UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

PRE-EFFECTIVE NO. 1 TO FORM S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

AELUMA, INC.

(Exact name of registrant as specified in its charter)

<u>Delaware</u> (State or other jurisdiction of incorporation or organization)

85-2807351

I.R.S. Employer Identification Number

27 Castilian Drive, Goleta, California Tel: (805) 351-2707

(Address, including zip code, and telephone number, including area code of registrant's principal executive offices)

Jonathan Klamkin Chief Executive Officer Aeluma, Inc. 27 Castilian Drive, Goleta, California Tel: (805) 351-2707

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box \(\preceq \)

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plants, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. \square

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

 Large accelerated filer
 □
 Accelerated filer
 □

 Non-accelerated filer
 ⊠
 Smaller reporting company
 ⊠

 Emerging growth company
 ⊠

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act. \square

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement relating to these securities that has been filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

(Subject to Completion, Dated August 6, 2025)

PROSPECTUS \$100,000,000 Aeluma, Inc. Common Stock Preferred Stock Warrants Subscription Rights Debt Securities Units

We may from time to time, in one or more offerings at prices and on terms that we will determine at the time of each offering, sell common stock, preferred stock, warrants, or a combination of these securities, or units, for an aggregate offering price of up to \$100,000,000. This prospectus describes the general manner in which our securities may be offered using this prospectus. Each time we offer and sell securities, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock, par value \$0.0001 per share, is currently listed on the Nasdaq Capital Market under the symbol "ALMU". As of the date of this prospectus, none of the other securities that we may offer by this prospectus is listed on any national securities exchange or automated quotation system.

As of August 5, 2025, the aggregate market value of the voting and non-voting common equity held by non-affiliates was \$294,760,073, based on the closing price of \$21.34 on August 4, 2025. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date of this prospectus.

Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell our common stock in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75,000,000. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date of this prospectus.

The securities offered by this prospectus involve a high degree of risk. See "Risk Factors" beginning on page 6, in addition to Risk Factors contained in the applicable prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

We may offer the securities directly or through agents or to or through underwriters or dealers. If any agents or underwriters are involved in the sale of the securities their names, and any applicable purchase price, fee, commission, or discount arrangement between or among them, will be set forth, or will be calculable from the information set forth, in an accompanying prospectus supplement. We can sell the securities through agents, underwriters, or dealers only with delivery of a prospectus supplement describing the method and terms of the offering of such securities. See "Plan of Distribution."

This prospectus is dated August 6, 2025

Explanatory Note

We are filing this Pre-Effective Amendment No. 1 to the Registration Statement on Form S-3 originally filed with the U.S. Securities and Exchange Commission (the "SEC") on July 31, 2025, to correct typographical errors included therein.

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You should rely only on the information contained or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference into this prospectus. If any person does provide you with information that differs from what is contained or incorporated by reference in this prospectus, you should not rely on it. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You should assume that the information contained in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information contained in any document we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any prospectus supplement or any sale of a security. These documents are not an offer to sell or a solicitation of an offer to buy these securities by anyone in any jurisdiction in which such offer or solicitation is not authorized, or in which the person is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one of more offerings up to a total dollar amount of proceeds of \$100,000,000. This prospectus describes the general manner in which our securities may be offered by this prospectus. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update, or change information contained in this prospectus or in documents incorporated by reference in this prospectus. The prospectus supplement that contains specific information about the terms of the securities being offered may also include a discussion of certain U.S. Federal income tax consequences and any risk factors or other special considerations applicable to those securities. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus or in documents incorporated by reference in this prospectus, you should rely on the information in the prospectus supplement. You should carefully read both this prospectus and any prospectus supplement together with the additional information described under "Where You Can Find More Information" before buying any securities in this offering.

This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, certain market and industry data and obtained from independent market research, industry publications and surveys, governmental agencies and publicly available information. Industry surveys, publications and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We believe the data from such third-party sources to be reliable. However, we have not independently verified any of such data and cannot guarantee its accuracy or completeness. Similarly, internal market research and industry forecasts, which we believe to be reliable based upon our management's knowledge of the market and the industry, have not been verified by any independent sources. While we are not aware of any misstatements regarding the market or industry data presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors.

Unless the context otherwise requires, references to "we," "our," "us," "ALMU" or the "Company" in this prospectus mean AELUMA, INC., a Delaware corporation, on a consolidated basis with its wholly owned subsidiaries, as applicable.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents and information incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements are based on our management's beliefs and assumptions and on information currently available to our management. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets, or future development and/or otherwise are not statements of historical fact.

All statements in this prospectus and the documents and information incorporated by reference in this prospectus that are not historical facts are forward-looking statements. We may, in some cases, use terms such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "frojects," "should," "will," "would" or similar expressions or the negative of such items that convey uncertainty of future events or outcomes to identify forward-looking statements. "Common Stock" is the Common Stock of Aeluma, Inc., par value US\$0.0001 per share.

Forward-looking statements are made based on management's beliefs, estimates and opinions on the date the statements are made, and we undertake no obligation to update forward-looking statements if these beliefs, estimates and opinions or other circumstances should change, except as may be required by applicable law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements.

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ABOUT AELUMA

Company Overview

Aeluma develops novel optoelectronic and electronic devices for sensing, communication, and computing applications. Aeluma has pioneered a technique to produce semiconductor materials and chips using high-performance compound semiconductors on large diameter substrates that are commonly used to manufacture mass market microelectronics. This enables cost effective manufacturing of high-performance photodetectors and photodetector arrays for imaging applications in mobile devices, as well as other applications. Aeluma's technology has the potential to impact a broad range of market verticals. Aeluma is based in Goleta, California, considered one of the most important technology hubs in the world that some claim is the next Silicon Valley. The Company operates in a 9,000 sq. ft. facility with a state-of-the-art R&D/manufacturing cleanroom and access to world-class rapid prototyping capabilities. The facility houses unique equipment for scalable manufacturing. Aeluma also partners with production-scale fabrication foundries and packaging companies. Aeluma maintains extensive patent protection and trade secrets that relate to its materials, manufacturing technology and applications.

Our Mission

Aeluma is a transformative semiconductor company specializing in high-performance technology that scales. Applications include mobile, automotive, AI, defense & aerospace, communication, AR/VR, HPC, and quantum computing. Aeluma aims to break out of traditional manufacturing to expand the reach of its technology into mass markets. According to MarketsandMarketsTM, the demand for higher performance semiconductors in consumer markets is increasing. Aeluma's disruptive technology is

scalable, cost effective, and does not sacrifice performance.

Corporate Structure

We were incorporated as Parc Investments, Inc. in the State of Delaware on August 21, 2020. Prior to the Merger (as defined below), we were a "shell company" (as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")).

