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Test Report: IEI-02491, Issue: 1

EN 166:2002

Innovative Eyewear, Inc.

Lucyd Armor Smart Safety Glasses

April 03, 2025

ACCREDITED
Test Laboratory
Certificate # 1612.01

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e. Decision Rule – COLTS makes all statements of conformity (pass/fail) based on actual values reported, unless otherwise stated.

Authorized By:

Jacob Gary
Director of Operations

Reviewed By:

Jason Fawell
Technical Engineer

Report Summary

Product Description: Lucyd Armor Smart Safety Glasses: Clear Lens, Black and Yellow Frame
Date Received: March 03, 2025
Date(s) Tested: March 24, 2025 to April 03, 2025
Standard: EN 166:2002
Laboratory Conditions: 23°C, 48% RH

Final Conclusion:

The Spectacle Sample: Lucyd Armor Smart Safety Glasses (Clear Lens, Black and Yellow Frame) does comply with EN 166:2002 for the test(s) included in this report.

Test Name	Result
6.1 General Construction	Pass
7.1.1 Field of Vision	Pass
7.1.2.1 Spherical and Astigmatic Powers	Pass
7.1.2.1 Prismatic Prism	Pass
7.1.2.2.1 Transmittance Oculars without filtering action	Pass
7.1.2.3 Diffusion of Light	Pass
7.1.3 Quality of Material and Surface	Pass
7.1.4.2.2 Increased Robustness - Complete eye-protectors and frames	Pass
7.1.5.1 Stability at an Elevated Temperature	Pass
7.1.7 Resistance to Ignition	Pass

Test Results - IEI-02491-01/Lucyd Armor Smart Safety Glasses Clear Lens, Black and Yellow Frame

EN 166 - 6.1 General Construction

6.1 General Construction

Test	Specification	Pass
Sample 1		Pass
Sample 2		Pass
Sample 3		Pass

EN 166 - 7.1.1 Field of Vision

7.1.1 Field of Vision

Test	Specification	Pass
Sample 1		Pass
Sample 2		Pass
Sample 3		Pass

EN 166 - 7.1.2.1 Spherical, Astigmatic Powers

7.1.2.1 Spherical and Astigmatic Powers

Test	Specification	Pass
Refractive Power - Sample 1		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Astigmatism - Sample 1		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Resolving Power - Sample 1		Pass
Left Eye		Pass
Right Eye		Pass
Refractive Power - Sample 2		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Astigmatism - Sample 2		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Resolving Power - Sample 2		Pass
Left Eye		Pass
Right Eye		Pass
Refractive Power - Sample 3		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Astigmatism - Sample 3		Pass
Left Eye		0.040 (Diopters)
Right Eye		0.040 (Diopters)
Resolving Power - Sample 3		Pass
Left Eye		Pass

Test Results - IEI-02491-01/Lucyd Armor Smart Safety Glasses Clear Lens, Black and Yellow Frame

Right Eye		Pass

EN 166 - 7.1.2.1 Prism

7.1.2.1 Prismatic Prism

Test	Specification	Pass
Vertical - Sample 1		0.00 (Diopters)
Horizontal Base Out - Sample 1		0.30 (Diopters)
Vertical - Sample 2		0.00 (Diopters)
Horizontal Base Out - Sample 2		0.25 (Diopters)
Vertical - Sample 3		0.00 (Diopters)
Horizontal Base Out - Sample 3		0.10 (Diopters)

EN 166 - 7.1.2.2.1 Trans (w/o filtering action)

7.1.2.2.1 Transmittance Oculars without filtering action

Test	Specification	Pass
Sample 1		Pass
Left Eye		85.6 (%)
Right Eye		85.4 (%)
Sample 2		Pass
Left Eye		86.0 (%)
Right Eye		85.9 (%)
Sample 3		Pass
Right Eye		85.1 (%)
Left Eye		85.4 (%)

