IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ACUITY BRANDS LIGHTING, INC.,	)	
	)	
Plaintiff,	)	
	)	**C.A. No. 19-2207(MN)**
v.	)	
	)	
ULTRAVISION TECHNOLOGIES, LLC,	)	
	)	
Defendant.	)	

Wednesday, July 21, 2021
10:00 a.m.
Claim Construction Hearing

844 King Street
Wilmington, Delaware

BEFORE: THE HONORABLE MARYELLEN NOREIKA
United States District Court Judge

APPEARANCES:

DUANE MORRIS LLP
BY: MONTE TERRELL SQUIRE, ESQ.
BY: MATTHEW S. YUNGWIRTH, ESQ.
BY: GLENN D. RICHESON, ESQ.

Counsel for the Plaintiffs

APPEARANCES CONTINUED:

BAYARD, P.A.
BY: STEPHEN B. BRAUERMAN, ESQ.

-and-

FABRICANT LLP
BY: ALFRED R. FABRICANT, ESQ.
BY: JACOB OSTLING, ESQ.
BY: JOSEPH M. MERCADANTE, ESQ.

Counsel for the Defendant

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THE COURT: Good morning, everyone. Please be seated. Let's start with some introductions.

MR. SQUIRE: Good morning, Your Honor. Monte Squire from Duane Morris on behalf of Acuity Brands Lighting. And I'm joined at the counsel table with my co-counsel, Matt Yungwirth and Glenn Richeson, both out of our Atlanta office.

THE COURT: Good morning.

MR. YUNGWIRTH: Good morning.

THE COURT: Mr. Brauerman.

MR. BRAUERMAN: Good morning, Your Honor. Steve Brauerman from Bayard. I'm joined at counsel table by Fred Fabricant, Joseph Mercadante and Jacob Ostling from

Fabricant LLP on behalf of Ultravision Technologies LLC.

THE COURT: Good morning to all of you as well.

We're here today for the claim construction in the case. There are seven terms. Have any additional terms been agreed upon?

MR. YUNGWIRTH: There have not, Your Honor.

THE COURT: Okay. Have you talked about how you want to proceed?

MR. YUNGWIRTH: Go ahead.

MR. FABRICANT: Your Honor, it's a declaratory judgment case, but I think in the normal order of claim construction cases we would propose that Ultravision go first with respect to each of the claim terms.

THE COURT: Okay. Have you discussed that?

MR. YUNGWIRTH: Yes, that's acceptable, Your Honor.

THE COURT: So we're going to go one by one, though. Okay?

Do you want to give me a hard copy of the slides or do you want me to pull my own copy?

MR. FABRICANT: May I approach, Your Honor?

THE COURT: Yes.

MR. RICHESON: May I approach?

THE COURT: Sure.

MR. FABRICANT: There is two copies for the

Court.

THE COURT: Okay.

MR. FABRICANT: Good morning, Your Honor. Fred Fabricant for the Ultravision company.

MR. BRAUERMAN: May I approach, Your Honor, to the court reporter?

THE COURT: Sure. You're on the clock, though, so let's start talking.

MR. FABRICANT: Yes, Your Honor.

Your Honor, the first claim term today is with respect to the uniformity terms. And the uniformity terms are found --

THE COURT: I know. Let's just get to the meat of it. I have read all the papers, I promise you, I have looked at the slides, so let's just get to the crux of why the term is indefinite or an exact term.

MR. FABRICANT: Yes, Your Honor.

We believe the claims put in context the language of the claims, the proposed claim construction by Ultravision, there are claim elements with respect to wherein the light from each of the LEDs is directed outward to the structure of the LED, how the light is directed with each of the lens elements across the entire display surface as illustrated in the claim 1 of the '410 Patent, claim 12 of the '946 Patent, and independent claim 1, again,

structure with respect to the light assembly is configured to direct light in a manner that does not create hot spots or result in dead spots on the area regardless of whether all the LEDs are functional. And the same with respect to claim 12, structured within each of the claims that are asserted in this case which puts into context the meaning of the claim terms with respect to uniformity.

Then you look to the specification, and the specification we believe in numerous illustrations puts again in context, and especially taken as a whole over the references in the written description, what is intended by the patent, what is intended by the claims. The key here being that uneven illumination creates hot spots and dead spots. And that these hot spots and dead spots would be noticeable and that the invention is an apparatus invention, it's a lighting assembly. It's a type of device. And this device can be projected and illuminate any surface is our position. And it's the same device whether you point it up at a billboard, whether you point it at a sign, whether you point it at an area, whether you point it at a display surface or a sidewalk, it is a device. And the object of this device pursuant to all of the illustrations of the structure is to illuminate the area without any -- minimizing any noticeable unevenness in the overall illumination to prevent hot spots and dead spots. That's

what everyone in the industry is attempting to accomplish with their lighting.

We can see there is references to hot spots and references to dead spots throughout the specification. And again, the specification gives numerous illustrations as to how one would accomplish this in the embodiments which are disclosed.

And as the Court is aware, there was a construction of these very claim terms, five of the seven sets we believe of the disputed terms in this case were previously construed in the Eastern District of Texas by Judge Payne and confirmed and affirmed by Judge Gilstrap. I would point out to the Court it was the same counsel that represented Acuity who represented Holophane in the Eastern District of Texas. It was the same parties in interest because Acuity owns Holophane and they had every opportunity and did put in all of the briefs, all of the arguments. They objected to the claim constructions that were rendered by Judge Payne, and those constructions were affirmed by Judge Gilstrap, the district court judge.

And I think most important, perhaps, is that the district court recognized that the uniformity terms involve what can be seen by the normal human eye. And this provides an objective baseline through which to interpret the claims. It does not turn on a person's taste or opinion, and is not

purely subjective.

Now Acuity here challenges this statement in its opposition. And you'll see that they challenge it as well in their slides this morning. But this statement that Judge Payne wrote and was affirmed by Judge Gilstrap was right out of *Sonic*. It is right out of the Federal Circuit *Sonic* decision. In that case, "visually negligible" was the disputed claim term. And in that case the defendant raised all of the same arguments that are raised in this case. And the court in Texas looked at the claim terms here of uniformity and they looked at the same arguments that are being made here today with respect to what is a normal human eye. And what conditions is one observing the illumination. And *Sonic* did the same thing.

And in *Sonic* the court reversed summary judgment finding indefiniteness, and found that it was not an indefinite term, that the key was the normal human eye and whether the specification in the claims provided guidance with respect to an objective baseline. *Sonic* used the words "not purely subjective", yet --

THE COURT: What's the reason to put in this such as hot spots or dead spots?

MR. FABRICANT: Because hot spots and dead spots --

THE COURT: Why do we need to give an example?

MR. FABRICANT: Well, I believe that hot spots and dead spots would inform the jury with respect to the evidence that would be presented by expert witnesses, would help them understand how an ordinary observer with a normal human eye would determine --

THE COURT: Yes. But why limit it? Why give them examples of things that -- you know, why do we have to put that into the -- assume that it's definite and that it talks about not creating an -- a noticeable unevenness, such as why did you pick those, because those are in the patent, because those are what you want to talk about when you talk about infringement? I don't usually put examples in my claim constructions, so why should I do that here?

MR. FABRICANT: It wouldn't be necessary, Your Honor. Those words are in many of the claims themselves, and so with respect to the claims that contain those words, those words are actually given as examples within the claims.

THE COURT: Then why do we need it in a construction?

MR. FABRICANT: Well, we don't necessarily need it, Your Honor.

THE COURT: So when you say necessarily, I don't know what you're referring to.

MR. FABRICANT: All I'm referring to, Judge, if

we have a claim obviously that claims hot spots and dead spots as part of the claim language as to referring to what is even illumination, it's there. So for a construction we don't need it, Your Honor.

I turn to the issue of the words --

THE COURT: Let's say I understand your position. Let me hear from the other side.

MR. FABRICANT: Thank you, Your Honor.

THE COURT: Particular is used a lot in patent claims and the Federal Circuit doesn't have a problem with it most of the time, so why is this clear and convincing evidence that you have here?

MR. YUNGWIRTH: Yes, Your Honor. The difference here is that we are dealing with a lower boundary of substantially uniform, not the edge between what is uniform and not uniform, but how much nonuniformity is permitted.

THE COURT: Isn't that an issue of fact, whether it's seeing something is substantially uniform or not?

MR. YUNGWIRTH: But the difference, Your Honor, here because the parties -- this is a term of degree. The Federal Circuit has made it clear that we have to have objective criteria in which that fact can be judged and here the specification lacks any of that criteria.

I think it's important for Your Honor to understand some context for this. This is the slide deck

from Ultravision. And in this --

THE COURT: Can you zoom out so I can read the whole thing?

Thank you.

MR. YUNGWIRTH: Okay. So in this particular slide, they are talking about a set of dependent claims and claim 5 is a good example. In claim 5, it talks about how much nonuniformity is permitted by claim 5. And it says if you're looking at a billboard, the average illumination to the minimum illumination can have a ratio of 3:1. That means you could have a minimum illumination three times less than the average illumination which certainly is something that would be noticeable. And that is a modifier of what they are characterizing as substantial uniformity. And therefore we know that substantial uniformity can be at least as non-uniformed as having this 3:1 ratio.

And because this is a dependent claim, the independent claim arguably could have even more nonuniformity. The question is it's a term of degree, where does it end, where do we go from substantially uniform to not substantially uniform, that is where the specification comes in, it has to provide that criteria for us. And it doesn't do so. We're not talking about that boundary between just barely not uniform, the parties agree that substantially uniform is something different than uniform.

The question is how much nonuniformity is permitted and that question is not answered by the specification. And it's not answered by noticeable unevenness or the human eye.

In fact, this is the testimony of their expert who says yes, you got to look at it to determine whether there is noticeable unevenness or not. When you're looking at a billboard, whether it seems even or not depends on a lot of things. In fact, their expert agreed with us that it depends on a lot of things.

Look at this last question and answer. He's basically saying that you got to look at the background light to determine -- that could impact whether you see a nonuniformity or not. If I'm designing a light and I then decide to install it on the countryside on a dark road, maybe you don't notice a nonuniformity -- I'm sorry, maybe you do notice a nonuniformity because there is no other light, background light that's impacting what you see. By comparison if I take that exact same light and I install it in a city where there is all kinds of background light, the uniformity on the billboard may not be apparent.

How am I to avoid infringement when I'm looking at environmental conditions that are outside the claim and trying to figure out sometimes it might seem uniform, sometimes it might not seem uniform, that's where the indefiniteness comes in. And either the specification nor

the claims provide that objective criteria against which I can judge this nonuniformity.

The same thing is true with respect to the quote unquote ordinary observer that they rely on. I think it's important for Your Honor to understand this testimony was not before the court in Texas. This ordinary observer theory that they have come up with, they did not present that to Judge Payne or Judge Gilstrap. This is all new evidence that we're dealing with now in this case that wasn't handled back then.

But an ordinary observer, first of all, it's a concept from design patent law. It's not a concept from utility patent law. And I have not seen any case that says we can cure an indefiniteness through the eyes of an ordinary observer.

Here we know most people wear glasses. I think the statistics say 64 percent of the population need their eye vision corrected. That impacts whether they notice. If I don't have my reading glasses on, I'm not able to read these letter very well. All of a sudden now we're considering does a person need corrective vision to notice a billboard and notice nonuniformity. I cannot design around that type of thing. The claims does not have metes and bounds in which I can avoid infringement and that's why there is not reasonable uncertainty as to the scope of the

claim and this claim is indefinite.

Two cases that we identified in our briefs deal with something similar. In *Datamize*, the term aesthetically pleasing was found to be indefinite. Aesthetically pleasing, noticeable unevenness, they're both from the perspective of the observer. And just like the court found in *Datamize* that aesthetically pleasing was indefinite, this too should be found indefinite.

University of Massachusetts --

THE COURT: Don't you think that substantially uniform is different in terms of objectiveness than aesthetically pleasing?

MR. YUNGWIRTH: I'm sorry, do I think that?

THE COURT: Aesthetically pleasing, you can understand that by its definition how it's subjective; right?

MR. YUNGWIRTH: Yes, Your Honor.

THE COURT: That just seems different to me than substantially uniform. I understand your argument that that doesn't mean that it has objective boundaries, but it just seems like apples and oranges putting that case up on the board for this proposition.

MR. YUNGWIRTH: Your Honor, I concede that that's even more indefinite than this, but the same underlying concepts of does the specification provide an

objective criteria that an engineer could look at and say if I don't want to infringe this claim, this is what I need to do to avoid it. And here that criteria doesn't exist just like it didn't exist in *Datamize* and it didn't exist in the University of Massachusetts case where noticeable decrease, how much do we merge from a particular standard, in that case it was something different than uniformity, but here how much -- how far away from uniformity can we get or do we need to get in order to avoid infringement? And we simply don't have an answer.

Your Honor has already picked up on one of the issues with their instruction. I mean, certainly we don't need the example, but even if we look at noticeable unevenness, again, that's no more definite than substantially uniform. I mean, we're just replacing one indefinite term for another indefinite term.

And also when you look at their construction, level of illumination creates confusion. Does this mean we have to dim the light to a certain level to avoid unevenness? Level of illumination in the context of these substantial terms just does not make sense.

So unless Your Honor has any questions, I mean, I think the standards are laid out in our brief. They have not identified an objective criteria. Certainly a hot spot and a dead spot is something that is subjective. It's

something that a person, some people may notice and others may not notice. Noticeable unevenness is subjective and there simply is no criteria in which a person can judge whether they are infringing the claim or not.

THE COURT: All right. Mr. Fabricant, why are we not just adding an indefinite term when we say noticeable unevenness along the lines of that Massachusetts case?

