

0,000	0,318	0,314	0,314	0,314	0,314	0,314	0,314	0,314	0,314
0,000	0,331	0,330	0,328	0,328	0,329	0,329	0,328	0,328	0,328
0,000	0,733	3,362	8,532	16,323	27,141	40,597	57,341	76,608	76,608
0,646	0,297	0,153	0,422	0,224	0,316	0,312	0,000	0,000	0,000
0,329	0,609	0,065	0,506	0,332	0,153	0,328	0,000	0,000	0,000
12,555	42,700	4,537	56,917	47,173	17,214	61,596	0,000	0,000	0,000
0,000	0,317	0,314	0,314	0,314	0,314	0,314	0,314	0,314	0,314
0,000	0,331	0,329	0,328	0,328	0,329	0,329	0,328	0,328	0,328
0,000	0,580	2,857	7,360	14,123	23,664	35,397	49,958	67,188	67,188
0,640	0,302	0,151	0,421	0,227	0,328	0,315	0,000	0,000	0,000
0,330	0,597	0,064	0,502	0,334	0,158	0,330	0,000	0,000	0,000
22,889	79,758	8,107	99,844	86,948	29,244	106,423	0,000	0,000	0,000

color	preX	preY	preYy	postX	postY	postYy
Blue Sky	0,1982	0,2003	31,6517	0,2513	0,2655	24,1540
Purple	0,2196	0,1325	5,5307	0,2859	0,2168	7,8881
G7	0,4817	0,4149	17,8225	0,4478	0,3880	17,1384
F7	0,4038	0,3878	56,2799	0,4048	0,3751	40,8417
Blue	0,1520	0,0749	7,0615	0,1875	0,1332	7,7320
E7	0,3802	0,3589	83,5392	0,3893	0,3571	63,9744
D7	0,4808	0,3832	50,0439	0,4626	0,3726	37,5313
Neutral 5	0,2712	0,3029	30,1127	0,3140	0,3279	24,1684
J7	0,4312	0,3672	53,3933	0,4244	0,3617	40,5378
I7	0,5393	0,4051	19,1668	0,4981	0,3895	17,9359
H7	0,3675	0,3565	60,5077	0,3784	0,3553	44,9606
Green	0,2814	0,5764	42,6855	0,3078	0,4916	29,0490
Yellow Green	0,3617	0,5525	87,5263	0,3813	0,4935	55,6256
Bluish Green	0,2233	0,3360	85,4420	0,2629	0,3546	53,7500
Moderate Red	0,4698	0,2941	29,4535	0,4593	0,3097	23,7533
Orange	0,5261	0,4217	50,1203	0,5090	0,4066	36,1133
Yellow	0,4344	0,5129	112,7369	0,4434	0,4754	74,6215
Ref White	0,2731	0,2993	152,9470	0,3147	0,3299	120,9660
Neutral 3.5	0,2686	0,3025	8,7364	0,3133	0,3285	10,4956
Neutral 6.5	0,2705	0,3025	62,8424	0,3140	0,3287	45,1475
Cyan	0,1865	0,2321	33,8696	0,2193	0,2862	24,0085
CP-Light	0,4121	0,4063	84,8426	0,4116	0,3874	62,8907
G8	0,3804	0,3550	56,4471	0,3878	0,3540	42,2977
F8	0,3757	0,3575	56,6180	0,3839	0,3558	42,1295
E8	0,4097	0,3533	73,3060	0,4113	0,3540	56,8251
D8	0,3949	0,3524	55,0113	0,3987	0,3528	42,0604
Magenta	0,3320	0,1945	30,5112	0,3728	0,2415	23,7767
Light Skin	0,3673	0,3564	60,9047	0,3782	0,3552	45,2160
Foliage	0,3183	0,5019	18,8921	0,3393	0,4282	16,9661
J8	0,4239	0,3781	58,3339	0,4197	0,3688	43,6671
I8	0,5078	0,4054	9,4355	0,4582	0,3816	11,0837
Purplish Blue	0,1656	0,1109	15,9465	0,2112	0,1810	14,1491
H8	0,3827	0,3581	57,4940	0,3892	0,3560	43,0442
CP-Dark	0,4144	0,4030	65,5323	0,4119	0,3843	47,7163
Red	0,5930	0,3210	16,2732	0,5423	0,3189	14,9377
Black	0,2646	0,3072	1,9979	0,3135	0,3279	3,7142
White	0,2719	0,3053	140,8304	0,3148	0,3307	109,4288

Orange Yellow	0,4716	0,4717	79,0053	0,4670	0,4430	54,4979
Blue Flower	0,2139	0,1854	37,5193	0,2716	0,2546	29,7058
Neutral 8	0,2696	0,3010	100,9048	0,3135	0,3280	74,0269
Dark Skin	0,4331	0,3791	10,2281	0,4076	0,3617	11,8155

Before	x	y	Y		After	x	y
0	0,000	0,000	0,000		0	0,000	0,000
10	0,318	0,331	0,733		10	0,317	0,331
20	0,314	0,330	3,36		20	0,314	0,329
30	0,314	0,328	8,53		30	0,314	0,328
40	0,314	0,328	16,32		40	0,314	0,328
50	0,314	0,329	27,14		50	0,314	0,329
60	0,314	0,329	40,60		60	0,314	0,329
70	0,314	0,328	57,34		70	0,314	0,328
80	0,314	0,328	76,61		80	0,314	0,328
90	0,312	0,328	99,32		90	0,312	0,328
100	0,315	0,330	119,89		100	0,315	0,330
R	0,646	0,329	0,204	12,555	R	0,640	0,330
G	0,297	0,609	0,693	42,700	G	0,302	0,597
B	0,153	0,065	0,074	4,5373	B	0,151	0,0643
Y	0,422	0,506	0,924	56,917	Y	0,421	0,502
C	0,224	0,332	0,766	47,173	C	0,227	0,334
M	0,316	0,153	0,279	17,214	M	0,328	0,158
W	0,312	0,328	1,000	61,596	W	0,315	0,330

0,312	0,315
0,328	0,330
99,316	119,887
0,000	0,000
0,000	0,000
0,000	0,000
0,312	0,315
0,328	0,330
87,101	105,214
0,000	0,000
0,000	0,000
0,000	0,000

Color	pre-x	pre-y	Pre-Y	pre-cd/m2	post-x	post-y
Ref White	0,2731	0,2993	1,0000	152,9470	0,3147	0,3299
Dark skin	0,4331	0,3791	0,0669	10,2281	0,4076	0,3617
Light skin	0,3673	0,3564	0,3982	60,9047	0,3782	0,3552
Blue sky	0,1982	0,2003	0,2069	31,6517	0,2513	0,2655
Foliage	0,3183	0,5019	0,1235	18,8921	0,3393	0,4282
Blue flower	0,2139	0,1854	0,2453	37,5193	0,2716	0,2546
Bluish green	0,2233	0,3360	0,5586	85,4420	0,2629	0,3546
Orange	0,5261	0,4217	0,3277	50,1203	0,5090	0,4066
Purplish blue	0,1656	0,1109	0,1043	15,9465	0,2112	0,1810
Moderate red	0,4698	0,2941	0,1926	29,4535	0,4593	0,3097
Purple	0,2196	0,1325	0,0362	5,5307	0,2859	0,2168
Yellow green	0,3617	0,5525	0,5723	87,5263	0,3813	0,4935
Orange Yellow	0,4716	0,4717	0,5166	79,0053	0,4670	0,4430
Blue	0,1520	0,0749	0,0462	7,0615	0,1875	0,1332
Green	0,2814	0,5764	0,2791	42,6855	0,3078	0,4916
Red	0,5930	0,3210	0,1064	16,2732	0,5423	0,3189
Yellow	0,4344	0,5129	0,7371	112,7369	0,4434	0,4754
Magenta	0,3320	0,1945	0,1995	30,5112	0,3728	0,2415
Cyan	0,1865	0,2321	0,2214	33,8696	0,2193	0,2862
White	0,2719	0,3053	0,9208	140,8304	0,3148	0,3307
Neutral 8	0,2696	0,3010	0,6597	100,9048	0,3135	0,3280
Neutral 6.5	0,2705	0,3025	0,4109	62,8424	0,3140	0,3287
Neutral 5	0,2712	0,3029	0,1969	30,1127	0,3140	0,3279
Neutral 3.5	0,2686	0,3025	0,0571	8,7364	0,3133	0,3285
Black	0,2646	0,3072	0,0131	1,9979	0,3135	0,3279
D7	0,4808	0,3832	0,3272	50,0439	0,4626	0,3726
D8	0,3949	0,3524	0,3597	55,0113	0,3987	0,3528
E7	0,3802	0,3589	0,5462	83,5392	0,3893	0,3571
E8	0,4097	0,3533	0,4793	73,3060	0,4113	0,3540
F7	0,4038	0,3878	0,3680	56,2799	0,4048	0,3751
F8	0,3757	0,3575	0,3702	56,6180	0,3839	0,3558
G7	0,4817	0,4149	0,1165	17,8225	0,4478	0,3880
G8	0,3804	0,3550	0,3691	56,4471	0,3878	0,3540
H7	0,3675	0,3565	0,3956	60,5077	0,3784	0,3553
H8	0,3827	0,3581	0,3759	57,4940	0,3892	0,3560
I7	0,5393	0,4051	0,1253	19,1668	0,4981	0,3895
I8	0,5078	0,4054	0,0617	9,4355	0,4582	0,3816