EN 166 - 7.1.2.3 Diffusion of Light

7.1.2.3 Diffusion of Light

Test	Specification	Pass
Sample 1		Pass
Left Eye		0.11 (%)
Right Eye		0.03 (%)
Sample 2		Pass
Left Eye		0.08 (%)
Right Eye		0.05 (%)
Sample 3		Pass
Left Eye		0.09 (%)
Right Eye		0.01 (%)

EN 166 - 7.1.3 Quality of Material and Surface

7.1.3 Quality of Material and Surface

Test	Specification	Pass
Sample 1		Pass
Sample 2		Pass
Sample 3		Pass

Test Results - IEI-02491-01/Lucyd Armor Smart Safety Glasses Clear Lens, Black and Yellow Frame

EN 166 - 7.1.4.2.2 Increased Robustness (Complete)

7.1.4.2.2 Increased Robustness - Complete eye-protectors and frames

Test	Specification	Pass
Sample 1 - Left Eye Frontal at 23°		Pass
Sample 2 - Left Eye Frontal at 55°		Pass
Sample 3 - Left Eye Frontal at -5°		Pass
Sample 4 - Left Eye Lateral at 23°		Pass
Sample 5 - Left Eye Lateral at 55°		Pass
Sample 6 - Left Eye Lateral at -5°		Pass
Sample 7 - Right Eye Frontal at 23°		Pass
Sample 8 - Right Eye Frontal at 55°		Pass
Sample 9 - Right Eye Frontal at -5°		Pass
Sample 10 - Right Eye Lateral at 23°		Pass
Sample 11 - Right Eye Lateral at 55°		Pass
Sample 12 - Right Eye Lateral at -5°		Pass

EN 166 - 7.1.5.1 Stability at Elevated Temp

7.1.5.1 Stability at an Elevated Temperature

Test	Specification	Pass
Sample 1		Pass
Sample 2		Pass
Sample 3		Pass

EN 166 - 7.1.6 Resistance To Corrosion

7.1.6 Resistance To Corrosion

Result		Pass
Sample 1		Pass
Sample 2		Pass
Sample 3		Pass

EN 166 - 7.1.7 Resistance to Ignition

7.1.7 Resistance to Ignition

Test	Specification	Pass
Sample 1		Pass
Lens 1		Pass
Front 1		Pass
Temple 1		Pass
Other 1		N/A
Sample 2		Pass
Lens 2		Pass
Front 2		Pass
Temple 2		Pass
Other 2		N/A

Test Results - IEI-02491-01/Lucyd Armor Smart Safety Glasses Clear Lens, Black and Yellow Frame

Sample 3		Pass
Lens 3		Pass
Front 3		Pass
Temple 3		Pass
Other 3		N/A

APPENDIX 1

EN 166 Measurement Uncertainty Values		
Section	**Requirement**	**Uncertainty**
6.3	Headbands – Dimensional	0.5mm
7.1.2.1	Spherical/Astigmatic Refractive Power	0.007D
7.1.2.1	Prismatic Power	0.05Δ
7.1.2.2.1	Transmittance - Oculars without filtering action	0.41%
7.1.2.2.2	Transmittance - Oculars with filtering action	
	85% - 8.5%	0.41%
	8.5 – 3.16%	0.0018287%
	3.16 – 1.18%	0.0003283%
	1.18 – 0.44%	0.0003605%
	0.44 – 0.164%	0.0000961%
	0.164 – 0.061%	0.0001944%
	0.061 – 0.023%	0.0000459%
	0.023 – 0.0085%	0.0000706%
	0.0085 – 0.0032%	0.0000068%
	0.0032 – 0.0012%	0.0000055%
	0.0012 – 0.00044%	0.0000028%
	0.00044 – 0.00027%	0.0000017%
	UV	0.00006%
	IR	0.01000%
7.1.2.3	Diffusion of Light	0.05
7.3.2	Resistance to fogging of Oculars	1.54%