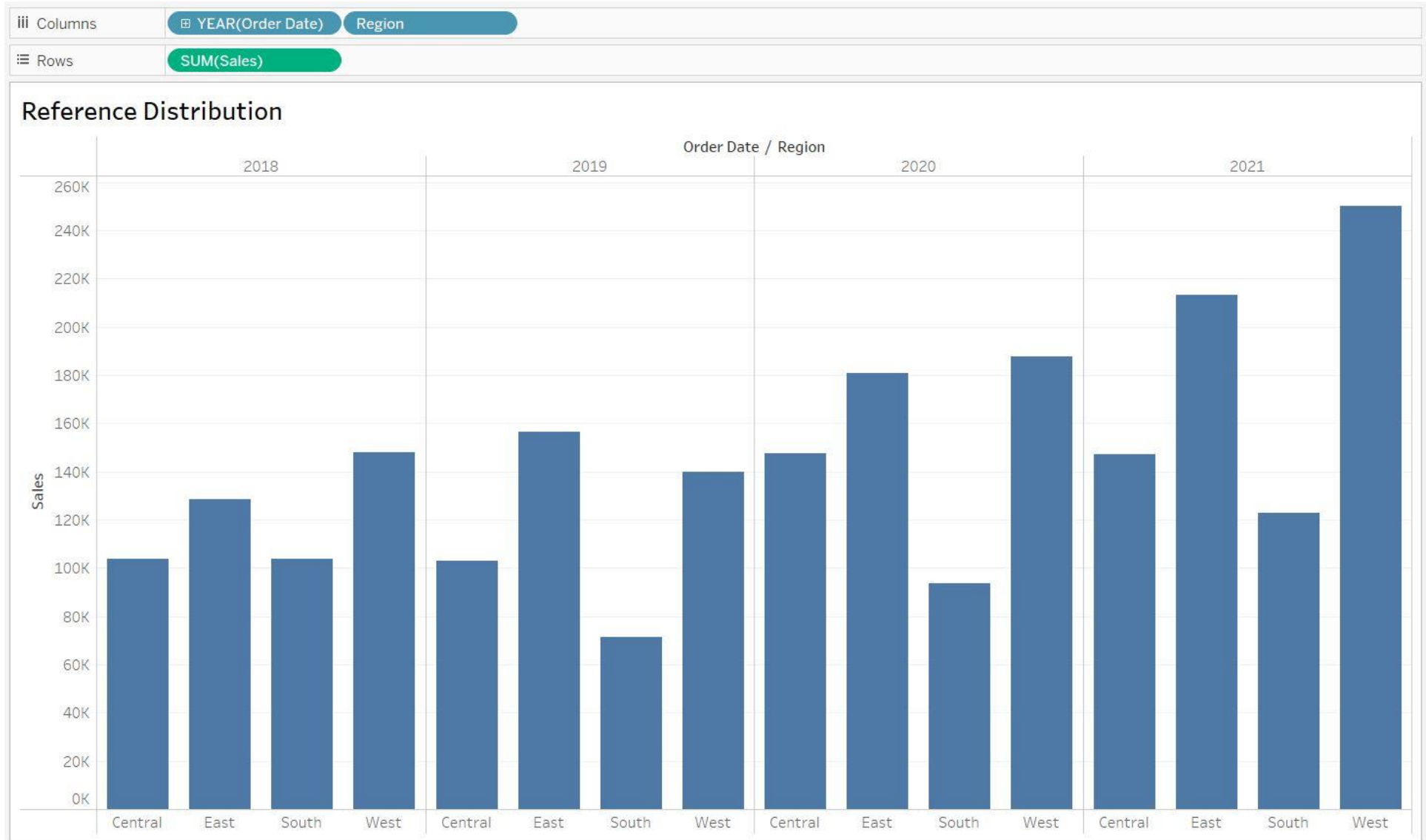


# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 1:** Assume that we have a Bar Chart view of **Sales Vs YEAR(Order Date) & Region**



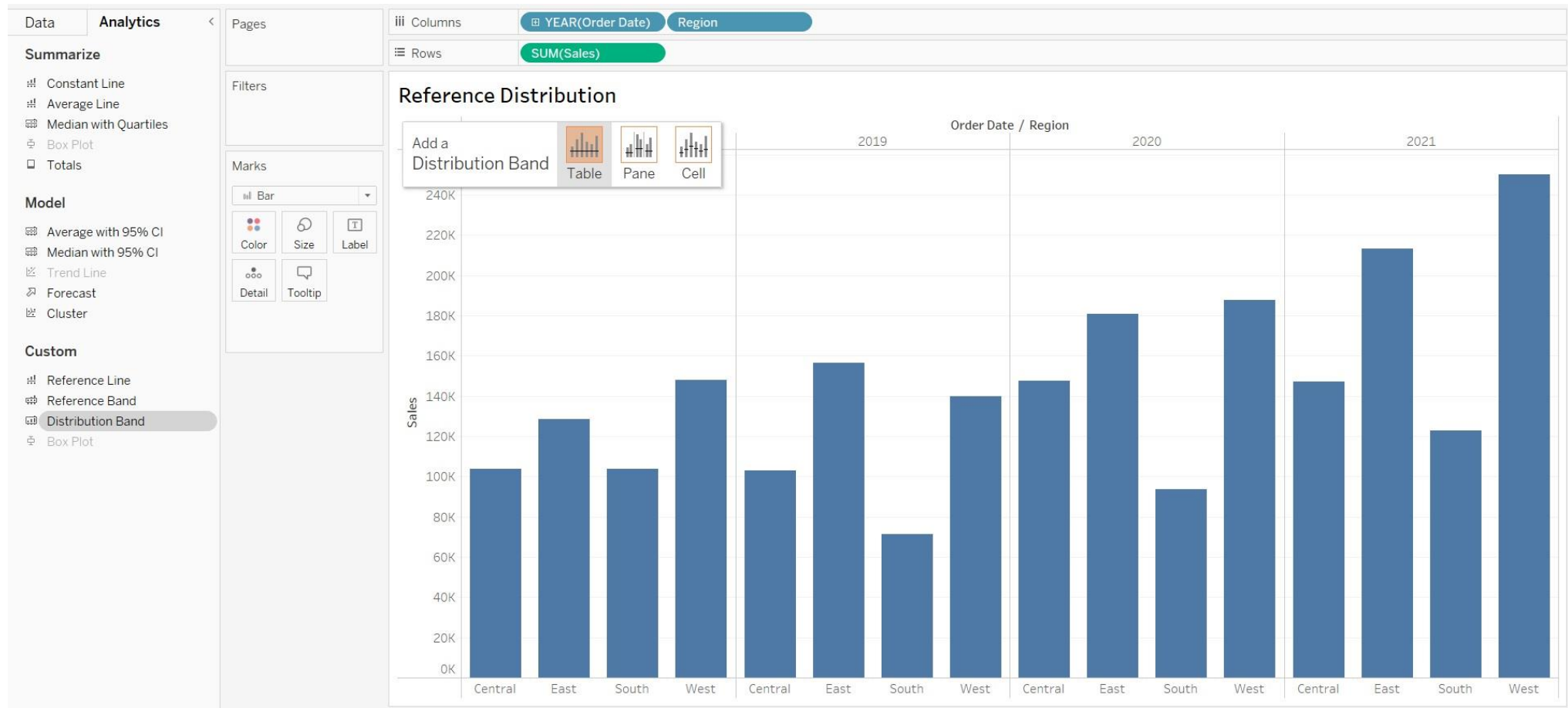
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 2:** Drag **Distribution Band** from the **Analytics** pane into the view.

