

TEST RESULTS and REPORT

for

Racing Optics, Inc.

RealShield™ RS15001A

by



COLTS | Laboratories™

Precision Testing. Definitive Results.

**COLTS Laboratories maintains A2LA accreditation to ISO/IEC 17025 for the tests listed on Certificate # 1612.01.
Any tests not included on this certificate have been identified on the appropriate test result page.**

Also Certified for testing by the Safety Equipment Institute

Z-RAO061620-01

- Unless otherwise stated, results in this report apply only to the samples tested and not to lots from which they were taken.
- This report shall not be reproduced, except in full, without written approval from COLTS Laboratories.
- Unless otherwise requested, test samples will be discarded 21 days from the report date.

COLTS Laboratories

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 URL: www.colts-laboratories.com



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**PRODUCT
 RESULTS
 SUMMARY**

A2LA Accredited Certificate # 1612.01

**Racing Optics, Inc.
 RAO061620-01**

| COLTS Project ID | Test/Models(s) | Results Pass / Fail | Reason | Page |
|-------------------------|---|--------------------------------|---------------|-------------|
| Z-RAO061620-01-01 | ANSI Z87.1-2020 Faceshield Base Model General Requirements RealShield™ RS15001A RealShield™ Attached to Racing Optics Baseball-style Cap | Pass | | 1 |
| Z-RAO061620-01-02 | ANSI Z87.1-2020 Faceshield Optional Claim (D3) RealShield™ RS15001A RealShield™ Attached to Racing Optics Baseball-style Cap | Pass | | 5 |
| Z-RAO061620-01-03 | ANSI Z87.1-2020 Faceshield Base Model General Requirements RealShield™ RS15001A RealShield™ Attached to RealShield Tennis-style Visor | Pass | | 7 |
| Z-RAO061620-01-04 | ANSI Z87.1-2020 Faceshield Optional Claim (D3) RealShield™ RS15001A RealShield™ Attached to RealShield Tennis-style Visor | Pass | | 11 |
| Z-RAO061620-01-05 | ANSI Z87.1-2020 Faceshield Base Model General Requirements RealShield™ RS15001A RealShield™ Attached to ERB Safety Blue Bump Cap | Pass | | 13 |
| Z-RAO061620-01-06 | ANSI Z87.1-2020 Faceshield Optional Claim (D3) RealShield™ RS15001A RealShield™ Attached to ERB Safety Blue Bump Cap | Pass | | 17 |

Report Date: 06/24/2020

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

Racing Optics, Inc.
7200 Montessouri St Ste 100
Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A
Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-01



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to Racing Optics Baseball-style Cap

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Base Model General Requirements.

Detailed test results are included.

Final Conclusion:

The Faceshields: RealShield™ RS15001A (RealShield™ Attached to Racing Optics Baseball-style Cap) do comply with ANSI Z87.1-2020 for the test(s) included in this report.

COLTS makes all statements of conformity (Pass/Fail) based on actual values reported, unless otherwise stated.

Please contact us should you have any questions concerning this report.

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President & COO

Dale Payne
Technical Services Manager

Report To: Racing Optics, Inc.
 Project No: Z-RAO061620-01-01



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to Racing Optics Baseball-style Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
 Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|---|--------------|------------|
| Optical Quality | 5.1.1 | Protector lenses shall be free of: striae, bubbles, waves and other visible defects which would impair the wearer's vision. | Acceptable | Pass |
| Luminous Transmittance | 5.1.2 | Clear lenses shall have a luminous transmittance of not less than 85%. Luminous Transmittance | Acceptable | Pass |
| | | Left Eye | 90.1% | Pass |
| | | Right Eye | 90.1% | Pass |
| Haze – Clear Lenses Only | 5.1.3 | Clear plano lenses shall not exhibit more than 3% haze. Haze | Acceptable | Pass |
| | | Left Eye | 0.39% | Pass |
| | | Right Eye | 0.38% | Pass |
| Faceshield - Resolving Power, Prism and Prism Imbalance for Plano Protectors | 5.1.4 | The tolerance on resolving power, prism and prism imbalance shall be as indicated below. Filter lenses of shade 9 or higher are exempt from this section. Resolving Power (Pattern 20) | Acceptable | Pass |
| | | Left Eye | Acceptable | Pass |
| | | Right Eye | Acceptable | Pass |
| | | Complete Prism (0.37 Max) | Acceptable | Pass |
| | | Left Eye | 0.150 | Pass |
| | | Right Eye | 0.150 | Pass |
| | | Prismatic Imbalance | Acceptable | Pass |
| | | Vertical (0.37 Max) | 0.00 | Pass |
| | | Horizontal Base In/Out (In 0.125 Max; Out 0.75 Max) | 0.30 out | Pass |
| Physical Requirements | 5.2 | Protectors shall be free from: projections, sharp edges or other defects which are likely to cause discomfort or injury during use. | Acceptable | Pass |

