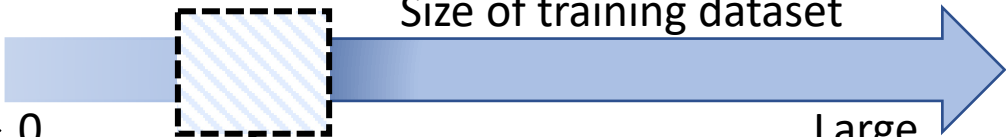


Accuracy of machine learning models



Size of training dataset



0

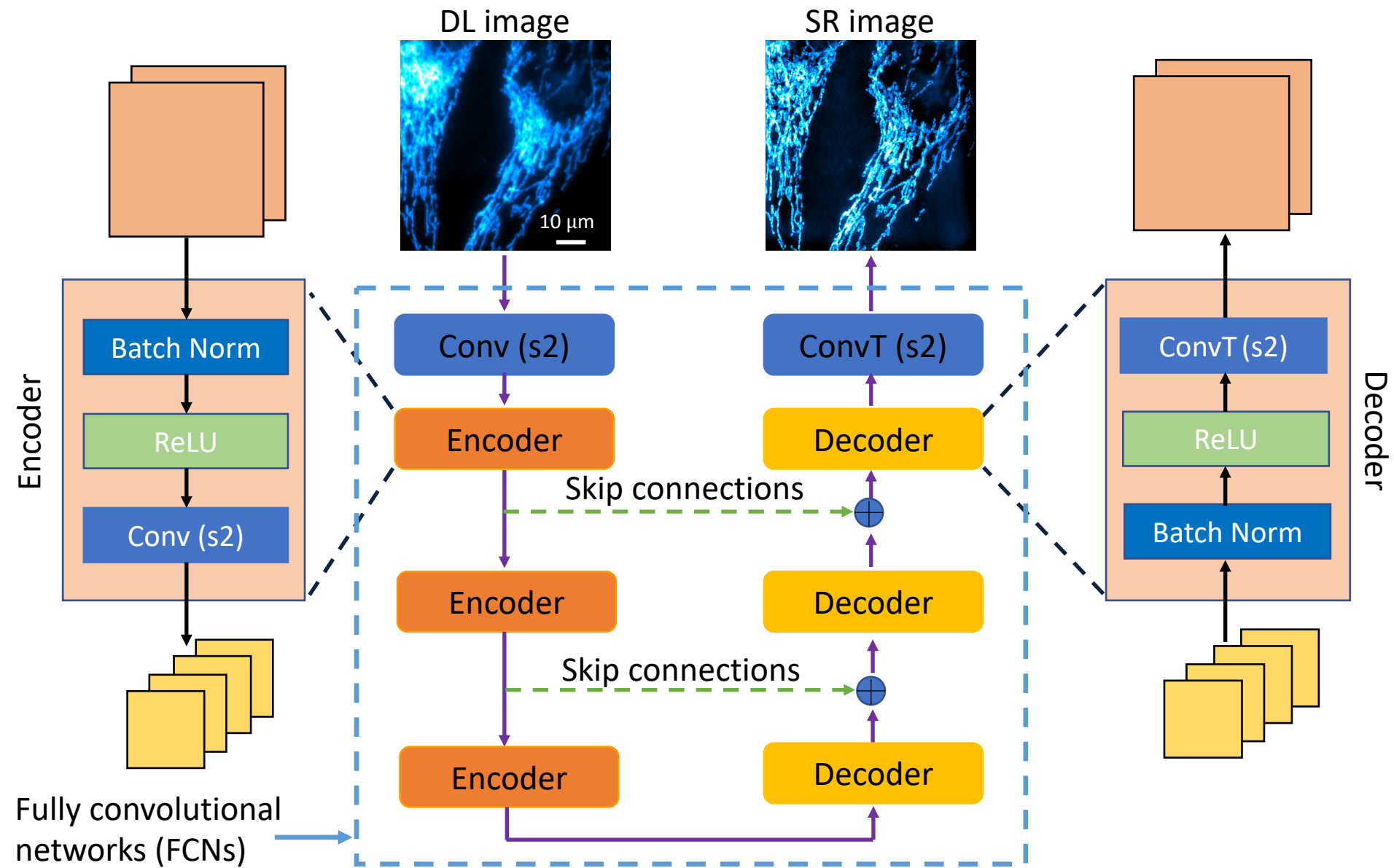
Large



No training data.  
Self-supervised  
learning

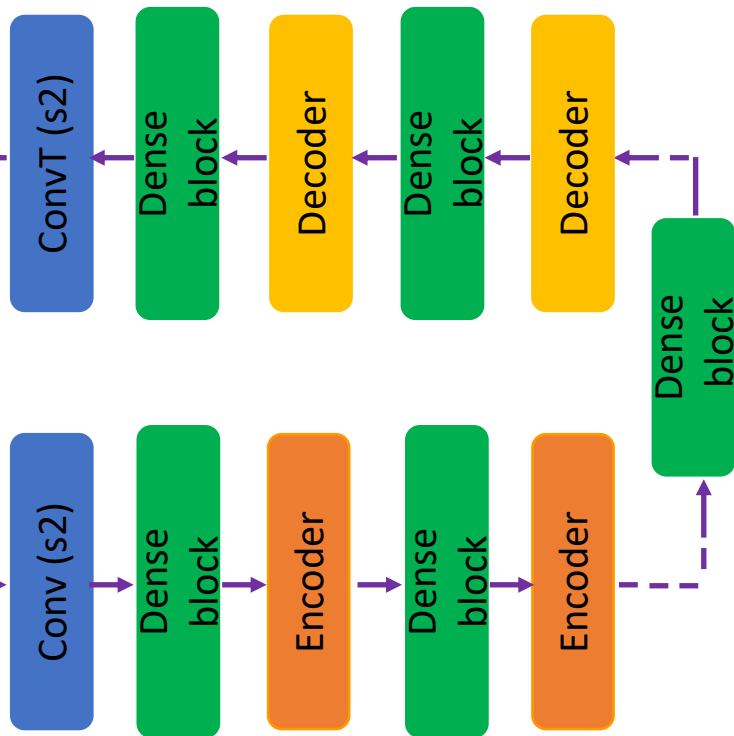
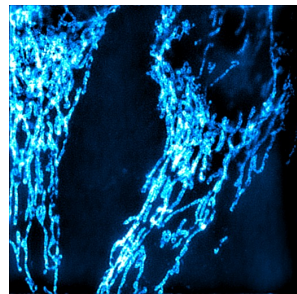
Small training data.  
**SRDenseED**  
**(Our model)**

