

Filed on behalf of: Signify Holdings B.V.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUMINEX INTERNATIONAL COMPANY LTD.,
and MENARD, INC.,*

Petitioners,

v.

SIGNIFY HOLDINGS B.V.,
Patent Owner.

Case IPR2024-00101
U.S. Patent No. 10,299,336

PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY

* Menard, Inc. has been joined as a petitioner. *See* IPR2024-01469, Paper 8.

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Claims 13, 15 and 16 Have a 2016 Priority Date.....	2
III.	Claims 13-20 are not unpatentable	8
	A. Claims 13 and 15 Over Reiff (Ground 3).....	8
	1. Element 13(d).....	8
	2. Elements 13(a) and (b).....	11
	B. Claims 13-20 Over Chaimberg Alone or Combined with Roberge (Grounds 1a-1b).....	14
	C. Claims 13, 15-16, 19-20 Over Halliwell (Ground 2).....	18
IV.	Claims 1-12 are not unpatentable	20
	A. Claims 1-12 Over Chaimberg Alone or Combined with Roberge (Grounds 1a-1b).....	20
	1. Element 1(d).....	20
	2. Claim 7	24
	3. The Petition’s Obviousness Ground 1b Fails.....	25
	B. Ground 2: Claims 1, 2-5, 7, and 9-12 Are Not Unpatentable Over Halliwell	26
	1. Element 1(d).....	26
	2. Element 1(e)	27
	3. Claims 7 and 11	27
V.	The Petition Is Time Barred	27
VI.	Conclusion	28

TABLE OF AUTHORITIES

Cases

<i>Acceleration Bay, LLC v. Activision Blizzard Inc.</i> , 908 F.3d 765 (Fed. Cir. 2018)	2
<i>DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.</i> , 567 F.3d 1314 (Fed. Cir. 2009)	24
<i>In re Fine</i> , 837 F.2d 1071 (Fed. Cir. 1988)	14
<i>Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	2
<i>Lockwood v. American Airlines</i> , 107 F.3d 1565 (Fed. Cir. 1997)	7, 8
<i>SPTS Techs. Ltd. v. Plasma-Therm LLC</i> , No. IPR2018-00618, Paper 24 (PTAB Aug. 26, 2019).....	6

Statutes

35 U.S.C. §311(b)	17
-------------------------	----

Rules

37 C.F.R. §42.6(a)(3)	23
-----------------------------	----

PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	Menard's Third-Party Complaint (10/27/2022)
2002	Luminex's Answer to the Third-Party Complaint and Crossclaim (2/27/2023)
2003	Signify's Complaint for Patent Infringement (8/12/2022)
2004	Proof of Service for Signify's Complaint
2005	Order Granting Motion to Transfer (12/9/2022)
2006	Signify's Infringement Contentions (8/31/2022)
2007	Luminex's Opposition to Motion to Transfer (5/15/2023)
2008	Order on Motion to Sever (8/31/2023)
2009	District Court Scheduling Order (10/2/2023)
2010	Black's Law Dictionary
2011	Joint Invalidity Contentions (Appendix F) (11/22/2023)
2012	U.S. District Court Caseload Statistics
2013	Amended Luminex's Answer to the Third-Party Complaint and Crossclaim (11/16/2023)
2014	Canarm's Answer and Affirmative Defenses to the Third-Party Complaint (1/25/2024)
2015	Signify's letter to Menard (2/8/2021)
2016	Luminex's letter to Signify (3/15/2021)
2017	Luminex's letter to Signify (4/26/2021)
2018	Menard's letter to Signify (2/24/2021)
2019	Luminex's letter to Signify (4/18/2024)

Exhibit No.	Description
2020	Luminex's letter to Signify (5/10/2024)
2021	Luminex's email to Signify (10/29/2024)
2022	R Mark Halligan's (Luminex counsel) email to Signify (4/1/2021)
2023	Menard's email to Signify (11/8/2024)
2024	Opening expert report of Dr. J. Gary Eden
2025	Rebuttal expert report of Dr. J. Gary Eden
2026	Protective Order in parallel district court litigation
2027	Menard's Amended Answer to Signify's Complaint (10/19/2023)
2028	Yoshi Ohno, Calculation of CCT and Duv and Practical Conversion Formulae, CORM 2011 Conference, Gaithersburg, MD (May 3-5, 2011) (Eden Deposition EX2028)
2029	Tyco Electronics, Switches Core Program (March 2008) (Eden Deposition EX2029)
2030	Transcript of the Deposition of Dr. J. Gary Eden, taken on December 5, 2024
2031	Declaration of Dr. Michael Krames
2032	Website Printout of TE Connectivity ALCOSWITCH Switches 1571999-1, https://www.digikey.com/en/products/detail/te-connectivity-alcoswitch-switches/1571999-1/969165
2033	DIP Switch ADE, ADF & ADP Series Datasheet
2034	Excerpt from McGraw-Hill Dictionary of Electronics and Computer Technology (3d Ed. 1984)
2035	Taru Oksala, "Why the Same Color Temperatures Look Different?" (Apr. 13, 2016), https://light.fi/why-same-color-temperatures-look-different/

Exhibit No.	Description
2036	PR8 HALO Commercial Brochure, Eaton (2017)
2037	HALO Canless Recessed Lighting, Cooper
2038	Signify Press Release (2020)
2039	HALO Spec Sheet (2018)
2040	“Home Depot Announces 2018 Innovation Award Winners,” Builder Magazine (2018)
2041	ADEX Award (2019)
2042	HALO Commercial Spec Sheet (2017)
2043	“Please Explain the Term ‘Black Body Curve,’” X-Rite (2024)
2044	Light-Emitting Diodes, 2 nd Ed., Schubert, Cambridge University Press (2006)
2045	Excerpt from McGraw-Hill Dictionary of Scientific and Technical Terms (5th Ed. 1994)
2046	Emails Between Menard and Luminex (August 17, 2021)
2047	Menard Letter (September 12, 2022)
2048	Proposed Stipulate Protective Order
2049	Website Printout for “Patriot Lighting® 5070 Lumen 47-3/4” LED Back-Lit Flat Panel Light”
2050	CIE Technical Note 013:2022 (2022)
2051	U.S. Dep’t of Energy, Solid State Lighting Technology Fact Sheet (April 2016)
2052	Transcript of the Deposition of Dr. J. Gary Eden, taken on April 25, 2024

I. INTRODUCTION¹

Luminex’s Reply highlights the critical flaws in the Petition, and narrows the disputes before the Board.