MR. FABRICANT: Well, I believe that this is really right in line with the *Sonic* decision where we were dealing with visually negligible. There, the issue is not whether you run around to a thousand billboards around the country to determine whether each and every one is in a lighting situation that causes it to infringe or not. This is an apparatus claim. This is a lighting apparatus which is capable of producing this feature and this result of this type of illumination and that's what we're addressing here. And it was recognized in *Sonic* that you were dealing with a normal human eye and you were -- it didn't matter whether that was in a dark room that you put the item that was engraved with these data matrix dots or whether it was in a bright situation, it didn't matter what the eyesight level was of the individual, we were dealing with a normal human eye.

THE COURT: What about the 3:1 point that was raised? That's in the dependent claims so what happens if

we construe substantially uniform to mean it doesn't create noticeable unevenness, but then the 3:1 does, how does that work?

MR. FABRICANT: It's only in dependent claims.

THE COURT: Yes, but it's in the dependent claim which means that 3:1, if we are saying 3:1 is noticeable, then it can't be that the independent claim is not noticeable.

MR. FABRICANT: We are not saying that 3:1 is noticeable. In the context of the specification and these claims, the claim -- there are many claims that recite 3:1 and they're dependent claims. And what we're saying is that first you have to meet the limitations obviously of each and every element of the independent claim. That requires uniformity, without any question. Then you look to the dependent claim. You would still have to have uniformity and no noticeable unevenness, even with the 3:1 ratio. And their expert goes to an extreme and comes up with a hypothetical trying to come up with a scenario under which a 3:1 might in a hypothetical universe be noticeable. But that is not what we're looking at here. We're looking at a scenario where in order to infringe the dependent claim, you would first have to have uniform illumination and then you would look to see whether the dependent claim could still satisfy infringement.

It would have to at the end of the day be uniform illumination with the 3:1 ratio and that is something which is scientifically possible because it all depends on the level of illumination as to whether the 3:1 is noticeable. So we don't believe it contradicts at all the teaching of this invention.

THE COURT: All right. Let's move to the next term.

MR. MERCADANTE: Thank you, Your Honor. The next term is lens element. And there has been some updates to both proposed constructions since the briefing went in because the parties did make a good faith effort to try to resolve the dispute as to this term after the briefing went in.

Our construction is a geometrically distinct volume of an optical element, and Acuity's proposed construction is now a lens with two or more optical surfaces. The lens element terms come up in defining part of the optical element. Claim 1 of the '410 Patent states that each of the plurality of optical elements comprises a first lens element and a second lens element.

The issue with Acuity's proposed construction is that it defines the lens element as a lens when the claim shows that the lens element is a part of an optical element. And in the specification, the lens element is discussed in

describing figures 8D to 8H which are these complex looking optical elements or lenses which have been helpfully annotated in Acuity's brief.

Going back to the specification, the specification describes that these parts, 820, 822, 824, 826 are the lens elements. So if we look at these different parts, these aren't individual lenses. This, if we look at Figure 8G, the one that looks like a flower, that is a lens. It's one lens that has multiple lens elements. And so all we are trying to do is describe in words those different parts.

THE COURT: Why wouldn't volume be in your construction, geometrically distinct volume, not a part.

MR. MERCADANTE: We would be okay with part, Your Honor. We were just -- the small issue with part, although we would be okay with it, is that one of the past disputes regarding these types of lenses was that these actually had to be distinct structures, it couldn't be molded together, it couldn't be a single piece. That construction, that proposed part of this construction was rejected in Texas actually twice. And so the issue that we have with the term part is that it implies this distinction between these pieces, but at the end of the day we would be okay with the term part, Your Honor.

THE COURT: Do you agree that an optical element

is a lens?

MR. MERCADANTE: Yes.

THE COURT: They're the same thing?

MR. MERCADANTE: Yes.

And so we think the plain meaning which is what we have attempted to come up with is geometric volume or geometric part is the proper way to describe these complex looking lenses with some clarity to the jury.

The issue that we have with Acuity's proposed construction, and I'll go back to it, is not only that it defines the lens element as a lens, which we think is incorrect, but it adds this two or more optical surfaces. That's how it sort of defines the lens.

If we look at these optical elements that the patent described as having lens elements, that would require, for example, the green one, 824, has an optical surface on top which you can see is curved, and then I guess has an optical surface on the bottom which you can see in Figure 8D is flat and flush against the pink piece 820. But that's not an actual surface. This entire optical element is one piece of acrylic.

So if we define the green 824 as having two optical surfaces, that would necessarily require the jury to understand that that interior surface, that line between the green element and the pink element isn't really a surface,

that's just a clear piece of acrylic. And so we think that this defining the lens elements by reference to two or more optical surfaces is confusing and incorrect.

And just finally, Your Honor, I will point to Judge Payne's opinion in the Texas case where he came to the same -- relatively the same conclusion regarding what the lens elements were and what the patent was trying to describe in the claim when it refers to the lens elements, and he, again, noted these geometric shapes which is where the geometrically distinct came from in our construction, our proposed alternate construction, and even he recognized that it's the shapes not of the surfaces that are the lens elements in these figures. And so we don't think that the reference to the surfaces, two or more, is proper. And we think that the geometrically distinct volume more accurately, or geometrically distinct part more accurately describes the different parts of these complicated lenses in a way that is helpful to the jury.

THE COURT: Okay. When we were talking about it was 8F, 8E, why can't that flat part be a surface if it's geometrically distinct?

MR. MERCADANTE: It can be a surface, Your Honor, it's just confusing to the jury without further clarification because when you actually look at the infringing product or prior art, these lenses are just clear

pieces of acrylic. They have been diagramed here in the patent with references to different parts and these internal boundaries drawn, but that's not what these look like in real life, they are a just blobs of clear plastic. So we think that having to have an interior surface define the different parts that doesn't actually exist, that's not a boundary in real life, would be confusing to the jury.

THE COURT: Okay. Thank you.

MR. YUNGWIRTH: Your Honor, this dispute originally arose from the fact that Ultravision was arguing the surface of a lens in Texas is a lens element. That's how we got here today. That's what we argued in Texas. That was the primary disputed issue.

So when we proposed the construction for lens element we were trying to distinguish between a lens element and a lens surface. And during the course of the briefing, Ultravision conceded that they are not -- they're no longer referring to the surface as a lens element. They actually argued that a lens element was the element of a lens. And it wasn't until after the briefing concluded that they came up with this new theory that a lens element is this geometric -- geometrically distinct volume of an optical element which I don't think adds any clarity to the jury. All that's going to do is be causing the parties to fight down the road about what is geometrically distinct and what

is not geometrically distinct.

If we go back to the Figures 8 that were referred to before, you can see that every one of these figures has -- every one of these components of every one of these figures has two or more surfaces. And our concern is that we get this issue resolved now rather than --

THE COURT: But I mean, I think their point is that the lines that we see in the diagram aren't real, and so what you're pointing me to as a surface isn't something that you see.

MR. YUNGWIRTH: Your Honor, if I could approach the screen over here?

THE COURT: Yes.

MR. YUNGWIRTH: If we look at this, this is real. There is three surfaces. This is real. This is real. There is an inner and outer surface of this. Every single one of these has two or more surfaces. They're real surfaces. What the real issue is, somehow these things can be injection molded and put together. We don't disagree with that. We've said in our brief that we agree that's distinct. They don't need to be distinct. They can be put together as one. But the fact is the light travels through each of those components and it gets redirected when it passes from one, quote unquote, geometric volume to another geometric volume.

THE COURT: Do you agree it can be injected molded all as one piece?

MR. YUNGWIRTH: Yes, each of the --

THE COURT: What's the problem then, over here, Ultravision? What's your problem with that? I don't even understand what you guys don't agree on.

Just stay at the table. You don't have to stand on each other, just tell me what the disagreement is.

MR. MERCADANTE: Your Honor, the disagreement is that the implication raised by the two surfaces will be understood by the jury to require two lenses on top of each other rather than just a single lens that has multiple different parts.

THE COURT: You didn't argue that?

MR. YUNGWIRTH: No, Your Honor. Each of the elements in the Figures 8, they reflect different optical properties. You put them together -- I'm not going to argue that lens element is not meant because the device has been injection molded and everything has been combined into one piece of plastic, we will not make that argument.

THE COURT: I don't understand the issue. I get what you're saying, but I don't understand that they're saying something terribly different.

MR. MERCADANTE: No, we are very close to agreement on this. I do agree with many of the major issues

with respect to this term have been resolved, we think our proposed plain and ordinary meaning --

THE COURT: You think geometric volume is easier for a jury than surface?

MR. MERCADANTE: I think it's more accurate, Your Honor.

THE COURT: So you have an injection -- you have one piece of injection molded and you think that they're going to be able to understand that there are different geometric volumes in there, but they can't understand that there are different surfaces?

MR. MERCADANTE: Yes, Your Honor, because it necessarily requires a reference to one of these interior surfaces that does not exist.

THE COURT: I don't know what that means. It doesn't exist, what?

MR. MERCADANTE: These interior surfaces, the lines that we're seeing on the figures, they don't exist.

THE COURT: Yeah.

MR. MERCADANTE: And I understand --

THE COURT: Isn't a line just showing a distinct geometric volume?

MR. MERCADANTE: You can see that it's a distinct shape by looking at it.

THE COURT: I don't understand. You're going to

have to tell me again, because it sounds like they're not arguing that if you have this piece and it's got different parts to it that that doesn't constitute two different surfaces. So I don't understand your concern.

MR. MERCADANTE: Yes, Your Honor, I do appreciate the --

THE COURT: You're not explaining your concern. I don't care if you appreciate it. I'm sure he doesn't care if you appreciate it. You need to explain to me why what you're telling me which is these words that seem much harder to me to understand are better than multiple surfaces.

MR. MERCADANTE: Your Honor, it's better because even though we won't see a non-infringement argument regarding interior surfaces, it's still our burden to show infringement. And we think that by reference to surfaces that do not exist in real life could be confusing to the jury, who will be looking for a surface --

THE COURT: What I'm missing is when you said they don't exist, I thought you meant you just can't see them. But now it seems to me -- how does a geometric volume exist that a jury could see in a way that a surface doesn't, that's what I need you to explain to me.

MR. MERCADANTE: Because you can draw an internal boundary line inside a lens, our expert could annotate a lens just like we saw in the briefing and on the

slides that identifies these geometric volumes but don't have -- without reference to certainly --

THE COURT: Is this term something that is actually in dispute with respect to infringement or validity?

MR. YUNGWIRTH: Your Honor, this term is found in two patents.

THE COURT: I'm asking if it's a subject of dispute with respect to infringement or validity?

MR. YUNGWIRTH: I don't know, based on their infringement contentions, yes, because they still say that surfaces are lens elements. I assume they're going to amend their infringement contentions and I don't know where that's going to lead us, but under the current contentions the answer is yes. The two patents are '410 and '413 which I don't know if you guys are going to continue to pursue.

THE COURT: Talk to me. Talk to me, not to him.

MR. YUNGWIRTH: Sorry, Your Honor.

THE COURT: I don't understand. Is it a term? He just said you said they're surfaces, I'm completely confused as to why this is a dispute that I need to deal with.

MR. MERCADANTE: Your Honor, it's a dispute because there is still differences between the parties' two positions regarding which is the proper construction of the

term, which reflects the plain and ordinary meaning in view of the specification.

THE COURT: Say that again.

MR. MERCADANTE: There is a dispute regarding whether an interior surface could be a lens element or not which is why it's still a claim construction issue that needs to be resolved.

THE COURT: All right. Go ahead, I interrupted you. Go ahead.

MR. YUNGWIRTH: Thank you. And I'm almost done, Your Honor. But to add some clarity so you understand the dispute. This is Figure 5 from the patents. Figure 5 does not refer to lens elements. It talks about lenses with surfaces. Many of the -- these products have lenses look like this. And they're saying the outer surface and the inner surface are the lens element. Again, I assume that they would drop that given how claim construction has evolved, but those are the allegations that are out there that we're dealing with.

And that's all I have, Your Honor. Unless you have questions.

THE COURT: Okay. So let me just ask you this. When you said that you needed it to be a geometrically distinct volume because then your expert can draw interior boundary lines, why is that not saying -- what I am missing

is the surface aspect because your expert would just draw a boundary and say that's the surface.

MR. MERCADANTE: Well, Your Honor, the point of our construction is that he wouldn't need to make an opinion that that's the surface. If I may, Your Honor, take the podium?

THE COURT: Yes.

MR. MERCADANTE: Just going back to these annotated figures which I think are most helpful to clarify the dispute. If this, say Figure 8E as annotated here shows up in the infringement expert report, I think it's clearer that these are geometrically distinct volumes rather than portions of these lenses that have certain optical surfaces. You can draw a volume using one of these interior boundaries without having to call it a surface. That's the crux of the dispute, Your Honor.

THE COURT: Go ahead. Next term.

MR. OSTLING: Jacob Ostling for Ultravision, Your Honor. If I may proceed?

The next term is convex optical element. Ultravision's position is that this term should be accorded its plain and ordinary meaning, that is an optical element that is convex.

THE COURT: We all agree now that an optical element is a lens; right?

MR. OSTLING: Right.

THE COURT: This is a convex lens.

MR. OSTLING: Well, Your Honor, I think the center of dispute is over the proper construction of convex.

THE COURT: But that's -- okay. So your construction is a lens that's convex; right? You have optical element in there, but just so we're all on the same page, that means lens; right?

MR. OSTLING: That is right.

THE COURT: So a convex optical element is a convex lens?

MR. OSTLING: That's right, Your Honor.

THE COURT: But their position is it has to be radially symmetric in order to be convex.

