were present when prior-art products practicing the described prior art were used before the application that ultimately led to the Asserted Patent. Thus, where patents or other printed materials are disclosed, Defendant reserves the right to also rely on those materials as descriptions of products, systems, devices, or methods referenced therein, publicly used, and/or on sale or known in the United States. Further, Defendant reserves the right to rely on other evidence of the prior art beyond merely the exemplary references cited in the charts attached as Exhibits. Moreover, to the extent that the Asserted Claim is not rendered invalid purely on anticipatory

grounds, it would have been obvious to one of ordinary skill in the art, applying nothing more than their own or common industry knowledge, to modify or combine the above references (together, or with their general knowledge) to arrive at that which is recited in the Asserted Claim.

Where patents or other printed materials are disclosed, Defendant reserves the right to also rely on those materials as descriptions of systems, devices, or methods referenced therein, publicly used, and/or on sale or known in the United States. Defendant reserves the right to also use those references to invalidate the claim under 35 U.S.C. § 103.

B. Obviousness Grounds

The Asserted Claim of the '245 Patent is obvious in view of one or more items of the prior art identified above in Section III, alone or in combination. Pursuant to P.R. 3-3(b) and the Order, Defendant further provides exemplary, non-limiting grounds of invalidity based on obviousness below:

Base Reference	Secondary Source(s) / Reference(s)
Lin	Lin alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Chen '066	Chen '066 alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '402, Gloisten, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Chen '402	Chen '402 alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Gloisten, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Gloisten	Gloisten alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.

Hella	Hella alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Maitland	Maitland alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Mingozi	Mingozi alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Roberge, Reisenauer, and/or LED-PAR83.
Roberge	Roberge alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Reisenauer, and/or LED-PAR83.
Wang	Wang alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Roberge, Reisenauer, and/or LED-PAR83.
Reisenauer	Reisenauer alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Roberge, and/or LED-PAR83.
LED-PAR83	LED-PAR83 alone, or in combination with the knowledge of a person of ordinary skill in the art and/or one or more of: Lin, Chen '066, Chen '402, Gloisten, Maitland, Mingozi, Roberge, and/or Reisenauer.

Defendant reserves the right to amend, supplement, and otherwise modify the obviousness arguments listed below using any references identified and any other references including those that may become known or that may become known to be relevant during the course of discovery.

Defendant further reserves the right to rely upon combinations of references disclosed within the prosecution history of the '245 Patent family with the references cited herein.

Much of the art identified in these contentions reflects common knowledge and the state of the art prior to the filing or asserted priority date of the Asserted Patent. As such, the obviousness combinations in these contentions are intended to be exemplary. There are many possible combinations of the disclosed prior art, and the inclusion of certain exemplary combinations does not exclude other combinations. For example, where a particular contention calls for combining references, any of a number of references can be combined.

Pursuant to P.R. 3-3(c), the accompanying invalidity claim charts (Exhibits 1-A through 11-A) set forth the example bases for obviousness, identifying where each reference discloses, alone or in combination with other references, each element of the Asserted Claim on a limitation-by-limitation basis. Section IV.C below further provides exemplary combinations and obviousness rationale. Defendant's claim charts and Section IV.C below are exemplary and are not intended to be exhaustive.

Defendant's assertion that the combinations above render the Asserted Claim obvious under pre-AIA 35 U.S.C. § 103 is in no way an admission or suggestion that a reference does not independently anticipate the Asserted Claim under pre-AIA 35 U.S.C. § 102. *See Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (“[A]nticipation is the epitome of obviousness.”) (quoting *In re Fracalossi*, 681 F.2d 792, 794 (CCPA 1982)). Nor does the inclusion of the exemplary combinations in the attached exhibits exclude other combinations of prior art disclosed in this or previous or subsequent sections (including, without limitation, Section IV.C).

All discussion of obviousness in these Preliminary Invalidity Contentions follows well-established precedent. The U.S. Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) (“*KSR*”), held that patents based on new combinations of elements or components already known in a technical field may be obvious. Specifically, the Court in *KSR* rejected a rigid application of the “teaching, suggestion, or motivation [to combine]” test. *Id.* at 418-19. “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim.” *Id.* at 420. “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* In particular, the Supreme Court emphasized the principle that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. A key inquiry is whether the “improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 401.

C. Exemplary Motivations to Combine

It would have been obvious to one of ordinary skill in the art to combine one or more of the prior art references listed above with each of the other references and/or nothing more than his or her own knowledge, education, experience and/or common sense to arrive at the alleged inventions of the Asserted Patent. As the Supreme Court emphasized in *KSR*, inventions arising from ordinary innovation, ordinary skill, or common sense are not patentable. *See Id.* at 406, 420-422.

The identified prior art references also use those familiar elements for their primary or well-known purposes in a manner well within the ordinary level of skill in the art. In addition, the

identified prior art addresses the same or similar technical issues relating to, inter alia, design, manufacture, operation and/or use of lighting fixtures, including LED lighting fixtures. Accordingly, common sense and the knowledge of the prior art render the Asserted Claim of the Asserted Patent invalid under § 103.

The Supreme Court has held that, “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 417.

Finally, as further described in the exemplary combinations below, the motivation to combine the teachings of the prior art references disclosed herein is also found in the references themselves and in: (1) the nature of the problem being solved, (2) the express, implied, and inherent teachings of the prior art, including the admitted prior art of the Asserted Patent, (3) the knowledge of persons of ordinary skill in the art, (4) the fact that the prior art is generally directed towards the same subject matter as the Asserted Patent, and/or (5) the predictable results obtained in combining the different elements of the prior art. One of ordinary skill in the art at the relevant time of the Asserted Patent would have been motivated and had a reasonable expectation of success to make one or more modifications or combinations of the prior art references cited in Exhibits 1-A through 11-A because, for example, each would have been merely: (a) a combination of prior art elements according to known methods to yield predictable results; (b) a simple substitution of one known element for another to obtain predictable results; (c) a use of a known technique to improve similar

devices in the same way; (d) application of a known technique to a known device ready for improvement to yield predictable results; (e) obvious to try; and/or (f) known work in one field of endeavor prompting variations of it for use in either the same field or a different one based on design incentives or other market forces since the variations are predictable to one of ordinary skill in the art.

The prior art references disclosed herein identify and address many of the same technical issues and suggest similar solutions to those issues as the Asserted Patent. The reasons or motivation to combine the prior art would thus include, for example, the fact that the prior art identified herein, as well as the prior art disclosed during prosecution of the Asserted Patent and related patents and applications, generally relate to the area of, inter alia, LED lighting devices and fixtures and the operation thereof. One of ordinary skill in the art would have been motivated to investigate the various related publications and/or patents, as well as actual and potential products and the like, identified in these Preliminary Invalidity Contentions to address the problems the Asserted Patent purport to address. Indeed, LED lighting devices, including those with an internal power supply were well-known in the art. An internal power supply was a common feature of LED lighting fixtures in order to allow for integration of the components within the lighting fixture itself, without requiring a separate and additional external power supply. Moreover, the incorporation of fins, ribs, or other protrusions to assist in dissipating heat during operation of LED lighting devices was also well-known, as reflected by prior art disclosed herein. And, certain prior art references disclosed herein illustrate that it was known in the art to arrange the heat-dissipating fins such that they surround a recess, cavity, or other area in which internal components of the LED lighting devices and fixtures, including power supplies, reside. It was known to include a power supply with a recess formed by an array of fins in order to, for example, reduce the overall

volume of the fixture and allow for integration of components within the lighting fixture. The lighting fixtures, devices and methods described in the prior art disclosed herein share several similarities and employ the same basic concepts. The references disclosed herein are generally directed to the LED lighting devices and fixtures, and operation thereof, and seek to solve similar problems. Accordingly, a person of ordinary skill in the art would have been motivated to combine any number of the references because the references relate to analogous art and use common technology and methods in various applications related to LED lighting devices and fixtures, operation thereof. It would have been common sense to make such combinations.

