

Colorimetric data of "Standard Original": Television Luminous System TLS11 for CIE lightness $L^*_N=11$ of black for illuminant D65															
System TLS11	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_c=LAB^*_1c$	$a^*_c=LAB^*_2c$	$b^*_c=LAB^*_3c$	$C^*_{ab,c}=LAB^*_{rc}$	$h_{ab,c}$	$X_c=XYZ_1c$	$Y_c=XYZ_2c$	$Z_c=XYZ_3c$	x_c	y_c	$Y_c/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	54.21	78.64	58.52	98.03	37	42.14	22.17	3.33	0.623	0.3278	0.2503
	01 o13y	1.0	0.125	0.0	54.91	76.45	59.02	96.58	38	42.42	22.84	3.44	0.6174	0.3325	0.2579
	02 o25y	1.0	0.25	0.0	57.87	68.1	61.12	91.5	42	43.91	25.83	3.96	0.5958	0.3505	0.2916
	03 o38y	1.0	0.375	0.0	62.22	56.16	64.44	85.47	49	46.26	30.66	4.75	0.5664	0.3754	0.3461
	04 o50y	1.0	0.5	0.0	67.48	42.42	68.19	80.31	58	49.48	37.27	5.91	0.534	0.4022	0.4207
	05 o63y	1.0	0.625	0.0	73.63	27.43	72.96	77.94	70	53.85	46.12	7.39	0.5016	0.4296	0.5206
	06 o75y	1.0	0.75	0.0	80.08	12.73	77.89	78.93	81	59.14	56.82	9.2	0.4725	0.454	0.6414
	07 o88y	1.0	0.875	0.0	86.52	-1.05	82.98	82.99	91	65.14	69.03	11.22	0.448	0.4748	0.7793
	08 y00l	1.0	1.0	0.0	94.11	-15.83	89.38	90.77	101	73.43	85.54	13.8	0.425	0.4951	0.9655
	09 y13l	0.875	1.0	0.0	92.0	-27.1	86.39	90.55	108	64.07	80.71	13.54	0.4047	0.5098	0.911
	10 y25l	0.75	1.0	0.0	90.22	-37.49	83.97	91.96	115	56.47	76.78	13.28	0.3854	0.524	0.8667
	11 y38l	0.625	1.0	0.0	88.56	-48.25	81.77	94.94	122	49.55	73.23	13.01	0.3649	0.5393	0.8266
	12 y50l	0.5	1.0	0.0	87.07	-58.61	79.85	99.06	128	43.6	70.14	12.75	0.3447	0.5545	0.7917
	13 y63l	0.375	1.0	0.0	85.89	-67.53	78.43	103.5	132	39.02	67.76	12.51	0.3271	0.568	0.7649
	14 y75l	0.25	1.0	0.0	84.97	-74.95	77.13	107.56	136	35.55	65.95	12.4	0.3121	0.579	0.7444
	15 y88l	0.125	1.0	0.0	84.37	-79.89	76.36	110.52	138	33.36	64.77	12.3	0.3021	0.5865	0.7312
	16 l00c	0.0	1.0	0.0	84.21	-81.1	76.13	111.24	138	32.83	64.47	12.29	0.2996	0.5883	0.7278
	17 l13c	0.0	1.0	0.125	84.25	-80.71	73.57	109.22	139	32.98	64.54	13.31	0.2976	0.5823	0.7285
	18 l25c	0.0	1.0	0.25	84.35	-78.62	63.95	101.35	143	33.71	64.74	17.66	0.2903	0.5576	0.7308
	19 l38c	0.0	1.0	0.375	84.61	-75.49	51.46	91.37	148	34.93	65.24	24.72	0.2797	0.5224	0.7365
	20 l50c	0.0	1.0	0.5	84.97	-71.46	38.14	81.01	154	36.59	65.95	34.2	0.2676	0.4823	0.7444
	21 l63c	0.0	1.0	0.625	85.43	-66.43	24.55	70.83	163	38.75	66.85	46.23	0.2552	0.4403	0.7546
	22 l75c	0.0	1.0	0.75	85.97	-61.24	11.9	62.39	173	41.15	67.93	59.93	0.2435	0.4019	0.7668
	23 l88c	0.0	1.0	0.875	86.54	-56.04	0.7	56.06	183	43.7	69.07	74.31	0.2336	0.3692	0.7796
	24 c00v	0.0	1.0	1.0	87.18	-51.1	-9.41	51.97	195	46.37	70.38	89.45	0.2249	0.3413	0.7944
	25 c13v	0.0	0.875	1.0	78.68	-38.63	-22.32	44.62	213	38.35	54.38	86.97	0.2134	0.3026	0.6138
	26 c25v	0.0	0.75	1.0	71.08	-26.3	-33.97	42.97	233	32.33	42.3	84.93	0.2026	0.2651	0.4775
	27 c38v	0.0	0.675	1.0	63.12	-11.97	-46.39	47.92	254	27.09	31.73	83.16	0.1908	0.2235	0.3582
	28 c50v	0.0	0.5	1.0	54.95	4.19	-59.11	59.26	272	22.65	22.88	81.29	0.1786	0.1804	0.2582
	29 c63v	0.0	0.375	1.0	47.37	21.46	-71.55	74.71	284	19.44	16.3	80.45	0.1673	0.1403	0.184
	30 c75v	0.0	0.25	1.0	40.2	39.44	-83.05	91.95	294	16.99	11.37	79.32	0.1578	0.1056	0.1284
	31 c88v	0.0	0.125	1.0	34.57	55.15	-92.53	107.73	299	15.49	8.29	79.02	0.1507	0.0806	0.0935
	32 v00m	0.0	0.0	1.0	33.09	59.26	-94.9	111.9	301	15.11	7.58	78.79	0.1489	0.0747	0.0856
	33 v13m	0.125	0.0	1.0	33.6	60.17	-94.39	111.95	301	15.63	7.82	79.26	0.1522	0.0761	0.0882
	34 v25m	0.25	0.0	1.0	35.64	62.25	-90.58	109.92	303	17.57	8.82	78.88	0.1669	0.0838	0.0996
	35 v38m	0.375	0.0	1.0	38.78	65.67	-85.41	107.74	306	20.9	10.53	79.21	0.1889	0.0952	0.1189
	36 v50m	0.5	0.0	1.0	42.38	69.54	-79.14	105.36	310	25.19	12.75	79.11	0.2152	0.1089	0.1439
	37 v63m	0.625	0.0	1.0	46.58	74.48	-72.19	103.73	315	31.01	15.7	79.49	0.2457	0.1244	0.1772
	38 v75m	0.75	0.0	1.0	50.83	79.05	-64.9	102.28	320	37.61	19.12	79.55	0.276	0.1403	0.2158
	39 v88m	0.875	0.0	1.0	54.98	83.66	-57.89	101.74	324	44.97	22.91	79.74	0.3046	0.1552	0.2586
	40 m00o	1.0	0.0	1.0	59.56	89.09	-50.27	102.3	329	54.26	27.64	80.12	0.3349	0.1706	0.312
	41 m13o	1.0	0.0	0.875	58.35	87.39	-40.57	96.35	334	51.59	26.33	65.42	0.3599	0.1837	0.2972
	42 m25o	1.0	0.0	0.75	57.23	85.38	-29.34	90.29	340	49.04	25.16	51.28	0.3908	0.2005	0.284
	43 m38o	1.0	0.0	0.675	56.14	83.38	-16.14	84.93	348	46.62	24.05	37.77	0.4299	0.2218	0.2715
	44 m50o	1.0	0.0	0.5	55.19	81.22	-0.89	81.23	359	44.43	23.11	25.72	0.4764	0.2478	0.2609
	45 m63o	1.0	0.0	0.375	54.35	79.62	15.44	81.1	11	42.67	22.31	16.14	0.526	0.275	0.2518
	46 m75o	1.0	0.0	0.25	53.75	78.41	33.44	85.24	24	41.41	21.74	8.91	0.5747	0.3017	0.2454
	47 m88o	1.0	0.0	0.125	53.35	77.5	51.81	93.22	34	40.55	21.37	4.23	0.613	0.323	0.2412
	48 o00y	1.0	0.0	0.0	54.21	78.64	58.52	98.03	37	42.14	22.17	3.33	0.623	0.3278	0.2503
	49 n00w	0.0	0.0	0.0	10.76	5.51	-3.96	6.79	0	1.34	1.23	1.71	0.3134	0.2867	0.0139
	50 n13w	0.125	0.125	0.125	16.56	4.87	-3.31	5.9	169	2.33	2.21	2.86	0.3146	0.2988	0.025
	51 n25w	0.25	0.25	0.25	30.75	4.15	-2.76	4.99	269	6.61	6.54	7.89	0.3142	0.311	0.0739
	52 n38w	0.375	0.375	0.375	43.53	4.11	-2.65	4.9	292	13.48	13.52	15.89	0.3142	0.3152	0.1526
	53 n50w	0.5	0.5	0.5	55.06	4.06	-2.42	4.73	297	22.73	22.99	26.55	0.3145	0.3181	0.2595
	54 n63w	0.625	0.625	0.625	66.15	3.69	-1.8	4.11	298	34.83	35.52	40.18	0.3151	0.3214	0.401
	55 n75w	0.75	0.75	0.75	76.28	3.24	-0.77	3.34	301	49.03	50.35	55.64	0.3163	0.3248	0.5683
	56 n88w	0.875	0.875	0.875	85.51	2.1	0.82	2.26	299	64.62	67.02	71.95	0.3174	0.3292	0.7565
	57 n99w	1.0	1.0	1.0	95.41	-0.21	4.78	4.79	0	84.08	88.59	89.43	0.3208	0.338	1.0

IE360-7N, Colorimetric data of Television Luminous System TLS11 for CIE standard illuminant D65; LCD monitor; Page: 1/66

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 1/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS11 for CIE lightness $L^*_N=11$ of black for illuminant D65
System TLS11
LCD monitor

Y Yellow

$LCH^* = 94.1 \ 90.8 \ 100$

$LAB^* = 94.1 \ -15.8 \ 89.4$

L Leaf green

$LCH^* = 84.2 \ 111.2 \ 137$

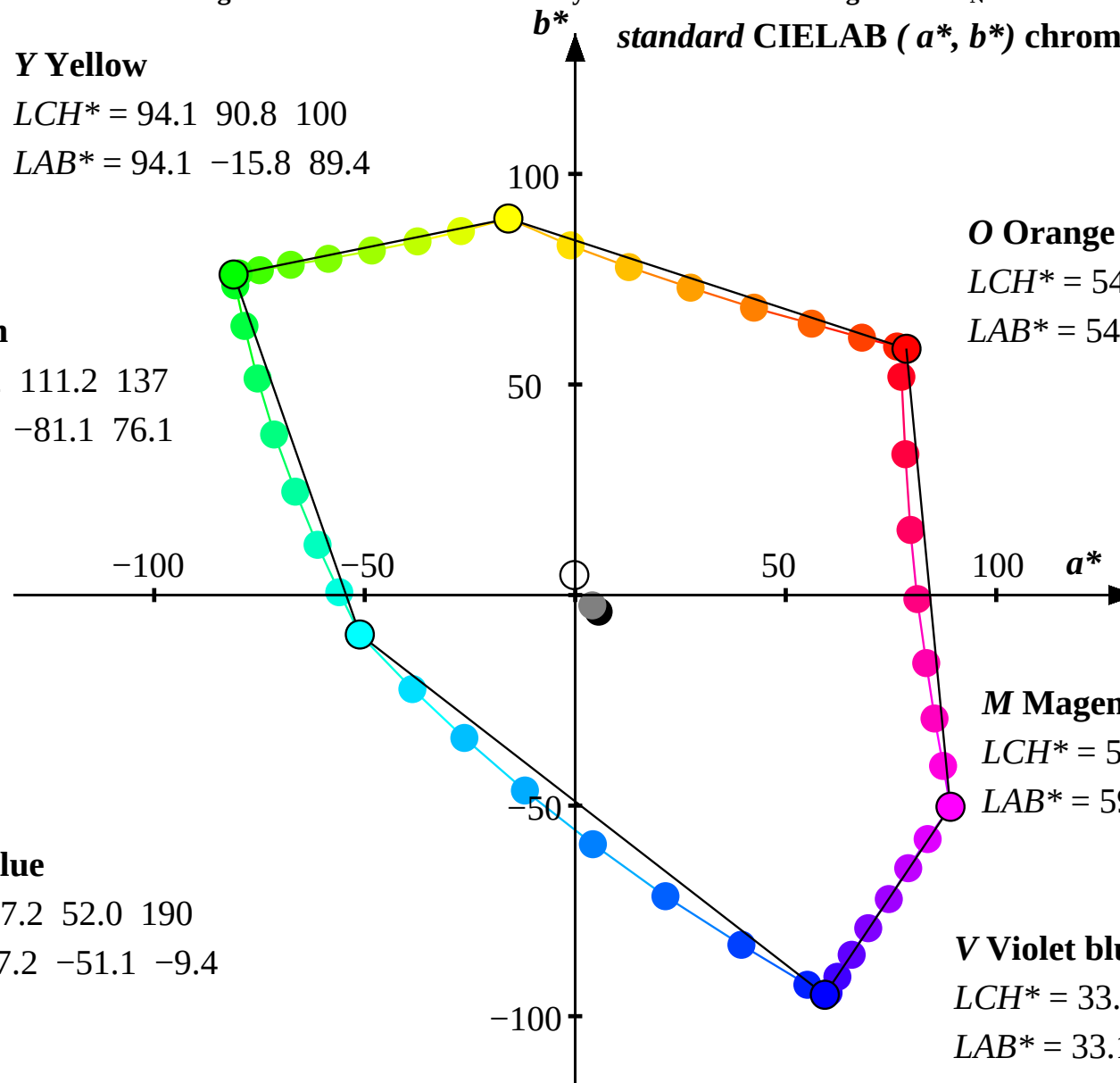
$LAB^* = 84.2 \ -81.1 \ 76.1$

C Cyan blue

$LCH^* = 87.2 \ 52.0 \ 190$

$LAB^* = 87.2 \ -51.1 \ -9.4$

standard CIELAB (a^* , b^*) chroma diagram



O Orange red

$LCH^* = 54.2 \ 98.0 \ 37$

$LAB^* = 54.2 \ 78.6 \ 58.5$

M Magenta red

$LCH^* = 59.6 \ 102.3 \ 331$

$LAB^* = 59.6 \ 89.1 \ -50.3$

V Violet blue

$LCH^* = 33.1 \ 111.9 \ 302$

$LAB^* = 33.1 \ 59.3 \ -94.9$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ra}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	54.21	76.07	58.0	95.66	37	41.29	22.17	3.41	0.6174	0.3315	0.2503
	01 o13y	1.0	0.125	0.0	54.91	73.93	58.43	94.23	38	41.58	22.84	3.54	0.6118	0.3361	0.2579
	02 o25y	1.0	0.25	0.0	57.87	65.78	60.22	89.18	42	43.12	25.83	4.12	0.5901	0.3535	0.2916
	03 o38y	1.0	0.375	0.0	62.22	54.13	63.09	83.13	49	45.55	30.66	5.03	0.5607	0.3774	0.3461
	04 o50y	1.0	0.5	0.0	67.48	40.75	66.3	77.82	58	48.87	37.27	6.37	0.5283	0.4029	0.4207
	05 o63y	1.0	0.625	0.0	73.63	26.18	70.43	75.13	70	53.36	46.12	8.1	0.496	0.4287	0.5206
	06 o75y	1.0	0.75	0.0	80.08	11.91	74.7	75.64	81	58.8	56.82	10.24	0.4672	0.4515	0.6414
	07 o88y	1.0	0.875	0.0	86.52	-1.44	79.12	79.13	91	64.97	69.03	12.67	0.4429	0.4707	0.7793
	08 y00l	1.0	1.0	0.0	94.11	-15.7	84.73	86.17	101	73.49	85.54	15.81	0.4203	0.4892	0.9655
	09 y13l	0.875	1.0	0.0	92.0	-27.11	81.96	86.33	108	64.06	80.71	15.42	0.3999	0.5038	0.911
	10 y25l	0.75	1.0	0.0	90.22	-37.62	79.72	88.15	115	56.42	76.78	15.06	0.3806	0.5179	0.8667
	11 y38l	0.625	1.0	0.0	88.56	-48.96	77.69	91.59	122	49.46	73.23	14.69	0.36	0.5331	0.8266
	12 y50l	0.5	1.0	0.0	87.07	-58.49	75.93	96.14	128	43.48	70.14	14.35	0.3398	0.5481	0.7917
	13 y63l	0.375	1.0	0.0	85.89	-67.96	74.63	100.94	132	38.89	67.76	14.04	0.3222	0.5615	0.7649
	14 y75l	0.25	1.0	0.0	84.97	-75.44	73.43	105.28	136	35.4	65.95	13.88	0.3072	0.5723	0.7444
	15 y88l	0.125	1.0	0.0	84.37	-80.42	72.71	108.42	138	33.21	64.77	13.75	0.2973	0.5797	0.7312
	16 l00c	0.0	1.0	0.0	84.21	-81.64	72.51	109.2	138	32.68	64.47	13.72	0.2948	0.5815	0.7278
	17 l13c	0.0	1.0	0.125	84.25	-81.25	69.95	107.21	139	32.83	64.54	14.83	0.2926	0.5752	0.7285
	18 l25c	0.0	1.0	0.25	84.35	-79.15	60.31	99.51	143	33.55	64.74	19.49	0.2849	0.5497	0.7308
	19 l38c	0.0	1.0	0.375	84.61	-76.0	47.79	89.79	148	34.78	65.24	27.01	0.2738	0.5136	0.7365
	20 l50c	0.0	1.0	0.5	84.97	-71.95	34.43	79.78	154	36.44	65.95	37.07	0.2613	0.4729	0.7444
	21 l63c	0.0	1.0	0.625	85.43	-66.89	20.8	70.06	163	38.61	66.85	49.78	0.2487	0.4306	0.7546
	22 l75c	0.0	1.0	0.75	85.97	-61.66	8.09	62.2	173	41.02	67.93	64.21	0.2369	0.3923	0.7668
	23 l88c	0.0	1.0	0.875	86.54	-56.43	-3.15	56.52	183	43.57	69.07	79.31	0.227	0.3598	0.7796
	24 c00v	0.0	1.0	1.0	87.18	-51.44	-13.34	53.15	195	46.25	70.38	95.2	0.2184	0.3322	0.7944
	25 c13v	0.0	0.875	1.0	78.68	-39.54	-25.37	46.99	213	38.06	54.38	91.34	0.2071	0.2959	0.6138
	26 c25v	0.0	0.75	1.0	71.08	-27.73	-36.23	45.64	233	31.93	42.3	88.11	0.1967	0.2606	0.4775
	27 c38v	0.0	0.675	1.0	63.12	-13.94	-47.83	49.84	254	26.61	31.73	85.14	0.1854	0.2212	0.3582
	28 c50v	0.0	0.5	1.0	54.95	1.67	-59.7	59.74	272	22.1	22.88	82.09	0.1739	0.18	0.2582
	29 c63v	0.0	0.375	1.0	47.37	18.43	-71.36	73.71	284	18.85	16.3	80.21	0.1634	0.1413	0.184
	30 c75v	0.0	0.25	1.0	40.2	35.92	-82.13	89.65	294	16.36	11.37	78.1	0.1546	0.1074	0.1284
	31 c88v	0.0	0.125	1.0	34.57	51.25	-91.02	104.47	299	14.84	8.29	77.05	0.1481	0.0827	0.0935
	32 v00m	0.0	0.0	1.0	33.09	55.26	-93.24	108.4	301	14.45	7.58	76.63	0.1465	0.0768	0.0856
	33 v13m	0.125	0.0	1.0	33.6	56.21	-92.78	108.49	301	14.96	7.82	77.15	0.1497	0.0782	0.0882
	34 v25m	0.25	0.0	1.0	35.64	58.43	-89.19	106.63	303	16.87	8.82	77.06	0.1642	0.0859	0.0996
	35 v38m	0.375	0.0	1.0	38.78	62.05	-84.34	104.72	306	20.16	10.53	77.8	0.1858	0.0971	0.1189
	36 v50m	0.5	0.0	1.0	42.38	66.17	-78.44	102.63	310	24.4	12.75	78.19	0.2116	0.1105	0.1439
	37 v63m	0.625	0.0	1.0	46.58	71.39	-71.92	101.35	315	30.18	15.7	79.14	0.2414	0.1256	0.1772
	38 v75m	0.75	0.0	1.0	50.83	76.25	-65.07	100.25	320	36.76	19.12	79.78	0.271	0.1409	0.2158
	39 v88m	0.875	0.0	1.0	54.98	81.14	-58.49	100.03	324	44.1	22.91	80.55	0.2989	0.1553	0.2586
	40 m00o	1.0	0.0	1.0	59.56	86.88	-51.35	100.93	329	53.4	27.64	81.56	0.3284	0.17	0.312
	41 m13o	1.0	0.0	0.875	58.35	85.1	-41.52	94.69	334	50.73	26.33	66.53	0.3533	0.1834	0.2972
	42 m25o	1.0	0.0	0.75	57.23	83.02	-30.18	88.34	340	48.17	25.16	52.11	0.384	0.2006	0.284
	43 m38o	1.0	0.0	0.675	56.14	80.94	-16.86	82.68	348	45.76	24.05	38.35	0.423	0.2224	0.2715
	44 m50o	1.0	0.0	0.5	55.19	78.72	-1.52	78.73	359	43.58	23.11	26.11	0.4696	0.249	0.2609
	45 m63o	1.0	0.0	0.375	54.35	77.06	14.91	78.48	11	41.82	22.31	16.39	0.5194	0.2771	0.2518
	46 m75o	1.0	0.0	0.25	53.75	75.81	32.96	82.67	24	40.56	21.74	9.05	0.5685	0.3047	0.2454
	47 m88o	1.0	0.0	0.125	53.35	74.87	51.38	90.8	34	39.71	21.37	4.32	0.6072	0.3268	0.2412
	48 o00y	1.0	0.0	0.0	54.21	76.07	58.0	95.66	37	41.29	22.17	3.41	0.6174	0.3315	0.2503
	49 n00w	0.0	0.0	0.0	10.76	0.0	0.0	0.01	0	1.17	1.23	1.34	0.3127	0.329	0.0139
	50 n13w	0.125	0.125	0.125	16.56	-0.23	0.05	0.25	169	2.09	2.21	2.4	0.3119	0.3299	0.025
	51 n25w	0.25	0.25	0.25	30.75	0.0	-0.86	0.87	269	6.22	6.54	7.36	0.3091	0.3252	0.0739
	52 n38w	0.375	0.375	0.375	43.53	0.82	-2.07	2.24	292	12.97	13.52	15.63	0.308	0.3209	0.1526
	53 n50w	0.5	0.5	0.5	55.06	1.55	-3.03	3.42	297	22.18	22.99	26.95	0.3076	0.3188	0.2595
	54 n63w	0.625	0.625	0.625	66.15	1.93	-3.55	4.05	298	34.32	35.52	41.67	0.3077	0.3186	0.401
	55 n75w	0.75	0.75	0.75	76.28	2.17	-3.58	4.19	301	48.64	50.35	58.62	0.3086	0.3195	0.5683
	56 n88w	0.875	0.875	0.875	85.51	1.65	-2.93	3.37	299	64.42	67.02	76.71	0.3095	0.322	0.7565
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0

IE360-7N, Colorimetric data of Television Luminous System TLS11a for CIE standard illuminant D65; LCD monitor; Page: 3/66

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 3/66 output: $olv^* setrgbcolor / w^* setgray$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a
LCD monitor

Y Yellow

$LCH^*_a = 94.1 \ 86.2 \ 101$

$LAB^*_a = 94.1 \ -15.7 \ 84.7$

L Leaf green

$LCH^*_a = 84.2 \ 109.2 \ 138$

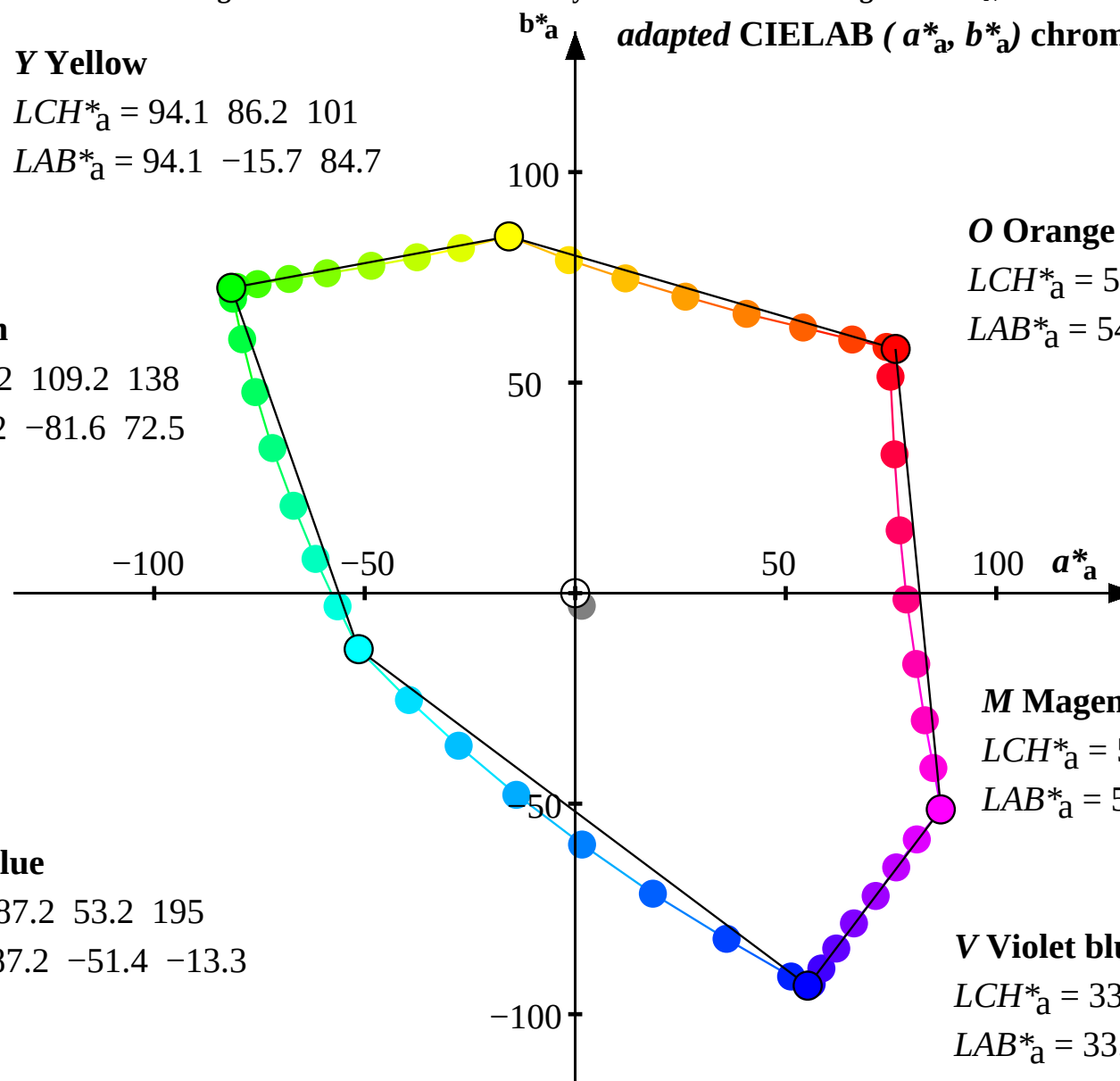
$LAB^*_a = 84.2 \ -81.6 \ 72.5$

C Cyan blue

$LCH^*_a = 87.2 \ 53.2 \ 195$

$LAB^*_a = 87.2 \ -51.4 \ -13.3$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 54.2 \ 95.7 \ 37$