J7	0,4312	0,3672	0,3491	53,3933	0,4244	0,3617
J8	0,4239	0,3781	0,3814	58,3339	0,4197	0,3688
CP-Light	0,4121	0,4063	0,5547	84,8426	0,4116	0,3874
CP-Dark	0,4144	0,4030	0,4285	65,5323	0,4119	0,3843

Y

0,000	104%	104%	104%	104%	104%	104%
0,580	96%	96%	96%	96%	96%	96%
2,86						
7,36						
14,12	6505	6505	6505	6505	6505	6505
23,66						
35,40						
49,96						
67,19						
87,10						
105,21						

0,2151	22,889
0,7494	79,758
0,0762	8,107
0,9382	99,844
0,8170	86,948
0,2748	29,244
1,000	106,423

Post-Y	post-cd/m2
1,0000	120,9660
0,0977	11,8155
0,3738	45,2160
0,1997	24,1540
0,1403	16,9661
0,2456	29,7058
0,4443	53,7500
0,2985	36,1133
0,1170	14,1491
0,1964	23,7533
0,0652	7,8881
0,4598	55,6256
0,4505	54,4979
0,0639	7,7320
0,2401	29,0490
0,1235	14,9377
0,6169	74,6215
0,1966	23,7767
0,1985	24,0085
0,9046	109,4288
0,6120	74,0269
0,3732	45,1475
0,1998	24,1684
0,0868	10,4956
0,0307	3,7142
0,3103	37,5313
0,3477	42,0604
0,5289	63,9744
0,4698	56,8251
0,3376	40,8417
0,3483	42,1295
0,1417	17,1384
0,3497	42,2977
0,3717	44,9606
0,3558	43,0442
0,1483	17,9359
0,0916	11,0837

0,3351	40,5378
0,3610	43,6671
0,5199	62,8907
0,3945	47,7163

104%	104%	104%	104%
96%	96%	96%	96%

6505	6505	6505	6505
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Name: Type Name Here
Company: Type Company Here
E-Mail: Type E-Mail Address Here
Software: Select One. . .
Color Analyzer: Select One. . .
Signal Source: Select One. . .
Calibration Date: 10/08/2014

Calibration Report

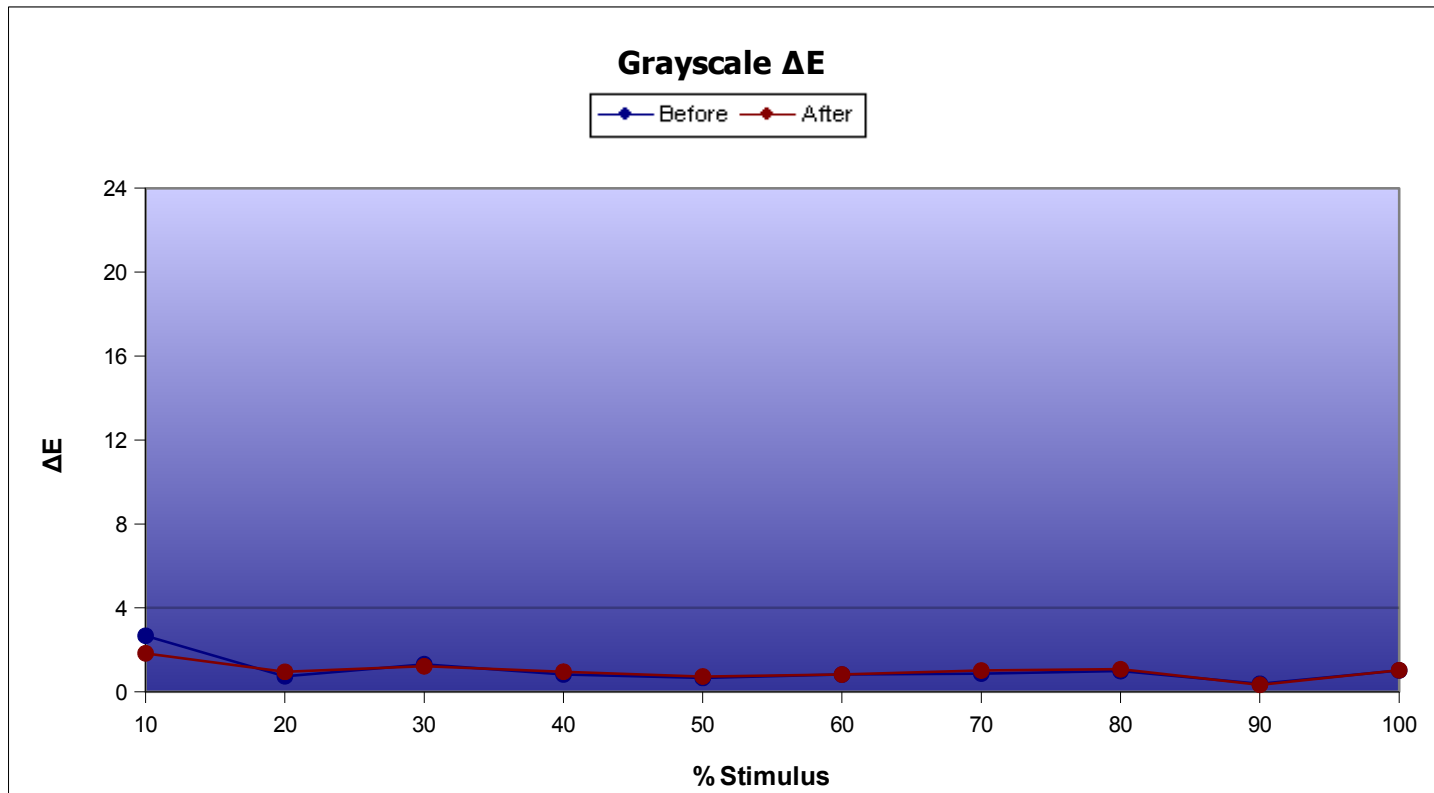
Client: Owner
Display: Display

Gray Scale Performance

This chart displays the color of white across the entire grayscale in raw xy data and Delta-E. White is defined as x0.3127, y0.329. Delta E (dE or ΔE) is a measurement of deviation from a color standard. The smaller the number, the less the deviation from the standard and the more accurate the color. ΔE for white should not rise above 4.