Defendant believes that no showing of a specific motivation to combine the identified prior art references described herein and in the attached charts is required, as each combination of art would have no unexpected results and at most would simply represent a known alternative to one of ordinary skill in the art. *See KSR*, 550 U.S. at 414-18 (rejecting the Federal Circuit’s “rigid” application of the teaching, suggestion, or motivation to combine test, instead espousing an “expansive and flexible” approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is “a person of ordinary creativity, not an automaton” and “in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 421.

Nevertheless, in addition to the information contained in this section and elsewhere in these contentions, Defendant identifies additional motivations and reasons to combine the art.

i. “a flange” [Claim 21]

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose a “flange” it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference disclosing such limitations to render Claims 21 obvious. There

would have been many reasons that a POSITA would have known to so modify or combine such reference.

A POSITA would have understood that a flange provides surfaces on which to mount and contain components of the LED light fixture. A POSITA would have been motivated to use a flange to mount and contain certain components, such as a lens to enclose the LED light fixture or a circuit board to power the LEDs. Using a flange would have been a simple, well-known way to implement or construct a LED light-fixture, using well-known techniques and materials.

As an example, without limitation, it would have been obvious to combine any of the charted references with Chen (U.S. Pat. No. 7,465,066) (“Chen ’066”). Chen ’066 is directed to a water-resistant LED light fixture. The light fixture includes a “tubular body 14” of “housing 1.” (Chen ’066, Figs. 1-2, 2:3-6.) “The front end portion 141 of the tubular body 14 has an annular inner surface 113 formed with three annular engaging grooves 16 arranged spacedly apart from each other in the axial direction (A).” (*Id.*, Figs. 1-2, 2:6-23.) The “angular engraving grooves 16” allow “positioning rings 40, 41, and 42” to engage with “tubular body 14.” (*Id.*, Figs. 1-2, 2:12-17.) The positioning rings 40, 41, and 42 support various components of the LED light fixture. “Positioning ring 42” holds “transparent plate 8” which is “disposed in front of the lighting units.” (*Id.*, Figs. 1-2, 2:61-65.) “Positioning ring 40” holds “heat dissipating plate 2” which “circuit board 3” is attached to. (*Id.*, Figs. 1-2, 2:24-35.)

Additionally, the “front end 11 of the housing 1” provides a surface to mount an “annular cap 7” by “means of a plurality of screw fasteners.” (*Id.*, Figs. 1-2, 2:65-67.) A “seal wash 9” configured with “transparent 7” and “annular cap 7” provides a “liquid-tight seal.” (*Id.*, Figs. 1-2, 3:5-7.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen ’066, to include a flange in order to have surfaces on

which to mount and contain components of the light fixture. In particular, as taught by Chen '066, including a flange provides surfaces on which to mount a frontal lens enclosing the light fixture (*Id.*, 2:61-65, 3:5-7), and provides internal surfaces on which to mount and contain components including LED circuit boards. (*Id.* 2:12-17, 2:24-35.) A POSITA would have had a reasonable expectation of success in using a flange, as disclosed in Chen '066, as this would have simply been the use of a well-known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Chen '066 all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Chen '066's known technique of including a flange, in order to yield the predictable result of mounting and containing components of the LED light fixture.

As another example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Gloisten (US2008002502). Gloisten discloses an LED lighting apparatus that includes a first portion that controls illumination of the LEDs and a second portion that provides a thermal dissipation mechanism. (Gloisten, [0023].) Gloisten discloses “a controllable illumination first portion 200A that includes a lens holder 210, an outer lens 220, a one-piece lens array 230 and an LED circuit board 240.” (*Id.*, Figs. 2, 2C, 3, [0024].) The “first portion 200A” is configured to allow the “outer lens 220” and the “one-piece lens array 230” to be “disposed” within it. (*Id.*) Gloisten teaches that in addition to the lenses, the “first portion 200A” is configured to mount other components of the LED light fixture. For example, “emergency lighting module 300” may fit within “first portion 200A.” (*Id.*, Figs. 2, 2C, 3, [0024].); (*See also Id.*, Figs. 2B, 7A, 7B, 8A and 8B.) Further, components of the “thermal-dissipation second portion 200B” including thermal pads and an interface plate may be disposed within “lens holder 210” of

“first portion 200A.” (*Id.*, Figs. 2, 2C, 3, [0024].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Gloisten, to include a flange to mount components of the light fixture. A POSITA would have had a reasonable expectation of success in using a flange, as disclosed in Gloisten, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Gloisten all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Gloisten’s known technique of including a flange, in order to yield the predictable result of mounting and containing components of the LED light fixture.

Further, without limitation, a POSITA would have found it obvious to combine any of the charted references with Lin (TW94204571U). Lin discloses a “LED searchlight (10)” which contains a “a heat dissipation unit (20), a power supply unit (30), and a light-emitting unit (40).” (Lin, Figs. 1-3, 4:18-25.) As shown by Figure 2, the “front end” of the “heat dissipation unit (20)” protrudes from the “heat dissipation unit (20)” and allows a “light-transmissive plate (23)” to be “arranged” in the “front end” of the “heat dissipation unit (20).” (*Id.*, Fig. 2, 4:26-30; *see also Id.*, Figs. 1,3, 3:11-16, Claim 2.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Lin, to include a flange to mount components of the light fixture. A POSITA would have had a reasonable expectation of success in using a flange, as disclosed in Lin, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more

the routine application of Lin's known technique of including a flange, in order to yield the predictable result of mounting and containing components of the LED light fixture.

Similarly, as additional non-limiting examples, Reisenauer (Ex. 11-A), Maitland (Ex. 6-A), Roberge (Ex. 8-A), and Mingozi (Ex. 7-A) all disclose these elements, and a POSITA would have been motivated to combine such references with any other charted reference at least for the reasons given above.

ii. “a frontal lens” [Claim 21]

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose “a frontal lens” [Claim 21], it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference disclosing such limitations to render Claim 21 obvious. There would have been many reasons that a POSITA would have known to so modify or combine such reference.

A POSITA would have recognized that a frontal lens can function as a front cover of the light fixture which can protect the internal components, such as the LED modules and the printed circuit board from dust, moisture and damage. The internal components, such as the LED modules and the printed circuit board are fragile, and once damaged, they are difficult and expensive to repair. With the frontal lens, the internal components, such as the LED modules and the printed circuit board will remain protected and last longer. Similarly, a POSITA would have understood that the light fixture must have a transparent cover, such as a lens at the front end so that light can pass through. Moreover, a POSITA would have been motivated to use a frontal lens as it can help diffuse or filter the light.

