	airplane	barbara	boats	lena	mandril	peppers	tiffany	zelda		max	min
	510x510	510x510	510x510	510x510	510x510	510x510	510x510	510x510			
	diff1	diff1	diff1	diff1	diff1	diff1	diff1	diff1			
brightness -20%	0.3	3.1	1.1	0.7	0.3	3.1	0	1.1		3.1	
brightness -15%	0	1.5	0.3	0.3	0.3	2.7	0	0.7		2.7	
brightness -10%	0	0	0	0	0	1.9	0	0		1.9	
brightness -5%	0	0	0.3	0	0	1.1	0	0		1.1	
brightness 5%	0	0	0	0	0	0.3	0.7	0		0.7	
brightness 10%	0	0	0.3	0.3	0	0	2.3	0		2.3	
brightness 15%	0.7	0	0	0.7	0.7	0.3	5	0		5	
brightness 20%	4.2	0.7	0.3	0.7	0.7	0.3	8.2	0.3		8.2	
contrast -20%	0	0	0.3	0	0	0	0	0		0.3	
contrast -15%	0	0	0.3	0	0	0	0	0		0.3	
contrast -10%	0	0	0.3	0	0	0.7	0	0		0.7	
contrast -5%	0	0	0.3	0	0	0.3	0	0		0.3	
contrast 5%	0	0	0.3	0	0	0.7	0.7	0		0.7	
contrast 10%	0	0	0.3	0	0	1.1	2.3	0		2.3	
contrast 15%	0	0	0.7	0.3	0	1.9	2.7	0		2.7	
contrast 20%	0	0.7	0.7	0.3	0.7	2.3	4.2	0.3		4.2	
gamma 0.75	0.3	3.5	1.5	0.7	1.1	3.1	0.3	0.3		3.5	
gamma 0.8	0.3	2.3	1.5	0.3	0.7	2.7	0.3	0.3		2.7	
gamma 0.85	0.3	2.3	1.1	0.3	0.3	2.3	0.3	0.3		2.3	
gamma 0.9	0.3	1.5	0.3	0.3	0	1.1	0.3	0		1.5	
gamma 1.05	0.3	0.7	0.7	0.3	0	1.1	0	0		1.1	
gamma 1.1	1.1	1.5	0.7	0.3	0	0.3	0	0		1.5	
gamma 1.15	0.7	1.5	1.1	0.3	0	0.3	0	0		1.5	
gamma 1.2	0.7	1.5	1.1	0.3	0	0.3	0	0		1.5	
gamma 1.25	0.7	1.5	0.7	0.3	0	0.3	0	0		1.5	
blur 0.5	0	0	0	0	0	0.3	0	0		0.3	
blur 1	0	0.7	0.3	0	0.3	1.1	0.3	0		1.1	
blur 2	0.3	1.1	1.9	0	0.3	1.1	0.7	0		1.9	
blur 3	0.7	1.5	2.3	0.3	1.1	1.5	0.7	0		2.3	
compress 5	3.9	4.2	7.8	1.9	2.3	2.7	5	0.7		7.8	
compress 10	3.1	1.9	1.5	0.3	1.1	1.5	2.3	0		3.1	
compress 25	1.5	0.3	0.7	0	0	0.7	1.1	0		1.5	
compress 50	0.7	0.3	0.7	0	0	0.3	0	0		0.7	
compress 75	1.1	0.3	0	0	0	0.7	0.3	0		1.1	
compress 100	0	0	0	0	0	0	0	0		0	
color noise 0.5	1.1	0.7	0.7	0	0	1.5	1.1	0		1.5	
color noise 1	1.5	1.5	1.9	0.3	0.7	1.9	1.9	0		1.9	
color noise 1.5	3.1	1.9	3.1	0.3	1.1	2.3	3.5	0		3.5	
color noise 2	3.1	1.9	3.5	0.3	1.9	2.7	3.5	0		3.5	
color noise 2.5	3.1	1.9	3.5	0.3	2.3	2.7	4.2	0.3		4.2	
color noise 3	3.1	2.3	4.6	0.3	2.7	2.3	4.6	0.3		4.6	
gray noise 0.5	1.1	0.7	0.3	0	0	0.3	0.3	0		1.1	