MR. OSTLING: That is their position.

THE COURT: And you all say all it has to do is bulge instead of going in?

MR. FABRICANT: I think that is -- as Dr. Coleman opined, the key here is that convex as used in the relevant art refers generally to bulging or protruding lenses as opposed to recessed or concave lenses. And Dr. Coleman cited to a range of definitions that are consistent with his understanding of the plain and ordinary meaning here. And Mr. Mercadante, if I could have Dr. Josefowicz's testimony at page 58-59. Acuity's claim

construction evidence, Dr. Josefowicz when asked about this construction actually acknowledged here after a lengthy answer about whether an optical physics or a shaped definition should apply, he acknowledged that convex here is being used as a shape.

And then he goes on, it's used as a general term, while at the same time being part of a specific optic, so I'm saying it's doubtful to me that convex in the context of the '410 actually is a convex lens, referring to the optical physics definition, but it's more of a general outward facing curve on a lens.

And that portion of Dr. Josefowicz's testimony I think is consistent with what Dr. Coleman is saying that convex here is just a protruding or a bulging shape.

And Mr. Mercadante, if could go to page 72 of that transcript.

So following that response, Dr. Josefowicz purported to apply the classical physics definition of convex in his construction, in Acuity's construction. Now I disagree that that is the classical physics definition -- Mr. Mercadante, can I get back to the slide.

He goes on to say that what he's really doing under the gambit of this classical physics definition is trying to describe the convex optic in Figure 5A, or in 5A.

Now, that is we believe wrong here because it is

limiting what is convex to one extremely specific embodiment of convex. And it's also in conflict with the Federal Circuit's holding in Hockerson that it's inappropriate to look at the patent drawings for those precise proportions.

So in the absence of any lexicography or disclaimer it's improper to try to limit convex to the embodiment of Figure 5 when in the art it generally -- it refers to optical elements or lenses that are as a whole bulging or protruding from a surface as opposed to recessed below the surface.

And it's also worth looking at the use of the term convex optical element in claims 21 and 22 of the '946 Patent. There we have a convex optical element with three portions. Two portions that are directing light in lateral directions and one portion orthogonal to those. That is at least referring to an exemplary embodiment in Figure 8 where we have lens elements 822, 824 being the lateral lens elements --

THE COURT: I can't see the numbers.

MR. OSTLING: Sorry.

THE COURT: Point me to something.

MR. OSTLING: I could just go to this larger figure.

So 822 and 824 would be those lateral lens elements or lateral portions, and 826 would be the portion

that is orthogonal to those lens elements.

And then moving to claim 22, we have a description of the intersections between those various portions or lens elements that is also consistent with what is shown in Figure 8. To be clear, this is not limited to what is in Figure 8, but Figure 8 is an embodiment of what is described in the convex lens element or convex optical element, rather, in claims 21 and 22.

And Acuity's construction requiring that we have a perfect hemisphere would read this out entirely. Moreover, it's not clear that it's possible --

THE COURT: You're not pointing me to anything that looks convex. Can you back up and tell me what you're talking about here? You're pointing me to 8F. What are we talking about that's convex here, 822 and 824?

MR. OSTLING: The optical element, the lens as a whole comprising 822, 824, and 826 here is convex because that element as a whole is protruding --

THE COURT: You see there are a whole bunch of 822s and 824s. Point me to something. Like Figure 8F, 822 and 824, just look like rectangles. I'm missing -- you got to back up and start again. Do you have a pointer? Can you point me? What is it that you're saying is convex?

MR. OSTLING: Yes, Your Honor. So first to be clear, Figures 8D through 8G are different perspective views

of the same optic.

THE COURT: Okay.

MR. OSTLING: So I am pointing to the entirety of 822 through 826 which is an optical element that is protruding or bulging above the surface. All that convex requires in this context is that it be protruding or bulging above the surface. There is nothing in the claims or in the plain and ordinary meaning of art here that would require that convex, that a convex element as used in lighting have that perfect hemispherical curve.

THE COURT: What if it were just to bulge up, but not something that's drawn here, bulge up and be rectangular. Nobody would think that's convex; right?

MR. OSTLING: Your Honor, I think that the way that it's being used in this patent, that would be convex because it is bulging or protruding above the surface as opposed to being recessed below the surface.

And I would just point to one of Acuity's patents where we believe this term is also being used consistently with its plain and ordinary meaning. And here we have a convex lens that is a pyramid shape and actually has a recessed part on the tip. But because that structure, the reflectors which are referred to convex reflective walls, and the lens on the tip are protruding out of the surface as a whole, that is within the plain and ordinary

meaning of convex.

THE COURT: Okay. I think I understand. Thank you.

MR. OSTLING: Thank you, Your Honor.

MR. RICHESON: Your Honor, Glenn Richeson for Acuity.

The reason we're here, and Ultravision alluded to it in their argument, they're identifying portions of Figure 8 that -- they're identifying portions of Figure 8 that clearly have concave surfaces. And part of this gets to the heart of the argument. A majority of the accused products, I know my colleagues said many of the accused products have a convex surface or convex like or at least a circular surface, but a majority of the accused products have concave exterior surfaces, they bulge on or have a recess in. That's completely inconsistent with what Ultravision just argued. What Ultravision just argued to you that a convex output element is ordinarily a bulge as opposed to recessed, i.e., concave surfaces. And Figure 8 clearly has concave surfaces.

THE COURT: Let me ask the patentee over here. Could you put that Figure 8 back on there, please. Can you blow that up a little bit for me. Thanks.

So let me just understand, Figure 8E, 826, is that a convex surface in your construction?

MR. OSTLING: 826 is a lens element, Your Honor, that is inward facing. That is --

THE COURT: I just need you to answer my question. Are you saying that 826 in that picture is convex?

MR. OSTLING: We are not saying that, but we are saying that it is part of a convex element because it is bulging out overall from the surface. So 826 --

THE COURT: So your position is the entire element, Figure 8E, is convex because what part of it is bulging?

MR. OSTLING: Your Honor, if we look at 822, 824 and 826, and imagine a boundary line where -- let me rephrase.

If we imagine a boundary line between the green and blue elements, 822 and 824, and that pink element 820, or even between 820 and the base of the substrate where we have 804, the whole of the optical element, even the part that has the concave surface is bulging out of the surface. And this is consistent --

THE COURT: What's the surface? 818 is the surface? What's the surface?

MR. OSTLING: The surface here would be the boundary between 824 and 820.

THE COURT: I don't know, you got to point me to

that. Is that the straight across line?

MR. OSTLING: Yes, the straight across line from 824 and 822.

THE COURT: So what's the difference between something that is convex and something that just has height?

MR. OSTLING: I think that the way that convex is being used here, it does refer to an optical element where the element as a whole is bulging or protruding above that surface. It would be concave if the element as a whole were recessed inside that surface.

And I would just like to point out that this is the same way that Acuity uses the term convex in their patents where they have a concave surface at the tip of the convex element.

THE COURT: And tell me, what is 820, what is the piece 820 called?

MR. OSTLING: 820 is a lens element in some embodiments of the optical element. In some other embodiments we have -- you can have a subset of those license elements that would comprise the optical element.

THE COURT: All right. Okay. Thank you.

Mr. Richeson, sorry, I interrupted you. Go ahead.

MR. RICHESON: Your Honor, under that interpretation, any lens that extends out no matter what the

surface looks like could be a convex optical element to Ultravision.

It's important that we understand that convex output element is not defined in the patent. It's not even used anywhere other than the claims of the patent. The first time we see convex optical element is in the claims of of the '248 and '946 patent. Our expert looked to the specification and recognized that there was no definition, there is no lexicography argument for convex optical element. How would a POSITA look and understand what a convex optical element would be. They would look to optical definitions of what a convex lens would be because as Ultravision has already conceded an optical element is a lens, it has to be the entire thing.

Recognizing that, it's important to point out that Figure 5, although maybe not drawn to scale, looks similar to a convex lens. Right? It has a radially symmetric outer surface. The outer surface looks convex. The PTAB agreed that Figure 5 looks generally like a convex optical element. It said -- and the PTAB also acknowledged that the '946 patent doesn't expressly disclose what that could be, but it looks close to Figure 5.

THE COURT: Is your position really that because Figure 5 kind of looks hemispherical, that that's why it has to be?

MR. RICHESON: No, Your Honor. The position is that convex element has a well-known definition to a POSITA.

THE COURT: Where? In the physics? In the basic physics world?

MR. RICHESON: In the optical definition of convex lens, we have already established that an optical element means lens, has a well-known definition, and that definition has at least a radically symmetric outer surface. And a radically symmetric outer surface while accurately describing that lens is how a POSITA would look at this.

And that's no different than what Ultravision identified as what a POSITA would look to. Ultravision identifies what the level of skill in the art was and with a bachelor's degree in science, engineering, physics, optics, or its equivalent, but then they presented every definition from a random dictionary. Keeping in mind that dictionary definition agreed, you know, in large part with Acuity's position here that the outer surface of the lens cannot have a concave element. It can't have any recesses. That's why we're here because the accused products have recesses. And if we can get a definition, or if Ultravision can get a definition that anything bulges out then that's going to capture a large swath of the accused products.

THE COURT: That's not the reason to construe a claim. I have to construe the claim without looking at the

potential infringement, you know, whether a product infringes or not. I'm just trying to understand, okay, so I think I understand where you're getting your definition from. So what I need to understand from the patentee, then, is if we had that thing where 820 is the bottom and then like something on top. Okay? So we have 820 and then we have something on top. If that something on top is essentially a rectangle, you say that's convex; right?

MR. OSTLING: As described in the patent, yes, Your Honor.

THE COURT: If that thing on the top goes up and then all of the surface of that rectangle comes down into a concave shell, is that still convex to you?

MR. OSTLING: Provided that it is all above the boundary line, yes.

THE COURT: But that boundary line someone else just told me isn't real; right?

MR. OSTLING: There is still a -- Your Honor, these lenses in the context of the claims are being flipped, either part of or placed on a substrate, a layer that includes all the lenses. And that layer does have a clear boundary. I think in Figure 5, there is a boundary line between the convex elements and the substrate, and in Figure 8 --

THE COURT: You can just put the boundary line

wherever you want so that it comes up, even if it's going down?

MR. OSTLING: I do not think that the boundary line can be arbitrarily placed.

And Mr. Richeson, if I could take the podium.

Your Honor, I don't think that we can arbitrarily place the boundary line. I think that they're based on the substrate and the optics as a whole, there is a factual issue about where the boundary line is. But I don't think that can overcome the patentee's reference to Figure 8, or at least to an embodiment in Figure 8 in claims 21 and 22.

THE COURT: Where is claim -- I get it, but you're saying claims 21 and 22 are Figure 8, because you say so?

MR. OSTLING: Well, Your Honor, claim 21 recites --

THE COURT: Does anything in the specification talking about Figure 8 say that one part of it is convex?

MR. OSTLING: The term convex is not used in the specification, Your Honor.

THE COURT: The only way you get Figure 8 and convex is to say well, 21 and 22, they're Figure 8; right?

MR. OSTLING: I think that --

THE COURT: Yes or no?

MR. OSTLING: No, Your Honor, I think that there is specific structures described in claims 21 and 22. And there is -- this is the embodiment of a complex optical element with multiple lens elements in the patent. And looking specifically to claim 22, it's describing the intersection between the first, second, and third portions are lens elements as they're described in the specification, and it's entirely consistent with what's depicted in Figure 8.

I would just like to address two points that opposing counsel made, and that is under Acuity's construction requiring a perfect hemisphere, if you even flattened out that hemisphere a little get bit, it wouldn't satisfy that construction. It wouldn't be radially symmetric any longer. And that is not consistent with the usage of the term in the patent or I believe the plain and ordinary meaning. In fact, that is even narrower --

THE COURT: What I'm trying to understand is for me the plain and ordinary meaning, I'm with you, I say okay, convex, it doesn't have to be a perfect half a globe, it just has to bulge. But now it seems to me when you're saying anything that comes up, even if it goes down, even if you would look at that from the side and it would be concave under anyone's definition, you're saying as long as it goes up before it's concave, it's convex; is that right?

MR. OSTLING: Your Honor --

THE COURT: No, is that right? Am I understanding your position correctly?

MR. OSTLING: That is our position as long as it's above the boundary line, it is convex.

THE COURT: Okay.

MR. OSTLING: And based on Mr. Coleman's testimony that is the ordinary usage of a convex lens element in the field of lighting.

THE COURT: All right. Let's go to the next term.

MR. OSTLING: Thank you, Your Honor.

THE COURT: Mr. Richeson, did you want to take your papers or did you want to add something?

MR. RICHESON: I just wanted to add, Your Honor, if I could, the answer to the first question is why is it a dispute. I think there is a dispute over the plain and ordinary meaning. And just Acuity's position is that Acuity's proposed construction more accurately describes what a person would understand at a minimum that the outer surface would not have a recess which I think Your Honor understood.

THE COURT: Thank you.

MR. FABRICANT: Your Honor, the next term, and I would like to discuss the next two terms, they overlap, is

display surface and then the area terms. And I wanted to start by just pointing out which I think is at the crux of the issue here. These claims are all directed at lighting assemblies. And this is an example of one of the lighting assemblies.

And what we're really talking about when attempting to construe display surface and the area terms, it's the same lighting assembly which is either pointed down, it could be pointed at a sidewalk or at a street or at any side of a building, and we illuminate sides of buildings like government offices and the Empire State Building and objects and buildings like that, or it could be pointed at a sign or a billboard, it's the same light. Nothing is different, the way the structure, the way it's illuminated the way it's uniformly even, the way it still requires no noticeable unevenness, it's the same.

