

# Camera Lens Super-Resolution –Supplementary Material–

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In Sec. 1, as a supplement to the main paper, we further show the quantitative results on the five test images from the iPhone X version of City100 (Table 1). The corresponding visual results are shown in Fig. 1.

In Sec. 2, we demonstrate the favorable generalization capability of our proposed CameraSR in terms of scene content and device, as shown in Figs. 2 and 3. Specifically, the CameraSR network trained on City100 (Nikon D5500) can be readily applied to different DSLR cameras such as Canon EOS 750D and 760D.

In Sec. 3, we show an overview of the content from our City100 dataset. 100 city scenes printed in postcards are adopted as the subjects. As shown in Fig. 4, images from City100 have diverse colors and contents which facilitate leaning-based SR.

## 1. SR Results on the iPhone X Version of City100

Test image	Interpolated LR	BicubicSR	CameraSR
	PSNR / SSIM / Ma's / VGG	PSNR / SSIM / Ma's / VGG	PSNR / SSIM / Ma's / VGG
St. Petersburg	25.21 / 0.8257 / 4.10 / 0.9425	25.20 / 0.8405 / 6.59 / 0.7199	26.38 / 0.8647 / 6.97 / 0.1860
Dubai	27.15 / 0.8343 / 3.36 / 0.5326	27.03 / 0.8430 / 6.80 / 0.3340	28.68 / 0.8708 / 8.49 / 0.1344
Venice	22.37 / 0.6542 / 3.88 / 1.1483	22.33 / 0.6768 / 6.77 / 0.7977	23.55 / 0.7188 / 6.96 / 0.3637
Rome	26.79 / 0.8439 / 4.26 / 0.5198	26.91 / 0.8622 / 6.79 / 0.3856	29.15 / 0.8949 / 7.19 / 0.1089
New York	21.86 / 0.7070 / 3.98 / 1.3647	21.98 / 0.7369 / 6.73 / 1.0750	23.51 / 0.7933 / 6.81 / 0.3820
Average	24.67 / 0.7730 / 3.92 / 0.9016	24.69 / 0.7919 / 6.74 / 0.6624	26.25 / 0.8285 / 7.28 / 0.2350

Table 1. Quantitative SR results on the five test images from the iPhone X version of City100. PSNR and SSIM [5] (the higher, the better) are adopted for the evaluation of reconstruction accuracy (VDSR [1] network). Ma's [3] metric (the higher, the better) and VGG [4, 6] metric (the lower, the better) are adopted for the evaluation of perceptual quality (SRGAN [2] network).

## References

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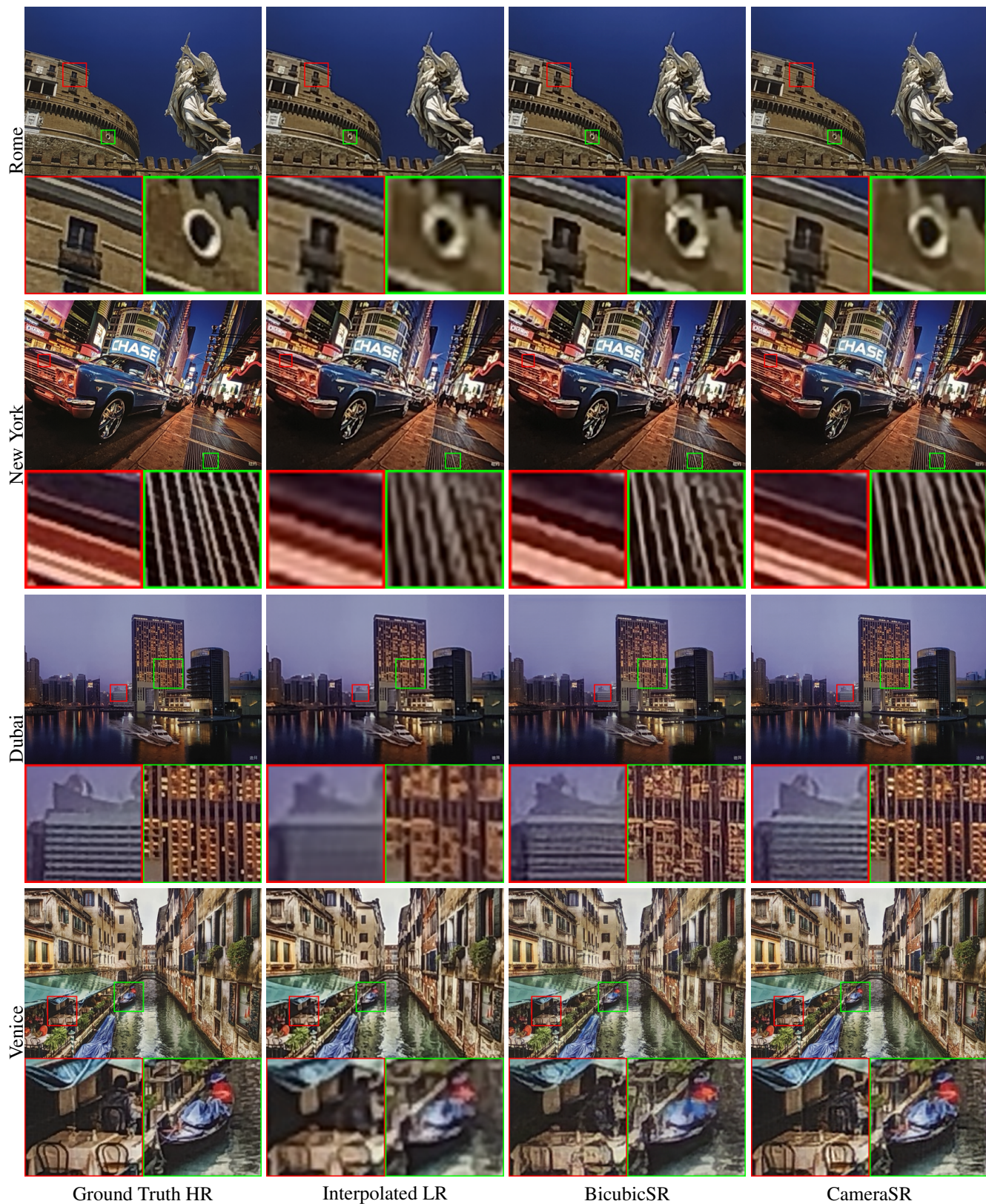