On June 22, 2021, our board of directors and all of our pre-Merger stockholders approved a restated certificate of incorporation, which was effective upon its filing with the Secretary of State of the State of Delaware on June 22, 2021, and through which we changed our name to "Aeluma, Inc." On June 22, 2021, our board of directors also adopted restated bylaws.

On June 22, 2021, Biond Photonics, Inc., a privately held California corporation ("Biond Photonics") merged with and into our wholly owned subsidiary, Aeluma Operating Co., a corporation formed in the State of Delaware on June 22, 2021 ("Acquisition Sub"). Pursuant to this transaction (the "Merger"), Acquisition Sub was the surviving corporation and remained our wholly owned subsidiary, and all of the outstanding stock of Biond Photonics was converted into shares of our common stock.

As a result of the Merger, we acquired the business of Biond Photonics and will continue the existing business operations of Biond Photonics as a public reporting company under the name Aeluma, Inc.

In accordance with "reverse merger" or "reverse acquisition" accounting treatment, our historical financial statements as of period ends, and for periods ended, prior to the Merger will be replaced with the historical financial statements of Biond Photonics prior to the Merger, in all future filings with the U.S. Securities and Exchange Commission (the "SEC").

Stock Symbol

As of August 5, 2025, our common stock trades on the Nasdaq Capital Market, under the symbol "ALMU."

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Merger and Name Change

On June 22, 2021, Parc Investments, Inc., Acquisition Sub and Biond Photonics, Inc. entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"). Pursuant to the terms of the Merger Agreement, on June 22, 2021, Biond Photonics merged with and into Acquisition Sub, with Acquisition Sub continuing as the surviving corporation and our wholly owned subsidiary.

As a result of the Merger, we acquired the business of Biond Photonics, a California corporation, doing business as Aeluma. See "Description of Business" below. At the time the certificates of merger reflecting the Merger were filed with the Secretaries of State of California and Delaware, each of Biond Photonics' shares of capital stock issued and outstanding immediately prior to the closing of the Merger was converted into the right to receive (a) 1.299135853 shares of our common stock (the "Common Share Conversion Ratio"), with the maximum number of shares of our common stock issuable to the former holders of Biond Photonics' capital stock equal to 4,100,002 after adjustments due to rounding for fractional shares. Immediately prior to the effectiveness of the Merger, an aggregate of 2,500,000 shares of our common stock owned by our stockholders prior to the Merger were forfeited and cancelled (the "Stock Forfeiture").

On June 22, 2021, our board of directors and all of our pre-Merger stockholders approved a restated certificate of incorporation, which was effective upon its filing with the Secretary of State of the State of Delaware on June 22, 2021, and through which we changed our name to "Aeluma, Inc." On June 22, 2021, our board of directors also adopted restated bylaws.

The Merger Agreement contained customary representations and warranties and pre- and post-closing covenants of each party and customary closing conditions.

As a condition to the Merger, we entered into an indemnity agreement with our former officer and directors (the "Pre-Merger Indemnity Agreement"), pursuant to which we agreed to indemnify such former officer and directors for actions taken by them in their official capacities relating to the consideration, approval and consummation of the Merger and certain related transactions.

The Merger was treated as a recapitalization and reverse acquisition for us for financial reporting purposes. Biond Photonics is considered the acquirer for accounting purposes, and our historical financial statements before the Merger will be replaced with the historical financial statements of Biond Photonics before the Merger in future filings with the SEC. The Merger is intended to be treated as a tax-free reorganization under Section 368(a) of the Internal Revenue Code of 1986, as amended.

Recent Financings and Stock Listing

On March 26, 2025, we entered into an Underwriting Agreement (the "Underwriting Agreement") with Craig-Hallum Capital Group LLC relating to the public offering (the "Offering") of 2,285,714 shares of common stock of the Company, at a public offering price of \$5.25 per share. In addition, we granted the underwriter an option to purchase up to an additional 342,857 shares of our common stock at the public offering price per share, less the underwriting discounts to cover over-allotments, if any, which option was exercised in its entirely on March 27, 2025. The Offering closed on March 28, 2025.

The Shares were offered under our registration statement on Form S-1, as amended (File No. 333-285469), which was declared effective by the U.S. Securities and Exchange Commission (the "SEC") on March 25, 2025, and a registration statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933 (the "Securities Act") which was filed with the SEC and became effective upon filing on March 26, 2025.

The aggregate gross proceeds of the Offering were approximately \$13.8 million, prior to deducting underwriting discounts and other offering expenses, but including exercise in full of the over-allotment option. The net proceeds from the offering were approximately \$12.7 million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, but including exercise in full of the over-allotment option. We intend to use the net proceeds from the Offering for expanding business development efforts, advancing manufacturing processes to support commercialization traction, and working capital and general business purposes

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Our officers and directors have agreed, subject to certain exceptions, for a period of 90 days after the closing of this Offering, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock of the Company or any securities convertible into or exercisable or exchangeable for shares of common stock of the Company either owned as of the date of the Underwriting Agreement or thereafter acquired without the prior written consent of the underwriter.

We, and any successor, have agreed, subject to certain exceptions, not to for a period of 90 days after the closing of the offering, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the SEC a registration statement under the Securities Act relating to, any shares of stock or any securities convertible into or exercisable or exchangeable for Stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of stock or such other securities, in cash or otherwise, without the prior written consent of the underwriter, which shall not be unreasonably withheld. The underwriter may, in its sole discretion and at any time or from time to time before the termination of the lock-up period, without notice, release all or any portion of the securities subject to lock-up agreements.

The foregoing descriptions of the Underwriting Agreement, Warrant and the form of lock-up agreement do not purport to be complete and are qualified in their entirety by reference to the full text of the Underwriting Agreement and Warrant.

Our Strategy

We will continue to develop our technology that includes novel materials and devices based on our core intellectual property. Our primary focus is to manufacture high-performance semiconductor technologies that scale for mass markets. Our technology has the potential to impact across mobile, automotive, AI, defense & aerospace, communication, AR/VR, HPC, and quantum computing applications. Acluma operates an R&D/manufacturing facility at its headquarters in Goleta, California, and has developed relationships with volume fabrication foundries and packaging partners. We will continue to mature our manufacturing processes to further our commercialization traction. We have generated revenue through various customer and government contracts, including small-volume orders, engineering sample evaluations, non-recurring engineering (NRE) development efforts, and R&D projects. We will continue to perform on these various efforts, expand our business development and marketing efforts, further engage with our manufacturing partners, and continue our efforts toward volume production and commercialization.