In a simple case, the drop target area offers three options:

**Table, Pane** and **Cell**

For this example, we will drop it to **Table**



# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 3: Edit Reference Line, Band, or Box** dialog box will appear  
Ensure that **Scope** option selected as **Entire Table**

Edit Reference Line, Band, or Box

Line Band **Distribution** Box Plot

Scope

☒ Entire Table ☐ Per Pane ☐ Per Cell

Computation


Value: 60%,80% of Average

Label: Computation

Tooltip: Automatic

Formatting

Line: None

Fill: 

☐ Fill Above

☐ Fill Below

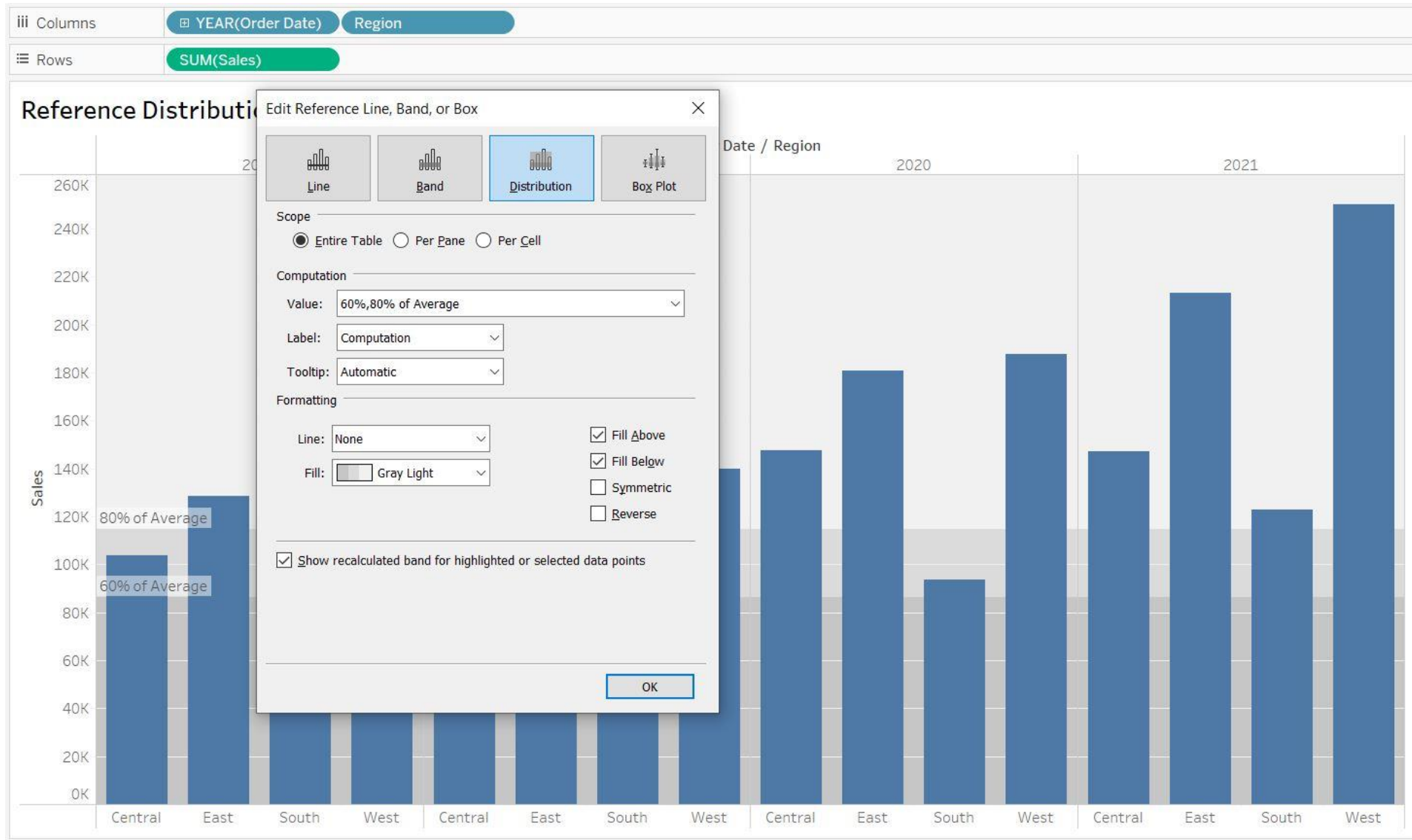
☐ Symmetric

☒ Show recalculated band for highlighted or selected data points

OK

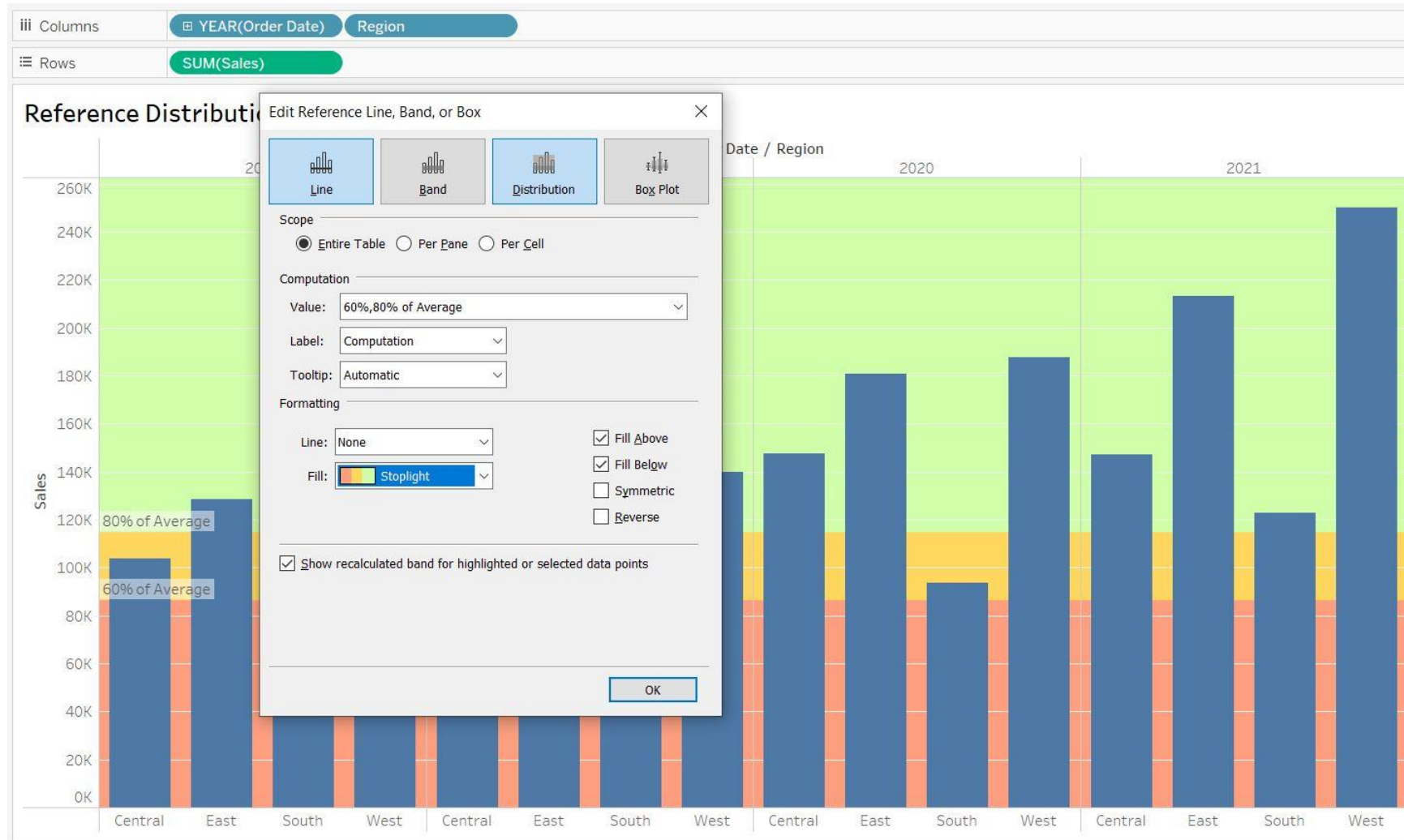
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 4:** Select the **Fill Above** and **Fill Below** options