Large training data.  
Supervised  
learning

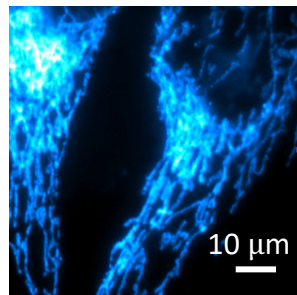


(a)

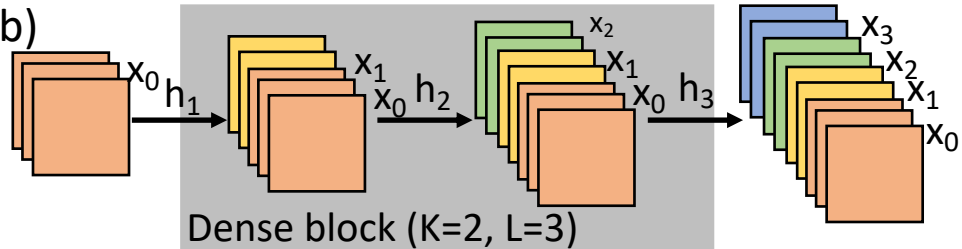
SR image



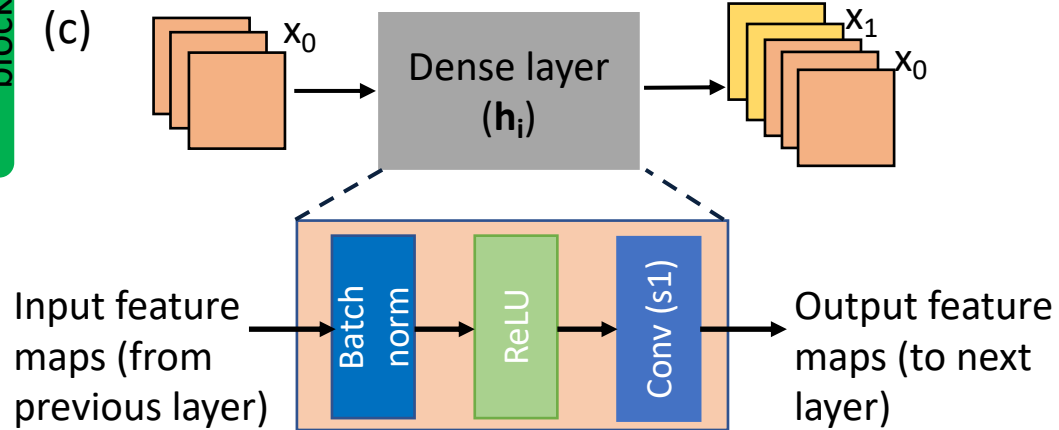
DL image



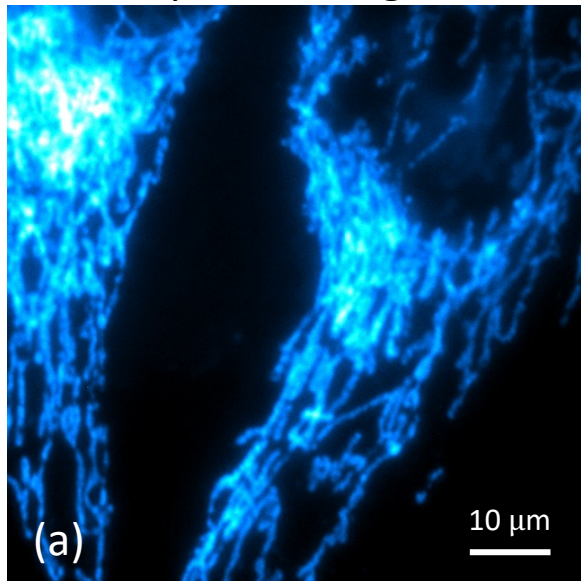
(b)



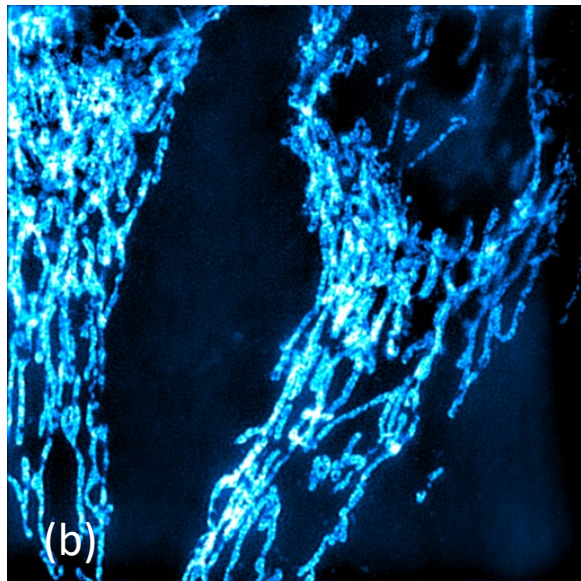
(c)