For example, Signify’s POR demonstrated that claim 13 and certain dependents are supported by the earliest Provisional. The Reply disputes a single limitation, based on the singular possibility that the Provisional’s “electrical wiring” may be house wiring rather than an electrical cable “of the luminaire.” Luminex’s expert, however, confirmed that a POSITA would *not* conclude that to be the case, and further testified that if someone used house wiring in that context, that person would need to have his “head x-rayed.” EX2052, 140:23-141:23; EX2030, 90:11-91:11.

This resolves Grounds 1 and 2 with respect to claim 13. Ground 3 relies on Reiff, which Luminex concedes does not mention CCT selectability at all. The Reply also never disputes the Board’s correct conclusion that other elements of claim 13 are not disclosed in Chaimberg, Halliwell, or Reiff.

Signify’s POR demonstrated that claim 1—the other independent claim—is not unpatentable over either Chaimberg or Halliwell. Regarding Chaimberg, the Reply fabricates a figure in which its switch is somehow “hidden” behind a narrower feature, and then claims that figure “confirms” that the switch is “disposed

¹ All emphasis herein added unless otherwise indicated.

remotely.” The only thing confirmed by this erroneous annotation is that the Petition fails to demonstrate unpatentability. Similarly, the Reply confirms that Halliwell’s CCT switch is device-located and thus **not** “disposed remotely”.

In several instances the Reply concedes defeat on the Petition’s grounds, and instead pursues **new** purportedly obvious modifications and/or combinations that are absent from the Petition, which should be rejected. *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 775 (Fed. Cir. 2018) (affirming rejection of “new obviousness argument” on reply); *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369-70 (Fed. Cir. 2016) (affirming exclusion of new obviousness rationale and supporting references).

At bottom, Luminex’s bold, unsupported rhetoric that ’336 Patent’s CCT selectability invention was trivial and known for years simply does not square with its reliance on two primary references (Chaimberg and Halliwell) filed years after the critical date, and a third (Reiff) that does not reference CCT at all. The consistently unreliable testimony from Luminex’s expert further confirms the failure of all grounds.

II. CLAIMS 13, 15 AND 16 HAVE A 2016 PRIORITY DATE

Regarding priority, Luminex only challenges whether the Provisional’s disclosed switch includes claim 13’s “coupling feature ... configured to electrically couple to an electrical cable of the luminaire.” Reply, 15-18. Specifically, Luminex

concedes that the Provisional discloses a DIP switch with a “coupling feature,” and that it recites “electrical wiring” sufficient to disclose a “cable.” *Id.*; see EX2030, 107:9-22. Luminex argues only that the electrical wiring “refers to existing wiring in the house,” which is not “of the luminaire.” Reply, 17. Luminex’s own expert, Dr. Eden, confirmed the opposite:

Q. Is it your opinion that the electrical wiring referenced in the ’424 provisional could be house wiring?

A. No, I don’t think there is any reason to believe that.

EX2052, 140:23-141:23; see EX2030, 90:11-91:11 (Dr. Eden would have his “head x-rayed” if he wired existing house wiring into a luminaire). This admission settles the matter.

Luminex misrepresents certain testimony of Dr. Krames, which in no way suggested the Provisional’s reference to electrical wiring could be house wiring. Reply, 16. Dr. Krames was responding to Dr. Eden’s opinion regarding *Halliwell*, which describes having “electrical components of the LED lighting device 20 (*e.g.*, the driver circuitry 19, switch control unit 35, ...) ... directly wired to line voltage (*e.g.* through a junction box).” EX1012, 7:8-19. Dr. Krames confirmed that a POSITA would have understood Halliwell’s reference to “line voltage” to refer to standard voltage supplied by existing power lines (house wiring), and that such “existing house wiring” wired directly into a lighting device would not constitute an “electrical cable of the luminaire.” EX2031, ¶233. But Dr. Krames never testified

that the “electrical wiring” in the Provisional is line voltage—his opinion, like Dr. Eden’s clear admission, is the opposite. EX2031, ¶87-93 (the Provisional’s “electrical wiring” is a cable “of the luminaire”). Tellingly, Luminex did not question Dr. Krames about its unsupported interpretation at his deposition, choosing instead to take his declaration out of context. Accordingly, Luminex’s position that the Provisional’s disclosed electrical wiring “refers to existing wiring in the house” (Reply, 17) is unsupported and contradicted by both parties’ experts.

Luminex’s second and third “technical” arguments (Reply, 17-18) are wrong and demonstrably misleading. For example, Luminex asserts that “Dr. Krames conceded that the ’424 Provisional’s luminaire could be battery powered, such that switches 210 would not be electrically coupled to **any** electrical cable.” Reply, 17 (emphasis in original). However, the allegedly supporting testimony was in response to a generic question, having nothing to do with the Provisional:

Q. Could a luminaire be powered by a battery, for example?

A. Yes.

EX1031, 100:8-10; Reply 17.

In fact, the Provisional describes “electrical wiring” extending from the luminaire housing to power the substrate (and thus the DIP switch), as reflected in Figures 1-2 and 4. POR, 16-21. The Provisional figures also show the interior of the luminaire in detail, and Dr. Eden could not identify any disclosure of a “battery” or

explain what purpose the “electrical wiring” would serve if a battery were present. EX2052, 141:24-144:2, 147:17-148:4 (“I don’t know.”).