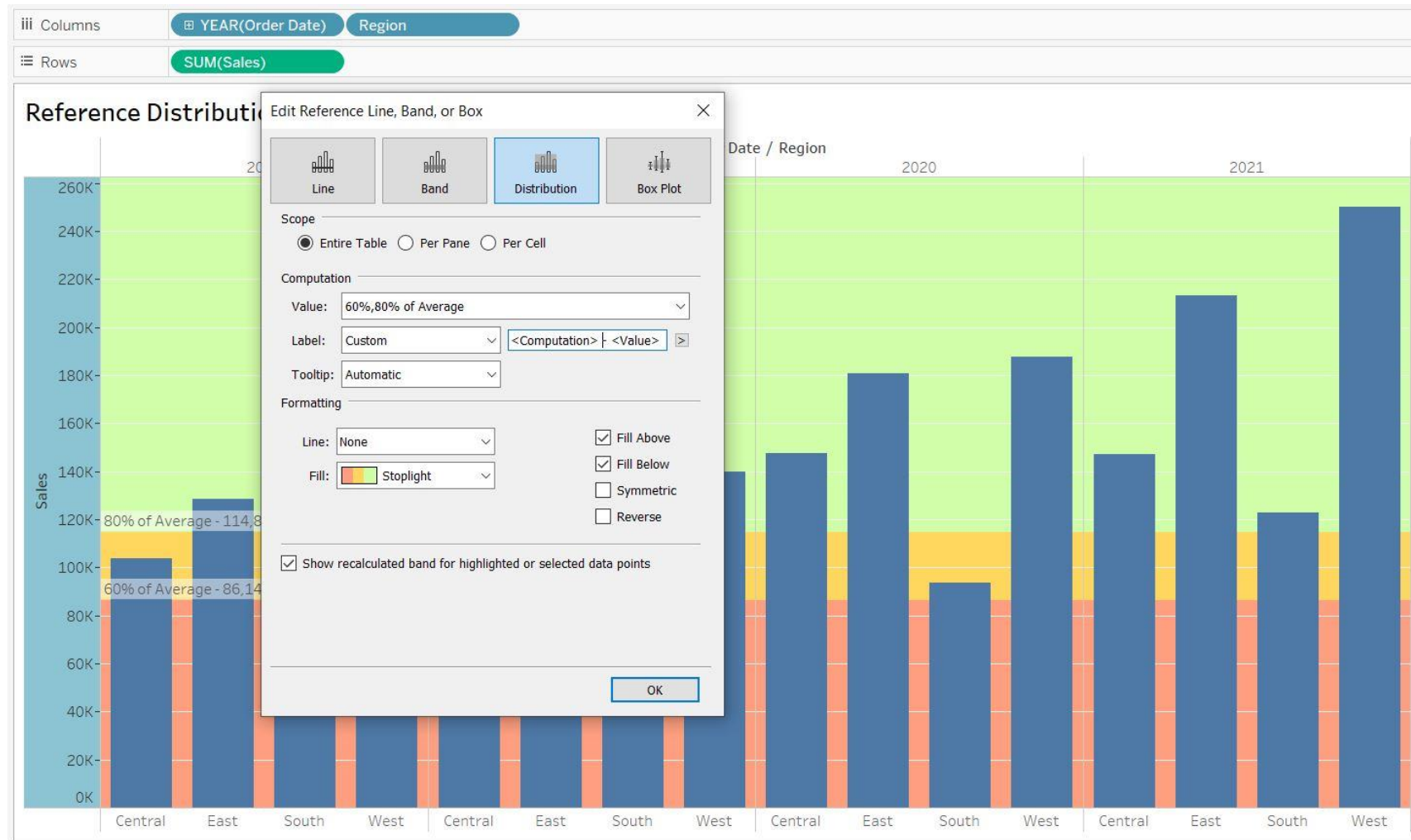
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 5:** If required change the **Fill** color to make the color gradient more prominent



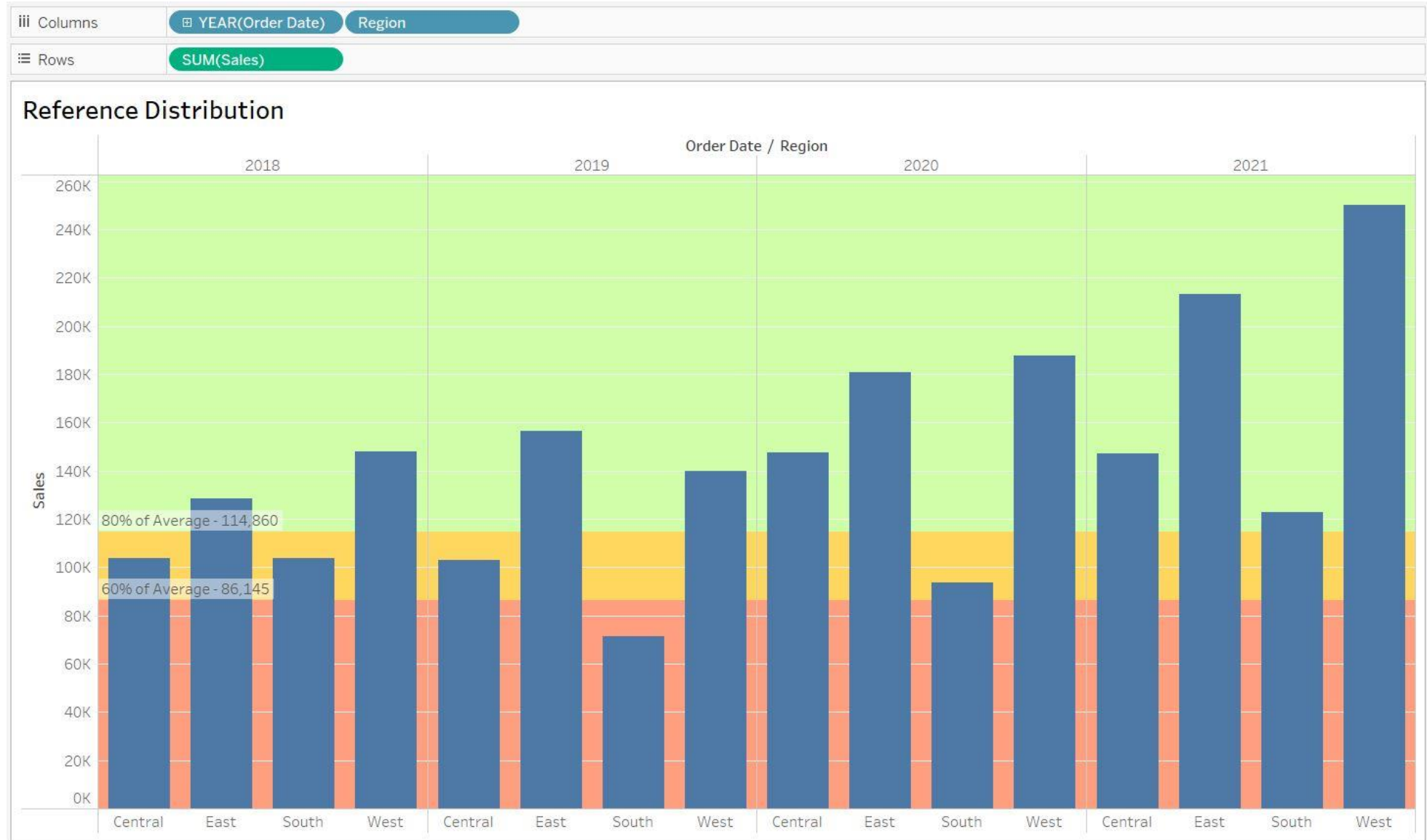
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 6:** If required we can select **Custom** in the **Label** section  
Select the fields as Computation and Value as mentioned  
Click **OK**