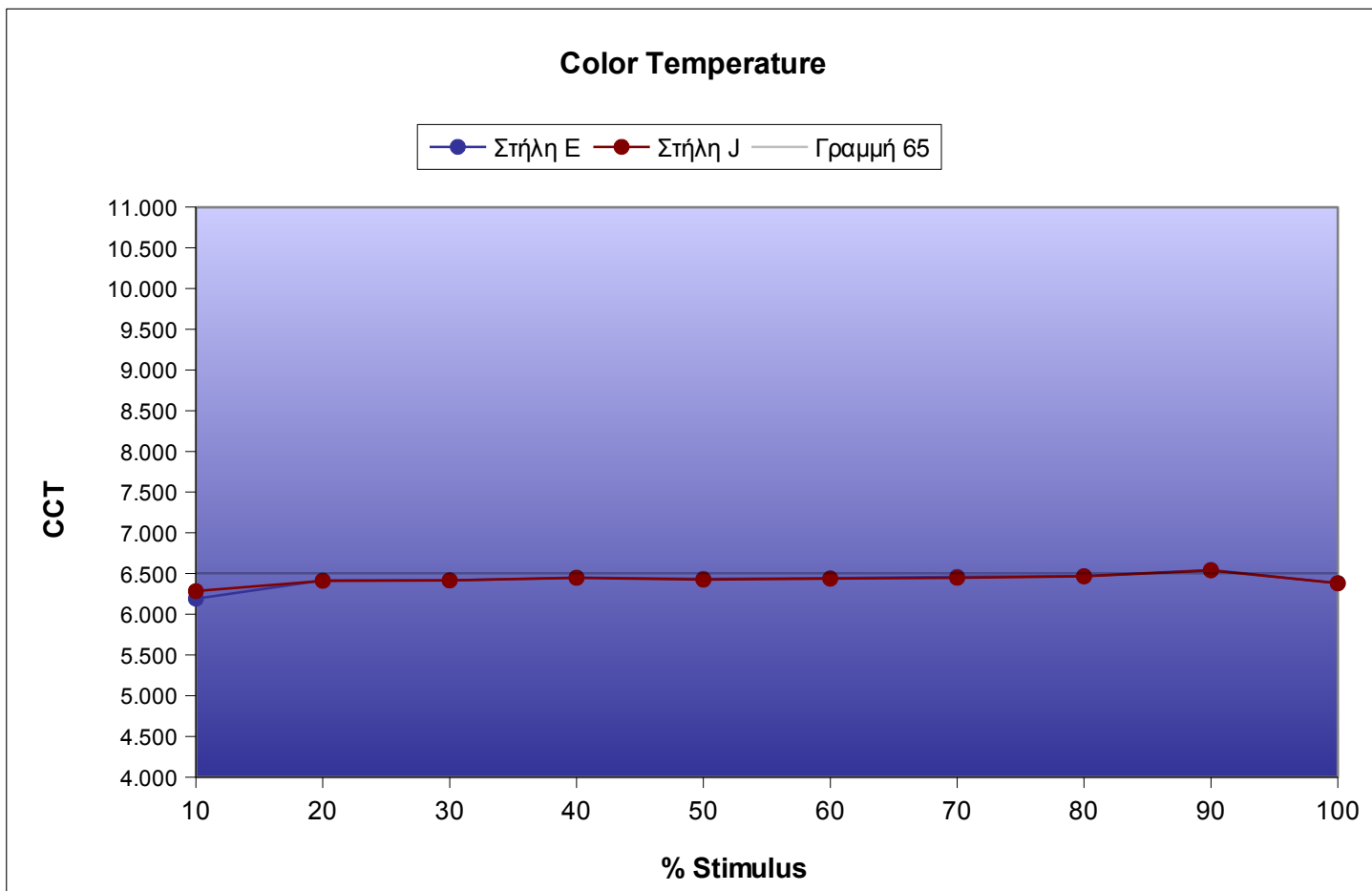
Color Difference Model: CIE94

Before Calibration					After Calibration				
% Stim	x	y	ΔE	CCT	% Stim	x	y	ΔE	CCT
10	0,318	0,331	2,7	6.192	10	0,317	0,331	1,8	6.284
20	0,314	0,330	0,7	6.416	20	0,314	0,329	1,0	6.410
30	0,314	0,328	1,3	6.417	30	0,314	0,328	1,2	6.416
40	0,314	0,328	0,8	6.451	40	0,314	0,328	1,0	6.447
50	0,314	0,329	0,7	6.436	50	0,314	0,329	0,7	6.424
60	0,314	0,329	0,8	6.443	60	0,314	0,329	0,8	6.437
70	0,314	0,328	0,9	6.460	70	0,314	0,328	1,0	6.448
80	0,314	0,328	1,0	6.469	80	0,314	0,328	1,1	6.465
90	0,312	0,328	0,4	6.545	90	0,312	0,328	0,3	6.540
100	0,315	0,330	1,0	6.382	100	0,315	0,330	1,0	6.380
Ave.			1,0	40 + 123 -	Ave.			1,0	35 + 125 -



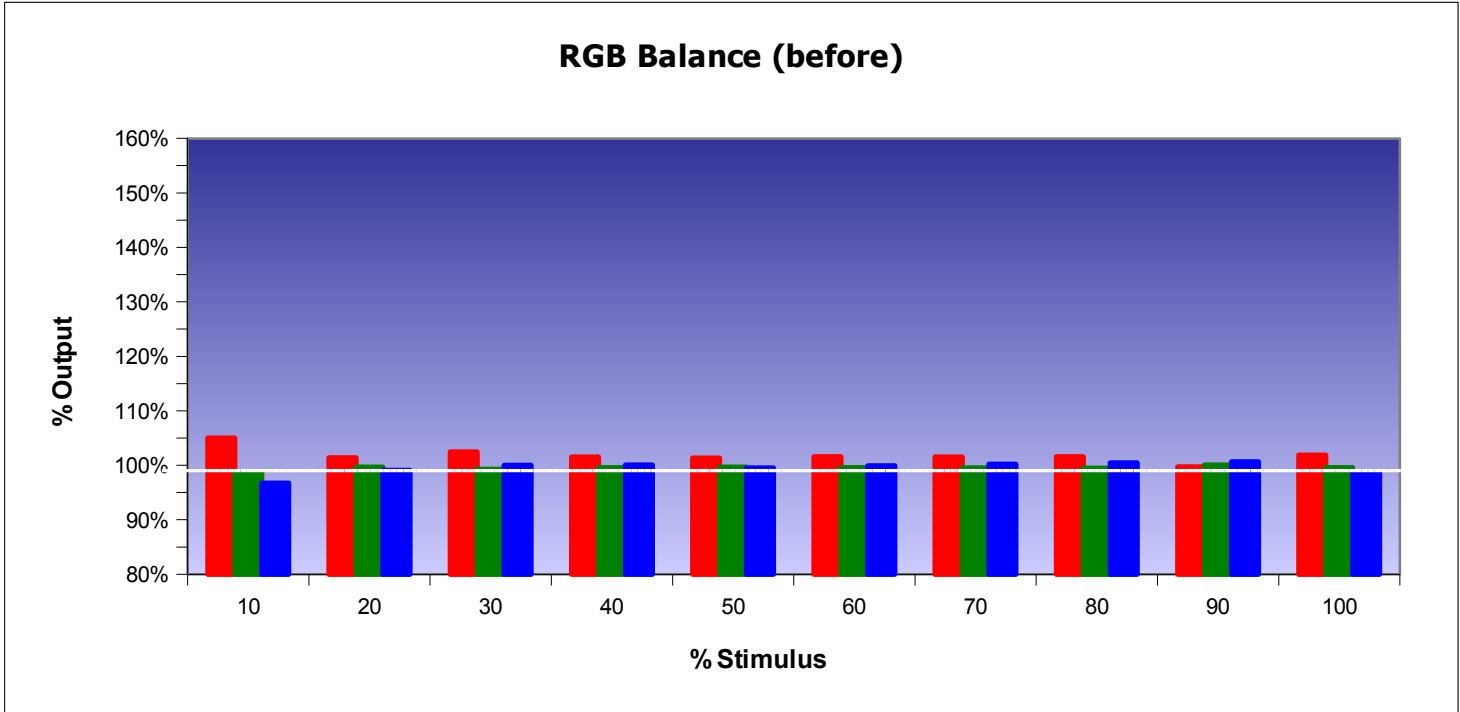
Correlated Color Temperature

Correlated Color Temperature (CCT) is a less precise measurement of the color of white. The target is 6505. Higher than 6505 is too blue. Lower is too red.

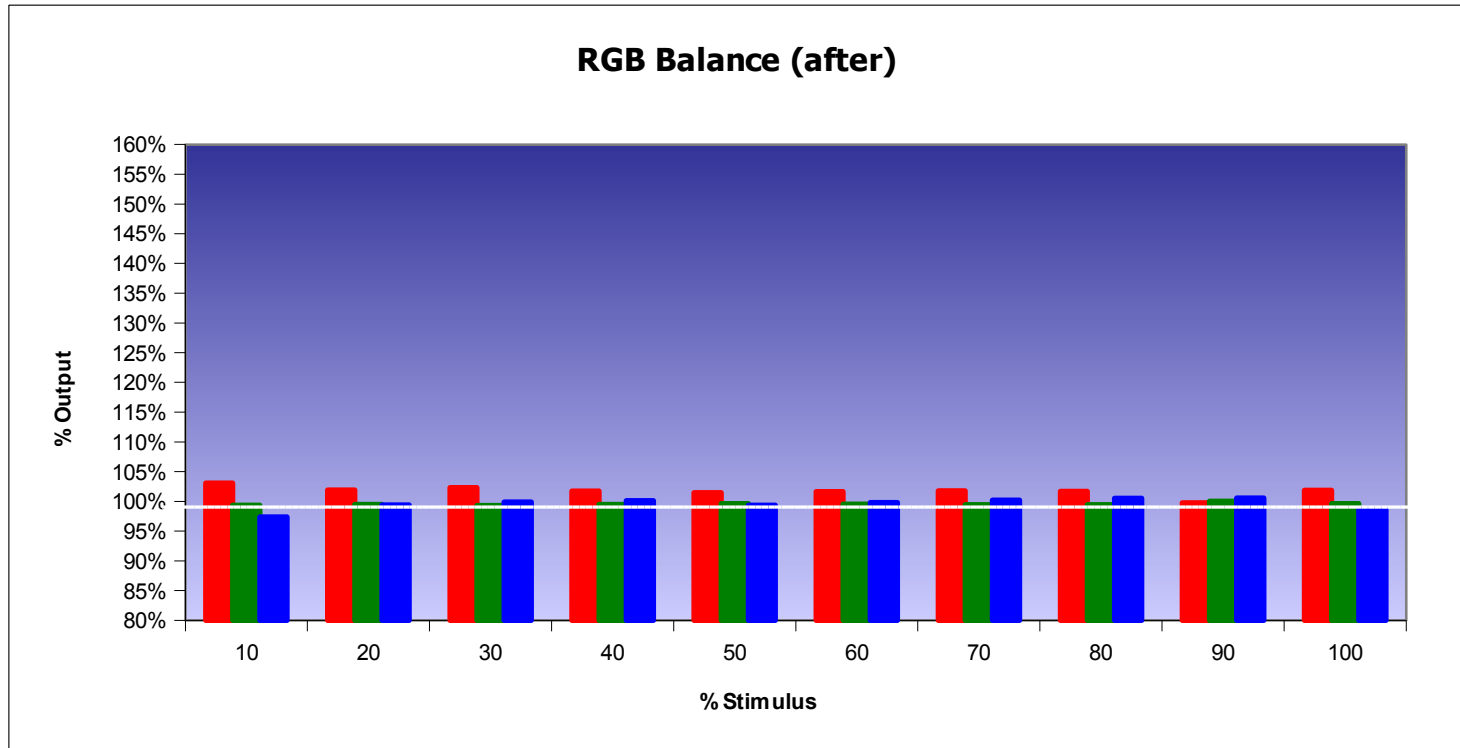


RGB Histogram Chart

This chart also displays gray scale performance, but breaks out the contributions of red, green, and blue. Ideally, all three colors should be within +/- 4% from 100% across the entire range.