So we then address the claim terms that are disputed. And the first one is display surface. Now, plain and ordinary construction is that it's the surface to be displayed using illumination. The district court in the Eastern District of Texas construed this to mean a sign surface. So with respect to this one construction we disagree with the result of the construction in the Eastern District of Texas.

And that's because again, addressing the same

lighting assembly pointing at a billboard, pointing at a sign or pointing downward towards a sidewalk, there is nothing other than the fact that the embodiment in the specification refers to billboards or signs. There is nothing which requires that that limitation be imported --

THE COURT: But it says in the specification, although billboards are used for purposes of example, it's understood the present disclosure may be applied to lighting for any type of sign. That seems very close to the present invention being related to signs, doesn't it?

MR. FABRICANT: We don't think --

THE COURT: Now you're saying oh, no, it's not a sign, it's a side of a building or it's a sidewalk.

MR. FABRICANT: Well, the claims are very clear as the claims are reviewed. Some claims use the phrase or the term billboard or billboard with a display surface. Other claims do not use the word "billboard" at all, and they only use the claim display surface. And then we get with respect to the area claims, they don't anywhere within the claims of the '410 or the -- of the -- I'm sorry, the '946 or the '248, or the '946 or the '248 patents, they don't ever use in the claims the words billboard or display surface, they specifically direct the claims to area or regional, or rectangular area. So we believe that it is clear that the inventors here purposefully were attempting

to claim scope --

THE COURT: Is there anything in the specification that tells me that their invention was broader than signs?

MR. FABRICANT: There is no expressed statement in the specification.

THE COURT: Anything, I don't know that you need an expressed statement, anything that you can tell me in there that implies it?

MR. FABRICANT: Well, the device which is described throughout the specification including the figures as I started with, the device itself can be pointed any direction, that's part of the specification. Here is the assembly, here are the lens elements, here is how the assembly is hung and that can be pointed in any direction. I would say while there is no express statement that the device could be pointed at a sidewalk or could be pointed at a parking lot surface or the side of the building, certainly when the patents were prosecuted with respect to area or rectangular area or rectangular region, they clearly were claiming a surface that was not a sign. An area is not a sign. A rectangular region or rectangular surface is not a sign. So I think it is when taken in context, and these patents were prosecuted and I believe twenty-four or so patents issued out of the same specification, and they moved

far away from billboard and far away from sign.

And we do believe that the district court in East Texas got it right when Judge Payne and Judge Gilstrap construed area, a rectangular area, to mean -- to give it the plain and ordinary meaning, not limiting it to sign, not limiting it to billboard. And to limit it in the way that the Acuity company would propose to this Court would simply say --

THE COURT: But the Texas court construed display surface to mean sign, right?

MR. FABRICANT: Yes, Your Honor.

THE COURT: So they got it all right except for the one you don't like?

MR. FABRICANT: Well, we think the court --

THE COURT: You keep saying Judge Payne said it, and Judge Gilstrap, he blessed it. Well, Judge Payne said it and Judge Gilstrap blessed the display surface, too; right?

MR. FABRICANT: Yes, Your Honor. And I would simply say there is one aspect and it's a very narrow disagreement I guess because I believe that and we believe that a display surface doesn't necessarily have to be a sign, and to that extent we disagree with the construction of display surface. But taking it away from display surface -- and I believe the reason that the court adopted that

construction in Texas was there are claims where -- which recite a billboard with a display surface in the claim. So there was a greater reason to tie the display surface to a sign. There is no such limitations in the patents which have the terms area and rectangular area, there is no such limitations. And the court pointed out in its analysis why --

THE COURT: Do you agree that these two terms, display surface and area, should be construed together, so if I agree with Judge Payne that display surface includes a sign, they both get a sign, or if I agree with you that they're not limited, neither is limited? Or you only agree if you win they're the same?

MR. FABRICANT: We like to win, Your Honor, but we agree that area and rectangular area should not be limited. I would --

THE COURT: Do you agree that a display surface and area should be construed the same?

MR. FABRICANT: Well, we've argued that they should, but I think in the context of the specifications, there is certainly a more compelling argument to be made that a display surface which is a surface upon which you would display something is more like a sign than the much broader, much broader claim terms area or rectangular area. Those are much --

THE COURT: I just want to make sure I understand. You agree that you have argued to me that the two should be construed the same, and you think that they should both be construed more broadly, but I just want to make sure I understand so that I can ask the other side this, too, they should be -- they really should be construed the same and your argument is they should be construed more broadly than sign; right?

MR. FABRICANT: That is our argument.

THE COURT: All right.

MR. FABRICANT: But I just wanted to make clear for the Court that I can understand as I understood the court's construction in Texas, I could understand that the argument is stronger to say that a display surface could be construed as a sign while I think the argument is much weaker that an area or a rectangular area should be limited in that way.

THE COURT: Right. But I don't understand why if the specification is limiting as to display surface, it's not similarly limiting to an area, or if it's not limiting to a display surface, it's not limiting to an area. What is there anywhere that tells me if I find the specification is limiting, it should only apply to one versus the other of the terms?

MR. FABRICANT: I don't think it is limiting,

that's our position.

THE COURT: But let's say -- but if it were, or why wouldn't it be limiting overall?

MR. FABRICANT: Because I think where you start in construction is with the language of the claim itself, you certainly look to the specification in construing the claim, but you start with the claim language itself. And you look to the -- in this context the fact that there are claim terms in dispute like area and rectangular area which are on their face much broader in the context of the claims used, don't use the term billboard like in the other patent claims where billboard display surface is used, those are very, very different claim terms. I agree you always look to the specification for context, but I believe here that they're much, much broader terms when you move to area or rectangular area than when you look at a claim that has a billboard with a display surface. So I don't believe that the specification necessarily requires the Court to say if I decide that a display surface is a sign, that it necessarily has to find that area must also be a sign.

THE COURT: All right.

MR. FABRICANT: Thank you, Your Honor.

THE COURT: Let me hear from the other side. Do you agree that the term -- not you, you're good. Thank you.

MR. FABRICANT: I'm sorry.

THE COURT: Do you agree that the term should be construed the same regardless of whether I say they're limited or not limited?

MR. YUNGWIRTH: Yes, Your Honor.

Here as Your Honor has pointed out, I mean, the court has already construed, the Texas court construed display surface to be sign surface. In the Texas court's original preliminary construction it construed the term area to be sign. Somewhere along the line after that preliminary construction it said well, let's just construe area to be the plain and ordinary meaning, but that plain and ordinary meaning is the plain and ordinary meaning that would be understood in the context of the specification. We can't disregard that. I don't know what the court intended with that. I don't know why it changed. It didn't explain why it changed. But what we know is the plain and ordinary meaning is not some abstract plain and ordinary meaning, or plain and ordinary meaning in a vacuum, it's the plain and ordinary meaning in the context of the patent.

Here, as Your Honor has pointed out, the patent uniformly and consistently says that this patent is about external illumination of billboards and if we're going to stretch beyond that, we're only going to signs, that's what a person of ordinary skill would look at.

You saw some pictures earlier from Mr. Fabricant

suggesting that it's the same exact light regardless of its usage. And that's just plainly not true. He didn't cite any evidence for that. In fact, there is no evidence for it. When you look at what he does to make that argument it makes this point clear. Sorry for the delay.

To make that argument, he's taking our light and turning it upside down and saying well, this is a street light, we get it, but you can turn it upside down and use it to illuminate a billboard. That's exactly what they did in the infringement context in Texas. They literally took a light, you got a billboard, it's about the size of this, they take a light that's about this tall and about this wide and stick it five feet from that and say look, you can use this to illuminate a sign. That's not what the light is designed for. We just don't design lights for any purpose. There are street lights that are designed to be mounted forty feet above a road and billboard lights designed to be mounted to light a billboard. Here the patent is talking about LED lights for illuminating billboards. There is no opening for them to say it has anything to do with streets or sidewalks or parks, but that is exactly what they're accusing.

There is no product in this case that is designed to illuminate a billboard. There was one product in Texas. That product is not at issue in this case.

This is what we're dealing with. These are how the lights are mounted. They are basically trying to capture lights through this construction that would be used to light the surface of parking lots. Every one of these lights on this screen that is an accused product looks like these lights, mounted over roadways or parking lots. These are not the lights that are designed to illuminate an area as a person of ordinary skill in the art would understand that term in the context of this patent, or a display surface.

We have this in our brief, but I think it's worth noting that in Texas, Magistrate Judge Payne with the blessing of Judge Gilstrap found that display surface is a sign surface. Ultravision did not raise any objections to that. The report and recommendation came out, they accepted the construction, it was adopted by the court.

THE COURT: It doesn't mean they couldn't appeal it.

MR. YUNGWIRTH: That's correct, one would think if they disagreed with it, they should have probably made that argument at that time. We certainly objected to the court's construction of area because we think that the court's original construction that area equals sign was the correct construction. In this case you look at cases like the *Wisconsin Alumni Research Foundation*, and you consider

that case and the fact when you look at the specification, everything is about billboards and the only caveat that is provided is saying well, we talk about billboards but it could be other signs. It tells a clear message to the person of ordinary skill in the art.

I also want to address some comments they made in their slides about area, where they suggest that we are taking inconsistent positions in our IPR. And it's plainly not true.

This is our IPR petition for the '946 Patent, and in this IPR petition we explicitly tell the PTAB that while -- at this point it was followed by Acuity Brand Lighting, they had not taken a position, their affiliates had, but it says we agree with the court's construction. At this time it was the preliminary construction that area means signs. We told the PTAB that.

THE COURT: What happened in the PTAB?

MR. YUNGWIRTH: I'm going to get there.

The PTAB instituted the IPR. In our IPR there were two grounds. There was one ground based on a reference called Schemata that is actually intended to be used for illuminating signs. There is a second ground that involves a street light. We told the PTAB we are bringing this ground as a backup if you disagree that area equals sign. This is in our petition, page 68, where we tell them if the

board determines that area should be construed more broadly than sign, the second ground works. We're not trying to hide the ball, we're not taking inconsistent positions, our position has been clear since the beginning.

The only inconsistent positions that have been taken so far are those by Ultravision where they argue to the court in the Lamar case that this patent was all about billboards and then when they decided to come after us and accuse street lights, all of a sudden the patent became about any type of light.

THE COURT: What is the status of that petition?

MR. YUNGWIRTH: That petition has been instituted.

THE COURT: On both grounds?

MR. YUNGWIRTH: Well, it's instituted --

THE COURT: It's instituted, you don't know.

MR. YUNGWIRTH: Yes. And our expert is being deposed today in Orlando. Their response is due next week at some point in time.

THE COURT: And how many patents are in this case?

MR. YUNGWIRTH: Your Honor, there are five patents in this case.

THE COURT: And are there IPR petitions for all of them?

MR. YUNGWIRTH: There are IPR petitions on two of the patents, the '248 Patent and the '946 Patent. And those were filed because those two patents are the broadest patents. You have heard some discussion earlier today about the '410 and '413 Patents. In the '410 and '413 Patents, many of the claims refer to billboards themselves and some of the claims that don't refer to billboards refer to display surfaces. And they have other limitations that we think could be right for summary judgment of non-infringement.

Then you get to the '738 Patent that has these complicated lens claims that again we don't think our products meet. And so we filed these IPR petitions with the intent of putting us in a position where there is potentially only those two patents left in the case at a point in time when Your Honor could potentially consider whether to stay the case, assuming the second petition gets instituted. It's not gotten to the point of being instituted yet.

THE COURT: Five patents, two petitions. The petitions are on what?

MR. YUNGWIRTH: The '946 Patent and the '248 Patent.

THE COURT: And which one is instituted?

MR. YUNGWIRTH: The '946 Patent.

THE COURT: And then we have the '410 and the '413 Patents?

MR. YUNGWIRTH: Correct.

THE COURT: And then you have the '738 Patent?

MR. YUNGWIRTH: Yes, Your Honor.

THE COURT: And there are no petitions?

MR. YUNGWIRTH: No, Your Honor.

THE COURT: Okay.

MR. YUNGWIRTH: Just one moment, Your Honor. I think I have basically covered everything. I think this is pretty well laid out in our brief.

So, Your Honor, I do think it's worth noting this. This is the expert you heard from, Ultravision's expert. They talk about him. I put this image up during his deposition and said, hey, are any of these substantially rectangular? Can you tell me which one is? He refused to tell me. What he said is I got to go back and look at the specification. He wouldn't say that the one in the bottom right-hand side was substantially rectangular, he had to go look at the spec. It's the exact same thing a person of ordinary skill in the art would do, they look at the spec to figure out what does it mean by substantially rectangular area and the spec would have told them that it's the area of a sign or a billboard.

The next thing they could look at would be

claims like this that talks about the lighting assembly being used to illuminate a substantially rectangular area, that happens to be twenty-four feet wide. What does that mean? That's one of the common dimensions of a billboard. This is just an example of these claims. There is all kind of claims in here that talk about forty-eight-foot length and twenty-four-foot lengths. They're just referring to the length of billboards. Those are the kind of things that reinforce the fact that display surface and area as used in these claims refer to the billboards and signs.

That's all I have, Your Honor.

THE COURT: All right.

MR. FABRICANT: If I could just have a moment, Your Honor?

THE COURT: Okay.

MR. FABRICANT: I would start by following up even with the construction of a sign surface, there is nothing in the construction or in the specification of these patents which would eliminate or remove the possibility that it's a round sign or a square sign, so the whole concept that this has to be a rectangular sign no matter what the claim is is just wrong. It's inconsistent with the claims.

THE COURT: Well, it's inconsistent with the claims, some of the which say rectangular, so I get that.

