/\*\*

\* Clips a polar line against a window and returns a line segment from the endpoints

\* There are two main cases based on the angle of the line, because there is a potential

\* singularity clipping the other way:

\*

\* - case 1: 0 < theta < pi/4 and 3\*pi/4 < theta < pi

\* must clip against the window top and bottom first

\*

\* In case 1, there are 7 subcases where clip points are to the left, inside,

\* or to the right of the window:

\*

\* @image html cv-workbench\_wb\_window\_clip\_90\_degree.jpg

\*

\* This shows the position of the clip point in each subcase:

\* case | 1.1| 1.2 | 1.3 | 1.4 | 1.5 | 1.6 |1.7

\* ------------|----|------|------|------|------|------|-----

\* upper point |left|left |inside|inside|inside|right |right

\* lower point |left|inside|left |inside|right |inside|right

\*

\* This shows the intersection points that make up the resulting line segment, or none:

\* case |1.1 |1.2 |1.3 |1.4 |1.5 | 1.6 |1.7

\* -------------|----|------|------|------|-----|------|-----

\* first point |none|left |top |top |top |right |none

\* second point |none|bottom|left |bottom|right|bottom|none

\*

\* - case 2: pi/4 < theta < 3\*pi/4

\* must clip against the window left and right first

\*

\* In case 2, there are 7 subcases where clip points are above, inside,

\* or below the window:

\*

\* @image html cv-workbench\_wb\_window\_clip\_0\_degree.jpg

\*

\* This shows the position of the clip point in each subcase:

\* case | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7

\* -----------|-----|------|-------|------|------|------|-----

\* upper point|above|above |inside |inside|inside|below |below

\* lower point|above|inside|above |inside|below |inside|below

\*

\* This shows the intersection points that make up the resulting line segment, or none:

\* case |2.1 |2.2 | 2.3 | 2.4 | 2.5 |2.6 |2.7

\* ------------|----|-----|-----|-------|-------|------|-----

\* first point |none|top | left| left | left |bottom|none

\* second point|none|right| top | right| bottom|right |none

\*

\* @param line Polar line to clip against window

\* @return line segment of endpoint on the window, or nullptr if none -- the latter won't occur for Hough lines