	10	20	30	40	50	60	70	80	90	100	Ave.
R	105,0%	101,4%	102,4%	101,5%	101,3%	101,6%	101,5%	101,6%	99,7%	101,9%	101,8%
G	98,8%	99,7%	99,3%	99,5%	99,7%	99,5%	99,5%	99,5%	100,0%	99,6%	99,5%
B	96,7%	99,1%	100,0%	100,0%	99,5%	99,9%	100,2%	100,5%	100,6%	98,7%	99,5%



	10	20	30	40	50	60	70	80	90	100	Ave.
R	103,1%	101,9%	102,3%	101,7%	101,5%	101,6%	101,8%	101,7%	99,7%	101,8%	101,7%
G	99,4%	99,5%	99,3%	99,5%	99,6%	99,5%	99,4%	99,4%	100,0%	99,6%	99,5%
B	97,4%	99,4%	99,9%	100,1%	99,4%	99,8%	100,2%	100,5%	100,6%	98,6%	99,6%

Chromaticity Performance

Select Color Space: Rec. 709

The raw data below shows the display's ability to accurately reproduce color as defined by the selected color difference model in ΔE units. CIELUV or CIELAB should be 4 or less. CIE94 should be 1.5 or less.

Rec. 709 Reference (HD)

	x	y	Y
R	0,6400	0,3300	0,2126
G	0,3000	0,6000	0,7152
B	0,1500	0,0600	0,0722
Y	0,4193	0,5053	0,9278
C	0,2246	0,3287	0,7874
M	0,3209	0,1542	0,2848
W	0,3127	0,3290	1,0000

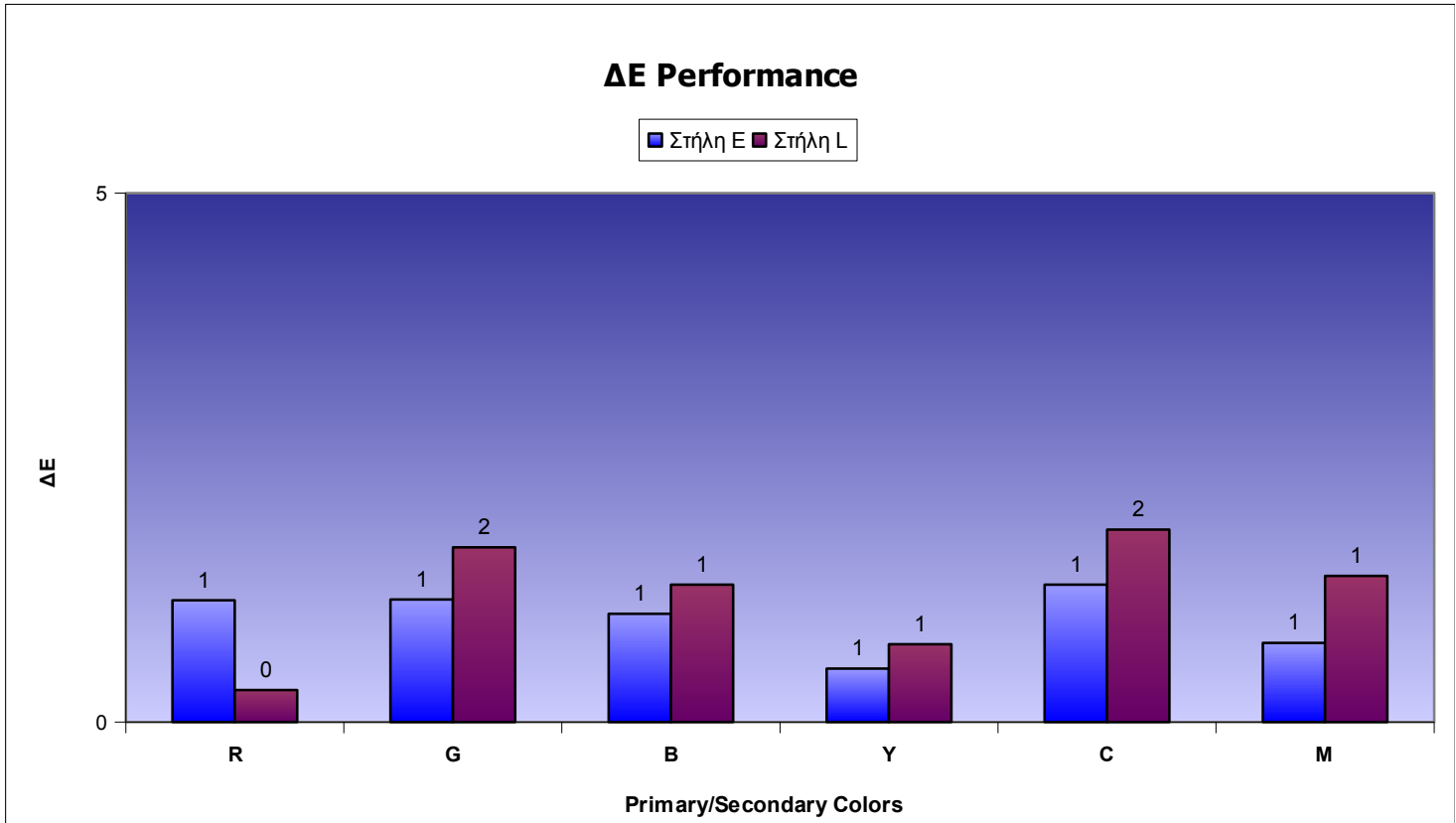
Before Calibration

	x	y	Y	ΔE
R	0,646	0,329	0,204	1,2
G	0,297	0,609	0,693	1,2
B	0,153	0,065	0,074	1,0
Y	0,422	0,506	0,924	0,5
C	0,224	0,332	0,766	1,3
M	0,316	0,153	0,279	0,7
				1,0 Ave.

After Calibration

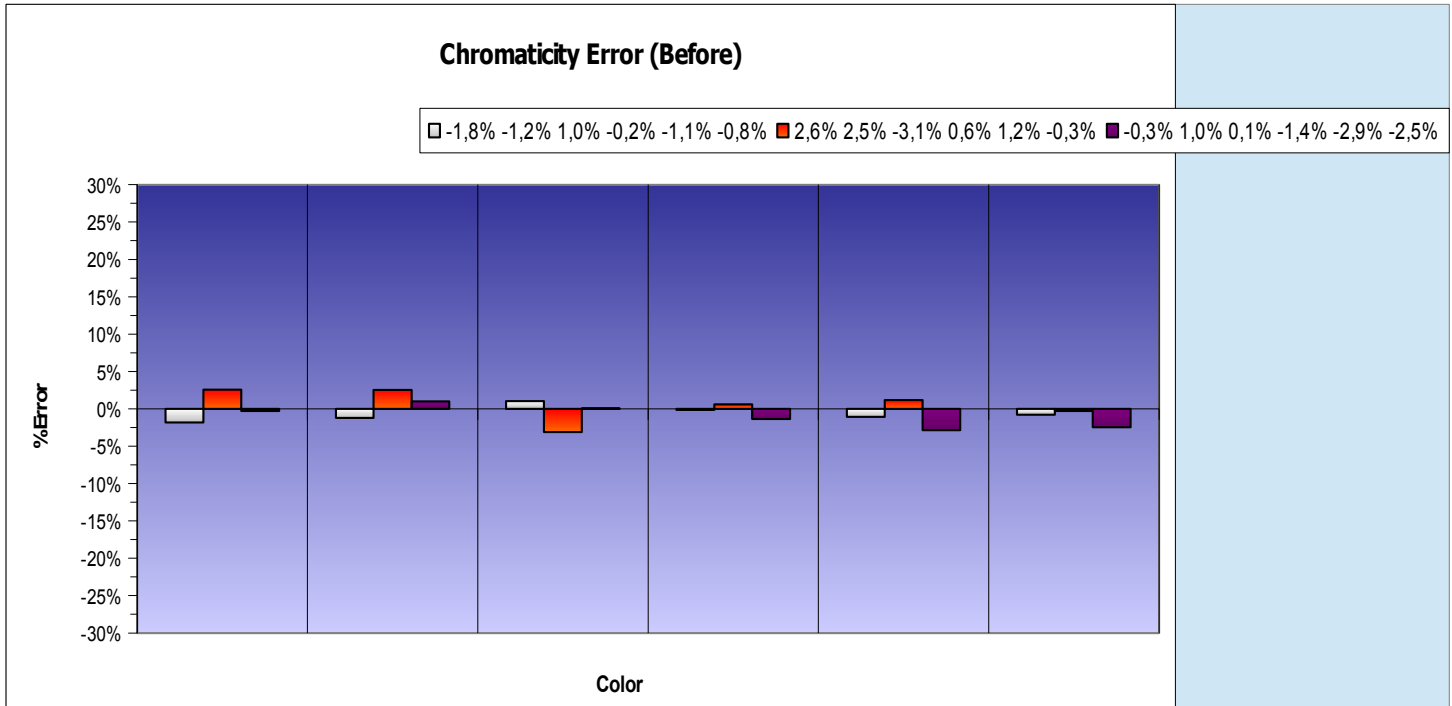
	x	y	Y	ΔE
R	0,640	0,330	0,215	0,3
G	0,302	0,597	0,749	1,7
B	0,151	0,064	0,076	1,3
Y	0,421	0,502	0,938	0,7
C	0,227	0,334	0,817	1,8
M	0,328	0,158	0,275	1,4
				1,2 Ave.

