



## COVER GLASS & ROUNDEL LENS

product catalog



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# COVER GLASS & ROUNDELS

Kopp Glass Roundel lenses are available in standard sizes as part of our stock catalog, or we can design custom lenses. If you want to create innovative lighting products, collaborate with our engineering team to design a lens that gives your product exceptional light control capabilities.

## SUPERIOR DURABILITY

Molded from durable borosilicate glass, our roundel lenses can stand up to the most demanding theatrical lighting applications and environments and still deliver excellent results. Intense heat and fluctuating temperatures won't break or damage our glass lenses. And unlike plastic, UV exposure won't yellow glass.

Choose glass when you want a lens that will last.

## DIFFERENTIATED LIGHTING PRODUCTS

The emergence of new lighting technologies has introduced complex challenges to the general lighting industry. Lighting engineers and designers must overcome these to realize their efficiency advantages. We offer solutions to common lighting challenges:

- ▶ Tailored glass compositions that allow for greater efficiency
- ▶ Color temperature correction without a significant loss in transmission
- ▶ Retrofitting existing designs for new technologies

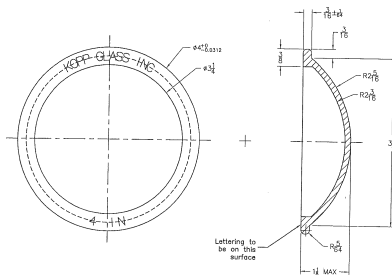
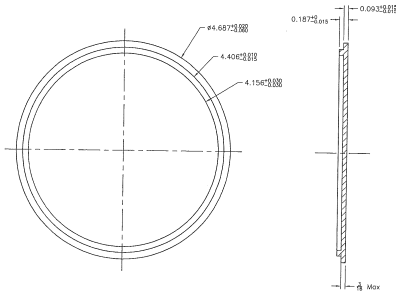
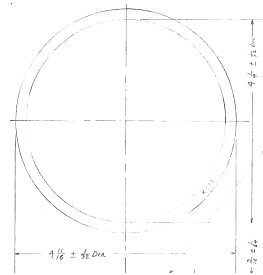
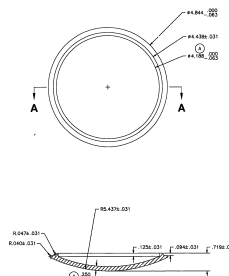
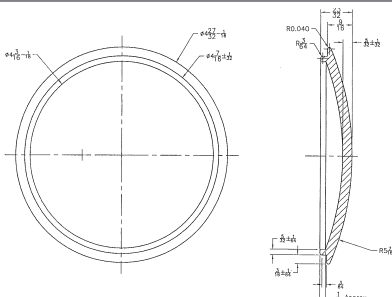
Leverage our lighting engineering expertise to develop a meaningful competitive advantage and ensure higher margins through lower manufacturing costs, accelerated time to market, and truly innovative new products.



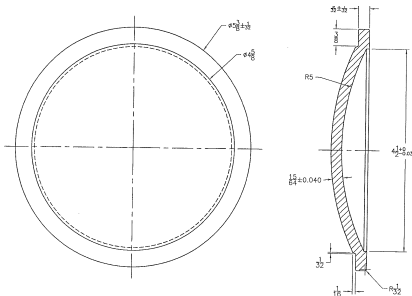
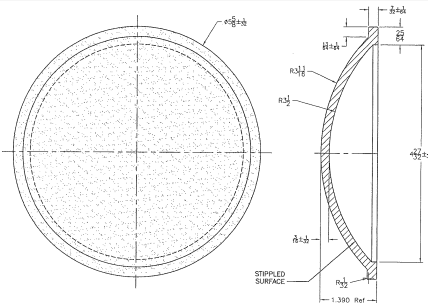
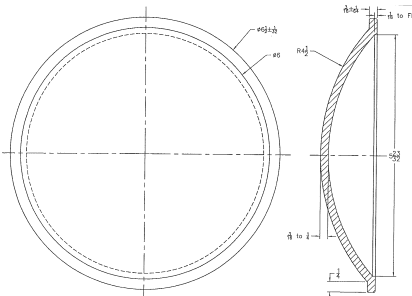
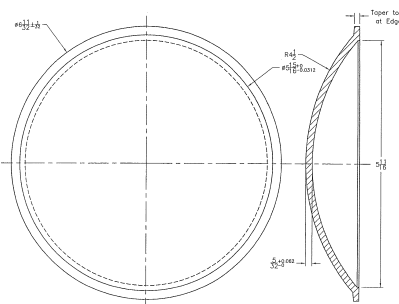
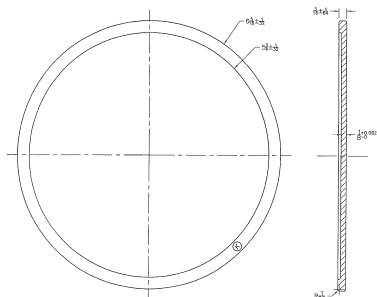


