

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUMINEX INTERNATIONAL CO., LTD.
and MENARD, INC.,
*Petitioners*¹

v.

SIGNIFY HOLDINGS B.V.,
Patent Owner

Case IPR2024-00101

U.S. Patent No. 10,299,336

**LUMINEX INTERNATIONAL CO., LTD.'S OPPOSITION
TO PATENT OWNER'S REQUEST FOR
DIRECTOR REVIEW OF FINAL WRITTEN DECISION**

¹ Menard, Inc. filed a petition and a motion for joinder in IPR2024-01469 and has been joined as a petitioner in this proceeding.

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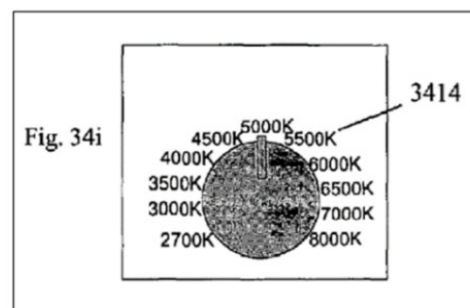
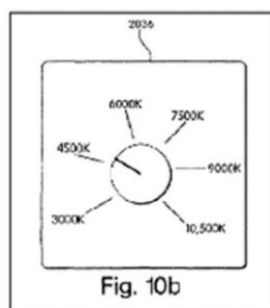
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I. INTRODUCTION

Claims 13 and 15 of U.S. Patent No. 10,299,336 (“the ’336 patent”) are broad, reflecting well-known parts in an obvious combination, and the Board correctly held them unpatentable over Reiff (EX1013). Directed to electrical switches, these claims require basic features of all such switches: a “body,” “an actuator,” and “at least one coupling feature” disposed on the body. EX1027 (Eden Decl.), ¶85 (“Any switch that has ever been devised has a ‘body’” and other “basic parts, one of which are electrical connectors,” called “coupling feature” in the ’336 patent). The alleged invention is coupling a conventional switch to an electrical cable of the light fixture (“luminaire”), enabling the switch to “control[] a correlated color temperature (CCT) of light emitted by [the] luminaire.” EX1001, cl. 13. The switch thus permits switching from “warm” white light with a lower CCT (*e.g.*, 2500K) to “cool” white light with a higher CCT (*e.g.*, 5000K). But switches for adjusting a luminaire’s CCT were known *more than 15 years* before the alleged 2016 priority date. EX1002 (filed 2000, left below) and EX1011 (filed 2004, right) are examples:



Reiff (filed in 2004), just like all of the Petition’s asserted references, discloses

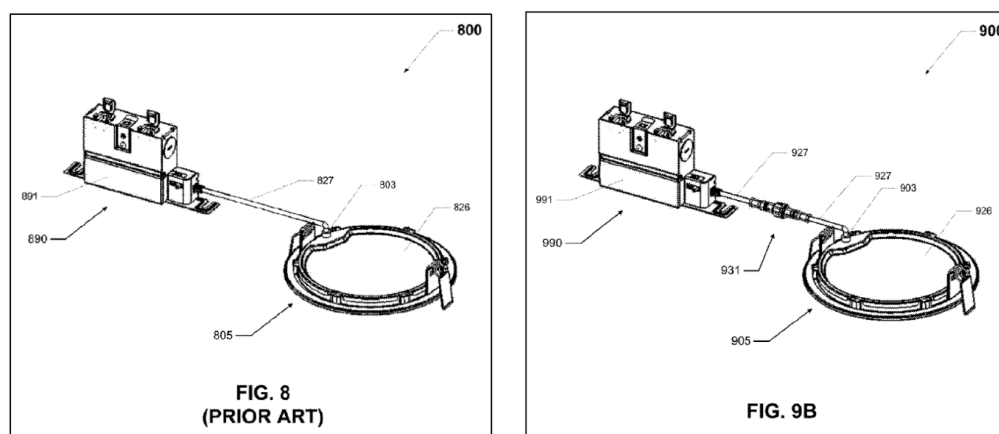
CCT switches. Its “light” can “switch[] between [fluorescent and LED] light sources” so that “the color of the emitted light can easily be switched.” EX1013, Abstract. Both the fluorescent and LED lights “may provide white light” (*id.*), such that the switch enables switching from warmer white light with a lower CCT to a cooler white light with a higher CCT. Reiff thus provides a straightforward teaching of claims 13 and 15. The Board correctly held these claims obvious over Reiff.