Color Difference Model: CIE94

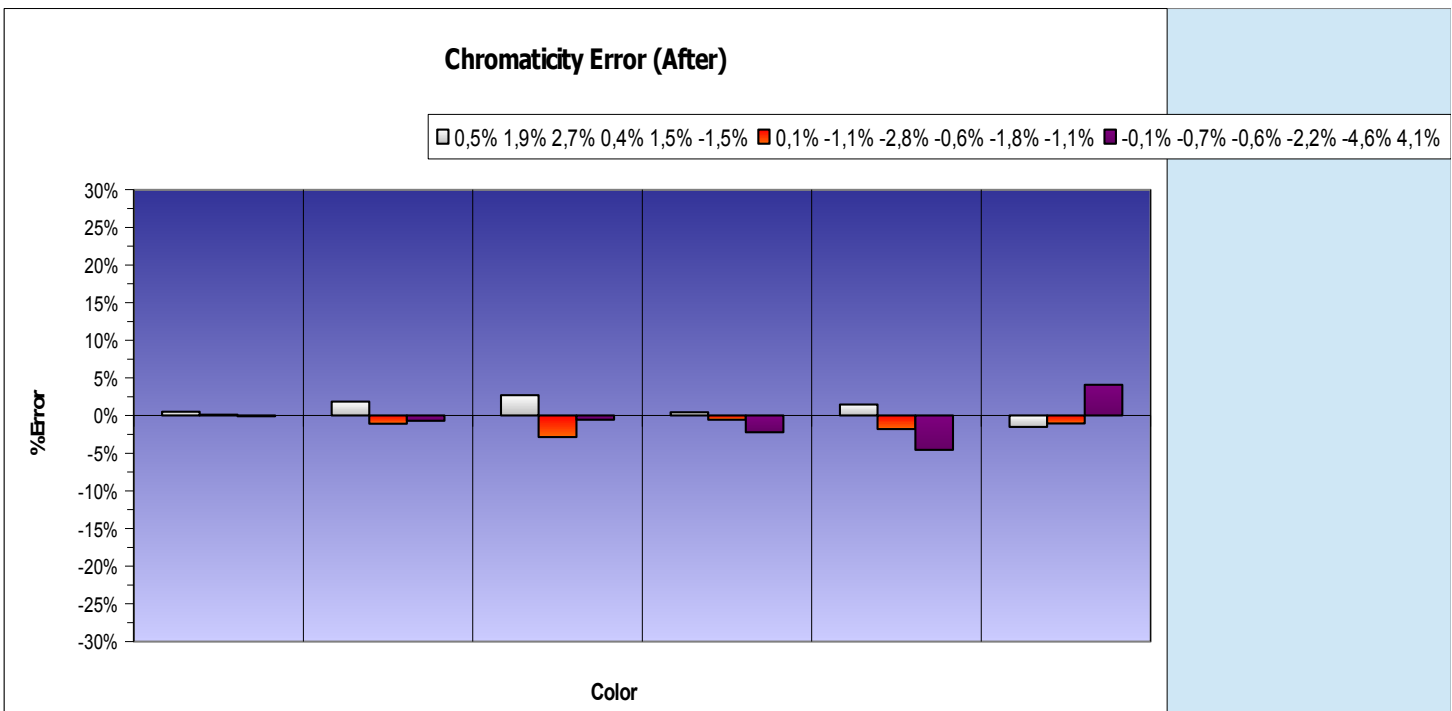


Lightness, Saturation, and Hue Error

These charts display the before/after chromaticity errors of the primary/secondary colors in terms of the three visible components of color: Lightness, Saturation, and Hue (LSH). Ideally, all primary and secondary colors should have no more than 2% error in any component.



Lightness	-1,8%	-1,2%	1,0%	-0,2%	-1,1%	-0,8%
Saturation	2,6%	2,5%	-3,1%	0,6%	1,2%	-0,3%
Hue	-0,3%	1,0%	0,1%	-1,4%	-2,9%	-2,5%
	R	G	B	Y	C	M



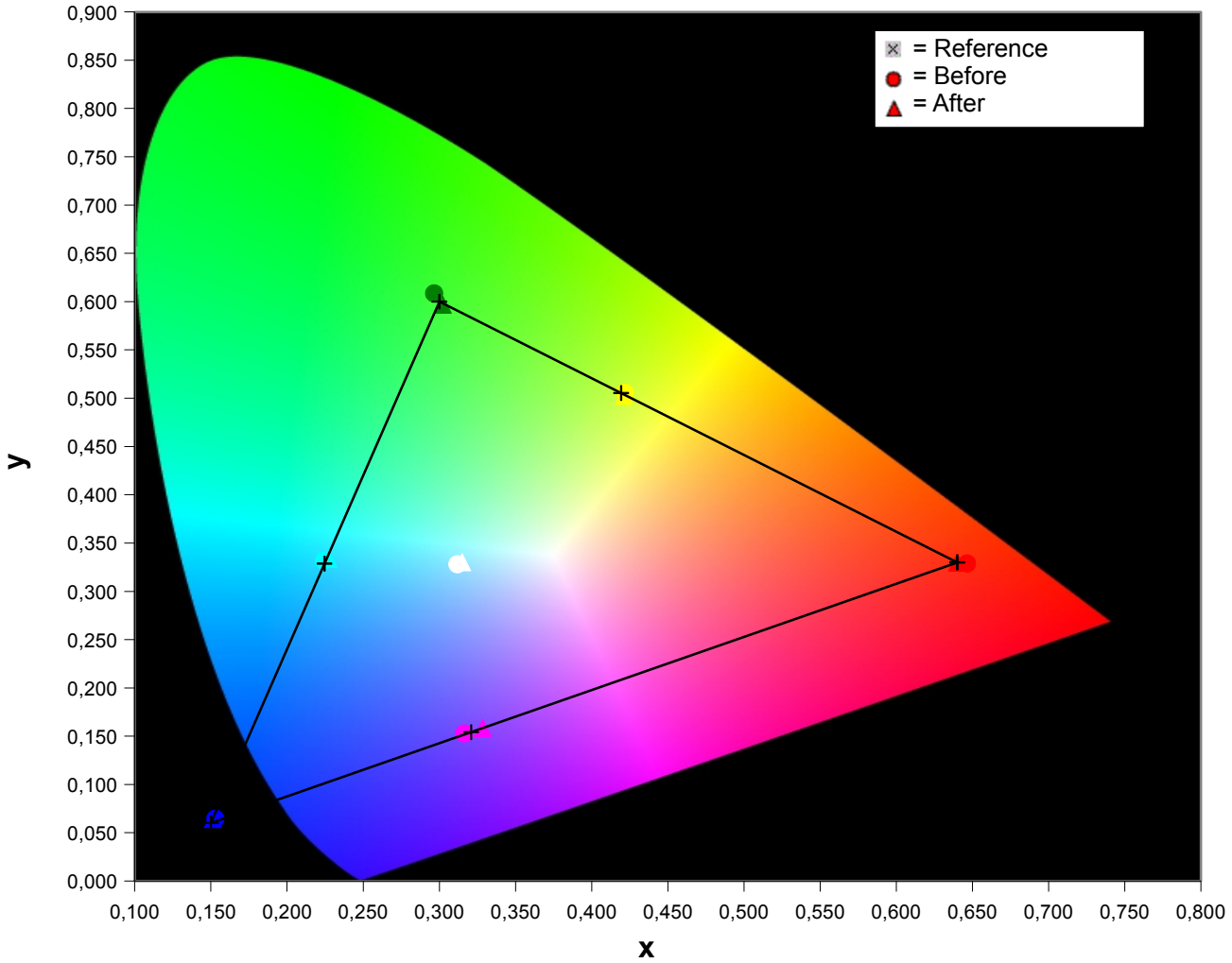
Lightness	0,5%	1,9%	2,7%	0,4%	1,5%	-1,5%
Saturation	0,1%	-1,1%	-2,8%	-0,6%	-1,8%	-1,1%
Hue	-0,1%	-0,7%	-0,6%	-2,2%	-4,6%	4,1%
	R	G	B	Y	C	M

CIE Charts

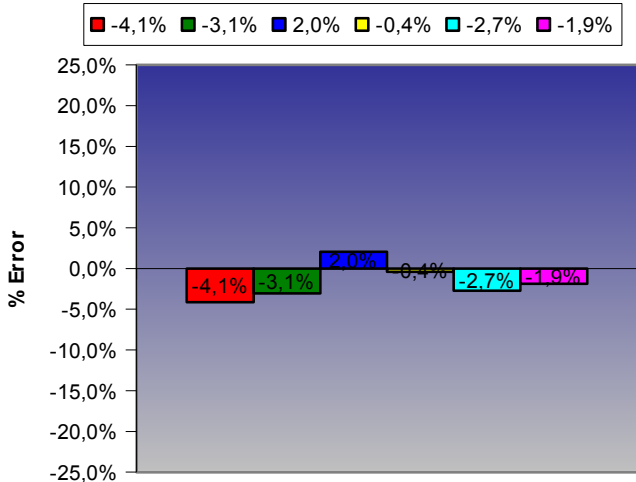
Color Space: Rec. 709 Reference (HD)

These charts graphically map the accuracy of the display's color saturation and hue relative to the chosen standard. The closer the "After" symbols are to the reference points, the more accurate the color. There are 2 chromaticity charts, one showing before/after performance based on the 1931 xy system and another based on the 1976 u'v' system, which is less well known, but more perceptually uniform.