MR. FABRICANT: I would also say that Your Honor

asked a question about the specification, whether the specification compels really a construction that ties these claims display surface to area to be the same construction, and I would just read to the Court two sentences, a few sentences from the claim construction order of the court in Texas which addressed this very point in which the court found -- "The court further finds that the area terms are unambiguous, easily understandable by a jury, and should be given the plain and ordinary meaning. In light of the intrinsic evidence, the term area and region are broader than the previous term display surface. Moreover, the intrinsic evidence indicates that when the patentees intended to limit an area or region to a display surface, they did so explicitly. For example, claim 1 of the '738 Patent recites, 'a display surface having a substantially rectangular region,' or in other words, according to this court's construction, a sign surface having a substantially rectangular region."

Then the court continues. "In contrast, claim 19 of the '738 Patent recites 'a lighting assembly configured to illuminate a substantially rectangular region.' Thus claim 19 is not limited to a display surface or sign."

That's all I have, Your Honor.

THE COURT: Next.

MR. MERCADANTE: Your Honor, just one follow-up on your queries regarding the IPR's which is that the plaintiff, the accused infringer, is time barred from filing additional IPRs on the three remaining patents.

THE COURT: I got it that there were no more coming.

MR. MERCADANTE: Your Honor, the next term is "configured to." The configured to terms show up mostly when talking about the light output that comes out of the light assembly. We see on the bottom here the light assembly is configured to direct light from the LEDs in a particular way in claim 1 of the '946 Patent.

And the real crux of this issue is that Acuity with their definition of configured to as designed to is strongly implying that their interpretation of designed to is much narrower than any other court's previous interpretation of designed to or configured to or adapted to.

According to Acuity, a fixture is designed to illuminate something only if it is installed according to the manufacturer's instructions.

If we see here on slide 49, we have two identical lights, and both of these lights generate an area of substantially uniformed illumination. The light on the right is hung a little bit higher than the light on the

left. So the light on the right illuminates this red area with the area of substantially uniformed illumination. The light on the left because it's hung a little lower illuminates a slightly smaller area because of the light output. Even those these are two identical lights, it's Acuity's position that one of these is infringing and one of these is not infringing based on how high the light is hung.

And as we've talk about multiple times today, these are all apparatus claims. Everything in this case is an apparatus claim claiming a light assembly, and it's configured to direct the light toward the LEDs in a manner by virtue of its design.

But the issue we have with Acuity's construction is not really --

THE COURT: Isn't it from the Federal Circuit cases, isn't configured to generally thought of to be narrower than capable of.

MR. MERCADANTE: Yes, Your Honor, the case law supports that. But in this instance capable of is the more appropriate construction when you consider the --

THE COURT: Don't tell me about the infringement because I'm not supposed to construe the claims with an eye toward whether someone infringes or doesn't infringe. So if you're saying it doesn't have its normal narrower meaning for the Federal Circuit, what in the intrinsic evidence

tells me that?

MR. MERCADANTE: Your Honor, the only reason we are talking about infringement first of all is because Acuity --

THE COURT: I don't care. I don't want you to tell me about infringement, I want you to tell me about what is in the intrinsic evidence that I should be using.

MR. MERCADANTE: The intrinsic evidence supports -- we started claim construction by looking at the language of the claim. And the language of the claim is that the lighting assembly is configured to direct light in a particular way. We're not saying that by capable of that we could change the light output by using mirrors or whatever. The light is configured to, to output the light pattern, the illumination pattern that actually comes out of the light. That's what it's configured to do, to spread the light in a particular pattern.

Now that can be changed based on how the light -- how that light actually falls on an area depends on how it's installed, but that's not what's being claimed. The intrinsic evidence just by looking at the claims says that you got this apparatus, it's got a heat sink, it's got a circuit board, it's got LEDs and it's got lenses, and then the light comes out of it in a particular way. It's capable of outputting that light pattern as claimed.

THE COURT: Wait. So it's capable of -- you're saying it's capable of directing the light in a manner that doesn't create hot spots. But if they don't use it in a manner that doesn't create hot spots, they still infringe?

MR. MERCADANTE: The use of the light is not material to the infringement of the apparatus claim. So the light fixture infringes when it is sold because it has the capability to produce the infringing light pattern without modification.

THE COURT: All right. What else do you have in the intrinsic evidence? You have the claims, what else have you got?

MR. MERCADANTE: We have the claim. The specification also cites to -- I'm sorry, describes a situation which is claimed in which a billboard is evenly illuminated by two lights. Figure 1A of the patent shows a light 110 illuminating the left side of the billboard and the light 110 illuminating the right side of the billboard. And the designed to construction particularly with the implication that the plaintiff has put behind the designed to construction would read out this embodiment because these lights are not designed to illuminate an entire billboard, the entire area. The area can be a part of a sign, it can be a part of a road, what's important is that the street light is configured to illuminate a street, the billboard

light is configured to illuminate a billboard or a part of a billboard, it's not that the entire area is uniformly -- is substantially uniformly illuminated by a single fixture. And obviously these can be used in ways that do not illuminate, in this example of Figure 1, an entire sign.

THE COURT: Okay. Anything else on the intrinsic evidence?

MR. MERCADANTE: No, Your Honor.

THE COURT: Okay.

MR. MERCADANTE: And just one more point on this issue which is the hypothetical that Acuity actually brought up on their sur reply brief which is the car headlight illuminating an envelope. Acuity's position seems to be that a car headlight is capable of illuminating an envelope that you're holding in front of a car, but it is not designed to illuminate an envelope. And I think this is a perfect understanding. We would be fine with the designed to construction if it wasn't for this implication that Acuity has placed behind the designed to construction which is of course the car headlight is designed to illuminate an envelope that you're holding in front of it. The car headlight is designed to output a particular lighting pattern to illuminate whatever is in front of the car. And if that's just an empty street, if it's a dog, if it's a person holding an envelope, then the headlight is designed

to illuminate, to place the illumination in a particular pattern. Whatever that illumination happens to fall on is not material. The intent of the designer is not material to the infringement of the claim.

And so we would be fine and I think the hypothetical is a perfect example of their interpretation of designed to which is incorrect, that the car headlight is designed and also configured to spray the light in a particular way and it lands on whatever is in its way.

THE COURT: Okay.

MR. MERCADANTE: Thank you, Your Honor.

THE COURT: And let me just ask you, then -- not you. Sorry. When you say designed to, are you really talking about what the intent of the person who designed it was?

MR. YUNGWIRTH: No, Your Honor.

THE COURT: Are you talking about designed to as in these lights together are meant, designed to illuminate the spot without dead spots?

MR. YUNGWIRTH: Your Honor, the issue -- first of all, in the Texas case we did not -- nobody proposed to construe this term. Along the way it became apparent that they were using this language, configured to, and replacing it with capable of, and basically saying if you have a light that is capable of producing uniform illumination over a

space, no matter how small that space is, then you meet the claim limitation. So we realized we got an *O2 Micron* dispute we got to get it resolved.

Our position is the configured to has a meaning consistent with what the Federal Circuit said, and it doesn't include capable of. If we reach that agreement, we don't need a construction here. The point is they're using the capable of language --

THE COURT: What's the construction that you're saying that you want from the Federal Circuit?

MR. YUNGWIRTH: Well, we used designed to because that's consistent with what the Federal Circuit said, configured to is similar to designed to. I know you don't like negative limitations, but a limitation that configured to is not as broad as capable of or something along those lines would be fine as well, but in order to avoid the negative limitation we proposed an affirmative limitation which is how we got to designed to.

At the end of the day if you are to use their capable of language, then you have a light that puts an illumination pattern and according to them as long as they can find some little small area within that output that's uniform, then the claim is met. At some point that limitation no longer exist.

I mean, the whole point of this is we're trying

to provide a uniform illumination pattern, not some little snippet of the pattern that happens to be uniform. That's where the parties' disconnect is. And the Federal Circuit made clear that configured to does not encompass capable of. And they are affirmatively asking for capable of. And the things they just showed you from the specification, none of that supports this construction that encompasses capable of.

They showed you the picture, this picture from the specification and said well, look, the specification says maybe you have two lights illuminating a billboard, but number one, they haven't shown that this is part of any of the claims. And number two, what the picture is showing is that the light output from the left 110 light is uniformly illuminating that section of the billboard, not that we can take some little, you know, quarter of that illumination out and say right here in the very middle it's uniformed even though it's not uniformed around the edges. That's what they're trying to do with their capable of construction. This does not support their position that somehow what everybody knows as configured to all of a sudden encompasses capable of.

From our perspective this is pretty clear under the law. As Your Honor said earlier, we're not to be guided here by the infringement contentions. The infringement contentions only have value to provide context as to why the

parties are disputing this claim term --

THE COURT: I mean, I was asking before about infringement or validity because I wanted to make sure it's a claim term that I actually need to construe, because I don't do it just for fun, I do it because it means something, so that's why I was asking that, not because I want to construe it in connection with infringement one way or the other or validity one way or the other.

MR. YUNGWIRTH: Right, Your Honor. Here I think both parties are proposing constructions. Again, our position is that capable of opens up a can of worms and we're just going to be fighting down the road about that. And it's not proper under the law. They haven't identified any case where the court said configured to means capable of. They make reference to one of them in their brief in the reply, and we responded in the sur reply saying they mischaracterized that case. Clearly they should not be permitted to read out a limitation by construing configured to means capable of.

THE COURT: What I don't quite understand, though, is when you say designed to, so if the issue is look, it's a light assembly and you infringe when you make, use, or sell, so you sell this light assembly, are you saying that you wouldn't know if you infringed until you installed it?

MR. YUNGWIRTH: No, Your Honor. This goes back to Mr. Fabricant's statement in the last set of terms where he said the light is a light is a light, or something along those lines. That is completely untrue. When you look at these products, any one of the products, it's designed for a specific usage. It's designed to be mounted within a range of heights over a street. And the way the lens is designed for that purpose is very different than the way that the lens would be designed to illuminate a billboard.

Anyone in this industry can look at a light, can look at a light that is intended to be mounted on a street light and say that light is certainly not designed to be turned on its side a little more than 90 degrees to project light up on a billboard. There is not really a factual dispute about that. The only reason it becomes a factual dispute is you say well, configured to means capable of, even though the light is designed to project light down, I could possibly turn it on its side even though it would void the warranty and it would put light all over, you know, well off the sides of the building or the billboard that I'm now illuminating. But that doesn't matter. We can ignore all of that because it's capable of this little small area of uniformed illumination. This is not an intent issue at all.

Unfortunately I don't have product specifications here. If you look at any of these product

specifications, they tell you what the light is designed for and how it is to be installed. There is no real factual dispute about that.

THE COURT: Okay.

MR. MERCADANTE: Your Honor, one quick point on this term, still. Which is that the product specifications, many of these product are just area lights. They're used for streets, sidewalks, sometimes inside warehouses, parks, there is no single use case for many of these lights. And even with the street lights that we've been talking about, those street lights are capable of lighting a street and are also capable maybe of, you know, lighting a sidewalk that's next to the street using the same light. The implication with designed to that the person of ordinary skill in the art could just understand by looking at the light what it's designed to do is not correct because again, in these claims, the configured to language comes up when discussing the light output.

We're not saying that by capable of that we're going to be somehow modifying the light out, that the light is capable of outputting a certain light output if you use mirrors or if we put an additional lens on top of it or whatever, that's not what we're talking about with capable of, we're just talking about how does the light come out of the light when you turn it on, that's all the dispute is.

THE COURT: Okay.

MR. YUNGWIRTH: Just one very, very quick point, Your Honor. This is in response to Mr. Mercadante's comment. It says right here in the last limitation, the light assembly is configured to direct light. They're basically changing that to say the lighting assembly is capable of directing light, and that's just not what the claim says and it's not what one of ordinary skill in the art would understand the claim to say. This is from their slide deck.

THE COURT: Leave that up there for a second. Let me ask Mr. Mercadante. That's what's tripping me up is if you say it's capable of directing the light toward an area in a manner that doesn't create hot spots, that seems broader than your invention. Right? It's capable of doing it, it doesn't, it's capable of doing it if you look at a very narrow area. I mean, what -- I don't understand what you're saying capable of includes.

MR. MERCADANTE: Capable of includes that the unmodified light output includes an area of substantially even illumination, or in the case --

THE COURT: So when you were -- in response then to defendant, when the defendants say okay, so I have a light shining on the billboard and there is dark spots where, you know, maybe if they used your client's product it

wouldn't be dark spots, but here we have some dark spots, but if you look super narrow, there is no -- it's all even. Is that really what your claims are directed to? Is that really what the --

MR. MERCADANTE: No, Your Honor, it's not what the claims are directed to, it's not the infringement case, it's repeated mischaracterization of our infringement case. This is the slide from the infringement report in the Texas case. The area that was being illuminated that's being measured is a 5 by 11 junior poster billboard. We used a billboard. That's the area that's being measured on the top left, it's a 5 by 11. It's not a one inch by one inch square somewhere on a billboard that our expert found. And the only reason it was a 5 by 11 --

THE COURT: Yes, but why -- I get it, but you're not helping me with how broadly -- you want me to say capable of. They have pointed out that there are some issues if I say capable of where it's including something in your claim that really doesn't seem like anyone intended it to be in your claim. So I'm trying to ask you what capable of means, not what you asserted it meant in a different case. It seems like what the light was supposed to do; right?

MR. MERCADANTE: Yes.

THE COURT: Why is that not what it's designed

to do?

MR. MERCADANTE: It is what it's designed to do if we don't have this intent element that defendants are putting --

THE COURT: They are not putting an intent element in.

MR. MERCADANTE: They are, they are putting an intent element in. The car headlight is a perfect example with an envelope. They're saying that car headlight is not designed to illuminate a person standing in front of it holding an envelope when, of course, it is.

