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

Form 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
under the Securities Exchange Act of 1934

For the month of November 2026

Commission file number: 001-41334

RAIL VISION LTD.
(Translation of registrant's name into English)

7 HaPnina St.
P.O. Box 2155
Ra'anana 4321547, Israel
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☒ Form 40-F ☐

CONTENTS

Attached hereto and incorporated herein is the Registrant's press release issued on November 23, 2026, titled "Rail Vision Eliminates all Outstanding Toxic Warrants with Anti-Dilution Provisions in Exchange for Ordinary Shares, Establishing Clean Cap Table."

The first three paragraphs in the press release attached to this Report on Form 6-K as Exhibit 99.1 are incorporated by reference into the Registrant's Registration Statements on F-3 (File Nos. 333-271068, 333-272933, 333-277963 and 333-278645) and Form S-8 (File Nos. 333-265968, 333-281329 and 333-286652), filed with the Securities and Exchange Commission, to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

EXHIBIT INDEX

Exhibit No.	
99.1	Press release issued by Rail Vision Ltd. on November 23, 2026, titled "Rail Vision Eliminates all Outstanding Toxic Warrants with Anti-Dilution Provisions in Exchange for Ordinary Shares, Establishing Clean Cap Table"

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Rail Vision Ltd.

Date: November 23, 2026

By: */s/ Ofer Naveh*
Name: Ofer Naveh
Title: Chief Financial Officer

Exhibit 99.1

Rail Vision Eliminates all Outstanding Toxic Warrants with Anti-Dilution Provisions in Exchange for Ordinary Shares, Establishing Clean Cap Table

Company to issue 120,000 restricted ordinary shares in exchange for the full cancellation of 163,214 outstanding warrants

Ra'anana, Israel, November 23, 2026 (GLOBE NEWSWIRE) – Rail Vision Ltd. (Nasdaq: RVSN, FSE:C80) ("Rail Vision" or the "Company"), an early commercialization stage technology company transforming railway safety through advanced AI-integrated sensing systems, today announced that it has reached an agreement with an institutional investor for the exchange and full cancellation of 163,214 outstanding warrants that included anti-dilution and price protection provisions.

Under the terms of the agreement, Rail Vision will issue 120,000 restricted ordinary shares to the investor in consideration for the full cancellation of the warrants and all related rights. The newly issued shares will represent approximately 4.9% of the Company's issued and outstanding share capital immediately following the issuance.

Following the cancellation of the warrants, the Company expects to have a simplified capital table. The transaction is intended to provide management with greater flexibility to evaluate and pursue financing alternatives based on the Company's capital requirements and prevailing market conditions.

About Rail Vision Ltd.

Rail Vision (Nasdaq: RVSN, FSE: C80) is an early commercialization stage technology company transforming railway safety through advanced AI-integrated sensing systems. The Company develops and commercializes proprietary electro-optic platforms that provide extended-range situational awareness and real-time hazard detection. Using machine learning algorithms to identify and classify obstacles, Rail Vision's technology enhances safety, improves operational efficiency, and supports continuity across deployments.

The Company's cloud-based platform complements its products by transforming railway operational data into actionable insights that help optimize performance, reduce downtime, and improve safety. As the Company expands its global footprint, it delivers AI-driven perception that supports safer operations, reduces operational risk, and enables the transition to fully autonomous operations.

Rail Vision holds a 51% stake in Quantum Transportation, which has an exclusive sub-license for rail technologies under an innovative pending patent in quantum error correction owned by Ramot, the technology transfer company of Tel Aviv University.

For more information, please visit https://www.railvision.io/

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act and other securities laws. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements. For example, the Company is using forward-looking statements when it discusses the expected completion of the warrant exchange and issuance of the ordinary shares, and the Company's ability to access the capital markets and manage its financing strategy. Such expectations, beliefs and projections are expressed in good faith. However, there can be no assurance that management's expectations, beliefs and projections will be achieved, and actual results may differ materially from what is expressed in or indicated by the forward-looking statements. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the forward-looking statements. For a more detailed description of the risks and uncertainties affecting the Company, reference is made to the Company's reports filed from time to time with the Securities and Exchange Commission ("SEC"), including, but not limited to, the risks detailed in the Company's annual report on Form 20-F for the fiscal year ended December 31, 2025, filed with the SEC on March 31, 2026. Forward-looking statements speak only as of the date the statements are made. The Company assumes no obligation to update forward-looking statements to reflect actual results, subsequent events or circumstances, changes in assumptions or changes in other factors affecting forward-looking information except to the extent required by applicable securities laws. If the Company does update one or more forward-looking statements, no inference should be drawn that the Company will make additional updates with respect thereto or with respect to other forward-looking statements. References and links to websites have been provided as a convenience, and the information contained on such websites is not incorporated by reference into this press release. Rail Vision is not responsible for the contents of third-party websites.

Investor Relations:

Michal Efraty
investors@railvision.io