The Reply also argues that circuit traces in Figures 2 and 4 do not represent an “electrical cable” of the luminaire. Reply, 18. But the POR cited those figures to show that the disclosed DIP switch and electrical wiring were “electrically connected.” POR, 26-30. Luminex conceded this on Reply. Reply, 17 n.5. (“Petitioner and Dr. Eden agree the claims encompass indirect electrical coupling.”). Notably, Luminex’s concession on this point directly contradicts Dr. Eden’s prior testimony regarding “electrically coupled”:

Q. And so just to be clear, you interpreted the ’336 patent term, “electrically coupled” to require a direct physical connection; is that fair?

A. I think that’s the only way that the ’336 patent makes any sense Mr. Dorsky.

EX2030, 101:7-12; *id.*, 132:24-133:3, 109:6-21.

Dr. Eden’s inconsistent testimony continued during his second cross-examination, when he provided a new claim construction for “electrical cable of a luminaire” never mentioned in Luminex’s papers:

Q. So in your opinion, for there to be an electrical cable of a luminaire, there has to be a driver housing separated from the luminaire housing with a cable running between the two. Is that correct?

A. That’s the principle that is described by the ’336 patent and by Chaimberg.

Q. And that's how you're interpreting electrical cable of a luminaire in your declarations, correct?

A. Yes, because that's what they say.

EX2052, 119:22-120:7; *id.*, 117:10-119:1. This construction would require the switch to be disposed “somewhere” in the cable, and a driver to be present and located remotely from the LED housing (*id.*)—neither of which are required by claim 13. The construction is not advanced in either of Luminex's papers, nor is it articulated anywhere in Dr. Eden's declarations, despite his testimony that he relied on it throughout this proceeding.² Accordingly, the Board should ignore this construction, and give little or no weight to Dr. Eden's opinions. *SPTS Techs. Ltd. v. Plasma-Therm LLC*, No. IPR2018-00618, Paper 24 at 25-27 (PTAB Aug. 26, 2019) (according “very little weight” to contradictory expert testimony).

Luminex's two “legal” arguments on priority (Reply, 19-20) also misrepresent Signify's evidence and the applicable law.

First, Luminex asserts that Signify “uses obviousness” to support priority, but fails to identify any such theory (or the word “obvious”) in the POR—because it is

² Dr. Eden's testimony regarding his new theory about claim 13 and his prior declarations is clearly contradicted by, at least, his opinion that Reiff discloses limitation 13b by disclosing a switch on an electrical cord that plugs into a conventional outlet to receive conventional 120-volt power. *See* DI, 60.

not there. *See* POR, 10-26. “Obviousness” is not necessary in view of the Provisional’s express description of an electrical cable (“electrical wiring”) exiting the housing through a wiring aperture for powering the substrate on which the CCT switch is coupled. *Id.*, 16-20.³ Luminex’s citation to *Lockwood v. American Airlines* is thus inapposite; there, the patentee conceded key elements were **missing** from the application yet still “envisioned” by the inventor. 107 F.3d 1565, 1571-72 (Fed. Cir. 1997). Here, the Provisional expressly discloses the “electrical cable” through its description of “electrical wiring” within the housing, and both experts further confirmed that there is **not** “any reason to believe” the Reply’s lone theory contesting priority—that the disclosed wiring is house wiring not “of the luminaire.” EX2052, 140:23-141:23.

Regarding claim 16, the Provisional expressly contemplates embodiments where the DIP switch “may have fewer **or more** switches 210” (i.e., more than two to achieve the four positions in the preferred embodiment). EX1008, 5:13-16; POR, 25-26. This tracks Dr. Eden’s testimony that Chaimberg’s lesser disclosure of a switch having three positions demonstrated “possession of a switch having five

³ The “electrical wiring” is specifically discussed in a paragraph describing the “example luminaire” design, further confirming it is “of the luminaire.” EX1008, 4:19-25.

positions corresponding to five CCT settings.” EX2052, 104:21-105:8. No obviousness theory was advanced, or is necessary, to support this disclosure.

Second, Luminex asserts that Signify uses “hindsight” to identify a receptacle on the Provisional substrate for the electrical wiring. Reply, 19-20. But the Provisional expressly discloses the receptacle in Figure 1E, as Dr. Krames confirmed. POR, 18-19; EX2031, ¶¶90; *see Lockwood*, 107 F.3d at 1572 (support can be found in “figures”). Dr. Krames’ testimony on this point is undisputed, as the Reply cites no evidence supporting its attorney argument that a “POSA would not have understood the grainy, unlabeled shape identified by PO as a receptacle.” Reply, 20.

III. CLAIMS 13-20 ARE NOT UNPATENTABLE

There is no dispute Grounds 1 and 2 fail if claims 13, 15 and 16 are accorded the February 19, 2016, priority date. Ground 3 also fails for several independent reasons.

A. Claims 13 and 15 Over Reiff (Ground 3)

1. Element 13(d)

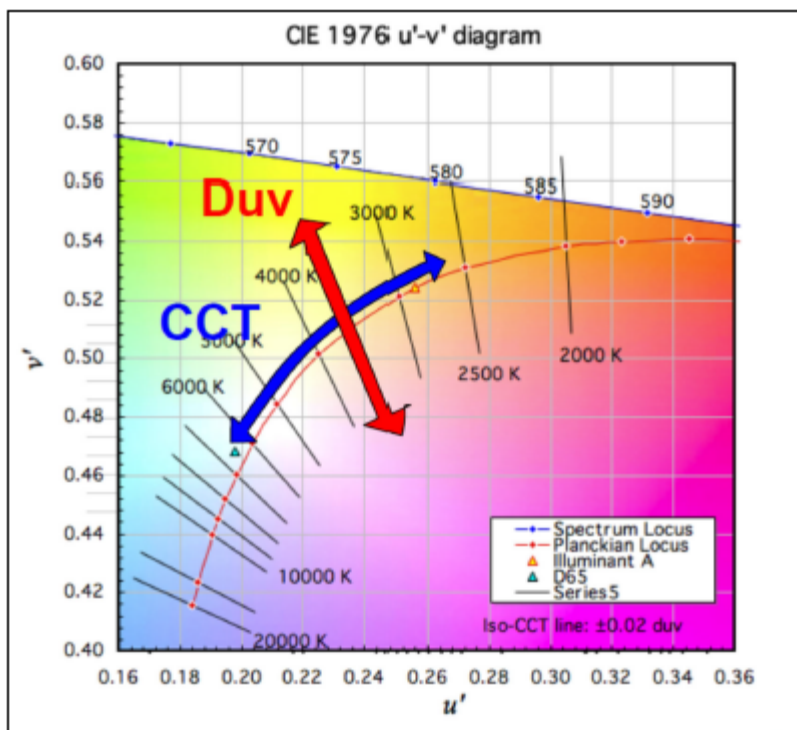
The Reply confirms that Reiff does not refer to “CCT” *at all* (Reply, 33; EX2031, ¶¶131-132; EX2030, 148:5-150:13), and instead discloses a switch for selecting between two light *sources* (one fluorescent and one LED). EX1013, 4:28-32, 5:62-66. Therefore, the Petition relies on Dr. Eden’s conclusory assertion that “different-colored light sources emit light of different CCTs.” Reply, 31.