Signify’s Request for Director Review (“DR Request”) largely sidesteps the substance of the Board’s unpatentability holding, focusing instead on alleged procedural defects. But contrary to Signify’s contentions, the Board’s obviousness holding is consistent with the Petition, *i.e.*, that, given the disclosures of Reiff, its switches anticipate or render obvious claims 13 and 15. The Board and the Reply did not improperly “expand” the Petition or present “new” theories.

Signify’s complaints about a supposedly deficient obviousness analysis are likewise misguided. Given Reiff’s disclosures, this was a straightforward case. Whether labeled anticipation or single-reference obviousness, Reiff teaches the claims. Signify demands that the Board engage in a more complicated analysis for no reason. Like the Petition, the Board relied on closely related disclosures in Reiff—*e.g.*, its “Abstract, Summary of the Invention, and claims,” the embodiment of Figure 2, and various other “relate[d]” disclosures, Paper 47 at 145-46—to hold the claims obvious. The Director should deny review.

II. BACKGROUND

The '336 patent issued from a continuation-in-part (“CIP”) application filed on June 21, 2018. EX1001. The CIP’s new disclosure was directed to the coupling of a known switch (a CCT switch for controlling the CCT of a luminaire’s light) to an electrical cable of a known luminaire. Paper 1 at 21-23. To contrast this alleged invention with the prior art, the patent depicts the “Prior Art” luminaire 800 of Figure 8 (left below) and the alleged invention as luminaire 900 of Figure 9B (right):



The prior-art luminaire of Figure 8 includes housing 805 with one or more light sources, a junction box 890, and an electrical cable 827 connected to the light sources. EX1001, 10:66-11:12. The luminaire of Figure 9B differs in only one respect: It includes a conventional switch 931 coupled to electrical cable 927. *Id.*, 11:25-29 (“[T]he luminaire 900 ... is substantially the same as the luminaire 800 of FIG. 8, except that the luminaire 900 ... includes the example switch 931.”).

Claims 1-12 of the '336 patent are directed to the alleged invention of Figure 9B. They recite, *inter alia*, a luminaire with “a housing,” “an electrical cable,” and

“a switch coupled to the electrical cable” and “disposed remotely from the housing,” just as in Figure 9B. The Board held all of these claims (except claim 8) unpatentable (Paper 47 at 64-99, 127-31), and the DR Request does not challenge this holding.²

Instead, the DR Request challenges the Board’s unpatentability holding as to independent claim 13 and its dependent claim 15, which are even broader than others held unpatentable: Whereas claims 1-7 and 9-12 are directed to a “luminaire” with a CCT switch and other components (“a housing,” “an electrical cable,” etc.), claims 13 and 15 are directed exclusively to the CCT switch and its conventional components. Claim 13 is representative and recites:

[13pre] *A switch for controlling a correlated color temperature (CCT) of light emitted by a luminaire, the switch comprising:*

[13a] a body;

[13b] *at least one first coupling feature disposed on the body, wherein the at least one first coupling feature is configured to electrically couple to an electrical cable of the luminaire; and*

[13c] an actuator disposed on the body, wherein the actuator has a range of positions,

[13d] *wherein each position of the range of positions of the actuator corresponds to a CCT of the light emitted by the luminaire.*

EX1001, cl. 13 (labels and emphases added). The DR Request concerns 13pre and 13d (the “CCT Switch Limitations”) and 13b (the “Coupling Feature Limitation”).

² The DR Request also does not challenge the Board’s unpatentability holdings for claims 14 and 18-20. Paper 47 at 110-12, 127-28, 131-32.

As relevant here, Ground 3 challenged claims 13 and 15 on the basis that “Reiff anticipates under §102 and/or renders obvious under §103.” Paper 1 at 15. In its arguments for this anticipation/single-reference obviousness ground, the Petition walked through each element of claims 13 and 15 to show that Reiff’s disclosure teaches the claims, and as support the Petition cited Reiff as well as the opinions of Luminex’s expert, J. Gary Eden, Ph.D. *See id.* at 82-89 (citing EX1004 & EX1013). In its Preliminary Response, Signify did not challenge any grounds on the merits, instead raising only § 315 and *Fintiv* arguments. *See* Paper 6.