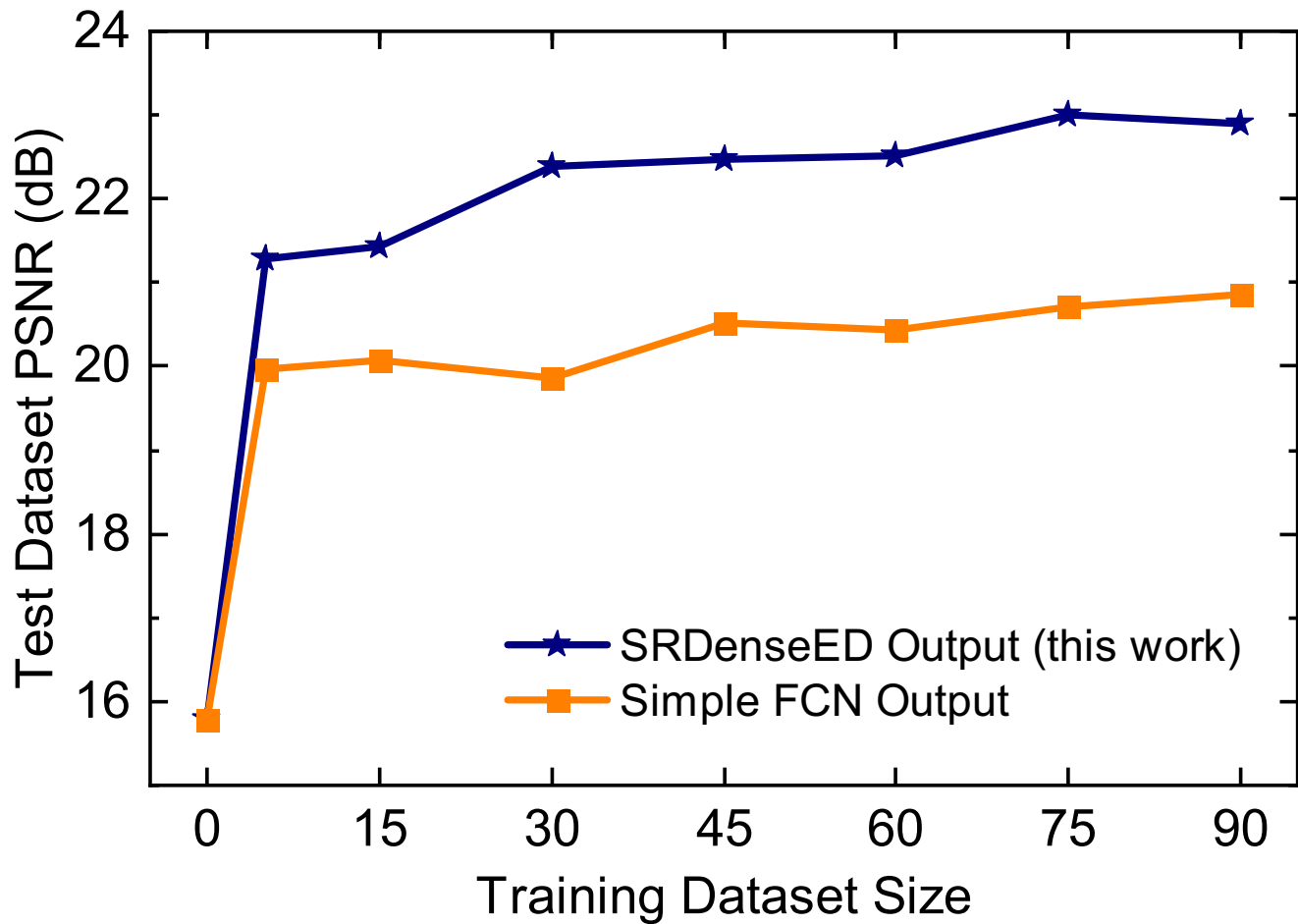


Input DL image

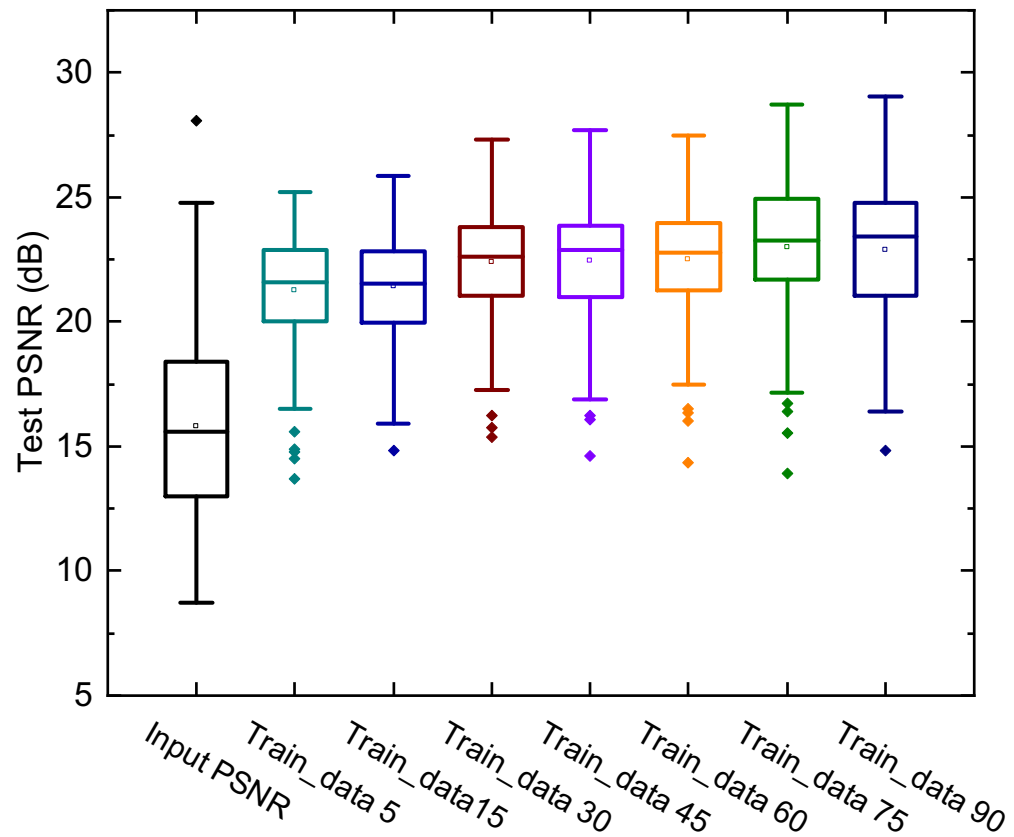


Target SR image

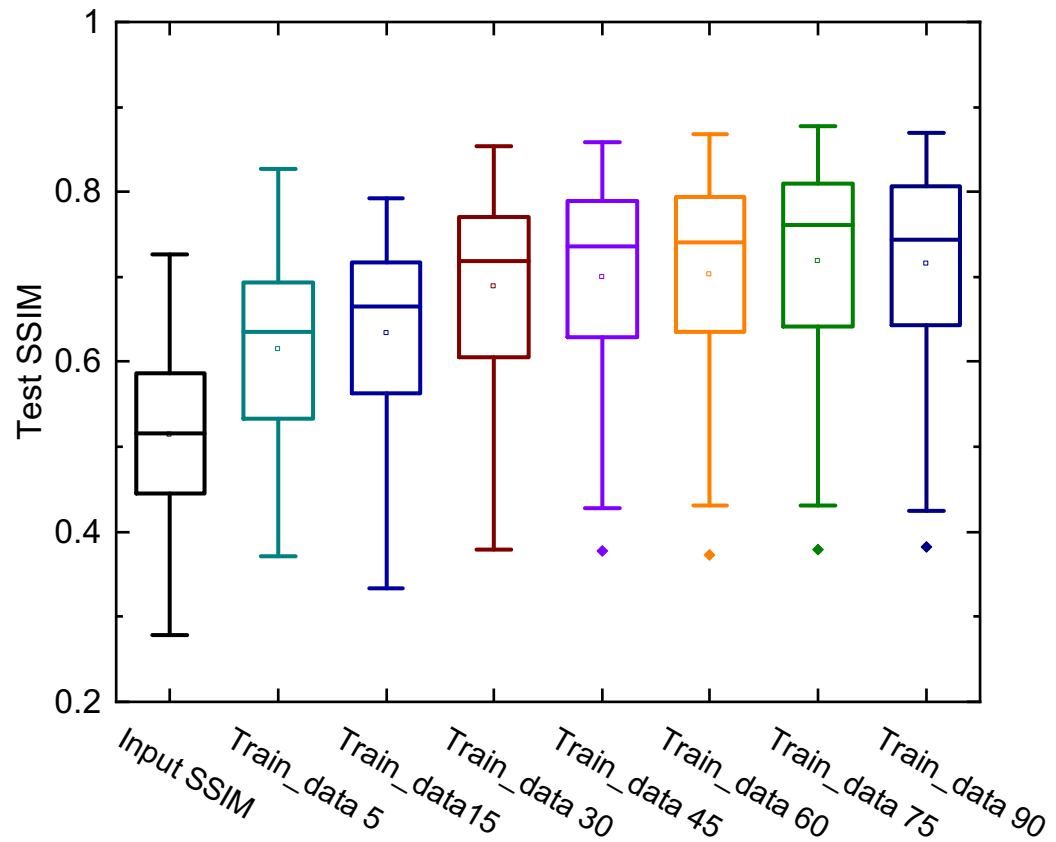




(a) Test PSNR (dB) vs no-noise training data size



(b) Test SSIM vs no-noise training data size