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Report To: Racing Optics, Inc.
 Project No: Z-RAO061620-01-01



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to Racing Optics Baseball-style Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
 Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|--|--------------|------------|
| Drop Ball Impact Resistance | 5.2.1 | The protector shall fail if any of the following occur when impacted by a 25.4 mm (1 in.) diameter steel ball when dropped from a height of 127 cm (50 in.): | | |
| | | • lens (lens only) fractures | | |
| | | • piece fully detached from the inner surface | | |
| | | • projectile penetrates the inner surface | | |
| | | • lens not retained | | |
| | | Glass welding filter lenses shall be tested and used in conjunction with a safety plate in order to comply with the drop ball impact performance criteria. | | |
| | | Protectors first tested to and meeting the requirements of Section 7.1.4 are exempt from drop ball impact testing. | | |
| | | Sample 1 - Left Eye | Acceptable | Pass |
| | | Sample 2 - Left Eye | Acceptable | Pass |
| | | Sample 3 - Right Eye | Acceptable | Pass |
| | | Sample 4 - Right Eye | Acceptable | Pass |
| Ignition (Faceshield) | 5.2.2 | When tested in accordance with Section 9.7, protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of metals, textiles or elastic bands) shall be tested. | | |
| | | Lens/Window | Acceptable | Pass |
| | | Crown | N/A | N/A |
| | | Headgear/Adapter | N/A | N/A |
| | | Other | N/A | N/A |
| Corrosion Resistance of Metal Components | 5.2.3 | Metal components used in protectors shall be corrosion resistant to the degree that the function of the protector shall not be impaired by the corrosion and the protector can be worn as intended. Lenses and electrical components are excluded from these requirements. | | |
| | | Corrosion Resistant | N/A | N/A |

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Report To: Racing Optics, Inc.
 Project No: Z-RAO061620-01-01



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to Racing Optics Baseball-style Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
 Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|---|-----------|---|---------------------------------------|------------|
| Minimum Coverage Area | 5.2.4 | Protectors shall cover an area of not less than 40 mm in width and 33 mm in height (elliptical) in front of each eye, centered on the pupil centers of the test headform. | | |
| | | Protectors designed for small head sizes shall cover an area of not less than 34 mm in width and 28 mm in height (elliptical), centered on the pupil centers of the test headform. Minimum Coverage Area | Acceptable | Pass |
| Placement of Markings (Faceshield) | 5.3.2 | All protectors shall bear the permanent and legible markings in specified locations. | | |
| | | Markings for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer. | | |
| | | Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below: | | |
| | | Markings permanent, legible and in relatable proximity | N/A | N/A |
| | | Markings representative of other standards shall not interfere with or be intermixed with the markings required by this standard. | N/A | N/A |
| | | Complete Device Markings | N/A | N/A |
| | | Manufacturer's Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| + Mark | N/A | N/A | | |
| Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A | | |
| Use (multiple claim sequence D3,D4,D5) | N/A | N/A | | |
| | | | Markings for this device not assessed | |

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

Racing Optics, Inc.
7200 Montessouri St Ste 100
Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A
Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-02



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to Racing Optics Baseball-style Cap

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Optional Claim (D3).

Detailed test results are included.