$LAB^*_a = 54.2 \ 76.1 \ 58.0$

M Magenta red

$LCH^*_a = 59.6 \ 100.9 \ 329$

$LAB^*_a = 59.6 \ 86.9 \ -51.4$

V Violet blue

$LCH^*_a = 33.1 \ 108.4 \ 301$

$LAB^*_a = 33.1 \ 55.3 \ -93.3$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_{1a}$	$Y_a=XYZ^*_{2a}$	$Z_a=XYZ^*_{3a}$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	53.21	78.53	65.65	102.36	40	40.69	21.24	2.1	0.6355	0.3317	0.2484
	01 o13y	1.0	0.125	0.0	53.94	76.28	65.83	100.76	41	40.98	21.92	2.23	0.6292	0.3365	0.2564
	02 o25y	1.0	0.25	0.0	57.02	67.72	66.71	95.06	45	42.54	24.95	2.82	0.605	0.3548	0.2918
	03 o38y	1.0	0.375	0.0	61.52	55.58	68.6	88.29	51	45.0	29.85	3.75	0.5726	0.3797	0.3491
	04 o50y	1.0	0.5	0.0	66.94	41.72	70.89	82.26	60	48.37	36.55	5.1	0.5373	0.406	0.4275
	05 o63y	1.0	0.625	0.0	73.24	26.73	74.3	78.96	70	52.93	45.53	6.85	0.5026	0.4323	0.5325
	06 o75y	1.0	0.75	0.0	79.83	12.13	78.0	78.94	81	58.44	56.38	9.03	0.4719	0.4552	0.6594
	07 o88y	1.0	0.875	0.0	86.38	-1.46	82.01	82.02	91	64.7	68.76	11.49	0.4463	0.4744	0.8042
	08 y00l	1.0	1.0	0.0	94.1	-15.93	87.27	88.72	100	73.34	85.49	14.68	0.4227	0.4927	1.0
	09 y13l	0.875	1.0	0.0	91.95	-27.55	84.51	88.89	108	63.78	80.6	14.28	0.402	0.508	0.9427
	10 y25l	0.75	1.0	0.0	90.14	-38.26	82.28	90.74	115	56.03	76.62	13.91	0.3823	0.5228	0.8962
	11 y38l	0.625	1.0	0.0	88.45	-49.38	80.26	94.24	122	48.97	73.01	13.54	0.3613	0.5388	0.854
	12 y50l	0.5	1.0	0.0	86.94	-60.11	78.52	98.89	127	42.91	69.88	13.19	0.3406	0.5547	0.8174
	13 y63l	0.375	1.0	0.0	85.74	-69.36	77.23	103.81	132	38.25	67.47	12.88	0.3225	0.5689	0.7891
	14 y75l	0.25	1.0	0.0	84.81	-77.08	76.04	108.28	135	34.72	65.63	12.72	0.3071	0.5804	0.7676
	15 y88l	0.125	1.0	0.0	84.19	-82.22	75.33	111.52	138	32.5	64.44	12.58	0.2967	0.5884	0.7537
	16 l00c	0.0	1.0	0.0	84.03	-83.48	75.12	112.31	138	31.96	64.13	12.56	0.2941	0.5903	0.7501
	17 l13c	0.0	1.0	0.125	84.07	-83.08	72.37	110.19	139	32.11	64.2	13.68	0.2919	0.5837	0.7509
	18 l25c	0.0	1.0	0.25	84.18	-80.91	62.13	102.03	142	32.84	64.4	18.41	0.284	0.5569	0.7533
	19 l38c	0.0	1.0	0.375	84.44	-77.67	49.03	91.86	148	34.09	64.92	26.04	0.2726	0.5192	0.7593
	20 l50c	0.0	1.0	0.5	84.81	-73.5	35.21	81.5	154	35.77	65.63	36.23	0.2599	0.4768	0.7676
	21 l63c	0.0	1.0	0.625	85.28	-68.28	21.21	71.51	163	37.96	66.55	49.13	0.2471	0.4331	0.7784
	22 l75c	0.0	1.0	0.75	85.82	-62.91	8.24	63.45	173	40.41	67.64	63.75	0.2352	0.3937	0.7911
	23 l88c	0.0	1.0	0.875	86.4	-57.53	-3.2	57.63	183	43.0	68.79	79.07	0.2253	0.3604	0.8046
	24 c00v	0.0	1.0	1.0	87.06	-52.42	-13.54	54.15	194	45.72	70.12	95.18	0.2167	0.3323	0.8202
	25 c13v	0.0	0.875	1.0	78.4	-40.44	-25.8	47.98	213	37.41	53.89	91.26	0.2049	0.2952	0.6304
	26 c25v	0.0	0.75	1.0	70.63	-28.48	-36.92	46.64	232	31.2	41.65	87.99	0.194	0.2589	0.4871
	27 c38v	0.0	0.675	1.0	62.45	-14.4	-48.87	50.97	254	25.8	30.93	84.99	0.182	0.2183	0.3618
	28 c50v	0.0	0.5	1.0	53.98	1.74	-61.22	61.26	272	21.23	21.95	81.89	0.1697	0.1755	0.2568
	29 c63v	0.0	0.375	1.0	46.02	19.41	-73.51	76.04	285	17.93	15.29	79.98	0.1584	0.135	0.1788
	30 c75v	0.0	0.25	1.0	38.35	38.38	-85.12	93.38	294	15.41	10.29	77.84	0.1488	0.0993	0.1203
	31 c88v	0.0	0.125	1.0	32.16	55.61	-94.97	110.06	300	13.86	7.16	76.77	0.1418	0.0732	0.0837
	32 v00m	0.0	0.0	1.0	30.5	60.26	-97.5	114.62	302	13.47	6.44	76.35	0.14	0.0669	0.0754
	33 v13m	0.125	0.0	1.0	31.07	61.12	-96.93	114.6	302	13.99	6.68	76.88	0.1434	0.0685	0.0781
	34 v25m	0.25	0.0	1.0	33.35	62.93	-92.92	112.23	304	15.93	7.7	76.78	0.1586	0.0767	0.0901
	35 v38m	0.375	0.0	1.0	36.81	66.05	-87.54	109.67	307	19.26	9.44	77.54	0.1813	0.0888	0.1104
	36 v50m	0.5	0.0	1.0	40.7	69.7	-81.13	106.97	311	23.56	11.68	77.94	0.2082	0.1032	0.1366
	37 v63m	0.625	0.0	1.0	45.18	74.51	-74.14	105.11	315	29.42	14.67	78.89	0.2392	0.1193	0.1716
	38 v75m	0.75	0.0	1.0	49.67	79.02	-66.89	103.54	320	36.09	18.14	79.54	0.2698	0.1356	0.2122
	39 v88m	0.875	0.0	1.0	54.01	83.65	-59.99	102.94	324	43.54	21.99	80.32	0.2985	0.1508	0.2572
	40 m00o	1.0	0.0	1.0	58.77	89.16	-52.55	103.5	329	52.97	26.78	81.35	0.3288	0.1663	0.3133
	41 m13o	1.0	0.0	0.875	57.52	87.43	-42.59	97.26	334	50.26	25.46	66.11	0.3543	0.1795	0.2978
	42 m25o	1.0	0.0	0.75	56.35	85.39	-31.06	90.87	340	47.67	24.27	51.49	0.3862	0.1966	0.2838
	43 m38o	1.0	0.0	0.675	55.22	83.35	-17.43	85.15	348	45.22	23.14	37.54	0.427	0.2186	0.2707
	44 m50o	1.0	0.0	0.5	54.23	81.16	-1.58	81.17	359	43.01	22.19	25.13	0.4761	0.2457	0.2596
	45 m63o	1.0	0.0	0.375	53.36	79.52	15.69	81.06	11	41.22	21.38	15.26	0.5294	0.2745	0.25
	46 m75o	1.0	0.0	0.25	52.73	78.3	35.35	85.91	24	39.95	20.8	7.82	0.5826	0.3033	0.2433
	47 m88o	1.0	0.0	0.125	52.31	77.37	57.23	96.24	36	39.08	20.42	3.02	0.6251	0.3266	0.2389
	48 o00y	1.0	0.0	0.0	53.21	78.53	65.65	102.36	40	40.69	21.24	2.1	0.6355	0.3317	0.2484
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	289	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	8.96	-0.41	0.08	0.43	169	0.94	1.0	1.08	0.3109	0.3309	0.0117
	51 n25w	0.25	0.25	0.25	27.82	0.0	-0.99	1.0	269	5.12	5.39	6.11	0.3082	0.3244	0.0631
	52 n38w	0.375	0.375	0.375	41.94	0.88	-2.21	2.39	292	11.97	12.46	14.5	0.3075	0.3201	0.1458
	53 n50w	0.5	0.5	0.5	54.1	1.61	-3.16	3.56	297	21.31	22.07	25.97	0.3073	0.3182	0.2581
	54 n63w	0.625	0.625	0.625	65.58	1.98	-3.65	4.16	298	33.61	34.78	40.9	0.3076	0.3182	0.4068
	55 n75w	0.75	0.75	0.75	75.95	2.21	-3.65	4.28	301	48.14	49.81	58.08	0.3085	0.3192	0.5826
	56 n88w	0.875	0.875	0.875	85.36	1.68	-2.98	3.43	299	64.14	66.72	76.43	0.3094	0.3219	0.7804
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0362

IE360-7N, Colorimetric data of Television Luminous System TLS11a for CIE standard illuminant D65; LCD monitor; Page: 5/66

$$n = 88.59 / (88.59 - 1.23) = 1.014$$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 5/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65
System TLS00a

LCD monitor

Y Yellow

$LCH^*_a = 94.1 \ 88.7 \ 100$

$LAB^*_a = 94.1 \ -15.9 \ 87.3$

L Leaf green

$LCH^*_a = 84.0 \ 112.3 \ 138$

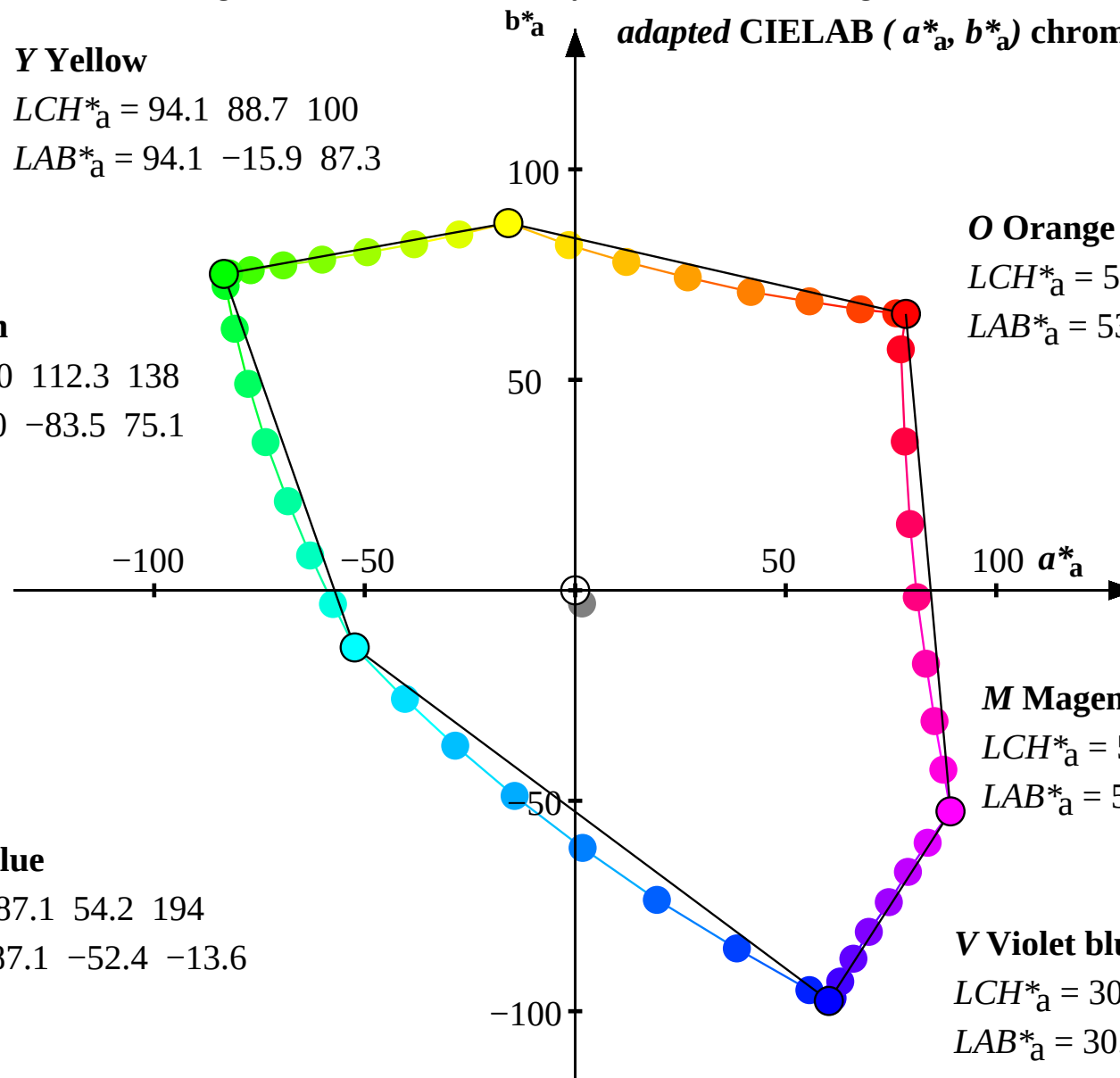
$LAB^*_a = 84.0 \ -83.5 \ 75.1$

C Cyan blue

$LCH^*_a = 87.1 \ 54.2 \ 194$

$LAB^*_a = 87.1 \ -52.4 \ -13.6$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 53.2 \ 102.4 \ 40$

$LAB^*_a = 53.2 \ 78.5 \ 65.7$

M Magenta red

$LCH^*_a = 58.8 \ 103.5 \ 329$

$LAB^*_a = 58.8 \ 89.2 \ -52.6$

V Violet blue

$LCH^*_a = 30.5 \ 114.6 \ 302$

$LAB^*_a = 30.5 \ 60.3 \ -97.5$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	53.21	78.53	65.65	102.36	40	40.69	21.24	2.1	0.6355	0.3317	0.2484
	01 o13y	1.0	0.125	0.0	53.94	76.28	65.83	100.76	41	40.98	21.92	2.23	0.6292	0.3365	0.2564
D65 reflection:	02 o25y	1.0	0.25	0.0	57.02	67.72	66.71	95.06	45	42.54	24.95	2.82	0.605	0.3548	0.2918
$Y_N = 0.0$	03 o38y	1.0	0.375	0.0	61.52	55.58	68.6	88.29	51	45.0	29.85	3.75	0.5726	0.3797	0.3491
$L^*_N = 0.0$	04 o50y	1.0	0.5	0.0	66.94	41.72	70.89	82.26	60	48.37	36.55	5.1	0.5373	0.406	0.4275
	05 o63y	1.0	0.625	0.0	73.24	26.73	74.3	78.96	70	52.93	45.53	6.85	0.5026	0.4323	0.5325
	06 o75y	1.0	0.75	0.0	79.83	12.13	78.0	78.94	81	58.44	56.38	9.03	0.4719	0.4552	0.6594
	07 o88y	1.0	0.875	0.0	86.38	-1.46	82.01	82.02	91	64.7	68.76	11.49	0.4463	0.4744	0.8042
	08 y00l	1.0	1.0	0.0	94.1	-15.93	87.27	88.72	100	73.34	85.49	14.68	0.4227	0.4927	1.0
	09 y13l	0.875	1.0	0.0	91.95	-27.55	84.51	88.89	108	63.78	80.6	14.28	0.402	0.508	0.9427
	10 y25l	0.75	1.0	0.0	90.14	-38.26	82.28	90.74	115	56.03	76.62	13.91	0.3823	0.5228	0.8962
	11 y38l	0.625	1.0	0.0	88.45	-49.38	80.26	94.24	122	48.97	73.01	13.54	0.3613	0.5388	0.854
	12 y50l	0.5	1.0	0.0	86.94	-60.11	78.52	98.89	127	42.91	69.88	13.19	0.3406	0.5547	0.8174
	13 y63l	0.375	1.0	0.0	85.74	-69.36	77.23	103.81	132	38.25	67.47	12.88	0.3225	0.5689	0.7891
	14 y75l	0.25	1.0	0.0	84.81	-77.08	76.04	108.28	135	34.72	65.63	12.72	0.3071	0.5804	0.7676
	15 y88l	0.125	1.0	0.0	84.19	-82.22	75.33	111.52	138	32.5	64.44	12.58	0.2967	0.5884	0.7537
	16 l00c	0.0	1.0	0.0	84.03	-83.48	75.12	112.31	138	31.96	64.13	12.56	0.2941	0.5903	0.7501
	17 l13c	0.0	1.0	0.125	84.07	-83.08	72.37	110.19	139	32.11	64.2	13.68	0.2919	0.5837	0.7509
	18 l25c	0.0	1.0	0.25	84.18	-80.91	62.13	102.03	142	32.84	64.4	18.41	0.284	0.5569	0.7533
	19 l38c	0.0	1.0	0.375	84.44	-77.67	49.03	91.86	148	34.09	64.92	26.04	0.2726	0.5192	0.7593
	20 l50c	0.0	1.0	0.5	84.81	-73.5	35.21	81.5	154	35.77	65.63	36.23	0.2599	0.4768	0.7676
	21 l63c	0.0	1.0	0.625	85.28	-68.28	21.21	71.51	163	37.96	66.55	49.13	0.2471	0.4331	0.7784
	22 l75c	0.0	1.0	0.75	85.82	-62.91	8.24	63.45	173	40.41	67.64	63.75	0.2352	0.3937	0.7911
	23 l88c	0.0	1.0	0.875	86.4	-57.53	-3.2	57.63	183	43.0	68.79	79.07	0.2253	0.3604	0.8046
	24 c00v	0.0	1.0	1.0	87.06	-52.42	-13.54	54.15	194	45.72	70.12	95.18	0.2167	0.3323	0.8202
	25 c13v	0.0	0.875	1.0	78.4	-40.44	-25.8	47.98	213	37.41	53.89	91.26	0.2049	0.2952	0.6304
	26 c25v	0.0	0.75	1.0	70.63	-28.48	-36.92	46.64	232	31.2	41.65	87.99	0.194	0.2589	0.4871
	27 c38v	0.0	0.675	1.0	62.45	-14.4	-48.87	50.97	254	25.8	30.93	84.99	0.182	0.2183	0.3618
	28 c50v	0.0	0.5	1.0	53.98	1.74	-61.22	61.26	272	21.23	21.95	81.89	0.1697	0.1755	0.2568
	29 c63v	0.0	0.375	1.0	46.02	19.41	-73.51	76.04	285	17.93	15.29	79.98	0.1584	0.135	0.1788
	30 c75v	0.0	0.25	1.0	38.35	38.38	-85.12	93.38	294	15.41	10.29	77.84	0.1488	0.0993	0.1203
	31 c88v	0.0	0.125	1.0	32.16	55.61	-94.97	110.06	300	13.86	7.16	76.77	0.1418	0.0732	0.0837
	32 v00m	0.0	0.0	1.0	30.5	60.26	-97.5	114.62	302	13.47	6.44	76.35	0.14	0.0669	0.0754
	33 v13m	0.125	0.0	1.0	31.07	61.12	-96.93	114.6	302	13.99	6.68	76.88	0.1434	0.0685	0.0781
	34 v25m	0.25	0.0	1.0	33.35	62.93	-92.92	112.23	304	15.93	7.7	76.78	0.1586	0.0767	0.0901
	35 v38m	0.375	0.0	1.0	36.81	66.05	-87.54	109.67	307	19.26	9.44	77.54	0.1813	0.0888	0.1104
	36 v50m	0.5	0.0	1.0	40.7	69.7	-81.13	106.97	311	23.56	11.68	77.94	0.2082	0.1032	0.1366
	37 v63m	0.625	0.0	1.0	45.18	74.51	-74.14	105.11	315	29.42	14.67	78.89	0.2392	0.1193	0.1716
	38 v75m	0.75	0.0	1.0	49.67	79.02	-66.89	103.54	320	36.09	18.14	79.54	0.2698	0.1356	0.2122
	39 v88m	0.875	0.0	1.0	54.01	83.65	-59.99	102.94	324	43.54	21.99	80.32	0.2985	0.1508	0.2572
	40 m00o	1.0	0.0	1.0	58.77	89.16	-52.55	103.5	329	52.97	26.78	81.35	0.3288	0.1663	0.3133
	41 m13o	1.0	0.0	0.875	57.52	87.43	-42.59	97.26	334	50.26	25.46	66.11	0.3543	0.1795	0.2978
	42 m25o	1.0	0.0	0.75	56.35	85.39	-31.06	90.87	340	47.67	24.27	51.49	0.3862	0.1966	0.2838
	43 m38o	1.0	0.0	0.675	55.22	83.35	-17.43	85.15	348	45.22	23.14	37.54	0.427	0.2186	0.2707
	44 m50o	1.0	0.0	0.5	54.23	81.16	-1.58	81.17	359	43.01	22.19	25.13	0.4761	0.2457	0.2596
	45 m63o	1.0	0.0	0.375	53.36	79.52	15.69	81.06	11	41.22	21.38	15.26	0.5294	0.2745	0.25
	46 m75o	1.0	0.0	0.25	52.73	78.3	35.35	85.91	24	39.95	20.8	7.82	0.5826	0.3033	0.2433
	47 m88o	1.0	0.0	0.125	52.31	77.37	57.23	96.24	36	39.08	20.42	3.02	0.6251	0.3266	0.2389
	48 o00y	1.0	0.0	0.0	53.21	78.53	65.65	102.36	40	40.69	21.24	2.1	0.6355	0.3317	0.2484
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	289	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	8.96	-0.41	0.08	0.43	169	0.94	1.0	1.08	0.3109	0.3309	0.0117
	51 n25w	0.25	0.25	0.25	27.82	0.0	-0.99	1.0	269	5.12	5.39	6.11	0.3082	0.3244	0.0631
	52 n38w	0.375	0.375	0.375	41.94	0.88	-2.21	2.39	292	11.97	12.46	14.5	0.3075	0.3201	0.1458
	53 n50w	0.5	0.5	0.5	54.1	1.61	-3.16	3.56	297	21.31	22.07	25.97	0.3073	0.3182	0.2581
	54 n63w	0.625	0.625	0.625	65.58	1.98	-3.65	4.16	298	33.61	34.78	40.9	0.3076	0.3182	0.4068
	55 n75w	0.75	0.75	0.75	75.95	2.21	-3.65	4.28	301	48.14	49.81	58.08	0.3085	0.3192	0.5826
	56 n88w	0.875	0.875	0.875	85.36	1.68	-2.98	3.43	299	64.14	66.72	76.43	0.3094	0.3219	0.7804
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0362

IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; LCD monitor; Page: 7/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 7/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a

LCD monitor

D65 reflection:

$Y_N = 0.0$

$L^*_N = 0.0$

Y Yellow

$LCH^*_a = 94.1 \ 88.7 \ 100$

$LAB^*_a = 94.1 \ -15.9 \ 87.3$

L Leaf green

$LCH^*_a = 84.0 \ 112.3 \ 138$

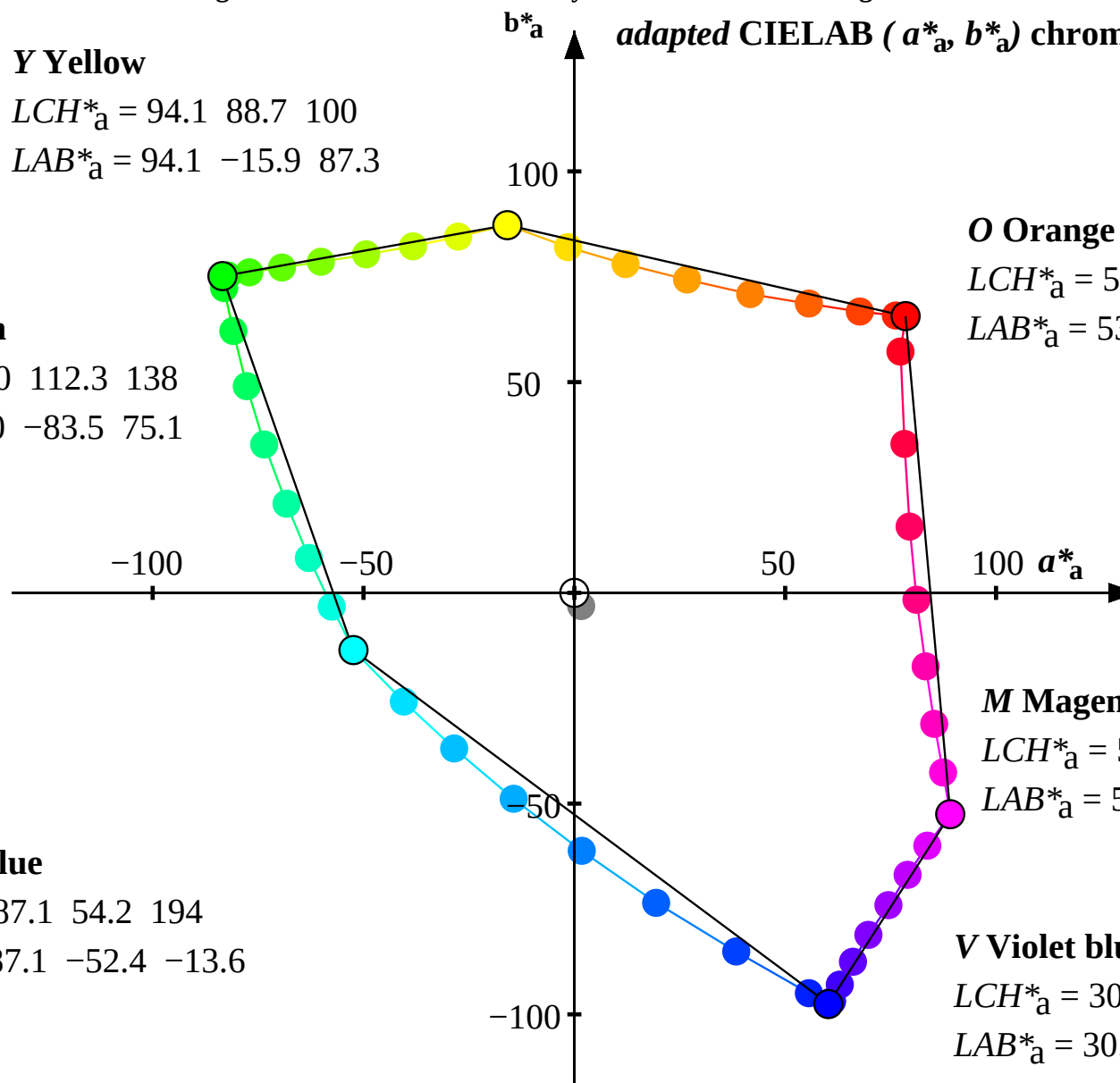
$LAB^*_a = 84.0 \ -83.5 \ 75.1$

C Cyan blue

$LCH^*_a = 87.1 \ 54.2 \ 194$

$LAB^*_a = 87.1 \ -52.4 \ -13.6$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65

System TLS06a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	53.73	77.26	61.36	98.66	38	41.0	21.72	2.78	0.626	0.3316	0.254
	01 o13y	1.0	0.125	0.0	54.44	75.06	61.69	97.16	39	41.29	22.39	2.9	0.6201	0.3363	0.2619
D65 reflection:	02 o25y	1.0	0.25	0.0	57.46	66.71	63.13	91.85	43	42.84	25.4	3.49	0.5972	0.3541	0.297
$Y_N = 0.63$	03 o38y	1.0	0.375	0.0	61.88	54.83	65.61	85.5	50	45.28	30.26	4.41	0.5664	0.3785	0.3539
$L^*_N = 5.69$	04 o50y	1.0	0.5	0.0	67.21	41.22	68.44	79.89	59	48.62	36.92	5.75	0.5326	0.4044	0.4317
	05 o63y	1.0	0.625	0.0	73.44	26.45	72.25	76.94	70	53.15	45.83	7.49	0.4992	0.4304	0.5359
	06 o75y	1.0	0.75	0.0	79.96	12.02	76.27	77.21	81	58.63	56.61	9.65	0.4694	0.4533	0.6619
	07 o88y	1.0	0.875	0.0	86.45	-1.45	80.5	80.51	91	64.84	68.9	12.1	0.4446	0.4725	0.8057
	08 y00l	1.0	1.0	0.0	94.11	-15.81	85.95	87.39	100	73.42	85.52	15.26	0.4215	0.4909	1.0
	09 y13l	0.875	1.0	0.0	91.98	-27.32	83.18	87.56	108	63.92	80.65	14.86	0.4009	0.5058	0.9431
	10 y25l	0.75	1.0	0.0	90.18	-37.93	80.95	89.4	115	56.23	76.7	14.5	0.3814	0.5203	0.8969
	11 y38l	0.625	1.0	0.0	88.51	-48.92	78.92	92.86	122	49.22	73.12	14.13	0.3607	0.5358	0.8551
	12 y50l	0.5	1.0	0.0	87.0	-59.51	77.17	97.46	128	43.21	70.01	13.78	0.3402	0.5513	0.8187
	13 y63l	0.375	1.0	0.0	85.81	-68.64	75.87	102.32	132	38.58	67.62	13.47	0.3224	0.565	0.7907
	14 y75l	0.25	1.0	0.0	84.89	-76.23	74.68	106.72	136	35.07	65.79	13.32	0.3071	0.5762	0.7694
	15 y88l	0.125	1.0	0.0	84.28	-81.29	73.97	109.91	138	32.87	64.61	13.18	0.297	0.5839	0.7555
	16 l00c	0.0	1.0	0.0	84.13	-82.53	73.76	110.7	138	32.33	64.31	13.15	0.2945	0.5857	0.752
	17 l13c	0.0	1.0	0.125	84.16	-82.13	71.11	108.65	139	32.48	64.37	14.27	0.2923	0.5793	0.7528
	18 l25c	0.0	1.0	0.25	84.27	-80.0	61.19	100.73	143	33.21	64.58	18.96	0.2844	0.5531	0.7551
	19 l38c	0.0	1.0	0.375	84.53	-76.81	48.39	90.79	148	34.44	65.08	26.54	0.2732	0.5163	0.7611
	20 l50c	0.0	1.0	0.5	84.89	-72.7	34.81	80.61	154	36.12	65.79	36.66	0.2606	0.4748	0.7694
	21 l63c	0.0	1.0	0.625	85.35	-67.57	21.0	70.77	163	38.29	66.7	49.46	0.2479	0.4319	0.78
	22 l75c	0.0	1.0	0.75	85.9	-62.26	8.16	62.81	173	40.72	67.79	63.99	0.2361	0.393	0.7927
	23 l88c	0.0	1.0	0.875	86.47	-56.96	-3.18	57.06	183	43.29	68.93	79.19	0.2262	0.3601	0.8061
	24 c00v	0.0	1.0	1.0	87.12	-51.91	-13.44	53.64	195	45.99	70.25	95.19	0.2175	0.3323	0.8215
	25 c13v	0.0	0.875	1.0	78.54	-39.97	-25.58	47.47	213	37.75	54.14	91.3	0.2061	0.2955	0.6331
	26 c25v	0.0	0.75	1.0	70.86	-28.09	-36.57	46.12	232	31.57	41.98	88.05	0.1954	0.2598	0.4909
	27 c38v	0.0	0.675	1.0	62.8	-14.16	-48.34	50.38	254	26.21	31.34	85.07	0.1838	0.2198	0.3665
	28 c50v	0.0	0.5	1.0	54.48	1.71	-60.44	60.47	272	21.68	22.43	82.0	0.1719	0.1779	0.2623
	29 c63v	0.0	0.375	1.0	46.72	18.89	-72.39	74.83	285	18.4	15.81	80.1	0.161	0.1383	0.1849
	30 c75v	0.0	0.25	1.0	39.32	37.08	-83.56	91.42	294	15.9	10.84	77.98	0.1518	0.1035	0.1268
	31 c88v	0.0	0.125	1.0	33.43	53.28	-92.89	107.1	300	14.36	7.74	76.91	0.1451	0.0781	0.0905
	32 v00m	0.0	0.0	1.0	31.87	57.58	-95.25	111.31	301	13.97	7.03	76.49	0.1433	0.0721	0.0822
	33 v13m	0.125	0.0	1.0	32.4	58.49	-94.74	111.35	302	14.49	7.26	77.02	0.1467	0.0735	0.0849
	34 v25m	0.25	0.0	1.0	34.55	60.54	-90.96	109.27	304	16.41	8.28	76.92	0.1615	0.0815	0.0968
	35 v38m	0.375	0.0	1.0	37.84	63.94	-85.86	107.06	307	19.72	10.0	77.67	0.1836	0.0931	0.1169
	36 v50m	0.5	0.0	1.0	41.58	67.85	-79.73	104.7	310	24.0	12.23	78.07	0.21	0.107	0.143
	37 v63m	0.625	0.0	1.0	45.91	72.88	-72.99	103.15	315	29.81	15.2	79.02	0.2403	0.1226	0.1777
	38 v75m	0.75	0.0	1.0	50.27	77.58	-65.95	101.83	320	36.44	18.64	79.66	0.2704	0.1384	0.218
	39 v88m	0.875	0.0	1.0	54.51	82.35	-59.22	101.44	324	43.82	22.46	80.44	0.2987	0.1531	0.2627
	40 m00o	1.0	0.0	1.0	59.18	87.99	-51.93	102.17	329	53.19	27.22	81.46	0.3286	0.1682	0.3183
	41 m13o	1.0	0.0	0.875	57.95	86.23	-42.04	95.93	334	50.5	25.91	66.33	0.3538	0.1815	0.3029
	42 m25o	1.0	0.0	0.75	56.81	84.16	-30.6	89.56	340	47.93	24.72	51.81	0.3851	0.1987	0.2891
	43 m38o	1.0	0.0	0.675	55.69	82.1	-17.14	83.87	348	45.49	23.61	37.96	0.4249	0.2205	0.2761
	44 m50o	1.0	0.0	0.5	54.72	79.89	-1.55	79.91	359	43.3	22.66	25.63	0.4727	0.2474	0.265
	45 m63o	1.0	0.0	0.375	53.87	78.24	15.28	79.72	11	41.53	21.85	15.84	0.5242	0.2759	0.2555
	46 m75o	1.0	0.0	0.25	53.25	77.01	34.08	84.21	24	40.26	21.28	8.45	0.5752	0.304	0.2488
	47 m88o	1.0	0.0	0.125	52.85	76.08	54.01	93.3	35	39.4	20.91	3.69	0.6157	0.3267	0.2445
	48 o00y	1.0	0.0	0.0	53.73	77.26	61.36	98.66	38	41.0	21.72	2.78	0.626	0.3316	0.254
	49 n00w	0.0	0.0	0.0	5.69	0.0	0.0	0.01	289	0.6	0.63	0.69	0.3127	0.329	0.0074
	50 n13w	0.125	0.125	0.125	13.35	-0.29	0.06	0.31	169	1.53	1.62	1.76	0.3116	0.3302	0.0189
	51 n25w	0.25	0.25	0.25	29.37	0.0	-0.92	0.93	269	5.69	5.98	6.75	0.3087	0.3249	0.07
	52 n38w	0.375	0.375	0.375	42.77	0.85	-2.14	2.31	292	12.48	13.0	15.08	0.3077	0.3206	0.1521
	53 n50w	0.5	0.5	0.5	54.6	1.58	-3.09	3.48	297	21.76	22.54	26.47	0.3075	0.3185	0.2636
	54 n63w	0.625	0.625	0.625	65.87	1.95	-3.6	4.11	298	33.97	35.16	41.3	0.3076	0.3184	0.4112
	55 n75w	0.75	0.75	0.75	76.12	2.19	-3.62	4.24	301	48.4	50.09	58.36	0.3086	0.3194	0.5857
	56 n88w	0.875	0.875	0.875	85.44	1.66	-2.95	3.4	299	64.28	66.87	76.57	0.3095	0.3219	0.782
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0359