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Summary Risk Factors and Challenges

We face substantial competition from a great many established and emerging technology companies that develop, distribute, or sell products similar to ours. Our current and potential competitors include large technology companies. Many of our current and potential competitors have substantially greater financial, technical, and human resources than we do and significantly more experience in the marketing, commercialization, discovery, development and regulatory approvals of products, which could place us at a significant competitive disadvantage or deny our marketing exclusivity rights. Typically, our competitors will most likely have more capital resources to support their products than we do. In addition, you should carefully consider the risks described here and under the "Risk Factors" section before investing in us.

The below is a summary of principal risks to our business and risks associated with this offering. It is only a summary. You should read the more detailed discussion of risks set forth below and elsewhere in this prospectus for a more complete discussion of the risks listed below and other risks.

- Risk associated with our business and profitability including, but not limited to:
 - Although we have generated some revenue, we are unprofitable and will continue to be unprofitable in the foreseeable future;
 - Our business, operations, plans, and timelines could be adversely affected by the effects of health epidemics;
 - While testing of our samples by both Aeluma and third parties have been successful to date, qualified products have not yet been demonstrated on a commercial scale; and
 - We may require additional financing to fully execute our business plan and to fund operations, which additional financing may not be available on reasonable terms or at all.
- Risk associated with the development of our products, including but not limited to:
 - Biond Photonics, now Aeluma, was formed in 2019 and therefore, we are subject to the risks involved with any speculative early-stage enterprise. There is no assurance that we will successfully offer, market, and distribute our products or service;
 - Our customers may require our products to undergo a lengthy and expensive qualification process without any assurance of product sales;
 - We will rely on limited sources of wafer fabrication, packaged products fabrication and product testing, the loss of which could delay and limit our product shipments;
 - Because we will depend on third-party manufacturers to build portions of our products, we will be susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales, income and customers; and
 - Rapid innovation and short product life cycles in the semiconductor industry can result in price erosion of older products, which may materially adversely affect our business and results of operations.

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- Risks associated with intellectual property including but not limited to:
 - We may not be successful in obtaining or maintaining patent or other related rights necessary to the development of our products;
 - The intellectual property rights underlying exclusive licensing rights may expire or be terminated due to lack of maintenance; and

- We may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages, and could limit our ability to use certain technologies.
- Risks associated with competition and manufacturing including, but not limited to:
 - We face competition from entities that have developed or are developing products similar to ours; and
 - The semiconductor industry is highly competitive, and our inability to compete effectively could materially adversely affect our business and results of operations.
- Risks associated with government regulations including without limitation:
 - If we do not obtain the necessary governmental approvals, the import and export of our products outside the U.S. may be negatively impacted; and
 - Special authorizations, permits, licenses may be required for our operations, which if delayed or denied could materially adversely affect our results of operations and financial condition.
- Risk associated with our Common Stock including without limitation:
 - The market prices and trading volumes of the Common Stock may be volatile and may be affected by economic conditions beyond our control; and
 - Shares of our Common Stock are sporadically and thinly traded.

These and other risks described in this prospectus could materially and adversely impact our business, financial condition, operating results, and cash flow, which could cause the trading price of our Common Stock to decline and could result in a loss of your investment. In addition, you should carefully consider the risks described under "Risk Factors" beginning on page 6.

Corporate Information

Our principal executive office is located at 27 Castilian Dr., Goleta, CA 93117. Our telephone number at our principal executive office is (805)-351-2707. Our corporate website is www.aeluma.com. The information on our corporate website is not part of, and is not incorporated by reference into, this prospectus.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should consider carefully the risks, uncertainties and other factors described in our most recent Annual Report on Form 10-K, as supplemented and updated by subsequent quarterly reports on Form 10-Q and current reports on Form 8-K that we have filed or will file with the SEC, which are incorporated by reference into this prospectus.

Our business, affairs, prospects, assets, financial condition, results of operations and cash flows could be materially and adversely affected by these risks. For more information about our SEC filings, please see "Where You Can Find More Information."

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USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus for general corporate purposes, including for general working capital purposes, which may include the repayment of outstanding debt. We may also use a portion of our net proceeds to acquire or invest in complementary products, technologies or businesses, although we have no present commitments to complete any such transaction. The amounts and timing of our expenditures will depend on numerous factors, including the expenses we incur in sales and marketing, the scope of research and development efforts and the timing of regulatory submissions and approvals (if required). Accordingly, our management will have broad discretion over the use of the net proceeds from the sale of any securities offered by us.

DILUTION

If required, we will set forth in a prospectus supplement the following information regarding any material dilution of the equity interests of investors purchasing securities in an offering under this prospectus:

- the net tangible book value per share of our equity securities before and after the offering;
- the amount of the increase in such net tangible book value per share attributable to the cash payments made by purchasers in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

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DESCRIPTION OF SECURITIES TO BE REGISTERED

We may issue from time to time, in one or more offerings the following securities:

• shares of common stock;

- shares of preferred stock;
- debt securities:
- warrants exercisable for debt securities, common stock, or preferred stock;
- rights to purchase any of such securities; and
- units of debt securities, common stock, preferred stock, or warrants, in any combination.

This prospectus contains a summary of the material general terms of the various securities that we may offer. The specific terms of the securities will be described in a prospectus supplement, information incorporated by reference or related free writing prospectus, which may be in addition to or different from the general terms summarized in this prospectus. Where applicable, the prospectus supplement, information incorporated by reference or related free writing prospectus will also describe any material United States federal income tax considerations relating to the securities offered and indicate whether the securities offered are or will be listed on any securities exchange. The summaries contained in this prospectus and in any prospectus supplements, information incorporated by reference or related free writing prospectus may not contain all of the information that you would find useful. Accordingly, you should read the actual documents relating to any securities sold pursuant to this prospectus.

The terms of any particular offering, the initial offering price and the net proceeds to us will be contained in the prospectus supplement, information incorporated by reference or free writing prospectus, relating to such offering.

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Common Stock

As of the date hereof, there are 15,881,215 shares of our Common Stock issued and outstanding.

Common Stock

Listing

Our common stock is listed on Nasdaq under the symbol "ALMU." On August 4, 2025, the closing price for our common stock, as reported on Nasdaq, was \$21.34 per share.

Dividend Rights

Subject to preferences that may apply to any shares of redeemable convertible preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine.

Voting Rights

Holders of our common stock are entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our restated certificate of incorporation. Except as otherwise required by law, the restated and amended certificate of incorporation, the restated and amended bylaws or the rules of any applicable stock exchange, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at a meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the amended and restated certificate of incorporation or the amended and restated bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Accordingly, even if a director receives 1% of the votes cast, he or she will be elected assuming there is no opposition candidate; where there is an opposition candidate, the candidate receiving the most votes wins, without regard to whether those votes constitute a majority of the votes at the meeting. Our restated bylaws establish a classified board of directors, to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our liquidation, dissolution, or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating redeemable convertible preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of redeemable convertible preferred stock.