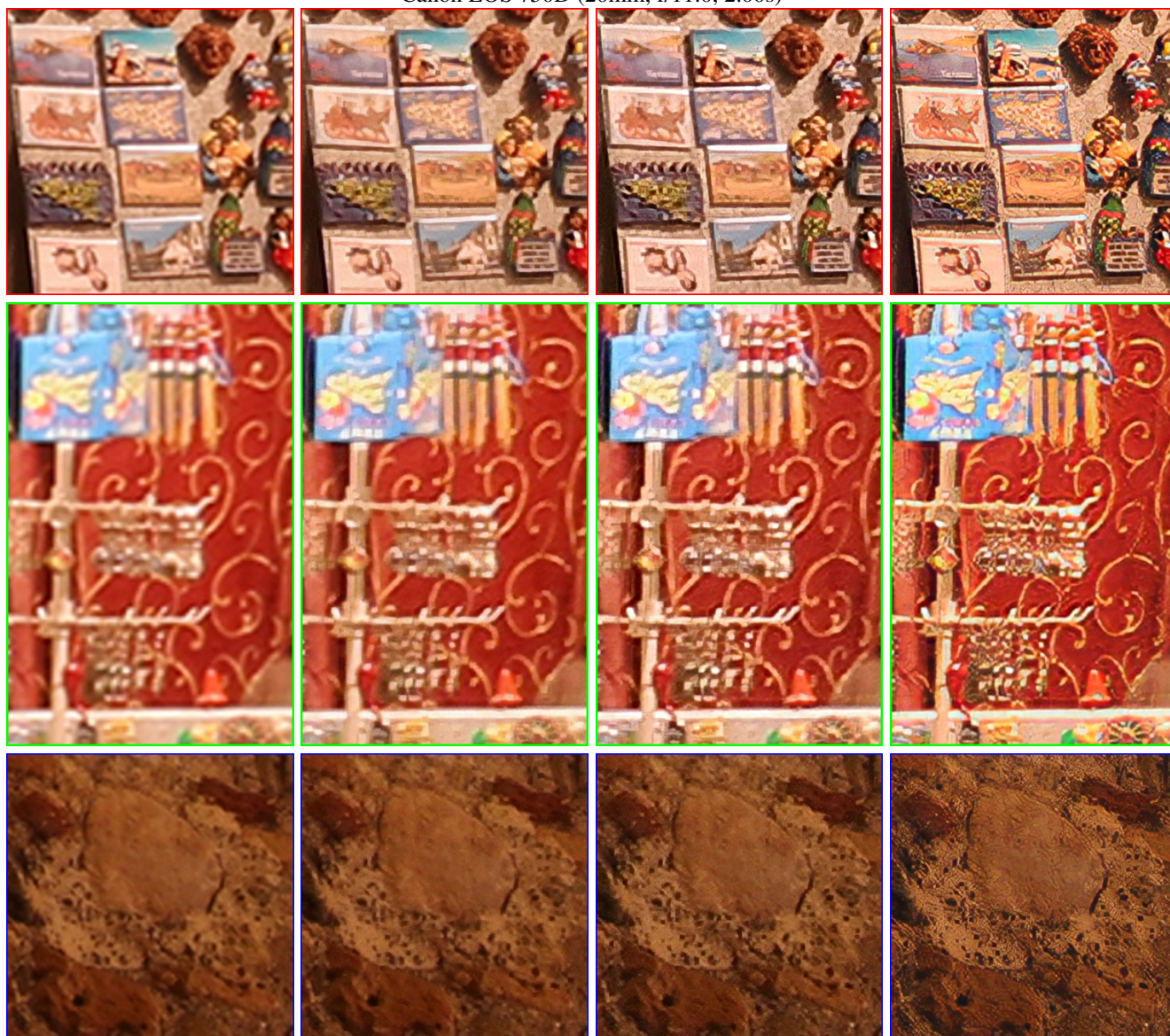
Figure 1. Visual comparison of SR results on the test images from the iPhone X version of City100, in terms of reconstruction accuracy (“Rome” and “New York”, VDSR [1] network) and perceptual quality (“Dubai” and “Venice”, SRGAN [2] network).



