

Supplementary Material—Unpaired Photo-realistic Image Deraining with Energy-informed Diffusion Model

Table 1: Quantitative comparisons of our proposed method and the other comparative algorithms on five synthetic testing datasets. The **red and **blue** font indicate the best and second-best metrical scores, respectively. Our model achieves the best performance in PSNR and SSIM indicators.**

Method	Test100		Test1400		Test1200		Test1188		Test1000		Average	
	PSNR	SSIM	PSNR	SSIM	PSNR	SSIM	PSNR	SSIM	PSNR	SSIM	PSNR	SSIM
CycleGAN	22.098	0.7378	25.108	0.7638	26.704	0.7753	20.426	0.7430	16.302	0.6511	22.128	0.7342
UAGGAN	20.381	0.6446	21.790	0.6851	22.091	0.6751	19.267	0.7756	22.820	0.8299	21.270	0.7221
CUT	24.108	0.7352	23.799	0.7222	23.743	0.7573	22.683	0.8216	27.939	0.9021	24.454	0.7877
DCLGAN	19.921	0.6368	19.727	0.6540	19.861	0.6329	20.314	0.7639	20.566	0.7746	20.078	0.6924
DerainCycleGAN	24.257	0.7802	27.213	0.8379	27.565	0.8133	18.852	0.8211	30.197	0.9294	25.617	0.8364
NLCL	20.377	0.6971	20.257	0.7445	20.851	0.7009	20.169	0.8373	23.480	0.8499	21.027	0.7660
DCD-GAN	24.324	0.7333	23.696	0.7198	24.744	0.7524	24.490	0.8390	28.739	0.9268	25.199	0.7943
LUD-VAE	21.112	0.5353	20.329	0.4794	19.732	0.4361	16.031	0.3852	24.432	0.4337	20.327	0.4539
EGSDE	21.563	0.7488	24.265	0.6822	24.895	0.6204	21.225	0.6834	26.081	0.7972	23.606	0.7064
UNSB	19.925	0.5708	19.540	0.5663	20.668	0.5752	16.302	0.6511	21.045	0.6792	19.496	0.6085
CLIP-LIT	22.636	0.7072	24.183	0.7761	23.152	0.7377	23.952	0.8415	31.572	0.9425	25.099	0.8010
UPID-EDM (ours)	24.986	0.8035	28.578	0.8627	29.942	0.8582	26.878	0.8554	32.060	0.8921	28.489	0.8544