The Board instituted IPR, and, in its detailed decision, the Board recognized that Ground 3 raised both § 102 and § 103 arguments. *See* Paper 14 at 14, 56. And for the CCT Switch Limitations and all but one other limitation, the Board preliminarily agreed with Luminex that Reiff discloses the limitations. *Id.* at 58-59, 61-63. For the remaining limitation (the Coupling Feature Limitation), although the Board found that “Petitioner does not show where Reiff describes the claimed ‘first coupling feature’ as ‘disposed on the body’ [as claimed] instead of ‘disposed in the body,’” the Board agreed that “Petitioner establishes sufficiently for § 103 that Reiff teaches or suggests limitation 13b.” *Id.* at 60-61.

During trial, Signify argued that Luminex failed to make an obviousness argument for Reiff, but, like its DR Request, it relied on a superficial and unsupported reading of the Petition and misunderstandings of fact. For instance,

Signify argued that Reiff's discussion of "color" did not refer to white light. Paper 29 at 38. As the Board observed, however, Reiff's discussion of color includes white light. Paper 47 at 143-44. Signify also contended that "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." Paper 41 at 11. As the Board recognized, this ignored the Petition's element-by-element analysis of the claims relying on various "relate[d]" disclosures of Reiff, not just a single disclosure, like its Figure 2 embodiment, as would be appropriate for an anticipation theory. Paper 47 at 145-46, 154 (citing *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) ("Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim.*")).³ The Board thus rejected Signify's assertion that the Petition did not raise an obviousness ground for Reiff. *See* Paper 47 at 145.

On the merits, after reviewing all of the evidence, and carefully addressing each side's arguments, the Board "determine[d] that Reiff teaches the invention covered by claim 13 but does not disclose every element of claim 13 'arranged as in the claim'"; the Board thus denied a § 102 basis, but found that Luminex "has shown

³ Signify's DR Request again tries to belittle Ground 3 on the basis of its page length compared to the "67" pages of Grounds 1a, 1b, and 2. Paper 49 at 3 n.3. Ground 3, however, concerned only two claims whereas Grounds 1a, 1b and 2 addressed all 20 claims, and often multiple times in different grounds.

by a preponderance of the evidence that claim[s] 13 [and 15 are] unpatentable under § 103 because the claim[s] would have been obvious over Reiff.” *Id.* at 154-55.

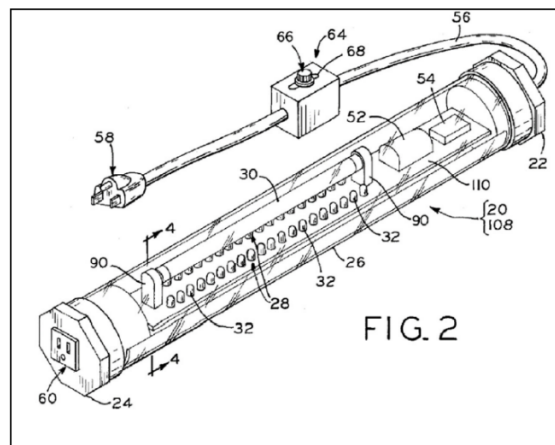
Now, in its DR Request, Signify tries to refashion this well-reasoned determination into bold claims of “a new theory post-institution,” “manufactured rationales,” and “an important policy issue.” Paper 49 at 1. Its DR Request, however, concerns only two of the 20 challenged claims, most of which the Board found unpatentable and, as noted above, Signify does not challenge the FWD on those other claims. *See* Paper 47 at 159-60. Also, its DR Request concerns only one of the many issues Signify intends to raise on appeal and has not raised here. *See* Paper 50 (seeking to raise at least ten issues on appeal); *see also* Appeal No. 25-2093, Dkt. No. 17 (Federal Circuit remand order retaining jurisdiction other than for “the Director to consider the merits of Signify’s rehearing request”). Luminex hereby responds to the limited, and erroneous, arguments the DR Request raises.