# HOW TO ADD A REFERENCE DISTRIBUTION

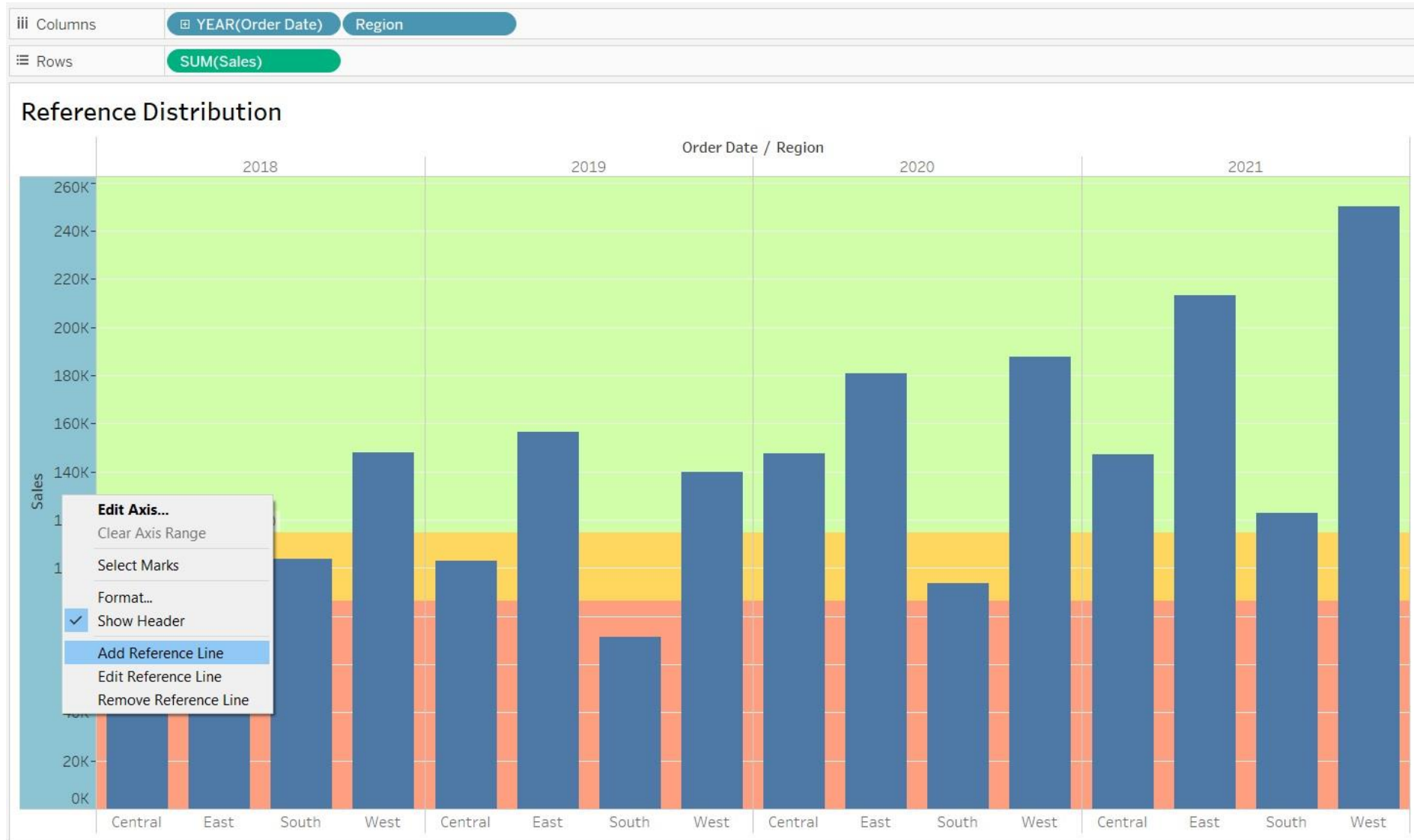
**STEP 7:** This view contains the **60%,80% of Average** for the **Entire Table**





# HOW TO ADD A REFERENCE DISTRIBUTION

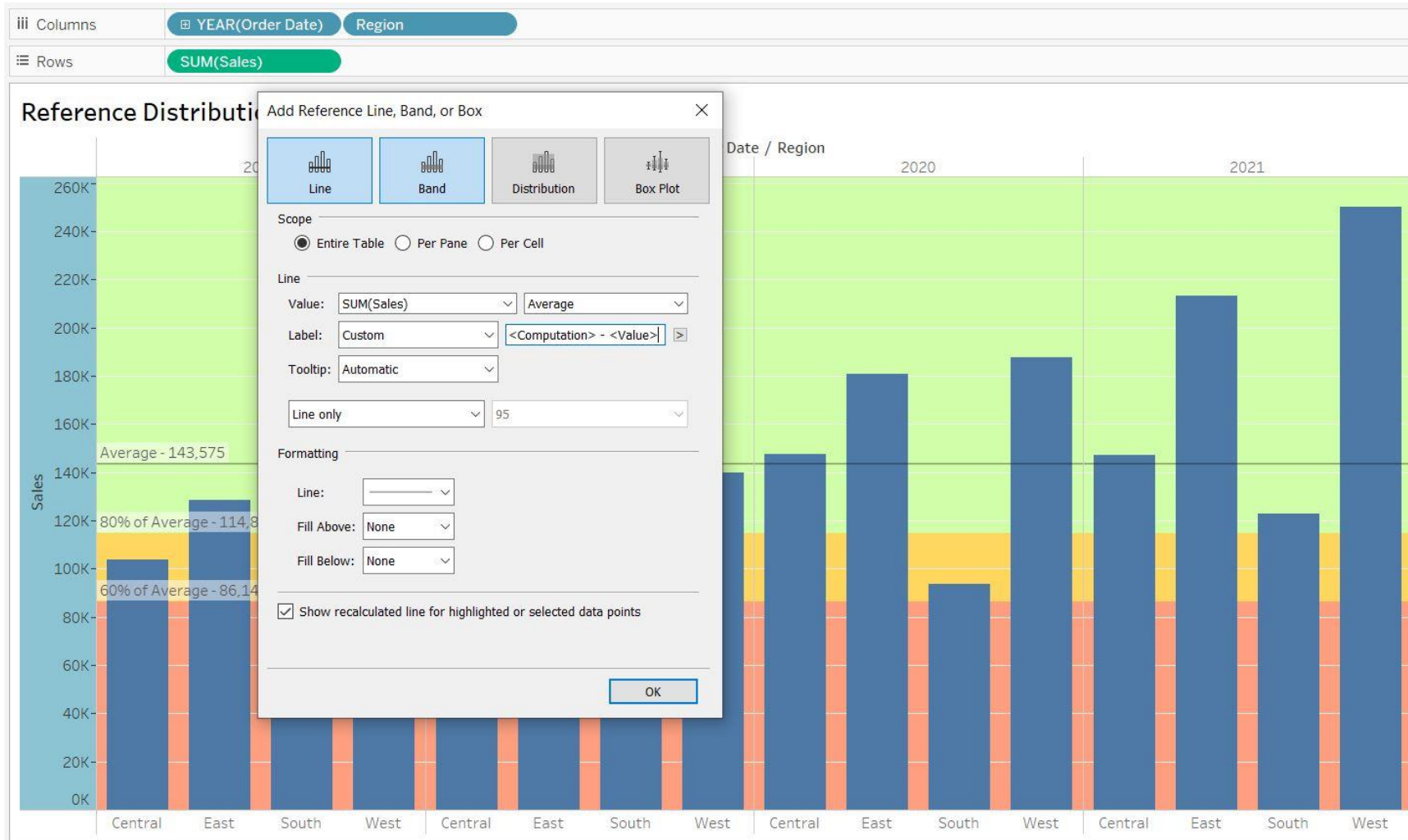
**STEP 8:** If required we can change **Add Reference Line** for Average





# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 9:** Ensure that **Scope** is **Entire Table** and select **Label** as **Custom**  
Select the fields as Computation and Value as mentioned  
Click **OK**



# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 10:** If required we can confirm the Average Value by making use of a text table

Pages

Filters

Marks

Automatic

Color

Size

Text

Detail

Tooltip

SUM(Sales)

Columns

YEAR(Order Date)

Rows

Region

Average Calculation

	Order Date			
Region	2018	2019	2020	2021
Central	103,838	102,874	147,429	147,098
East	128,680	156,332	180,686	213,083
South	103,846	71,360	93,610	122,906
West	147,883	139,966	187,480	250,128

# HOW TO ADD A REFERENCE DISTRIBUTION

## STEP 11: In the **Analytics** Pane double-click on **Totals**

The screenshot shows the Tableau interface with the **Analytics** pane on the left. Under the **Summarize** section, the **Totals** mark type is selected. In the **Model** section, **Average with 95% CI** is selected. The **Marks** card shows **SUM(Sales)** as the aggregation. The **Columns** shelf contains **YEAR(Order Date)** and the **Rows** shelf contains **Region**. The main view displays an **Average Calculation** table.

Region	Order Date			
	2018	2019	2020	2021
Central	103,838	102,874	147,429	147,098
East	128,680	156,332	180,686	213,083
South	103,846	71,360	93,610	122,906
West	147,883	139,966	187,480	250,128

The screenshot shows the Tableau interface with the **Analytics** pane on the left. Under the **Summarize** section, the **Trends** mark type is selected. In the **Model** section, **Average with 95% CI** is selected. The **Marks** card shows **SUM(Sales)** as the aggregation. The **Columns** shelf contains **YEAR(Order Date)** and the **Rows** shelf contains **Region**. The main view displays an **Average Calculation** table with an additional **Grand Total** column.

Region	Order Date				Grand Total
	2018	2019	2020	2021	
Central	103,838	102,874	147,429	147,098	501,240
East	128,680	156,332	180,686	213,083	678,781
South	103,846	71,360	93,610	122,906	391,722
West	147,883	139,966	187,480	250,128	725,458
Grand To..	484,247	470,533	609,206	733,215	2,297,201

# HOW TO ADD A REFERENCE DISTRIBUTION

## STEP 12: Analysis > Totals > Total All Using > Average

The screenshot shows the Tableau Desktop interface. The 'Analysis' menu is open, and the path 'Totals > Total All Using > Average' is highlighted. The background shows a dashboard with a bar chart and a table.

**Tableau Menu Path:**

- Analysis
  - Aggregate Measures
  - Totals
    - Show Row Grand Totals
    - Show Column Grand Totals
    - Row Totals to Left
    - Column Totals to Top
    - Add All Subtotals
    - Remove All Subtotals
    - Total All Using
      - Average

**Table Data:**

Order Date	Grand Total
21	501,240
98	678,781
83	391,722
06	725,458
28	2,297,201
15	

# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 13:** This average value of **143,575** matches the value obtained from the average reference line in the previous visual

Pages

Filters

Marks

Columns: YEAR(Order Date)

Rows: Region

Automatic

Color

Size

Text

Detail

Tooltip

SUM(Sales)

Average Calculation

	Order Date				
Region	2018	2019	2020	2021	Grand Total
Central	103,838	102,874	147,429	147,098	125,310
East	128,680	156,332	180,686	213,083	169,695
South	103,846	71,360	93,610	122,906	97,930
West	147,883	139,966	187,480	250,128	181,364
Grand To..	121,062	117,633	152,301	183,304	143,575