For example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Maitland (AU2005100101A4). Maitland discloses a LED light unit

comprising at least one light source for providing light, which includes “a transparent cover covering the light source” and “light passing through the cover.” (Maitland, 2:27-3:3, 3:15-27, Figs. 2-4; *see also* 4:26-29; Cl. 1.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Maitland in order to, for example, include a frontal lens to assist retaining the light engine assembly in position. And, a POSITA would have had a reasonable expectation of success in using a frontal lens, such as the transparent cover as disclosed in Maitland, as this would have simply been the use of a well-known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Maitland all pertain to lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Maitland’s known technique of including a frontal lens, in order to yield the predictable result of separating the internal components of a light fixture from the environment while allowing light to go through.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Reisenauer (U.S. Pat. No. 7,651,245). Reisenauer is directed to “a light emitting diode (LED) based light engine that can replace a conventional PAR type bulb with no modifications to a host lighting fixture.” (Reisenauer, Abstract.) The LED based light engine 100, 200 as disclosed in Reisenauer includes (1) “an LED light module 112, 212 for producing visible light,” (2) “a housing 108, 208 for supporting the LED light module”; and (3) “an electronic current driver board 116, 216.” (*Id.*, [0033], Fig. 3.) The housing 108, 208 further “includes a heat sink mechanism 114, 214, e.g., fins, for conducting heat away from the LEDs of the LED light module.” (*Id.*) Reisenauer discloses that the LED light engine 100, 200 “further includes a base 118, 218 for coupling the current driver board 116, 216 to a power source and a window or lens

120, 220 for sealing the engine.” (*Id.*) Reisenauer further discloses that the lens 120, 220 “seals the unit against the environment using dual O-rings and also provides a simple mechanism for cleaning when exposed to the environment.” (*Id.*) Reisenauer explains that the lens 120, 220 can be made of glass or “other transmissive materials.” (*Id.*) The lens 120, 220 “will be epoxied to the housing 108” and “will be further supported by a retaining ring 123, 223 which snaps into the housing 108.” (*Id.*)

In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Reisenauer in order to, for example, include a frontal lens to seal the housing of the light fixture with a frontal lens to prevent the internal electronics of the LED light fixture from being exposed to the environment. And a POSITA would have had a reasonable expectation of success in using a frontal lens, such as lens 120, 220 as disclosed in Reisenauer, as this would have simply been the use of a well-known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Reisenauer all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Reisenauer’s known technique of including a frontal lens, in order to yield the predictable result of separating the internal components of the LED light fixture from the environment while allowing light to go through.

As a further example, a POSITA would have found it obvious to combine any of the charted references with Gloisten. The LED lighting apparatus 200 as disclosed in Gloisten includes an outer lens 220, which “is generally circular in shape and may be made of any suitable transparent or translucent optical material, for example, glass, plastic, polycarbonate, etc.” (Gloisten, [0024], Fig. 3.) In addition to the reasons set forth above, a POSITA would have been motivated to

combine any of the charted references with Gloisten, to include a frontal lens to cover and seal the internal components of a LED light fixture. And a POSITA would have had a reasonable expectation of success in using a frontal lens, such as the outer lens 220 as disclosed in Gloisten, as this would have simply been the use of a well-known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Gloisten all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Gloisten's known technique of including a frontal lens, in order to yield the predictable result of separating the internal components of the LED light fixture from the environment while allowing light to go through.

Further, without limitation, a POSITA would have found it obvious to combine any of the charted references with Lin. Lin discloses a "LED searchlight (10)" which contains a "a heat dissipation unit (20)" and the heat dissipation unit (20) "comprises baffle plates (22) arranged on both sides and a light-transmitting plate (23) arranged at the front end, and at the same time, a housing space is formed by the baffle plates (22) on both sides and the light-transmissive plate (23) at the front end as well as the heat dissipating unit (20)." (Lin, Figs. 1-3, 4:21-30.) Lin further discloses that the converged light emitted by the LEDs "passes through ... the light-transmissive plate (23) at the front end of the heat dissipation unit (20) before being released outward, thereby achieving the lighting effect." (*Id.*, Figs. 1-3, 5:11-15.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Lin, to include a frontal lens to cover and seal the internal components of a LED light fixture. And a POSITA would have had a reasonable expectation of success in using a frontal lens, such as the light-transmissive plate (23) as disclosed in Lin, as this would have simply been the use of a well-

known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Lin's known technique of including a frontal lens, in order to yield the predictable result of separating the internal components of the LED light fixture from the environment while allowing light to go through.

Additionally, also without limitation, it would have been obvious to combine any of the charted references with Chen '066. Chen '066 discloses "[a] cellular grating plate 53 is disposed in the housing 1 and between the lighting units 5 and the transparent plate 8." (Chen '066, Figs. 1-3, 3:1-4.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '066, to include a frontal lens to cover and seal the internal components of a light fixture. And a POSITA would have had a reasonable expectation of success in using a frontal lens, such as the cellular grating plate 53 as disclosed in Chen '066, as this would have simply been the use of a well-known component for its intended purpose. Moreover, a POSITA would have had a reasonable expectation of success because the charted references and Chen '066 all pertain to lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Chen '066's known technique of including a frontal lens, in order to yield the predictable result of separating the internal components of the light fixture from the environment while allowing light to go through.

Similarly, as additional non-limiting examples, Roberge (Ex. 8-A) and Chauvet – PAR83 (Ex. 10-A) also discloses this element, and a POSITA would have been motivated to combine such reference with any other charted reference at least for the reasons given above.

iii. ***“an array of fins extending rearward from the flange to define a rear receptacle that extends forward towards the flange” [Claim 21]***

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose “an array of fins extending rearward from the flange to define a rear receptacle that extends forward towards the flange” it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference disclosing such limitations to render Claims 21 obvious. There would have been many reasons that a POSITA would have known to so modify or combine such reference.

A POSITA would have understood that “an array of fins” is a well-known technique to dissipate heat generated within LED light fixtures. A POSITA would recognize that providing an array of fins allows for more heat to be dissipated from the components in the LED light fixtures, including, but not limited to, the LEDs themselves and the circuit boards. Further, a POSITA would understand that dissipating heat away from the LEDs would allow for a longer service life for the LEDs. Therefore, positioning the array of fins to extend rearward from the flange to define a rear receptacle that extends forward towards the flange would have been a simple, well-known way to implement or construct a LED light-fixture, using well-known techniques and materials. Further, it would have been obvious to include an array of fins extending away from a flange that define a rear receptacle, such that there is a space for incorporating internal components of the light fixture, such as power supplies and circuit boards. Moreover, by including an array of fins extending from a flange and defining a rear receptacle, a POSITA would have understood that the overall volume of the lighting fixture can be reduced, allowing for lighting fixtures to, for example, be placed in more locations. In addition, a POSITA would have understood that providing an array of fins that define a rear receptacle in a lighting fixture would have simply been the implementation of a known technique for dissipating heat while also providing space for the required lighting

fixture components. A POSITA would have had a reasonable expectation of success, as this would simply be the use of a known component for its known functionality, and the LEDs of the lighting device would continue to operate in their same way. Moreover, a POSITA would have understood that providing the array of fins extending rearward from the flange (as opposed to, for example, parallel to the flange or in some other direction) is merely the implementation of one of a limited number of orientations for the fins. A POSITA would have found it at least obvious to try including an array of fins extending rearward from a flange to define a receptacle, as this is again one of a limited number of methods and would allow the flange to support the array of fins.