IE360-7N, Colorimetric data of Television Luminous System TLS06a for CIE standard illuminant D65; LCD monitor; Page: 9/66

$$n = 88.59 / (88.59 - 1.23) = 1.014$$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 9/66 output: $olv^* setrgbcolor / w^* setgray$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65

System TLS06a

LCD monitor

D65 reflection:

$Y_N = 0.63$

$L^*_N = 5.69$

Y Yellow

$LCH^*_a = 94.1 \ 87.4 \ 100$

$LAB^*_a = 94.1 \ -15.8 \ 86.0$

L Leaf green

$LCH^*_a = 84.1 \ 110.7 \ 138$

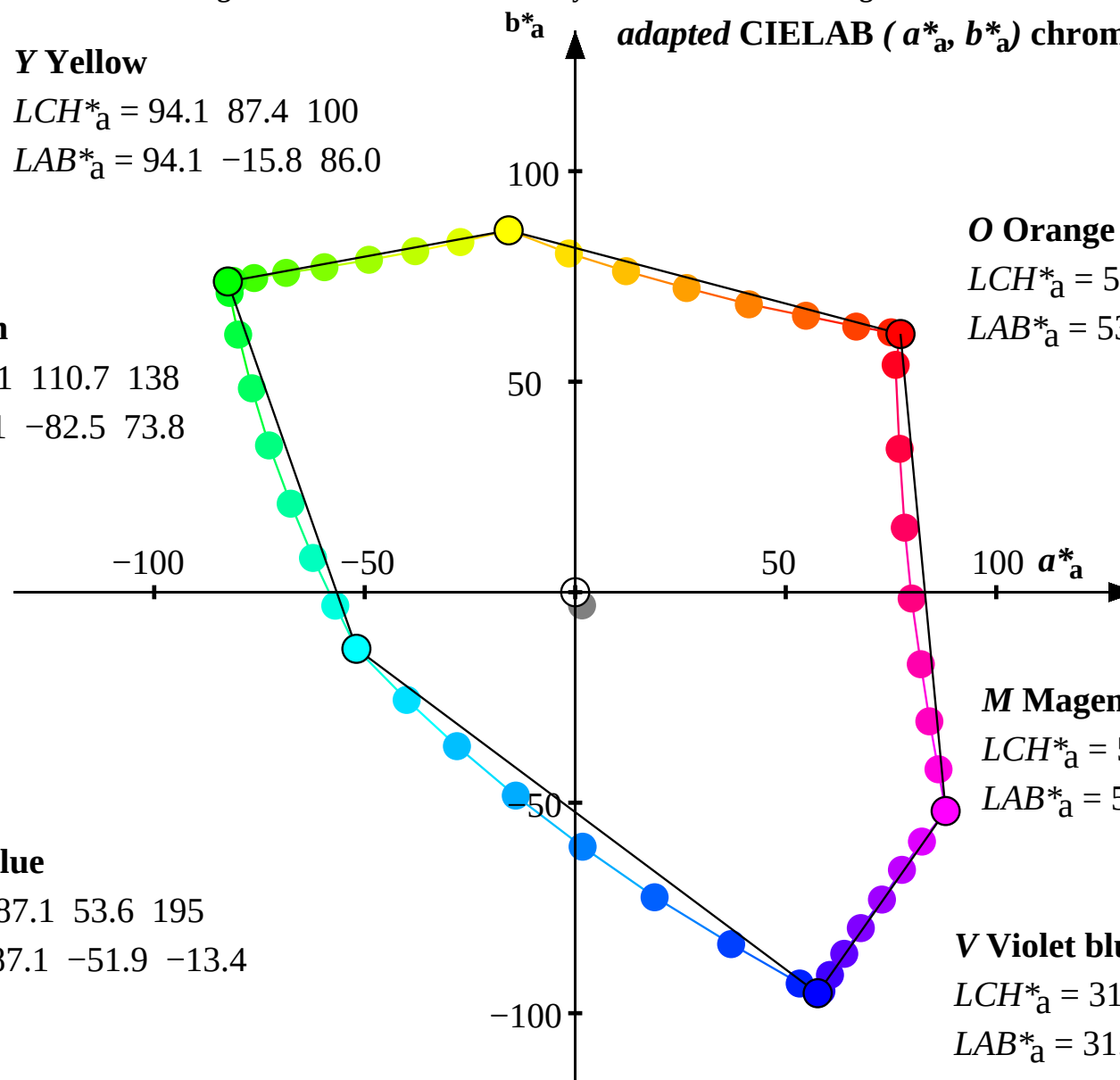
$LAB^*_a = 84.1 \ -82.5 \ 73.8$

C Cyan blue

$LCH^*_a = 87.1 \ 53.6 \ 195$

$LAB^*_a = 87.1 \ -51.9 \ -13.4$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 53.7 \ 98.7 \ 38$

$LAB^*_a = 53.7 \ 77.3 \ 61.4$

M Magenta red

$LCH^*_a = 59.2 \ 102.2 \ 329$

$LAB^*_a = 59.2 \ 88.0 \ -51.9$

V Violet blue

$LCH^*_a = 31.9 \ 111.3 \ 301$

$LAB^*_a = 31.9 \ 57.6 \ -95.3$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	54.24	76.01	57.83	95.51	37	41.31	22.2	3.45	0.617	0.3315	0.2595
	01 o13y	1.0	0.125	0.0	54.94	73.87	58.26	94.08	38	41.6	22.87	3.57	0.6114	0.3361	0.2673
D65 reflection:	02 o25y	1.0	0.25	0.0	57.9	65.73	60.07	89.04	42	43.13	25.85	4.16	0.5897	0.3535	0.3022
$Y_N = 1.26$	03 o38y	1.0	0.375	0.0	62.24	54.09	62.96	83.0	49	45.56	30.68	5.07	0.5604	0.3773	0.3587
$L^*_N = 11.0$	04 o50y	1.0	0.5	0.0	67.49	40.72	66.19	77.71	58	48.88	37.29	6.4	0.528	0.4028	0.4359
	05 o63y	1.0	0.625	0.0	73.64	26.16	70.33	75.04	70	53.38	46.14	8.13	0.4959	0.4286	0.5394
	06 o75y	1.0	0.75	0.0	80.09	11.9	74.61	75.56	81	58.81	56.84	10.27	0.467	0.4514	0.6644
	07 o88y	1.0	0.875	0.0	86.52	-1.44	79.04	79.06	91	64.97	69.04	12.7	0.4429	0.4706	0.8071
	08 y00l	1.0	1.0	0.0	94.11	-15.69	84.66	86.11	101	73.49	85.54	15.84	0.4203	0.4892	1.0
	09 y13l	0.875	1.0	0.0	92.0	-27.1	81.9	86.27	108	64.07	80.71	15.45	0.3999	0.5037	0.9436
	10 y25l	0.75	1.0	0.0	90.22	-37.6	79.65	88.09	115	56.43	76.79	15.09	0.3805	0.5178	0.8977
	11 y38l	0.625	1.0	0.0	88.56	-48.47	77.63	91.52	122	49.47	73.23	14.72	0.36	0.5329	0.8561
	12 y50l	0.5	1.0	0.0	87.07	-58.93	75.86	96.07	128	43.5	70.15	14.38	0.3398	0.5479	0.8201
	13 y63l	0.375	1.0	0.0	85.89	-67.92	74.56	100.87	132	38.9	67.77	14.07	0.3222	0.5613	0.7922
	14 y75l	0.25	1.0	0.0	84.97	-75.4	73.36	105.21	136	35.42	65.96	13.91	0.3072	0.5721	0.7711
	15 y88l	0.125	1.0	0.0	84.37	-80.37	72.65	108.35	138	33.23	64.78	13.78	0.2973	0.5795	0.7573
	16 l00c	0.0	1.0	0.0	84.22	-81.59	72.44	109.12	138	32.7	64.48	13.75	0.2948	0.5813	0.7538
	17 l13c	0.0	1.0	0.125	84.25	-81.2	69.88	107.14	139	32.85	64.55	14.86	0.2927	0.575	0.7546
	18 l25c	0.0	1.0	0.25	84.35	-79.1	60.26	99.45	143	33.57	64.75	19.52	0.2849	0.5495	0.757
	19 l38c	0.0	1.0	0.375	84.61	-75.96	47.76	89.74	148	34.8	65.25	27.04	0.2738	0.5134	0.7628
	20 l50c	0.0	1.0	0.5	84.97	-71.91	34.41	79.73	154	36.46	65.96	37.09	0.2614	0.4728	0.7711
	21 l63c	0.0	1.0	0.625	85.43	-66.85	20.79	70.02	163	38.62	66.86	49.8	0.2487	0.4306	0.7817
	22 l75c	0.0	1.0	0.75	85.97	-61.63	8.09	62.17	173	41.03	67.93	64.22	0.2369	0.3923	0.7942
	23 l88c	0.0	1.0	0.875	86.54	-56.4	-3.15	56.5	183	43.59	69.07	79.31	0.227	0.3598	0.8075
	24 c00v	0.0	1.0	1.0	87.18	-51.41	-13.33	53.13	195	46.27	70.38	95.2	0.2184	0.3322	0.8228
	25 c13v	0.0	0.875	1.0	78.69	-39.52	-25.36	46.97	213	38.08	54.39	91.34	0.2072	0.2959	0.6358
	26 c25v	0.0	0.75	1.0	71.09	-27.71	-36.21	45.61	233	31.95	42.32	88.11	0.1968	0.2606	0.4947
	27 c38v	0.0	0.675	1.0	63.14	-13.93	-47.81	49.61	254	26.63	31.75	85.15	0.1855	0.2212	0.3712
	28 c50v	0.0	0.5	1.0	54.97	1.67	-59.66	59.7	272	22.12	22.9	82.1	0.174	0.1801	0.2677
	29 c63v	0.0	0.375	1.0	47.4	18.4	-71.31	73.65	284	18.87	16.33	80.21	0.1635	0.1415	0.1909
	30 c75v	0.0	0.25	1.0	40.25	35.86	-82.05	89.56	294	16.39	11.4	78.11	0.1548	0.1077	0.1333
	31 c88v	0.0	0.125	1.0	34.63	51.15	-90.92	104.33	299	14.86	8.32	77.05	0.1483	0.083	0.0972
	32 v00m	0.0	0.0	1.0	33.16	55.14	-93.14	108.25	301	14.48	7.61	76.63	0.1467	0.0771	0.089
	33 v13m	0.125	0.0	1.0	33.66	56.09	-92.68	108.34	301	14.99	7.85	77.16	0.1499	0.0785	0.0917
	34 v25m	0.25	0.0	1.0	35.7	58.32	-89.09	106.49	303	16.9	8.85	77.06	0.1644	0.0861	0.1035
	35 v38m	0.375	0.0	1.0	38.83	61.96	-84.26	104.59	306	20.18	10.56	77.8	0.1859	0.0973	0.1235
	36 v50m	0.5	0.0	1.0	42.42	66.08	-78.37	102.52	310	24.43	12.77	78.2	0.2117	0.1107	0.1493
	37 v63m	0.625	0.0	1.0	46.61	71.31	-71.86	101.25	315	30.2	15.73	79.14	0.2415	0.1257	0.1838
	38 v75m	0.75	0.0	1.0	50.86	76.18	-65.03	100.17	320	36.78	19.15	79.78	0.271	0.1411	0.2238
	39 v88m	0.875	0.0	1.0	55.01	81.08	-58.45	99.96	324	44.11	22.93	80.55	0.2989	0.1554	0.2681
	40 m00o	1.0	0.0	1.0	59.58	86.82	-51.32	100.86	329	53.41	27.66	81.56	0.3284	0.1701	0.3234
	41 m13o	1.0	0.0	0.875	58.37	85.04	-41.49	94.63	334	50.74	26.36	66.54	0.3532	0.1835	0.3081
	42 m25o	1.0	0.0	0.75	57.25	82.96	-30.15	88.27	340	48.19	25.18	52.13	0.384	0.2007	0.2944
	43 m38o	1.0	0.0	0.675	56.16	80.88	-16.85	82.61	348	45.77	24.07	38.37	0.4229	0.2225	0.2815
	44 m50o	1.0	0.0	0.5	55.21	78.66	-1.51	78.67	359	43.59	23.14	26.14	0.4694	0.2491	0.2705
	45 m63o	1.0	0.0	0.375	54.38	76.99	14.89	78.42	11	41.83	22.33	16.42	0.5191	0.2771	0.2611
	46 m75o	1.0	0.0	0.25	53.77	75.75	32.91	82.58	23	40.58	21.76	9.08	0.5681	0.3047	0.2544
	47 m88o	1.0	0.0	0.125	53.38	74.81	51.24	90.68	34	39.73	21.39	4.35	0.6068	0.3268	0.2501
	48 o00y	1.0	0.0	0.0	54.24	76.01	57.83	95.51	37	41.31	22.2	3.45	0.617	0.3315	0.2595
	49 n00w	0.0	0.0	0.0	10.99	0.0	0.0	0.01	0	1.2	1.26	1.37	0.3127	0.329	0.0147
	50 n13w	0.125	0.125	0.125	16.71	-0.23	0.05	0.25	169	2.12	2.24	2.44	0.3119	0.3299	0.0262
	51 n25w	0.25	0.25	0.25	30.82	0.0	-0.86	0.87	269	6.25	6.57	7.39	0.3091	0.3253	0.0769
	52 n38w	0.375	0.375	0.375	43.57	0.82	-2.07	2.23	292	13.0	13.55	15.66	0.308	0.3209	0.1584
	53 n50w	0.5	0.5	0.5	55.09	1.55	-3.03	3.41	297	22.21	23.02	26.97	0.3076	0.3188	0.2691
	54 n63w	0.625	0.625	0.625	66.17	1.92	-3.55	4.05	298	34.33	35.54	41.69	0.3077	0.3186	0.4155
	55 n75w	0.75	0.75	0.75	76.29	2.16	-3.58	4.19	301	48.65	50.36	58.63	0.3086	0.3195	0.5888
	56 n88w	0.875	0.875	0.875	85.52	1.65	-2.93	3.37	299	64.43	67.03	76.72	0.3095	0.322	0.7836
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0357

IE360-7N, Colorimetric data of Television Luminous System TLS11a for CIE standard illuminant D65; LCD monitor; Page: 11/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 11/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a

LCD monitor

D65 reflection:

$Y_N = 1.26$

$L^*_N = 11.0$

Y Yellow

$LCH^*_a = 94.1 \ 86.1 \ 101$

$LAB^*_a = 94.1 \ -15.7 \ 84.7$

L Leaf green

$LCH^*_a = 84.2 \ 109.1 \ 138$

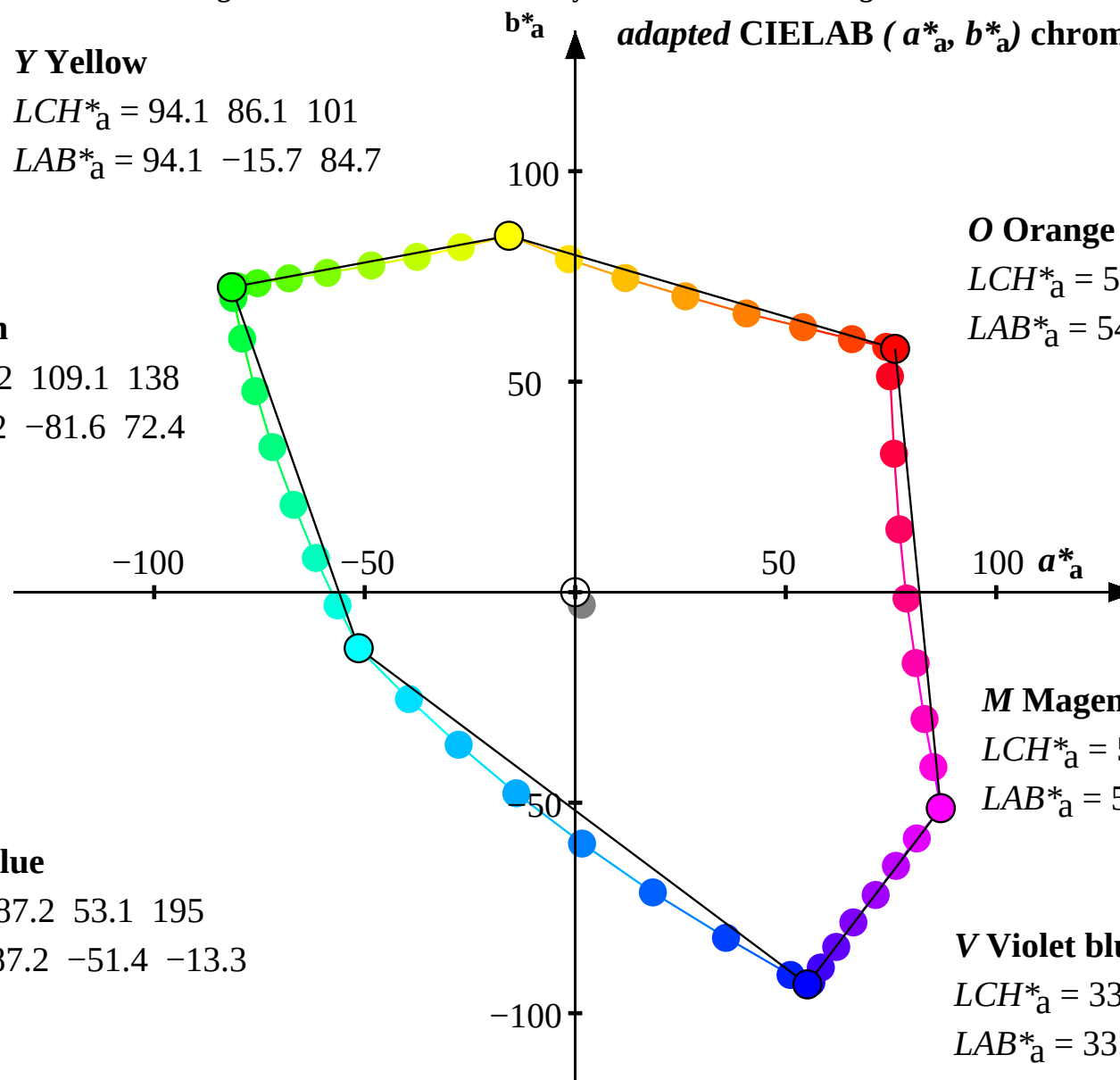
$LAB^*_a = 84.2 \ -81.6 \ 72.4$

C Cyan blue

$LCH^*_a = 87.2 \ 53.1 \ 195$

$LAB^*_a = 87.2 \ -51.4 \ -13.3$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 54.2 \ 95.5 \ 37$

$LAB^*_a = 54.2 \ 76.0 \ 57.8$

M Magenta red

$LCH^*_a = 59.6 \ 100.9 \ 329$

$LAB^*_a = 59.6 \ 86.8 \ -51.3$

V Violet blue

$LCH^*_a = 33.2 \ 108.2 \ 301$

$LAB^*_a = 33.2 \ 55.1 \ -93.1$

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	55.23	73.6	52.22	90.24	35	41.93	23.16	4.79	0.6001	0.3314	0.2706
	01 o13y	1.0	0.125	0.0	55.9	71.56	52.76	88.91	36	42.21	23.82	4.91	0.595	0.3357	0.2783
D65 reflection:	02 o25y	1.0	0.25	0.0	58.75	63.8	55.0	84.24	41	43.73	26.76	5.49	0.5756	0.3522	0.3126
$Y_N = 2.52$	03 o38y	1.0	0.375	0.0	62.94	52.65	58.41	78.63	48	46.12	31.52	6.38	0.5489	0.3751	0.3683
$L^*_N = 18.01$	04 o50y	1.0	0.5	0.0	68.04	39.74	62.19	73.81	57	49.39	38.03	7.7	0.5193	0.3998	0.4443
	05 o63y	1.0	0.625	0.0	74.03	25.6	66.82	71.56	69	53.82	46.75	9.4	0.4894	0.4251	0.5463
	06 o75y	1.0	0.75	0.0	80.34	11.68	71.52	72.47	81	59.17	57.29	11.52	0.4624	0.4477	0.6695
	07 o88y	1.0	0.875	0.0	86.66	-1.41	76.28	76.29	91	65.25	69.32	13.91	0.4395	0.4669	0.81
	08 y00l	1.0	1.0	0.0	94.13	-15.45	82.18	83.62	101	73.65	85.58	17.0	0.4179	0.4856	1.0
	09 y13l	0.875	1.0	0.0	92.05	-26.66	79.42	83.77	109	64.36	80.82	16.62	0.3978	0.4995	0.9444
	10 y25l	0.75	1.0	0.0	90.3	-36.95	77.17	85.56	116	56.83	76.96	16.26	0.3787	0.5129	0.8992
	11 y38l	0.625	1.0	0.0	88.66	-47.57	75.14	88.94	122	49.97	73.45	15.9	0.3587	0.5272	0.8583
	12 y50l	0.5	1.0	0.0	87.2	-57.76	73.37	93.38	128	44.09	70.41	15.56	0.339	0.5414	0.8228
	13 y63l	0.375	1.0	0.0	86.04	-66.5	72.05	98.06	133	39.56	68.07	15.26	0.3219	0.5539	0.7953
	14 y75l	0.25	1.0	0.0	85.14	-73.75	70.85	102.28	136	36.13	66.28	15.1	0.3074	0.5641	0.7745
	15 y88l	0.125	1.0	0.0	84.55	-78.55	70.13	105.32	138	33.97	65.13	14.97	0.2978	0.571	0.761
	16 l00c	0.0	1.0	0.0	84.4	-79.73	69.93	106.06	139	33.44	64.83	14.94	0.2954	0.5726	0.7575
	17 l13c	0.0	1.0	0.125	84.43	-79.35	67.54	104.21	140	33.59	64.89	16.03	0.2933	0.5667	0.7583
	18 l25c	0.0	1.0	0.25	84.53	-77.32	58.47	96.94	143	34.3	65.09	20.63	0.2858	0.5423	0.7606
	19 l38c	0.0	1.0	0.375	84.79	-74.28	46.53	87.66	148	35.51	65.59	28.04	0.275	0.5079	0.7664
	20 l50c	0.0	1.0	0.5	85.14	-70.36	33.63	77.99	154	37.15	66.28	37.95	0.2628	0.4688	0.7745
	21 l63c	0.0	1.0	0.625	85.59	-65.45	20.37	68.55	163	39.28	67.17	50.47	0.2503	0.4281	0.7849
	22 l75c	0.0	1.0	0.75	86.12	-60.37	7.94	60.9	173	41.66	68.23	64.68	0.2386	0.3909	0.7973
	23 l88c	0.0	1.0	0.875	86.68	-55.28	-3.1	55.37	183	44.17	69.36	79.56	0.2288	0.3592	0.8104
	24 c00v	0.0	1.0	1.0	87.31	-50.42	-13.13	52.11	195	46.82	70.64	95.22	0.2201	0.3322	0.8255
	25 c13v	0.0	0.875	1.0	78.97	-38.61	-24.92	45.97	213	38.74	54.88	91.41	0.2094	0.2966	0.6413
	26 c25v	0.0	0.75	1.0	71.54	-26.96	-35.51	44.6	233	32.7	42.98	88.23	0.1995	0.2622	0.5022
	27 c38v	0.0	0.675	1.0	63.81	-13.47	-46.76	48.68	254	27.46	32.57	85.31	0.1889	0.2241	0.3806
	28 c50v	0.0	0.5	1.0	55.94	1.6	-58.15	58.18	272	23.02	23.85	82.31	0.1782	0.1846	0.2787
	29 c63v	0.0	0.375	1.0	48.73	17.48	-69.2	71.39	284	19.81	17.37	80.45	0.1684	0.1477	0.203
	30 c75v	0.0	0.25	1.0	42.02	33.64	-79.19	68.05	293	17.37	12.51	78.37	0.1604	0.1156	0.1462
	31 c88v	0.0	0.125	1.0	36.88	47.37	-87.26	99.3	298	15.86	9.47	77.33	0.1545	0.0923	0.1107
	32 v00m	0.0	0.0	1.0	35.56	50.86	-89.23	102.71	300	15.48	8.78	76.92	0.153	0.0868	0.1026
	33 v13m	0.125	0.0	1.0	36.0	51.85	-88.85	102.88	300	15.99	9.01	77.43	0.1561	0.088	0.1053
	34 v25m	0.25	0.0	1.0	37.85	54.34	-85.6	101.4	302	17.87	10.0	77.34	0.1698	0.0951	0.1169
	35 v38m	0.375	0.0	1.0	40.72	58.32	-81.22	100.0	306	21.11	11.69	78.07	0.1904	0.1054	0.1366
	36 v50m	0.5	0.0	1.0	44.04	62.79	-75.77	98.42	310	25.29	13.87	78.46	0.215	0.1179	0.162
	37 v63m	0.625	0.0	1.0	47.98	68.34	-69.7	97.62	314	30.98	16.78	79.39	0.2436	0.1319	0.196
	38 v75m	0.75	0.0	1.0	52.0	73.48	-63.23	96.95	319	37.46	20.15	80.02	0.2722	0.1464	0.2354
	39 v88m	0.875	0.0	1.0	55.97	78.6	-56.96	97.08	324	44.69	23.88	80.78	0.2992	0.1599	0.2791
	40 m00o	1.0	0.0	1.0	60.38	84.55	-50.11	98.29	329	53.85	28.54	81.78	0.328	0.1739	0.3335
	41 m13o	1.0	0.0	0.875	59.21	82.72	-40.41	92.07	334	51.22	27.25	66.98	0.3522	0.1874	0.3184
	42 m25o	1.0	0.0	0.75	58.13	80.61	-29.28	85.76	340	48.71	26.1	52.77	0.3818	0.2046	0.3049
	43 m38o	1.0	0.0	0.675	57.08	78.49	-16.28	80.17	348	46.33	25.01	39.21	0.4191	0.2262	0.2922
	44 m50o	1.0	0.0	0.5	56.17	76.25	-1.45	76.27	359	44.18	24.08	27.16	0.463	0.2524	0.2814
	45 m63o	1.0	0.0	0.375	55.37	74.57	14.15	75.9	11	42.44	23.29	17.57	0.5095	0.2795	0.2721
	46 m75o	1.0	0.0	0.25	54.79	73.31	30.79	79.51	23	41.2	22.73	10.34	0.5548	0.306	0.2655
	47 m88o	1.0	0.0	0.125	54.41	72.36	46.67	86.1	33	40.37	22.36	5.68	0.5901	0.3269	0.2613
	48 o00y	1.0	0.0	0.0	55.23	73.6	52.22	90.24	35	41.93	23.16	4.79	0.6001	0.3314	0.2706
	49 n00w	0.0	0.0	0.0	18.01	0.0	0.0	0.01	0	2.4	2.52	2.74	0.3127	0.329	0.0294
	50 n13w	0.125	0.125	0.125	21.9	-0.17	0.04	0.18	169	3.3	3.49	3.79	0.3122	0.3296	0.0408
	51 n25w	0.25	0.25	0.25	33.47	0.0	-0.76	0.77	269	7.37	7.76	8.68	0.3097	0.3259	0.0907
	52 n38w	0.375	0.375	0.375	45.12	0.77	-1.94	2.09	292	14.03	14.63	16.83	0.3084	0.3216	0.1709
	53 n50w	0.5	0.5	0.5	56.05	1.48	-2.91	3.28	297	23.1	23.96	27.97	0.3079	0.3193	0.28
	54 n63w	0.625	0.625	0.625	66.75	1.87	-3.45	3.94	298	35.05	36.31	42.48	0.3079	0.3189	0.4242
	55 n75w	0.75	0.75	0.75	76.63	2.12	-3.5	4.1	301	49.16	50.92	59.18	0.3087	0.3197	0.5949
	56 n88w	0.875	0.875	0.875	85.68	1.62	-2.88	3.31	299	64.71	67.34	77.0	0.3095	0.3221	0.7868
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0351