Fully Paid and Non-Assessable

All outstanding shares of common stock are fully paid and non-assessable.

Preferred Stock

Our certificate of incorporation provides that we may issue up to 10,000,000 shares of preferred stock in one or more series as may be determined by our board of directors. Our board of directors has broad discretionary authority with respect to the rights of any new series of preferred stock and may establish the following with respect to the shares in each series, without any vote or action of the stockholders:

- the number of shares;
- the designations, powers, preferences and relative participation, optional or other rights, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences; and
- any qualifications, limitations or restrictions.

We believe that the ability of our board of directors to issue one or more series of preferred stock provides us with flexibility in structuring possible future financings and acquisitions, and in meeting other corporate needs that may arise. The authorized shares of preferred stock, as well as authorized and unissued shares of common stock, are available for issuance without action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded.

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by our stockholders. Our board of directors can also increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the

Description of Rights

We may issue rights to purchase our securities. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. Each series of rights will be issued under a separate rights agent agreement to be entered into between us and one or more banks, trust companies or other financial institutions, as rights agent that we will name in the applicable prospectus supplement. The rights agent will act solely as our agent in connection with the rights and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights.

The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate amount of securities purchasable upon exercise of the rights;
- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase for cash the principal amount of securities at the exercise price set forth in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than our security holders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby arrangements, as described in the applicable prospectus supplement.

Description of Warrants

We may issue warrants to purchase our Common Stock or preferred shares. Warrants may be issued independently or together with any other securities that may be sold by us pursuant to this prospectus or any combination of the foregoing and may be attached to, or separate from, such securities. To the extent warrants that we issue are to be publicly traded, each series of such warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe in particular the terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of the warrant and/or warrant agreement, if any, which may include a form of warrant certificate, as applicable that describes the terms of the particular series of warrants we may offer before the issuance of the related series of warrants. We may issue the warrants under a warrant agreement that we will enter into with a warrant agent to be selected by us. The warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any registered holders of warrants or beneficial owners of warrants. The following summary of material provisions of the warrants and warrant agreements is subject to, and qualified in its entirety by reference to, all the provisions of the form of warrant and/or warrant agreement and warrant certificate applicable to a particular series of warrants. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the warrants.

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The particular terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

- the title of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the securities or other rights for which the warrants are exercisable;
- the designation and terms of the other securities, if any, with which the warrants are to be issued and the number of warrants issued with each other security;
- the aggregate number of warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which the securities or other rights purchasable upon exercise of the warrants may be purchased;
- if applicable, the date on and after which the warrants and the securities or other rights purchasable upon exercise of the warrants will be separately transferable;
- a discussion of any material U.S. federal income tax considerations applicable to the exercise of the warrants;

- the date on which the right to exercise the warrants will commence, and the date on which the right will expire;
- the maximum or minimum number of warrants that may be exercised at any time;
- information with respect to book-entry procedures, if any; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Exercise of Warrants

Each warrant will entitle the holder of warrants to purchase the number of Common Stock or preferred shares of the relevant class or series at the exercise price stated or determinable in the prospectus supplement for the warrants. Warrants may be exercised at any time up to the close of business on the expiration date shown in the applicable prospectus supplement, unless otherwise specified in such prospectus supplement. After the close of business on the expiration date, if applicable, unexercised warrants will become void. Warrants may be exercised in the manner described in the applicable prospectus supplement. When the warrant holder makes the payment and properly completes and signs the warrant certificate at the corporate trust office of the warrant agent, if any, or any other office indicated in the prospectus supplement, we will, as soon as possible, forward the securities or other rights that the warrant holder has purchased. If the warrant holder exercises less than all of the warrants represented by the warrant certificate, we will issue a new warrant certificate for the remaining warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Prior to the exercise of any warrants to purchase Common Stock or preferred shares of the relevant class or series, holders of the warrants will not have any of the rights of holders of Common Stock or preferred shares purchasable upon exercise, including the right to vote or to receive any payments of dividends or payments upon our liquidation, dissolution or winding up on the Common Stock or preferred shares purchasable upon exercise, if any.

Outstanding Warrants

As of the date of this prospectus, we have 1,564,928 and 540,079 options and warrants outstanding, respectively of the Company outstanding.

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Description of Units

The following description, together with the additional information we may include in any applicable prospectus supplement, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement and any related free writing prospectus. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as an exhibit to the registration statement of which this prospectus is a part or will incorporate by reference from another report we file with the SEC, the form of unit agreement that describes the terms of the series of units we may offer under this prospectus, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

We may issue units comprised of Common Stock or preferred shares and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable, if applicable;
- any provisions for the issuance, payment, settlement, transfer, or exchange of the units or of the securities comprising the units;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

The provisions described in this section, as well as those described under "Description of Share Capital – Common Stock and Preferred Shares" and "Description of Warrants" will apply to each unit and to any Common Stock, preferred shares or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

We may enter into unit agreements with a unit agent. Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

Description of Debt Securities

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will generally apply to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we offer under a prospectus supplement may differ from the terms we describe below. As of the date of this prospectus, we have no outstanding registered debt securities.

We may issue notes under senior or subordinated indentures or, separately, without the use of an indenture. If we issue senior or subordinated notes without the use of an indenture, we will issue such senior or subordinated notes directly to the purchasers of such senior or subordinated notes.

If we issue senior notes under a senior indenture, we will enter into such subordinated indenture with the trustee to be named in such senior indenture. If we issue subordinated notes under a subordinated indenture, we will enter into such subordinated indenture with the trustee to be named in such subordinated indenture. We will file as exhibits to the registration statement of which this prospectus is a part or will incorporate by reference from another report that we file with the SEC, the form of such notes and indentures, if any, that describes the terms of the particular note we may offer under this prospectus, and any supplement agreements, before the issuance of the related note. We use the term "indentures" to refer to both the senior indenture and the subordinated indenture.

The indentures will be qualified under the Trust Indenture Act of 1939. References to the Trust Indenture Act of 1939 include all amendments thereto. We use the term "debenture trustee" to refer to either the senior trustee or the subordinated trustee, as applicable.

The following summaries of material provisions of the senior notes, the subordinated notes and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities, and all supplements thereto. We urge you to read the applicable prospectus supplements related to the debt securities that we sell under this prospectus, as well as the complete indentures that contain the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior and the subordinated indentures are identical.