III. ARGUMENT

Contrary to the DR Request (at 9-15), the Reply and the Board did not improperly go outside the Petition. The Petition asserted both anticipation and obviousness over a single reference requiring no motivation to combine. The Reply reinforced this and appropriately responded to Signify’s arguments, and the Board confined its adoption of Ground 3 to the Petition’s theories.

A. The Findings on the CCT Switch Limitations Were Proper

In challenging the CCT Switch Limitations as anticipated by or obvious over Reiff, the Petition cited Reiff's Abstract disclosing a "light" with components "for switching between two light sources" that "may provide white light" to "easily ... switch" the "color of the emitted light," and also Figure 2's depiction of switching between fluorescent and LED light sources. Paper 1 at 82-85, 88-89.



EX1013, Fig. 2. In Figure 2, switch 66 enables selecting between fluorescent lamp 30 and LEDs 32. EX1013, 4:28-36, 6:18-24. The Abstract further explains that the fluorescent and LED sources "may provide white light," such that switching enables, *e.g.*, switching between warmer (redder) white light having a lower CCT to cooler (bluer) white light having a higher CCT. *Id.*, Abstract; EX1004 (Eden Decl.), ¶¶85, 338. The Petition explained that Reiff's switches include "two 'on' positions correspond[ing] to different CCT emitted by the luminaire: the LED operating position corresponds to a CCT emitted by the LEDs, and the fluorescent lamp corresponds to a 'different' CCT emitted by the fluorescent lamp." *Id.* at 83-84, 88.

The Reply stayed within the bounds of the Petition, elaborating when necessary to address Signify’s attempted rebuttals. For instance, with respect to the Petition’s explanation that Reiff’s switch 66 is a CCT switch because it is used for “selecting between ... a regular white light fluorescent light source ... or a ‘colored’ LED light source,” Paper 1 at 84 (citing EX1013, 4:28-36), Signify argued that “the concept of CCT would not even apply to Reiff’s ‘colored’ light source” because “Reiff uses ‘color’ to describe perceived color (e.g., ‘blue’),” and a “POSITA would not understand CCT to describe saturated or monochromatic colors.” Paper 29 at 33-35. Luminex’s Reply addressed this contention: “PO’s argument misunderstands Reiff, which used ‘color’ in referring to white light, not just ‘monochromatic colors.’” Paper 35 at 32. For support, Luminex cited additional portions of Reiff that did not introduce a new theory or element but simply demonstrated that Reiff used “color” to also mean white light, refuting Signify’s contrary contention. *Id.* at 32-33 (citing EX1013, Abstract, 3:67-4:3; 3:41-49, 6:43-45, 7:45-58 and explaining that “Reiff’s disclosure of selecting between light sources with different ‘colors’ encompasses selecting between fluorescent light source 30 (white light) and LED light source 32 (also white, though a different color than fluorescent light source 30)”). For instance, Reiff’s Abstract discloses “switching between [fluorescent and LED] light sources” to “easily...switch[]” the “color of the emitted light,” where “[t]he light sources may provide white light,” which the Reply quoted. *Id.* at 33.

Such reply arguments are “proper” because they are “responsive and simply expand[] on previously raised arguments.” *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1384 (Fed. Cir. 2023). “In fact, the introduction of new evidence in the course of the trial is to be expected in IPR trial proceedings and permissible as long as the opposing party is given notice of the evidence and an opportunity to respond to it.” *Id.* (internal citations omitted). Here, Signify had that opportunity in its Sur-Reply, and did so. Paper 41 at 8-11; *see also Skky, Inc. v. MindGeek, s.a.r.l.*, 859 F.3d 1014, 1022-23 (Fed. Cir. 2017) (reply did not contain new arguments because it “responded to the positions laid out by [patent owner],” patent owner had the opportunity to, and did, respond, and the Board relied “on the same combinations of references that were set forth in its institution decision”).