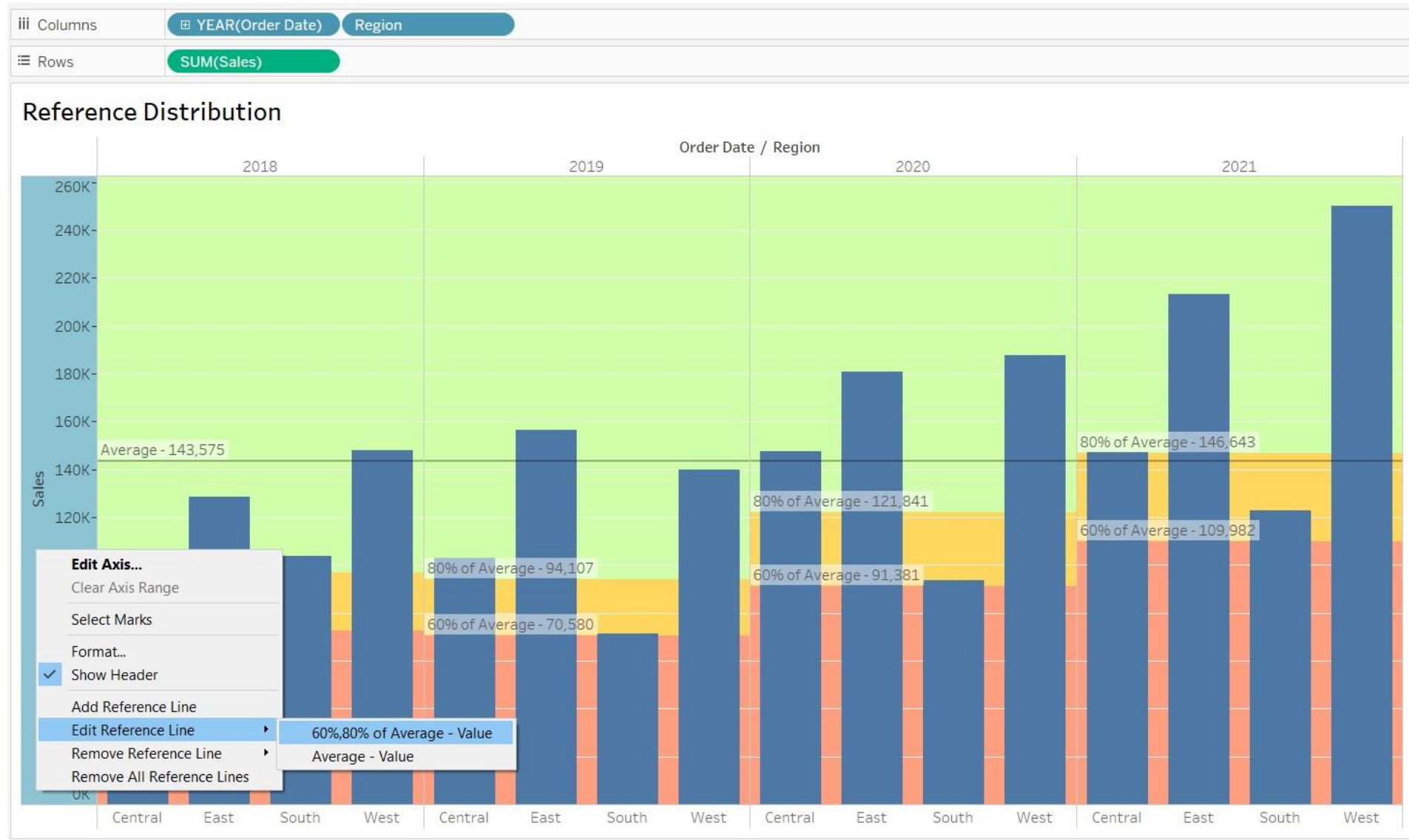
Region: All

Year of Order Date: All

Sales: 143,575

# HOW TO ADD A REFERENCE DISTRIBUTION

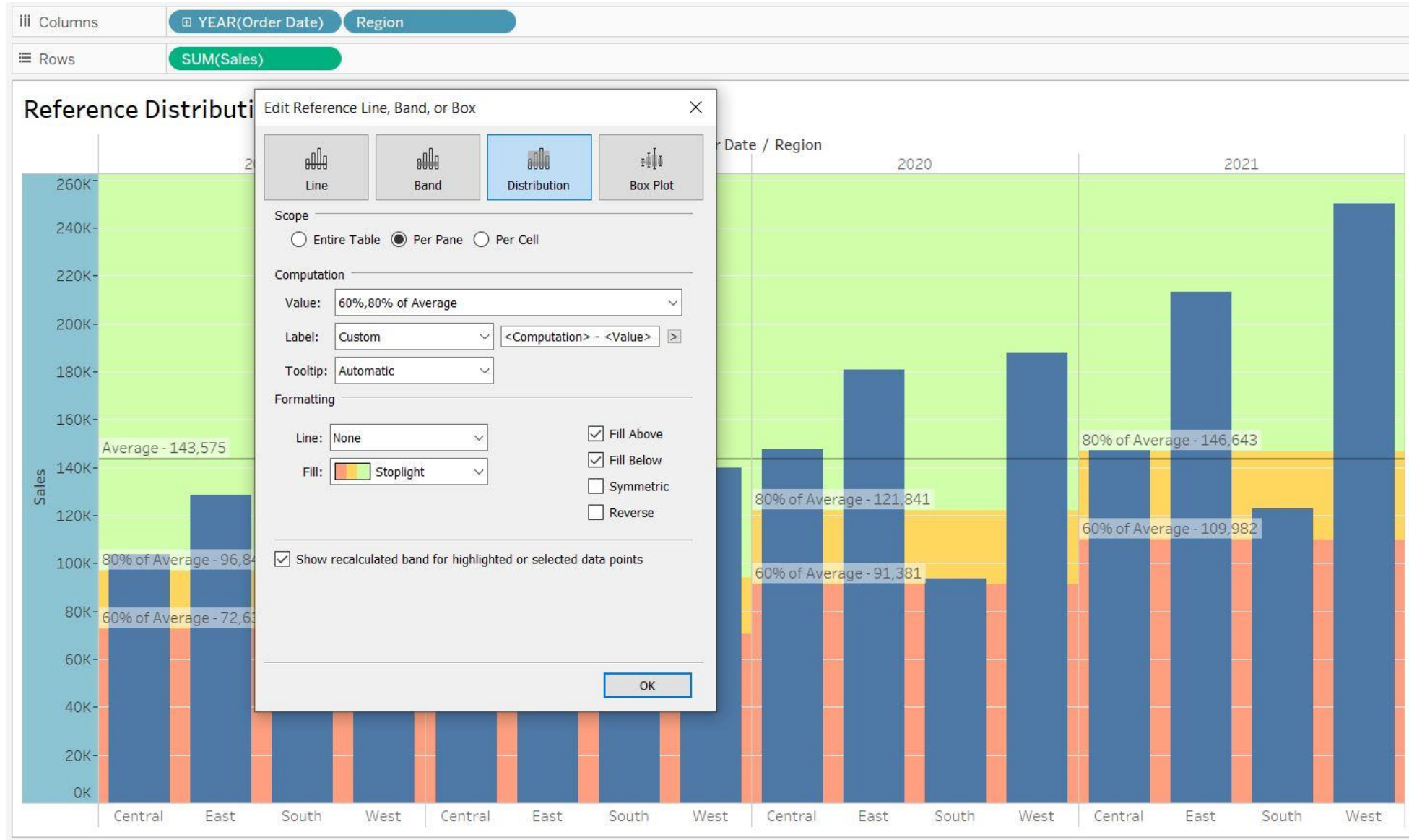
## STEP 14: Right-click on Sales Axis, Edit Reference Line > 60%,80% of Average - Value





# HOW TO ADD A REFERENCE DISTRIBUTION

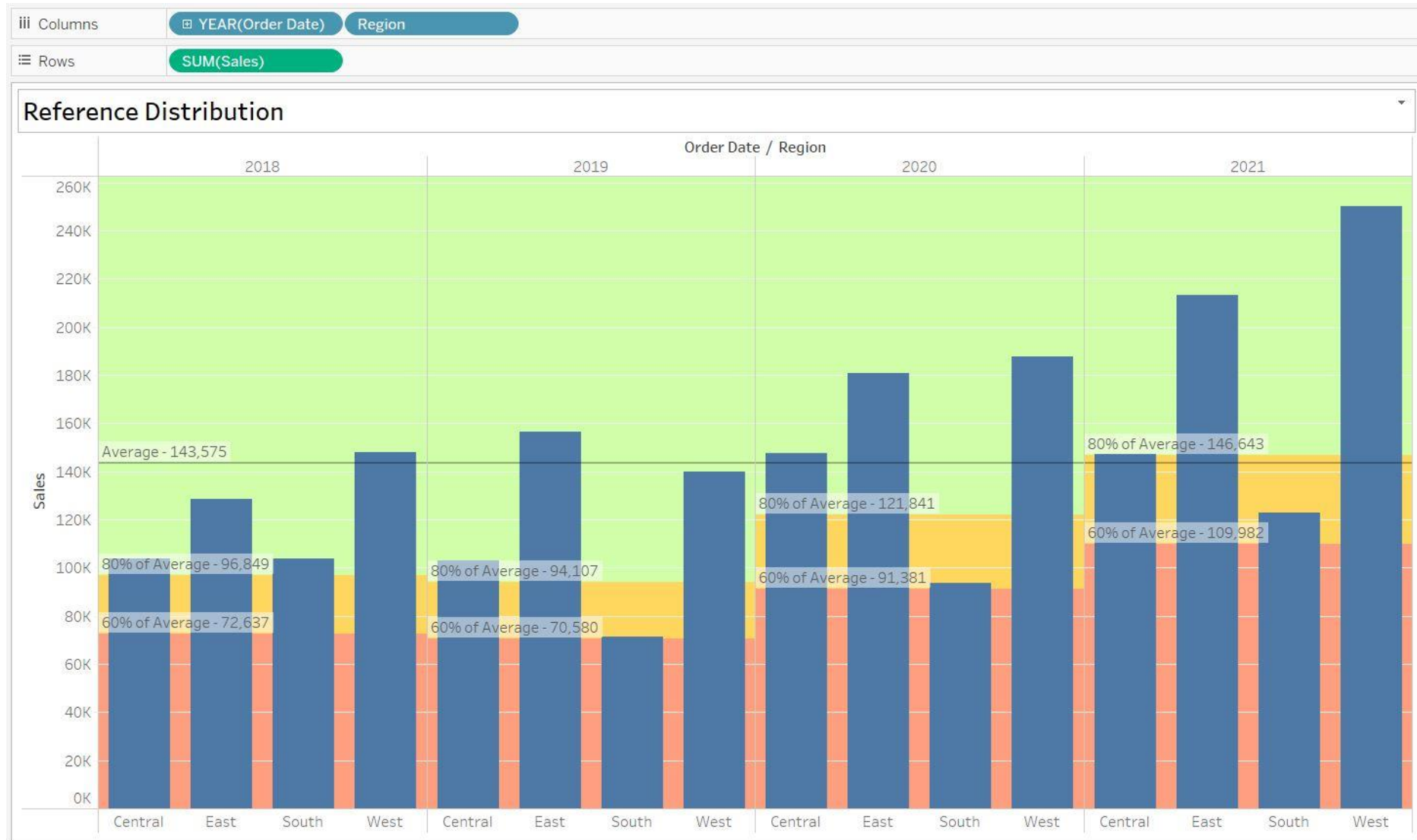
**STEP 15:** Select the **Scope** option as **Per Pane**. Click **OK**