The statements and descriptions in this prospectus or in any prospectus supplement regarding provisions of debt securities and any indentures are summaries of these provisions, do not purport to be complete and are subject to, and are qualified in their entirety by reference to, all of the provisions of the debt securities and the indentures (including any amendments or supplements we may enter into from time to time which are permitted under the debt securities or any indenture).

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers' certificate or by a supplemental indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. In addition, the particular terms of each series of debt securities will be described in a prospectus supplement relating to such series, including any pricing supplement. The prospectus supplement will set forth, among other things:

- the title;
- the principal amount being offered, and, if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form and, if so, the terms and who the depositary will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a U.S. person for tax purposes, and whether we can redeem the debt securities if we must pay such additional amounts;

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- the annual interest rate, which may be fixed or variable, or the method for determining the rate, the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- the terms of the subordination of any series of subordinated debt, if applicable;
- the place where payments will be payable;
- restrictions on transfer, sale, or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions, and any other applicable terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability and/or the ability of our subsidiaries to, among other things:
- incur additional indebtedness;
- · issue additional securities;
- create liens;

- pay dividends and make distributions in respect of our capital stock and the capital stock of our subsidiaries;
- redeem capital stock;
- place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
- make investments or other restricted payments;
- sell or otherwise dispose of assets;
- enter into sale-leaseback transactions;
- engage in transactions with stockholders and affiliates;
- · issue or sell stock of our subsidiaries; or
- effect a consolidation or merger;
- · whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based, or other financial ratios;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;

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- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code;
- · the procedures for any auction and remarketing, if any;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- if other than dollars, the currency in which the series of debt securities will be denominated; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any events of default that are in addition to those
 described in this prospectus or any covenants provided with respect to the debt securities that are in addition to those described above, and any terms that may be
 required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for Common Stock, preferred shares, or other securities of ours or a third party, including the conversion or exchange rate, as applicable, or how it will be calculated, and the applicable conversion or exchange period. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of our securities or the securities of a third party that the holders of the series of debt securities receive upon conversion or exchange would, under the circumstances described in those provisions, be subject to adjustment, or pursuant to which those holders would, under those circumstances, receive other property upon conversion or exchange, for example in the event of our merger or consolidation with another entity.

Consolidation, Merger or Sale

The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer, or otherwise dispose of all or substantially all of our assets. However, any successor of ours or the acquirer of such assets must assume all of our obligations under the indentures and the debt securities.

If the debt securities are convertible for our other securities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

The following are events of default under the indentures in the forms initially filed as exhibits to the registration statement with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended or deferred;
- if we fail to pay the principal, sinking fund payment or premium, if any, when due and payable and the time for payment has not been extended or delayed;

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- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the debenture trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

debenture trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the debenture trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the debenture trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method, and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act of 1939, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity, to the debenture trustee to institute the proceeding as trustee; and
- the debenture trustee does not institute the proceeding and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the debenture trustee regarding our compliance with specified covenants in the indentures.

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Modification of Indenture; Waiver

We and the debenture trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- · to fix any ambiguity, defect, or inconsistency in the indenture;
- to comply with the provisions described above under "Consolidation, Merger or Sale";
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act of 1939;
- to evidence and provide for the acceptance of appointment by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to, delete from, or revise the conditions, limitations and restrictions on the authorized amount, terms or purposes of issuance, authorization and delivery of debt securities or any series, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under "General" to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to add to our covenants such new covenants, restrictions, conditions, or provisions for the protection of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default, or to surrender any of our rights or powers under the indenture: or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the debenture trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of debt securities;
- reducing the principal amount, reducing the rate or extending the time of payment of interest, or reducing any premium payable upon the redemption of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification, or waiver.

Discharge

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except that the following obligations, among others survive until the maturity date or the redemption date:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost, or mutilated debt securities of the series;
- · maintain paying agencies;
- · hold monies for payment in trust; and
- appoint any successor trustee; and the following obligations survive the maturity date or the redemption date
- · recover excess money held by the debenture trustee; and
- compensate and indemnify the debenture trustee.

As more fully set forth in the indentures, in order to exercise our rights to be discharged, we must either deliver for cancellation all securities of a series to the debenture trustee or must deposit with the debenture trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, known as DTC, or another depositary named by us and identified in a prospectus supplement with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in a board resolution the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of any series being redeemed in part during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

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Information Concerning the Debenture Trustee

The debenture trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses, and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will name in the applicable board resolution any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act of 1939 is applicable.

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not limit the amount of indebtedness that we may incur, including senior indebtedness or subordinated indebtedness, and do not limit us from issuing any other debt, including secured debt or unsecured debt.

Anti-Takeover Provisions

Certain provisions of Delaware law, our Certificate of Incorporation and our Bylaws may have the effect of delaying, deferring, or discouraging another person from acquiring control of the Company.

Among other things, the Charter and the Bylaws:

- permit the Board to issue up to 10,000,000 shares of Preferred Stock, with any rights, preferences, and privileges as they may designate, including the right to approve an acquisition or other change of control;
- provide that the authorized number of directors may be changed only by resolution of the Board;
- provide that the Board is classified into three classes of directors;
- provide that, subject to the rights of any series of Preferred Stock to elect directors, directors may only be removed for cause, which removal may be effected, subject to any limitation imposed by law, by the holders of at least a majority of the voting power of all of the then-outstanding shares of the Company's capital stock entitled to vote generally at an election of directors;

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- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by the Company's stockholders must be effected at a duly called annual or special meeting of stockholders, or without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of the then-outstanding shares of stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Company in the manner provided by applicable law;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;
- provide that special meetings of the Company's stockholders may be called only by the chairperson of the Board, the Company's Chief Executive Officer or by the Board pursuant to a resolution adopted by a majority of the total number of authorized directors; and
- do not provide for cumulative voting rights, therefore allowing the holders of a majority of the voting power of the stock of the Company entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose.

The amendment of any of these provisions would require approval by the holders of at least 66 2/3% of the voting power of all of the Company's then-outstanding capital stock entitled to vote generally in the election of directors, voting together as a single class.

The combination of these provisions makes it more difficult for the Company's existing stockholders to replace the Board as well as for another party to obtain control of us by replacing the Board. Since the Board has the power to retain and discharge the Company's officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for the Board to issue Preferred Stock with voting or other rights or preferences that could impede the success of any attempt to change the Company's control.

These provisions are intended to enhance the likelihood of continued stability in the composition of the Board and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce the Company's vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for the Company's shares and may have the effect of delaying changes in the Company's control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of the Company's stock.

Certain Anti-Takeover Provisions of Delaware Law

Special Meetings of Stockholders

The Charter and the Bylaws provide that special meetings of the Company's stockholders may be called only by the Chairman of the Board, the Chief Executive Officer of the Company (or the president in the absence of a Chief Executive Officer), or the Board pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board for adoption).