Final Conclusion:

The Faceshields: RealShield™ RS15001A (RealShield™ Attached to Racing Optics Baseball-style Cap) do comply with ANSI Z87.1-2020 for the test(s) included in this report.

COLTS makes all statements of conformity (Pass/Fail) based on actual values reported, unless otherwise stated.

Please contact us should you have any questions concerning this report.

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President & COO

Dale Payne
Technical Services Manager

Report To: Racing Optics, Inc.
Project No: Z-RAO061620-01-02



Sample ID:
RealShield™ RS15001A
RealShield™ Attached to Racing Optics Baseball-style Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|----------------------------------|-----------|--|--------------|------------|
| Faceshields - Droplet and Splash | 7.3.2 | The laser beam shall not make direct contact with any point on the eye-region rectangle without first being intercepted by the faceshield. Faceshield Droplet and Splash Hazard | Acceptable | Pass |

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

Racing Optics, Inc.
7200 Montessouri St Ste 100

Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A

Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-03



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to RealShield Tennis-style Visor

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Base Model General Requirements.

Detailed test results are included.

Final Conclusion:

The Faceshields: RealShield™ RS15001A (RealShield™ Attached to RealShield Tennis-style Visor) do comply with ANSI Z87.1-2020 for the test(s) included in this report.

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Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President & COO

Dale Payne
Technical Services Manager

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 Project No: Z-RAO061620-01-03



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to RealShield Tennis-style Visor

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
 Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|---|--------------|------------|
| Optical Quality | 5.1.1 | Protector lenses shall be free of: striae, bubbles, waves and other visible defects which would impair the wearer's vision. | Acceptable | Pass |
| Luminous Transmittance | 5.1.2 | Clear lenses shall have a luminous transmittance of not less than 85%. Luminous Transmittance | Acceptable | Pass |
| | | Left Eye | 90.4% | Pass |
| | | Right Eye | 90.6% | Pass |
| Haze – Clear Lenses Only | 5.1.3 | Clear plano lenses shall not exhibit more than 3% haze. Haze | Acceptable | Pass |
| | | Left Eye | 0.31% | Pass |
| | | Right Eye | 0.33% | Pass |
| Faceshield - Resolving Power, Prism and Prism Imbalance for Plano Protectors | 5.1.4 | The tolerance on resolving power, prism and prism imbalance shall be as indicated below. Filter lenses of shade 9 or higher are exempt from this section. Resolving Power (Pattern 20) | Acceptable | Pass |
| | | Left Eye | Acceptable | Pass |
| | | Right Eye | Acceptable | Pass |
| | | Complete Prism (0.37 Max) | Acceptable | Pass |
| | | Left Eye | 0.200 | Pass |
| | | Right Eye | 0.000 | Pass |
| | | Prismatic Imbalance | Acceptable | Pass |
| | | Vertical (0.37 Max) | 0.00 | Pass |
| | | Horizontal Base In/Out (In 0.125 Max; Out 0.75 Max) | 0.20 out | Pass |
| Physical Requirements | 5.2 | Protectors shall be free from: projections, sharp edges or other defects which are likely to cause discomfort or injury during use. | Acceptable | Pass |

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Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to RealShield Tennis-style Visor

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Report Date: 6/24/2020

Lab Temp (C): 23

Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|--|--------------|------------|
| Drop Ball Impact Resistance | 5.2.1 | The protector shall fail if any of the following occur when impacted by a 25.4 mm (1 in.) diameter steel ball when dropped from a height of 127 cm (50 in.): | | |
| | | • lens (lens only) fractures | | |
| | | • piece fully detached from the inner surface | | |
| | | • projectile penetrates the inner surface | | |
| | | • lens not retained | | |
| | | Glass welding filter lenses shall be tested and used in conjunction with a safety plate in order to comply with the drop ball impact performance criteria. | | |
| | | Protectors first tested to and meeting the requirements of Section 7.1.4 are exempt from drop ball impact testing. | | |
| | | Sample 1 - Left Eye | Acceptable | Pass |
| | | Sample 2 - Left Eye | Acceptable | Pass |
| | | Sample 3 - Right Eye | Acceptable | Pass |
| | | Sample 4 - Right Eye | Acceptable | Pass |
| Ignition (Faceshield) | 5.2.2 | When tested in accordance with Section 9.7, protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of metals, textiles or elastic bands) shall be tested. | | |
| | | Lens/Window | Acceptable | Pass |
| | | Crown | N/A | N/A |
| | | Headgear/Adapter | N/A | N/A |
| | | Other | N/A | N/A |
| Corrosion Resistance of Metal Components | 5.2.3 | Metal components used in protectors shall be corrosion resistant to the degree that the function of the protector shall not be impaired by the corrosion and the protector can be worn as intended. Lenses and electrical components are excluded from these requirements. | | |
| | | Corrosion Resistant | N/A | N/A |

