```
function [disparityMapHorizontal, disparityMapVertical] =
 getDisparityMap(image1, image2)

    disparityMapHorizontal = disparity(image1,
 image2, 'Method', 'SemiGlobal');

    rotatedImage1 = imrotate(image1, 90);
    rotatedImage2 = imrotate(image2, 90);
    disparityMapVertical = disparity(rotatedImage1,
 rotatedImage2, 'Method', 'SemiGlobal');

    disparityMapVertical = imrotate(disparityMapVertical, -90);

    % normalize the disparity map between 0-255
    disparityMapHorizontal(disparityMapHorizontal < 0) = 0;
    disparityMapVertical(disparityMapVertical < 0) = 0;
    disparityMapHorizontal = normalizeMatrix(disparityMapHorizontal,
 0, 255);
    disparityMapVertical = normalizeMatrix(disparityMapVertical, 0,
 255);
end
```

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