KOPP PART NUMBER	PRODUCT DESCRIPTION	DRAWING	ORDER QUANTITY
RL 4501	Diameter: 1" Lens Design: Flat Color Disk Thickness: 0.0625" Texture: Plain		Minimum: 100 Base: 1000
FR 765	Diameter: 3.125" Lens Design: Convex Texture: Plain		Minimum: 60 Base: 600
FR 764	Diameter: 3.125" Lens Design: Convex Texture: Stipple		Minimum: 60 Base: 600
FR 5839	Diameter: 3.75" Lens Design: Convex Texture: Plain		Minimum: 50 Base: 350
FR 5846	Diameter: 4" Lens Design: Convex Texture: Stipple		Minimum: 50 Base: 500



KOPP PART NUMBER	PRODUCT DESCRIPTION	DRAWING	ORDER QUANTITY
FR 5845	Diameter: 4" Lens Design: Convex Texture: Plain		Minimum: 50 Base: 500
FR 5858	Diameter: 4.688" Lens Design: Flat Texture: Plain		Minimum: 50 Base: 500
FR 5864	Diameter: 4.688" Lens Design: Flat Texture: Plain		Minimum: 50 Base: 500
FR 5861	Diameter: 4.843" Lens Design: Convex Texture: Stipple		Minimum: 50 Base: 500
FR 5860	Diameter: 4.843" Lens Design: Convex Texture: Plain		Minimum: 50 Base: 500

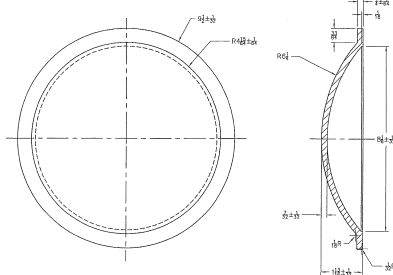
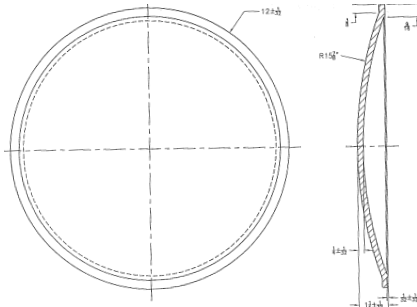


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FR 4480	Diameter: 5.355" Lens Design: Convex Texture: Plain		Minimum: 50 Base: 500
FR 5882	Diameter: 5.625" Lens Design: Convex Texture: Stipple		Minimum: 50 Base: 500
FR 5900	Diameter: 6.5" Lens Design: Convex Texture: Plain		Minimum: 48 Base: 480
FR 5896	Diameter: 6.344" Lens Design: Convex Texture: Plain		Minimum: 40 Base: 400
FR 5893	Diameter: 6.313" Lens Design: Flat Texture: Plain		Minimum: 40 Base: 400



KOPP PART NUMBER	PRODUCT DESCRIPTION	DRAWING	ORDER QUANTITY
FF 5261	Diameter: 7.875" Lens Design: Flat Texture: Plain		Minimum: 40 Base: 400
FR 5923	Diameter: 7" Lens Design: Convex Texture: Plain		Minimum: 40 Base: 400
FR 5928	Diameter: 7.563" Lens Design: Convex Texture: Stipple		Minimum: 40 Base: 400
FR 5930	Diameter: 7.563" Lens Design: Convex Texture: Plain		Minimum: 40 Base: 400
CG 0860	Diameter: 8.375" Lens Design: Convex Texture: Plain		Minimum: 30 Base: 300