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Report To: Racing Optics, Inc.
 Project No: Z-RAO061620-01-03



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to RealShield Tennis-style Visor

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Report Date: 6/24/2020

Lab Temp (C): 23
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Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|---|-----------|---|---------------------------------------|------------|
| Minimum Coverage Area | 5.2.4 | Protectors shall cover an area of not less than 40 mm in width and 33 mm in height (elliptical) in front of each eye, centered on the pupil centers of the test headform. | | |
| | | Protectors designed for small head sizes shall cover an area of not less than 34 mm in width and 28 mm in height (elliptical), centered on the pupil centers of the test headform. Minimum Coverage Area | Acceptable | Pass |
| Placement of Markings (Faceshield) | 5.3.2 | All protectors shall bear the permanent and legible markings in specified locations. | | |
| | | Markings for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer. | | |
| | | Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below: | | |
| | | Markings permanent, legible and in relatable proximity | N/A | N/A |
| | | Markings representative of other standards shall not interfere with or be intermixed with the markings required by this standard. | N/A | N/A |
| | | Complete Device Markings | N/A | N/A |
| | | Manufacturer's Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| + Mark | N/A | N/A | | |
| Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A | | |
| Use (multiple claim sequence D3,D4,D5) | N/A | N/A | | |
| | | | Markings for this device not assessed | |

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

Racing Optics, Inc.
7200 Montessori St Ste 100

Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A

Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-04



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to RealShield Tennis-style Visor

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Optional Claim (D3).

Detailed test results are included.

Final Conclusion:

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Project No: Z-RAO061620-01-04



Sample ID:
RealShield™ RS15001A
RealShield™ Attached to RealShield Tennis-style Visor

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|----------------------------------|-----------|--|--------------|------------|
| Faceshields - Droplet and Splash | 7.3.2 | The laser beam shall not make direct contact with any point on the eye-region rectangle without first being intercepted by the faceshield. Faceshield Droplet and Splash Hazard | Acceptable | Pass |

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Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A

Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-05



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to ERB Safety Blue Bump Cap

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Base Model General Requirements.

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Report To: Racing Optics, Inc.
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 RealShield™ RS15001A
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Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|---|--------------|------------|
| Optical Quality | 5.1.1 | Protector lenses shall be free of: striae, bubbles, waves and other visible defects which would impair the wearer's vision. | Acceptable | Pass |
| Luminous Transmittance | 5.1.2 | Clear lenses shall have a luminous transmittance of not less than 85%. Luminous Transmittance | Acceptable | Pass |
| | | Left Eye | 90.3% | Pass |
| | | Right Eye | 89.7% | Pass |
| Haze – Clear Lenses Only | 5.1.3 | Clear plano lenses shall not exhibit more than 3% haze. Haze | Acceptable | Pass |
| | | Left Eye | 0.19% | Pass |
| | | Right Eye | 0.17% | Pass |
| Faceshield - Resolving Power, Prism and Prism Imbalance for Plano Protectors | 5.1.4 | The tolerance on resolving power, prism and prism imbalance shall be as indicated below. Filter lenses of shade 9 or higher are exempt from this section. Resolving Power (Pattern 20) | Acceptable | Pass |
| | | Left Eye | Acceptable | Pass |
| | | Right Eye | Acceptable | Pass |
| | | Complete Prism (0.37 Max) | Acceptable | Pass |
| | | Left Eye | 0.000 | Pass |
| | | Right Eye | 0.150 | Pass |
| | | Prismatic Imbalance | Acceptable | Pass |
| | | Vertical (0.37 Max) | 0.00 | Pass |
| | | Horizontal Base In/Out (In 0.125 Max; Out 0.75 Max) | 0.15 out | Pass |
| Physical Requirements | 5.2 | Protectors shall be free from: projections, sharp edges or other defects which are likely to cause discomfort or injury during use. | Acceptable | Pass |