IE360-7N, Colorimetric data of Television Luminous System TLS18a for CIE standard illuminant D65; LCD monitor; Page: 13/66

$$n = 88.59 / (88.59 - 1.23) = 1.014$$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 13/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a

LCD monitor

D65 reflection:

$Y_N = 2.52$

$L^*_N = 18.01$

Y Yellow

$LCH^*_a = 94.1 \ 83.6 \ 101$

$LAB^*_a = 94.1 \ -15.5 \ 82.2$

L Leaf green

$LCH^*_a = 84.4 \ 106.1 \ 139$

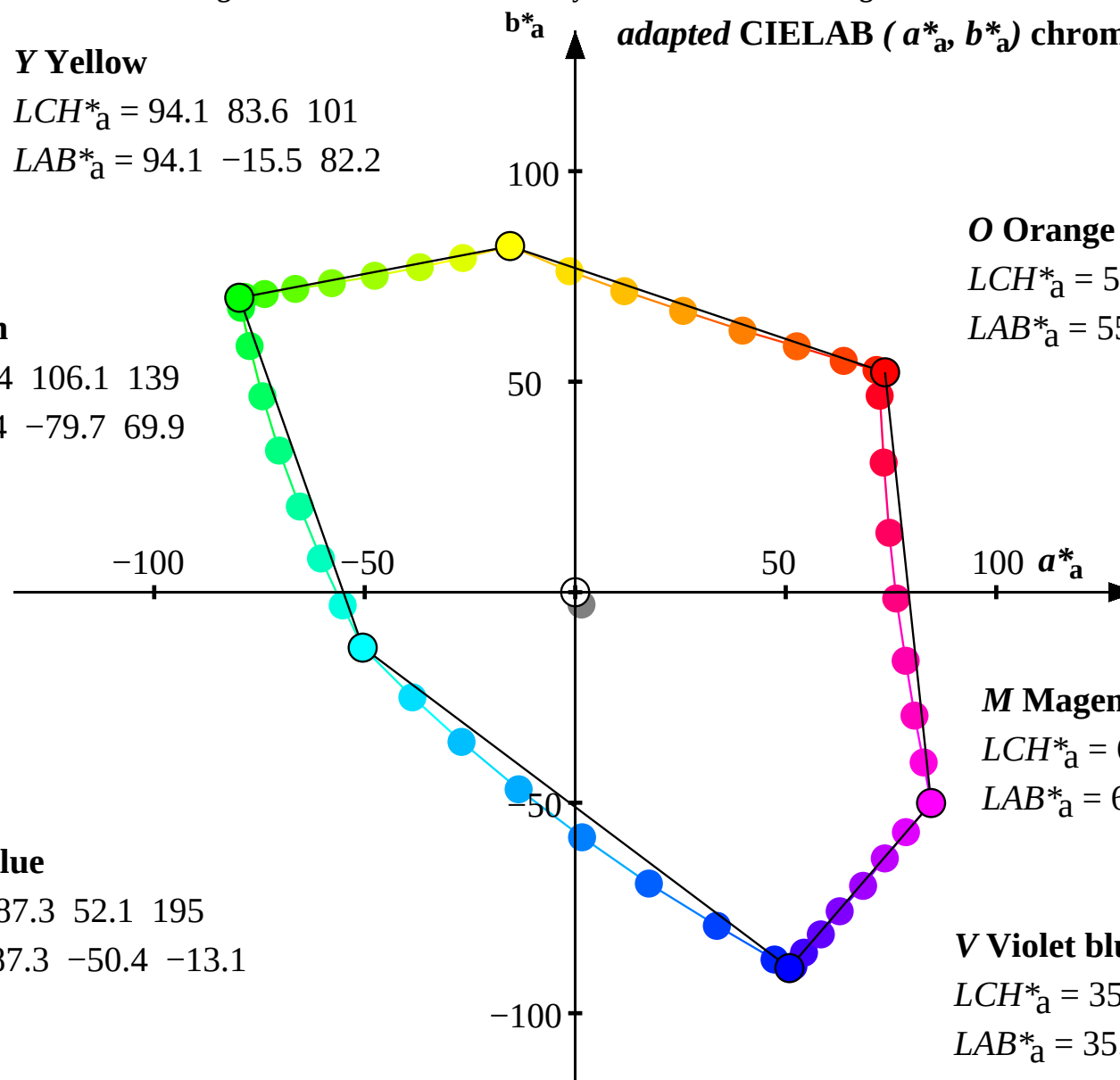
$LAB^*_a = 84.4 \ -79.7 \ 69.9$

C Cyan blue

$LCH^*_a = 87.3 \ 52.1 \ 195$

$LAB^*_a = 87.3 \ -50.4 \ -13.1$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 55.2 \ 90.2 \ 35$

$LAB^*_a = 55.2 \ 73.6 \ 52.2$

M Magenta red

$LCH^*_a = 60.4 \ 98.3 \ 329$

$LAB^*_a = 60.4 \ 84.5 \ -50.1$

V Violet blue

$LCH^*_a = 35.6 \ 102.7 \ 300$

$LAB^*_a = 35.6 \ 50.9 \ -89.2$

Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	57.14	69.06	44.23	82.01	33	43.17	25.07	7.47	0.5702	0.3311	0.2926
	01 o13y	1.0	0.125	0.0	57.76	67.21	44.85	80.8	34	43.44	25.71	7.59	0.566	0.335	0.3001
D65 reflection:	02 o25y	1.0	0.25	0.0	60.4	60.15	47.43	76.6	38	44.91	28.57	8.15	0.5502	0.35	0.3335
$Y_N = 5.04$	03 o38y	1.0	0.375	0.0	64.31	49.88	51.28	71.53	46	47.23	33.19	9.02	0.5281	0.371	0.3874
$L^*_N = 26.85$	04 o50y	1.0	0.5	0.0	69.12	37.85	55.63	67.28	56	50.41	39.51	10.3	0.503	0.3942	0.4612
	05 o63y	1.0	0.625	0.0	74.81	24.51	60.81	65.56	68	54.71	47.98	11.95	0.4772	0.4185	0.56
	06 o75y	1.0	0.75	0.0	80.86	11.23	66.04	66.98	80	59.91	58.21	14.0	0.4534	0.4406	0.6795
	07 o88y	1.0	0.875	0.0	86.94	-1.36	71.23	71.25	91	65.81	69.89	16.33	0.4329	0.4597	0.8158
	08 y00l	1.0	1.0	0.0	94.17	-14.97	77.54	78.98	101	73.96	85.67	19.33	0.4133	0.4787	1.0
	09 y13l	0.875	1.0	0.0	92.15	-25.78	74.8	79.12	109	64.94	81.05	18.96	0.3937	0.4914	0.9461
	10 y25l	0.75	1.0	0.0	90.46	-35.65	72.56	80.85	116	57.63	77.3	18.61	0.3754	0.5034	0.9023
	11 y38l	0.625	1.0	0.0	88.87	-45.8	70.53	84.1	123	50.97	73.9	18.26	0.3561	0.5163	0.8626
	12 y50l	0.5	1.0	0.0	87.46	-55.47	68.76	88.35	129	45.26	70.95	17.93	0.3374	0.5289	0.8281
	13 y63l	0.375	1.0	0.0	86.34	-63.73	67.43	92.78	133	40.86	68.67	17.64	0.3213	0.54	0.8015
	14 y75l	0.25	1.0	0.0	85.47	-70.53	66.24	96.77	137	37.53	66.94	17.48	0.3078	0.5489	0.7813
	15 y88l	0.125	1.0	0.0	84.9	-75.02	65.53	99.62	139	35.44	65.81	17.36	0.2988	0.5549	0.7682
	16 l00c	0.0	1.0	0.0	84.75	-76.12	65.32	100.31	139	34.93	65.52	17.33	0.2966	0.5563	0.7648
	17 l13c	0.0	1.0	0.125	84.79	-75.77	63.22	98.69	140	35.07	65.59	18.39	0.2946	0.5509	0.7656
	18 l25c	0.0	1.0	0.25	84.88	-73.86	55.09	92.15	143	35.76	65.78	22.85	0.2875	0.5288	0.7678
	19 l38c	0.0	1.0	0.375	85.13	-71.01	44.16	83.63	148	36.94	66.26	30.04	0.2772	0.4973	0.7735
	20 l50c	0.0	1.0	0.5	85.47	-67.32	32.12	74.6	154	38.53	66.94	39.66	0.2655	0.4612	0.7813
	21 l63c	0.0	1.0	0.625	85.91	-62.69	19.55	65.68	163	40.59	67.8	51.82	0.2534	0.4232	0.7914
	22 l75c	0.0	1.0	0.75	86.42	-57.9	7.65	58.41	172	42.9	68.83	65.61	0.2419	0.3881	0.8034
	23 l88c	0.0	1.0	0.875	86.96	-53.08	-2.99	53.17	183	45.34	69.92	80.06	0.2321	0.358	0.8161
	24 c00v	0.0	1.0	1.0	87.57	-48.47	-12.71	50.12	195	47.91	71.17	95.26	0.2235	0.332	0.8307
	25 c13v	0.0	0.875	1.0	79.54	-36.86	-24.04	44.02	213	40.08	55.87	91.56	0.2137	0.298	0.6521
	26 c25v	0.0	0.75	1.0	72.44	-25.52	-34.14	42.64	233	34.21	44.32	88.47	0.2049	0.2654	0.5173
	27 c38v	0.0	0.675	1.0	65.13	-12.62	-44.72	46.48	254	29.12	34.21	85.64	0.1955	0.2297	0.3994
	28 c50v	0.0	0.5	1.0	57.79	1.48	-55.25	55.28	272	24.81	25.74	82.72	0.1862	0.1932	0.3005
	29 c63v	0.0	0.375	1.0	51.22	15.86	-65.26	67.17	284	21.7	19.46	80.92	0.1777	0.1594	0.2271
	30 c75v	0.0	0.25	1.0	45.28	29.89	-73.98	79.8	292	19.32	14.74	78.9	0.1711	0.1305	0.1721
	31 c88v	0.0	0.125	1.0	40.88	41.24	-80.8	90.72	297	17.86	11.79	77.89	0.1661	0.1096	0.1376
	32 v00m	0.0	0.0	1.0	39.78	44.02	-82.39	93.42	298	17.5	11.12	77.49	0.1649	0.1048	0.1298
	33 v13m	0.125	0.0	1.0	40.15	45.04	-82.13	93.68	299	17.98	11.34	77.99	0.1676	0.1057	0.1324
	34 v25m	0.25	0.0	1.0	41.69	47.78	-79.4	92.67	301	19.81	12.3	77.9	0.1801	0.1118	0.1436
	35 v38m	0.375	0.0	1.0	44.15	52.12	-75.71	91.93	305	22.95	13.94	78.61	0.1987	0.1207	0.1627
	36 v50m	0.5	0.0	1.0	47.05	56.99	-71.0	91.05	309	27.01	16.06	78.99	0.2213	0.1315	0.1874
	37 v63m	0.625	0.0	1.0	50.55	62.94	-65.65	90.95	314	32.54	18.88	79.89	0.2478	0.1438	0.2204
	38 v75m	0.75	0.0	1.0	54.19	68.48	-59.83	90.94	319	38.83	22.15	80.5	0.2744	0.1566	0.2586
	39 v88m	0.875	0.0	1.0	57.82	73.93	-54.11	91.62	324	45.85	25.78	81.24	0.2999	0.1686	0.3009
	40 m00o	1.0	0.0	1.0	61.91	80.19	-47.78	93.35	329	54.74	30.3	82.21	0.3273	0.1812	0.3537
	41 m13o	1.0	0.0	0.875	60.82	78.29	-38.35	87.19	334	52.19	29.05	67.84	0.3501	0.1949	0.3391
	42 m25o	1.0	0.0	0.75	59.82	76.13	-27.62	80.99	340	49.75	27.93	54.05	0.3777	0.212	0.326
	43 m38o	1.0	0.0	0.675	58.85	73.98	-15.23	75.53	348	47.43	26.87	40.89	0.4118	0.2332	0.3136
	44 m50o	1.0	0.0	0.5	58.01	71.72	-1.34	71.73	359	45.35	25.97	29.18	0.4512	0.2584	0.3031
	45 m63o	1.0	0.0	0.375	57.27	70.0	12.86	71.17	10	43.67	25.2	19.88	0.492	0.2839	0.2941
	46 m75o	1.0	0.0	0.25	56.74	68.72	27.26	73.93	22	42.46	24.65	12.87	0.5309	0.3082	0.2878
	47 m88o	1.0	0.0	0.125	56.39	67.77	39.88	78.63	30	41.65	24.3	8.34	0.5607	0.3271	0.2837
	48 o00y	1.0	0.0	0.0	57.14	69.06	44.23	82.01	33	43.17	25.07	7.47	0.5702	0.3311	0.2926
	49 n00w	0.0	0.0	0.0	26.85	0.0	0.0	0.01	0	4.79	5.04	5.49	0.3127	0.329	0.0588
	50 n13w	0.125	0.125	0.125	29.36	-0.11	0.02	0.12	169	5.67	5.98	6.5	0.3124	0.3293	0.0698
	51 n25w	0.25	0.25	0.25	38.07	0.0	-0.61	0.62	269	9.62	10.12	11.25	0.3104	0.3267	0.1182
	52 n38w	0.375	0.375	0.375	48.0	0.68	-1.72	1.86	291	16.08	16.79	19.16	0.309	0.3228	0.196
	53 n50w	0.5	0.5	0.5	57.9	1.37	-2.69	3.03	297	24.89	25.85	29.98	0.3083	0.3203	0.3018
	54 n63w	0.625	0.625	0.625	67.9	1.77	-3.27	3.72	298	36.49	37.84	44.06	0.3082	0.3196	0.4417
	55 n75w	0.75	0.75	0.75	77.29	2.03	-3.36	3.93	301	50.19	52.02	60.27	0.3089	0.3202	0.6072
	56 n88w	0.875	0.875	0.875	85.99	1.56	-2.78	3.19	299	65.28	67.96	77.57	0.3097	0.3224	0.7933
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0341

IE360-7N, Colorimetric data of Television Luminous System TLS27a for CIE standard illuminant D65; LCD monitor; Page: 15/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 15/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a

LCD monitor

D65 reflection:

$Y_N = 5.04$

$L^*_N = 26.85$

Y Yellow

$LCH^*_a = 94.2 \ 79.0 \ 101$

$LAB^*_a = 94.2 \ -15.0 \ 77.5$

L Leaf green

$LCH^*_a = 84.8 \ 100.3 \ 139$

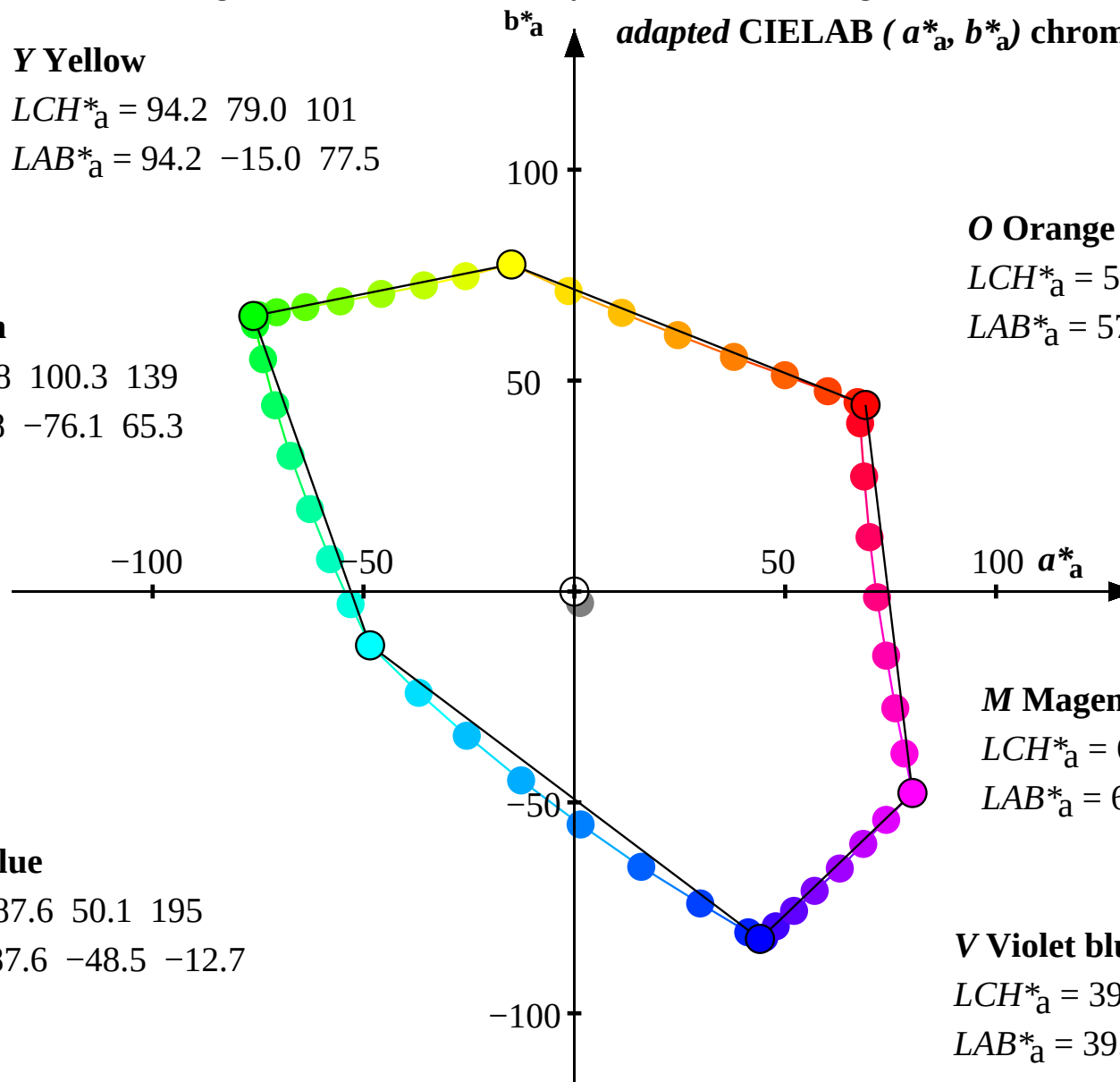
$LAB^*_a = 84.8 \ -76.1 \ 65.3$

C Cyan blue

$LCH^*_a = 87.6 \ 50.1 \ 195$

$LAB^*_a = 87.6 \ -48.5 \ -12.7$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 57.1 \ 82.0 \ 33$

$LAB^*_a = 57.1 \ 69.1 \ 44.2$

M Magenta red

$LCH^*_a = 61.9 \ 93.3 \ 329$

$LAB^*_a = 61.9 \ 80.2 \ -47.8$

V Violet blue

$LCH^*_a = 39.8 \ 93.4 \ 298$

$LAB^*_a = 39.8 \ 44.0 \ -82.4$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	60.7	60.97	34.16	69.88	29	45.64	28.9	12.84	0.5223	0.3308	0.3367
	01 o13y	1.0	0.125	0.0	61.23	59.42	34.78	68.85	30	45.9	29.51	12.96	0.5195	0.3339	0.3437
	02 o25y	1.0	0.25	0.0	63.5	53.52	37.39	65.29	35	47.28	32.19	13.48	0.5087	0.3463	0.375
D65 reflection:	03 o38y	1.0	0.375	0.0	66.92	44.76	41.32	60.92	43	49.46	36.53	14.3	0.4932	0.3642	0.4255
$Y_N = 10.08$	04 o50y	1.0	0.5	0.0	71.19	34.28	45.91	57.3	53	52.45	42.47	15.5	0.475	0.3846	0.4947
$L^*_N = 37.99$	05 o63y	1.0	0.625	0.0	76.33	22.42	51.39	56.07	66	56.49	50.43	17.05	0.4557	0.4068	0.5874
	06 o75y	1.0	0.75	0.0	81.86	10.36	57.01	57.94	80	61.37	60.04	18.98	0.4371	0.4277	0.6994
	07 o88y	1.0	0.875	0.0	87.49	-1.27	62.59	62.6	91	66.92	71.02	21.16	0.4206	0.4464	0.8272
	08 y00l	1.0	1.0	0.0	94.25	-14.02	69.3	70.7	101	74.57	85.85	23.98	0.4044	0.4655	1.0
	09 y13l	0.875	1.0	0.0	92.36	-24.04	66.63	70.84	110	66.1	81.51	23.63	0.386	0.476	0.9494
	10 y25l	0.75	1.0	0.0	90.77	-33.11	64.45	72.46	117	59.23	77.98	23.3	0.369	0.4858	0.9083
	11 y38l	0.625	1.0	0.0	89.29	-42.34	62.47	75.47	124	52.98	74.78	22.98	0.3515	0.4961	0.8711
	12 y50l	0.5	1.0	0.0	87.97	-51.05	60.73	79.35	130	47.61	72.01	22.67	0.3346	0.5061	0.8388
	13 y63l	0.375	1.0	0.0	86.93	-58.4	59.42	83.32	135	43.48	69.87	22.39	0.3203	0.5147	0.8139
	14 y75l	0.25	1.0	0.0	86.13	-64.41	58.28	86.87	138	40.35	68.24	22.25	0.3084	0.5216	0.7949
	15 y88l	0.125	1.0	0.0	85.6	-68.34	57.58	89.37	140	38.38	67.19	22.13	0.3006	0.5262	0.7826
	16 l00c	0.0	1.0	0.0	85.46	-69.29	57.39	89.98	140	37.9	66.92	22.1	0.2986	0.5272	0.7795
	17 l13c	0.0	1.0	0.125	85.49	-68.98	55.71	88.67	141	38.04	66.98	23.1	0.2969	0.5228	0.7802
	18 l25c	0.0	1.0	0.25	85.58	-67.3	49.05	83.28	144	38.69	67.16	27.29	0.2906	0.5045	0.7823
	19 l38c	0.0	1.0	0.375	85.81	-64.78	39.78	76.03	148	39.79	67.61	34.05	0.2813	0.478	0.7876
	20 l50c	0.0	1.0	0.5	86.13	-61.53	29.25	68.14	155	41.28	68.24	43.09	0.2705	0.4472	0.7949
	21 l63c	0.0	1.0	0.625	86.53	-57.42	17.97	60.18	163	43.22	69.06	54.51	0.2592	0.414	0.8044
	22 l75c	0.0	1.0	0.75	87.01	-53.15	7.08	53.63	172	45.39	70.02	67.47	0.2482	0.3829	0.8156
	23 l88c	0.0	1.0	0.875	87.51	-48.83	-2.78	48.92	183	47.69	71.05	81.05	0.2387	0.3556	0.8276
	24 c00v	0.0	1.0	1.0	88.07	-44.69	-11.88	46.25	195	50.1	72.22	95.33	0.2302	0.3318	0.8413
	25 c13v	0.0	0.875	1.0	80.65	-33.53	-22.33	40.3	214	42.74	57.84	91.85	0.2221	0.3006	0.6738
	26 c25v	0.0	0.75	1.0	74.18	-22.87	-31.47	38.92	234	37.23	46.99	88.96	0.215	0.2713	0.5474
	27 c38v	0.0	0.675	1.0	67.65	-11.09	-40.86	32.44	255	32.44	37.49	86.29	0.2077	0.24	0.4368
	28 c50v	0.0	0.5	1.0	61.25	1.27	-49.9	49.93	271	28.39	29.54	83.55	0.2007	0.2088	0.3441
	29 c63v	0.0	0.375	1.0	55.71	13.25	-58.2	59.7	283	25.47	23.63	81.85	0.1945	0.1804	0.2752
	30 c75v	0.0	0.25	1.0	50.92	24.22	-65.06	69.43	290	23.24	19.2	79.96	0.1899	0.1568	0.2236
	31 c88v	0.0	0.125	1.0	47.52	32.57	-70.19	77.39	295	21.87	16.42	79.01	0.1864	0.14	0.1913
	32 v00m	0.0	0.0	1.0	46.7	34.5	-71.33	79.25	296	21.52	15.79	78.64	0.1856	0.1362	0.1839
	33 v13m	0.125	0.0	1.0	46.98	35.46	-71.21	79.56	296	21.98	16.0	79.11	0.1877	0.1367	0.1864
	34 v25m	0.25	0.0	1.0	48.14	38.22	-69.14	79.01	299	23.69	16.9	79.02	0.1981	0.1413	0.1969
	35 v38m	0.375	0.0	1.0	50.03	42.65	-66.39	78.91	303	26.65	18.44	79.69	0.2136	0.1478	0.2148
	36 v50m	0.5	0.0	1.0	52.32	47.69	-62.7	78.78	307	30.46	20.43	80.04	0.2327	0.156	0.238
	37 v63m	0.625	0.0	1.0	55.16	53.89	-58.44	79.5	313	35.65	23.08	80.89	0.2553	0.1653	0.2689
	38 v75m	0.75	0.0	1.0	58.19	59.76	-53.65	80.31	318	41.57	26.16	81.47	0.2786	0.1753	0.3047
	39 v88m	0.875	0.0	1.0	61.28	65.54	-48.83	81.74	323	48.16	29.57	82.16	0.3012	0.1849	0.3444
	40 m00o	1.0	0.0	1.0	64.82	72.12	-43.4	84.18	329	56.52	33.82	83.07	0.3259	0.195	0.3939
	41 m13o	1.0	0.0	0.875	63.87	70.16	-34.54	78.21	334	54.12	32.64	69.57	0.3462	0.2088	0.3802
	42 m25o	1.0	0.0	0.75	63.0	67.97	-24.6	72.29	340	51.82	31.59	56.61	0.3701	0.2256	0.3679
	43 m38o	1.0	0.0	0.675	62.16	65.8	-13.36	67.15	349	49.65	30.59	44.24	0.3989	0.2457	0.3563
	44 m50o	1.0	0.0	0.5	61.44	63.56	-1.15	63.57	359	47.69	29.75	33.24	0.4309	0.2688	0.3465
	45 m63o	1.0	0.0	0.375	60.8	61.85	10.77	62.78	10	46.11	29.02	24.5	0.4628	0.2913	0.3381
	46 m75o	1.0	0.0	0.25	60.35	60.57	22.05	64.46	20	44.98	28.51	17.91	0.4921	0.3119	0.3321
	47 m88o	1.0	0.0	0.125	60.05	59.63	31.02	67.22	27	44.22	28.18	13.65	0.5139	0.3275	0.3282
	48 o00y	1.0	0.0	0.0	60.7	60.97	34.16	69.88	29	45.64	28.9	12.84	0.5223	0.3308	0.3367
	49 n00w	0.0	0.0	0.0	37.99	0.0	0.0	0.01	0	9.58	10.08	10.98	0.3127	0.329	0.1174
	50 n13w	0.125	0.125	0.125	39.52	-0.06	0.02	0.08	169	10.41	10.96	11.93	0.3126	0.3292	0.1277
	51 n25w	0.25	0.25	0.25	45.44	0.0	-0.45	0.46	269	14.12	14.86	16.39	0.3113	0.3275	0.1731
	52 n38w	0.375	0.375	0.375	53.09	0.55	-1.39	1.5	291	20.19	21.13	23.82	0.3099	0.3243	0.2461
	53 n50w	0.5	0.5	0.5	61.34	1.18	-2.32	2.61	297	28.47	29.64	33.99	0.3091	0.3218	0.3452
	54 n63w	0.625	0.625	0.625	70.11	1.58	-2.92	3.33	298	39.37	40.9	47.22	0.3088	0.3208	0.4764
	55 n75w	0.75	0.75	0.75	78.59	1.85	-3.07	3.6	301	52.24	54.22	62.45	0.3093	0.321	0.6316
	56 n88w	0.875	0.875	0.875	86.61	1.45	-2.58	2.97	299	66.42	69.21	78.71	0.3099	0.3229	0.8062
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.032

IE360-7N, Colorimetric data of Television Luminous System TLS38a for CIE standard illuminant D65; LCD monitor; Page: 17/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 17/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a

LCD monitor

D65 reflection:

