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 10, 2026, titled "Rail Vision Successfully Completes U.S. Rail Industry Testing Phase Under the Association of American Railroads' Technology Roadmap Program."

The first four paragraphs in the press release attached 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and Exchange Commission, to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.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 10, 2026, titled "Rail Vision Successfully Completes U.S. Rail Industry Testing Phase Under the Association of American Railroads' Technology Roadmap Program"

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 10, 2026

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

Exhibit 99.1

Rail Vision Successfully Completes U.S. Rail Industry Testing Phase Under the Association of American Railroads' Technology Roadmap Program

The Technology Roadmap Program supports the development of performance standards for next-generation rail safety and automation.

Ra'anana, Israel, November 10, 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 the successful completion of the testing phase of its TrackScout™ mainline railway system under the Association of American Railroads ("AAR") Technology Roadmap Program, an industry initiative supporting the development of next-generation rail safety and automation technologies.

The testing was conducted as part of the Train Control, Communications, and Operations ("TCCO") Technology Roadmap Program, managed by MxV Rail, a subsidiary of AAR. Rail Vision's participation in the program follows its initial inclusion in the broader Technology Roadmap Program in December 2024 and its subsequent selection for the locomotive sensor pre-integration testing phase, announced in September 2026.

The program addresses the North American freight rail industry's efforts to advance Restricted Speed Enforcement ("RSE") capabilities, an important building block in the transition toward increased rail automation. These efforts reflect evolving safety and operational requirements across the sector, including those of Class I railroad operators. AI-powered perception technologies are expected to play an important role in this evolution by providing enhanced situational awareness and supporting more informed operational and safety decisions.

As the research and testing subsidiary of the AAR, MxV Rail serves as the industry's independent research and testing partner, working with the North American railroad industry to evaluate emerging technologies and support the development of industry standards. Rail Vision's participation in the TCCO program contributes to this broader industry effort.

"Completing this testing phase represents another important step in Rail Vision's engagement with the North American freight rail industry," said David BenDavid, Chief Executive Officer of Rail Vision. "As the rail industry moves toward increasingly automated train operations, reliable forward perception and real-time situational awareness will be essential. Our AI-powered perception technology is designed to provide a critical layer of intelligence that complements existing rail safety systems and supports the industry's longer-term vision for autonomous rail operations."

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 role of AI-powered perception technologies in the evolution of rail safety and automation and the potential of its technology to support increasingly automated and autonomous rail operations. 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:

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