In his first deposition, Dr. Eden demonstrated a lack of understanding of CCT. POR, 38. In the second deposition, his new purported understanding required him to dispute the teachings of *his own supporting references*, which make clear that different colors of light may have the same CCT. EX2052, 238:10-240:18 (“the same stimulus with the same CCT and Duv can appear very differently”), 225:16-226:5, 242:15-25; EX1005 (“Two bulbs or lamps can have the same CCT but have different chromaticities.”); EX1039, 6-7 (showing “a CCT of 4300K with three different Duv values”).

The description of “colored” light sources in Reiff is not a description of different CCTs—which is an entirely different concept that Luminex and Dr. Eden still either fail to grasp or blatantly ignore. As Signify established, “color temperature” refers to a quality of *white* light based on where it falls on the Planckian curve, and “correlated color temperature” provides a means for correlating *white* light that may fall somewhat off the Planckian curve, to a color temperature on that curve. POR, 36-37. By contrast, saturated colors (e.g., red or blue) do not have an associated CCT, because they are so far off the curve that no meaningful correlation is possible. EX2031, ¶¶125-27. This is confirmed by Dr. Krames’ CIE publication (the same organization that published the CIE 1976 diagram), which both Luminex and Dr. Eden fail to address. EX2050, 6 (“CCT ... *should not be used for coloured light sources.*”). This is also apparent in the CIE 1976 diagram Luminex relies on,

where black CCT spectrum lines extend a short distance from the Planckian curve, because CCT is a descriptor for white light. Reply, 32.

While failing to follow basic CCT concepts during his first deposition, at his second deposition, Dr. Eden adopted a new (incorrect) assertion that **only** points falling precisely on the Planckian curve (the red curve illustrated below) have an associated CCT, and that the black lines labeled with CCTs are simply “not meaningful” and “not correct.”



EX2052, 219:22-220:16, 222:25-223:21, 230:21-232:21. Dr. Eden has no support for this opinion, which contradicts evidence submitted by both parties. *See, e.g., id.*, 238:10-239:15, 242:10-25, Ex. A §4.0 (full copy of EX1042, appended to transcript); EX2035, 2 (“So if it is said that two light sources have a CCT of 4000K,

this means that they are on the same line that runs through the 4000K spot, but may, in fact, look totally different.”).

Additionally, the Reply describes a *new* obviousness theory, where instead of using colored light, “LED light source 32” is now “white, though a different color than fluorescent light source 30.” Reply, 32-33. But neither Reiff nor the Petition addresses this idea. The Petition relies on Figure 2, which employs a “white” fluorescent light and a “*colored*” (“red, blue, or UV light”) LED source. Pet., 84-89; EX1013, 5:62-66. This new modification to Reiff is also attorney argument with no expert evidence for support. Indeed, Dr. Eden testified that given two sources of white light, “you would need to know the CCT of each source to determine if they’re the same or different colors,” and there is no dispute that Reiff does not mention CCT at all, much less specific CCT values for different sources of white lights (which also are not disclosed). EX2052, 261:13-20; POR, 33. Thus, Ground 3 fails.

2. Elements 13(a) and (b)

Ground 3 fails for other reasons. Luminex does not dispute that the Petition (with an analysis for Reiff spanning a mere six pages) advances only an “anticipat[ion]” theory concerning Reiff and does not provide any obviousness rationale. Pet., 82-89; POR, 38, 40. Luminex also does not dispute the Board’s conclusion that the Petition does not show anticipation. DI, 60-61. Therefore,

Also, the Petition identified and highlighted the outer surfaces of “control box 64” as the switch “body.”



Dr. Eden conceded that control box 64 is **not** a switch body, that his prior identification was “an oversight,” and that any “body” in Reiff would “depend[] on ... the particular switch product that is chosen.” EX2030, 139:21-141:23. Because the Petition failed to identify any other alleged body, this ground fails.

Given this failure, the Reply combines Reiff's disclosure with a third-party drawing of a switch (EX1029) that it asserts somehow corresponds to what might be inside control box 64. Reply, 27-28. This finds no basis in the Petition, or in Dr. Eden's testimony:

Q. [T]he portion of the control box 64 highlighted in yellow is not the switch body, according to your testimony today?

A. My testimony today is that it could be the body of the switch. It depends on the nature of the switch and the way it was manufactured.

EX2030, 140:12-141:14.

Luminex had an obligation to disclose its theories in the Petition. *Intelligent Bio-Systems*, 821 F.3d at 1369-70. But the Board is now faced with:

- 1) the Petition's theory that control box 64 is the recited body (Pet., 86-87),
- 2) Dr. Eden's testimony that control box 64 "could be" the recited body (EX2030, 140:12-141:14), and
- 3) the Reply's assertion that a possible body is actually shown in EX1029 (Reply, 27-28).

These theories should be rejected as either not supported or not disclosed.