$Y_N = 10.08$

$L^*_N = 37.99$

Y Yellow

$LCH^*_a = 94.2 \ 70.7 \ 101$

$LAB^*_a = 94.2 \ -14.0 \ 69.3$

L Leaf green

$LCH^*_a = 85.5 \ 90.0 \ 140$

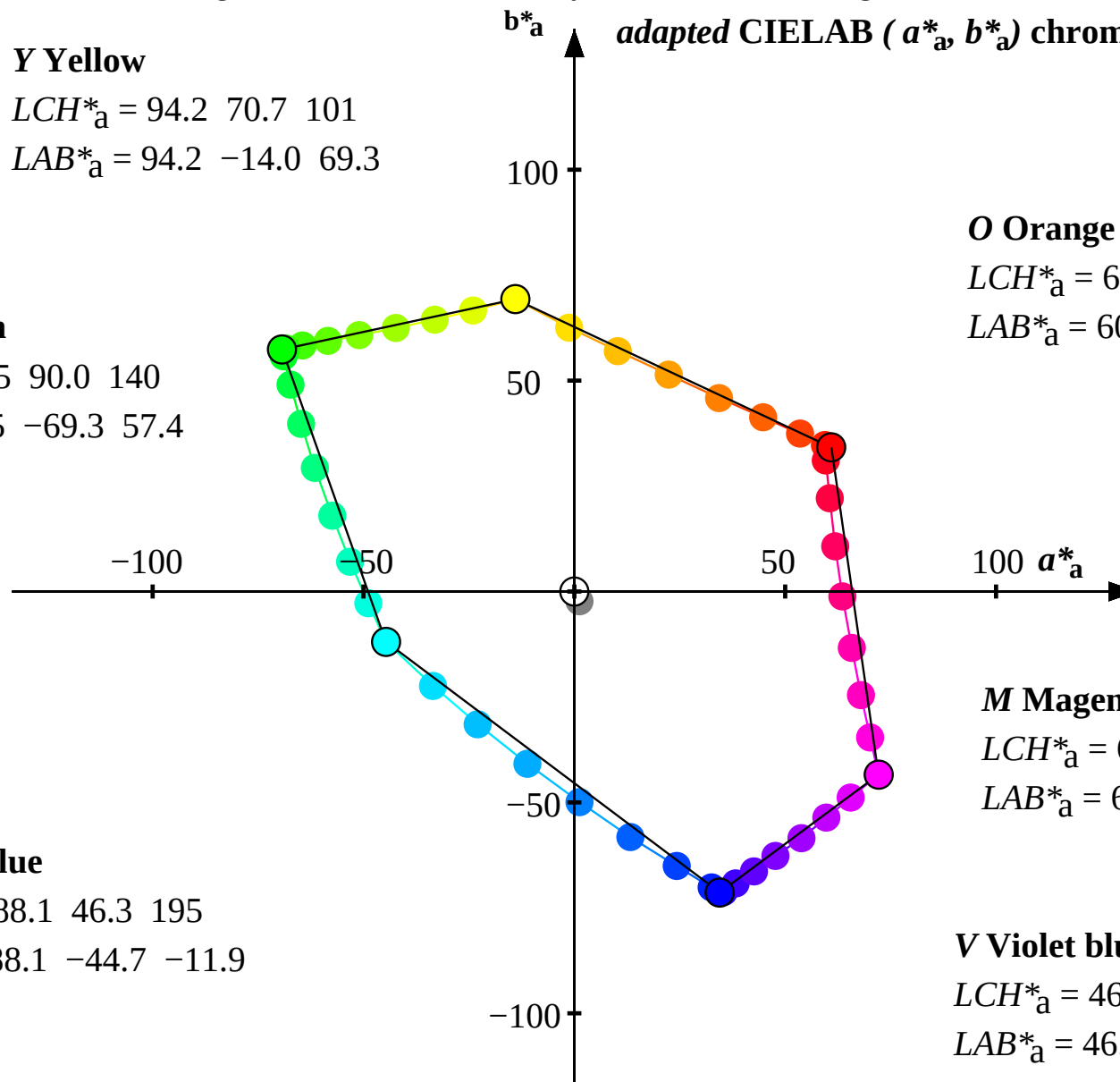
$LAB^*_a = 85.5 \ -69.3 \ 57.4$

C Cyan blue

$LCH^*_a = 88.1 \ 46.3 \ 195$

$LAB^*_a = 88.1 \ -44.7 \ -11.9$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 60.7 \ 69.9 \ 29$

$LAB^*_a = 60.7 \ 61.0 \ 34.2$

M Magenta red

$LCH^*_a = 64.8 \ 84.2 \ 329$

$LAB^*_a = 64.8 \ 72.1 \ -43.4$

V Violet blue

$LCH^*_a = 46.7 \ 79.2 \ 296$

$LAB^*_a = 46.7 \ 34.5 \ -71.3$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	66.95	47.68	22.92	52.9	26	50.59	36.57	23.58	0.4569	0.3302	0.4242
	01 o13y	1.0	0.125	0.0	67.35	46.58	23.43	52.14	27	50.82	37.09	23.68	0.4554	0.3324	0.4303
D65 reflection:	02 o25y	1.0	0.25	0.0	69.06	42.36	25.62	49.51	31	52.02	39.43	24.13	0.4501	0.3411	0.4574
$Y_N = 20.16$	03 o38y	1.0	0.375	0.0	71.7	35.91	28.99	46.15	39	53.92	43.21	24.84	0.4421	0.3543	0.5013
$L^*_N = 52.02$	04 o50y	1.0	0.5	0.0	75.07	27.93	33.11	43.32	50	56.52	48.39	25.89	0.4321	0.3699	0.5614
	05 o63y	1.0	0.625	0.0	79.23	18.57	38.16	42.44	64	60.05	55.33	27.24	0.421	0.3879	0.6418
	06 o75y	1.0	0.75	0.0	83.81	8.72	43.52	44.39	79	64.3	63.71	28.93	0.4097	0.4059	0.7391
	07 o88y	1.0	0.875	0.0	88.58	-1.08	48.98	48.99	91	69.13	73.27	30.83	0.3991	0.423	0.85
	08 y00l	1.0	1.0	0.0	94.4	-12.14	55.61	56.92	102	75.81	86.2	33.29	0.3882	0.4414	1.0
	09 y13l	0.875	1.0	0.0	92.76	-20.64	53.2	57.06	111	68.43	82.42	32.98	0.3722	0.4483	0.9561
	10 y25l	0.75	1.0	0.0	91.39	-28.21	51.22	58.48	119	62.44	79.34	32.7	0.3579	0.4547	0.9204
	11 y38l	0.625	1.0	0.0	90.12	-35.77	49.42	61.02	126	56.98	76.56	32.41	0.3434	0.4613	0.8881
	12 y50l	0.5	1.0	0.0	88.99	-42.77	47.85	64.18	132	52.31	74.14	32.14	0.3298	0.4675	0.8601
	13 y63l	0.375	1.0	0.0	88.1	-48.57	46.65	67.35	136	48.71	72.27	31.9	0.3186	0.4728	0.8384
	14 y75l	0.25	1.0	0.0	87.41	-53.23	45.64	70.13	139	45.98	70.85	31.78	0.3094	0.4768	0.822
	15 y88l	0.125	1.0	0.0	86.96	-56.24	45.01	72.04	141	44.26	69.93	31.67	0.3034	0.4794	0.8113
	16 l00c	0.0	1.0	0.0	86.85	-56.96	44.84	72.5	142	43.85	69.7	31.65	0.302	0.48	0.8086
	17 l13c	0.0	1.0	0.125	86.87	-56.72	43.69	71.6	142	43.96	69.75	32.52	0.3006	0.477	0.8092
	18 l25c	0.0	1.0	0.25	86.95	-55.41	38.99	67.76	145	44.53	69.91	36.17	0.2957	0.4642	0.811
	19 l38c	0.0	1.0	0.375	87.15	-53.46	32.18	62.41	149	45.49	70.3	42.06	0.2882	0.4454	0.8156
	20 l50c	0.0	1.0	0.5	87.41	-50.93	24.06	56.34	155	46.79	70.85	49.94	0.2792	0.4228	0.822
	21 l63c	0.0	1.0	0.625	87.76	-47.7	15.02	50.02	163	48.49	71.56	59.9	0.2694	0.3977	0.8302
	22 l75c	0.0	1.0	0.75	88.16	-44.33	6.0	44.74	172	50.37	72.4	71.2	0.2597	0.3733	0.84
	23 l88c	0.0	1.0	0.875	88.59	-40.88	-2.38	40.96	183	52.37	73.3	83.02	0.251	0.3512	0.8503
	24 c00v	0.0	1.0	1.0	89.07	-37.56	-10.26	38.95	195	54.48	74.32	95.47	0.2429	0.3314	0.8622
	25 c13v	0.0	0.875	1.0	82.8	-27.51	-19.03	33.46	215	48.06	61.79	92.45	0.2376	0.3054	0.7168
	26 c25v	0.0	0.75	1.0	77.48	-18.3	-26.46	32.19	235	43.26	52.33	89.92	0.2332	0.2821	0.6071
	27 c38v	0.0	0.675	1.0	72.26	-8.61	-33.82	34.91	256	39.09	44.05	87.6	0.2289	0.258	0.5111
	28 c50v	0.0	0.5	1.0	67.37	0.95	-40.56	40.58	271	35.56	37.12	85.21	0.2252	0.2351	0.4306
	29 c63v	0.0	0.375	1.0	63.32	9.58	-46.47	47.46	282	33.01	31.97	83.73	0.222	0.215	0.3709
	30 c75v	0.0	0.25	1.0	59.98	16.9	-51.01	53.74	288	31.06	28.11	82.08	0.2199	0.199	0.3261
	31 c88v	0.0	0.125	1.0	57.74	22.1	-54.26	58.6	292	29.87	25.69	81.25	0.2183	0.1878	0.298
	32 v00m	0.0	0.0	1.0	57.21	23.24	-54.93	59.66	293	29.57	25.14	80.92	0.218	0.1853	0.2916
	33 v13m	0.125	0.0	1.0	57.39	23.99	-54.93	59.95	294	29.97	25.32	81.33	0.2193	0.1853	0.2937
	34 v25m	0.25	0.0	1.0	58.14	26.31	-53.58	59.7	296	31.46	26.11	81.26	0.2266	0.1881	0.3029
	35 v38m	0.375	0.0	1.0	59.39	30.12	-51.86	59.98	300	34.04	27.45	81.84	0.2375	0.1915	0.3184
	36 v50m	0.5	0.0	1.0	60.94	34.63	-49.41	60.34	305	37.36	29.18	82.15	0.2513	0.1963	0.3386
	37 v63m	0.625	0.0	1.0	62.92	40.32	-46.54	61.58	311	41.89	31.49	82.89	0.268	0.2015	0.3654
	38 v75m	0.75	0.0	1.0	65.1	45.93	-43.15	63.03	317	47.04	34.17	83.39	0.2858	0.2076	0.3965
	39 v88m	0.875	0.0	1.0	67.38	51.59	-39.65	65.07	322	52.79	37.14	83.99	0.3035	0.2136	0.4309
	40 m00o	1.0	0.0	1.0	70.07	58.11	-35.6	68.15	329	60.07	40.85	84.79	0.3235	0.22	0.4739
	41 m13o	1.0	0.0	0.875	69.34	56.2	-27.91	62.75	334	57.98	39.82	73.02	0.3394	0.2331	0.462
	42 m25o	1.0	0.0	0.75	68.68	54.12	-19.51	57.53	340	55.98	38.9	61.72	0.3575	0.2484	0.4513
	43 m38o	1.0	0.0	0.675	68.05	52.07	-10.35	53.09	349	54.09	38.04	50.95	0.378	0.2659	0.4413
	44 m50o	1.0	0.0	0.5	67.5	50.02	-0.86	50.03	359	52.38	37.3	41.36	0.3997	0.2847	0.4327
	45 m63o	1.0	0.0	0.375	67.03	48.43	7.81	49.05	9	51.0	36.67	33.74	0.4201	0.302	0.4254
	46 m75o	1.0	0.0	0.25	66.69	47.25	15.4	49.7	18	50.02	36.22	27.99	0.4378	0.3171	0.4202
	47 m88o	1.0	0.0	0.125	66.47	46.4	20.9	50.89	24	49.35	35.94	24.28	0.4504	0.328	0.4169
	48 o00y	1.0	0.0	0.0	66.95	47.68	22.92	52.9	26	50.59	36.57	23.58	0.4569	0.3302	0.4242
	49 n00w	0.0	0.0	0.0	52.02	0.0	0.0	0.01	0	19.16	20.16	21.95	0.3127	0.329	0.2339
	50 n13w	0.125	0.125	0.125	52.87	-0.03	0.01	0.04	169	19.88	20.93	22.78	0.3126	0.3291	0.2428
	51 n25w	0.25	0.25	0.25	56.41	0.0	-0.28	0.29	269	23.12	24.32	26.67	0.3119	0.3282	0.2822
	52 n38w	0.375	0.375	0.375	61.47	0.38	-0.97	1.05	291	28.41	29.79	33.15	0.311	0.3261	0.3456
	53 n50w	0.5	0.5	0.5	67.43	0.88	-1.74	1.96	297	35.62	37.21	42.01	0.3102	0.324	0.4316
	54 n63w	0.625	0.625	0.625	74.2	1.25	-2.33	2.65	298	45.12	47.02	53.54	0.3097	0.3228	0.5455
	55 n75w	0.75	0.75	0.75	81.09	1.54	-2.55	2.98	301	56.34	58.64	66.82	0.3099	0.3225	0.6802
	56 n88w	0.875	0.875	0.875	87.82	1.24	-2.2	2.53	299	68.71	71.7	80.99	0.3103	0.3238	0.8317
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0277

IE360-7N, Colorimetric data of Television Luminous System TLS52a for CIE standard illuminant D65; LCD monitor; Page: 19/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 19/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a

LCD monitor

D65 reflection:

$Y_N = 20.16$

$L^*_N = 52.02$

Y Yellow

$LCH^*_a = 94.4 \ 56.9 \ 102$

$LAB^*_a = 94.4 \ -12.1 \ 55.6$

L Leaf green

$LCH^*_a = 86.8 \ 72.5 \ 142$

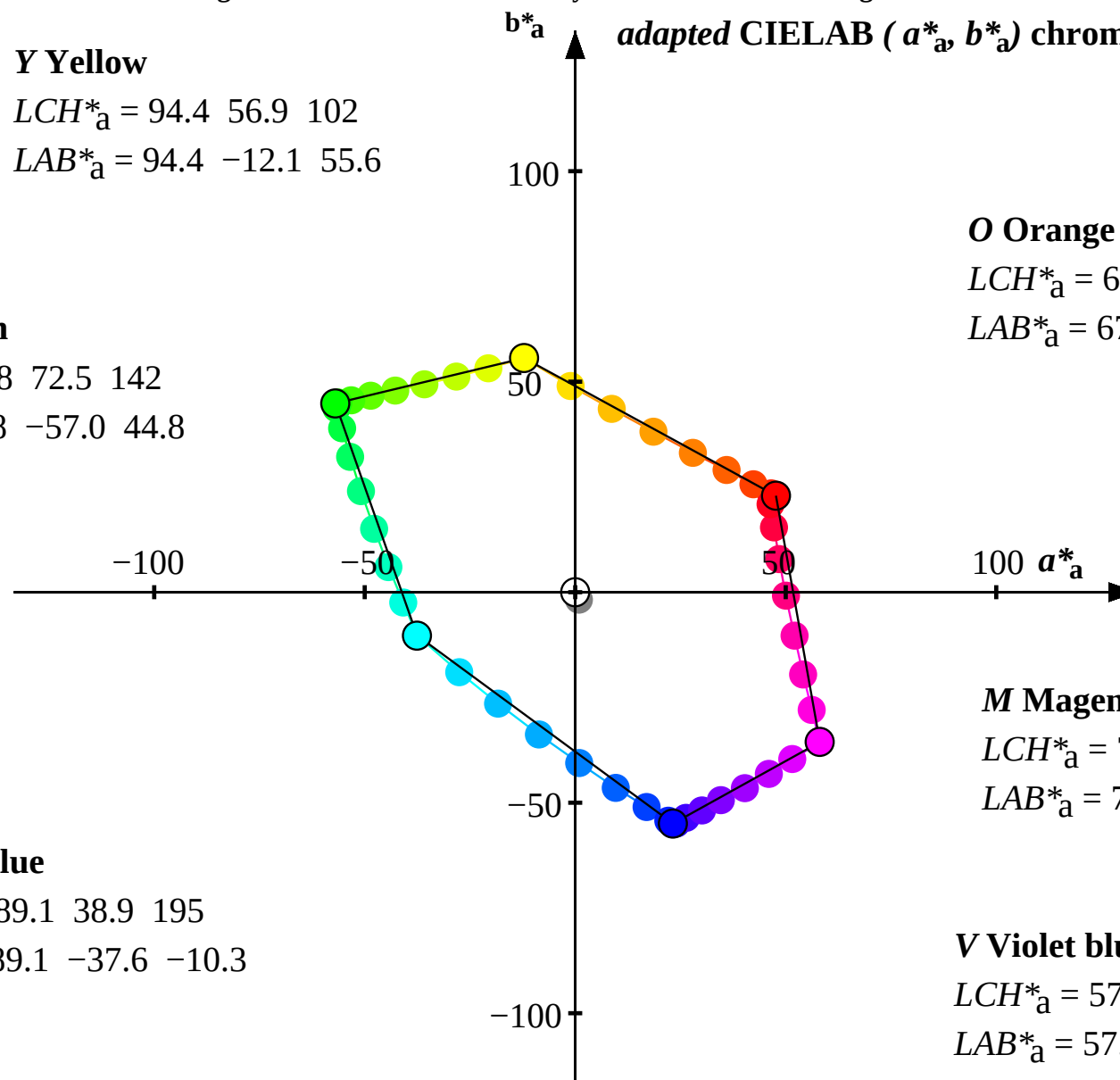
$LAB^*_a = 86.8 \ -57.0 \ 44.8$

C Cyan blue

$LCH^*_a = 89.1 \ 38.9 \ 195$

$LAB^*_a = 89.1 \ -37.6 \ -10.3$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 67.0 \ 52.9 \ 26$

$LAB^*_a = 67.0 \ 47.7 \ 22.9$

M Magenta red

$LCH^*_a = 70.1 \ 68.2 \ 329$

$LAB^*_a = 70.1 \ 58.1 \ -35.6$

V Violet blue

$LCH^*_a = 57.2 \ 59.7 \ 293$

$LAB^*_a = 57.2 \ 23.2 \ -54.9$

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	x_a	y_a	$Y_a/88.59$
LCD monitor	00 o00y	1.0	0.0	0.0	77.22	28.3	11.69	30.62	22	60.49	51.89	45.05	0.3842	0.3296	0.5971
	01 o13y	1.0	0.125	0.0	77.44	27.72	11.99	30.21	23	60.65	52.26	45.12	0.3838	0.3307	0.6014
D65 reflection:	02 o25y	1.0	0.25	0.0	78.41	25.53	13.32	28.8	28	61.5	53.91	45.44	0.3823	0.3352	0.6204
$Y_N = 40.32$	03 o38y	1.0	0.375	0.0	79.94	22.04	15.41	26.9	35	62.84	56.58	45.94	0.38	0.3422	0.6511
$L^*_N = 69.7$	04 o50y	1.0	0.5	0.0	81.96	17.53	18.1	25.2	46	64.67	60.23	46.68	0.3769	0.351	0.6931
	05 o63y	1.0	0.625	0.0	84.55	11.96	21.53	24.63	61	67.16	65.13	47.63	0.3733	0.362	0.7494
	06 o75y	1.0	0.75	0.0	87.5	5.76	25.38	26.02	77	70.16	71.04	48.82	0.3692	0.3738	0.8174
	07 o88y	1.0	0.875	0.0	90.68	-0.73	29.47	29.47	91	73.57	77.78	50.16	0.3651	0.386	0.8951
	08 y00l	1.0	1.0	0.0	94.7	-8.44	34.63	35.65	104	78.28	86.9	51.9	0.3606	0.4003	1.0
	09 y13l	0.875	1.0	0.0	93.55	-14.14	32.87	35.79	113	73.07	84.23	51.68	0.3496	0.4031	0.9693
	10 y25l	0.75	1.0	0.0	92.6	-19.06	31.44	36.77	121	68.85	82.07	51.48	0.3402	0.4055	0.9443
	11 y38l	0.625	1.0	0.0	91.73	-23.82	30.14	38.42	128	65.0	80.1	51.28	0.331	0.4079	0.9217
	12 y50l	0.5	1.0	0.0	90.96	-28.08	29.0	40.38	134	61.7	78.4	51.09	0.3227	0.4101	0.9021
	13 y63l	0.375	1.0	0.0	90.36	-31.51	28.14	42.25	138	59.16	77.08	50.92	0.3161	0.4118	0.887
	14 y75l	0.25	1.0	0.0	89.9	-34.2	27.43	43.85	141	57.24	76.08	50.83	0.3108	0.4131	0.8754
	15 y88l	0.125	1.0	0.0	89.59	-35.89	26.98	44.91	143	56.03	75.43	50.76	0.3075	0.414	0.868
	16 l00c	0.0	1.0	0.0	89.52	-36.29	26.86	45.16	143	55.73	75.26	50.74	0.3067	0.4141	0.8661
	17 l13c	0.0	1.0	0.125	89.53	-36.16	26.27	44.7	144	55.82	75.3	51.35	0.3059	0.4127	0.8665
	18 l25c	0.0	1.0	0.25	89.59	-35.39	23.8	42.66	146	56.21	75.41	53.93	0.303	0.4064	0.8678
	19 l38c	0.0	1.0	0.375	89.72	-34.27	20.06	39.71	150	56.89	75.69	58.09	0.2984	0.397	0.871
	20 l50c	0.0	1.0	0.5	89.9	-32.79	15.36	36.22	155	57.81	76.08	63.64	0.2927	0.3851	0.8754
	21 l63c	0.0	1.0	0.625	90.13	-30.89	9.82	32.42	162	59.01	76.58	70.67	0.2861	0.3713	0.8812
	22 l75c	0.0	1.0	0.75	90.4	-28.88	4.01	29.17	172	60.34	77.17	78.64	0.2792	0.357	0.888
	23 l88c	0.0	1.0	0.875	90.69	-26.8	-1.62	26.86	183	61.75	77.8	86.98	0.2726	0.3435	0.8953
	24 c00v	0.0	1.0	1.0	91.02	-24.78	-7.1	25.79	196	63.23	78.53	95.76	0.2662	0.3306	0.9036
	25 c13v	0.0	0.875	1.0	86.84	-17.45	-12.86	21.69	216	58.71	69.69	93.63	0.2644	0.3139	0.8019
	26 c25v	0.0	0.75	1.0	83.45	-11.18	-17.5	20.78	237	55.32	63.01	91.84	0.2632	0.2998	0.7251
	27 c38v	0.0	0.675	1.0	80.28	-5.05	-21.84	22.42	257	52.38	57.17	90.21	0.2622	0.2862	0.6579
	28 c50v	0.0	0.5	1.0	77.45	0.53	-25.54	25.55	271	49.89	52.28	88.52	0.2616	0.2742	0.6016
	29 c63v	0.0	0.375	1.0	75.23	5.18	-28.62	29.1	280	48.09	48.65	87.48	0.261	0.2641	0.5598
	30 c75v	0.0	0.25	1.0	73.5	8.84	-30.79	32.04	286	46.72	45.92	86.31	0.2611	0.2566	0.5285
	31 c88v	0.0	0.125	1.0	72.38	11.29	-32.3	34.23	289	45.87	44.22	85.73	0.2609	0.2515	0.5088
	32 v00m	0.0	0.0	1.0	72.11	11.8	-32.58	34.66	290	45.66	43.83	85.5	0.2609	0.2505	0.5044
	33 v13m	0.125	0.0	1.0	72.2	12.23	-32.64	34.87	291	45.94	43.96	85.79	0.2615	0.2502	0.5058
	34 v25m	0.25	0.0	1.0	72.57	13.61	-31.97	34.75	293	47.0	44.52	85.74	0.2651	0.2511	0.5122
	35 v38m	0.375	0.0	1.0	73.19	15.96	-31.19	35.04	297	48.81	45.46	86.15	0.2706	0.252	0.5231
	36 v50m	0.5	0.0	1.0	73.99	18.86	-29.98	35.42	302	51.16	46.68	86.37	0.2777	0.2534	0.5372
	37 v63m	0.625	0.0	1.0	75.02	22.68	-28.56	36.48	308	54.35	48.32	86.89	0.2867	0.2549	0.556
	38 v75m	0.75	0.0	1.0	76.2	26.68	-26.79	37.82	315	57.99	50.21	87.24	0.2967	0.2569	0.5777
	39 v88m	0.875	0.0	1.0	77.46	30.89	-24.91	39.69	321	62.04	52.3	87.67	0.3071	0.2589	0.6018
	40 m00o	1.0	0.0	1.0	78.99	35.95	-22.67	42.51	328	67.18	54.91	88.23	0.3194	0.2611	0.6319
	41 m13o	1.0	0.0	0.875	78.57	34.47	-17.35	38.59	333	65.7	54.19	79.92	0.3288	0.2712	0.6236
	42 m25o	1.0	0.0	0.75	78.19	32.91	-11.79	34.75	340	64.29	53.54	71.96	0.3388	0.2821	0.6161
	43 m38o	1.0	0.0	0.675	77.83	31.41	-6.05	31.99	349	62.96	52.93	64.35	0.3493	0.2937	0.6091
	44 m50o	1.0	0.0	0.5	77.53	29.94	-0.48	29.94	359	61.75	52.41	57.59	0.3595	0.3052	0.6031
	45 m63o	1.0	0.0	0.375	77.26	28.79	4.25	29.1	8	60.78	51.97	52.22	0.3684	0.315	0.598
	46 m75o	1.0	0.0	0.25	77.07	27.96	8.08	29.1	16	60.09	51.65	48.16	0.3758	0.323	0.5944
	47 m88o	1.0	0.0	0.125	76.95	27.37	10.68	29.38	21	59.62	51.45	45.55	0.3807	0.3285	0.592
	48 o00y	1.0	0.0	0.0	77.22	28.3	11.69	30.62	22	60.49	51.89	45.05	0.3842	0.3296	0.5971
	49 n00w	0.0	0.0	0.0	69.7	0.0	0.0	0.01	0	38.32	40.32	43.9	0.3127	0.329	0.464
	50 n13w	0.125	0.125	0.125	70.08	-0.01	0.0	0.02	169	38.83	40.86	44.49	0.3127	0.3291	0.4702
	51 n25w	0.25	0.25	0.25	71.73	0.0	-0.13	0.14	269	41.11	43.26	47.23	0.3124	0.3287	0.4978
	52 n38w	0.375	0.375	0.375	74.26	0.2	-0.5	0.55	291	44.84	47.11	51.8	0.3119	0.3277	0.5421
	53 n50w	0.5	0.5	0.5	77.49	0.5	-0.98	1.11	297	49.93	52.34	58.05	0.3114	0.3265	0.6023
	54 n63w	0.625	0.625	0.625	81.44	0.76	-1.41	1.61	298	56.64	59.27	66.19	0.311	0.3255	0.682
	55 n75w	0.75	0.75	0.75	85.74	0.99	-1.64	1.93	301	64.55	67.46	75.55	0.311	0.325	0.7763
	56 n88w	0.875	0.875	0.875	90.17	0.83	-1.49	1.71	299	73.27	76.67	85.55	0.3111	0.3256	0.8823
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0194

IE360-7N, Colorimetric data of Television Luminous System TLS70a for CIE standard illuminant D65; LCD monitor; Page: 21/66

$n = 88.59 / (88.59 - 1.23) = 1.014$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 21/66

output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a

LCD monitor

D65 reflection:

$Y_N = 40.32$

$L^*_N = 69.7$

Y Yellow

$LCH^*_a = 94.7 \ 35.6 \ 104$

$LAB^*_a = 94.7 \ -8.5 \ 34.6$

L Leaf green

$LCH^*_a = 89.5 \ 45.2 \ 143$

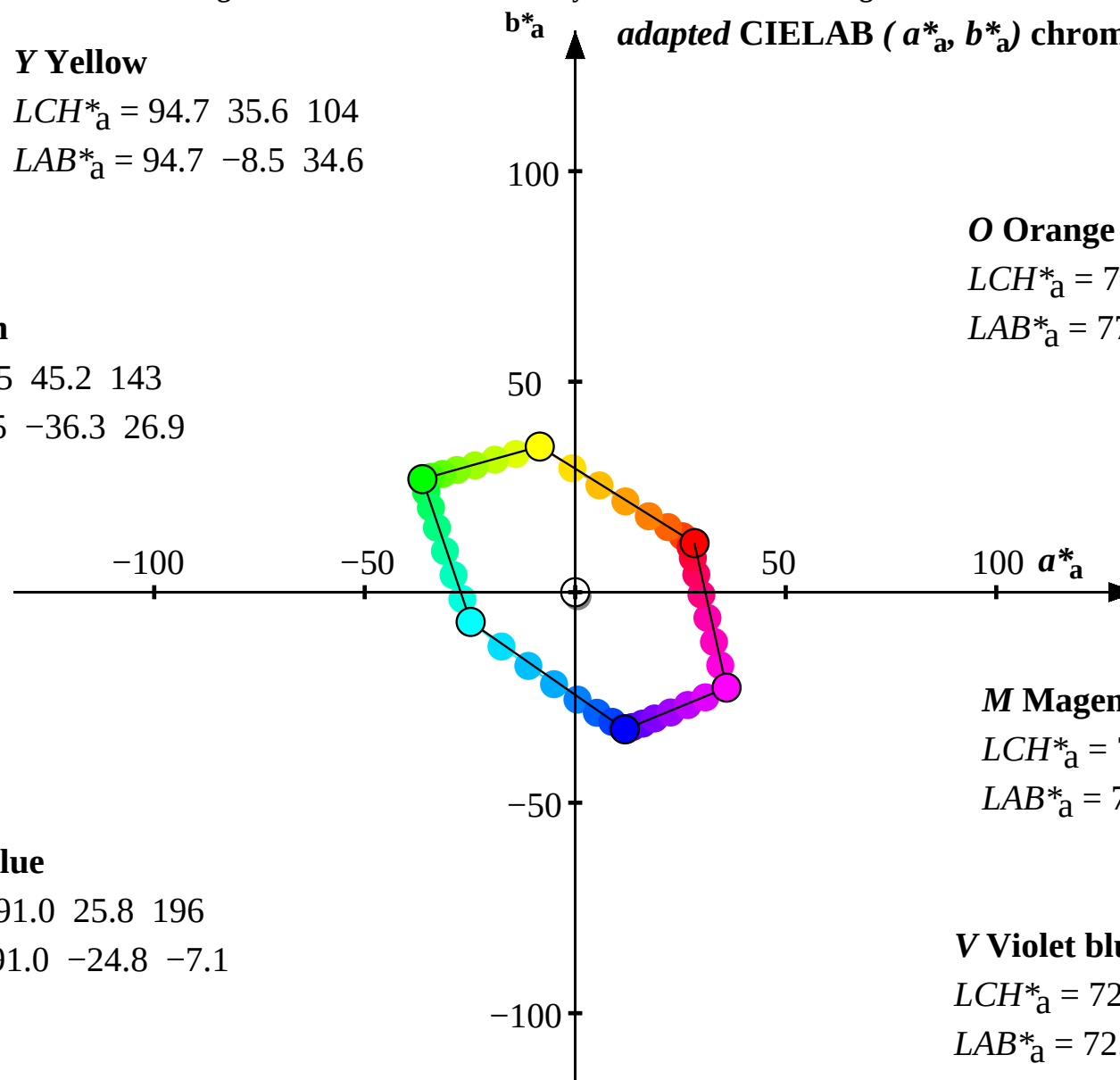
$LAB^*_a = 89.5 \ -36.3 \ 26.9$

C Cyan blue

$LCH^*_a = 91.0 \ 25.8 \ 196$

$LAB^*_a = 91.0 \ -24.8 \ -7.1$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 77.2 \ 30.6 \ 22$