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| Test/Property | Paragraph | Requirement | Test Results | Acceptance | |
|--|-----------|---|----------------------|------------|------|
| Drop Ball Impact Resistance | 5.2.1 | <p>The protector shall fail if any of the following occur when impacted by a 25.4 mm (1 in.) diameter steel ball when dropped from a height of 127 cm (50 in.):</p> <ul style="list-style-type: none"> • lens (lens only) fractures • piece fully detached from the inner surface • projectile penetrates the inner surface • lens not retained <p>Glass welding filter lenses shall be tested and used in conjunction with a safety plate in order to comply with the drop ball impact performance criteria.</p> <p>Protectors first tested to and meeting the requirements of Section 7.1.4 are exempt from drop ball impact testing.</p> | | | |
| | | | Sample 1 - Left Eye | Acceptable | Pass |
| | | | Sample 2 - Left Eye | Acceptable | Pass |
| | | | Sample 3 - Right Eye | Acceptable | Pass |
| | | | Sample 4 - Right Eye | Acceptable | Pass |
| Ignition (Faceshield) | 5.2.2 | <p>When tested in accordance with Section 9.7, protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of metals, textiles or elastic bands) shall be tested.</p> | | | |
| | | | Lens/Window | Acceptable | Pass |
| | | | Crown | N/A | N/A |
| | | | Headgear/Adapter | Acceptable | Pass |
| | | | Other | Acceptable | Pass |
| | Other | N/A | Bump cap N/A | | |
| Corrosion Resistance of Metal Components | 5.2.3 | <p>Metal components used in protectors shall be corrosion resistant to the degree that the function of the protector shall not be impaired by the corrosion and the protector can be worn as intended. Lenses and electrical components are excluded from these requirements.</p> | | | |
| | | | Corrosion Resistant | N/A | N/A |

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Report To: Racing Optics, Inc.
 Project No: Z-RAO061620-01-05



Sample ID:
 RealShield™ RS15001A
 RealShield™ Attached to ERB Safety Blue Bump Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
 Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|--|---------------------------------------|------------|
| Minimum Coverage Area | 5.2.4 | Protectors shall cover an area of not less than 40 mm in width and 33 mm in height (elliptical) in front of each eye, centered on the pupil centers of the test headform. | | |
| | | Protectors designed for small head sizes shall cover an area of not less than 34 mm in width and 28 mm in height (elliptical), centered on the pupil centers of the test headform. Minimum Coverage Area | Acceptable | Pass |
| Placement of Markings (Faceshield) | 5.3.2 | All protectors shall bear the permanent and legible markings in specified locations. Markings for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer. Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below: | | |
| | | Markings permanent, legible and in relatable proximity | N/A | N/A |
| | | Markings representative of other standards shall not interfere with or be intermixed with the markings required by this standard. | N/A | N/A |
| | | Complete Device Markings | N/A | N/A |
| | | Manufacturer's Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A |
| Use (multiple claim sequence D3,D4,D5) | N/A | N/A | | |
| | | | Markings for this device not assessed | |

COLTS Laboratories

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

Racing Optics, Inc.
7200 Montessouri St Ste 100

Las Vegas, NV 89113-4465

Project

of Model(s): RealShield™ RS15001A

Report of: ANSI Z87.1-2020
Project ID(s): Z-RAO061620-01-06



Attn: Roger Cone

Date: June 24, 2020

Product Description: RealShield™ Attached to ERB Safety Blue Bump Cap

On June 16, 2020, COLTS Laboratories received Faceshields: RealShield™ RS15001A from Racing Optics, Inc. . From June 18, 2020 through June 24, 2020 COLTS Laboratories tested these Faceshields in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Faceshield Optional Claim (D3).