gray noise 1	1.9	1.1	2.3	0	1.1	0.3	1.1	0		2.3	
gray noise 1.5	2.3	1.1	2.7	0.3	1.1	0.3	1.5	0		2.7	
gray noise 2	2.7	1.1	3.5	0.3	1.1	0.3	2.3	0.3		3.5	
gray noise 2.5	2.7	1.1	3.9	0.7	1.1	0.3	3.9	0.3		3.9	
gray noise 3	3.1	1.1	3.9	1.9	1.9	0.3	5	0.3		5	
resize 25%	0	0.7	0.3	0	0.3	0.7	0.3	0		0.7	
resize 50%	0	0.3	0.3	0	0	0.7	0	0		0.7	
resize 75%	0	0	0.3	0	0	0	0	0		0.3	
resize 150%	0	0	0.3	0	0	0.3	0	0		0.3	
resize 200%	0	0	0.3	0	0	0.3	0	0		0.3	

resize 400%	0	0	0.3	0	0	0.3	0	0		0.3	
rotation -90	46.8	53.9	50.7	50	44.5	50	47.6	51.5			
rotation -45	57	53.1	54.2	46.8	58.2	48	46	49.6			
rotation -30	53.5	50.3	51.5	45.3	54.6	47.6	44.9	45.7			
rotation -15	42.5	47.6	44.5	46	42.9	48.4	39.8	39.4			
rotation -5	28.5	30.4	29.2	32.8	26.5	28.1	25.3	25			
rotation 5	33.2	32	26.9	30	21.8	26.5	25.7	26.1			
rotation 15	51.1	43.3	38.2	40.2	42.1	47.6	41.7	37.8			
rotation 30	55.8	42.5	48.4	45.3	55.4	45.7	42.5	43.3			
rotation 45	60.9	45.3	49.6	46.8	59.7	49.6	46	48.8			
rotation 90	46.8	53.9	50.7	50	44.5	50	47.6	51.5			
rotcrop 1	5.8	5.4	5	3.9	3.9	2.7	5.4	3.9		5.8	
rotcrop 2	10.1	10.1	9.3	8.9	7.8	6.6	9.3	7		10.1	
rotcrop 5	19.1	26.5	16.7	20.3	12.5	16.7	18.3	17.1		26.5	
rotcrop 7	23.4	33.2	26.1	28.1	16.7	23	23	21.4			
rotcrop 10	28.1	37.8	34.7	33.2	22.6	30	30	28.5			
rotcrop 15	37.5	43.3	37.1	41.7	30.4	35.1	36.3	35.1			
rotcrop 20	43.3	46	39	44.1	35.9	41.4	38.2	40.2			
rotcrop 30	42.9	46	44.9	44.5	39.8	46.8	41.7	39			
rotcrop 45	44.9	50.7	48.8	42.1	44.1	53.1	42.5	45.7			
rotcrop 90	46.8	53.9	50.7	50	44.5	50	47.6	51.5			
flop	44.5	43.7	38.2	43.7	24.2	48.4	41.4	40.6			
flip	38.2	53.1	57	48.4	47.6	54.6	46	54.6			
transpose	41.4	42.1	39.8	35.9	38.2	46.8	41.4	48.4			
transverse	44.5	45.3	57	59.3	39.8	50	49.2	57.8			
translate north (black)	51.5	46	47.6	42.1	47.6	47.2	50.7	49.2			
traslate west (black)	53.9	42.1	47.2	47.2	49.6	50.3	49.2	50			
translate northwest (black)	55.8	47.2	46.4	48.4	51.1	51.5	50.3	48.4			
translate north vs west (black)	51.5	46	47.6	42.1	47.6	47.2	50.7	49.2			
translate north (white)	51.1	53.9	51.1	47.6	54.6	44.5	50	42.9			