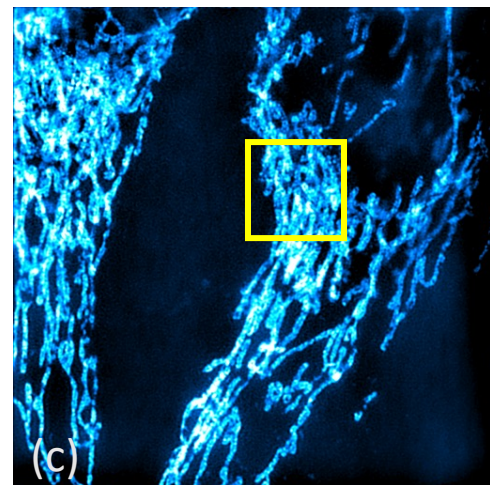
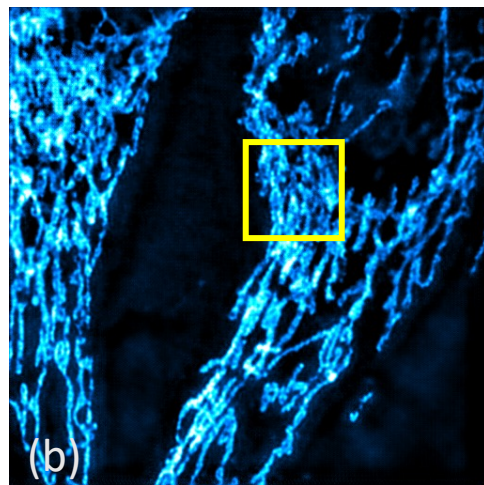
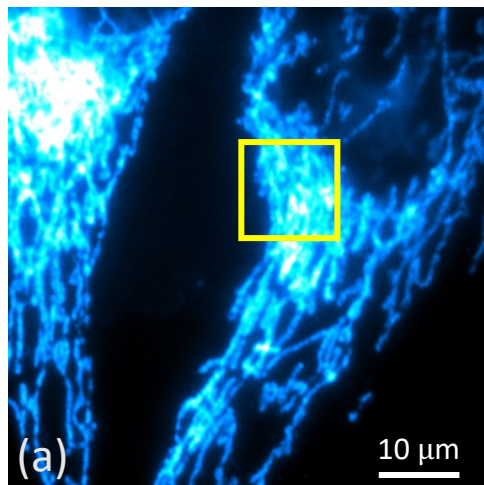


Input DL image

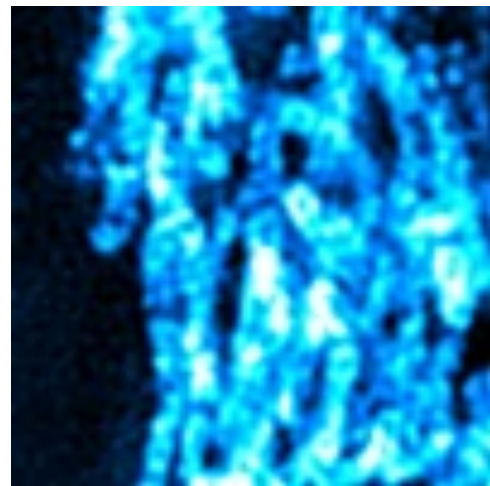
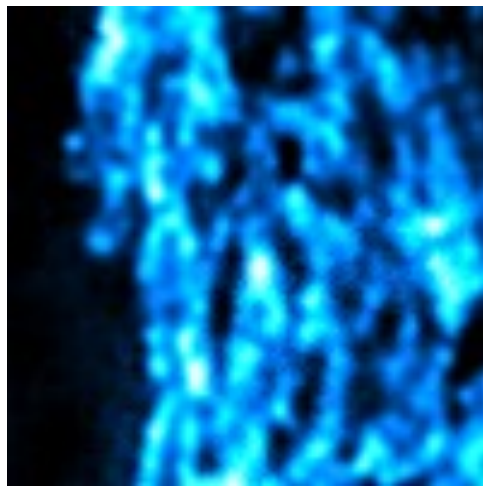
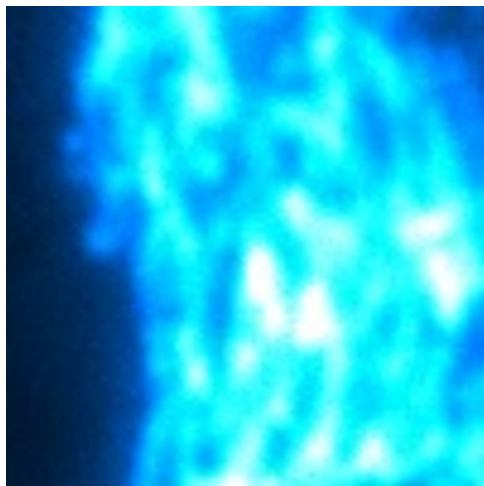
SRDenseED image