## 2. Generalizability from Nikon D5500 to Canon DSLR Cameras



Canon EOS 750D (20mm, f/11.0, 2.00s)



Interpolated LR

BicubicSR

GaussianSR

CameraSR

Figure 2. Visual comparison of SR results on an image captured by EOS 750D. Networks are trained on City100 using the SRGAN [2].





Canon EOS 760D (118mm, f/8.0, 1/20s)



Interpolated LR



BicubicSR



GaussianSR



CameraSR





Interpolated LR



BicubicSR



GaussianSR



CameraSR

Figure 3. Visual comparison of SR results on an image captured by EOS 760D. Networks are trained on City100 using the SRGAN [2].



### 3. Overview of City100

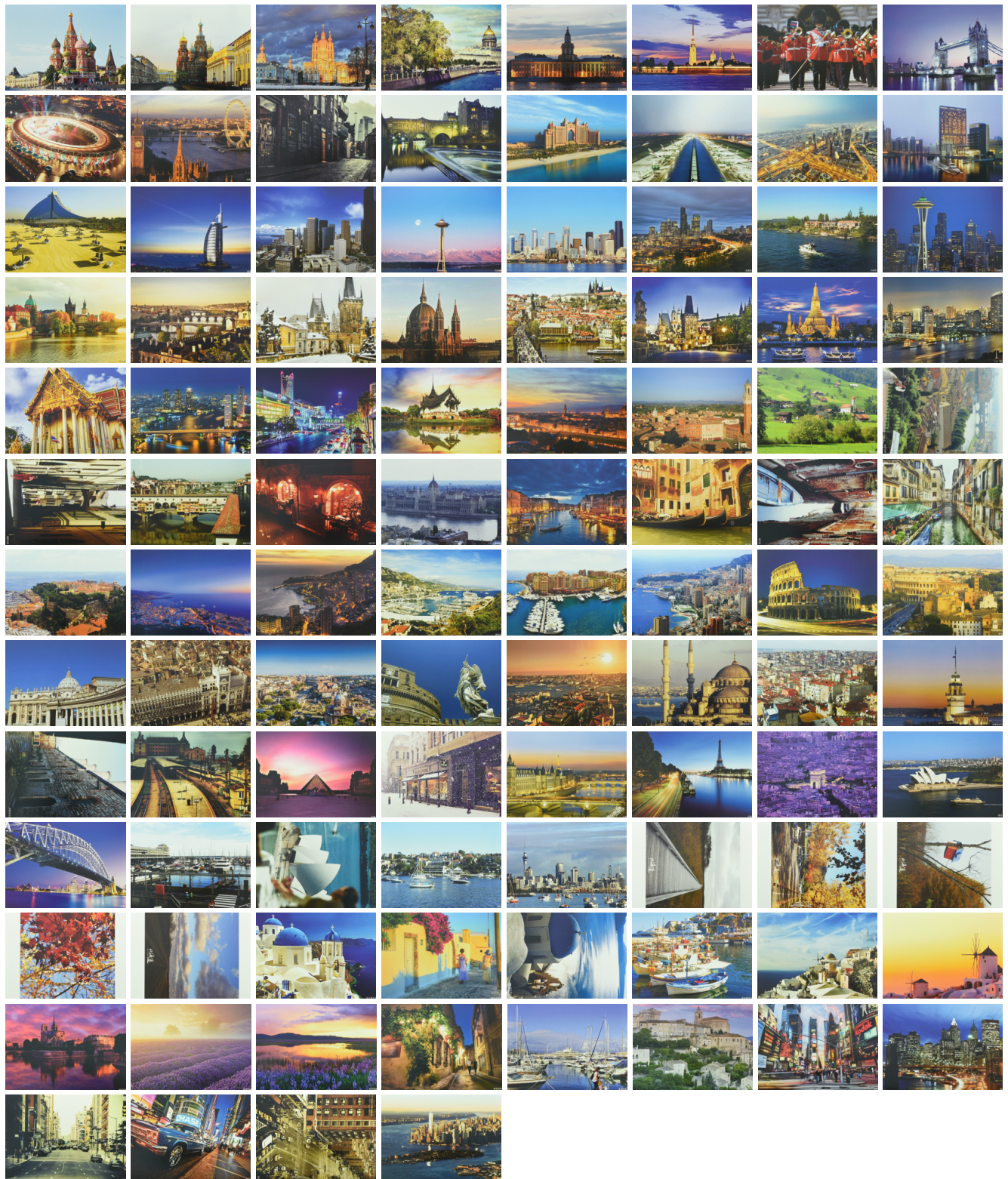


Figure 4. The overview of City100 content.