

Datasets	Metrics	Statistics-based methods				Learning-based methods				
		Spectral Gray Word	Max Spectral	Spectral Gray Edge	LRMF	DUNet	PWIR alexnet resnet50		Proposed	
KAUST's	e_{ang}	average	25.19	22.95	22.94	25.16	8.649	19.14	5.415	3.841
		median	23.45	21.17	21.08	23.57	6.976	16.53	4.440	2.709
		trimean	23.85	21.59	21.56	23.98	7.297	16.66	4.709	3.026
		best1/4	7.842	6.563	6.505	7.589	2.507	7.673	1.740	0.567
		worst1/4	45.27	42.25	42.26	45.38	18.32	36.41	10.79	8.936
	e_{msq}	average	0.154	0.141	0.142	0.148	2.362	4.318	0.018	0.014
		median	0.142	0.121	0.125	0.129	1.824	3.871	0.005	0.001
		trimean	0.141	0.125	0.129	0.133	1.912	4.153	0.008	0.004
		best1/4	0.015	0.011	0.012	0.015	0.493	2.305	0.000	0.000
		worst1/4	0.312	0.300	0.298	0.308	5.209	6.832	0.060	0.050
Ours	e_{ang}	average	29.32	23.9	36.82	33.49	14.18	25.14	6.693	4.485
		median	27.29	22.40	33.38	31.73	11.34	21.17	5.478	3.145
		trimean	27.70	22.48	34.55	31.93	11.89	21.94	5.817	3.530
		low1/4	9.122	6.830	10.43	10.09	4.109	10.07	2.149	0.657
		high1/4	52.68	43.99	67.80	60.39	30.03	47.82	13.33	10.43
	e_{msq}	average	0.177	0.143	0.195	0.180	0.092	0.159	0.039	0.016
		median	0.162	0.121	0.180	0.156	0.070	0.142	0.029	0.011
		trimean	0.175	0.142	0.192	0.175	0.091	0.157	0.036	0.014
		low1/4	0.015	0.011	0.016	0.018	0.019	0.084	0.004	0.002
		high1/4	0.358	0.403	0.412	0.377	0.202	0.257	0.130	0.057