THE COURT: All right. Move to the next one.

MR. MERCADANTE: Final term is 3:1, Your Honor, which is, is 3:1 from two claims of the '410 and '413 Patent.

Our construction is achieves 3:1 which is consistent with how these uniformity targets are used in the industry. We have unrebutted expert testimony that uniformity measures in the lighting industry are merely targets, that if you beat that uniformity that you're still at that uniformity.

We have extrinsic evidence that states the same thing, that these are targets. And we have an agreement by Acuity's expert that even though he didn't put forth an affirmative opinion on this that uniformity ratios are

merely targets.

This simple diagram is the dispute. Our position is that the yellow highlighted box would be within the scope of these claims. That if you have an illumination, a ratio of average to minimum illumination of 3:1 or better, 1:1 being absolutely perfect uniformity which is not achievable in the real world, that that is within the scope of the 3:1 claims. And Acuity's position is a single dimension of the red line at precisely 3:1 is what is required by these claims. That if you have more uniform illumination than a 3:1 ratio of average to minimum that you are outside the scope of this claim.

The spec on the right side states that the uniformity that achieves a 3:1 ratio of the average illumination to minimum is what is meant by evenly.

And then The Lighting Handbook which is the bible for lighting designers which is relied upon by our experts on the left states that the uniformity ratios are merely targets, that you can beat that target and still have that uniformity.

And then I deposed --

THE COURT: Wouldn't it be easier if the claim just said achieves, it's 3:1 or better?

MR. MERCADANTE: Yes, Your Honor, but it's not necessary because that's the normal usage of these targets,

these uniform ratios in the industry. And I deposed Dr. Josefowicz, Acuity's expert about the 3:1 ratio and he just said it's a target, right there on lines 11 and 12, it's a target for luminary manufacturers to be within, but for different applications, that's all it is, it's just a target.

So we have not only unrebutted expert testimony, unrebutted extrinsic evidence, but an agreement by a Acuity's expert that we're really just talking about targets here, that the usage of the term "is" in the claim doesn't mean that you have to be absolutely precisely at the 3:1 illumination ratio, ratio of average to minimum illumination, and that if you have more uniformed illumination that that is considered in the industry and considered by the person of ordinary skill in the art to meet the 3:1 threshold.

I have nothing further on that unless Your Honor has any questions.

THE COURT: Okay.

MR. RICHESON: Your Honor, what we're here arguing "is" means something other than it says it is. The patentee used is 3:1 in the '410 Patent, he used achieves at most a 3:1 in the '248 Patent. Separate claim, same family, same specification. And the patentee would like you to believe that there is no law that says that you should

interpret claims across different patents in the same family. And that's just incorrect.

Your Honor, first of all, the patentee -- correction, Ultravision is supporting their assertion by an expert who did not even consider the '248 Patent claim in his declaration. When asked at his deposition, he said he didn't need to. You would look to the claims and the intrinsic evidence which would be other patents in the same family.

That's the case law, Your Honor.

THE COURT: The case law -- claim 1 of the -- could you put that back, please. Claim 1 of the '248 Patent -- no, the one with the testimony. Claim 1 of the '248 Patent says "achieves," right, not "is."

MR. RICHESON: Yes, Your Honor, that's correct. And the purpose of that is the expert did not consider when writing an opinion about is 3:1 as it would be understood in the industry according to Ultravision's proposition that is 3:1 means something else. The expert did not consider that the '248 Patent which says and the patentee used the words achieved at most a 3:1, that that would be a distinction.

And the law is pretty clear on this. And not only is the law pretty clear, you know, this is the opinion of -- this is on all fours with an opinion that Judge Burke gave in December of 2020. In the *Sunoco Partners* case, the

issue before that court was whether the phrase "gasoline stream" included unblended gasoline streams or just a regular -- or you know, including an unblended or blended gasoline stream. And Judge Burke recognized that there were different uses across the same patent -- correction, across the same family, there were different uses of that term across different patents.

And in citing the *Trustees of Columbia University*, that is a law where multiple patents derive from the same patent application and share many common terms, we must interpret the claims consistently across all asserted patents.

I think the patentee with their own lexicographer is 3:1, doesn't mean anything else other than is 3:1, and that's our position, Your Honor.

THE COURT: Okay.

MR. MERCADANTE: Your Honor, just a couple of points. First, I'm not sure where the *Sunoco Partners* case came from. It wasn't in the briefing. We didn't see it --

THE COURT: Nevertheless, it's a case --

MR. MERCADANTE: We didn't see it until we got the slide this morning. And we're not talking about an instance where one claim says unblended gasoline and one claim says gasoline and someone is trying to say that also means unblended gasoline. We're talking about a usage of

the phrase in the art, how these uniformity ratios are used in the art is a target, and that if you're better than that target, you achieve that target. And we have unrebutted, not only unrebutted expert testimony, but an agreement among the experts that that's the way these are used in the industry. You don't have that in the *Sunoco* case or you don't have any case law that Acuity cited.

There is this issue about the '248 Patent which does say achieves and our position is that the claim was just changed for clarity purposes, that those claims are claiming the same thing, that you are at a 3:1 ratio or more uniform to meet the 3:1 ratio limitation across the family.

THE COURT: Okay.

MR. MERCADANTE: Thank you, Your Honor.

THE COURT: Thank you.

All right. So I need some time, I want to go back and look at some of the things that have been cited to me. And I'm going to ask that we take a break and why don't you come back around 3 o'clock and I will give you my ruling on whatever terms I can rule on.

MR. YUNGWIRTH: Your Honor, if I -- can I just make a comment off the record regarding the timing of coming back? Or I can do it on the record if you want me to. When the hearing got changed, I happened to be up here from Atlanta dropping my son off at lacrosse camp at St. David's.

The camp ends at 2:30 and I need to pick him up.

THE COURT: Absolutely. I just need someone who is here for it. You can go get your child.

MR. YUNGWIRTH: Thank you.

THE COURT: All right. Anything else?

MR. FABRICANT: Not.

THE COURT: See you at 3:00.

(Court recessed at 11:56 a.m.)

(Court resumed at 3:03 p.m.)

THE COURT: Thank you for the arguments earlier today. At issue we have five patents, and seven disputed claim terms.

I am prepared to rule on each of the disputes. I will not be issuing a written opinion, but I will issue an order stating my rulings. I want to emphasize before I announce my decisions that although I am not issuing a written opinion, we have followed a full and thorough process before making the decisions I am about to state. I have reviewed the patents in dispute. I have also reviewed the documents from the Eastern District of Texas action, the dictionary definitions, the excerpts of treatises, the expert declarations, and other documents included in the joint appendix. There was full briefing on each of the disputed terms. And there has been argument here today. All of that has been carefully considered.

As to my rulings, I am not going to read into the record my understanding of claim construction law and indefiniteness generally. I have a legal standard section that I have included in earlier opinions, including recently in *Ferring v. Fresenius*, C.A. No. 20-431. I incorporate that law and adopt it into my ruling today and will also set it out in the order that I issue.

As to the person of ordinary skill in the art, the parties have suggested differing definitions. But no party suggests that the differences are relevant to the issues currently before me.

Now the disputed terms. I am going to refer to the original numbering in the claim construction brief, even though several of those terms are no longer disputed.

The first term comprises several phrases, which the parties have collectively deemed "the Uniformity Limitations." All of the phrases include the word "substantially" and the parties agree that all of the terms should be construed the same. Ultravision argues that the Uniformity Limitations should be construed as "level of illumination that does not create noticeable unevenness in the overall illumination, such as hot spots or dead spots." Acuity argues that the Uniformity Limitations are indefinite and does not propose an alternative construction.

The crux of the dispute is whether the word

"substantially," used here as a word of degree, renders this term and the relevant claims indefinite. Here, I agree with Ultravision that it is not indefinite and will construe this term as "level of illumination that does not create unnoticeable unevenness in the overall illumination."

For a claim to be held invalid for indefiniteness, there must be clear and convincing evidence. Acuity has not met this burden.

In *Biosig Instruments, Inc. v. Nautilus, Inc.*, the Federal Circuit instructed that "[w]hen a 'word of degree' is used, the court must determine whether the patent provides 'some standard for measuring that degree'" and that "[c]laim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention."

Here, the specification indicates that the invention serves to "minimiz[e] any noticeable unevenness in the overall illumination" and gives examples of undesirable unevenness, such as "hot spots" and "dead spots." This suggests that the purpose of the invention is to produce a "substantially uniform" appearance without deviations readily apparent to the normal human eye. The Federal Circuit recognized in *Sonic* Tech. Co. v. Publications Int'l, Ltd., 844 F.3d 1370, 1378 (Fed. Cir. 2017) that, unlike terms that turn on whether something is aesthetically

pleasing or otherwise subjective, "what can be seen by the normal human eye . . . provides an objective baseline through which to interpret the claims." And courts have held that the normal human eye can detect when something is, for example, "substantially horizontal" or "substantially flattened," such that the use of "substantially" does not render those terms indefinite. Indeed, the Federal Circuit found that the phrase "substantially uniform," albeit in a different context, was not indefinite because "'substantially' is a descriptive term commonly used in patent claims to 'avoid a strict numerical boundary to the specified parameter.'"

Therefore, given that the word "substantially" suggests that the lighting must be uniform as detected by the normal human eye, I will adopt Ultravision's proposed construction of "level of illumination that does not create noticeable unevenness in the overall illumination."

The second term is "lens element." Ultravision contends that this term should be given its plain and ordinary meaning, which it argues is "an element of a lens," or alternatively, "a geometrically distinct volume of an optical element" and agreed today that we could use part instead of volume. Acuity proposes that the term be construed as "a lens with two or more optical surfaces."

I have some doubts that there is a significant

dispute about the parties' positions. But to the extent there is, I agree with Ultravision and will give the term its plain and ordinary meaning of "a geometrically distinct part of a lens" rather than require distinct surfaces.

That is consistent with the specification, which to the extent it refers to a lens element does so in connection with Figures 8A through J. These illustrate and identify different geometric shapes (such as 820, 822, 824 and 826) rather than surfaces as being lens elements.

The third term is "convex optical element." Ultravision argues that this term should be given its plain and ordinary meaning, which it proposes is "an optical element that is convex." Acuity asserts that the term should be construed as "a radially symmetric hemispherical outer surface."

The crux of the dispute is whether Acuity is correct in asserting that "convex" means perfectly hemispherical. Acuity points to Figure 5A in support of its position, arguing that "the lenses of Fig. 5A appear to be portions of a sphere with radial symmetry, *i.e.*, convex." But nothing in the specification or claims confirms that the lenses shown in Figure 5A are perfectly hemispherical. Furthermore, that figure depicts merely one embodiment, meaning it would be inappropriate to read that limitation into the claims.

Acuity also argues that Ultravision's expert supports Acuity's construction. I disagree. In his declaration, Ultravision's expert opines that a POSA "would understand a convex shape to bulge outwards, as opposed [to] a recessed (*i.e.*, concave) shape, without the need for further clarification." This says nothing about whether the shape must be radially symmetric and hemispherical.

I agree with Acuity, however, that using the word "convex" in the construction as Ultravision proposes is not helpful. The parties each cite definitions of convex. Ultravision's definitions include "curved or swelling out," "curving or bulging outward" and "having a surface that is curved or rounded outward." Acuity pointed to a definition defining convex as "[c]urving outward, like the outer boundary of a circle or sphere." Both parties agree that a "convex" shape is one that "bulges outwards" but there is nothing in the definitions or the intrinsic record to support Acuity's proposed limitation that a convex shape must be perfectly hemispherical, rather than some other convex or bulging shape.

Consistent with the plain and ordinary meaning of convex, I will construe "convex optical element" as "a lens that curves or bulges outward."

I am going to address the fourth and fifth terms together as the parties seem to agree that the analysis

underlying the construction of the two terms is the same. The fourth term is "display surface." Ultravision asserts that this term should be given its plain and ordinary meaning, which it contends is "surface to be displayed using illumination." Acuity argues that this term should be construed as "sign surface."

The fifth term is "area" / "substantially rectangular area." Ultravision argues that no construction is necessary and that the term should be given its plain and ordinary meaning. Acuity contends that the term should be construed to mean "sign" / "rectangular sign."

The dispute for these terms centers on whether the "display surface" and the "area" claimed are limited to signs. Here, I agree with Acuity and will construe "display surface" to mean "sign surface" and "area" to mean "area of a sign."

The Federal Circuit has repeatedly stated, in cases such as *Continental Circuits LLC v. Intel Corp.* that "the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'" Where, however, a patent repeatedly and consistently characterizes a claim term in a particular way, it is appropriate to construe the term in that way. Here, in column 2 at lines 6 through 9,

the specification explains that "[a]lthough billboards are used herein for purposes of example, it is understood that *the present disclosure may be applied to lighting for any type of sign* that is externally illuminated." And the Technical Field in the shared specification notes that "[t]he following disclosure relates to lighting systems and, more particularly, to lighting systems using light emitting diodes to externally illuminate signs." I find that these statements in the specification constitute expressions of manifest restriction intended to limit the invention to lighting of signs.

Therefore, I will construe "display surface" as "sign surface."

As to area, I will give the term its plain and ordinary meaning, but will limit to the area to that of a sign because as I have already determined with respect to display surface, the invention as claimed is restricted to signs. And indeed, when the term "area" is used in the specification, it is referencing the area of a surface.

The sixth term is "configured to / configured so." Ultravision asserts that this term should be construed as "capable of." Acuity argues that this term should be construed as "designed to / designed so."

The crux of the dispute centers on whether "configured" is simply the hypothetical ability to do

something. Here, I agree with Acuity and will construed the term as "designed to / designed so."