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Advance Notice Requirements for Stockholder Proposals and Director Nominations

The Bylaws provide that stockholders seeking to nominate candidates for election to the Board or to bring business before the Company's annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely under the Bylaws, a stockholder's notice needs to be received by the Secretary of the Company at the Company's principal executive offices not later than the close of business on the 45th day nor earlier than the close of business on the 90th day prior to the first anniversary of the preceding year's annual meeting provided, however, that in the event that no annual meeting was held during the preceding year or the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 60 days after the anniversary of the date of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the 120th day prior to such annual meeting and no later than the close of business on the later of the 90th day prior to such annual meeting or the tenth day following the day on which public announcement of the date of such meeting is first made by the Company. The Bylaws also specify certain requirements as to the form and content of a stockholders' meeting. These provisions may preclude the Company's stockholders from bringing matters before its annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

The Charter provides that unless the Company consents in writing to the selection of an alternative forum to the fullest extent permitted by the applicable law, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) and any appellate court therefrom shall be the sole and exclusive forum for the following claims or causes of action under Delaware statutory or common law: (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, stockholder, officer or other employee of the Company to the Company or the Company's stockholders, (iii) any action arising pursuant to any provision of the DGCL or the Company's certificate of incorporation or these bylaws (as either may be amended from time to time), or (iv) any action asserting a claim governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within ten (10) days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court, or for which such court does not have subject matter jurisdiction. The Charter also requires that unless the Company consents in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act. The above shall not apply to claims or causes of action brought to enforce a duty or liability created by the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Although the Company believes these provisions benefit us by providing increased consistency in the application of the DGCL in the types of lawsuits to which it applies, a court may determine that these provisions are unenforceable, and to the extent they are enforceable, the provisions may have the effect of discouraging lawsuits against the Company's directors and officers, although the Company's stockholders will not be deemed to have waived its compliance with federal securities laws and the rules and regulations thereunder.

Effect of California Long-Arm Statute.

We are a Delaware corporation, governed by the Delaware General Corporation Law. However, our headquarters, property, and officers are located in California, and Section 2115 of the California Corporations Code purports to impose on corporations like the Company certain portions of California's laws governing corporations formed under the laws of the State of California. While disputes have arisen regarding the enforceability of Section 2115, the statute purports to apply the California Corporations Code in the following areas of governance to corporations that meet the test for applicability of Section 2115: Chapter 1 (general provisions and definitions), to the extent applicable to the following provisions; Section 301 (annual election of directors); Section 303 (removal of directors without cause); Section 304 (removal of directors by court proceedings); Section 305, subdivision (c) (filling of director vacancies where less than a majority in office elected by shareholders); Section 309 (directors' standard of care); Section 316 (excluding paragraph (3) of subdivision (a) and paragraph (3) of subdivision (f)) (liability of directors for unlawful distributions); Section 317 (indemnification of directors, officers, and others); Sections 500 to 505, inclusive (limitations on corporate distributions in cash or property); Section 506 (liability of shareholder who receives unlawful distribution); Section 600, subdivisions (b) and (c) (requirement for annual shareholders' meeting and remedy if same not timely held); Section 708, subdivisions (a), (b), and (c) (shareholder's right to cumulate votes at any election of directors); Section 710 (supermajority vote requirement); Section 1001, subdivision (d) (limitations on sale of assets); Section 1101 (provisions following subdivision (e)) (limitations on mergers); Section 1151 (first sentence only) (limitations on conversions); Section 1152 (requirements of conversions); Chapter 12 (commencing with Section 1200) (reorganizations); Chapter 13 (commencing with Section 1

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We believe it is likely that we meet the test for the application of Section 2115 and do not anticipate a specific time in the future when we would not meet such test. Section 2115, if applicable, would purport to require a different outcome for certain important activities fundamental to the governance of corporations, and you are encouraged to review the effect of Section 2115 to determine whether the differences from the Delaware General Corporation Law are important to you.

Limitations on Liability and Indemnification of Officers and Directors

The Charter eliminates the Company's directors' liability for monetary damages to the fullest extent permitted by applicable law. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- · for any unlawful payment of dividends or redemption of shares; or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the Company's directors will be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

The Charter requires the Company to indemnify and advance expenses to the fullest extent permitted by applicable law, to its directors, officers, and agents. The Company maintains a directors' and officers' insurance policy pursuant to which the Company's directors and officers are insured against liability for actions taken in their capacities as directors and officers. Finally, the Charter prohibits any retroactive changes to the rights or protections or increase the liability of any director in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

In addition, the Company has entered into separate indemnification agreements with the Company's directors and officers. These agreements, among other things, require the Company to indemnify its directors and officers for certain expenses, including attorneys' fees, judgments, fines, and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as one of the Company's directors or officers or any other company or enterprise to which the person provides services at the Company's request.

We believe these provisions in the Charter are necessary to attract and retain qualified persons as directors and officers.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, the Company's stockholders will have appraisal rights in connection with a merger or consolidation of the Company. Pursuant to the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be VStock Transfer, LLC. The transfer agent's address is 18 Lafayette Place, Woodmere, New York 11598, and its telephone number is (212) 828-8436.

PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (i) to or through underwriters or dealers, including to the public through underwriting syndicates led by one or more managing underwriters, (ii) directly to purchasers, including our affiliates, including through a specific bidding, auction or other process, (iii) through agents, or (iv) through a combination of any these methods. The securities may be offered through privately negotiated transactions, block trades, to one or more underwriters acting alone for resale to investors or to the public or through a combination of any these methods or any other method permitted by law. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. The prospectus supplement will include the following information:

- the terms of the offering;
- the names of any underwriters or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- any over-allotment options under which underwriters may purchase additional securities from us;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any offering price;
- any discounts or concessions allowed or reallowed or paid to dealers;
- · any commissions paid to agents; and
- any securities exchange or market on which the securities may be listed.

Sale Through Underwriters or Dealers

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement. If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any offering price and any discounts or concessions allowed or reallowed or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

We will provide in the applicable prospectus supplement any compensation we will pay to underwriters, dealers, or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers.

We may engage in at the market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock and may use securities received in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The underwriters, dealers and agents may have relationships with, engage in transactions with or perform services for us or one or more of our affiliates in the ordinary course of business for which they receive compensation. We, the underwriters, dealers or agents may facilitate the marketing of an offering online directly or through one of their affiliates. In those cases, prospective investors may view offering terms and a prospectus online and, depending upon the particular underwriter, dealer or agent, place orders online or through their financial advisors.