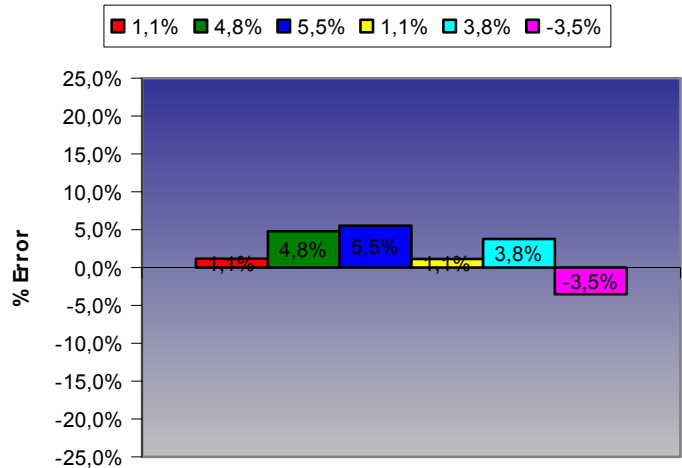
Primary/Secondary Chromaticity 1931



Luminance Error (Before)



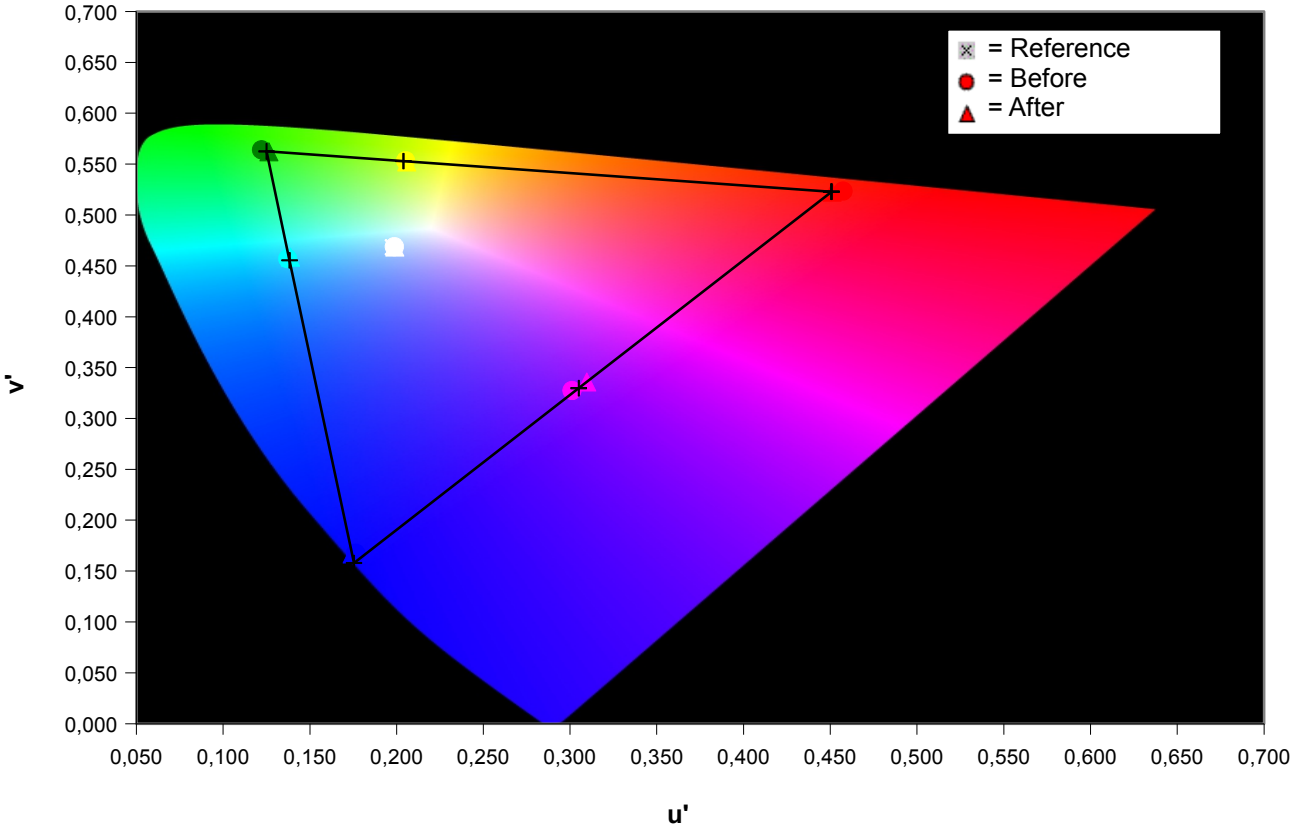
Luminance Error (After)



Color

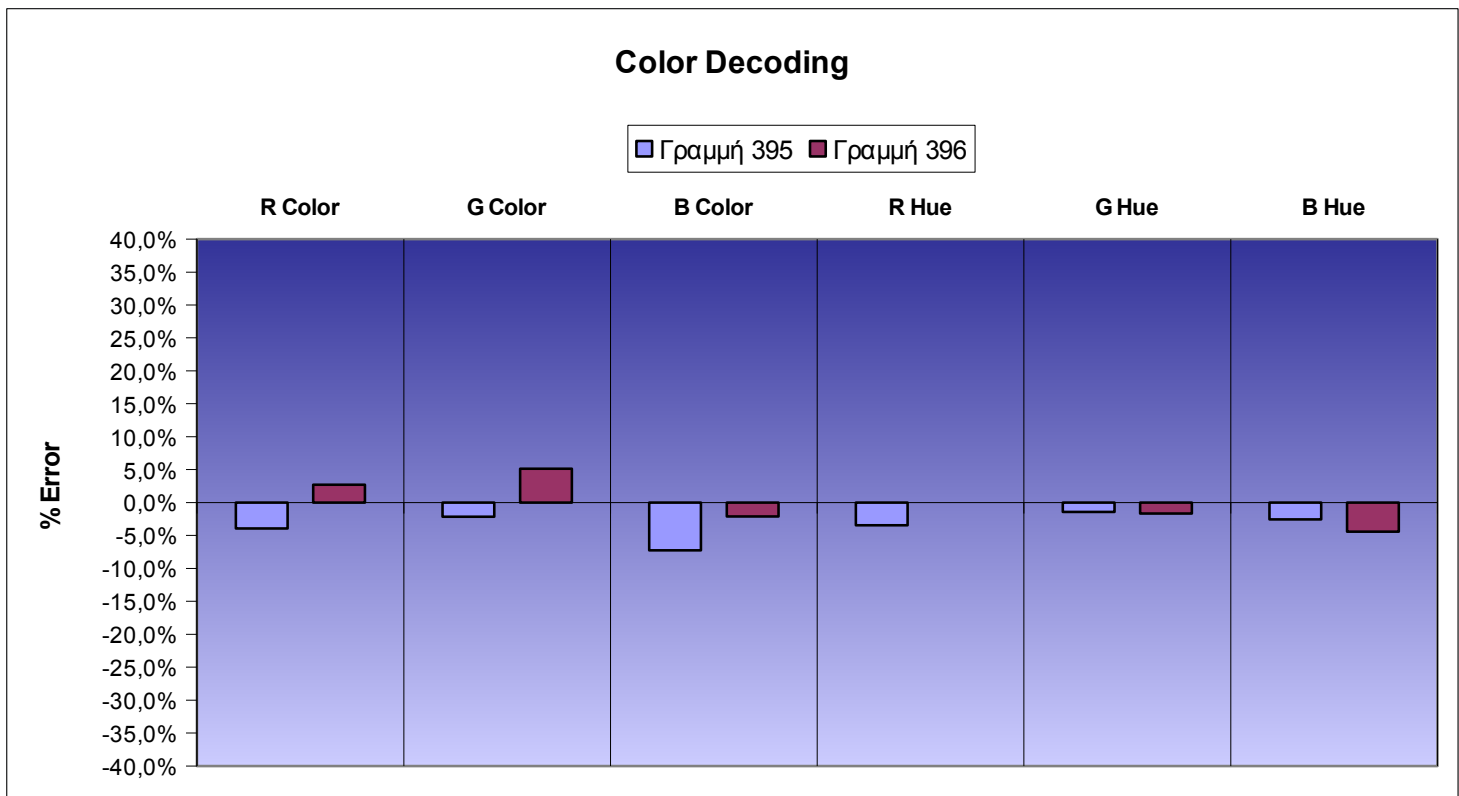
Color

Primary/Secondary Chromaticities 1976



Color Decoding

The display's color decoder affects its ability to reproduce the proper brightness of the primary colors and the proper hues of the secondary colors. Color decoding errors occur when hardware in the display chain incorrectly converts compressed YCbCr data into uncompressed RGB.