The patent specification uses "configured" interchangeably with "designed." The claim term refers to lenses or a substrate containing lenses being "configured to" direct light from each LED onto the entire display surface. The specification confirms that "the optical elements 514 are configured so that the light emitted from each LED 416 is projected onto the entire surface" and then notes that "by *designing* the lens in such a manner, when all LEDs are operating, the light [from] the collective thereof will illuminate the surface." The specification also explains that the lens structures located on the substrate are "designed to 'direct' the light from an edge of the surface to cover the entire surface." These examples show that the specification uses "configured" to mean "designed" to do something. That meaning is clear when the specification notes that "the optics panel 206 may be *configured specifically* for the light panel 204 and the surface." Importing Ultravision's proposed construction of "capable," this phrase becomes nonsensical. Acuity's proposed construction of "designed" is not only more meaningful, it is also confirmed by the specification, which gives an example in which "the panel 500 of Fig. 5 may be *specifically designed* for use with the PCB 402 of Fig. 4."

Therefore, the specification supports Acuity's proposed construction.

In *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, the Federal Circuit indicated that "configured to" has a narrower definition than "having the capacity to" or "capable of." And district courts have relied on *Aspex Eyewear* to construe "configured to" as "programmed to," which implies intentional design rather than mere capacity.

Therefore, I will construe this term as "designed to" / "designed so." Today during the argument, Acuity stated that it is not arguing that the "designed to" construction depends on the subjective intent of the people designing the product. I will hold Acuity to that.

The eighth term comprises several phrases, collectively deemed "the 3:1 Ratio Limitations." These phrases refer to the ratio between the average illumination across the display surface and the minimum illumination at any point on the display surface. Ultravision contends that this term should be construed as "achieves 3:1." Acuity argues that the term should be given its plain and ordinary meaning, which it asserts is "has a ratio of 3:1."

The crux of the dispute is whether a ratio better than 3:1 falls within the scope of the claim term. Here, I agree with Acuity and will give the term its plain and ordinary meaning of "has a ratio of 3:1."

First, the claims themselves state that the ratio of the average illumination to the minimum illumination "is 3:1," which suggests that the ratio must be exact rather than approximate.

Ultravision argues that the specification supports its broader construction because it describes "evenly" as "illumination with a uniformity that achieves a 3:1 ratio of the average to the minimum." This description does not, however, clarify whether ratios better than 3:1 are permissible. Accepting Ultravision's suggestion that the word *achieves* necessarily includes better illumination ratios would render this language in the specification broader than the plain language of the claims.

Because the five Patents-in-Suit share a common specification, language used in the other patents may inform our analysis. Here, claim language in the '248 Patent supports the Court's construction. In the '248 Patent, the patentee explicitly claimed "a uniformity that achieves at most a 3:1 ratio." Thus, the patentee could also have claimed "at most a 3:1 ratio" during prosecution of the '410 Patent and '413 Patent, yet chose not to do so.

Therefore, I will give this term its plain and ordinary meaning of "is 3:1."

Okay. Those are my rulings on the terms. Is there anything else that we need to discuss while we are

here today?

MR. FABRICANT: Not from Ultravision, Your Honor.

MR. SQUIRE: Yes, Your Honor. I just have one clarification. With respect to the area term, I just want to confirm, I think there was a comment at the end that said area of the surface at the very end of Your Honor's discussion, although the bulk of the discussion talked about area of a sign, and I just wanted --

THE COURT: Area of the surface, the display surface had been construed as a sign.

MR. SQUIRE: Thank you, Your Honor.

THE COURT: Anything else? All right.

(Court adjourned at 3:14 p.m.)

I hereby certify the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.

/s/ Dale C. Hawkins
Official Court Reporter
U.S. District Court

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ACUITY BRANDS LIGHTING, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 19-2207 (MN)
	)	
ULTRAVISION TECHNOLOGIES, LLC,	)	
	)	
Defendant.	)	

MEMORANDUM ORDER

At Wilmington this 28th day of July 2021:

IT IS HEREBY ORDERED that the claim terms of U.S. Patents Nos. 8,870,410 ("the '410 Patent"), 8,870,413 ("the '413 Patent"), 9,734,738 ("the '738 Patent"), 9,947,248 ("the '248 Patent"), and 10,223,946 ("the '946 Patent") (collectively, "the Patents-in-Suit") with agreed-upon constructions (*see* D.I. 92-1), are construed as follows:

1. "acrylic material" / "acrylic material substrate" means "material containing primarily acrylates" / "substrate containing primarily acrylates" ('410 Patent, cl. 15; '413 Patent, cl. 4, 10, 12);

2. The preambles "An optics panel for use in a light emitting diode (LED) lighting assembly comprising" / "An optics panel for use in a light emitting diode (LED) lighting assembly for illuminating a billboard that has a display surface extending between outer edges of the billboard, the optics panel comprising" are limiting ('410 Patent, cl. 1, 10, 15; '413 Patent, cl. 1, 5, 11);

3. "substantially transparent" means "transparent" ('410 Patent, cl. 1; '413 Patent, cl. 5, 11);

4. "predetermined bounded area" means "area determined by the dimensions of the [display surface]" ('410 Patent, cl. 1);

5. "substantially the entire display surface" shall have its plain and ordinary meaning of "the entire display surface" ('410 Patent, cl. 1, 15);

6. "optics panel" shall have its plain and ordinary meaning, and the optics panels of independent claims 1 and 15 of the '410 Patent and claims 1, 5, and 11 of the '413 Patent comprise the respective elements of those claims ('410 Patent, cl. 1, 10, 11, 15; '413 Patent, cl. 1, 5, 11); and

7. "wherein each lens is disposed over only one associated LED" / "each optical element disposed over only one associated LED" / "each optical element is disposed over only one associated LED" / "each optical element overlies only one associated LED" / "each optical element overlies only one associated LED" / "each convex optical element overlying an associated one of the LEDs" / "each optical element . . . overlies a respective one of the LEDs" shall have their plain and ordinary meaning of "each [lens/optical element/convex optical element] is disposed over only one LED" ('410 Patent, cl. 10; '413 Patent, cl. 1, 5, 11; '738 Patent, cl. 1, 10; '248 Patent, cl. 1, 10; '946 Patent, cl. 29).

Further, as announced at the hearing on July 21, 2021, IT IS HEREBY ORDERED that the following disputed claim terms of the Patents-in-Suit are construed as follows:

1. "substantially uniform / substantially equal level of illumination / a uniformity . . . remains substantially unchanged / the uniformity of light . . . remains substantially the same / a uniformity of light . . . remains substantially the same / a uniformity of light . . . remains substantially unchanged" mean "a level of illumination that does not create unnoticeable unevenness in the overall illumination ('410 Patent, cl. 1, 10, 15; '248 Patent, cl. 3; '738 Patent, cl. 11, 13; '946 Patent, cl. 12);

2. "lens element" means "a geometrically distinct part of a lens" ('410 Patent cl. 1, 16, 22; '413 Patent cl. 3, 7, 13);

3. "convex optical element" means "a lens that curves or bulges outward" ('946 Patent cl. 1, 21, 29);

4. "display surface" means "sign surface" ('410 Patent, cl. 1, 7, 10, 12, 14, 15, 19, 20, 21, 25, 26; '413 Patent, cl. 1, 2, 4, 5, 6, 10, 11, 12, 16, 17);

5. "area" / "substantially rectangular area" mean "area of a sign" / "substantially rectangular area of a sign" ('946 Patent, cl. 1, 21, 24, 29; '248 Patent, cl. 1, 10, 11, 12);

6. "configured to" / "configured so" means "designed to" / "designed so" ('410 Patent, claims 1, 10, 15; '413 Patent, claims 1, 5, 11; '738 Patent, claims 1, 10, 11, 12, 14; '248 Patent, claims 1, 3, 10, 11; '946 Patent, claims 1, 12, 21, 24, 29); and

7. "[average illumination to minimum illumination uniformity ratio] is 3:1 / [a ratio of the average illumination from that LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] is 3:1 / [a ratio of the average illumination from each of the LEDs across the entire display surface to the minimum illumination at any point on the display surface from each of the LEDs] is 3:1 / [a ratio of the average illumination from that LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] is 3:1 / [ratio of the average illumination from each LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] [[to]] is 3:1" mean "has a ratio of 3:1" ('410 Patent, cl. 5, 14, 20; '413 Patent, cl. 1, 5, 11).

The parties briefed the issues, (*see* D.I. 93), and submitted a Joint Claim Construction Chart containing intrinsic evidence, (*see* D.I. 92-1). The Court carefully reviewed all submissions in connection with the parties' contentions regarding the disputed claim terms, heard oral argument, (*see* D.I. 100), and applied the following legal standards in reaching its decision.

I. LEGAL STANDARDS

A. Claim Construction

"[T]he ultimate question of the proper construction of the patent [is] a question of law," although subsidiary fact-finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015). "[T]he words of a claim are generally given their ordinary and customary meaning [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (internal citations and quotation marks omitted). Although "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim also must be considered. *Id.* at 1314. "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted).

The patent specification "is always highly relevant to the claim construction analysis . . . [as] it is the single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is also possible that "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. "Even when the specification describes only a single embodiment, [however,] the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal quotation marks omitted) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence, . . . consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

In some cases, courts "will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. Extrinsic evidence "consists of all evidence external to the patent and prosecution history,

including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. Expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Phillips*, 415 F.3d at 1318. Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* Overall, although extrinsic evidence "may be useful to the court," it is "less reliable" than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

B. Indefiniteness

Section 112 of the Patent Act requires a patent applicant to "particularly point out and distinctly claim the subject matter" regarded as the applicant's invention. 35 U.S.C. § 112 ¶ 2. "The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, *e.g.* competitors of the patent owner, can determine whether or not they infringe." *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779-80 (Fed. Cir. 2002) (citing *Warner-Jenkinson Co. v. Hilton-Davis Chem. Co.*, 520 U.S. 17, 28-29 (1997)). Put another way, "[a] patent holder should know what he owns, and the public should know what he does not." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 731 (2002).

A patent claim is indefinite if, "viewed in light of the specification and prosecution history, [it fails to] inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). A claim may be indefinite if the patent does not convey with reasonable certainty how to measure a claimed feature. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). But "[i]f such an understanding of how to measure the claimed [feature] was within the scope of knowledge possessed by one of ordinary skill in the art, there is no requirement for the specification to identify a particular measurement technique." *Ethicon Endo–Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1319 (Fed. Cir. 2015).

Like claim construction, definiteness is a question of law, but the Court must sometimes render factual findings based on extrinsic evidence to resolve the ultimate issue of definiteness. *See, e.g.*, *Sonix Tech. Co. v. Publications Int'l, Ltd.*, 844 F.3d 1370, 1376 (Fed. Cir. 2017); *see also Teva*, 135 S. Ct. at 842-43. "Any fact critical to a holding on indefiniteness . . . must be proven by the challenger by clear and convincing evidence." *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003); *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008).

II. THE COURT'S RULING

The Court's rulings regarding the disputed claim terms of the Patents-in-Suit were announced from the bench at the conclusion of the hearing as follows:

> . . . Thank you for the arguments earlier today. At issue we have five patents,[1] and seven disputed claim terms.

[1] All five of the patents in suit share a specification, although the '410 Patent and '413 Patent are based on a different provisional application than the'738 Patent, '248 Patent, and '946 Patent.

I am prepared to rule on each of the disputes. I will not be issuing a written opinion, but I will issue an order stating my rulings. I want to emphasize before I announce my decisions that although I am not issuing a written opinion, we have followed a full and thorough process before making the decisions I am about to state. I have reviewed the patents in dispute. I have also reviewed the documents from the Eastern District of Texas action, the dictionary definitions, the excerpts of treatises, the expert declarations, and other documents included in the joint appendix. There was full briefing on each of the disputed terms. And there has been argument here today. All of that has been carefully considered.

As to my rulings, I am not going to read into the record my understanding of claim construction law and indefiniteness generally. I have a legal standard section that I have included in earlier opinions, including recently in *Ferring v. Fresenius*, C.A. No. 20-431. I incorporate that law and adopt it into my ruling today and will also set it out in the order that I issue.

As to the person of ordinary skill in the art, the parties have suggested differing definitions. But no party suggests that the differences are relevant to the issues currently before me.

Now the disputed terms. I am going to refer to the original numbering in the claim construction brief, even though several of those terms are no longer disputed.

The first term comprises several phrases, which the parties have collectively deemed "the Uniformity Limitations."[2] All of the phrases include the word "substantially" and the parties agree that all of the terms should be construed the same. Ultravision argues that the Uniformity Limitations should be construed as "level of illumination that does not create noticeable unevenness in the overall illumination, such as hot spots or dead spots." Acuity argues that the Uniformity Limitations are indefinite and does not propose an alternative construction.

The crux of the dispute is whether the word "substantially," used here as a word of degree, renders this term and the relevant claims

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2 Those phrases are: "substantially uniform / substantially equal level of illumination / a uniformity . . . remains substantially unchanged / the uniformity of light . . . remains substantially the same / a uniformity of light . . . remains substantially the same / a uniformity of light . . . remains substantially unchanged" in claims 1, 10, and 15 of the '410 Patent, claim 3 of the '248 Patent, claims 11 and 13 of the '738 Patent, and claim 12 of the '946 Patent.

indefinite. Here, I agree with Ultravision that it is not indefinite and will construe this term as "level of illumination that does not create unnoticeable unevenness in the overall illumination."

For a claim to be held invalid for indefiniteness, there must be clear and convincing evidence.[3] Acuity has not met this burden.

