

# Dioptric Cowl



I recently went on a much-needed vacation with my partner and family. While on Tybee Island we visited a local lighthouse and saw the incredible innovation that allowed a small light to project almost 20 miles into the open Atlantic. The Fresnel lens, within, bends light with bands of similarly-angled but slowly shifting glass surfaces, refracting a dim bulb into a beam strong enough to guide weary travelers home.

This cowl was created with the goal to knit at least 100 Superwash cowls for the Broadway Youth Center (being run by Sacha Urban @swissmama69) in mind. You can contact Sacha for more information or drop off your donation cowls at Knit 1 Chicago (@knit1chgo) before November 28th, 2021.

Please share your action shots and finished cowls with the hashtag #DioptricCowl

*Designed by Tommy Schafer  
(@edible\_chrome on instagram)*

*Questions or issues with the pattern can be directed to @tschafer47 on Ravelry or [tschafer47@gmail.com](mailto:tschafer47@gmail.com)*

**This pattern is FREE** and should not be sold, feel free to give copies to your friends! If you liked this pattern and would like to support my work and vision of a future with more **pay-if-you-like-it patterns**, contributions can be sent to one of the following:

**Venmo:** @ToastedBrioche  
**Paypal:** [tschafer47@gmail.com](mailto:tschafer47@gmail.com)  
**CashApp:** \$ToastedBrioche  
*Or feel free to contact me about other options*

## Dioptric Cowl

### *Sizes*

1(2,3) [small (medium, large)]

### *Dimensions*

23 (26, 29) in. Circumference of the cowl. (measure around the back of your neck across the tip if your nose to ensure it will fit over your face)  
9 in. from bottom edge to top edge

### *Materials*

#### *Suggested Needles*

1 US #5 (3.75mm) circular 16"

1 US #7 (4.5mm) circular 16"

(Or needles to obtain desired gauge, I am a medium tension knitter)

#### *Notions*

1 stitch markers, for beginning of round,  
More to mark repeats if you choose

1 tapestry needle

3 yds waste yarn for provisional CO

### *Gauge*

25 stitches and 29 rows per 4" x 4" square in stranded color work, blocked

(If you want to test swatch, I suggest swatching the first 34 rows of the chart in the round, adding a 3-stitch garter stitch border on either side, however you can also test your stitch-width gauge when working the ribbing as well, to ensure proper circumference)



### *Yarn*

1 skein Malabrigo, Rios (DK weight)

100% Superwash Merino Wool (210yds/100g)

1 skein beWoolen, DK (DK weight)

100% Superwash American Wool (280yds/114g)

(Sample shown in size medium and Main Color (MC): Malabrigo Rios, color "069 Pearl Ten" and Contrast Color (CC): beWoolen, color "Almost Perfect")

### *Yardage*

Total: 240(280,305) yds

MC: 120(140,150) yds

CC: 120(140,155) yds

### *Abbreviations*

K: Knit

P: Purl

## Dioptric Cowl

Sl: Slip

St(s): Stitch(es)

Pwise: Purl-wise, as if to purl

Kwise: Knit-wise, as if to knit

Wyib: with yarn in back, yarn held on backside of work

Wyif: with yarn in front, yarn held on the frontside of work

Yo: Yarn over

BOR: beginning of round

Rnd: Round (equivalent to row but in circular knitting)

CO: Cast-On

BO: Bind-Off

MC: Main Color

CC: Contrast Color

### *Techniques, Special Stitches*

**Provisional Cast On:** This is my favorite

provisional CO method, with no crochet

chain to start, you can simply pull out a single yarn without worrying about catches once the CO is complete. See “Way #2” in the link, there is also a helpful video link in this instructional page: <https://www.10rowsaday.com/provisional-caston>

**Two-handed stranded color work in the round:** Brooklyn Tweed has a great tutorial on this here: <https://brooklyntweed.com/pages/stranded-colorwork-101>

I highly recommend holding the MC in the right hand and the CC in the left hand and when floats are more than 7 sts wide, holding the CC in between the needles and the wrap of the MC to hold the float on the WS of the work

**Tubular CO edge:** (Explained in instructions)

**Sewn Bind-Off:**

Here are some good instructions from Purl Soho, you can think of a sewn bind-off with a 1x1 rib as a Kitchener you work without separate stitches. <https://www.purlsoho.com/create/ribbed-sewn-bind-off-1x1/>

*Instructions*

Using waste yarn, MC, and US size 5 needle, provisionally cast-on 140 (160, 180) sts. Connect in the round being careful not to twist stitches. Place BOR marker.

*Work Tubular CO Rnds*

*Continuing with MC*

Rnd 1: \* K1, Sl1wyif \* to BOR

Rnd 2: \* Sl1wyib, P1 \* to BOR

Work Rnds 1 and 2 one additional time.



The detail of the 2-row tubular CO and corrugated slip stitch ribbing

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### *Work 1x1, Slipped Corrugated Ribbing*

Rnd 1, with MC: \* K1, P1\* to BOR

Rnd 2, with CC: \* Sl1wyib, P1 \* to BOR

Repeat Rnds 1-2, 4 additional times

### *Begin Chart 1*

Work 51 rnds of chart, starting on bottom row and repeating each row 7 (8, 9) times across rnd. Place markers between each repeat if this is helpful for you when working the chart. A helpful tip, is that every stitch you slip in the chart will be in CC, so if you find yourself slipping MC stitches, check that you're correctly aligned in your chart.

### *Work 1x1, Slipped Corrugated Ribbing (in reverse)*

Rnd 1, with CC: \* Sl1wyib, P1 \* to BOR

Rnd 2, with MC: \* K1, P1\* to BOR

Repeat Rnds 1-2, 4 additional times.

Break MC leaving 8" tail for weaving in.

### *Work Tubular BO Rnds*

#### *Using only MC*

Rnd 1: \* Sl1wyib, P1 \* to BOR

Rnd 2: \* K1, Sl1wyif \* to BOR

Work Rnds 1 and 2 one additional time.

### *Tubular, Sewn bind-off*

You will now sew all the stitches together using a sewn bind off, you will need approximately 4 times the length of your bind off in yarn, so cut your CC leaving a tail to weave in and your MC with a tail approximately 3 yards long, which should be plenty for any size. BO all stitches using sewn bind-off.

### *Finishing*

Break MC, leaving an 8" tail.

Using a tapestry needle, secure the joining of the rnd on the CO and BO edges. Weave in all ends.

Wet Block to measurements and let dry fully before wearing. I recommend some stretching in all directions while the cowl is saturated with water and before pinning to size, this evens out the color work tension. Don't forget that you can donate complete, MAchine-Washable Cowls, to the Broadway Youth Center by dropping them off or mailing to Knit 1 Chicago!

The Fresnel Lens, 178 steps up, on the top of Tybee Island Light Station



# Dioptric Cowl

Chart 1.