Luminex also introduces another *new* theory, that Reiff's switch is necessarily the same as switch 931 in '336 Patent Fig. 9B. Reply, 29-30. This theory is pure

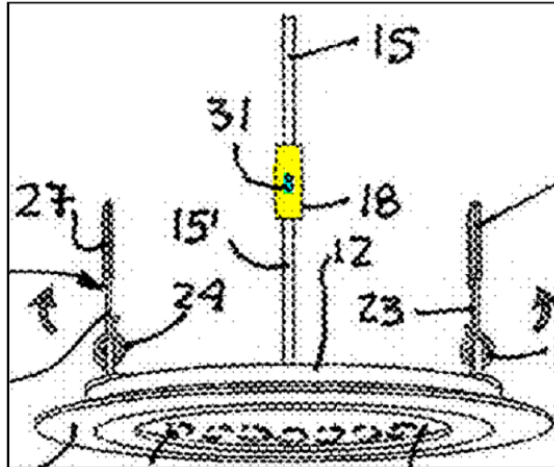
attorney argument that its own expert does not endorse, and finds no support in the Petition or Reiff. It also demonstrates classic impermissible hindsight by using the '336 Patent itself as a roadmap for modifying Reiff. *See In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

The Reply further argues that Reiff's switch necessarily *cannot* be a wireless switch—which is another point that finds no support from Dr. Eden. EX2030, 153:2-6, 154:1-16 (“It’s possible”). Therefore, Ground 3 fails.

B. Claims 13-20 Over Chaimberg Alone or Combined with Roberge (Grounds 1a-1b)

Chaimberg does not constitute prior art for claims 13, 15 and 16, and therefore Ground 2 fails against those claims. *Supra*, Section II. Furthermore, the Reply confirms the Board's conclusion that the Petition fails to establish anticipation of claim 13 and its dependencies (DI, 30-31). Therefore, Ground 1 should be rejected as to those claims.

The Petition identified and highlighted the outer surfaces of element 18 in Figure 1 as the purported switch “body”:



Pet., 40-41 (“The ‘body’ portion of the switch 18 is highlighted in yellow below”); EX1004, ¶162. The Petition did *not* identify anything within the highlighted switch 18, or advance any obviousness theory.

Signify and Dr. Krames established that the highlighted box is *not* a switch “body,” and a POSITA would have understood it to be, at most, an outer casing that would not include any “coupling feature.” POR, 44-48; EX2030, ¶¶151-57.

Nevertheless, the Reply argues that the switch “body” and “coupling feature” are obvious, because they are *inside* the feature identified in the Petition. Reply, 22-24. Luminex asserts that the Board “underst[ood]” it was not relying on the outer casing it highlighted as the body. Reply, 23 (citing DI, 29-30). To the contrary, the Board understood that the Petition’s “highlighted excerpt from Figure 1 includes *yellow highlighting over the structure that Petitioner identifies as switch 18’s body.*” DI, 30. Thus, the Board did not find (and the Petition did not assert) that anything *inside* the highlighted feature could constitute claim elements. Indeed, Dr.

Eden confirmed this on cross: “There could be a pot of gold inside [box 18]. I have no idea.” EX2030, 220:18-221:1.

The Reply cites pictures of products from Chaimberg’s assignee (“Globe”) to support its new theory about what could be inside yellow box 18 in Chaimberg. Reply, 24. This fails for several reasons.

First, the Globe product pictures are not evidence of what Chaimberg itself teaches or suggests to a POSITA. Indeed, there is no evidence that the Globe products even existed prior to *any* applicable priority date for the ’336 Patent, which Dr. Eden confirmed at deposition, and are thus irrelevant to patentability. EX2052, 51:3-52:10, 53:9-55:18 (“I don’t know”).

Second, there is no evidence that any Globe product pictured in the Reply is the same design as the Chaimberg embodiment relied upon in the Petition, or even that the products practice any claims in Chaimberg. Dr. Eden admitted he had not provided any analysis of Globe products against Chaimberg’s claims (or the ’336 Patent claims). EX2052, 28:5-10, 34:2-6. Marking products for notice purposes does not demonstrate that specific product features are present *in Chaimberg’s disclosure* (particularly where such features are not claimed in Chaimberg), and Luminex fails to demonstrate otherwise (factually or legally). *Id.*, 44:24-45:17; EX1003, claims 1-10.

Third, none of the pictures or Globe products were cited or relied upon in combination with Chaimberg in the Petition, even if products could be used to establish unpatentability in IPRs—which they cannot. 35 U.S.C. §311(b).

If anything, Luminex’s product image (Reply, 24) confirms that the feature highlighted in the Petition *is* simply an outer casing and (as demonstrated in the POR) and that casing does not “electrically couple” to anything. Regardless, the Board should reject this belated attempt to modify the Petition.

Luminex’s attempt to rely on Figure 3 of Chaimberg (Reply, 23) likewise fails in view of the numerous issues identified by Dr. Krames that renders it unreliable (EX1031, 78:4-15, 186:19-190:25)—which Dr. Eden does *not* dispute. Luminex also argues that Chaimberg’s switch necessarily cannot be wireless, but again, Luminex’s expert contradicted this argument at his deposition. POR, 48; EX2030, 212:8-213:2, 218:25-219:21, 220:18-221:1.