In *Biosig Instruments, Inc. v. Nautilus, Inc.*, the Federal Circuit instructed that "[w]hen a 'word of degree' is used, the court must determine whether the patent provides 'some standard for measuring that degree'" and that "[c]laim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention."[4]

Here, the specification indicates that the invention serves to "minimiz[e] any noticeable unevenness in the overall illumination"[5] and gives examples of undesirable unevenness, such as "hot spots" and "dead spots."[6] This suggests that the purpose of the invention is to produce a "substantially uniform" appearance without deviations readily apparent to the normal human eye. The Federal Circuit recognized in *Sonic Tech. Co. v. Publications Int'l, Ltd.*, 844 F.3d 1370, 1378 (Fed. Cir. 2017) that, unlike terms that turn on whether something is aesthetically pleasing or otherwise subjective, "what can be seen by the normal human eye . . . provides an objective baseline through which to interpret the claims." And courts have held that the normal human eye can detect when something is, for example, "substantially horizontal"[7] or "substantially flattened,"[8] such that the use of "substantially" does not render those terms indefinite. Indeed, the Federal Circuit found that the phrase "substantially uniform," albeit in a different context, was not indefinite because "'substantially' is a descriptive term

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3 *See Nautilus*, 572 U.S. at 912 n.10 (citing *Microsoft Corp. v. i4i Ltd. Partnership*, 564 U.S. 91, 95 (2011))).

4 *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015).

5 ('410 Patent col. 6 ll. 21–23).

6 (*See* '410 Patent col. 2 ll. 55–58, col. 5 ll. 33–35).

7 *Total Control Sports, Inc. v. Precision Impact*, No. 17-CV-09281, 2019 WL 6464002, at *9 (N.D. Ill. Dec. 2, 2019) ("The normal human eye can perceive when an object travels 'substantially horizontal,' and thus a person having ordinary skill has an objective baseline to interpret the claims.").

8 *Kluhsman Mach., Inc. v. Dino Paoli SRL*, No. 5:19-CV-00020, 2020 WL 4227470, at *6 (W.D.N.C. July 23, 2020) (giving "substantially flattened" the "plain and ordinary meaning of substantially but not necessarily completely flat.").

commonly used in patent claims to 'avoid a strict numerical boundary to the specified parameter.'"[9]

Therefore, given that the word "substantially" suggests that the lighting must be uniform as detected by the normal human eye, I will adopt Ultravision's proposed construction of "level of illumination that does not create noticeable unevenness in the overall illumination."

The second term is "lens element."[10] Ultravision contends that this term should be given its plain and ordinary meaning, which it argues is "an element of a lens," or alternatively, "a geometrically distinct volume of an optical element" and agreed today that we could use part instead of volume. Acuity proposes that the term be construed as "a lens with two or more optical surfaces."

I have some doubts that there is a significant dispute about the parties' positions. But to the extent there is, I agree with Ultravision and will give the term its plain and ordinary meaning of "a geometrically distinct part of a lens" rather than require distinct surfaces.

That is consistent with the specification, which to the extent it refers to a lens element does so in connection with Figures 8A through J. These illustrate and identify different geometric shapes (such as 820, 822, 824 and 826) rather than surfaces as being lens elements.

The third term is "convex optical element."[11] Ultravision argues that this term should be given its plain and ordinary meaning, which it proposes is "an optical element that is convex." Acuity asserts that the term should be construed as "a radially symmetric hemispherical outer surface."

The crux of the dispute is whether Acuity is correct in asserting that "convex" means perfectly hemispherical. Acuity points to Figure 5A in support of its position, arguing that "the lenses of Fig. 5A appear to be portions of a sphere with radial symmetry, *i.e.*, convex."[12] But nothing in the specification or claims confirms that the lenses shown in Figure 5A are perfectly hemispherical.

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9 *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001).

10 This term is in claims 1, 16, and 22 of the '410 Patent and claims 3, 7, and 13 of the '413 Patent.

11 This term is in claims 1, 21, and 29 of the '946 Patent.

12 (D.I. 93 at 30).

Furthermore, that figure depicts merely one embodiment, meaning it would be inappropriate to read that limitation into the claims.[13]

Acuity also argues that Ultravision's expert supports Acuity's construction.[14] I disagree. In his declaration, Ultravision's expert opines that a POSA "would understand a convex shape to bulge outwards, as opposed [to] a recessed (*i.e.*, concave) shape, without the need for further clarification."[15] This says nothing about whether the shape must be radially symmetric and hemispherical.

I agree with Acuity, however, that using the word "convex" in the construction as Ultravision proposes is not helpful. The parties each cite definitions of convex. Ultravision's definitions include "curved or swelling out,"[16] "curving or bulging outward"[17] and "having a surface that is curved or rounded outward."[18] Acuity pointed to a definition defining convex as "[c]urving outward, like the outer boundary of a circle or sphere."[19] Both parties agree that a "convex" shape is one that "bulges outwards" but there is nothing in the definitions or the intrinsic record to support Acuity's proposed limitation that a convex shape must be perfectly hemispherical, rather than some other convex or bulging shape.

Consistent with the plain and ordinary meaning of convex, I will construe "convex optical element" as "a lens that curves or bulges outward."

I am going to address the fourth and fifth terms together as the parties seem to agree that the analysis underlying the construction of the two terms is the same. The fourth term is "display surface."[20] Ultravision asserts that this term should be given its plain and ordinary meaning, which it contends is "surface to be displayed

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13 *See CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002); *Superguide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

14 (D.I. 93 at 30).

15 (D.I. 85, Ex. 7 ¶ 65).

16 (*Id.* at Ex. 13).

17 (*Id.* at Ex. 14)

18 (*Id.* at Ex. 15).

19 (*Id.* at Ex. 15).

20 This term is in claims 1, 10, 14, 15, and 20 of the '410 Patent, claims 1, 4, 5, 10, 11, and 12 of the '413 Patent, and claims 1, 3, 10, 11, 12, 13, and 17 of the '738 Patent.

using illumination." Acuity argues that this term should be construed as "sign surface."

The fifth term is "area" / "substantially rectangular area."[21] Ultravision argues that no construction is necessary and that the term should be given its plain and ordinary meaning. Acuity contends that the term should be construed to mean "sign" / "rectangular sign."

The dispute for these terms centers on whether the "display surface" and the "area" claimed are limited to signs. Here, I agree with Acuity and will construe "display surface" to mean "sign surface" and "area" to mean "area of a sign."

The Federal Circuit has repeatedly stated, in cases such as *Continental Circuits LLC v. Intel Corp.* that "the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'"[22] Where, however, a patent repeatedly and consistently characterizes a claim term in a particular way, it is appropriate to construe the term in that way.[23] Here, in column 2 at lines 6 through 9, the specification explains that "[a]lthough billboards are used herein for purposes of example, it is understood that *the present disclosure may be applied to lighting for any type of sign* that is externally illuminated."[24] And the Technical Field in the shared specification notes that "[t]he following disclosure relates to lighting systems and, more particularly, to lighting systems using light emitting diodes to externally illuminate signs." I find that these statements in the specification constitute expressions of manifest restriction intended to limit the invention to lighting of signs.

Therefore, I will construe "display surface" as "sign surface."

As to area, I will give the term its plain and ordinary meaning, but will limit to the area to that of a sign because as I have already determined with respect to display surface, the invention as claimed

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21 These terms are in claims 1, 21, 24, and 29 of the '946 Patent and claims 1, 10, 11, and 12 of the '248 Patent.

22 *Continental Circuits LLC v. Intel Corp.*, 915 F.3d 788, 797 (Fed. Cir.).

23 *Wisconsin Alumni Rsch. Found. v. Apple Inc.*, 905 F.3d 1341, 1351 (Fed. Cir. 2018).

24 ('410 Patent col. 2 ll. 6–9 (emphasis added)).

is restricted to signs. And indeed, when the term "area" is used in the specification, it is referencing the area of a surface.[25]

The sixth term is "configured to / configured so."[26] Ultravision asserts that this term should be construed as "capable of." Acuity argues that this term should be construed as "designed to / designed so."

The crux of the dispute centers on whether "configured" is simply the hypothetical ability to do something. Here, I agree with Acuity and will construed the term as "designed to / designed so."

The patent specification uses "configured" interchangeably with "designed." The claim term refers to lenses or a substrate containing lenses being "configured to" direct light from each LED onto the entire display surface.[27] The specification confirms that "the optical elements 514 are configured so that the light emitted from each LED 416 is projected onto the entire surface"[28] and then notes that "by *designing* the lens in such a manner, when all LEDs are operating, the light [from] the collective thereof will illuminate the surface."[29] The specification also explains that the lens structures located on the substrate are "designed to 'direct' the light from an edge of the surface to cover the entire surface."[30] These examples show that the specification uses "configured" to mean "designed" to do something. That meaning is clear when the specification notes that "the optics panel 206 may be *configured specifically* for the light panel 204 and the surface."[31] Importing Ultravision's

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25 ('410 Patent at [57] (describing "a surface having a predetermined bounded area. Light from each of the LEDs is directed by the transparent substrate across the entire area of the surface"); '410 Patent col. 1 ll. 24–27 (using same language)).

26 These terms are in claims 1, 10, and 15 of the '410 Patent, claims 1, 5, and 11 of the '413 Patent, claims 1, 10, 11, 12, and 14 of the '738 Patent, claims 1, 3, 10, and 11 of the '248 Patent, and claims 1, 12, 21, 24, and 29 of the '946 Patent.

27 (*See* '410 Patent col. 8 ll. 37–40 ("a substantially transparent substrate comprising a plurality of optical elements . . . configured to direct light from each of the plurality of LEDs . . . onto a display surface"), col. 9 ll. 11–13 ("a plurality of lenses, wherein each lens . . . is configured to direct light from that LED toward the display surface"), col. 9 ll. 41–47 ("an acrylic material substrate comprising a plurality of optical elements [which are] configured to direct light from each of the plurality of LEDs . . . onto a display surface")).

28 ('410 Patent col. 5 ll. 4–6).

29 ('410 Patent col. 5 ll. 16–18 (emphasis added)).

30 ('410 Patent col. 5 ll. 37–38).

31 ('410 Patent col. 6 ll. 32–34 (emphasis added)).

proposed construction of "capable," this phrase becomes nonsensical. Acuity's proposed construction of "designed" is not only more meaningful, it is also confirmed by the specification, which gives an example in which "the panel 500 of Fig. 5 may be *specifically designed* for use with the PCB 402 of Fig. 4."[32] Therefore, the specification supports Acuity's proposed construction.

In *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, the Federal Circuit indicated that "configured to" has a narrower definition than "having the capacity to" or "capable of."[33] And district courts have relied on *Aspex Eyewear* to construe "configured to" as "programmed to,"[34] which implies intentional design rather than mere capacity.

Therefore, I will construe this term as "designed to" / "designed so." Today during the argument, Acuity stated that it is not arguing that the "designed to" construction depends on the subjective intent of the people designing the product. I will hold Acuity to that.

The eighth term comprises several phrases, collectively deemed "the 3:1 Ratio Limitations."[35] These phrases refer to the ratio between the average illumination across the display surface and the minimum illumination at any point on the display surface. Ultravision contends that this term should be construed as "achieves 3:1." Acuity argues that the term should be given its plain and ordinary meaning, which it asserts is "has a ratio of 3:1."

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32 ('410 Patent col. 6 ll. 35–37 (emphasis added)).

33 *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012).

34 *See, e.g.*, *Wapp Tech Ltd. P'ship v. Seattle Spinco, Inc.*, No. 4:18-CV-469, 2020 WL 1983087, at *20 (E.D. Tex. Apr. 27, 2020); *Radware Ltd. v. A10 Networks, Inc.*, No. C-13-02024-RMW, 2014 WL 1572644, at *12 (N.D. Cal. Apr. 18, 2014).

35 Those phrases are: "[average illumination to minimum illumination uniformity ratio] is 3:1 / [a ratio of the average illumination from that LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] is 3:1 / [a ratio of the average illumination from each of the LEDs across the entire display surface to the minimum illumination at any point on the display surface from each of the LEDs] is 3:1 / [a ratio of the average illumination from that LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] is 3:1 / [ratio of the average illumination from each LED across the entire display surface to the minimum illumination from that LED at any point on the display surface] [[to]] is 3:1" in claims 5, 14, and 20 of the '410 Patent and claims 1, 5, and 11 of the '413 Patent.

The crux of the dispute is whether a ratio better than 3:1 falls within the scope of the claim term. Here, I agree with Acuity and will give the term its plain and ordinary meaning of "has a ratio of 3:1."

First, the claims themselves state that the ratio of the average illumination to the minimum illumination "is 3:1," which suggests that the ratio must be exact rather than approximate.

Ultravision argues that the specification supports its broader construction because it describes "evenly" as "illumination with a uniformity that achieves a 3:1 ratio of the average to the minimum."[36] This description does not, however, clarify whether ratios better than 3:1 are permissible. Accepting Ultravision's suggestion that the word *achieves* necessarily includes better illumination ratios would render this language in the specification broader than the plain language of the claims.

Because the five Patents-in-Suit share a common specification, language used in the other patents may inform our analysis.[37] Here, claim language in the '248 Patent supports the Court's construction. In the '248 Patent, the patentee explicitly claimed "a uniformity that achieves at most a 3:1 ratio."[38] Thus, the patentee could also have claimed "at most a 3:1 ratio" during prosecution of the '410 Patent and '413 Patent, yet chose not to do so.

Therefore, I will give this term its plain and ordinary meaning of "is 3:1."

Maryellen Noreika

The Honorable Maryellen Noreika
United States District Judge

36 ('410 Patent col. 5 ll. 14–16).

37 *See NTP, Inc. v. Rsch. In Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005).

38 (*See, e.g.*, '248 Patent col. 11 ll. 50–51).