Likewise, the Board did not raise a new theory. In a detailed analysis, it found that Reiff “teaches” the CCT Switch Limitations after carefully addressing both sides’ arguments and evidence, and the Board adopted Luminex’s. For instance, the Board rejected Signify’s contention that “the concept of CCT would not even apply to Reiff’s ‘colored’ light source.” Paper 47 at 139-44 (citing Paper 29 at 33, 35)). Citing express disclosures in Reiff, the Board found that “Reiff uses the word ‘color’ to describe not only monochromatic or saturated colors (*e.g.*, red, green, and blue) but also white light.” Paper 47 at 143. The Board also rejected Signify’s argument that Reiff’s two white light sources could have the same CCT despite producing

different colors (such that the switch would not adjust CCT). *See* Paper 29 at 32, 35-7 (Signify arguing that even different hues of white light may output the same CCT). Citing Exhibit 2051, introduced by Signify, the Board recognized that if Reiff’s two light sources had the same CCT, “then switching between [them] would produce only an insubstantial change in chromaticity,” but Reiff describes its switching as “produc[ing] a *substantial change in chromaticity*,” thus refuting Signify’s argument. Paper 47 at 144 (citing EX1013, 3:30-31, 3:47-48, 5:64-66; EX1027 ¶125) (emphasis added). In other words, when the Board observed that Reiff teaches “switching between different colors of white light, including switching between white light with different CCT values,” it was responding to Signify’s arguments. Paper 47 at 144. The FWD “properly consider[ed], and reject[ed],” Signify’s own arguments. *IGT v. Zynga Inc.*, 144 F.4th 1357, 1372 (Fed. Cir. 2025).

Signify faults the Board for citing “parts of Reiff” and testimony from Dr. Eden “never cited by either party.” Paper 49 at 8. That was not error. The Board does not adopt a “new theory” when it cites additional aspects of a prior art reference to rebut the patent owner’s arguments. *IGT*, 144 F.4th at 1369, 1371-72. *IGT* explained that “the Board was not limited to citing only portions of the prior art specifically drawn to its attention by [the petitioner]” where “the thrust of the Board’s analysis did not depart from [the petitioner’s] argument.” *Id.* at 1372-73 (internal citations omitted). Likewise here, the “thrust” of the Board’s analysis did

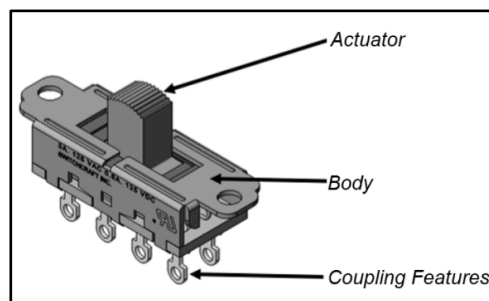
not depart from Luminex's. For instance, the Board cited Reiff's claim 2 as an additional example refuting Signify's contention that Reiff does not use "color" to describe white light; doing so was squarely consistent with analogous disclosures in Reiff cited by Luminex (and also adopted by the Board). *See* Paper 47 at 143-44.

Finally, Signify aims at a false target in complaining that the Board invoked a "staircase" of analysis not present in the Petition. *See* Paper 49 at 13-14. Reiff does not require Signify's purported "staircase." As the Board found, and the Petition explained, Reiff's disclosures regarding white light, switches, light fixtures with two different sources of white light, and switching between those sources readily teach the CCT Switch Limitations. Paper 47 at 143-45; Paper 1 at 84-89.

B. The Findings on the Coupling Feature Limitation Were Proper

Likewise, with respect to the Coupling Feature Limitation ("at least one first coupling feature disposed on the body"), the FWD tracked the Petition. Relying on Figure 2 and support from Dr. Eden, the Petition explained that, "[b]ecause the control box 64 [and switch 66] is located on the electrical cable 56, it is necessarily electrically coupled to electrical cable 56, and therefore must include at least one coupling feature." Paper 1 at 86 (citing EX1004, ¶344); *see also id.* at 85 (explaining that Figure 2's "control box 64 include[ing] a switch 66 ... necessarily includes a body for the switch"). The Petition further listed several examples of such coupling features, as provided by Dr. Eden. *Id.* at 86-87.