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Direct Sales and Sales Through Agents

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters, or dealers to solicit offers from certain types of institutions to purchase securities at the offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to

those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, other than our common stock, all securities we offer under this prospectus will be a new issue and will have no established trading market. We may elect to list offered securities on an exchange or in the over-the-counter market. Any underwriters that we use in the sale of offered securities may make a market in such securities but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 under the Securities Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing, or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

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LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus, and any supplement thereto, will be passed upon for us by Hunter Taubman Fischer & Li LLC, New York, NY. The legality of the securities for any underwriters, dealers or agents will be passed upon by counsel as may be specified in the applicable prospectus supplement.

EXPERTS

Rose, Snyder, and Jacobs LLP ("RSJ"), an independent registered public accounting firm, audited our financial statements included in our Annual Report on Form 10-K for the year ended June 30, 2024, and 2023, as set forth in their report included therein, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on RSJ's report, given on their authority as experts in accounting and auditing.

Material Changes

None.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file annual, quarterly, and special reports, along with other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov; you can also find our filings on our company website: www.aeluma.com. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The information on our website is not intended to form a part of or be incorporated by reference into this prospectus.

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC to register the securities offered hereby under the Securities Act of 1933, as amended. This prospectus does not contain all of the information included in the registration statement, including certain exhibits and schedules. You may obtain the registration statement and exhibits to the registration statement from the SEC at the address listed above or from the SEC's internet site.

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INFORMATION INCORPORATED BY REFERENCE

The Securities and Exchange Commission allows us to incorporate by reference the information we file with them under certain conditions, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus and any information that we file subsequent to this prospectus with the Securities and Exchange Commission will automatically update and supersede this information. The documents we are incorporating by reference are as follows:

- the Company's Annual Report on Form 10-K for the year ended June 30, 2024, as filed with the Commission on September 27, 2024;
- the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2025, as filed with the Commission on May 9, 2025;
- the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2024, as filed with the Commission on February 11, 2025;
- the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, as filed with the Commission on November 8, 2024;
- the Company's Current Reports on Form 8-K filed on March 28, 2025, March 19, 2025, February 26, 2025 and January 10, 2025 (except for the portions of such reports deemed to be furnished and not filed); and,
- The description of the Registrant's common stock, par value \$0.0001, contained in the Registrant's Form S-1 filed on February 28, 2025, and any amendment or report filed for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the initial filing date of this prospectus, through the date declared

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We will provide to any person, including any beneficial owner, to whom this prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus (excluding exhibits, unless the exhibits are specifically incorporated), at no cost to the requesting party, upon request to us in writing or by telephone using the following information:

Jonathan Klamkin Chief Executive Officer Aeluma, Inc. 27 Castilian Drive Goleta, California Tel: (805) 351-2707

Disclosure of Commission Position on Indemnification for Securities Act Liabilities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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Aeluma, Inc. \$100,000,000 Common Stock Preferred Stock Debt Securities Warrants Rights Units August 6, 2025

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses payable by the registrant in connection with this offering, other than underwriting commissions and discounts, all of which are estimated except for the SEC registration fee.

Securities and Exchange Commission registration fee	\$ 15,310.00
Accounting fees and expenses	\$
Legal fees and expenses	\$
Miscellaneous expenses	\$ *
Total	\$ *

* Estimated expenses are not presently known because they depend upon, among other things, the number of offerings that will be made pursuant to this registration statement, the amount and type of securities being offered and the timing of such offerings; we cannot compute the total until the exact expenses are known.

Item 15. Indemnification of Directors and Officers.

The Registrant's amended and restated certificate of incorporation (the "Charter") provides that all of the Registrant's directors, officers, employees and agents shall be entitled to be indemnified by the Registrant to the fullest extent permitted by Section 145 of the Delaware General Corporation Law ("DGCL"). Section 145 of the DGCL concerning indemnification of officers, directors, employees, and agents is set forth below.

- (a) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that the person's conduct was unlawful.
- (b) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.
- (c) To the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in subsections (a) and (b) of this section, or in defense of any claim, issue, or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.
- (d) Any indemnification under subsections (a) and (b) of this section (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee, or agent is proper in the circumstances because the person has met the applicable standard of conduct set forth in subsections (a) and (b) of this section. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (1) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, or (2) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.
- (e) Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative or investigative action, suit or proceeding may be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the corporation as authorized in this section. Such expenses (including attorneys' fees) incurred by former officers and directors, or other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems appropriate.

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- (f) The indemnification and advancement of expenses provided by, or granted pursuant to, the other subsections of this section shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to such provision after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, suit or proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.
- (g) A corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under this section.
- (h) For purposes of this section, references to "the corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under this section with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued.
- (i) For purposes of this section, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to any employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.
- (j) The indemnification and advancement of expenses provided by, or granted pursuant to, this section shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such a person.
- (k) The Court of Chancery is hereby vested with exclusive jurisdiction to hear and determine all actions for advancement of expenses or indemnification brought under this section or under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. The Court of Chancery may summarily determine a corporation's obligation to advance expenses (including attorneys' fees).

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to the Registrant's directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment of expenses incurred or paid by a director, officer or controlling person in a successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to the court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

In accordance with Section 102(b)(7) of the DGCL, the Charter provides that no director shall be personally liable to the Registrant or any of its stockholders for monetary damages resulting from breaches of their fiduciary duty as directors, except to the extent such limitation on or exemption from liability is not permitted under the DGCL. The effect of this provision of the Charter is to eliminate the Registrant's rights and those of the Registrant's stockholders (through stockholders' derivative suits on the Registrant's behalf) to recover monetary damages against a director for breach of the fiduciary duty of care as a director, including breaches resulting from negligent or grossly negligent behavior, except, as restricted by Section 102(b)(7) of the DGCL. However, this provision does not limit or eliminate the Registrant's rights or the rights of any stockholder to seek non-monetary relief, such as an injunction or rescission, in the event of a breach of a director's duty of care.

If the DGCL is amended to authorize corporate action further eliminating or limiting the liability of directors, then, in accordance with the Charter, the liability of the Registrant's directors to the Registrant or its stockholders will be eliminated or limited to the fullest extent authorized by the DGCL, as so amended. Any repeal or amendment of provisions of the Charter limiting or eliminating the liability of directors, whether by the Registrant's stockholders or by changes in law, or the adoption of any other provisions inconsistent therewith, will (unless otherwise required by law) be prospective only, except to the extent such amendment or change in law permits the Registrant to further limit or eliminate the liability of directors on a retroactive basis.