For example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Lin. Lin discloses a “LED searchlight” with a “heat dissipation unit (20), where the “rear of the heat dissipation unit (20) is provided with a plurality of heat dissipation fins (21).” (Lin, Figs. 1-3, 4:18-25.) As shown in Figure 2, the plurality of heat dissipation fins extend from the rear receptacle (the rear of the heat dissipation unit (20)), towards the flange (the front end of the heat dissipation unit(20)). (See Lin, Fig. 2; *see also* Lin, Figs. 2, 3.) Lin teaches that the by “increasing the heat dissipation effect of the LED searchlight (10) through the heat dissipation fins (21), enable[es] the heat energy released by the LEDs (41) to be rapidly released, thereby prolonging the service life of the LEDs (41) and the LED searchlight (10) at the same time.” (Lin, Figs. 1-3, 6:1-5.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Lin, to include an array of fins extending rearward from the flange to define a rear receptacle that extends forward towards the flange to dissipate the heat produced by the components within the LED light fixture, while providing an area to contain components such as power supply without increasing the length or volume of the overall fixture. A POSITA would have had a reasonable expectation of success in

using the array of fins, as disclosed in Lin, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Lin's known technique of including an array of fins, in order to yield the predictable result of dissipating the heat generated from the LEDs and other components within the LED light fixture.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Chen (TWI224402B) ("Chen '402"), which discloses an LED light module containing LEDs, a circuit board, a heat sink, and a power supply device. (Chen '402, Figs. 2, 4, p. 6.) Chen teaches the "heat sink 13a" which a "number of radiating fins 131a; each radiating fin 131a has an appropriate gap to facilitate heat dissipation." (*Id.*, Figs. 2, 4, p. 8.) The "radiating fins 131a" define a rear receptacle (a "housing") within "heat sink 13a" which contains the "power supply device 15" to supply LEDs 12 with power. (*Id.*, Figs. 2, 4, p. 8.) Because the LED light module "has a housing space where the power supply device 15 can be contained... and the power supply device 15 is arranged in the housing space of the heat sink 13a, the volume of the light emitting diode module 10a can be reduced, and the heat produced by the power supply device 15 can be dissipated by the heat sink 13a." (*Id.*, Figs. 2, 4, p. 8.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '402, to include an array of fins extending rearward from the flange to define a rear receptacle that extends forward towards the flange to reduce the volume a LED light fixture and to dissipate the heat produced by the components within the LED light fixture. A POSITA would have had a reasonable expectation of success in using the array of fins, as disclosed in Chen '402, as this

would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Chen '402 all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Chen '402's known technique of including an array of fins, in order to yield the predictable result of reducing the volume of the LED light module and dissipating the heat generated from the LEDs and other components within the LED light fixture.

Further, also without limitation, it would have been obvious to combine any of the charted references with Mingozi (US2007/0076413) which discloses an LED lamp. Mingozi teaches that the "lamp body 2" acts "as a heat sink by being provided with a plurality of fins 3 which are indeed adapted to dissipate the heat generated by a plurality of power LEDs." (Mingozi, Figs. 1-3, [0015].) As shown in Figure 1, the plurality of fins 3 extend rearward from the front of the lamp body (the flange) to define a rear receptacle extending towards the flange, the rear receptacle accommodates the "voltage stabilizing circuit 6." (*Id.*, Figs. 1-3, [0015].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Mingozi, to include an array of fins extending rearward from the flange to define a rear receptacle that extends forward towards the flange to dissipate the heat produced by components of the LED lamp. A POSITA would have had a reasonable expectation of success in using the array of fins, as disclosed in Mingozi, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Mingozi's known technique of including an array of fins, in order to

yield the predictable result of dissipating the heat generated from the LEDs and other components within the LED light fixture. Moreover, a POSITA would have understood that providing the array fins extending rearward from the flange to define a rear receptacle, as taught by Mingozzi, would have provided a compartment for the insertion of other components of the lighting fixture, such as circuits or power supplies. A POSITA would have been motivated to include such a rear receptacle defined by the array of fins in order to be able to integrate components into the lighting fixture.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Chen '066. Chen '066's lighting fixture, as discussed above, discloses a "housing 1" that contains "[t]he driving unit 6," which is "adapted to be coupled electrically to an external power source." (Chen '066, Figs. 1-2, 2:3-23, 2:51-57.) Chen '066 teaches that "housing 1" has a "tubular body 14" that "has an inner surface formed with a plurality of heat-dissipating ribs 17" in the "rear end portion 142." (Chen '066, Figs. 1-2, 2:17-19.) Further, Chen '066 discloses that the "outer surface 111" of the "tubular body 14" has "a plurality of heat-dissipating ribs 17'." (*Id.*, 2:19-23.) The plurality of heat-dissipating ribs 17 and 17' "extend[] in the axial direction (A)," which is rearward from the flange. (*Id.*, 2:17-22; *see also id.*, Fig. 1-2.) As shown in Figure 2, the heat-dissipating ribs 17 and 17' define a rear receptacle (a "rear end portion 142" and "an outer surface 111," respectively) of "tubular body 14" which contains "driving unit 6" to supply LEDs 51 with power. (*Id.*, Fig. 2, 2:19-23, 2:51-57.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '066, to include an array of fins extending rearward from the flange to define a rear receptacle that extends forward toward the flange to dissipate the heat produced by the power supply device needed to power the LEDs. A POSITA would have a reasonable expectation of success in using the array of fins, as disclosed in Chen '066, as this would have simply been the

use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Chen '066 all pertain to LED light fixtures and include common components. A POSITA would have understood that this would have been nothing more than a routine application of Chen '066's known technique of including an array of fins, in order to yield the predictable results of dissipating the heat generated from the LEDs and other components within the LED light fixture.

Similarly, as additional non-limiting examples, Roberge (Ex. 8-A), Gloisten (Ex. 4-A), Reisenauer (Ex. 11-A), and Chauvet – PAR83 (Ex. 10-A), all disclose these elements, and a POSITA would have been motivated to combine such references with any other charted reference at least for the reasons given above.

iv. “a power supply residing within the rear receptacle” [Claim 21]

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose a “a power supply residing within the rear receptacle” it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference disclosing such limitations to render Claims 21 obvious. There would have been many reasons that a POSITA would have known to so modify or combine such reference. *See Supra* IV.C.iii.

A POSITA would have understood that having a power supply reside within the rear receptacle of a LED light fixture is a well-known technique to supply power to LEDs. A POSITA would recognize that placing the power supply unit behind the LEDs would allow more flexibility to the types of power sources that could be used to power the LEDs, like a battery. A POSITA would understand that placing the power supply unit in a rear receptacle within the LED light fixture allows for the wires and cables between the LEDs and the power supply unit to be easily connected. It would have been obvious to a POSITA to try placing the power supply within the

rear receptacle of the LED light fixture because there are a limited number of known alternatives, either having the power supply reside internally within the housing of the LED light fixture, or externally, outside of the housing. Moreover, placing a power supply within the rear receptacle is a well-known way to implement or construct a LED light-fixture, using well-known techniques and materials.