$LAB^*_a = 77.2 \ 28.3 \ 11.7$

M Magenta red

$LCH^*_a = 79.0 \ 42.5 \ 328$

$LAB^*_a = 79.0 \ 36.0 \ -22.7$

V Violet blue

$LCH^*_a = 72.1 \ 34.7 \ 290$

$LAB^*_a = 72.1 \ 11.8 \ -32.6$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS00 for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_c=LAB^*_1c$	$a^*_c=LAB^*_2c$	$b^*_c=LAB^*_3c$	$C^*_{ab,c}=LAB^*_{rc}$	$h_{ab,c}$	$X_c=XYZ_1c$	$Y_c=XYZ_2c$	$Z_c=XYZ_3c$	x_c	y_c	$Y_c/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	56.02	77.48	66.45	102.07	42	44.38	23.93	2.62	0.6257	0.3374	0.2701
	01 o13y	1.0	0.125	0.0	56.02	77.28	66.41	101.9	42	44.31	23.93	2.62	0.6253	0.3377	0.2701
	02 o25y	1.0	0.25	0.0	57.92	71.8	67.19	98.34	45	45.26	25.88	2.98	0.6106	0.3492	0.2921
	03 o38y	1.0	0.375	0.0	62.19	59.5	69.13	91.21	51	47.4	30.62	3.86	0.5789	0.374	0.3457
	04 o50y	1.0	0.5	0.0	67.72	44.39	72.09	84.66	61	50.6	37.59	5.13	0.5422	0.4028	0.4243
	05 o63y	1.0	0.625	0.0	73.76	28.82	75.54	80.86	72	54.63	46.33	6.76	0.5071	0.4301	0.523
	06 o75y	1.0	0.75	0.0	79.96	13.76	79.39	80.57	83	59.35	56.61	8.67	0.4762	0.4542	0.639
	07 o88y	1.0	0.875	0.0	86.01	0.2	83.63	83.63	93	64.73	68.01	10.69	0.4513	0.4742	0.7677
	08 y00l	1.0	1.0	0.0	91.93	-12.99	87.13	88.09	101	70.31	80.55	13.19	0.4286	0.491	0.9092
	09 y13l	0.875	1.0	0.0	89.64	-24.0	84.58	87.92	108	61.01	75.52	12.63	0.409	0.5063	0.8525
	10 y25l	0.75	1.0	0.0	87.47	-35.92	82.12	89.64	116	52.43	70.97	12.15	0.3868	0.5236	0.8011
	11 y38l	0.625	1.0	0.0	85.44	-48.24	79.84	93.29	123	44.75	66.87	11.69	0.3629	0.5423	0.7548
	12 y50l	0.5	1.0	0.0	83.56	-60.65	77.73	98.6	129	38.03	63.22	11.28	0.338	0.5618	0.7136
	13 y63l	0.375	1.0	0.0	82.02	-72.3	75.94	104.86	134	32.65	60.33	10.97	0.3141	0.5804	0.681
	14 y75l	0.25	1.0	0.0	80.88	-82.0	74.62	110.88	138	28.73	58.25	10.74	0.294	0.5961	0.6575
	15 y88l	0.125	1.0	0.0	80.25	-87.72	73.89	114.7	140	26.61	57.12	10.61	0.2821	0.6054	0.6447
	16 l00c	0.0	1.0	0.0	80.17	-88.48	73.79	115.22	141	26.35	56.98	10.61	0.2805	0.6066	0.6432
	17 l13c	0.0	1.0	0.125	80.16	-88.43	73.41	114.94	141	26.35	56.96	10.73	0.2802	0.6057	0.643
	18 l25c	0.0	1.0	0.25	80.28	-86.86	66.19	109.21	143	26.86	57.18	13.53	0.2753	0.586	0.6454
	19 l38c	0.0	1.0	0.375	80.6	-83.19	51.95	98.09	148	28.12	57.74	20.48	0.2644	0.543	0.6518
	20 l50c	0.0	1.0	0.5	81.07	-77.87	35.94	85.77	155	30.02	58.59	30.89	0.2512	0.4903	0.6614
	21 l63c	0.0	1.0	0.625	81.71	-71.7	20.47	74.58	163	32.45	59.76	44.11	0.238	0.4384	0.6746
	22 l75c	0.0	1.0	0.75	82.43	-64.7	5.72	64.96	174	35.34	61.1	60.02	0.2259	0.3905	0.6897
	23 l88c	0.0	1.0	0.875	83.26	-57.4	-7.78	57.93	185	38.65	62.66	77.97	0.2156	0.3495	0.7073
	24 c00v	0.0	1.0	1.0	84.22	-50.12	-20.03	53.99	198	42.33	64.49	97.58	0.2071	0.3155	0.728
	25 c13v	0.0	0.875	1.0	77.24	-38.2	-30.47	48.88	214	36.57	51.93	95.19	0.1991	0.2827	0.5862
	26 c25v	0.0	0.75	1.0	69.81	-24.32	-41.97	48.52	235	31.36	40.48	93.23	0.19	0.2452	0.4569
	27 c38v	0.0	0.675	1.0	61.76	-8.13	-54.27	54.89	258	26.59	30.12	90.95	0.1801	0.204	0.34
	28 c50v	0.0	0.5	1.0	53.37	10.02	-67.62	68.37	276	22.44	21.38	89.33	0.1685	0.1606	0.2414
	29 c63v	0.0	0.375	1.0	44.84	31.31	-81.6	87.41	290	19.23	14.43	88.29	0.1577	0.1183	0.1628
	30 c75v	0.0	0.25	1.0	37.25	52.3	-94.04	107.62	298	17.02	9.67	87.38	0.1492	0.0848	0.1092
	31 c88v	0.0	0.125	1.0	33.58	63.94	-100.42	119.06	302	16.27	7.81	87.45	0.1459	0.07	0.0881
	32 v00m	0.0	0.0	1.0	33.4	63.27	-100.11	118.43	302	16.02	7.72	86.57	0.1452	0.07	0.0872
	33 v13m	0.125	0.0	1.0	33.76	63.95	-100.02	118.72	302	16.41	7.89	87.32	0.147	0.0707	0.0891
	34 v25m	0.25	0.0	1.0	36.14	65.42	-95.89	116.09	304	18.57	9.08	87.28	0.1616	0.079	0.1025
	35 v38m	0.375	0.0	1.0	39.92	68.67	-89.58	112.88	307	22.58	11.2	87.57	0.1861	0.0923	0.1264
	36 v50m	0.5	0.0	1.0	44.48	73.01	-82.23	109.98	311	28.25	14.17	88.31	0.2161	0.1084	0.16
	37 v63m	0.625	0.0	1.0	49.17	76.2	-73.8	106.09	315	34.63	17.73	87.83	0.247	0.1265	0.2002
	38 v75m	0.75	0.0	1.0	54.0	80.89	-66.0	104.41	320	42.59	21.98	88.59	0.2781	0.1435	0.2481
	39 v88m	0.875	0.0	1.0	58.64	85.03	-58.09	102.99	325	51.17	26.64	88.71	0.3073	0.16	0.3008
	40 m00o	1.0	0.0	1.0	63.05	89.51	-50.96	103.0	330	60.56	31.65	89.38	0.3335	0.1743	0.3573
	41 m13o	1.0	0.0	0.875	61.53	87.25	-38.83	95.5	336	56.9	29.85	69.87	0.3633	0.1906	0.337
	42 m25o	1.0	0.0	0.75	60.16	84.9	-25.02	88.51	344	53.63	28.3	52.01	0.4004	0.2113	0.3194
	43 m38o	1.0	0.0	0.675	58.9	82.72	-9.32	83.25	354	50.72	26.92	36.13	0.4458	0.2366	0.3038
	44 m50o	1.0	0.0	0.5	57.81	85.9	4.99	86.05	4	50.15	25.76	24.88	0.4976	0.2556	0.2908
	45 m63o	1.0	0.0	0.375	56.92	79.09	28.43	84.05	21	46.29	24.84	12.53	0.5533	0.2969	0.2804
	46 m75o	1.0	0.0	0.25	56.33	78.02	50.44	92.9	35	45.03	24.24	5.58	0.6016	0.3239	0.2737
	47 m88o	1.0	0.0	0.125	56.09	77.63	65.6	101.63	42	44.54	24.01	2.75	0.6247	0.3367	0.271
	48 o00y	1.0	0.0	0.0	56.02	77.48	66.45	102.07	42	44.38	23.93	2.62	0.6257	0.3374	0.2701
	49 n00w	0.0	0.0	0.0	0.46	-0.16	-0.09	0.2	0	0.04	0.05	0.06	0.2802	0.323	0.0006
	50 n13w	0.125	0.125	0.125	2.38	4.33	1.25	4.5	18	0.36	0.26	0.2	0.435	0.3218	0.003
	51 n25w	0.25	0.25	0.25	22.26	7.95	2.57	8.36	25	3.93	3.59	3.47	0.3576	0.3267	0.0405
	52 n38w	0.375	0.375	0.375	39.92	6.15	1.68	6.38	33	11.48	11.2	11.57	0.3352	0.327	0.1264
	53 n50w	0.5	0.5	0.5	54.11	5.42	0.6	5.45	37	22.13	22.08	23.68	0.326	0.3252	0.2492
	54 n63w	0.625	0.625	0.625	66.29	5.06	-0.08	5.06	44	35.4	35.7	38.95	0.3217	0.3244	0.403
	55 n75w	0.75	0.75	0.75	77.06	4.96	-1.02	5.06	43	50.91	51.63	57.3	0.3185	0.323	0.5828
	56 n88w	0.875	0.875	0.875	86.67	5.13	-1.86	5.46	27	68.21	69.33	77.9	0.3166	0.3218	0.7826
	57 n99w	1.0	1.0	1.0	95.41	4.95	-2.4	5.51	0	86.83	88.59	100.14	0.3151	0.3215	1.0

Colorimetric data of "Standard Original": Television Luminous System TLS00 for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00
CRT monitor

Y Yellow

$LCH^* = 91.9 \ 88.1 \ 98$

$LAB^* = 91.9 \ -13.0 \ 87.1$

L Leaf green

$LCH^* = 80.2 \ 115.2 \ 140$

$LAB^* = 80.2 \ -88.5 \ 73.8$

C Cyan blue

$LCH^* = 84.2 \ 54.0 \ 202$

$LAB^* = 84.2 \ -50.1 \ -20.0$

standard CIELAB (a^* , b^*) chroma diagram

O Orange red

$LCH^* = 56.0 \ 102.1 \ 41$

$LAB^* = 56.0 \ 77.5 \ 66.4$

M Magenta red

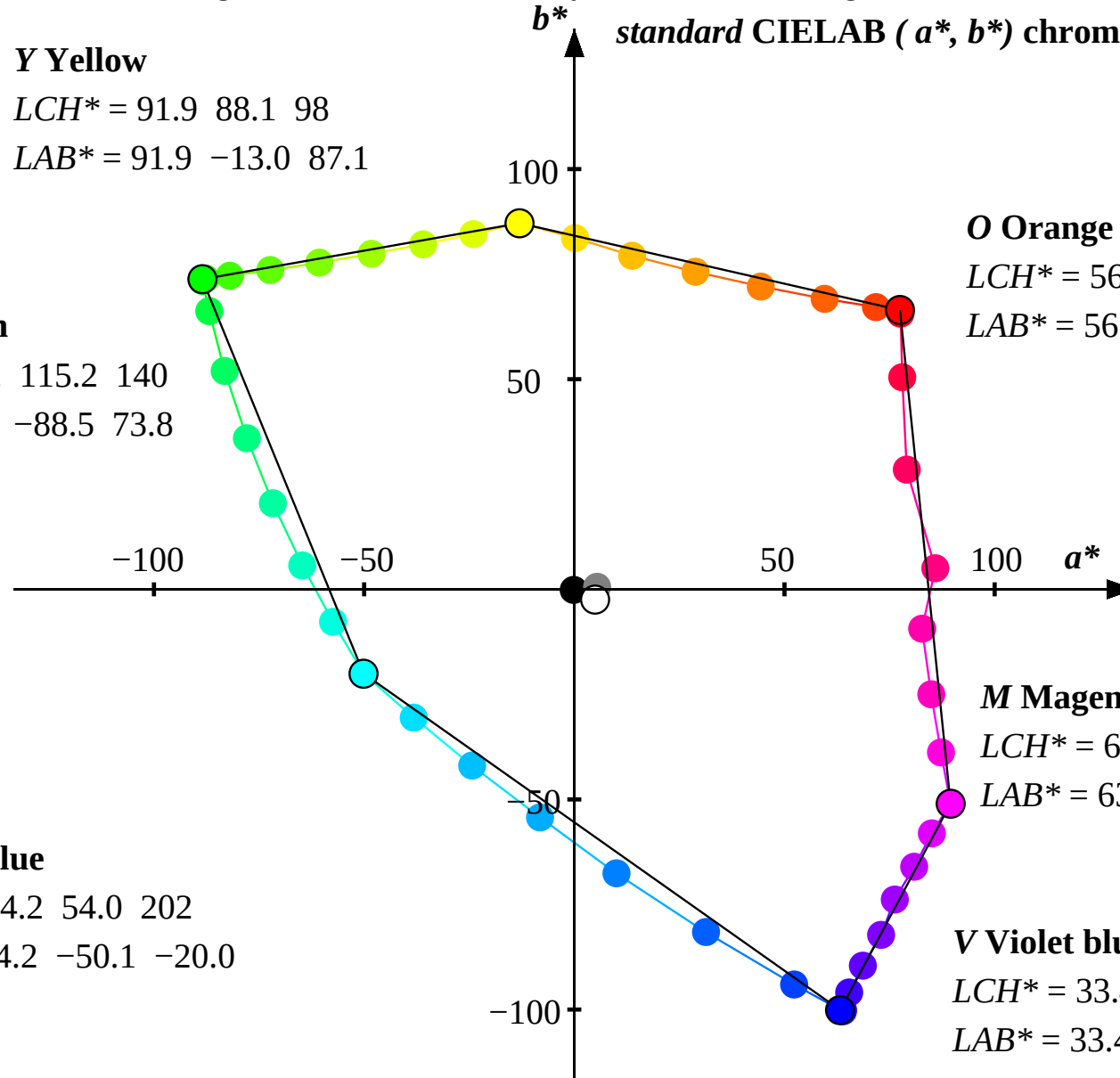
$LCH^* = 63.1 \ 103.0 \ 330$

$LAB^* = 63.1 \ 89.5 \ -51.0$

V Violet blue

$LCH^* = 33.4 \ 118.4 \ 302$

$LAB^* = 33.4 \ 63.3 \ -100.1$



Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ra}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	56.02	74.66	67.9	100.92	42	43.41	23.93	2.42	0.6223	0.343	0.2701
	01 o13y	1.0	0.125	0.0	56.02	74.46	67.87	100.75	42	43.35	23.93	2.43	0.6219	0.3433	0.2701
	02 o25y	1.0	0.25	0.0	57.92	68.88	68.69	97.27	45	44.24	25.88	2.76	0.607	0.3551	0.2921
	03 o38y	1.0	0.375	0.0	62.19	56.34	70.73	90.43	51	46.28	30.62	3.58	0.575	0.3805	0.3457
	04 o50y	1.0	0.5	0.0	67.72	40.94	73.83	84.42	61	49.32	37.59	4.77	0.5379	0.41	0.4243
	05 o63y	1.0	0.625	0.0	73.76	25.04	77.43	81.38	72	53.15	46.33	6.29	0.5025	0.438	0.523
	06 o75y	1.0	0.75	0.0	79.96	9.64	81.42	81.99	83	57.65	56.61	8.07	0.4713	0.4627	0.639
	07 o88y	1.0	0.875	0.0	86.01	-4.23	85.82	85.92	93	62.79	68.01	9.94	0.4461	0.4832	0.7677
	08 y00l	1.0	1.0	0.0	91.93	-17.76	89.45	91.2	101	68.11	80.55	12.28	0.4232	0.5005	0.9092
	09 y13l	0.875	1.0	0.0	89.64	-28.64	86.85	91.46	108	59.06	75.52	11.77	0.4035	0.516	0.8525
	10 y25l	0.75	1.0	0.0	87.47	-40.44	84.34	93.54	116	50.72	70.97	11.32	0.3813	0.5336	0.8011
	11 y38l	0.625	1.0	0.0	85.44	-52.65	82.01	97.46	123	43.24	66.87	10.91	0.3573	0.5526	0.7548
	12 y50l	0.5	1.0	0.0	83.56	-64.96	79.85	102.95	129	36.72	63.22	10.53	0.3324	0.5723	0.7136
	13 y63l	0.375	1.0	0.0	82.02	-76.53	78.03	109.3	134	31.48	60.33	10.25	0.3085	0.5911	0.681
	14 y75l	0.25	1.0	0.0	80.88	-86.16	76.68	115.35	138	27.67	58.25	10.04	0.2884	0.607	0.6575
	15 y88l	0.125	1.0	0.0	80.25	-91.85	75.94	119.18	140	25.62	57.12	9.92	0.2765	0.6164	0.6447
	16 l00c	0.0	1.0	0.0	80.17	-92.61	75.83	119.7	141	25.36	56.98	9.92	0.2749	0.6176	0.6432
	17 l13c	0.0	1.0	0.125	80.16	-92.56	75.45	119.42	141	25.36	56.96	10.04	0.2746	0.6167	0.643
	18 l25c	0.0	1.0	0.25	80.28	-90.99	68.23	113.74	143	25.86	57.18	12.72	0.2701	0.5971	0.6454
	19 l38c	0.0	1.0	0.375	80.6	-87.34	54.0	102.7	148	27.08	57.74	19.4	0.2598	0.554	0.6518
	20 l50c	0.0	1.0	0.5	81.07	-82.05	38.0	90.43	155	28.93	58.59	29.46	0.2473	0.5009	0.6614
	21 l63c	0.0	1.0	0.625	81.71	-75.92	22.55	79.2	163	31.29	59.76	42.28	0.2346	0.4482	0.6746
	22 l75c	0.0	1.0	0.75	82.43	-68.95	7.82	69.4	174	34.11	61.1	57.75	0.223	0.3995	0.6897
	23 l88c	0.0	1.0	0.875	83.26	-61.69	-5.66	61.96	185	37.32	62.66	75.23	0.213	0.3576	0.7073
	24 c00v	0.0	1.0	1.0	84.22	-54.47	-17.89	57.34	198	40.9	64.49	94.37	0.2048	0.3228	0.728
	25 c13v	0.0	0.875	1.0	77.24	-42.17	-28.5	50.91	214	35.39	51.93	92.28	0.197	0.2891	0.5862
	26 c25v	0.0	0.75	1.0	69.81	-27.89	-40.18	48.93	235	30.4	40.48	90.62	0.1882	0.2506	0.4569
	27 c38v	0.0	0.675	1.0	61.76	-11.26	-52.68	53.88	258	25.84	30.12	88.66	0.1787	0.2083	0.34
	28 c50v	0.0	0.5	1.0	53.37	7.34	-66.23	66.65	276	21.86	21.38	87.36	0.1674	0.1637	0.2414
	29 c63v	0.0	0.375	1.0	44.84	-80.42	-80.42	85.52	290	18.8	14.43	86.62	0.1568	0.1204	0.1628
	30 c75v	0.0	0.25	1.0	37.25	-93.04	105.87	105.87	298	16.69	9.67	85.98	0.1486	0.0861	0.1092
	31 c88v	0.0	0.125	1.0	33.58	62.33	-99.51	117.43	302	15.99	7.81	86.17	0.1454	0.071	0.0881
	32 v00m	0.0	0.0	1.0	33.4	61.66	-99.21	116.82	302	15.74	7.72	85.31	0.1447	0.071	0.0872
	33 v13m	0.125	0.0	1.0	33.76	62.32	-99.11	117.08	302	16.12	7.89	86.04	0.1465	0.0717	0.0891
	34 v25m	0.25	0.0	1.0	36.14	63.67	-94.92	114.3	304	18.24	9.08	85.92	0.1611	0.0802	0.1025
	35 v38m	0.375	0.0	1.0	39.92	66.72	-88.51	110.85	307	22.16	11.2	86.08	0.1855	0.0938	0.1264
	36 v50m	0.5	0.0	1.0	44.48	70.81	-81.06	107.64	311	27.69	14.17	86.65	0.2155	0.1103	0.16
	37 v63m	0.625	0.0	1.0	49.17	73.75	-72.52	103.43	315	33.92	17.73	86.03	0.2464	0.1288	0.2002
	38 v75m	0.75	0.0	1.0	54.0	78.18	-64.6	101.42	320	41.69	21.98	86.6	0.2774	0.1463	0.2481
	39 v88m	0.875	0.0	1.0	58.64	82.07	-56.57	99.68	325	50.06	26.64	86.57	0.3066	0.1632	0.3008
	40 m00o	1.0	0.0	1.0	63.05	86.31	-49.33	99.42	330	59.22	31.65	87.07	0.3328	0.1779	0.3573
	41 m13o	1.0	0.0	0.875	61.53	84.13	-37.24	92.0	336	55.65	29.85	67.96	0.3626	0.1945	0.337
	42 m25o	1.0	0.0	0.75	60.16	81.85	-23.47	85.15	344	52.45	28.3	50.47	0.3997	0.2157	0.3194
	43 m38o	1.0	0.0	0.675	58.9	79.74	-7.8	80.12	354	49.61	26.92	34.95	0.445	0.2415	0.3038
	44 m50o	1.0	0.0	0.5	57.81	82.98	6.49	83.23	4	49.07	25.76	23.97	0.4967	0.2607	0.2908
	45 m63o	1.0	0.0	0.375	56.92	76.22	29.91	81.88	21	45.28	24.84	11.97	0.5516	0.3026	0.2804
	46 m75o	1.0	0.0	0.25	56.33	75.18	51.9	91.35	35	44.05	24.24	5.25	0.5989	0.3296	0.2737
	47 m88o	1.0	0.0	0.125	56.09	74.8	67.06	100.46	42	43.57	24.01	2.55	0.6213	0.3423	0.271
	48 o00y	1.0	0.0	0.0	56.02	74.66	67.9	100.92	42	43.41	23.93	2.42	0.6223	0.343	0.2701
	49 n00w	0.0	0.0	0.0	0.46	0.0	0.0	0.01	0	0.05	0.05	0.06	0.3127	0.329	0.0006
	50 n13w	0.125	0.125	0.125	2.38	4.39	1.4	4.61	18	0.36	0.26	0.19	0.4418	0.3253	0.003
	51 n25w	0.25	0.25	0.25	22.26	6.95	3.2	7.65	25	3.86	3.59	3.37	0.357	0.3319	0.0405
	52 n38w	0.375	0.375	0.375	39.92	4.2	2.74	5.01	33	11.21	11.2	11.19	0.3337	0.3334	0.1264
	53 n50w	0.5	0.5	0.5	54.11	2.7	2.01	3.37	37	21.55	22.08	22.86	0.3241	0.3321	0.2492
	54 n63w	0.625	0.625	0.625	66.29	1.68	1.61	2.33	44	34.41	35.7	37.56	0.3196	0.3315	0.403
	55 n75w	0.75	0.75	0.75	77.06	1.0	0.93	1.37	43	49.43	51.63	55.23	0.3163	0.3303	0.5828
	56 n88w	0.875	0.875	0.875	86.67	0.65	0.33	0.73	27	66.18	69.33	75.06	0.3143	0.3292	0.7826
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0

IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; CRT monitor; Page: 25/66

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 25/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65
System TLS00a

CRT monitor

Y Yellow

$LCH^*_a = 91.9 \ 91.2 \ 101$

$LAB^*_a = 91.9 \ -17.8 \ 89.5$

L Leaf green

$LCH^*_a = 80.2 \ 119.7 \ 141$

$LAB^*_a = 80.2 \ -92.6 \ 75.8$

C Cyan blue

$LCH^*_a = 84.2 \ 57.3 \ 198$

$LAB^*_a = 84.2 \ -54.5 \ -17.9$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*

