# Dossier: CIRCLE OPTICS INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $149,963.70

**Award Date:** 2024-08-05

**Branch:** SCO

## AI-Generated Intelligence Summary

**Company Overview:**

Circle Optics Inc. is a Rochester, New York-based company specializing in developing and manufacturing wide field-of-view (WFOV) optics for defense, security, and industrial applications. Their core mission is to overcome the limitations of traditional lens and camera systems by creating panoramic imaging solutions that provide high-resolution, distortion-free, and real-time situational awareness. They aim to solve the problems of limited field-of-view, blind spots, and cumbersome multi-camera setups that plague various sectors, from defense vehicle vision to drone-based surveillance. Their unique value proposition lies in their proprietary lens technology that enables a single camera to capture a 360° view with minimal distortion and high image quality, reducing complexity, cost, and size compared to alternative approaches.

**Technology Focus:**

* HYDRA Multi-Perspective Optics:\*\* Circle Optics' core technology is the HYDRA lens, a multi-perspective optic that uses multiple apertures and custom-designed lens elements to capture a 360° field of view. This eliminates the need for multiple cameras or moving parts to achieve panoramic imaging.
* Software & Processing:\*\* They develop proprietary software and processing algorithms to stitch together the multiple perspective images captured by the HYDRA lens, resulting in a seamless, low-distortion, high-resolution panoramic image or video feed.

**Recent Developments & Traction:**

* SBIR Awards:\*\* Circle Optics has received multiple Small Business Innovation Research (SBIR) awards from the Department of Defense (DoD), including contracts from the Army and Air Force, to develop and refine their HYDRA lens technology for various applications like situational awareness on military vehicles and drone-based reconnaissance.
* Commercial Partnerships:\*\* In 2022, announced partnership with Corning Incorporated to explore using Corning's glass for HYDRA lens production, optimizing performance.
* Product Development and Demonstrations:\*\* Circle Optics has demonstrated functional prototypes of the HYDRA lens and continues to refine the technology for specific applications, showcasing its capabilities at defense industry events.

**Leadership & Team:**

* Zakary Swartz, CEO:\*\* A serial entrepreneur with a background in optics and imaging. His previous experience includes founding and leading other technology startups.
* Corey Hoven, CTO:\*\* Extensive experience in optical engineering and system design. Previously worked at large optics firms.

**Competitive Landscape:**

* Immersive Display Technologies:\*\* Offers panoramic surveillance cameras and systems. Circle Optics differentiates itself through its single-lens, multi-perspective approach, potentially offering a more compact and less complex solution than multi-camera systems.
* Panorai:\*\* Designs and manufactures panoramic imaging systems. Circle Optics attempts to differentiate through claimed image quality and lower distortion.

**Sources:**

1. [https://www.circleoptics.com/](https://www.circleoptics.com/)

2. [https://www.optics.rochester.edu/industry/alumni-profiles/zakary-swartz.html](https://www.optics.rochester.edu/industry/alumni-profiles/zakary-swartz.html)

3. [https://www.sbir.gov/sbirsearch/detail/2035545](https://www.sbir.gov/sbirsearch/detail/2035545)

4. [https://www.army.mil/article/246773/army\_modernization\_priority\_gets\_boost\_from\_small\_business\_innovation](https://www.army.mil/article/246773/army\_modernization\_priority\_gets\_boost\_from\_small\_business\_innovation)