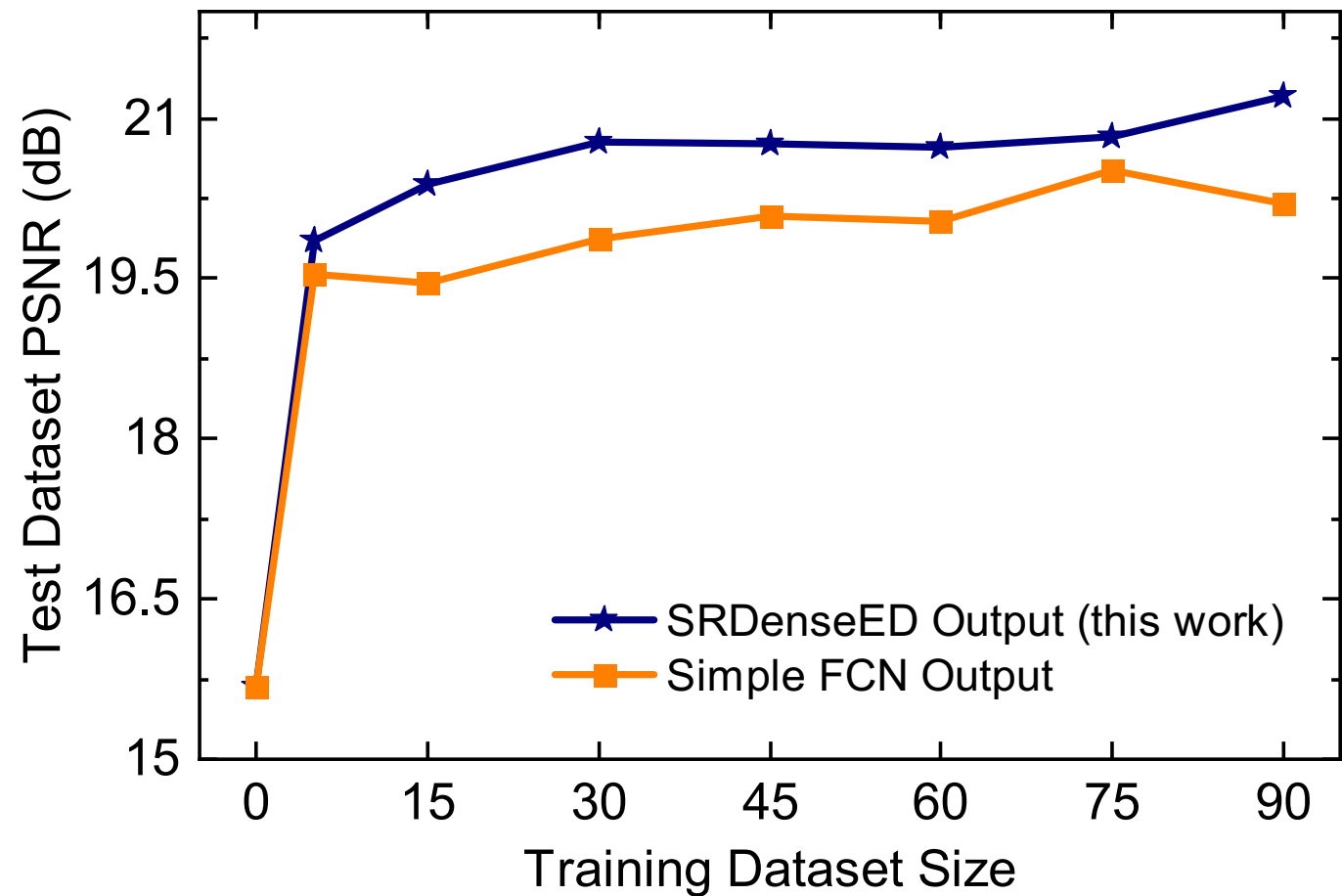
Target SR image

Full-image FOV



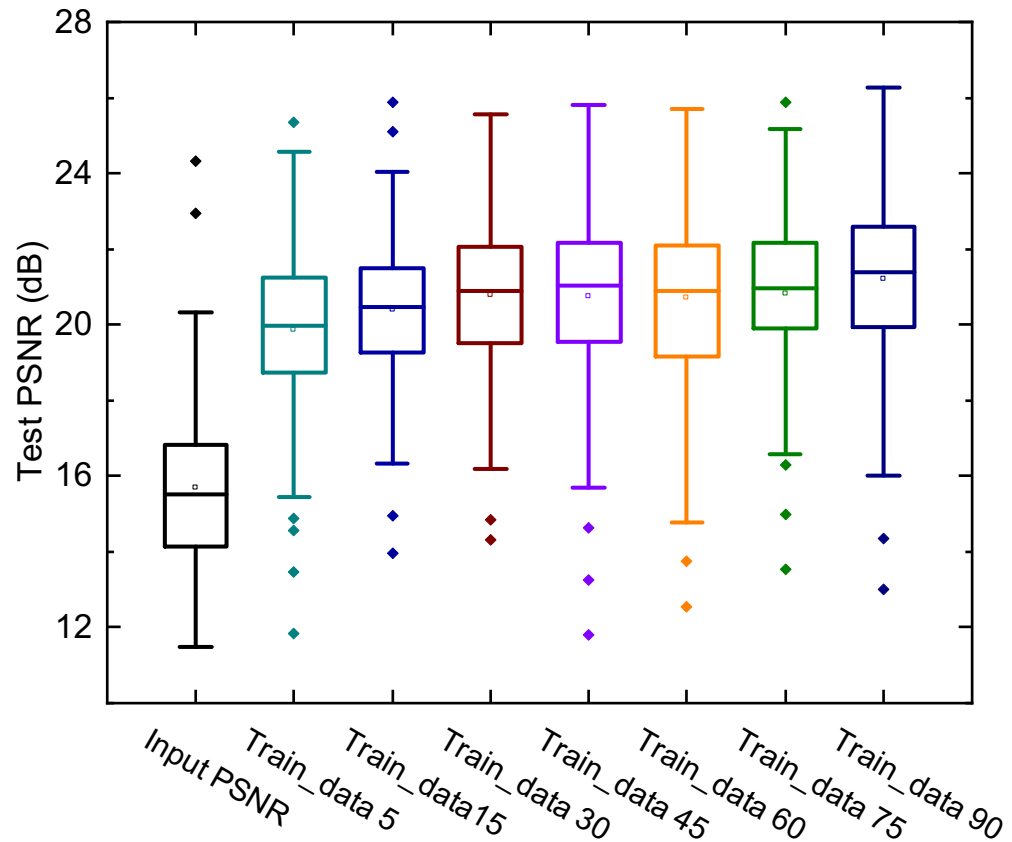
Selected ROI



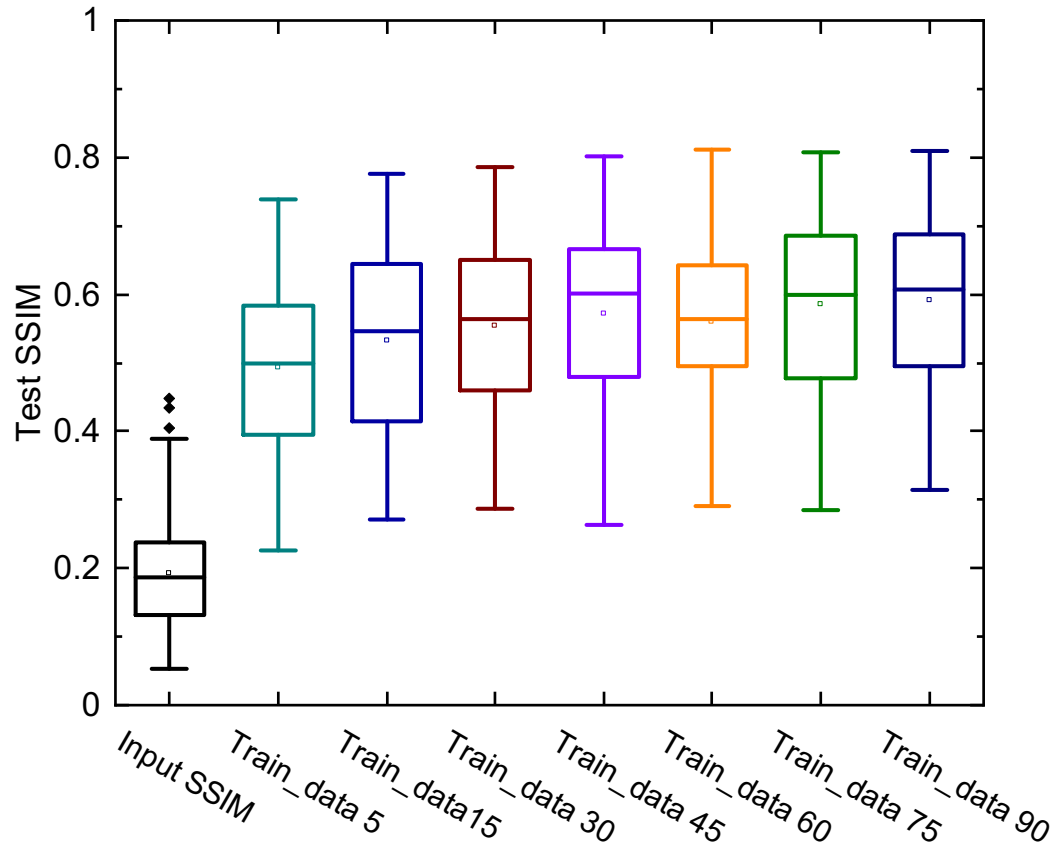




(a) Test PSNR (dB) vs Noisy training data size



(b) Test SSIM vs Noisy training data size