O Orange red

$LCH^*_a = 56.0 \ 100.9 \ 42$

$LAB^*_a = 56.0 \ 74.7 \ 67.9$

M Magenta red

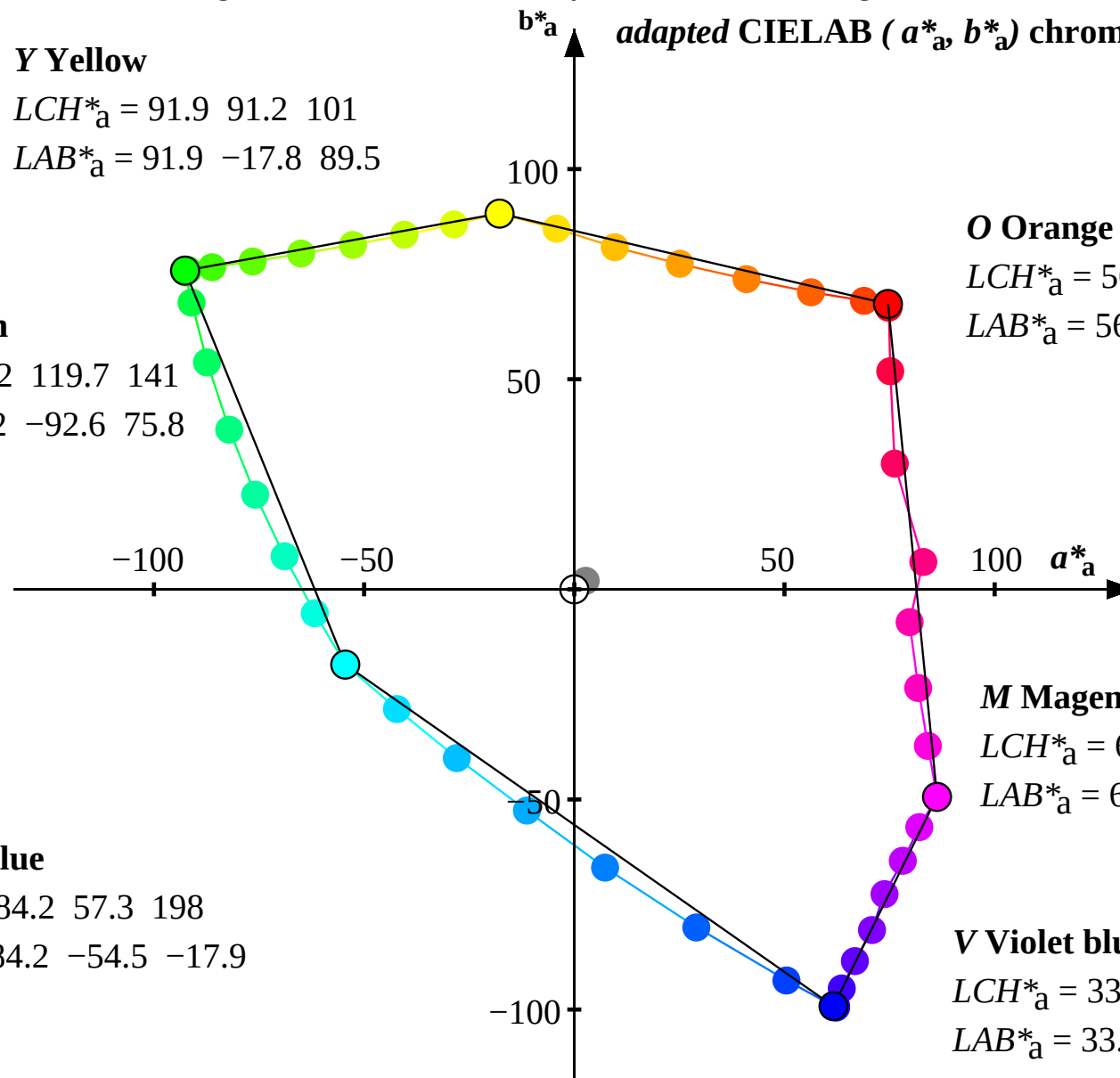
$LCH^*_a = 63.1 \ 99.4 \ 330$

$LAB^*_a = 63.1 \ 86.3 \ -49.3$

V Violet blue

$LCH^*_a = 33.4 \ 116.8 \ 302$

$LAB^*_a = 33.4 \ 61.7 \ -99.2$



Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	55.98	74.75	68.26	101.23	42	43.39	23.89	2.37	0.623	0.343	0.2966
	01 o13y	1.0	0.125	0.0	55.98	74.55	68.22	101.06	42	43.32	23.89	2.37	0.6226	0.3433	0.2966
	02 o25y	1.0	0.25	0.0	57.89	68.96	69.01	97.56	45	44.22	25.85	2.71	0.6076	0.3551	0.3209
	03 o38y	1.0	0.375	0.0	62.16	56.4	71.0	90.68	52	46.26	30.59	3.53	0.5755	0.3806	0.3798
	04 o50y	1.0	0.5	0.0	67.7	40.98	74.05	84.63	61	49.3	37.56	4.72	0.5383	0.4102	0.4664
	05 o63y	1.0	0.625	0.0	73.74	25.06	77.62	81.56	72	53.13	46.31	6.24	0.5028	0.4382	0.575
	06 o75y	1.0	0.75	0.0	79.95	9.65	81.58	82.15	83	57.64	56.59	8.02	0.4715	0.4629	0.7026
	07 o88y	1.0	0.875	0.0	86.01	-4.23	85.96	86.06	93	62.77	68.0	9.89	0.4463	0.4834	0.8443
	08 y00l	1.0	1.0	0.0	91.93	-17.77	89.58	91.32	101	68.1	80.54	12.23	0.4233	0.5006	1.0
	09 y13l	0.875	1.0	0.0	89.63	-28.66	86.98	91.58	108	59.05	75.51	11.72	0.4036	0.5162	0.9376
	10 y25l	0.75	1.0	0.0	87.47	-40.47	84.47	93.67	116	50.7	70.96	11.28	0.3814	0.5338	0.8811
	11 y38l	0.625	1.0	0.0	85.43	-52.7	82.13	97.59	123	43.22	66.85	10.86	0.3574	0.5528	0.8301
	12 y50l	0.5	1.0	0.0	83.55	-65.02	79.98	103.08	129	36.69	63.2	10.48	0.3324	0.5727	0.7847
	13 y63l	0.375	1.0	0.0	82.01	-76.6	78.16	109.44	134	31.45	60.32	10.2	0.3085	0.5915	0.7489
	14 y75l	0.25	1.0	0.0	80.87	-86.25	76.81	115.5	138	27.64	58.23	9.99	0.2883	0.6075	0.723
	15 y88l	0.125	1.0	0.0	80.24	-91.95	76.07	119.34	140	25.59	57.1	9.87	0.2764	0.6169	0.7089
	16 l00c	0.0	1.0	0.0	80.16	-92.71	75.96	119.86	141	25.33	56.96	9.87	0.2748	0.6181	0.7073
	17 l13c	0.0	1.0	0.125	80.15	-92.66	75.58	119.58	141	25.33	56.95	9.99	0.2745	0.6172	0.707
	18 l25c	0.0	1.0	0.25	80.27	-91.09	68.34	113.88	143	25.83	57.16	12.67	0.27	0.5976	0.7097
	19 l38c	0.0	1.0	0.375	80.59	-87.43	54.07	102.81	148	27.05	57.73	19.36	0.2597	0.5544	0.7167
	20 l50c	0.0	1.0	0.5	81.06	-82.13	38.04	90.52	155	28.9	58.58	29.42	0.2472	0.5011	0.7273
	21 l63c	0.0	1.0	0.625	81.7	-75.99	22.57	79.28	163	31.26	59.75	42.25	0.2346	0.4484	0.7418
	22 l75c	0.0	1.0	0.75	82.42	-69.01	7.82	69.46	174	34.08	61.08	57.72	0.2229	0.3995	0.7584
	23 l88c	0.0	1.0	0.875	83.25	-61.74	-5.67	62.02	185	37.3	62.64	75.22	0.2129	0.3576	0.7778
	24 c00v	0.0	1.0	1.0	84.21	-54.52	-17.9	57.39	198	40.88	64.48	94.37	0.2047	0.3228	0.8005
	25 c13v	0.0	0.875	1.0	77.23	-42.21	-28.52	50.96	214	35.36	51.91	92.28	0.1969	0.2891	0.6445
	26 c25v	0.0	0.75	1.0	69.79	-27.93	-40.21	48.97	235	30.37	40.45	90.62	0.1881	0.2505	0.5022
	27 c38v	0.0	0.675	1.0	61.73	-11.28	-52.73	53.93	258	25.8	30.09	88.66	0.1785	0.2082	0.3736
	28 c50v	0.0	0.5	1.0	53.33	7.35	-66.3	66.72	276	21.82	21.35	87.35	0.1672	0.1635	0.265
	29 c63v	0.0	0.375	1.0	44.78	29.15	-80.52	85.64	290	18.76	14.38	86.61	0.1566	0.1201	0.1786
	30 c75v	0.0	0.25	1.0	37.17	50.63	-93.18	106.06	299	16.66	9.63	85.98	0.1484	0.0858	0.1195
	31 c88v	0.0	0.125	1.0	33.48	62.53	-99.68	117.67	302	15.95	7.76	86.17	0.1452	0.0706	0.0964
	32 v00m	0.0	0.0	1.0	33.3	61.86	-99.37	117.06	302	15.7	7.68	85.31	0.1445	0.0706	0.0953
	33 v13m	0.125	0.0	1.0	33.66	62.52	-99.27	117.33	302	16.08	7.85	86.04	0.1463	0.0713	0.0974
	34 v25m	0.25	0.0	1.0	36.05	63.85	-95.06	114.52	304	18.2	9.03	85.91	0.1609	0.0798	0.1122
	35 v38m	0.375	0.0	1.0	39.84	66.87	-88.64	111.04	307	22.12	11.16	86.07	0.1854	0.0935	0.1385
	36 v50m	0.5	0.0	1.0	44.42	70.94	-81.16	107.8	311	27.66	14.13	86.65	0.2154	0.11	0.1754
	37 v63m	0.625	0.0	1.0	49.12	73.86	-72.6	103.57	315	33.89	17.69	86.02	0.2463	0.1286	0.2197
	38 v75m	0.75	0.0	1.0	53.96	78.28	-64.67	101.54	320	41.67	21.94	86.6	0.2774	0.1461	0.2724
	39 v88m	0.875	0.0	1.0	58.61	82.16	-56.63	99.79	325	50.04	26.61	86.56	0.3066	0.163	0.3304
	40 m00o	1.0	0.0	1.0	63.03	86.39	-49.38	99.51	330	59.2	31.62	87.07	0.3328	0.1777	0.3926
	41 m13o	1.0	0.0	0.875	61.5	84.21	-37.28	92.1	336	55.63	29.82	67.94	0.3627	0.1944	0.3702
	42 m25o	1.0	0.0	0.75	60.13	81.94	-23.49	85.24	344	52.43	28.26	50.44	0.3998	0.2155	0.3509
	43 m38o	1.0	0.0	0.675	58.86	79.83	-7.81	80.21	354	49.59	26.88	34.92	0.4452	0.2413	0.3338
	44 m50o	1.0	0.0	0.5	57.78	83.07	6.5	83.33	4	49.05	25.73	23.93	0.4969	0.2606	0.3194
	45 m63o	1.0	0.0	0.375	56.88	76.31	29.98	81.98	21	45.26	24.8	11.92	0.5521	0.3025	0.3079
	46 m75o	1.0	0.0	0.25	56.29	75.27	52.08	91.53	35	44.03	24.21	5.2	0.5995	0.3296	0.3005
	47 m88o	1.0	0.0	0.125	56.06	74.89	67.4	100.75	42	43.55	23.97	2.5	0.622	0.3423	0.2976
	48 o00y	1.0	0.0	0.0	55.98	74.75	68.26	101.23	42	43.39	23.89	2.37	0.623	0.343	0.2966
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	1.92	4.4	1.4	4.62	18	0.31	0.21	0.13	0.4723	0.3244	0.0026
	51 n25w	0.25	0.25	0.25	22.09	7.01	3.24	7.72	25	3.81	3.54	3.31	0.3576	0.3319	0.044
	52 n38w	0.375	0.375	0.375	39.84	4.21	2.75	5.03	33	11.17	11.16	11.14	0.3338	0.3334	0.1385
	53 n50w	0.5	0.5	0.5	54.07	2.7	2.01	3.37	37	21.52	22.04	22.82	0.3242	0.3321	0.2737
	54 n63w	0.625	0.625	0.625	66.27	1.69	1.61	2.33	44	34.39	35.67	37.53	0.3196	0.3316	0.4429
	55 n75w	0.75	0.75	0.75	77.04	1.0	0.94	1.37	43	49.41	51.61	55.21	0.3163	0.3303	0.6407
	56 n88w	0.875	0.875	0.875	86.66	0.65	0.33	0.73	27	66.17	69.32	75.05	0.3143	0.3292	0.8606
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0999

IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; CRT monitor; Page: 27/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

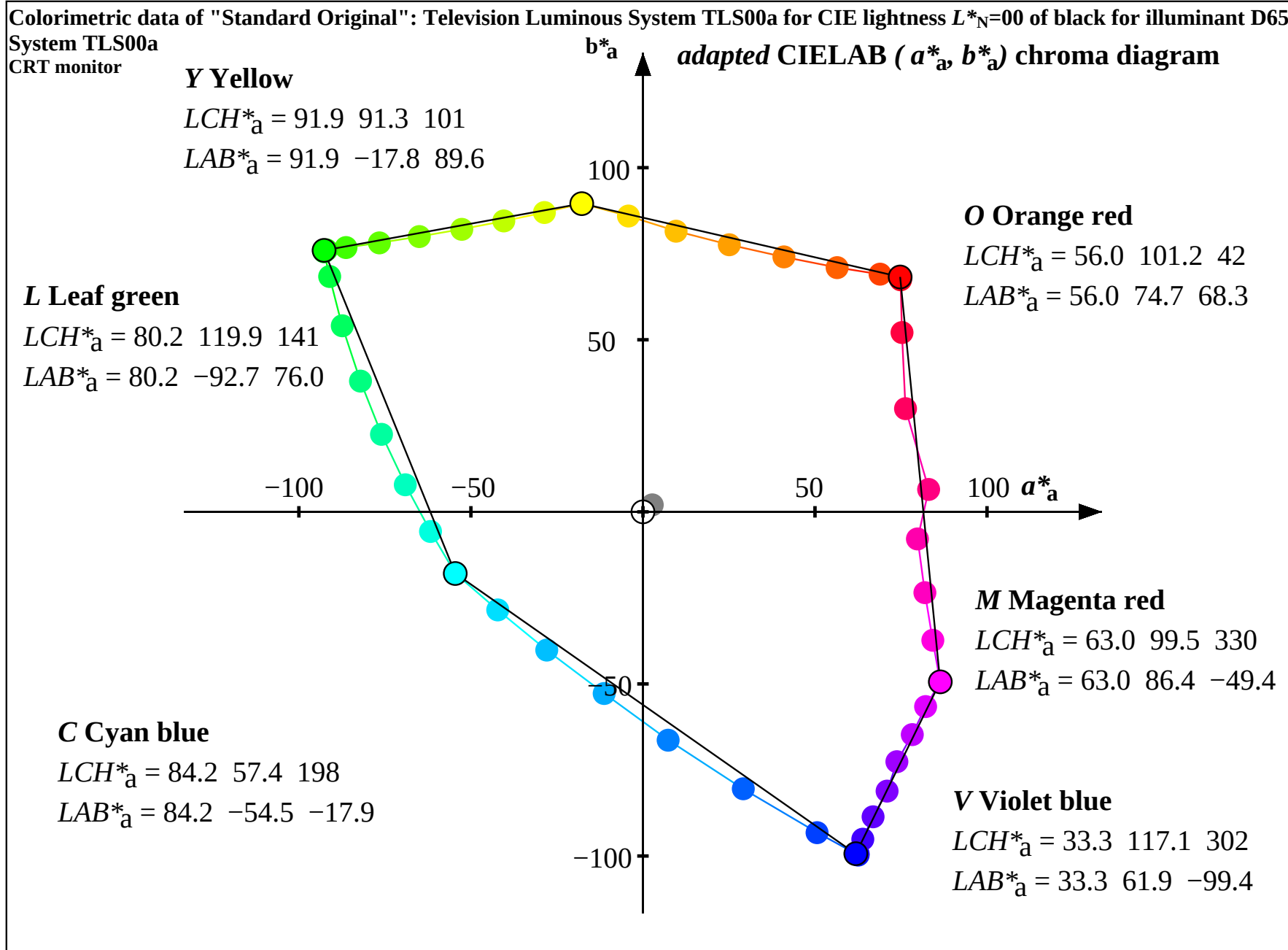
Display measurement: LCD, CRT, and LCD projector, page 27/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

See original or copy: <http://web.me.com/klaus.richter/IE36/IE36L0FP.PDF> / .PS
Technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20090901-IE36/IE36L0FP.PDF / .PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

<http://130.149.60.45/~farbmetrik/IE36/IE36L0FP.PDF> / .PS; linearized output
F: Output Linearization (OL) data IE36/IE36LE00FP.DAT in File (F)



IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; CRT monitor; Page: 28/66

TUB-test chart IE36; Hue circle and colorimetric data

Display measurement: LCD, CRT, and LCD projector, page 28/66

input: `olv* setrgbcolor`

output: `olv* setrgbcolor / w* setgray`

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_{1a}$	$Y_a=XYZ^*_{2a}$	$Z_a=XYZ^*_{3a}$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	55.98	74.75	68.26	101.23	42	43.39	23.89	2.37	0.623	0.343	0.2966
	01 o13y	1.0	0.125	0.0	55.98	74.55	68.22	101.06	42	43.32	23.89	2.37	0.6226	0.3433	0.2966
D65 reflection:	02 o25y	1.0	0.25	0.0	57.89	68.96	69.01	97.56	45	44.22	25.85	2.71	0.6076	0.3551	0.3209
$Y_N = 0.0$	03 o38y	1.0	0.375	0.0	62.16	56.4	71.0	90.68	52	46.26	30.59	3.53	0.5755	0.3806	0.3798
$L^*_N = 0.0$	04 o50y	1.0	0.5	0.0	67.7	40.98	74.05	84.63	61	49.3	37.56	4.72	0.5383	0.4102	0.4664
	05 o63y	1.0	0.625	0.0	73.74	25.06	77.62	81.56	72	53.13	46.31	6.24	0.5028	0.4382	0.575
	06 o75y	1.0	0.75	0.0	79.95	9.65	81.58	82.15	83	57.64	56.59	8.02	0.4715	0.4629	0.7026
	07 o88y	1.0	0.875	0.0	86.01	-4.23	85.96	86.06	93	62.77	68.0	9.89	0.4463	0.4834	0.8443
	08 y00l	1.0	1.0	0.0	91.93	-17.77	89.58	91.32	101	68.1	80.54	12.23	0.4233	0.5006	1.0
	09 y13l	0.875	1.0	0.0	89.63	-28.66	86.98	91.58	108	59.05	75.51	11.72	0.4036	0.5162	0.9376
	10 y25l	0.75	1.0	0.0	87.47	-40.47	84.47	93.67	116	50.7	70.96	11.28	0.3814	0.5338	0.8811
	11 y38l	0.625	1.0	0.0	85.43	-52.7	82.13	97.59	123	43.22	66.85	10.86	0.3574	0.5528	0.8301
	12 y50l	0.5	1.0	0.0	83.55	-65.02	79.98	103.08	129	36.69	63.2	10.48	0.3324	0.5727	0.7847
	13 y63l	0.375	1.0	0.0	82.01	-76.6	78.16	109.44	134	31.45	60.32	10.2	0.3085	0.5915	0.7489
	14 y75l	0.25	1.0	0.0	80.87	-86.25	76.81	115.5	138	27.64	58.23	9.99	0.2883	0.6075	0.723
	15 y88l	0.125	1.0	0.0	80.24	-91.95	76.07	119.34	140	25.59	57.1	9.87	0.2764	0.6169	0.7089
	16 l00c	0.0	1.0	0.0	80.16	-92.71	75.96	119.86	141	25.33	56.96	9.87	0.2748	0.6181	0.7073
	17 l13c	0.0	1.0	0.125	80.15	-92.66	75.58	119.58	141	25.33	56.95	9.99	0.2745	0.6172	0.707
	18 l25c	0.0	1.0	0.25	80.27	-91.09	68.34	113.88	143	25.83	57.16	12.67	0.27	0.5976	0.7097
	19 l38c	0.0	1.0	0.375	80.59	-87.43	54.07	102.81	148	27.05	57.73	19.36	0.2597	0.5544	0.7167
	20 l50c	0.0	1.0	0.5	81.06	-82.13	38.04	90.52	155	28.9	58.58	29.42	0.2472	0.5011	0.7273
	21 l63c	0.0	1.0	0.625	81.7	-75.99	22.57	79.28	163	31.26	59.75	42.25	0.2346	0.4484	0.7418
	22 l75c	0.0	1.0	0.75	82.42	-69.01	7.82	69.46	174	34.08	61.08	57.72	0.2229	0.3995	0.7584
	23 l88c	0.0	1.0	0.875	83.25	-61.74	-5.67	62.02	185	37.3	62.64	75.22	0.2129	0.3576	0.7778
	24 c00v	0.0	1.0	1.0	84.21	-54.52	-17.9	57.39	198	40.88	64.48	94.37	0.2047	0.3228	0.8005
	25 c13v	0.0	0.875	1.0	77.23	-42.21	-28.52	50.96	214	35.36	51.91	92.28	0.1969	0.2891	0.6445
	26 c25v	0.0	0.75	1.0	69.79	-27.93	-40.21	48.97	235	30.37	40.45	90.62	0.1881	0.2505	0.5022
	27 c38v	0.0	0.675	1.0	61.73	-11.28	-52.73	53.93	258	25.8	30.09	88.66	0.1785	0.2082	0.3736
	28 c50v	0.0	0.5	1.0	53.33	7.35	-66.3	66.72	276	21.82	21.35	87.35	0.1672	0.1635	0.265
	29 c63v	0.0	0.375	1.0	44.78	29.15	-80.52	85.64	290	18.76	14.38	86.61	0.1566	0.1201	0.1786
	30 c75v	0.0	0.25	1.0	37.17	50.63	-93.18	106.06	299	16.66	9.63	85.98	0.1484	0.0858	0.1195
	31 c88v	0.0	0.125	1.0	33.48	62.53	-99.68	117.67	302	15.95	7.76	86.17	0.1452	0.0706	0.0964
	32 v00m	0.0	0.0	1.0	33.3	61.86	-99.37	117.06	302	15.7	7.68	85.31	0.1445	0.0706	0.0953
	33 v13m	0.125	0.0	1.0	33.66	62.52	-99.27	117.33	302	16.08	7.85	86.04	0.1463	0.0713	0.0974
	34 v25m	0.25	0.0	1.0	36.05	63.85	-95.06	114.52	304	18.2	9.03	85.91	0.1609	0.0798	0.1122
	35 v38m	0.375	0.0	1.0	39.84	66.87	-88.64	111.04	307	22.12	11.16	86.07	0.1854	0.0935	0.1385
	36 v50m	0.5	0.0	1.0	44.42	70.94	-81.16	107.8	311	27.66	14.13	86.65	0.2154	0.11	0.1754
	37 v63m	0.625	0.0	1.0	49.12	73.86	-72.6	103.57	315	33.89	17.69	86.02	0.2463	0.1286	0.2197
	38 v75m	0.75	0.0	1.0	53.96	78.28	-64.67	101.54	320	41.67	21.94	86.6	0.2774	0.1461	0.2724
	39 v88m	0.875	0.0	1.0	58.61	82.16	-56.63	99.79	325	50.04	26.61	86.56	0.3066	0.163	0.3304
	40 m00o	1.0	0.0	1.0	63.03	86.39	-49.38	99.51	330	59.2	31.62	87.07	0.3328	0.1777	0.3926
	41 m13o	1.0	0.0	0.875	61.5	84.21	-37.28	92.1	336	55.63	29.82	67.94	0.3627	0.1944	0.3702
	42 m25o	1.0	0.0	0.75	60.13	81.94	-23.49	85.24	344	52.43	28.26	50.44	0.3998	0.2155	0.3509
	43 m38o	1.0	0.0	0.675	58.86	79.83	-7.81	80.21	354	49.59	26.88	34.92	0.4452	0.2413	0.3338
	44 m50o	1.0	0.0	0.5	57.78	83.07	6.5	83.33	4	49.05	25.73	23.93	0.4969	0.2606	0.3194
	45 m63o	1.0	0.0	0.375	56.88	76.31	29.98	81.98	21	45.26	24.8	11.92	0.5521	0.3025	0.3079
	46 m75o	1.0	0.0	0.25	56.29	75.27	52.08	91.53	35	44.03	24.21	5.2	0.5995	0.3296	0.3005
	47 m88o	1.0	0.0	0.125	56.06	74.89	67.4	100.75	42	43.55	23.97	2.5	0.622	0.3423	0.2976
	48 o00y	1.0	0.0	0.0	55.98	74.75	68.26	101.23	42	43.39	23.89	2.37	0.623	0.343	0.2966
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	1.92	4.4	1.4	4.62	18	0.31	0.21	0.13	0.4723	0.3244	0.0026
	51 n25w	0.25	0.25	0.25	22.09	7.01	3.24	7.72	25	3.81	3.54	3.31	0.3576	0.3319	0.044
	52 n38w	0.375	0.375	0.375	39.84	4.21	2.75	5.03	33	11.17	11.16	11.14	0.3338	0.3334	0.1385
	53 n50w	0.5	0.5	0.5	54.07	2.7	2.01	3.37	37	21.52	22.04	22.82	0.3242	0.3321	0.2737
	54 n63w	0.625	0.625	0.625	66.27	1.69	1.61	2.33	44	34.39	35.67	37.53	0.3196	0.3316	0.4429
	55 n75w	0.75	0.75	0.75	77.04	1.0	0.94	1.37	43	49.41	51.61	55.21	0.3163	0.3303	0.6407
	56 n88w	0.875	0.875	0.875	86.66	0.65	0.33	0.73	27	66.17	69.32	75.05	0.3143	0.3292	0.8606
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0999

IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; CRT monitor; Page: 29/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 29/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a

CRT monitor

D65 reflection:

$Y_N = 0.0$

$L^*_N = 0.0$

Y Yellow

$LCH^*_a = 91.9 \ 91.3 \ 101$

$LAB^*_a = 91.9 \ -17.8 \ 89.6$

L Leaf green

$LCH^*_a = 80.2 \ 119.9 \ 141$

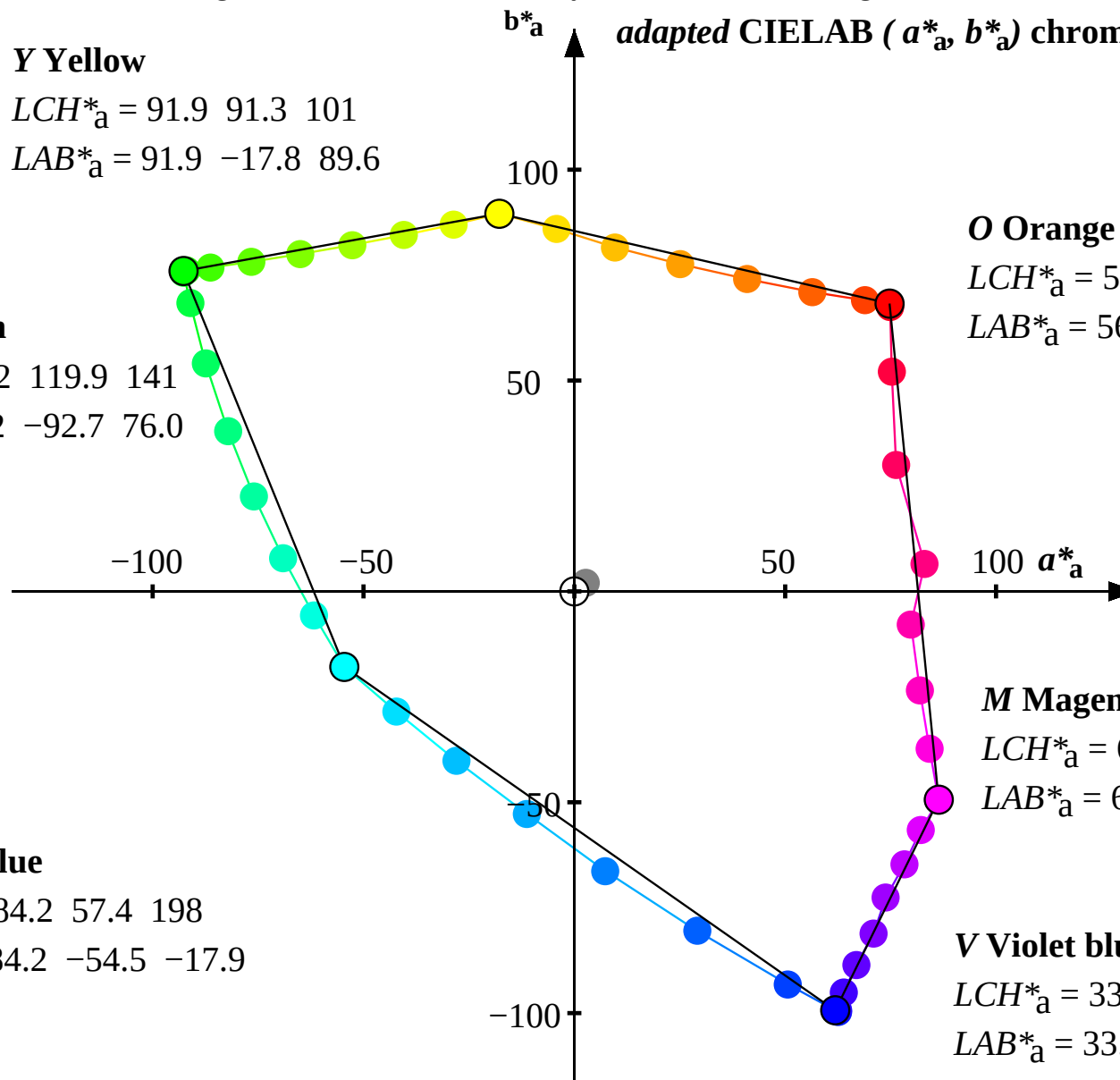
$LAB^*_a = 80.2 \ -92.7 \ 76.0$

C Cyan blue

$LCH^*_a = 84.2 \ 57.4 \ 198$

$LAB^*_a = 84.2 \ -54.5 \ -17.9$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65

System TLS06a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	56.44	73.63	64.22	97.7	41	43.68	24.35	3.04	0.6146	0.3426	0.3021
	01 o13y	1.0	0.125	0.0	56.44	73.43	64.19	97.53	41	43.61	24.35	3.04	0.6142	0.3429	0.3021
D65 reflection:	02 o25y	1.0	0.25	0.0	58.31	67.96	65.3	94.25	44	44.51	26.29	3.38	0.6	0.3545	0.3262
$Y_N = 0.63$	03 o38y	1.0	0.375	0.0	62.51	55.66	67.85	87.76	51	46.53	31.0	4.19	0.5694	0.3794	0.3847
$L^*_N = 5.69$	04 o50y	1.0	0.5	0.0	67.97	40.49	71.42	82.1	60	49.55	37.92	5.37	0.5337	0.4085	0.4705
	05 o63y	1.0	0.625	0.0	73.94	24.8	75.39	79.37	72	53.35	46.61	6.88	0.4993	0.4362	0.5783
	06 o75y	1.0	0.75	0.0	80.08	9.56	79.67	80.24	83	57.82	56.82	8.65	0.469	0.4608	0.7049
	07 o88y	1.0	0.875	0.0	86.08	-4.2	84.25	84.36	93	62.93	68.15	10.51	0.4444	0.4813	0.8455
	08 y00l	1.0	1.0	0.0	91.95	-17.63	88.07	89.82	101	68.22	80.6	12.83	0.422	0.4986	1.0
	09 y13l	0.875	1.0	0.0	89.68	-28.42	85.45	90.06	108	59.23	75.61	12.33	0.4025	0.5138	0.9381
	10 y25l	0.75	1.0	0.0	87.53	-40.1	82.92	92.11	116	50.93	71.09	11.88	0.3804	0.5309	0.882
	11 y38l	0.625	1.0	0.0	85.51	-52.17	80.57	95.99	123	43.51	67.01	11.47	0.3567	0.5493	0.8314
	12 y50l	0.5	1.0	0.0	83.64	-64.31	78.4	101.41	129	37.03	63.38	11.09	0.3321	0.5685	0.7864
	13 y63l	0.375	1.0	0.0	82.12	-75.7	76.56	107.67	135	31.83	60.52	10.81	0.3085	0.5867	0.7509
	14 y75l	0.25	1.0	0.0	80.98	-85.17	75.2	113.63	139	28.04	58.44	10.6	0.2888	0.602	0.7251
	15 y88l	0.125	1.0	0.0	80.36	-90.75	74.46	117.39	141	26.0	57.32	10.49	0.2772	0.611	0.7112
	16 l00c	0.0	1.0	0.0	80.29	-91.49	74.35	117.9	141	25.75	57.19	10.48	0.2756	0.6122	0.7095
	17 l13c	0.0	1.0	0.125	80.28	-91.44	73.99	117.63	141	25.75	57.17	10.6	0.2753	0.6113	0.7093
	18 l25c	0.0	1.0	0.25	80.39	-89.9	67.04	112.16	143	26.24	57.38	13.27	0.2708	0.5922	0.7119
	19 l38c	0.0	1.0	0.375	80.71	-86.32	53.23	101.42	148	27.45	57.95	19.91	0.2607	0.5503	0.719
	20 l50c	0.0	1.0	0.5	81.18	-81.12	37.55	89.39	155	29.29	58.79	29.9	0.2483	0.4983	0.7294
	21 l63c	0.0	1.0	0.625	81.81	-75.09	22.32	78.35	163	31.63	59.95	42.64	0.2357	0.4467	0.7438
	22 l75c	0.0	1.0	0.75	82.53	-68.23	7.75	68.68	174	34.43	61.28	58.0	0.224	0.3987	0.7603
	23 l88c	0.0	1.0	0.875	83.35	-61.08	-5.62	61.35	185	37.63	62.83	75.37	0.214	0.3573	0.7795
	24 c00v	0.0	1.0	1.0	84.3	-53.95	-17.75	56.81	198	41.19	64.65	94.39	0.2057	0.3229	0.8021
	25 c13v	0.0	0.875	1.0	77.38	-41.71	-28.27	50.4	214	35.71	52.17	92.31	0.1982	0.2895	0.6473
	26 c25v	0.0	0.75	1.0	70.03	-27.54	-39.82	48.43	235	30.75	40.79	90.66	0.1896	0.2515	0.5061
	27 c38v	0.0	0.675	1.0	62.09	-11.09	-52.15	53.33	258	26.22	30.51	88.71	0.1803	0.2098	0.3785
	28 c50v	0.0	0.5	1.0	53.84	7.2	-65.46	65.87	276	22.26	21.82	87.42	0.1693	0.166	0.2708
	29 c63v	0.0	0.375	1.0	45.51	28.37	-79.3	84.23	290	19.22	14.91	86.68	0.1591	0.1234	0.185
	30 c75v	0.0	0.25	1.0	38.18	48.93	-91.49	103.76	298	17.14	10.19	86.05	0.1511	0.0899	0.1264
	31 c88v	0.0	0.125	1.0	34.67	60.16	-97.67	114.72	302	16.44	8.34	86.24	0.1481	0.0751	0.1034
	32 v00m	0.0	0.0	1.0	34.5	59.49	-97.36	114.1	301	16.19	8.25	85.39	0.1474	0.0751	0.1024
	33 v13m	0.125	0.0	1.0	34.84	60.17	-97.29	114.4	302	16.57	8.42	86.11	0.1491	0.0758	0.1045
	34 v25m	0.25	0.0	1.0	37.11	61.72	-93.28	111.86	303	18.67	9.6	85.99	0.1634	0.084	0.1191
	35 v38m	0.375	0.0	1.0	40.75	65.01	-87.13	108.72	307	22.56	11.71	86.15	0.1874	0.0972	0.1453
	36 v50m	0.5	0.0	1.0	45.16	69.33	-79.93	105.81	311	28.06	14.66	86.72	0.2168	0.1132	0.1819
	37 v63m	0.625	0.0	1.0	49.74	72.46	-71.59	101.87	315	34.25	18.2	86.09	0.2472	0.1314	0.2258
	38 v75m	0.75	0.0	1.0	54.46	77.04	-63.85	100.07	320	41.97	22.41	86.67	0.2779	0.1484	0.2781
	39 v88m	0.875	0.0	1.0	59.02	81.04	-55.97	98.5	325	50.29	27.05	86.63	0.3067	0.165	0.3356
	40 m00o	1.0	0.0	1.0	63.36	85.37	-48.84	98.36	330	59.38	32.02	87.13	0.3326	0.1794	0.3973
	41 m13o	1.0	0.0	0.875	61.86	83.17	-36.83	90.96	336	55.83	30.24	68.15	0.362	0.1961	0.3752
	42 m25o	1.0	0.0	0.75	60.51	80.87	-23.17	84.13	344	52.66	28.69	50.77	0.3985	0.2172	0.356
	43 m38o	1.0	0.0	0.675	59.27	78.75	-7.68	79.12	354	49.83	27.32	35.35	0.4429	0.2428	0.339
	44 m50o	1.0	0.0	0.5	58.2	81.92	6.37	82.17	4	49.3	26.17	24.45	0.4934	0.2619	0.3247
	45 m63o	1.0	0.0	0.375	57.32	75.2	29.16	80.65	21	45.53	25.25	12.52	0.5466	0.3031	0.3133
	46 m75o	1.0	0.0	0.25	56.75	74.15	49.96	89.41	34	44.31	24.66	5.85	0.5922	0.3296	0.306
	47 m88o	1.0	0.0	0.125	56.51	73.77	63.52	97.35	41	43.84	24.43	3.17	0.6137	0.342	0.3031
	48 o00y	1.0	0.0	0.0	56.44	73.63	64.22	97.7	41	43.68	24.35	3.04	0.6146	0.3426	0.3021
	49 n00w	0.0	0.0	0.0	5.69	0.0	0.0	0.01	0	0.6	0.63	0.69	0.3127	0.329	0.0078
	50 n13w	0.125	0.125	0.125	7.59	4.3	1.39	4.52	18	0.91	0.84	0.82	0.3531	0.3278	0.0104
	51 n25w	0.25	0.25	0.25	24.15	6.31	2.87	6.93	24	4.39	4.15	3.97	0.3507	0.3315	0.0514
	52 n38w	0.375	0.375	0.375	40.75	4.05	2.64	4.83	33	11.69	11.71	11.74	0.3326	0.3332	0.1453
	53 n50w	0.5	0.5	0.5	54.57	2.65	1.97	3.3	37	21.96	22.51	23.34	0.3238	0.332	0.2793
	54 n63w	0.625	0.625	0.625	66.55	1.66	1.59	2.3	44	34.74	36.04	37.95	0.3195	0.3315	0.4472
	55 n75w	0.75	0.75	0.75	77.2	0.99	0.93	1.35	43	49.66	51.87	55.5	0.3162	0.3303	0.6435
	56 n88w	0.875	0.875	0.875	86.73	0.65	0.33	0.72	27	66.3	69.45	75.2	0.3143	0.3292	0.8617
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0992