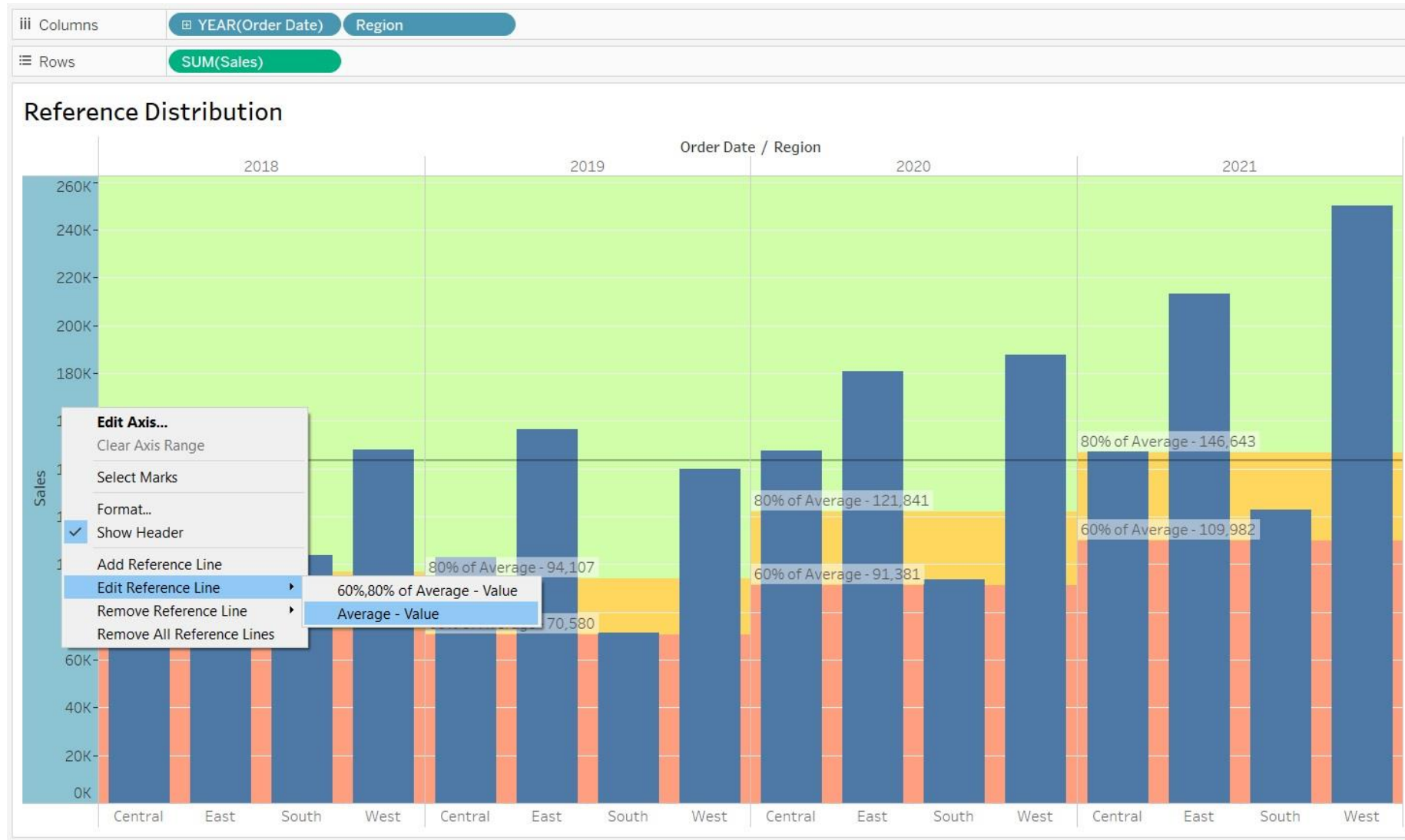
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 16:** Now the view contains the **Distribution Bands** for each Pane (**Per Pane**)  
i.e., **YEAR(Order Date)** with **Average line for Entire Table**