Further, without limitation, a POSITA would have found it obvious to combine any of the charted references with Lin. Lin discloses a “LED searchlight (10)” which contains a “a heat dissipation unit (20), a power supply unit (30), and a light-emitting unit (40).” (Lin, Figs. 1-3, 4:18-25.) “The power supply unit (30) is arranged at the back end of the heat dissipation unit (20) to provide power.” (*Id.*, Figs. 1-3, 4:31-32.) The rear of the heat dissipation unit, is the rear receptacle as it “is provided with a plurality of heat dissipation fins (21).” (*Id.*, Figs. 1-3, 4:18-30.) The “light-emitting unit is arranged at a front end of the heat dissipation unit.” (*Id.*, Figs. 1-3, 4:4-10.) The “light-emitting unit (40)” is composed of “circuit boards (42)”, where the LEDs are fixed on the circuit boards 42 and the “power supply unit (30)” is connected to the “circuit boards (42)” through “circuits.” (*Id.*, Figs. 1-3, 4:31-5:10.) The configuration of the power supply unit in the rear receptacle allows the power supply unit to “use a battery to provide power, or be connected with a general power line to be directly plugged into a general plug.” (*Id.*, 6:14-20.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Lin, to include a power supply unit in the rear receptacle of a LED light fixture to allow more flexibility to the types of power sources that can be used to power the LEDs. A POSITA would have had a reasonable expectation of success in positioning a power supply unit as disclosed in Lin, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the

charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Lin's known technique of having a power supply unit reside in the rear receptacle, in order to yield the predictable result of supplying power to LEDs.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Chen '402, which discloses an LED light module containing LEDs, a circuit board, a heat sink, and a power supply device. (Chen '402, Figs. 2, 4, p. 6.) As discussed above, Chen '402 teaches "heat sink 13" with a "number of radiating fins 131a" which define a rear receptacle (a "housing") within "heat sink 13a" which contains the "power supply device 15" to supply LEDs 12 with power. (*Id.*, Figs. 2, 4, p. 8.) Because the LED light module "has a housing space where the power supply device 15 can be contained... and the power supply device 15 is arranged in the housing space of the heat sink 13a, the volume of the light emitting diode module 10a can be reduced, and the heat produced by the power supply device 15 can be dissipated by the heat sink 13a." (*Id.*, Figs. 2, 4, p. 8.) Chen '402 discloses that the "power supply device 15 is fixedly arranged in the housing space with a plurality of positing elements" to provide a "DC power supply required by the light-emitting diodes 12." (*Id.*, p. 6.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '402, to include a power supply residing within the rear receptacle to supply electrical power to the LEDs. A POSITA would have a reasonable expectation of success in using the power supply residing within the rear receptacle as disclosed in Chen '402, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Chen '402 all pertain to LED light fixtures and include common components. A POSITA would have understood that this would have

been nothing more than a routine application of Chen '402's known technique of including a power supply residing within the rear receptacle, in order to yield the predictable results of maintaining a power generation source for the LED light module.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Mingozi which discloses an LED lamp. Mingozi teaches that the "lamp body 2" acts "as a heat sink by being provided with a plurality of fins 3 which are indeed adapted to dissipate the heat generated by a plurality of power LEDs." (Mingozi, Figs. 1-3, [0015].) As shown in Figure 1, the plurality of fins 3 extend rearward from the front of the lamp body (the flange) to define a rear receptacle extending towards the flange, the rear receptacle accommodates the "voltage stabilizing circuit 6." (*Id.*, Figs. 1-3, [0015].) The "voltage stabilizing circuit 6" "integrated within the body of the lamp" allows the LED lamp to be used "normal" or "conventional power supplies." (*Id.*, Figs. 1-3, [0018], [0022].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Mingozi, to include a power supply unit in the rear receptacle of a LED light fixture to allow more flexibility to the types of power sources that can be used to power the LEDs. A POSITA would have had a reasonable expectation of success in positioning a power supply unit as disclosed in Mingozi, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Lin all pertain to LED lighting fixtures and include common components. A POSITA would have understood that this would have been nothing more the routine application of Mingozi's known technique of having a power supply unit reside in the rear receptacle, in order to yield the predictable result of supplying power to LEDs.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Chen '066. As discussed above, Chen '066's lighting device discloses a housing, a circuit board, lighting units, and a driving unit. (Chen '066, 2:24-27.) Chen '066 discloses "driving unit 6" is "connected electrically to the circuit board 3" and is "adapted to be coupled electrically to an external power source (not shown) by means of a power cord 35." (*Id.*, 2:51-57.) Further, Chen '066 discloses a "switch 34" that is "connected electrically to the driving unit 6 for controlling supply of electrical power thereto." (*Id.*, 2:58-60.) As seen in Figure 2, "driving unit 6" resides in the "rear end portion 142" of "tubular body 14," which is within the rear receptacle. (*Id.*, Figs. 1-2, 2:3-23, 2:51-57.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '066, to include a power supply residing within the rear receptacle to supply electrical power to the LEDs. A POSITA would have a reasonable expectation of success in using the power supply residing within the rear receptacle, as disclosed in Chen '066, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Chen '066 all pertain to LED light fixtures and include common components. A POSITA would have understood that this would have been nothing more than a routine application of Chen '066's known technique of including a power supply residing within the rear receptacle, in order to yield the predictable results of maintaining a power generation source for the LED light module.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Reisenauer. Reisenauer discloses an LED based light engine which includes a "LED light module", a "housing for supporting the LED light module" and a "high power, compact, integrated electronic current driver board." (Reisenauer, [0009].) Further, "[t]he

electronics are integrated within the housing in a manner to maximize heat transfer from the printed circuit board (PCB) to the metal housing/heat sink.” (*Id.*, [0031].) For example, Reisenauer teaches designing an “internal electronics driver board 116...to fit within the heat sink housing 108 and base assemblies 118.” (*Id.*, Figs. 3-4, 7, [0040].) Where the “housing 108” includes a “plurality of axially radiating fins” which define the rear receptacle. (*Id.*, Figs. 3-4, 7, [0037].) Reisenauer recognizes that the integrated power supply unit that resides in the rear receptacle eliminates the need for an alternative, external power supply. (*Id.*, [0047].) Reisenauer discloses that an “external driver electronics” can be used, where “the current driver board 116 will not be mount in lower cavity 136 of housing 108 but will be located external to the housing 108.” (*Id.*, [0047].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Reisenauer, to include a power supply residing within the rear receptacle to supply electrical power to the LEDs, because Reisenauer recognizes only two options for the location of the power supply unit, either an internal power supply unit integrated into the LED light fixture or an external supply unit and it would have accounted for designing a fully integrated LED light fixture without unnecessary external components.

A POSITA would have a reasonable expectation of success in using the power supply residing within the rear receptacle, as disclosed in Reisenauer, as this would have simply been the use of a well-known component for its intended purpose. A POSITA would have had a reasonable expectation of success because the charted references and Reisenauer all pertain to LED light fixtures and include common components. A POSITA would have understood that this would have been nothing more than a routine application of Reisenauer’s known technique of including a power supply residing within the rear receptacle, in order to yield the predictable results of

facilitating connections between the LEDs and the power supply unit that maintain a consistent power generation source for the LEDs.

Similarly, as additional non-limiting examples, Roberge (Ex. 8-A) and Gloisten (Ex. 4-A Chauvet – PAR83 (Ex. 10-A), all disclose these elements, and a POSITA would have been motivated to combine such references with any other charted reference at least for the reasons given above.

v. *“the housing further including a rear cover that encloses the rear receptacle;” and “a power supply ... enclosed by the cover”* [Claim 21]

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose a “rear cover that encloses the rear receptacle” and that the power supply is “enclosed” by such cover it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference disclosing such limitations to render Claims 21 obvious. There would have been many reasons that a POSITA would have known to so modify or combine such reference. *See Supra* IV.C.iii.