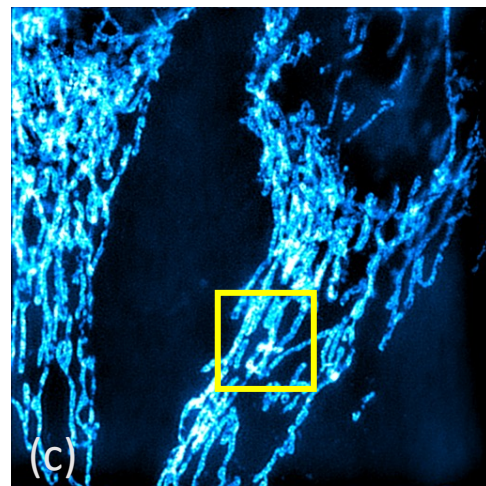
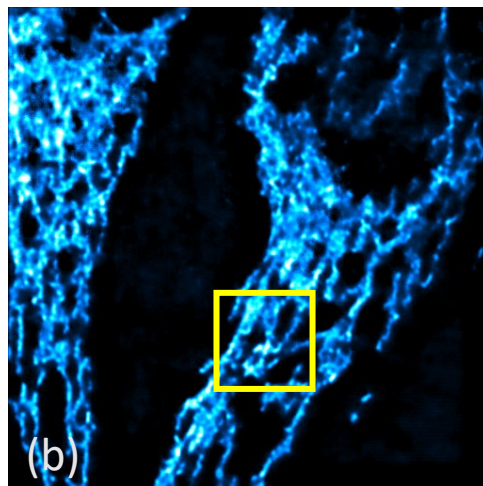
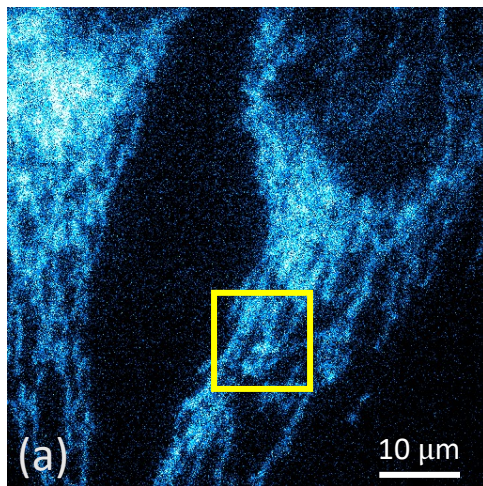


Noisy DL image

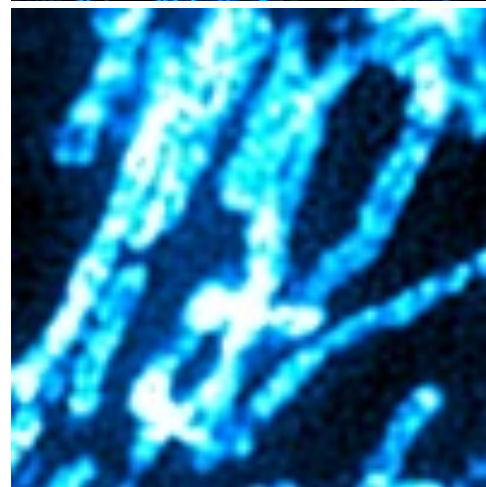
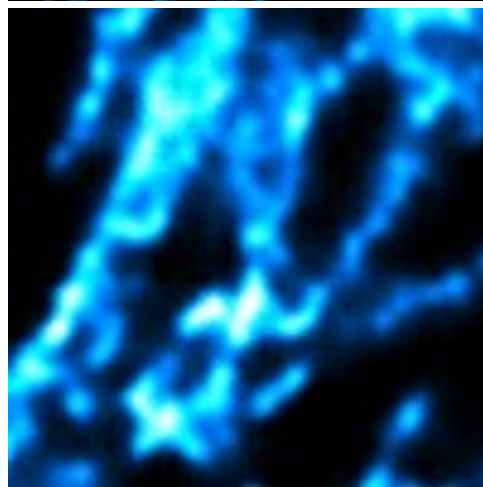
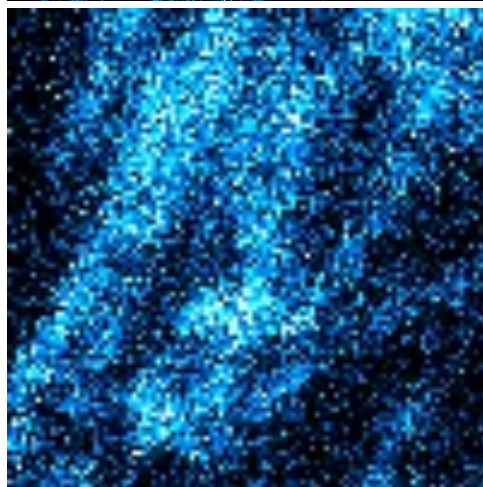
SRDenseED image