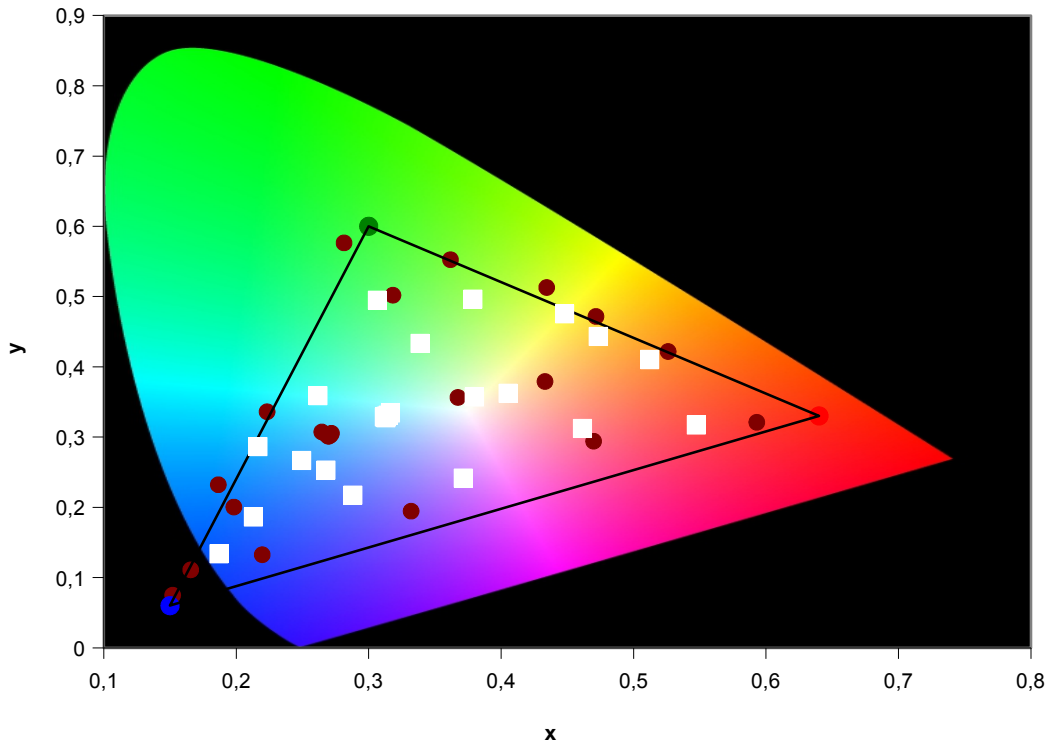


	R Color	G Color	B Color	R Hue	G Hue	B Hue	Ave. Error
Before	-3,9%	-2,1%	-7,3%	-3,5%	-1,4%	-2,6%	3,5%
After	2,7%	5,1%	-2,1%	0,0%	-1,7%	-4,4%	2,7%

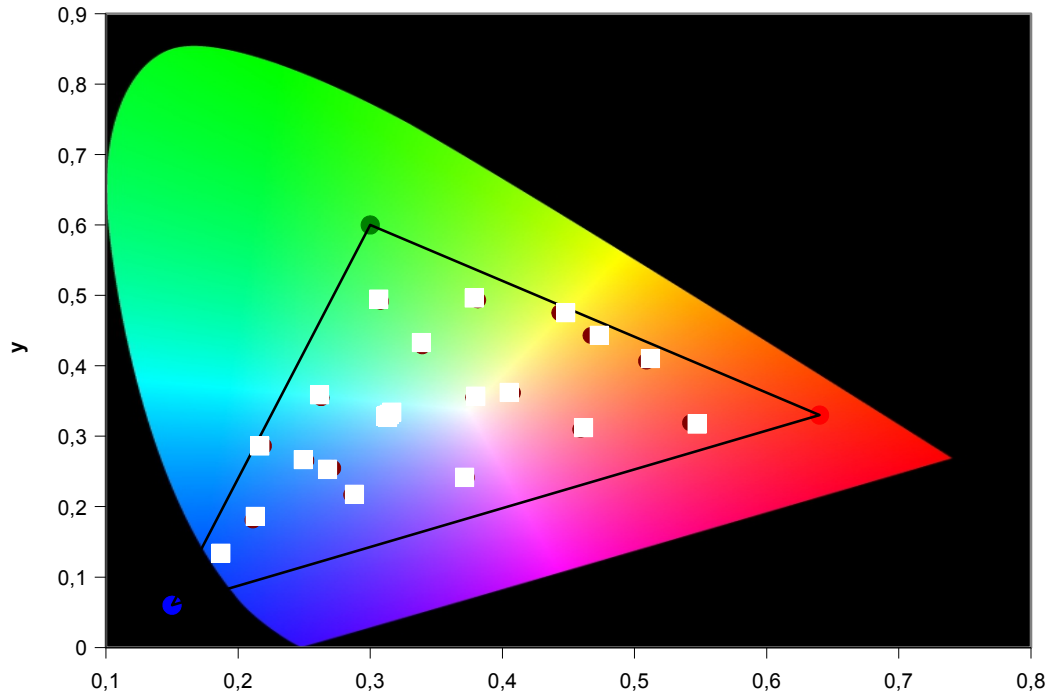
ColorChecker

The ColorChecker evaluates the real-world color performance of the display by measuring the accuracy of ordinary colors found in the natural world. It includes 24 natural colors plus 16 extra colors that sample a variety of human skin tones. These are important because human vision is especially sensitive to inaccurate skin tone reproduction.

ColorChecker Pre-Calibration



ColorChecker Post-Calibration



x

ColorChecker dE Performance

Pre-Calibration ColorChecker CIE94

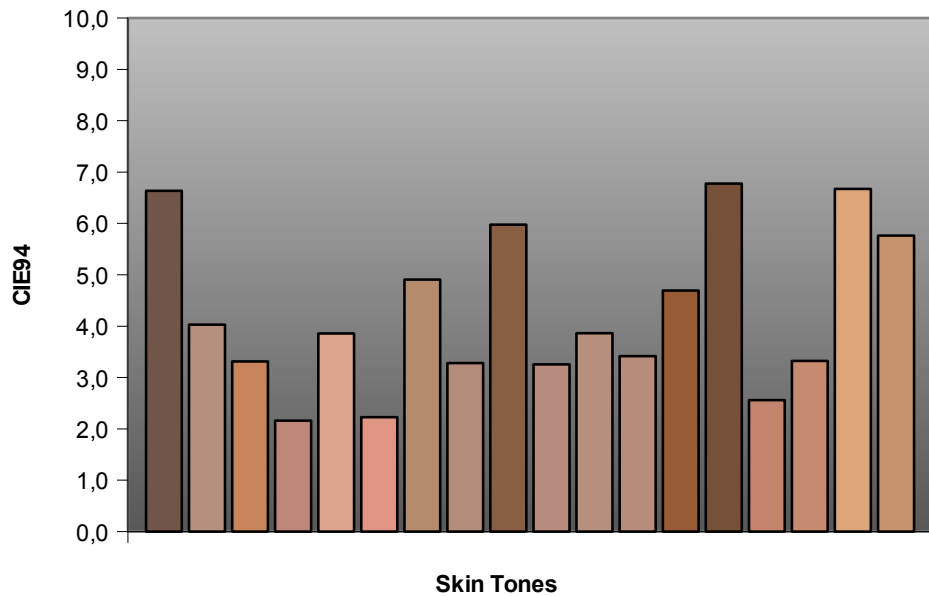
Color	CIE94
Dark skin	6,6
Light skin	4,0
Blue sky	14,1
Foliage	8,7
Blue flower	14,1
Bluish green	12,7
Orange	5,1
Purplish blue	14,1
Moderate red	4,2
Purple	12,9
Yellow green	12,0
Orange Yellow	8,3
Blue	11,3
Green	9,6
Red	4,1
Yellow	10,5
Magenta	9,6
Cyan	12,2
White	19,6
Neutral 8	18,9
Neutral 6.5	15,8
Neutral 5	12,1
Neutral 3.5	10,5
Black	10,8