A POSITA would have understood that placing a cover on the rear receptacle would further protect the internal components of the LED light fixture from damage. A rear cover would ensure that the internal components were not exposed to outside debris or moisture. Further, if the fixture were to drop, the internal components would be better protected from damage. A removable rear cover that encloses the rear receptacle and the power supply would make it easier to access the internal components for repair and maintenance. A POSITA would have been motivated to include a rear cover that encloses the rear receptacle to protect the internal components that are responsible for supplying power to the LEDs. A POSITA would have had a reasonable expectation of success in placing a rear cover that encloses the rear receptacle because using a rear cover was well-known

and commonly implemented in LED light fixtures at the time to increase the durability of the light fixtures.

For example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Maitland. Maitland discloses a “rear cover 56” which “prevents entry of water from the environment into the rear cavity 30 of the heat sink.” (Maitland, Figs. 2-5, 8:34-36.) The “printed circuit board 50” that “provide[s] power to the LED” is located in “rear cavity 30.” (*Id.*, Figs. 2-5, 8:28-30.) The “printed circuit board 50” and the LEDs are connected by “insulated conductors soldered to conductive tracks on the printed circuit board.” (*Id.*, Figs. 2-5, 8:30-31) The rear cover is configured with an “O-ring” to further “prevent[] entry of water between the rear cover 56 and the heat sink to the power supply circuitry.” (*Id.*, Figs. 2-5, 6:1-4.) The rear cover allows the lighting unit to be “essentially waterproof and is suitable for being mounted in outdoor locations unprotected from the weather.” (*Id.*, Figs. 2-5, 6:4-5.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Maitland, to enclose the rear receptacle and the power supply with a rear cover to prevent water damage to the internal electronics of the LED light fixture. A POSITA would have had a reasonable expectation of success in using a rear-cover, as disclosed in Maitland, as this would have simply been the use of a well-known component for its intended purpose.

As another example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Gloisten. Gloisten discloses a “rear seal 290” and a “rear cover 292” which are “configured to substantially close the bottom of the interior cavity of the heat exchanger 280.” (Gloisten, Fig. 3, [0024], [0027].) The “interior cavity” of “heat exchanger 280” defines the “rear receptacle” which contains “control circuit board 270” which is “electronically connected” with “LED circuit board 240” “to power illumination of the plurality of LEDs.”

(Gloisten, Fig. 3, [0005], [0024], [0026].) The “control circuit board 270” is a printed circuit board “with printed circuit traces” and “two projections...that are configured to engage” with “LED circuit board 240” to supply power to the LEDs. (*Id.*, Figs. 6A, 6B, [0005], [0024], [0026].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Gloisten, to enclose the rear receptacle and the power supply with a rear cover to better protect the circuit traces and electronic connections to the LEDs. A POSITA would have had a reasonable expectation of success in using a rear-cover, as disclosed in Gloisten, as this would have simply been the use of a well-known component for its intended purpose.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Mingozi. Mingozi discloses a “voltage stabilizing circuit” which is “accommodated” within a rear receptacle between the “fins 3 of the body 2” of the LED lamp. (Mingozi, Figs. 1-3, [0017].) Mingozi teaches that “it is possible to provide an element for covering the voltage stabilizing circuit 6, so as to protect it further.” (*Id.*, Figs. 1-3, [0021].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Mingozi, to enclose the rear receptacle and the power supply with a rear cover to further protect the components from damage. A POSITA would have found it at least obvious to try placing a rear cover to enclose the rear receptacle and the power supply, as it would have been only one of two known options, and it would have accounted for the need for more protection of the internal LED components. Further, a POSITA would recognize that a removable rear cover would protect the internal LED components as well as provide ease of access to remove the cover to perform repair and maintenance. A POSITA would have had a reasonable expectation of success in using a rear-cover, as disclosed in Mingozi, as this would have simply been the use of a well-known component for its intended purpose.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Reisenauer. Reisenauer discloses “internal electronics driver board 116” which fits within a “heat sink housing 108 and base assemblies 118.” (Reisenauer, [0040].) The “lower portion 142 of the driver board” includes the “input terminals 150 for receiving an input voltage from a power source” and “is dimensioned to be disposed in the base 118 with an interference fit. (*Id.*, Figs. 8A, 3-4, 7 [0040].) “The base 118” “supports the electronics board 116 and mates to the heat sink 108 using an epoxy adhesive for a seal to resist moisture intrusion.” (*Id.*, Figs. 8A, 3-4, 7, [0044].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Reisenauer, to enclose the rear receptacle and the power supply with a rear cover to prevent moisture from damaging the internal electronics of the LED light fixture. A POSITA would have had a reasonable expectation of success in using a rear-cover as disclosed in Reisenauer, as this would have simply been the use of a well-known component for its intended purpose.

Similarly, as additional non-limiting examples, Roberge (Ex. 8-A), Chen '066 (Ex. 2-A), LED-PAR83 (Ex. 10-A), and Lin (Ex. 1-A), all disclose these elements, and a POSITA would have been motivated to combine such references with any other charted reference at least for the reasons given above.

vi. “a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board” [Claim 21]

To the extent that any reference charted in Exhibits 1-A through 11-A does not disclose “a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board” it would have been obvious to modify or combine such reference with the knowledge of a POSITA or another reference

disclosing such limitations to render Claims 21 obvious. There would have been many reasons that a POSITA would have known to so modify or combine such reference.

A POSITA would recognize that LEDs mounted to a printed circuit board was a well-known way to implement or construct LED light fixtures. A POSITA would recognize that a printed circuit board allows for control of the distribution of the power and by mounting the LEDs on the printed circuit board, the LED light fixture could better control the supply of power to the LEDs. Further, a POSITA would recognize that an optical lens extending from the printed circuit board would direct the light emitted from the LEDs or otherwise assist in producing the desired light output. Without an optical lens the light may spread outwards from the LED instead of in an intended direction. A POSITA would be motivated to use an optical lens to improve the efficiency of the LEDs, thereby increasing the life of the LEDs. A POSITA would have had a reasonable expectation of success in using an optical lens extending from the printed circuit board because it was well-known and commonly used in LED light fixtures at the time, and the LEDs would continue to perform their same function.