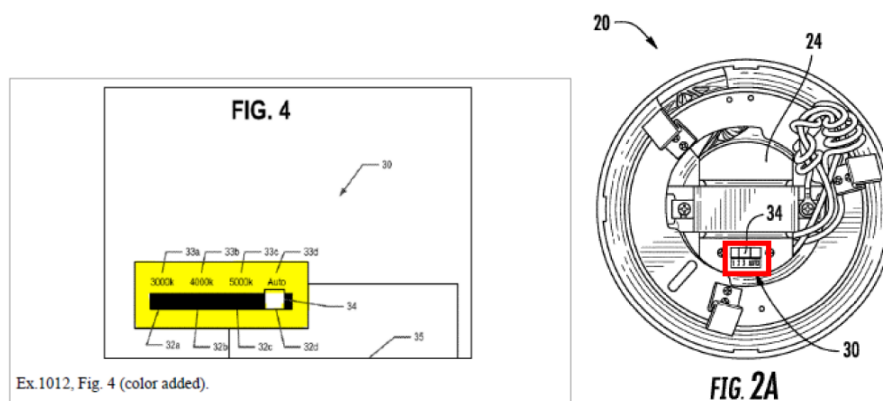
With respect to five switch positions (claims 4-5 and 16), Luminex asserts that “Chaimberg is clear” that “its luminaire can be modified” to add additional switch positions (Reply, 14), but it cites to no such disclosure in Chaimberg, and its expert simply parrots Luminex’s conclusory assertion. Thus, the rationale for Luminex’s obviousness assertion lacks support. Luminex again relies on undated Globe products as allegedly demonstrating that a five-position switch and locating a CCT switch in a junction box (claims 7-8, 19) would have been obvious modifications to

Chaimberg. Reply, 6-8, 12-13. These new theories fail for the reasons discussed above.

C. Claims 13, 15-16, 19-20 Over Halliwell (Ground 2)

Halliwell does not constitute prior art for claims 13, 15 and 16, and therefore Ground 2 fails against those claims. *Supra*, Section II. The Reply also confirms other fatal deficiencies in Ground 2.

Regarding elements 13(a) and (b), as established in the POR, Luminex failed to identify a switch “body” having at least one “coupling feature”, and instead highlighted part of a block diagram (Figure 4) depicting the outside of the luminaire housing, **not** a switch body.



Petition, 77 (“Halliwell’s exemplary CCT switch 30 includes a body, which is highlighted in yellow in Fig. 4”); EX1004, ¶¶308-09. The Reply does **not** dispute this, and thus it is clear that the Petition fails as to the switch “body” and “coupling feature.” POR, 64-71.

The Reply now argues that the “body” is instead some other, unidentified feature which may or may not exist within the luminaire housing. Reply, 24-25. Luminex still fails to explain what in Halliwell actually *is* the switch body and coupling feature required by claim 13, instead relying on descriptions *in the ’336 Patent* of a slide switch and DIP switch. *Id.* In contrast to Halliwell, the DIP switch “body” in the ’336 Patent is readily identifiable in Figure 1E, including coupling features (pins) that electrically couple it to an electrical cable via substrate 125. POR, 14-21. Halliwell does not use a DIP switch, and Luminex fails to identify any corresponding features in Halliwell. Luminex’s attempt to remedy the Petition’s failure using the ’336 Patent is improper hindsight. And Luminex’s further reference to extrinsic switch designs not mentioned in Halliwell or the Petition cannot remedy the failure.

The Reply further claims that “[i]t would have been obvious for a POSA to use ‘a cable of the luminaire’ for the wired connection” in Halliwell. Reply, 26. This is a complete departure from the Petition’s inherent anticipation theory, where Luminex argued that such electrical cable was “necessarily” present and coupled in the manner claimed. Pet., 77-78. Moreover, the Reply fails to address Signify’s evidence (and Dr. Eden’s own testimony) that the junction box located switch 40 in Halliwell would not be part of the luminaire itself, and thus not coupled to a cable of the luminaire as claimed. POR, 68-71. Luminex again provides no cogent

explanation as to why a remote switch would be part of the luminaire when device-located switch 30 is already present, as its expert confirmed. *Id.* Nor does Luminex identify any “coupling feature” disclosed in any junction box mounted switch of Halliwell, as no such coupling feature is disclosed or described.

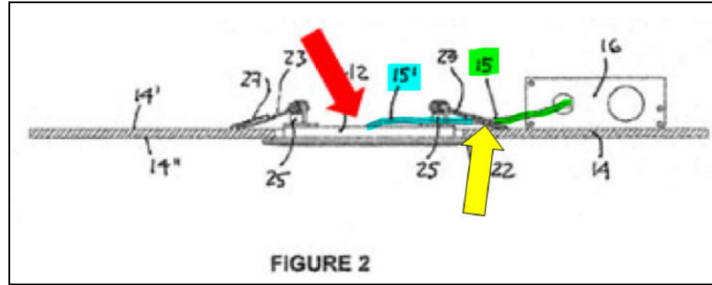
IV. CLAIMS 1-12 ARE NOT UNPATENTABLE

Independent claim 1 has a different scope than claim 13, as described in a later-filed application that became the '336 Patent. Nevertheless, the Petition's Grounds 1 and 2 relying on Chaimberg and Halliwell still fail, as confirmed by the Reply's repeated attempts to supplement the Petition with new and unsupported misrepresentations.