Colors	CIE94	
	Before	After
Dark skin	6,6	0,5
Light skin	4,0	1,6
Blue sky	14,1	1,5
Foliage	8,7	1,2
Blue flower	14,1	1,3
Bluish green	12,7	1,6
Orange	5,1	1,2
Purplish blue	14,1	1,0
Moderate red	4,2	1,2
Purple	12,9	0,3
Yellow green	12,0	1,7
Orange Yellow	8,3	1,4
Blue	11,3	0,9
Green	9,6	0,6
Red	4,1	1,4
Yellow	10,5	1,3
Magenta	9,6	1,1
Cyan	12,2	0,8
White	19,6	1,8
Neutral 8	18,9	1,8
Neutral 6.5	15,8	1,5
Neutral 5	12,1	1,2
Neutral 3.5	10,5	0,4
Black	10,8	0,2
Average	10,9	1,2
Maximum	19,6	1,8

Post-Calibration ColorChecker CIE94

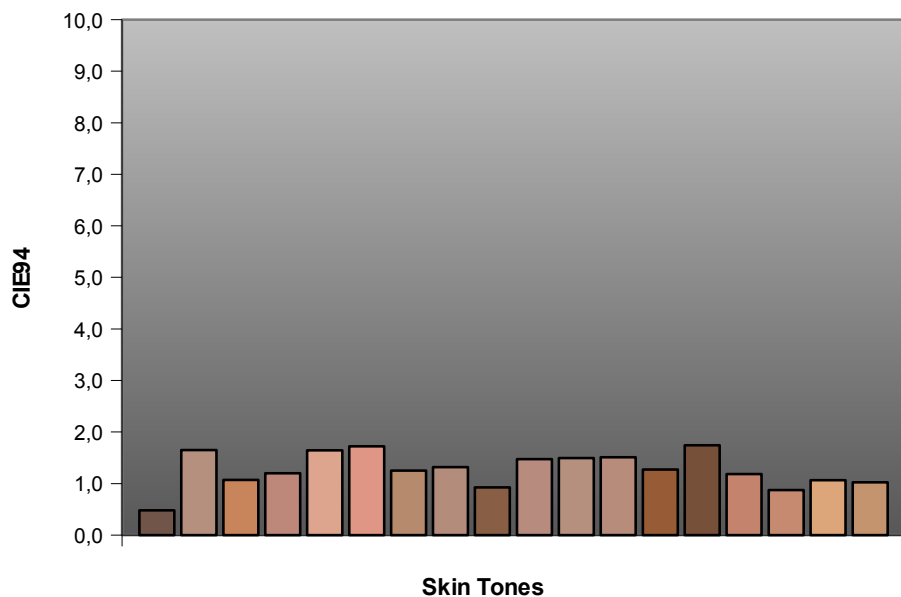
Color	CIE94
Dark skin	0,5
Light skin	1,6
Blue sky	1,5
Foliage	1,2
Blue flower	1,3
Bluish green	1,6
Orange	1,2
Purplish blue	1,0
Moderate red	1,2
Purple	0,3
Yellow green	1,7
Orange Yellow	1,4
Blue	0,9
Green	0,6
Red	1,4
Yellow	1,3
Magenta	1,1
Cyan	0,8
White	1,8
Neutral 8	1,8
Neutral 6.5	1,5
Neutral 5	1,2
Neutral 3.5	0,4
Black	0,2

Pre-Calibration ColorChecker Skin Tones CIE94



Colors	CIE94	
	Before	After
Dark skin	6,6	0,5
Light skin	4,0	1,6
D7	3,3	1,1
D8	2,2	1,2
E7	3,9	1,6
E8	2,2	1,7
F7	4,9	1,3
F8	3,3	1,3
G7	6,0	0,9
G8	3,3	1,5
H7	3,9	1,5
H8	3,4	1,5
I7	4,7	1,3
I8	6,8	1,7
J7	2,6	1,2
J8	3,3	0,9
CP-Light	6,7	1,1
CP-Dark	5,8	1,0
Average	4,3	1,3
Maximum	6,8	1,7

Post-Calibration ColorChecker Skin Tones CIE94



Gamma

Gamma describes the rate at which output increases with increasing signal input. This is not a one-to-one relationship. If gamma is too high, the image will darken and shadow detail will suffer. If it is too low, contrast and depth suffer.

Luminance: cd/m²

Target Gamma: BT.1886

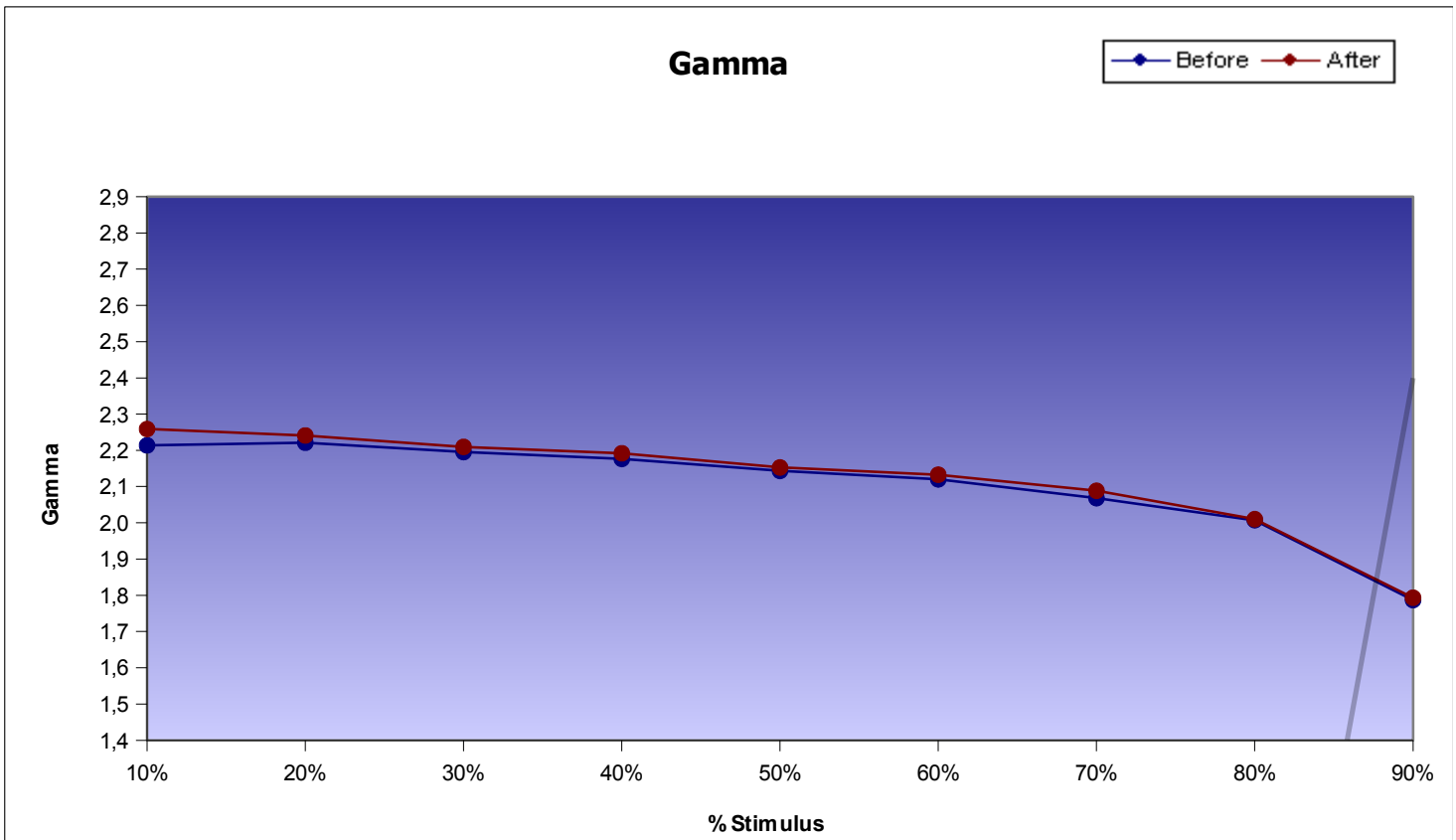
	Output		Output	
Input	Before	0,0%	After	0,0%
10%	0,73	0,61%	0,58	0,55%
20%	3,36	2,8%	2,86	2,7%
30%	8,53	7,1%	7,36	7,0%
40%	16,32	13,6%	14,12	13,4%
50%	27,14	22,6%	23,66	22,5%
60%	40,60	33,9%	35,40	33,6%
70%	57,34	47,8%	49,96	47,5%
80%	76,61	63,9%	67,19	63,9%
90%	99,32	82,8%	87,10	82,8%
100%	119,89	100,0%	105,21	100,0%

	Gamma		Gamma	
Input	Before	After	Before	After
10%	2,21	2,26		
20%	2,22	2,24		
30%	2,20	2,21		
40%	2,18	2,19		
50%	2,14	2,15		
60%	2,12	2,13		
70%	2,07	2,09		
80%	2,01	2,01		
90%	1,79	1,79		
Ave.	2,10	2,12		

Video White	
Before	After
119,9	105,2

Video Black	
Before	After
0,000	0,000

Contrast	
Before	After
#DIV/0!	#DIV/0!



Gamma

—○— Στήλη AJ —●— Στήλη C —●— Στήλη E