For example, without limitation, a POSITA would have found it obvious to combine any of the charted references with Lin. Lin discloses a “LEDs (41)” that are “full integrated on the circuit board (42).” (Lin, Figs. 1-3, 6:21-26.) The integration of the LEDs to the circuit board (42) allow the “assembly steps” for the LED light fixture to be “simplified” and “assembly time is saved, and productivity is increased.” (*Id.*) Lin further discloses a “cover body (43)” which are “fixed on the LEDs (41).” (*Id.*, Figs. 1-3, 4:31-5:10.) A “cover plate (44) is provided with a through hole (45) at a part corresponding to each cover body (43).” (*Id.*, Figs. 1-3, 4:33-5:10.) The “light produced by the LEDs (41) passes through the cover bodies (43) and is released outward through the holes (45).” (*Id.*, Figs. 1-3, 4:33-5:10.) The light is “converged after passing through the cover

bodies (43)” to achieve a “lighting effect.” (*Id.*, Figs. 1-3, 5:11-19.) The cover body helps “prolong[] the service life and improv[e][] the lighting effect of the searchlight, and at the same time, enabling the searchlight to feature small size.” (*Id.*, Figs. 1-3, 4:11-13.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Lin, to include an optical lens extending from the printed circuit board to improve the lighting effect from the LED light fixture. A POSITA would have had a reasonable expectation of success in using an optical lens, as disclosed in Lin, as this would have simply been the use of a well-known component for its intended purpose.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Reisenauer. Reisenauer discloses “LED devices 102 ...mounted to a metal core printed circuit board (PCB) 122.” (Reisenauer, Figs. 1, 5, [0034].) Reisenauer teaches that the “electronics design provides input power transient protection so that input power fluctuations will not damage the circuit components.” (*Id.*, Figs. 1, 5, 9 [0034].) “A current driver circuit provides constant current at up to 1.1 amps to the LEDs, independent of fluctuations in input voltage.” (*Id.*) Further, Reisenauer discloses “an optical element 104 [] place[d] over each LED 102 to efficiently >75% capture the light exiting the LED device 102 and channel it towards its intended target.” (*Id.*, Figs. 1, 5, [0035].) Each “individual optical element [] create[s] a spot with a total angle of 6, 10, or 25 degrees, depending upon the optical properties of the lens selected.” (*Id.*) The optical elements allow the light emitted from the LEDs is efficiently directed into either a “narrow spot” when the angle is set to 6 degrees or a “narrow flood light pattern” when the angle is set to 25 degrees. (*Id.*, Figs. 1, 5, [0028].) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Reisenauer, to include an optical lens extending from the printed circuit board to more efficiently

and flexibly direct the light emitted from the LEDs. A POSITA would have had a reasonable expectation of success in using an optical lens as disclosed in Reisenauer, as this would have simply been the use of a well-known component for its intended purpose.

As another example, also without limitation, it would have been obvious to combine any of the charted references with Chen '066. Chen '066 discloses “[e]ach of the lighting units 5 has a light emitting diode 51, such as a high power light emitting diode, mounted on the circuit board 3.” (Chen '066, Figs. 1-3, 2:40-50.) Chen '066 further teaches “a condensing member 52 mounted on the circuit board 3 and disposed around the light emitting diode 51...for condensing light generated thereby.” (*Id.*, Figs. 1-3, 2:40-50.) The presence of the condensing lens allows “the illumination apparatus [to][] achieve high-brightness illumination.” (*Id.*, Figs. 1-3, 3:18-19.) Chen acknowledges that the prior art, a “fluorescent lamp” had “a shorter service life” because the “light generated by the fluorescent lamp is not effectively condensed.” (*Id.*, Figs. 1-3, 1:11-14.) In addition to the reasons set forth above, a POSITA would have been motivated to combine any of the charted references with Chen '066, to include an optical lens extending from the printed circuit board to improve the illumination from the light emitted from the LEDs to achieve “high-brightness illumination.” (*Id.*, 3:18-19.) A POSITA would have had a reasonable expectation of success in using an optical lens as disclosed in Chen '066, as this would have simply been the use of a well-known component for its intended purpose.

Similarly, as additional non-limiting examples, Roberge (Ex. 8-A), Chen '402 (Ex. 3-A), Maitland (Ex. 6-A), Mingozi (Ex. 7-A), LED-PAR83 (Ex. 10-A), and Gloisten (Ex. 4-A), all disclose these elements, and a POSITA would have been motivated to combine such references with any other charted reference at least for the reasons given above.

V. P.R. 3-3(d): Invalidity based on 35 U.S.C. § 112

Defendant contends that the Asserted Claim is invalid under pre-AIA 35 U.S.C. § 112 because: (1) the claim is indefinite; (2) the claim is not enabled; and/or (3) the claim lacks adequate written description. Defendant's contentions that the Asserted Claim is invalid under pre-AIA 35 U.S.C. § 112 is made in the alternative, and do not constitute, and should not be interpreted as, admissions regarding the construction or scope of the claims of the Asserted Patent, or that any of the claims of the Asserted Patent are not anticipated or rendered obvious by any prior art.

These contentions are based on Defendant's current understanding of the Asserted Patent and Plaintiff's Preliminary Infringement Contentions. To the extent Plaintiff contends that the prior art references identified above would not enable a person of ordinary skill to make or use the elements of the Asserted Claim against which they are cited, and to the extent Plaintiff contends that the Asserted Claim covers something different from what Defendant understand them to cover, the Asserted Claim may not comply with the enablement, written description, and/or definiteness requirements of 35 U.S.C. § 112 ¶¶ 1-2. Because compliance with the requirements of 35 U.S.C. § 112 ¶¶ 1-2 depends on the construction of those phrases—and no claim construction positions have been exchanged, no claim construction order has issued, and no expert discovery has been undertaken—Defendant's positions on written description, enablement, and/or indefiniteness are necessarily preliminary at this early stage of the case. Defendant reserves all rights to amend or further revise these contentions based on further developments in the case.

The written description and enablement requirements are analyzed by comparing the claims with the disclosure in the specification. If the claimed invention does not appear in the specification, the claim fails regardless of whether one of skill in the art could make or use the claimed invention. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1348 (Fed. Cir. 2010).

To satisfy the written description requirement, the patentee must convey to those skilled in the art that, as of the filing date, the applicant was in possession of the invention, and demonstrate that possession by disclosing the invention in the specification. *Id.* at 1352. To satisfy the enablement requirement, a patentee must “describe the manner and process of making and using the invention so as to enable a person of skill in the art to make and use the full scope of the invention without undue experimentation.” *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1344-45 (Fed. Cir. 2005).

A patent must also be precise enough to afford clear notice to what is claimed. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 899 (2014). A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. *Id.* at 898-99. The standard for assessing if a patent claim is sufficiently definite to satisfy the statutory requirement is whether “one skilled in the art would understand the bounds of the claim when read in light of the specification.” *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1358 (Fed. Cir. 2003).

A claim term can be indefinite based on multiple grounds ranging from substantive concerns to unresolvable drafting errors, all of which can be fatal to the validity of the claims as a matter of law. For example, the Federal Circuit has repeatedly held that apparatus claims that contain method claim limitations are indefinite because it is impossible to determine when direct infringement occurs. *See, e.g., Rembrandt Data Techs., LP v. AOL, LLC*, 641 F.3d 1331, 1339-40 (Fed. Cir. 2011) (an independent claim that recited both an apparatus and a method of using that apparatus was indefinite, as was its dependent claims); *IPXL Holdings v. Amazon.com*, 430 F.3d 1377, 1384 (Fed. Cir. 2005); *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d

1303, 1318 (Fed. Cir. 2011) (mixed claims “create confusion as to when direct infringement occurs because they are directed both to systems and to actions performed by” users).

Claim terms that lack antecedent basis are indefinite. *See, e.g., Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1348-49 (Fed. Cir. 2002) (claim ending in the middle of a claim limitation was indefinite because it was “impossible to discern the scope of such a truncated limitation”). Furthermore, means plus function claims, which invoke 35 U.S.C. § 112 ¶ 6, may be invalid as indefinite where a patent owner has failed to disclose adequate corresponding structure linked to the recited claim functionality. *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311-12 (Fed. Cir. 2012).