Detailed test results are included.

Final Conclusion:

The Faceshields: RealShield™ RS15001A (RealShield™ Attached to ERB Safety Blue Bump Cap) do comply with ANSI Z87.1-2020 for the test(s) included in this report.

COLTS makes all statements of conformity (Pass/Fail) based on actual values reported, unless otherwise stated.

Please contact us should you have any questions concerning this report.

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President & COO

Dale Payne
Technical Services Manager

Report To: Racing Optics, Inc.
Project No: Z-RAO061620-01-06



Sample ID:
RealShield™ RS15001A
RealShield™ Attached to ERB Safety Blue Bump Cap

A2LA Accredited Certificate # 1612.01

Report Date: 6/24/2020

Lab Temp (C): 23
Lab Rh: 50

Report of: ANSI Z87.1-2020

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|----------------------------------|-----------|--|--------------|------------|
| Faceshields - Droplet and Splash | 7.3.2 | The laser beam shall not make direct contact with any point on the eye-region rectangle without first being intercepted by the faceshield. Faceshield Droplet and Splash Hazard | Acceptable | Pass |

APPENDIX 1

ANSI Z87.1 - 2020 Measurement Uncertainty Values

| Section | Requirement | Uncertainty |
|-----------|--|------------------------------|
| 5.1.2 | Luminous Transmittance | 0.19% |
| 5.1.3 | Haze | 0.08% |
| 5.1.4 | Refractive Power | 0.018D |
| | Astigmatism | 0.018D |
| | Prism | 0.048Δ |
| 5.4.5 | Minimum Lens Thickness | 0.012 mm |
| 5.5.1 | Replaceable Lenses – Goggles | 0.17 mm |
| 5.5.2 | Replaceable Lenses – Welding Helmets and Handshields | 0.17 mm |
| 6.1 | Relaxed Optics Level | See 5.1.4 |
| 6.2 | Anti-Fog Properties | 1.79% |
| 7.2.1 | Optical Radiation - Clear Lenses | See 5.1.2 |
| 7.2.2.1.1 | Transmission Requirements | |
| | Table 7 (Welding Filters) | |
| | W1.3 – W3.0 | See 5.1.2 |
| | W4 | 0.0018287% |
| | W5 | 0.0003283% |
| | W6 | 0.0003605% |
| | W7 | 0.0000961% |
| | W8 | 0.0001944% |
| | W9 | 0.0000459% |
| | W10 | 0.0000707% |
| | W11 | 0.0000163% |
| | W12 | 0.0000055% |
| | W13 | 0.0000029% |
| | W14 | 0.0000017% |
| | EFUV | 0.0000551% |
| | NUV | 0.0000576% |
| | IR | 0.010395% |
| | Table 8 (UV Filters) | |
| | EFUV | 0.0000551% |
| | NUV | 0.0000576% |
| | Table 9 (IR Filters) | 0.010395% |
| | Table 10 (VIS Filters) | See 7.2.2.1.1 W1.3 – W10 |
| | Table 11 Tinted | See 5.1.2 |
| | Extra Dark | See 5.1.2 |
| 7.2.2.1.2 | Visible Light Filters | |
| | Visible Light (L1.3 - L3) | See 5.1.2 |
| | UVA | See Table 7 NUV |
| | UVB | See Table 7 EFUV |
| 7.2.2.2 | Transmittance of Non-lens Components | See 7.2.2.1.1 Table 7, 8 & 9 |
| 7.2.3.1 | Automatic Darkening Welding Filter Lenses - Luminous Transmittance | See 7.2.2.1.1 Table 7 |
| 7.2.3.2 | Automatic Darkening Welding Filter Lenses - UV/IR Transmittance | See 7.2.2.1.1 Table 7 |
| 7.2.3.3 | Switching Index | 0.0192 mSec |
| 7.2.3.5 | Angular dependence of luminous transmittance | See 7.2.2.1.1 Table 7 |