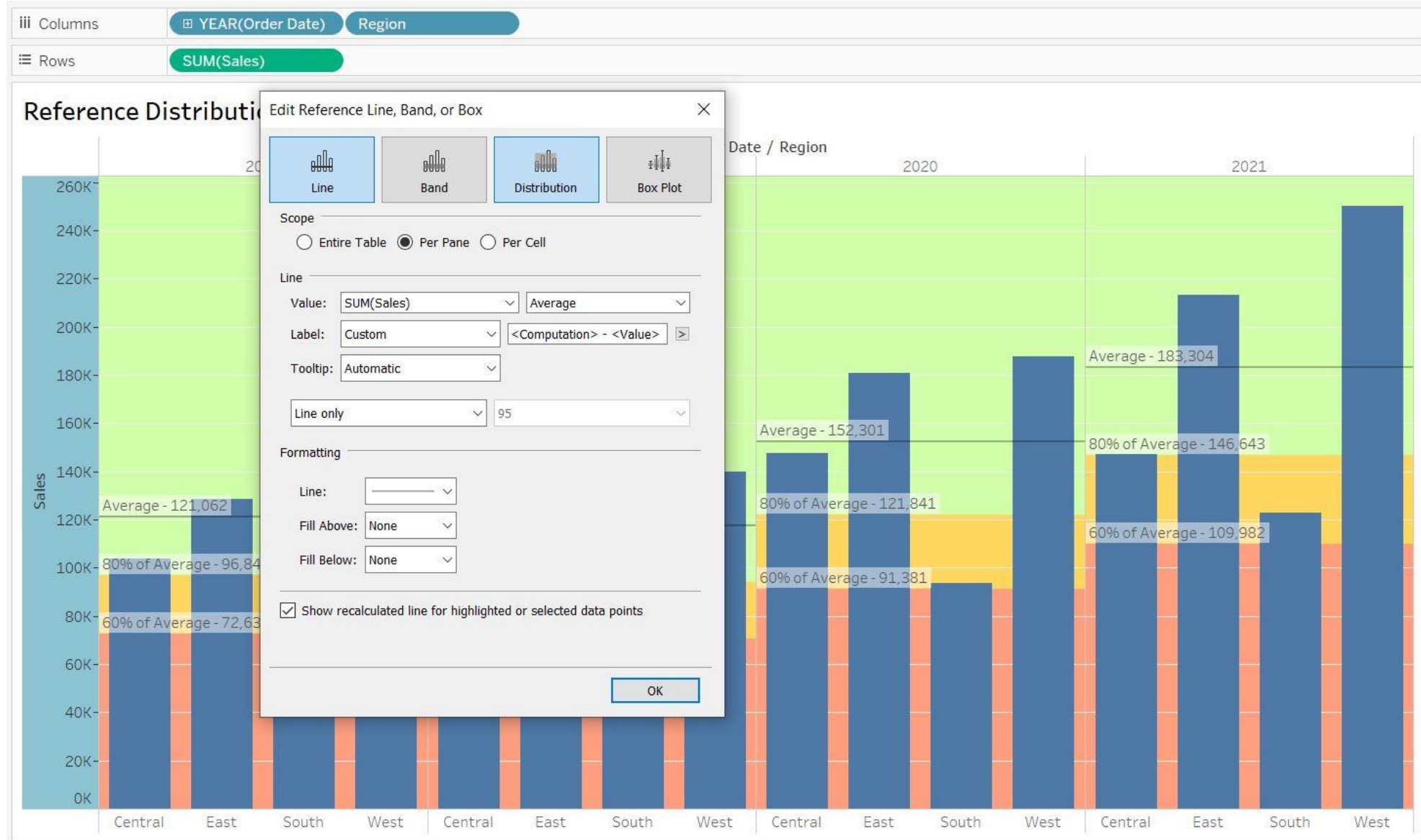
# HOW TO ADD A REFERENCE DISTRIBUTION

## STEP 17: Right-click on Sales Axis, Edit Reference Line > Average - Value



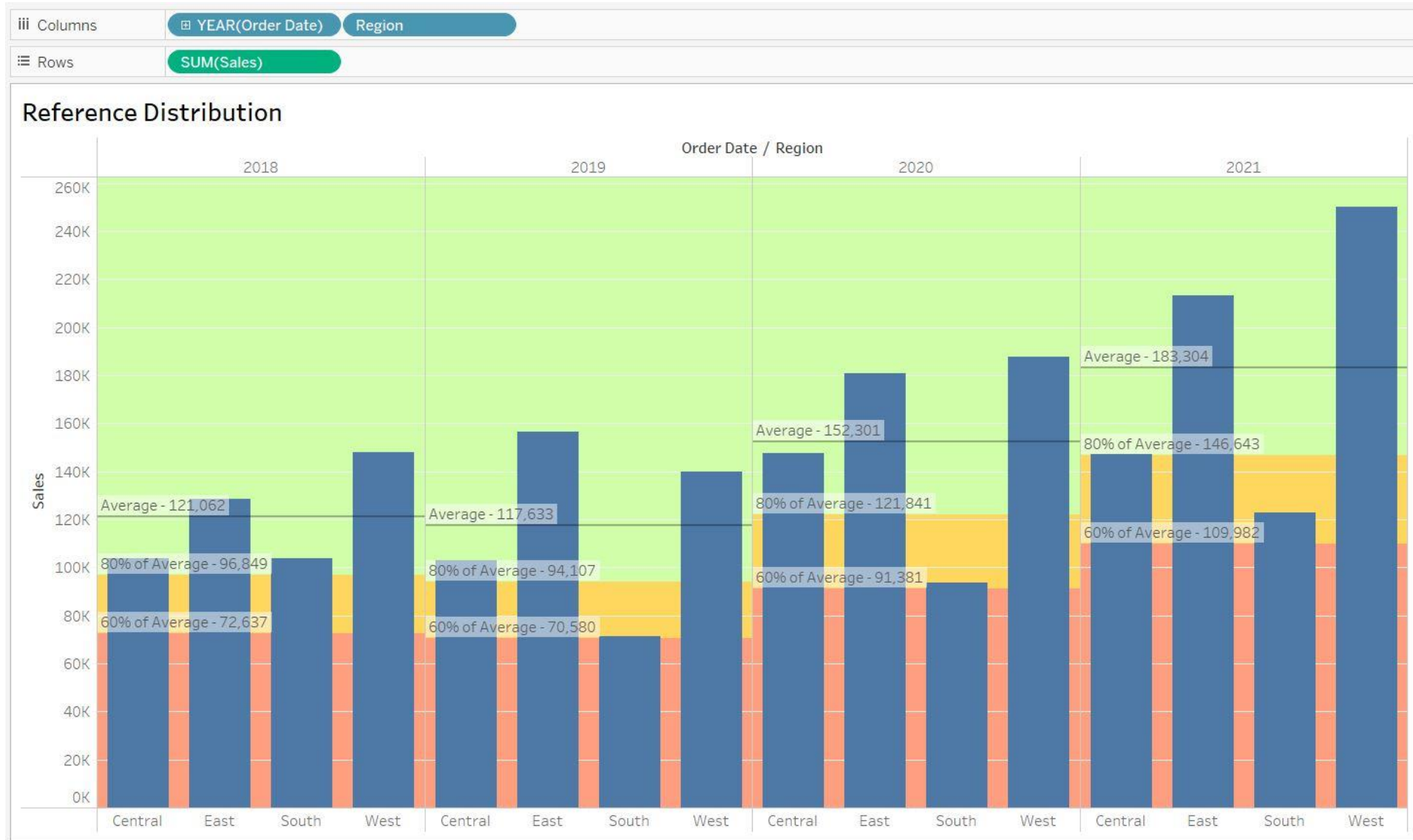
# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 18:** Select the **Scope** option as **Per Pane**. Click **OK**



# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 19:** Now the view contains the **Distribution Bands** for each Pane (**Per Pane**)  
i.e., **YEAR(Order Date)** with **Average line** also **Per Pane**



# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 20:** If required we can change the computation value  
The **Percentages** are configurable

Edit Reference Line, Band, or Box

Line Band **Distribution** Box Plot

Scope

☒ Entire Table ☐ Per Pane ☐ Per Cell

Computation

Value: 60%,80% of Average

Label: ☒ Percentages

Tooltip: ☐ Percentiles

Formatting: ☐ Quantiles

Line: ☐ Standard Deviation

Fill:

Percentages: 60,80

Percent of: SUM(Sales)

Average

☐ Fill Below

☐ Symmetric

☒ Show recalculated band for highlighted or selected data points

OK

# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 21:** If required we can change the computation value to **Percentiles**  
The **Percentiles** are configurable

Edit Reference Line, Band, or Box

Line Band **Distribution** Box Plot

Scope

☒ Entire Table ☐ Per Pane ☐ Per Cell

Computation

Value: 95 Percentiles

Label: ☐ Percentages

Tooltip: ☒ Percentiles

Formatting ☐ Quantiles

Line: ☐ Standard Deviation

Fill:

Percentiles:

95

Enter One or More Values...

80

90

95

99

Create a New Parameter...

☐ Symmetric

☒ Show recalculated band for highlighted or selected data points

OK

# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 22:** If required we can change the computation value to **Quantiles**  
The **Number of Tiles** are configurable

Edit Reference Line, Band, or Box

Line Band **Distribution** Box Plot

Scope  
☒ Entire Table ☐ Per Pane ☐ Per Cell

Computation  
Value: **Quantiles**

Label: ☐ Percentages  
Tooltip: ☐ Percentiles  
Formatting: ☒ Quantiles  
Line: ☐ Standard Deviation

Fill:  ☐ Fill Below ☐ Symmetric

☒ Show recalculated band for highlighted or selected data points

OK



# HOW TO ADD A REFERENCE DISTRIBUTION

**STEP 23:** If required we can change the computation value to **Standard Deviation**  
The **Factors** are configurable

Edit Reference Line, Band, or Box

Line Band **Distribution** Box Plot

Scope

☒ Entire Table ☐ Per Pane ☐ Per Cell

Computation

Value: -1,1 Standard Deviation

Label: ☐ Percentages

Tooltip: ☐ Percentiles

Formatting: ☐ Quantiles

Line: ☒ Standard Deviation

Fill:

Factors: -1,1

☒ Sample ☐ Population

☐ Fill Below

☐ Symmetric

☒ Show recalculated band for highlighted or selected data points

OK