In *Nautilus, Inc. v. Biosig Instruments, Inc.*, the Supreme Court clarified that a patent is invalid “for indefiniteness if its claims read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” 572 U.S. at 898-99. “It cannot be sufficient that a court can ascribe some meaning to a patent’s claim; the definiteness inquiry trains on the understanding of a skilled artisan at the time of the patent application, not that of a court viewing matters post hoc.” *Id.* at 911 (emphasis in original).

The Asserted Claim fails the enablement, written description, and/or definiteness requirements in view of at least the following claim terms and phrases.

A. Failure to Satisfy the Written Description Requirement

The Asserted Claim of the ’245 Patent is invalid because the specification of the ’245 Patent does not provide an adequate written description to support the scope of the claim sought by Plaintiff in furtherance of its infringement theories. 35 U.S.C. § 112 ¶ 1 requires a patent specification to contain “a written description of the invention.” The written description “must do

more than merely disclose that which would render the claimed invention obvious.” *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009). The written description must “clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed” by the time of the application filing date. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). To satisfy the written description requirement, “the applicant must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,’ and demonstrate that by disclosure in the specification of the patent.” *Carnegie Mellon Univ. v. Hoffmann-La Roche Inc.*, 541 F.3d 1115, 1122 (Fed. Cir. 2008) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991)). “[E]nough [of the invention] must be included to convince a person of skill in the art that the inventor possessed the invention.” *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005).

Defendant’s investigation of grounds of invalidity based upon failure to meet the written description requirement is ongoing, and Defendant reserves the right to supplement these Preliminary Invalidity Contentions.

The Asserted Claim of the ’245 Patent, at least under Plaintiff’s actual and/or apparent application of the claim, is invalid under 35 U.S.C. § 112 ¶ 1 because the specification fails to describe claim terms in sufficient detail such that one skilled in the art could reasonably conclude that the inventors had possession of the claimed subject matter. Based on the information currently available, the Asserted Claim of the ’245 Patent is invalid for lack of written description under § 112 ¶ 1 due to at least the following phrases and limitations being deficient:

- “the light engine having a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board” – Claim 21

For example, with respect the claim limitation “the light engine having a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board” recited in Claim 21, the specification fails to provide sufficient details and provides inadequate description regarding how each module includes both an LED mounted to a printed circuit board and an optical lens extending from the printed circuit board. Moreover, the specification fails to provide sufficient details and provides inadequate description regarding whether each optical lens extends from a printed circuit board as recited in the claims, or if each optical lens instead extends from each light module M.

For at least these reasons, the Asserted Claim is invalid because it does not satisfy the written description requirement.

B. Lack of Enablement

The Asserted Claim of the ’245 Patent is invalid due to lack of enablement under 35 U.S.C. § 112 ¶ 1. “To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *Trs. of Bos. Univ. v. Everlight Elecs. Co.*, 896 F.3d 1357, 1362 (Fed. Cir. 2018); *id.* at 1365 (“[I]f BU wanted to exclude others from what it regarded as its invention, its patent needed to teach the public how to make and use that invention.”).

For example, the Asserted Claim of the ’245 Patent fails to satisfy the enablement requirement because the specification fails to teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation, in view of at least the

following clause from Claim 21: “the light engine having a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board.”

First, no enabling disclosure exists in the '245 Patent for the following claim language: “the light engine having a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board.” To the extent a person of ordinary skill in the art could make and use the claimed invention, it would require undue experimentation, as the specification provides insufficient details regarding how each lens extends from the printed circuit board, and instead discloses that such lenses extend from “each light module M.” (*See, e.g.*, '245 Patent, 3:24-35, 5:27-30, Figs. 5-6.)

For at least these reasons, the Asserted Claim is invalid because it does not satisfy the enablement requirement.

C. Indefiniteness

The Asserted Claim of the '245 Patent is invalid because it fails to meet the definiteness requirement of 35 U.S.C. § 112 ¶ 2. Defendant identifies the following grounds of invalidity under 35 U.S.C. § 112 ¶ 2, which requires that a patent claim “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instrs., Inc.*, 572 U.S. 898, 901 (2014). Further, “a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.” *Id.* at 909-10 (“Otherwise there would be a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.”). “The Supreme

Court explained that a patent does not satisfy the definiteness requirement of § 112 merely because ‘a court can ascribe *some* meaning to a patent’s claims.’ The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370-71 (Fed. Cir. 2014). “[A] claim may be invalid as indefinite when (1) different known methods exist for calculating a claimed parameter, (2) nothing in the record suggests using one method in particular, and (3) application of the different methods result in materially different outcomes for the claim’s scope.” *Saso Golf, Inc. v. Nike, Inc.*, 843 F. App'x 291, 296 (Fed. Cir. 2021).

Defendant contends that at least the following terms in the Asserted Claim are indefinite:

- “the light engine having a plurality of light modules wherein each module includes both a LED mounted to a printed circuit board and an optical lens extending from the printed circuit board”

For example, the Asserted Claim fails to satisfy the requirements of 35 U.S.C. § 112 ¶ 2 because the claim term “an optical lens extending from the printed circuit board” fails to inform, with reasonably certainty, those of ordinary skill in the art about the scope of the claimed invention. To the extent “extending from” is a term of degree. The specification and prosecution history do not sufficiently explain what would be considered enough to be “from the circuit printed circuit board” with enough certainty or guidance to one of skill in the art to provide objective boundaries for the claim term. Moreover, neither the public nor a person of ordinary skill in the art would be able to determine with reasonable certainty, in light of the '245 Patent specification and prosecution history, the proper scope of Claim 21, including whether a given optical lens not directly physically connected to a printed circuit board is or is not within the scope of the claimed “an optical lens extending from the printed circuit board.” Similarly, neither the public nor a person

of ordinary skill in the art would be able to determine with reasonable certainty, in light of the '245 Patent specification and prosecution history, the proper scope of Claim 21, including whether a given optical lens not indirectly connected to a printed circuit board is or is not within the scope of the claimed “an optical lens extending from the printed circuit board.”

For at least these reasons, the Asserted Claim is invalid, because it does not satisfy the definiteness requirement.

VI. P.R. 3-4: Accompanying Document Production

Pursuant to P.R. 3.4, Defendant produces documents bearing bates numbers CHAUVET_000124 - CHAUVET_000507. The production includes prior art references that are cited in and support the accompanying invalidity claim charts, and are evidence of the state of the art at the time of the alleged invention(s) (although it may not include references that appear in the file histories of the '245 Patent, as contemplated under the Local Patent Rules). For certain foreign references, Defendant has obtained and provided translations to give Plaintiff fair notice of the art. Defendant reserves the right to supplement these contentions to rely on further content from certified translations of those same references.

Defendant's search for prior art references, additional documentation, and/or corroborating evidence concerning prior art products and the like is ongoing, as explained above. Defendant reserves the right to continue to supplement their production as Defendant obtains additional prior art references, documentation, and/or corroborating evidence concerning invalidity during the course of discovery. Without limitation, Defendant will promptly produce any prior art-related documentation or other evidence received in response to any third-party subpoenas it has served or may serve, and will supplement its contentions accordingly.

DATED: November 13, 2024

Sincerely,

/s/ Joseph J. Raffetto

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CERTIFICATE OF SERVICE

I certify that on November 13, 2024, I electronically served the foregoing to counsel of record who have registered through the CM/ECF system agreeing to receive such documents through electronic service.

/s/ Ky-Yen Wong

Ky-Yen Wong