A. Claims 1-12 Over Chaimberg Alone or Combined with Roberge (Grounds 1a-1b)

1. Element 1(d)

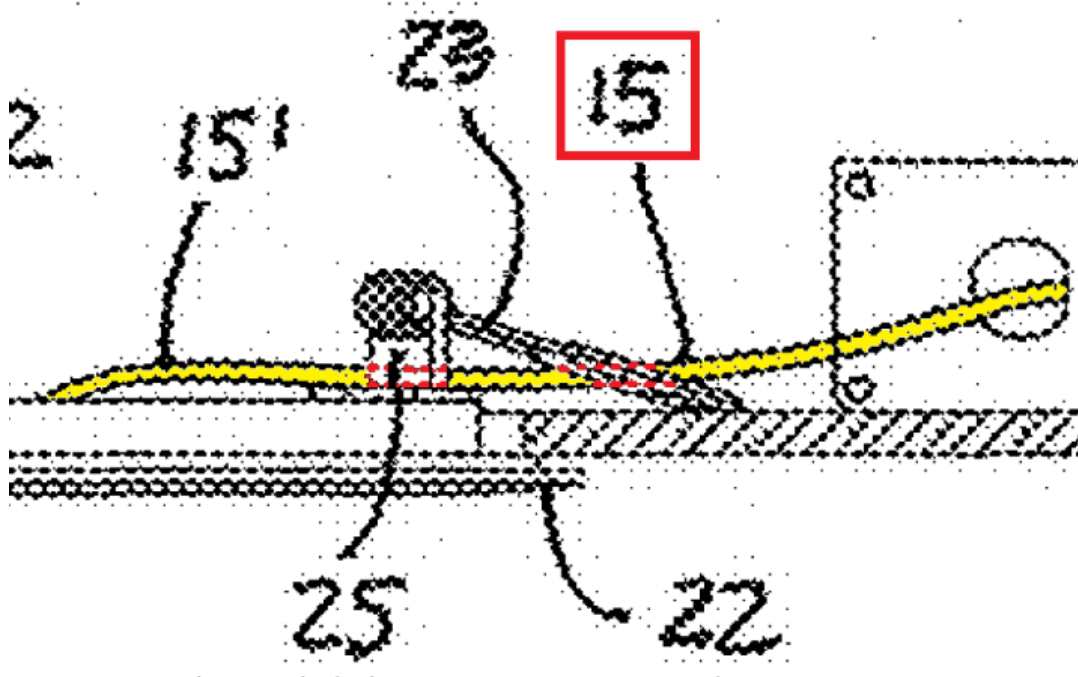
Signify's POR demonstrated that the Petition failed to show Chaimberg's switch is “disposed remotely from the housing” (element 1(d)). POR, 48-52. The Reply argues that “Chaimberg's Figure 2 confirms that switch 18 is remote” because it is allegedly “hidden from view” behind element 23 (a “clamping arm”) in that figure, as indicated by Luminex's yellow arrow below:



Reply, 2-3. This depiction is fabricated and wrong, as confirmed by Luminex’s failure to cite *any* passage in Chaimberg supporting its interpretation.

The manufactured figure in the Reply rests on an erroneous depiction of cable 15. Specifically, Luminex and Dr. Eden depicted 15 (green) and 15’ (blue) as separate *portions* of the cable, to argue that the switch (allegedly located between “portion[s]” 15 and 15’ in Figure 1) must be hidden behind element 23. Reply, 2-3; EX1027, ¶¶9-11. However, Chaimberg confirms that 15’ and 15” are *not* discrete “portion[s]” of the cable—instead, 15 is the entire cable, where 15’ identifies the end of that cable nearest to the luminaire housing, which Dr. Eden admitted at deposition. EX2052, 70:24-72:2; EX1003, 3:18-23. The Reply’s figure is simply wrong.

Figure 2 also shows an outline of cable 15 passing behind arms 23 and flange 25, with no indication of any switch present:



EX1003, Fig. 2 (annotated). If switch 18 were actually behind arm 23, its outline would be visible in Figure 2, because the casing of switch 18 is shown in Figure 1 to be larger than the diameter of cable 15. Thus, a POSITA would not have understood the switch to be located behind arm 23, but instead within the housing (not disposed remotely from it). POR, 48-52.⁴ As Dr. Krames explained, the switch is *not* shown in Figure 2, and the only locations it could be are within the luminaire

⁴ Notably, Dr. Eden was “not willing” to even address switch 18’s depiction with respect to arm 23 at his deposition, and even claimed that the size of switch 18 could have somehow “changed” between Figures 1 and 2. EX2052, 76:5-77:11, 79:10-80:9 (“who knows”), 81:6-14.

housing or in the driver housing; however, Chaimberg specifically teaches not to locate switch inside driver housing, leaving only the luminaire housing. EX2031, ¶¶168-170; EX1031, 53:23-54:17. Therefore, Luminex’s assertion that switch 18 “is indisputably external from housing 12” is very much disputed, and in fact lacks any support.

Similarly, the Reply cites Dr. Krames’ infringement analysis of an unrelated product (Menard SKU 348-2107). Reply, 3-4. But the SKU 348-2107 image clearly shows the backside of the product housing, confirming its switch is disposed remotely from that housing, as Dr. Eden acknowledged. EX2052, 81:15-82:22, 85:13-88:17, 89:20-90:1, 94:2-7 (“It appears to be.”). Chaimberg, by contrast, does not show or describe any backside to its housing, as Dr. Eden also confirmed. EX2052, 86:22-87:2. Thus, the Reply’s comparison (at 3) is easily distinguished.

Dr. Eden’s reply declaration separately claims that “even if Chaimberg did not anticipate claim 1, it would have been obvious for a POSA to slightly lengthen” Chaimberg’s cable “to ensure” the switch is not disposed within the housing. EX1027, ¶14; EX2052, 56:2-15, 59:10-18, 66:18-68:24. This theory is not in the Petition or Reply, lacks any supporting rationale, and underscores the problems with the ground as presented. 37 C.F.R. §42.6(a)(3) (barring incorporating arguments by reference).

Thus, the Reply confirms that Chaimberg does not teach claim 1.

2. Claim 7

Luminex does not dispute that (i) Chaimberg’s actual design (reflected in Figures 1 and 2) does not include a switch disposed on or within a junction box, and (ii) Chaimberg disparages what it calls a “conventional” concept of locating a CCT switch in a junction box. POR, 51-53. Simply calling a concept “conventional” does not make it so, and there is no other reference relied on in Ground 1 to support this assertion. At bottom, all that Chaimberg does is disparage locating the CCT switch in a junction box, and such disparagement (due to the risk of injury) constitutes teaching away. *Id.* (citing *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009)). Luminex fails to address *DePuy Spine*’s applicability to the facts at bar, or show support for Luminex’s apparent legal theory that a reference’s disparaging of a concept should suffice as a teaching despite the Federal Circuit’s well-established “teaching away” caselaw. Reply, 5 (“That defies logic.”). Luminex’s citation to *KSR*’s general obviousness standard (*id.*, 6) is similarly inapposite, as that case did not involve a reference expressly disparaging the claim element.

Luminex also provides no citation for its assertion that Dr. Krames “agrees” Chaimberg discloses the limitations of claim 7. Reply, 5. What Dr. Krames was asked was:

Q. [I]f there were a switch located on driver housing 16 in Chaimberg, that switch would be remote from the light fixture housing 10; is that right?