In its Response, Signify argued that “Reiff is *silent* on the contents of control box 64,” and speculated that Reiff’s switch could be “a wireless switch that is not configured to couple with the cable at all.” Paper 29 at 41-42 (emphasis in original). Again, Luminex properly rebutted Signify’s baseless argument, pointing to Figure 2’s switch 66 and Reiff’s description that switch 66 is “linearly slideable in slot 68,” thus confirming that a “POSA would have understood Reiff’s switch as a slide switch with a body and at least one coupling feature.” Paper 35 at 27 (citing EX1013, 4:33-36). This was a direct and appropriate response to Signify’s argument. Likewise, because Signify’s Response argued that “Reiff does not disclose a ‘coupling feature disposed on the body’” (Paper 29 at 40-41), the Reply cited documentary evidence showing that slide switches (like in Reiff, *see* EX1013, Fig. 2, 4:28-36; EX1027, ¶¶103-105) were understood by a POSA at the time of the alleged invention to include this feature. Paper 35 at 27-28.



Id. at 28 (citing EX1029 (9/14/09 datasheet with basic three-position slide switch)). Contrary to the DR Request, Luminex’s Reply did not present a new obviousness theory. The Reply refuted Signify’s arguments, which is proper.

C. Signify’s Remaining Arguments Also Lack Merit

First, Signify says the Board shifted the burden to it, but that is unsupported. *See* Paper 49 at 1, 9, 14. The Board repeatedly stated that “the burden remains on Petitioner to demonstrate unpatentability,” even for limitations Signify did not dispute. *See* Paper 47 at 95, 108. Indeed, the Board found claims 8 and 17 not unpatentable even though Signify did not address those claims at all, confirming that the Board consistently held Luminex to its burden. *Id.* at 97, 110.

Signify invokes only the FWD’s remark that “Patent Owner does not indicate a reason for [two different white lights having the same CCT value] when implementing Reiff’s teachings.” Paper 49 at 9; Paper 47 at 144. That, however, did not transfer the burden; it was simply an assessment of Signify’s argument that both of Reiff’s light sources could have the same CCT. *See* Paper 29 at 35-37; *supra* Section III.A. Thus, Signify’s reliance on *Magnum Oil* is misplaced. *See* Paper 49 at 14. There, the Board made a § 103 argument on the petitioner’s “behalf” by allowing the petition to “borrow” a motivation-to-combine rationale from one set of references and apply it to another, and then shifted the burden to the patent owner by faulting it for not rebutting that unarticulated rationale. *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1377-78, 80 (Fed. Cir. 2016). Here, by contrast, the Board neither made an argument on Luminex’s behalf, nor shifted the burden to Signify.

Second, Signify calls the Petition’s obviousness arguments “stray” or

“absent,” trying to make hay from a “contradictory” heading. Paper 49 at 1-4. But as it concedes, *id.* at 3, Ground 3 asserted both anticipation and obviousness, and it was a single-reference obviousness theory. In focused, straightforward contentions, the Petition explained how the claims are unpatentable under §§ 102 and 103, given the clear disclosures of Reiff. Paper 1 at 84-89. Signify has no basis to demand a more complicated presentation or analysis.

Third, Adaptics is inapt. There, the Board denied institution “in the interests of efficient administration of the Office and integrity of the patent system and as a matter of procedural fairness to Patent Owner” because the petition was “voluminous and excessive,” containing a “catch-all” obviousness ground that combined ten references “yielding hundreds of possible combinations”—amounting to “an empty invitation for the Board and Patent Owner to search the record for ... the full breadth of Petitioner’s contentions.” *Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20 at 18-19, 21-24 (PTAB Mar. 6, 2019) (informative). Nothing comparable exists here—this was a single-reference ground with no “catch-all” combinations nor burden on the Board or Signify to decipher the contentions. Notably, at institution, the Board recognized and analyzed obviousness as part of Ground 3, confirming the Petition was sufficiently clear. *See* Paper 14 at 14, 56-64.

IV. CONCLUSION

The Director should deny review.

Dated: October 29, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a complete and entire copy of **LUMINEX INTERNATIONAL CO., LTD.’S OPPOSITION TO PATENT OWNER’S REQUEST FOR DIRECTOR REVIEW OF FINAL WRITTEN DECISION** has been served in its entirety by e-mail to Patent Owner’s counsel of record and Petitioner Menard’s counsel of record:

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