Target SR image

Full-image FOV



Selected ROI

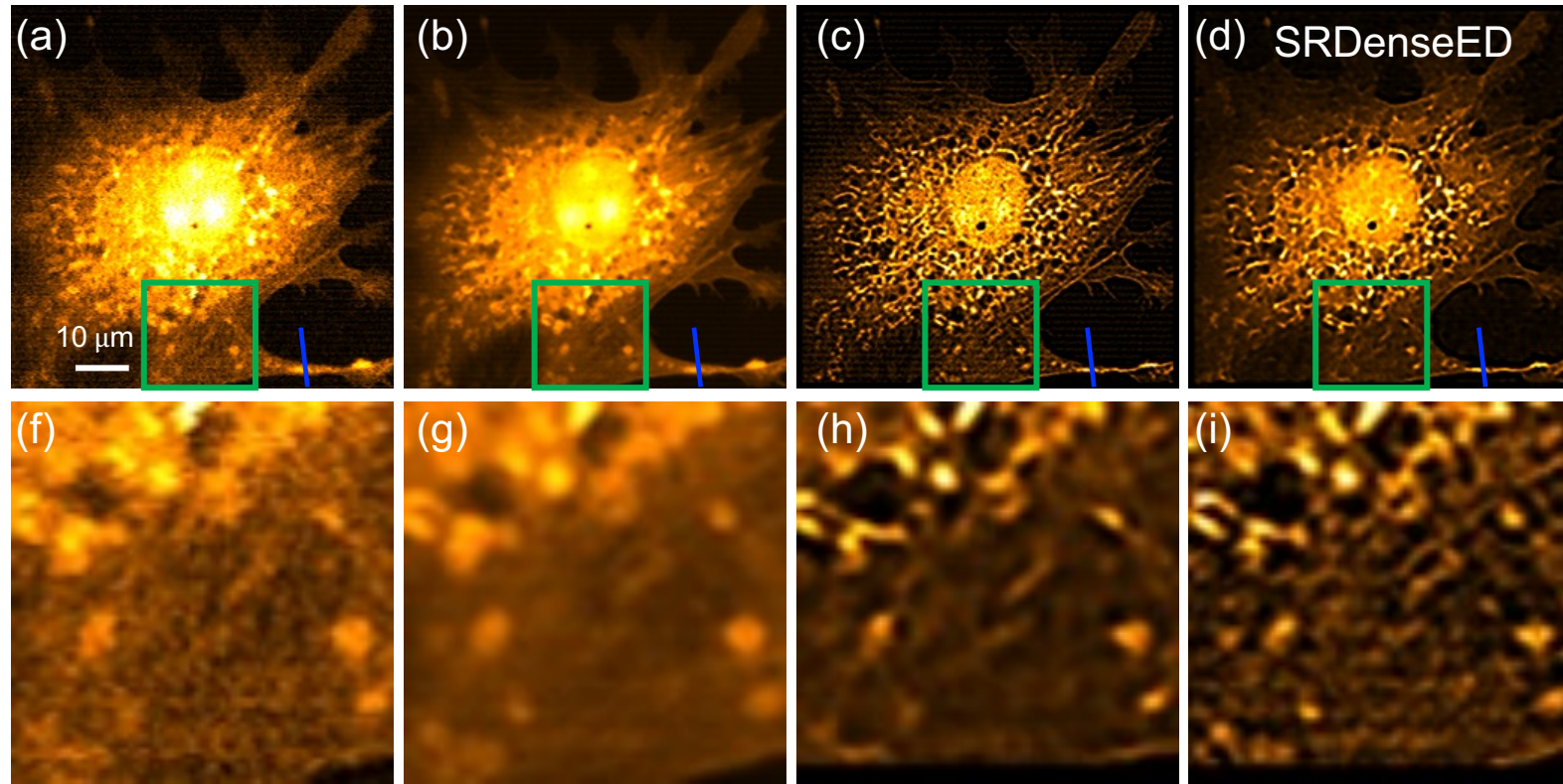


Noisy DL image

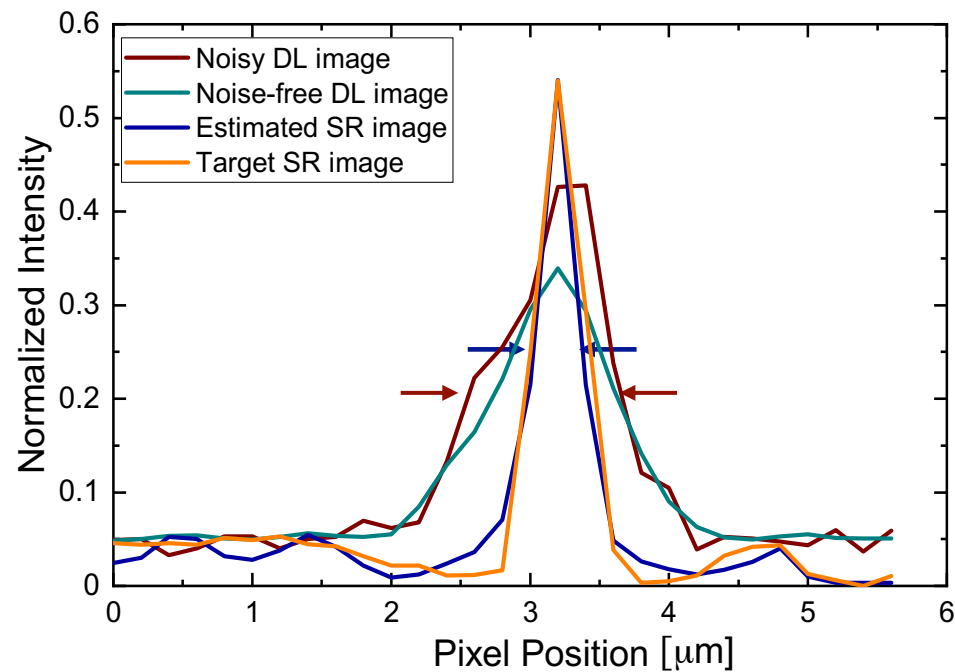
Noise-free DL image

Target SR image

Estimated SR image

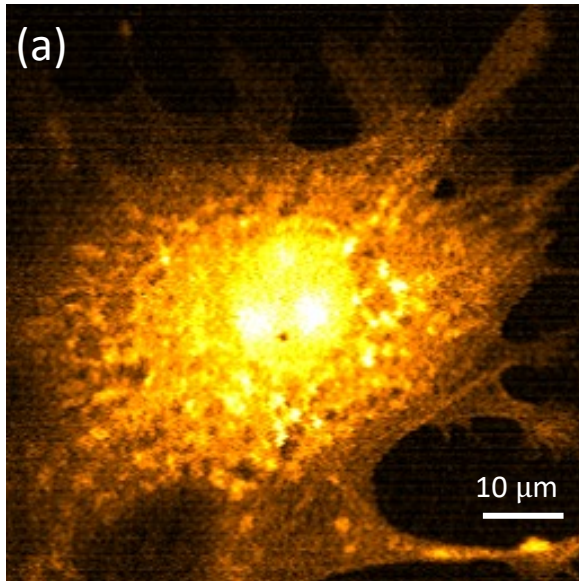


(e) Line plot for resolution improvement

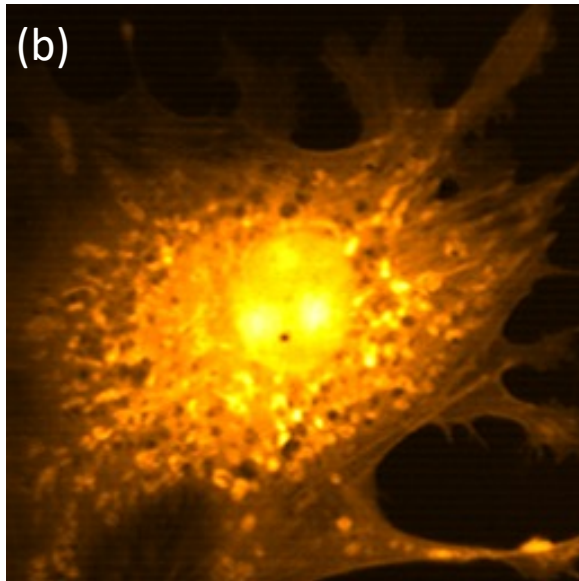




