

## Appendix A: Additional Quality Evaluation Results

**Table A1:** Artifacts of various compression algorithms at a target bitrate of 0.89 bit per pixel (bpp), or the quality level that comes closest. BCI for comparison (always 4bpp). Each cell shows quality and bpp in the top row, and FLIP and PSNR in the bottom row. Best and worst FLIP and PSNR values in a row are highlighted, with the exception of BCI which is not considered due to its high memory usage.

Reference	BCI	ASTC 12 × 12	JPEG	JPEG XL	AVIF	NTC
asphalt_04_diff_4k	4.00bpp	0.89bpp	Q40 0.86bpp	Q65 0.82bpp	Q40 0.98bpp	1.01bpp
	0.048 34.1	<b>0.108</b> 26.0	0.071 <b>25.8</b>	<b>0.069</b> 26.9	0.086 <b>28.4</b>	0.072 27.5
brick_wall_006	4.00bpp	0.89bpp	Q50 0.91bpp	Q70 0.87bpp	Q50 0.93bpp	1.01bpp
	0.048 35.3	<b>0.104</b> <b>28.8</b>	0.090 29.4	0.080 30.5	<b>0.079</b> <b>32.1</b>	0.089 30.7
bridge_1024_768	4.00bpp	0.89bpp	Q70 0.93bpp	Q75 0.77bpp	Q55 0.86bpp	1.30bpp
	0.044 34.6	<b>0.076</b> <b>29.4</b>	0.063 30.5	<b>0.054</b> 31.2	0.056 <b>33.9</b>	0.069 31.5
coast_sand	4.00bpp	0.89bpp	Q85 0.90bpp	Q85 0.81bpp	Q85 0.86bpp	1.01bpp
	0.028 42.3	<b>0.044</b> <b>39.9</b>	0.037 41.1	<b>0.029</b> 43.3	<b>0.029</b> <b>44.2</b>	0.0316 43.4
coral_gravel_diff_4k	4.00bpp	0.89bpp	Q40 0.99bpp	Q65 0.90bpp	Q45 0.98bpp	1.01bpp
	0.051 33.4	<b>0.113</b> <b>27.1</b>	0.094 27.9	<b>0.082</b> 29.3	0.084 <b>30.7</b>	0.090 29.4
denmin_fabric_02	4.00bpp	0.89bpp	Q40 0.94bpp	Q75 0.83bpp	Q55 0.95bpp	1.01bpp
	0.043 33.7	<b>0.089</b> <b>29.8</b>	0.078 30.6	0.061 32.6	<b>0.059</b> <b>34.7</b>	0.059 34.0
Chip005	4.00bpp	0.89bpp	Q55 0.93bpp	Q70 0.93bpp	Q50 0.95bpp	1.22bpp
	0.036 34.6	<b>0.076</b> <b>27.0</b>	0.065 27.7	0.058 29.6	<b>0.055</b> <b>32.4</b>	0.057 31.9

**Table A2: Quality metric plots for the test data sets in Table A1.**