A. Yes. If the switch is on driver housing 16 as shown in figures 1 and 2 of Chaimberg, that switch would be remote from the light fixture because the driver housing 16 is remote from Chaimberg's light fixture.

EX1031, 38:20-39:4; Reply, 4-5. Agreeing to a hypothetical "if" regarding Chaimberg is not an agreement on what Chaimberg actually discloses. Indeed, Dr. Krames has consistently opined that Chaimberg does *not* disclose such a design (and cautions away from it). EX2031, ¶¶170, 173-74; EX1031, 53:13-54:17. Also, neither Chaimberg nor Luminex identifies any reference describing such a design, suggesting it was not "usual[]." EX1031, 35:2-36:25.

Faced with these failures, Luminex again cites theories based on Roberge, a 2014 patent publication, and a Globe product—all of which appear *nowhere* in the Petition for claim 7. Reply, 5-8. Moreover, the Globe product does *not* illustrate a CCT switch located within a junction box, and (if anything) is consistent with Chaimberg's cautions *against* doing so. *Id.*, 7. Further, Luminex's citations to Roberge and the patent publication fail to establish that *Chaimberg* discloses or renders obvious claim 7, as the Petition contends. Pet., 32-35.

3. The Petition's Obviousness Ground 1b Fails

These failures continue into Ground 1b, where Luminex seeks to combine Roberge's Figure 34i "dial" embodiment with Chaimberg's "toggle" switch design.

Luminex does not meaningfully dispute that Roberge’s disclosed switch is not designed to be part of a luminaire and is instead a separate device used to pre-select CCT settings for later installation. POR, 55-59; Reply, 13-14. Instead, Luminex argues that a POSITA would simply use a different switch design in Chaimberg, but fails to explain why or how Figure 34i would be implemented, instead relying solely on hindsight to arrive at the invention.

As explained above, Luminex’s specific combinations for dependent claims (including claims 4-5 and 7-8) are likewise unsupported and based on both hindsight and *new* extrinsic evidence (including undated Globe products) that cannot remedy the Petition’s failures. *Supra*, Section III.B. Luminex has thus failed to demonstrate unpatentability in view of Chaimberg alone or combined with Roberge.

B. Ground 2: Claims 1, 2-5, 7, and 9-12 Are Not Unpatentable Over Halliwell

1. Element 1(d)

Luminex does *not* dispute (nor can it) that Halliwell *requires* its device-mounted CCT switch 30 to operate as intended. Consequently, Halliwell does not teach a CCT switch “disposed remotely from the housing,” as recited in claim 1.

Instead, Luminex’s Reply abandons the Petition’s assertion that remote switch 40 can be used “in place of” device-mounted switch 30 (Pet., 62), and now asserts that switch 40 would be used “in addition to” switch 30. Reply, 9. However, Luminex’s own expert made clear that “switch 40” is “*not a switch at all*,” and

instead “simply ... conveys instructions” to device-mounted switch 30. EX2030, 182:20-184:7. Thus, even Luminex’s new theory fails in view of its own expert’s admissions. Ground 2 fails on this basis alone.

2. Element 1(e)

Luminex does *not* dispute that the Petition expressly relied upon *all four* positions of switch 30 as positions corresponding to “discrete CCT output[s],” and it further does *not* dispute that the fourth position (Auto) does not, in fact, correspond to a discrete CCT output. POR, 74-75. In recognition of this failure, Luminex advances a *new* theory (buried in a footnote) where the “Auto” position is apparently omitted, and only the first three positions of switch 30 are considered. Reply, 9 n.4. This new theory, missing from the Petition, should be rejected.

3. Claims 7 and 11

Luminex fails to address Signify’s evidence demonstrating that Halliwell does *not* disclose or render obvious claim 7 and 11 because its remote switch is not located in a junction box *of the luminaire* and is instead located, e.g., at a wall location where it can be accessed at all times (as Dr. Eden confirmed). POR, 75-77. Therefore, Luminex has conceded that Ground 2 fails against those claims.

V. THE PETITION IS TIME BARRED

Luminex incorrectly asserts that Signify’s arguments have already been rejected by then-Director Ms. Vidal. Reply, 34. The former Director addressed only evidence of record at that time, and did not consider the additional evidence

submitted with the POR that directly addressed (and refuted) the Director’s primary concern—i.e., that Luminex, the alleged indemnitor, may not have learned of the infringement claims before Menard’s IPR deadline had passed. POR, 78-82. Therefore, Luminex’s suggestion that this issue is settled is incorrect.

Luminex now acknowledges that Menard had relayed Signify’s infringement allegations to it “almost three years before the IPR,” and made clear its expectation that Luminex would defend Menard’s interests in any lawsuit concerning the same. Reply, 35-36. These were not mere “routine business communications,” but rather evidence that Luminex was acting on behalf of Menard and in Menard’s interests. Consequently, the Petition should be time barred.

VI. CONCLUSION

For the reasons above, the Petition fails.

May 5, 2025

Respectfully submitted,

/Justin J. Oliver/
Justin J. Oliver (Reg. No. 44,986)
Venable LLP
600 Massachusetts Avenue, NW
Washington, D.C. 20001
Tel: (202) 721-5423

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I hereby certify that the foregoing Patent Owner's Sur-Reply to Petitioner's Reply contains 5,598 words as measured by the word processing software used to prepare the document, excluding the cover page, signature block, and portions exempted under 37 C.F.R. § 42.24(a).

Respectfully submitted,

May 5, 2025

/Justin J. Oliver/
Justin J. Oliver (Reg. No. 44,986)
Venable LLP
Tel: (202) 721-5423

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Patent Owner's Sur-Reply to Petitioner's Reply, including the new exhibit, was served to Petitioner by causing it to be sent by email to counsel for Petitioner at the following email address:

jrnightingale@jonesday.com

wdevitt@jonesday.com

vkhatri@jonesday.com

jmessing@jonesday.com

Respectfully submitted,

May 5, 2025

/Justin J. Oliver/
Justin J. Oliver (Reg. No. 44,986)
Venable LLP
Tel: (202) 721-5423