The Charter also provides that the Registrant will, to the fullest extent authorized or permitted by applicable law, indemnify its current and former officers and directors, as well as those persons who, while directors or officers of the Registrant, are or were serving as directors, officers, employees or agents of another entity, trust or other enterprise, including service with respect to an employee benefit plan, in connection with any threatened, pending or completed proceeding, whether civil, criminal, administrative or investigative, against all expense, liability and loss (including, without limitation, attorney's fees, judgments, fines, ERISA excise taxes and penalties and amounts paid in settlement) reasonably incurred or suffered by any such person in connection with any such proceeding.

Notwithstanding the foregoing, a person eligible for indemnification pursuant to the Charter will be indemnified by the Registrant in connection with a proceeding initiated by such person only if such proceeding was authorized by the Registrant's board of directors, except for proceedings to enforce rights to indemnification.

The right to indemnification which will be conferred by the Charter is a contract right that includes the right to be paid by the Registrant the expenses incurred in defending or otherwise participating in any proceeding referenced above in advance of its final disposition, provided, however, that if the DGCL requires, an advancement of expenses incurred by an officer or director of the Registrant (solely in the capacity as an officer or director of the Registrant) will be made only upon delivery to the Registrant of an undertaking, by or on behalf of such officer or director, to repay all amounts so advanced if it is ultimately determined that such person is not entitled to be indemnified for such expenses under the Charter or otherwise.

The rights to indemnification and advancement of expenses will not be deemed exclusive of any other rights which any person covered by the Charter may have or hereafter acquire under law, the Charter, the Registrant's amended and restated bylaws (the "Bylaws"), an agreement, vote of stockholders or disinterested directors, or otherwise.

Any repeal or amendment of provisions of the Charter affecting indemnification rights, whether by the Registrant's stockholders or by changes in law, or the adoption of any other provisions inconsistent therewith, will (unless otherwise required by law) be prospective only, except to the extent such amendment or change in law permits the Registrant to provide broader indemnification rights on a retroactive basis, and will not in any way diminish or adversely affect any right or protection existing at the time of such repeal or amendment or adoption of such inconsistent provision with respect to any act or omission occurring prior to such repeal or amendment or adoption of such inconsistent provision. The Charter also permits the Registrant, to the extent and in the manner authorized or permitted by law, to indemnify and to advance expenses to persons other that those specifically covered by the Charter.

The Bylaws include the provisions relating to advancement of expenses and indemnification rights consistent with those which are set forth in the Charter. In addition, the Bylaws provide for a right of indemnity to bring a suit in the event a claim for indemnification or advancement of expenses is not paid in full by the Registrant within a specified period of time. The Bylaws also permit the Registrant to purchase and maintain insurance, at the Registrant's expense, to protect it and/or any director, officer, employee or agent of the Registrant or another entity, trust, or other enterprise against any expense, liability, or loss, whether or not the Registrant would have the power to indemnify such person against such expense, liability, or loss under the DGCL.

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Any repeal or amendment of provisions of the Bylaws affecting indemnification rights, whether by the Registrant's board of directors, stockholders or by changes in applicable law, or the adoption of any other provisions inconsistent therewith, will (unless otherwise required by law) be prospective only, except to the extent such amendment or change in law permits the Registrant to provide broader indemnification rights on a retroactive basis, and will not in any way diminish or adversely affect any right or protection existing thereunder with respect to any act or omission occurring prior to such repeal or amendment or adoption of such inconsistent provision.

The Registrant has entered into indemnification agreements with each of its officers and directors. These agreements require the Registrant to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to the Registrant, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

Item 16. Exhibits.

The following documents are filed as exhibits to this registration statement, including those exhibits incorporated herein by reference to a prior filing under the Securities Act or the Exchange Act, as indicated in parentheses:

Description of Document

Exhibit
Number

Form of Underwriting Agreement** 1.1 Specimen Common Stock Certificate** 4.1 Form of Preferred Share Certificate** 4.2 Form of Warrant** 4.3 Form of Warrant Agreement** 4.4 Form of Unit Agreement** 4.5 Form of indenture with respect to senior debt securities, to be entered into between registrant and a trustee acceptable to the registrant, if any.* 4.6 Form of indenture with respect to subordinated debt securities, to be entered into between registrant and a trustee acceptable to the registrant, if any.* 47 4.8 Form of debt securities, if any** Form of Right Certificate, if any** 4.9 <u>Underwriter Warrant (incorporated by reference to the Current Report on Form 8-K filed on March 28, 2025)</u> 4.10 Opinion of Hunter Taubman Fischer & Li LLC* 5.1 Director Agreement dated February 24, 2025 (incorporated by reference to the Current Report on Form 8-K filed on February 26, 2025) 10.1

10.2	Indemnification Agreement dated February 24, 2025 (incorporated by reference to the Current Report on Form 8-K filed on February 26, 2025)
10.3	Form of Non-Qualified Option to Purchase Common Stock (incorporated by reference to the Current Report on Form 8-K filed on February 26, 2025)
23.1	Consent of Rose, Snyder & Jacobs LLP*
23.2	Consent of Hunter Taubman Fischer & Li LLC (included in Exhibit 5.1)*
25.1	Statement of Eligibility of trustee on Form T-1 under the Trust Indenture Act of 1939 under the Senior Indenture+

Statement of Eligibility of trustee on Form T-1 under the Trust Indenture Act of 1939 under the Subordinated Indenture+

- * Incorporated by reference to the Registration Statement on Form S-3 filed with the SEC on July 31, 2025
- ** To be filed by amendment or as an exhibit to a filing with the SEC under Section 13 or 15(d) of the Securities Exchange Act of 1934 and incorporated by reference in connection with the offering of securities to the extent required for any such offering.
- + To be filed pursuant to Rule 305(b)(2) of the Trust Indenture Act, if applicable.

Calculation of Filing Fee Table*

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Item 17. Undertakings

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- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
- (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

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(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) That for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) To supplement the prospectus, after the expiration of any subscription period, to set forth the results of any subscription offer, the transactions by the underwriters during any subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.
- (d) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling personed to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, Aeluma, Inc. certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in California on August 6, 2025.

Aeluma, Inc.

: /s/ Jonathan Klamkin

Jonathan Klamkin Chief Executive Officer

Aeluma, Inc.

By: /s/ Christopher Stewart

Christopher Stewart Chief Financial Officer

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Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

/s/ Jonathan Klamkin Jonathan Klamkin	President, Chief Executive Officer, and Chairman (Principal Executive Officer)	August 6, 2025
/s/ Christopher Stewart Christopher Stewart	Chief Financial Officer (Principal Financial Officer)	August 6, 2025
/s/ Craig Ensley Craig Ensley	Director	August 6, 2025
/s/ Steven DenBaars Steven DenBaars	Director	August 6, 2025
/s/ John Paglia John Paglia	Director	August 6, 2025
/s/ Michael Byron Michael Byron	Director	August 6, 2025
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