traslate west (white)	49.6	50	50	42.9	49.6	49.2	47.6	48.4			
translate northwest (white)	56.2	51.9	52.3	45.3	51.1	48	49.2	42.9			
translate north vs west (white)	51.1	53.9	51.1	47.6	54.6	44.5	50	42.9			
watermark 20%	3.9	4.2	4.2	0.7	2.7	3.5	6.2	2.7		6.2	
watermark 40%	4.2	6.2	6.2	3.1	3.5	5.8	10.9	5.8		10.9	
watermark 60%	5.8	7.8	7	4.6	6.2	7.8	11.7	7		11.7	
watermark 80%	6.2	9.3	7.8	5	7.8	8.5	14	8.2		14	
watermark 100%	7	9.3	8.2	5.8	8.2	9.3	14	8.2		14	
shear 1	8.9	5.4	5.4	3.1	5.4	3.5	8.2	3.9		8.9	
shear 2	12.5	9.3	9.7	9.3	8.2	7.8	9.7	6.2		12.5	
shear 3	14.4	15.6	12.1	15.6	11.3	10.9	12.8	10.5		15.6	
shear 4	16.7	20.7	13.6	17.5	13.2	14	15.2	14		20.7	
shear 5	19.1	23	15.6	22.6	14.4	17.9	17.1	16.4		23	
shear 10	27.3	33.9	24.6	32	27.7	26.9	30.8	25			
arc 1	7	4.6	4.2	3.9	3.5	2.7	4.6	0.7		7	
arc 2	10.5	6.6	7	5.8	5	4.2	6.2	1.9		10.5	
arc 3	12.8	9.7	8.5	9.7	7.4	6.6	9.7	6.6		12.8	
arc 4	14.4	11.7	10.9	12.5	9.7	8.5	13.2	7.8		14.4	
arc 5	15.6	15.2	12.5	15.2	12.8	8.9	14	10.1		15.6	
arc 10	22.6	22.2	19.9	24.6	20.7	15.2	19.1	17.1		24.6	
barrel 0.1	11.3	10.5	8.9	7.4	7.8	7.4	14.4	7.4		14.4	
barrel 0.2	14.8	17.1	17.5	16	15.2	12.1	21	14		21	
barrel 0.3	18.3	22.6	23.4	22.2	23.4	21	26.5	21		26.5	

barrel 0.4	23	25.7	29.6	28.5	25.7	27.7	27.7	25		29.6	
pincushion -0.1	32.4	33.9	29.6	35.1	23.4	25.7	26.5	24.6			
pincusion -0.2	37.8	36.3	33.9	40.2	28.5	31.2	33.5	28.9			
pincusion -0.3	41	37.8	35.9	44.9	32	35.9	36.3	32			
pincusion -0.4	43.3	42.5	39	46.4	33.9	38.6	36.7	35.1			
airplane	0	48.8	50.7	45.7	46	50.3	49.2	48.8			
barbara	48.8	0	47.2	50.7	50.3	53.1	55	51.5			
boats	50.7	47.2	0	52.7	45.3	53.5	44.5	54.2			
lena	45.7	50.7	52.7	0	53.5	51.5	52.7	50			
mandril	46	50.3	45.3	53.5	0	54.2	55.4	55			
peppers	50.3	53.1	53.5	51.5	54.2	0	44.9	46			
tiffany2	49.2	55	44.5	52.7	55.4	44.9	0	47.2			44.5
zelda	48.8	51.5	54.2	50	55	46	47.2	0			
Threshold Range										29.6	44.5
Separability (max-min)											14.9
Insensitive: rotation-crop up to 5, all watermark, shear up to 5, all arc and all barrel											
Sensitive: flip-flop-trans and pincushion											