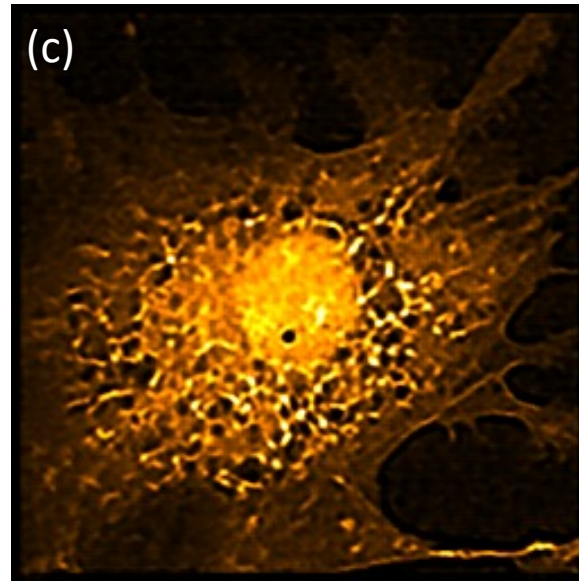
Input DL image



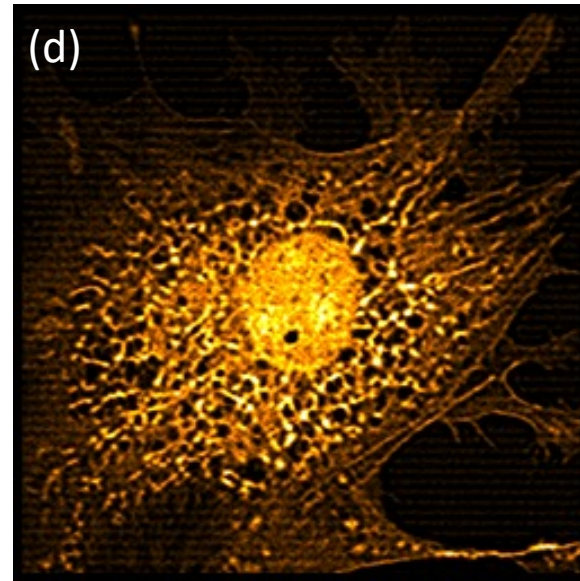
Averaged image



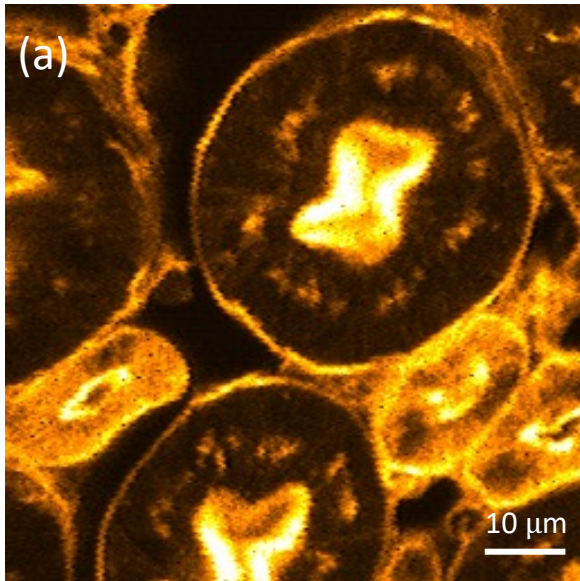
Estimated SRDenseED image



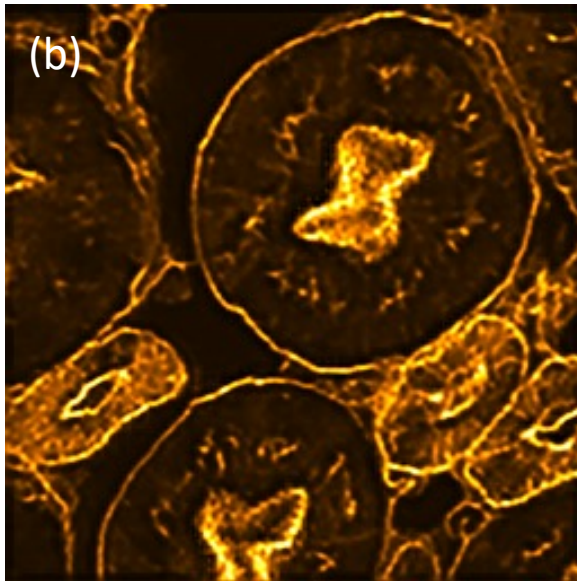
Target SR image



Input DL image



Estimated SR (DenseED FCNs)



Target SR image