KOPP PART NUMBER	PRODUCT DESCRIPTION	DRAWING	ORDER QUANTITY
<b>CG 0949</b>	Diameter: 9.5" Lens Design: Convex Texture: Plain		Minimum: 36 Base: 360
<b>CG 1200</b>	Diameter: 12" Lens Design: Convex Texture: Plain		Minimum: 20 Base: 200

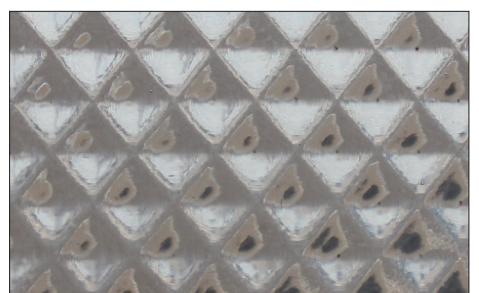
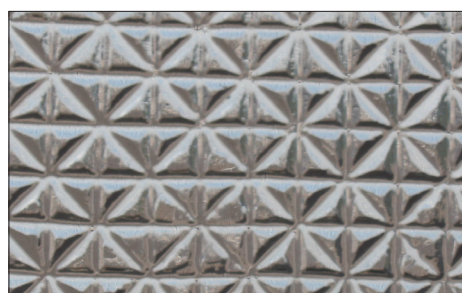
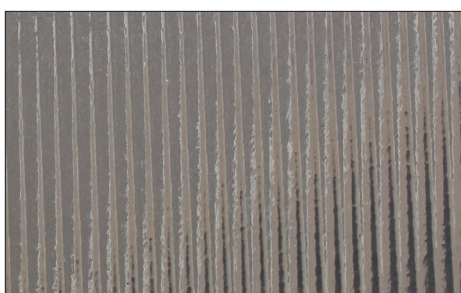
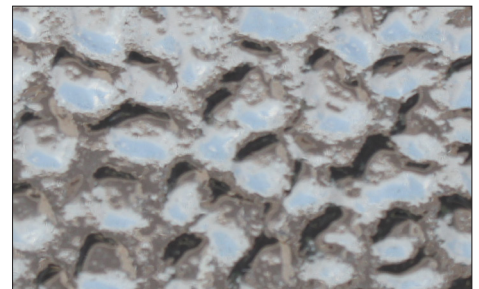
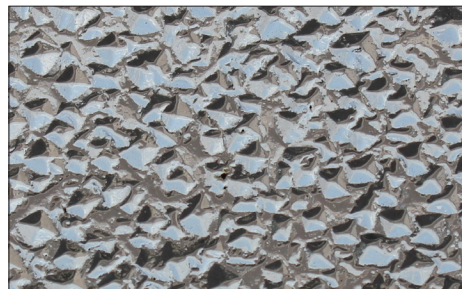
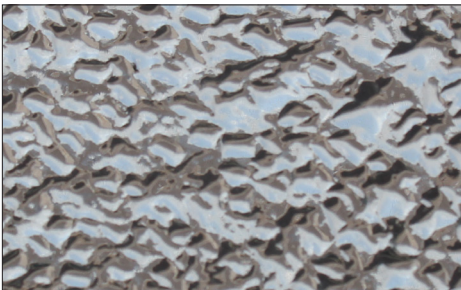
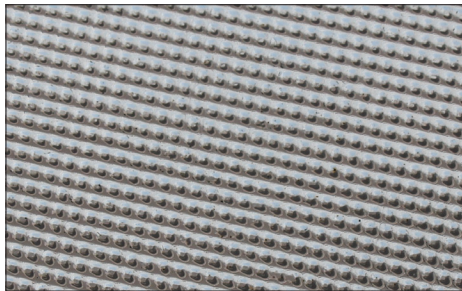
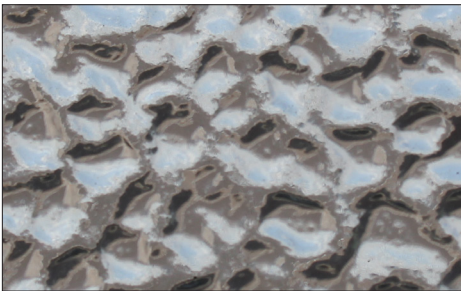
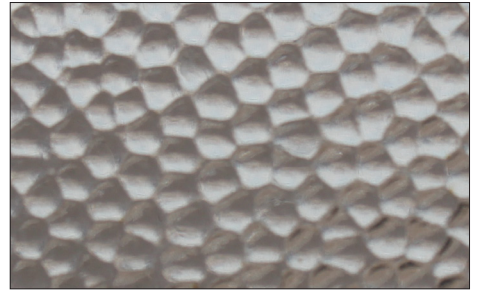
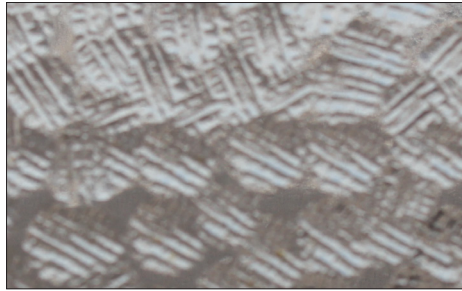


# CUSTOM FINISHES

Custom stipple patterns and surface finishes create the high-quality light you desire, including uniform light distribution and soft edges.

- ▶ Smooth as-molded surfaces or diffuse sandblasted surfaces
- ▶ 20+ surface stipple textures

## STIPPLE PATTERN OPTIONS





# SAFE HANDLING INSTRUCTIONS

The following recommended practices can provide methods to maximize the capabilities and life of your glass lens. The handling of glass and brittle materials require certain practices in order to avoid fracture or failure. Limitations in material properties in regards to thermal shock and mechanical loads need to be taken into consideration and careful handling practices should be followed.

## GENERAL RECOMMENDATIONS

All brittle materials are designed to endure various forms of stress introduction including thermal, mechanical, and electrical stress. Minimizing or controlling these various stress sources can prove helpful to maximize your lens lifespan.

1. Inspect all glass lenses prior to use and be certain there is no evidence of serious cracks, abrasion, etc.
2. Handle glass ware carefully when transporting or moving lenses. Wear appropriate safety PPE (safety glasses, gloves, etc.) to protect yourself in case of failure.

## MECHANICAL STRESS MINIMIZATION

1. Avoid over tightening any locking rings or devices used to secure the lens in your lighting fixture.
2. Retaining rings, clasps, or bolts should apply even pressure on the glass lens. Tighten clasps evenly using a cross pattern tightening sequence.
3. Avoid direct contact of glass and metal. Use of elastic gaskets or deformable buffer materials can allow for some flexing of the lens if over tightening during the securing of the lens happens to occur.
4. Avoid any handling that allows for the lens to flex or bend. Always provide uniform support around the perimeter of the lens to avoid any lens deformation in application.

## THERMAL STRESS MINIMIZATION

1. Minimize rapid temperature change of the glass lens during cooling. It is important to minimize the temperature difference between the exterior and interior of the glass lens.
2. Avoid significant temperature differences on the glass outer and inner surfaces. For example, attempt to minimize any fluid (rain, snow, sleet, etc.) on the exterior lens surface when the inner surface is hot.
3. Assure the light is focused appropriately where applicable. Incorrect focus of the reflector and/or lamp can increase the temperature in localized regions of the lens and create greater temperature differentials.

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## HIGH-PERFORMANCE CUSTOM GLASS

for mission-critical applications

### MATERIAL SCIENCE EXPERTISE

Founded over 90 years ago, Kopp Glass began with a deep understanding of glass chemistry and how it can be used to innovate. Today, our portfolio includes more than 200 different glasses. Depending on your need, our engineers and scientists are also able to create new compositions to meet tough design challenges.

### APPLICATIONS ENGINEERING EXPERTISE

We refine product designs alongside customers to help them reduce costs and increase yields. While our solutions are crafted to perform in some of the harshest environments on Earth, they're also designed to help the performance of our customers' bottom lines.

### RESPONSIVENESS

Kopp Glass is a small manufacturer, but the design and production challenges we face every working day are huge. Our customers see the difference in how we respond to them and in how our team responds to each other.

### ON-TIME IN-SPEC DELIVERY

Kopp Glass works to ensure the mission-critical, molded glass components we ship meet your standards—the first time.

WORK WITH US

[www.koppglass.com](http://www.koppglass.com)



**Year Founded** 1926

**Ownership** Closely Held

**Location** Pittsburgh, PA USA

**No. of Employees** 110

**Mfg. Sq. Ft.** 127,000

**Quality System** ISO: 9001:2015