IE360-7N, Colorimetric data of Television Luminous System TLS06a for CIE standard illuminant D65; CRT monitor; Page: 31/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 31/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65
System TLS06a
CRT monitor

D65 reflection:

$Y_N = 0.63$

$L^*_N = 5.69$

Y Yellow

$LCH^*_a = 92.0 \ 89.8 \ 101$

$LAB^*_a = 92.0 \ -17.6 \ 88.1$

L Leaf green

$LCH^*_a = 80.3 \ 117.9 \ 141$

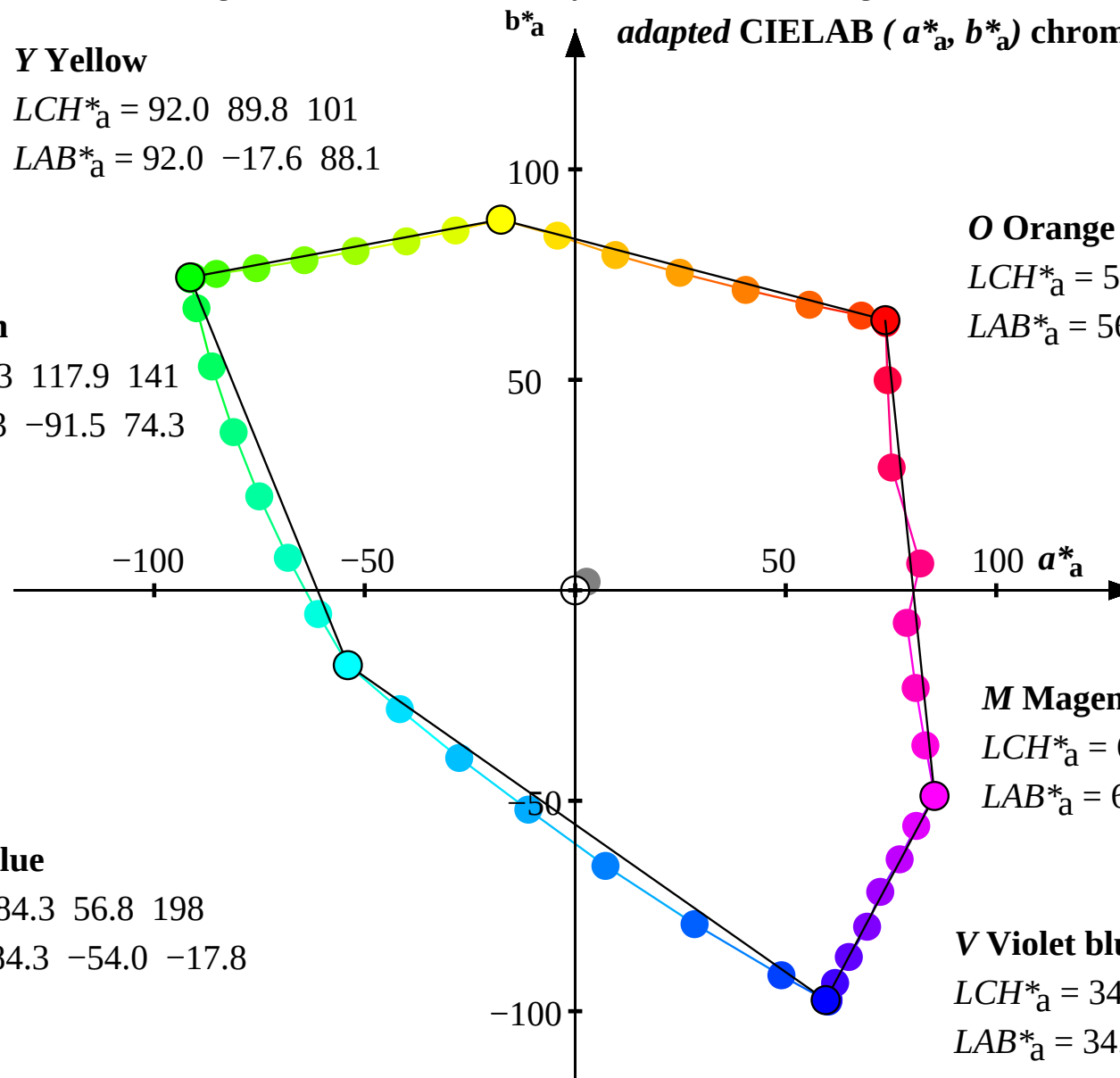
$LAB^*_a = 80.3 \ -91.5 \ 74.3$

C Cyan blue

$LCH^*_a = 84.3 \ 56.8 \ 198$

$LAB^*_a = 84.3 \ -54.0 \ -17.8$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 56.4 \ 97.7 \ 41$

$LAB^*_a = 56.4 \ 73.6 \ 64.2$

M Magenta red

$LCH^*_a = 63.4 \ 98.4 \ 330$

$LAB^*_a = 63.4 \ 85.4 \ -48.9$

V Violet blue

$LCH^*_a = 34.5 \ 114.1 \ 301$

$LAB^*_a = 34.5 \ 59.5 \ -97.4$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	56.89	72.52	60.85	94.67	40	43.97	24.81	3.71	0.6066	0.3423	0.3076
	01 o13y	1.0	0.125	0.0	56.89	72.33	60.82	94.5	40	43.91	24.81	3.71	0.6062	0.3426	0.3076
D65 reflection:	02 o25y	1.0	0.25	0.0	58.73	66.99	62.13	91.36	43	44.79	26.74	4.04	0.5927	0.3538	0.3315
$Y_N = 1.26$	03 o38y	1.0	0.375	0.0	62.86	54.92	65.07	85.15	50	46.8	31.42	4.85	0.5634	0.3782	0.3895
$L^*_N = 11.0$	04 o50y	1.0	0.5	0.0	68.23	40.01	69.02	79.78	60	49.79	38.29	6.02	0.5291	0.4069	0.4747
	05 o63y	1.0	0.625	0.0	74.13	24.53	73.32	77.32	71	53.57	46.91	7.52	0.496	0.4343	0.5816
	06 o75y	1.0	0.75	0.0	80.2	9.47	77.85	78.43	83	58.01	57.04	9.28	0.4666	0.4588	0.7073
	07 o88y	1.0	0.875	0.0	86.15	-4.16	82.62	82.73	93	63.08	68.29	11.13	0.4427	0.4793	0.8467
	08 y00l	1.0	1.0	0.0	91.98	-17.49	86.61	88.36	101	68.33	80.66	13.43	0.4207	0.4966	1.0
	09 y13l	0.875	1.0	0.0	89.72	-28.18	83.97	88.58	109	59.4	75.7	12.93	0.4013	0.5114	0.9386
	10 y25l	0.75	1.0	0.0	87.59	-39.73	81.43	90.61	116	51.17	71.21	12.49	0.3794	0.528	0.8829
	11 y38l	0.625	1.0	0.0	85.59	-51.65	79.06	94.44	123	43.8	67.16	12.08	0.356	0.5459	0.8327
	12 y50l	0.5	1.0	0.0	83.74	-63.61	76.88	99.79	130	37.36	63.56	11.7	0.3317	0.5644	0.7881
	13 y63l	0.375	1.0	0.0	82.23	-74.81	75.03	105.96	135	32.2	60.72	11.42	0.3086	0.5819	0.7528
	14 y75l	0.25	1.0	0.0	81.1	-84.1	73.66	111.81	139	28.44	58.66	11.22	0.2893	0.5966	0.7273
	15 y88l	0.125	1.0	0.0	80.49	-89.56	72.91	115.5	141	26.42	57.55	11.1	0.2779	0.6053	0.7135
	16 l00c	0.0	1.0	0.0	80.41	-90.29	72.8	115.99	141	26.16	57.41	11.1	0.2764	0.6064	0.7118
	17 l13c	0.0	1.0	0.125	80.4	-90.24	72.46	115.74	141	26.17	57.4	11.22	0.2761	0.6056	0.7116
	18 l25c	0.0	1.0	0.25	80.52	-88.73	65.8	110.47	143	26.66	57.61	13.86	0.2717	0.5871	0.7142
	19 l38c	0.0	1.0	0.375	80.83	-85.22	52.41	100.05	148	27.86	58.17	20.45	0.2616	0.5463	0.7212
	20 l50c	0.0	1.0	0.5	81.29	-80.12	37.06	88.29	155	29.68	59.0	30.38	0.2493	0.4956	0.7315
	21 l63c	0.0	1.0	0.625	81.92	-74.2	22.07	77.42	163	32.01	60.16	43.02	0.2368	0.445	0.7459
	22 l75c	0.0	1.0	0.75	82.63	-67.46	7.67	67.9	174	34.79	61.47	58.27	0.2251	0.3978	0.7622
	23 l88c	0.0	1.0	0.875	83.45	-60.41	-5.57	60.68	185	37.96	63.01	75.52	0.2151	0.357	0.7812
	24 c00v	0.0	1.0	1.0	84.39	-53.39	-17.61	56.24	198	41.5	64.82	94.4	0.2067	0.3229	0.8037
	25 c13v	0.0	0.875	1.0	77.54	-41.21	-28.03	49.85	214	36.06	52.43	92.34	0.1994	0.29	0.6501
	26 c25v	0.0	0.75	1.0	70.27	-27.15	-39.44	47.89	235	31.14	41.13	90.7	0.1911	0.2524	0.51
	27 c38v	0.0	0.675	1.0	62.44	-10.9	-51.58	52.73	258	26.63	30.92	88.77	0.182	0.2113	0.3834
	28 c50v	0.0	0.5	1.0	54.35	7.05	-64.64	65.03	276	22.71	22.3	87.48	0.1714	0.1683	0.2765
	29 c63v	0.0	0.375	1.0	46.23	27.63	-78.11	82.86	289	19.69	15.44	86.75	0.1616	0.1267	0.1914
	30 c75v	0.0	0.25	1.0	39.16	47.33	-89.86	101.57	298	17.62	10.75	86.13	0.1539	0.0939	0.1333
	31 c88v	0.0	0.125	1.0	35.81	57.96	-95.76	111.95	301	16.92	8.91	86.31	0.1509	0.0795	0.1105
	32 v00m	0.0	0.0	1.0	35.65	57.29	-95.44	111.32	301	16.67	8.83	85.47	0.1503	0.0795	0.1094
	33 v13m	0.125	0.0	1.0	35.97	57.99	-95.39	111.64	301	17.05	8.99	86.18	0.1519	0.0801	0.1115
	34 v25m	0.25	0.0	1.0	38.14	59.72	-91.57	109.33	303	19.14	10.17	86.06	0.1659	0.0881	0.126
	35 v38m	0.375	0.0	1.0	41.62	63.24	-85.67	106.49	306	23.01	12.26	86.22	0.1894	0.1009	0.152
	36 v50m	0.5	0.0	1.0	45.89	67.77	-78.72	103.88	311	28.47	15.19	86.79	0.2182	0.1164	0.1883
	37 v63m	0.625	0.0	1.0	50.34	71.1	-70.61	100.22	315	34.61	18.7	86.17	0.2481	0.1341	0.2319
	38 v75m	0.75	0.0	1.0	54.96	75.82	-63.05	98.62	320	42.27	22.89	86.74	0.2783	0.1507	0.2838
	39 v88m	0.875	0.0	1.0	59.43	79.95	-55.32	97.23	325	50.53	27.49	86.7	0.3068	0.1669	0.3408
	40 m00o	1.0	0.0	1.0	63.7	84.36	-48.32	97.22	330	59.56	32.43	87.2	0.3324	0.181	0.4021
	41 m13o	1.0	0.0	0.875	62.21	82.13	-36.38	89.84	336	56.04	30.65	68.35	0.3614	0.1977	0.3801
	42 m25o	1.0	0.0	0.75	60.89	79.82	-22.84	83.03	344	52.88	29.12	51.1	0.3973	0.2188	0.3611
	43 m38o	1.0	0.0	0.675	59.67	77.68	-7.55	78.05	354	50.08	27.76	35.79	0.4407	0.2443	0.3442
	44 m50o	1.0	0.0	0.5	58.62	80.79	6.25	81.03	4	49.55	26.62	24.96	0.49	0.2632	0.3301
	45 m63o	1.0	0.0	0.375	57.76	74.11	28.38	79.36	21	45.81	25.71	13.12	0.5412	0.3037	0.3187
	46 m75o	1.0	0.0	0.25	57.19	73.06	48.03	87.43	33	44.6	25.12	6.5	0.5851	0.3296	0.3115
	47 m88o	1.0	0.0	0.125	56.97	72.67	60.25	94.39	40	44.13	24.89	3.83	0.6057	0.3416	0.3086
	48 o00y	1.0	0.0	0.0	56.89	72.52	60.85	94.67	40	43.97	24.81	3.71	0.6066	0.3423	0.3076
	49 n00w	0.0	0.0	0.0	10.99	0.0	0.0	0.01	0	1.2	1.26	1.37	0.3127	0.329	0.0156
	50 n13w	0.125	0.125	0.125	12.41	3.02	1.01	3.18	18	1.5	1.47	1.5	0.3357	0.3284	0.0182
	51 n25w	0.25	0.25	0.25	26.01	5.74	2.59	6.3	24	4.96	4.75	4.64	0.3456	0.3311	0.0589
	52 n38w	0.375	0.375	0.375	41.62	3.91	2.53	4.66	33	12.21	12.26	12.35	0.3316	0.3329	0.152
	53 n50w	0.5	0.5	0.5	55.06	2.59	1.93	3.23	37	22.41	22.99	23.87	0.3235	0.3319	0.285
	54 n63w	0.625	0.625	0.625	66.84	1.64	1.57	2.27	44	35.09	36.42	38.36	0.3194	0.3315	0.4516
	55 n75w	0.75	0.75	0.75	77.36	0.98	0.92	1.34	43	49.91	52.13	55.8	0.3162	0.3303	0.6463
	56 n88w	0.875	0.875	0.875	86.8	0.64	0.64	0.72	27	66.43	69.59	75.36	0.3143	0.3292	0.8628
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0984

IE360-7N, Colorimetric data of Television Luminous System TLS11a for CIE standard illuminant D65; CRT monitor; Page: 33/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 33/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a

CRT monitor

D65 reflection:

$Y_N = 1.26$

$L^*_N = 11.0$

Y Yellow

$LCH^*_a = 92.0 \ 88.4 \ 101$

$LAB^*_a = 92.0 \ -17.5 \ 86.6$

L Leaf green

$LCH^*_a = 80.4 \ 116.0 \ 141$

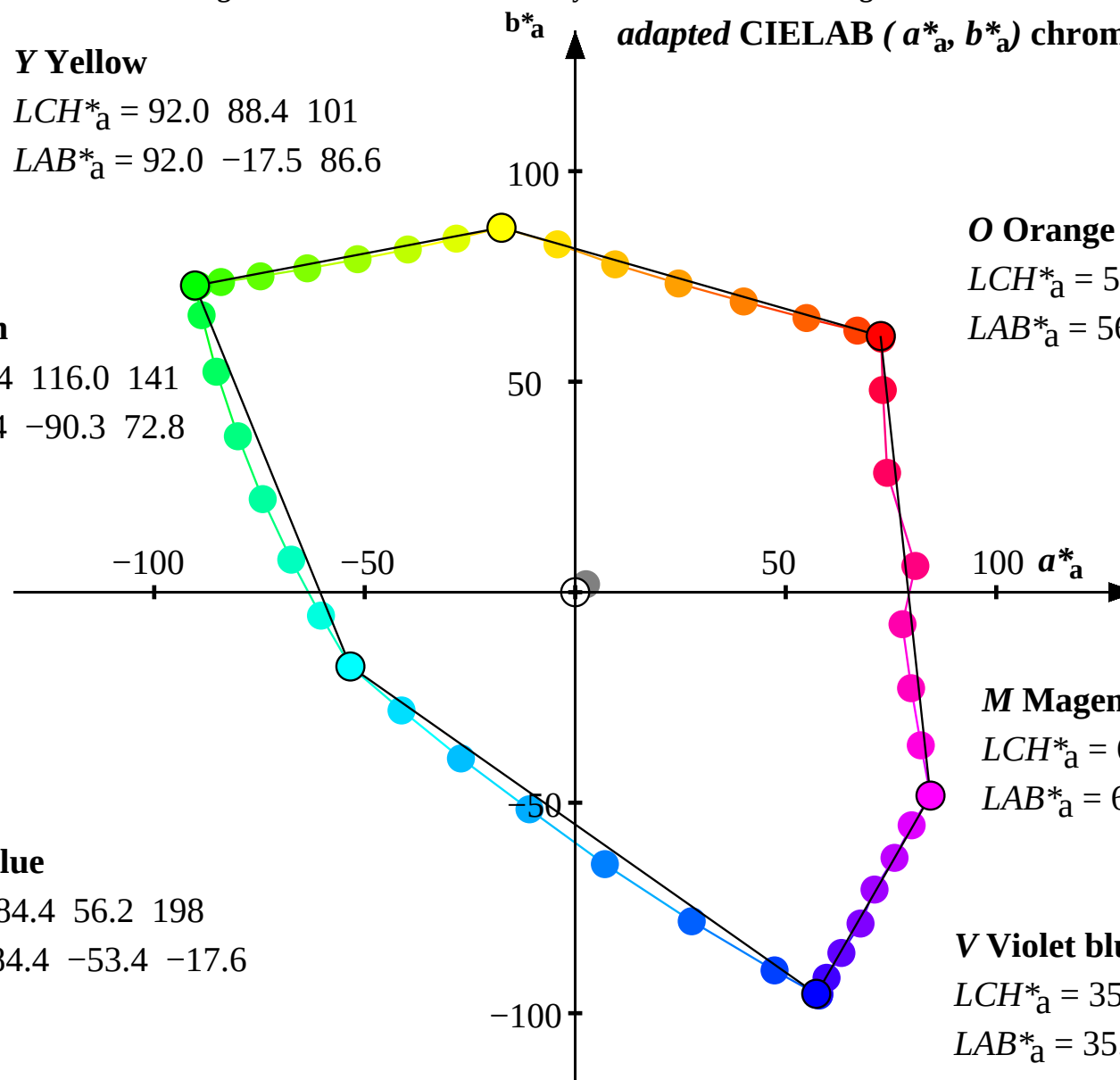
$LAB^*_a = 80.4 \ -90.3 \ 72.8$

C Cyan blue

$LCH^*_a = 84.4 \ 56.2 \ 198$

$LAB^*_a = 84.4 \ -53.4 \ -17.6$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 56.9 \ 94.7 \ 40$

$LAB^*_a = 56.9 \ 72.5 \ 60.8$

M Magenta red

$LCH^*_a = 63.7 \ 97.2 \ 330$

$LAB^*_a = 63.7 \ 84.4 \ -48.3$

V Violet blue

$LCH^*_a = 35.6 \ 111.3 \ 301$

$LAB^*_a = 35.6 \ 57.3 \ -95.4$

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	57.78	70.38	55.37	89.55	38	44.55	25.73	5.05	0.5914	0.3416	0.3186
	01 o13y	1.0	0.125	0.0	57.78	70.19	55.35	89.39	38	44.49	25.73	5.05	0.591	0.3419	0.3186
	02 o25y	1.0	0.25	0.0	59.55	65.08	56.89	86.44	41	45.36	27.63	5.38	0.5788	0.3526	0.3421
D65 reflection:	03 o38y	1.0	0.375	0.0	63.54	53.49	60.32	80.62	48	47.34	32.24	6.17	0.552	0.376	0.3992
	04 o50y	1.0	0.5	0.0	68.76	39.07	64.79	75.65	59	50.29	39.01	7.33	0.5204	0.4037	0.483
	05 o63y	1.0	0.625	0.0	74.51	24.01	69.56	73.59	71	54.01	47.51	8.81	0.4896	0.4306	0.5882
$Y_N = 2.52$	06 o75y	1.0	0.75	0.0	80.46	9.29	74.48	75.06	83	58.39	57.5	10.54	0.4619	0.4548	0.7119
	07 o88y	1.0	0.875	0.0	86.3	-4.09	79.55	79.65	93	63.38	68.59	12.36	0.4392	0.4752	0.8492
	$L^*_N = 18.01$														
	08 y00l	1.0	1.0	0.0	92.03	-17.21	83.82	85.57	102	68.56	80.77	14.63	0.4182	0.4926	1.0
	09 y13l	0.875	1.0	0.0	89.81	-27.69	81.16	85.76	109	59.76	75.89	14.13	0.399	0.5066	0.9395
	10 y25l	0.75	1.0	0.0	87.71	-38.99	78.59	87.74	116	51.65	71.47	13.7	0.3775	0.5224	0.8848
	11 y38l	0.625	1.0	0.0	85.74	-50.61	76.2	91.48	124	44.38	67.47	13.29	0.3546	0.5391	0.8354
	12 y50l	0.5	1.0	0.0	83.93	-62.23	74.0	96.69	130	38.04	63.93	12.92	0.3311	0.5564	0.7915
	13 y63l	0.375	1.0	0.0	82.44	-73.05	72.14	102.68	135	32.95	61.12	12.65	0.3088	0.5727	0.7567
	14 y75l	0.25	1.0	0.0	81.34	-82.0	70.77	108.32	139	29.25	59.09	12.45	0.2902	0.5863	0.7316
	15 y88l	0.125	1.0	0.0	80.74	-87.24	70.01	111.87	141	27.25	57.99	12.34	0.2793	0.5943	0.718
	16 l00c	0.0	1.0	0.0	80.66	-87.94	69.9	112.35	142	27.0	57.86	12.33	0.2778	0.5953	0.7164
	17 l13c	0.0	1.0	0.125	80.65	-87.89	69.58	112.11	142	27.0	57.85	12.45	0.2776	0.5945	0.7162
	18 l25c	0.0	1.0	0.25	80.77	-86.44	63.42	107.22	144	27.49	58.05	15.05	0.2732	0.5771	0.7187
	19 l38c	0.0	1.0	0.375	81.07	-83.07	50.81	97.39	149	28.67	58.6	21.55	0.2635	0.5385	0.7256
	20 l50c	0.0	1.0	0.5	81.53	-78.16	36.11	86.11	155	30.47	59.43	31.33	0.2513	0.4902	0.7358
	21 l63c	0.0	1.0	0.625	82.15	-72.45	21.59	75.61	163	32.76	60.57	43.79	0.2389	0.4417	0.7499
	22 l75c	0.0	1.0	0.75	82.84	-65.93	7.52	66.37	173	35.5	61.86	58.82	0.2273	0.3961	0.7659
	23 l88c	0.0	1.0	0.875	83.64	-59.1	-5.47	59.37	185	38.63	63.38	75.83	0.2172	0.3564	0.7847
	24 c00v	0.0	1.0	1.0	84.57	-52.29	-17.33	55.1	198	42.11	65.16	94.43	0.2088	0.3231	0.8068
	25 c13v	0.0	0.875	1.0	77.85	-40.24	-27.53	48.77	214	36.75	52.95	92.4	0.2018	0.2908	0.6556
	26 c25v	0.0	0.75	1.0	70.75	-38.67	46.84	46.84	236	31.9	41.82	90.79	0.1939	0.2542	0.5177
	27 c38v	0.0	0.675	1.0	63.14	-10.54	-50.46	51.56	258	27.46	31.75	88.88	0.1855	0.2144	0.3931
	28 c50v	0.0	0.5	1.0	55.34	6.76	-63.02	63.39	276	23.6	23.26	87.61	0.1755	0.173	0.288
	29 c63v	0.0	0.375	1.0	47.62	26.24	-75.82	80.24	289	20.62	16.49	86.89	0.1663	0.133	0.2042
	30 c75v	0.0	0.25	1.0	41.02	44.41	-86.76	97.48	297	18.58	11.87	86.28	0.1591	0.1017	0.147
	31 c88v	0.0	0.125	1.0	37.95	54.02	-92.18	106.85	300	17.89	10.06	86.46	0.1564	0.0879	0.1245
	32 v00m	0.0	0.0	1.0	37.8	53.36	-91.84	106.22	300	17.65	9.98	85.62	0.1558	0.0881	0.1235
	33 v13m	0.125	0.0	1.0	38.1	54.08	-91.83	106.58	300	18.02	10.14	86.33	0.1574	0.0886	0.1256
	34 v25m	0.25	0.0	1.0	40.08	56.08	-88.34	104.64	302	20.08	11.3	86.21	0.1707	0.0961	0.1399
	35 v38m	0.375	0.0	1.0	43.3	59.95	-82.89	102.3	306	23.89	13.36	86.37	0.1933	0.1081	0.1654
	36 v50m	0.5	0.0	1.0	47.3	64.83	-76.4	100.2	310	29.27	16.25	86.93	0.221	0.1227	0.2011
	37 v63m	0.625	0.0	1.0	51.51	68.5	-68.7	97.02	315	35.32	19.71	86.32	0.2499	0.1394	0.244
	38 v75m	0.75	0.0	1.0	55.92	73.47	-61.49	95.81	320	42.88	23.84	86.88	0.2792	0.1552	0.2951
	39 v88m	0.875	0.0	1.0	60.22	77.8	-54.05	94.74	325	51.02	28.37	86.84	0.3069	0.1707	0.3513
	40 m00o	1.0	0.0	1.0	64.35	82.37	-47.28	94.98	330	59.91	33.24	87.34	0.332	0.1842	0.4115
	41 m13o	1.0	0.0	0.875	62.92	80.11	-35.51	87.63	336	56.44	31.49	88.75	0.3602	0.201	0.3899
	42 m25o	1.0	0.0	0.75	61.64	77.77	-22.22	80.88	344	53.33	29.98	51.75	0.3949	0.222	0.3712
	43 m38o	1.0	0.0	0.675	60.46	75.6	-7.31	75.95	354	50.57	28.64	36.67	0.4364	0.2471	0.3545
	44 m50o	1.0	0.0	0.5	59.45	78.58	6.01	78.81	4	50.05	27.51	25.99	0.4833	0.2657	0.3407
	45 m63o	1.0	0.0	0.375	58.62	71.99	26.92	76.86	21	46.37	26.62	14.33	0.5311	0.3048	0.3295
	46 m75o	1.0	0.0	0.25	58.07	70.92	44.66	83.81	32	45.17	26.04	7.8	0.5717	0.3296	0.3224
	47 m88o	1.0	0.0	0.125	57.85	70.52	54.9	89.38	38	44.71	25.81	5.17	0.5907	0.341	0.3195
	48 o00y	1.0	0.0	0.0	57.78	70.38	55.37	89.55	38	44.55	25.73	5.05	0.5914	0.3416	0.3186
	49 n00w	0.0	0.0	0.0	18.01	0.0	0.0	0.01	0	2.4	2.52	2.74	0.3127	0.329	0.0312
	50 n13w	0.125	0.125	0.125	18.91	1.99	0.65	2.1	18	2.7	2.73	2.87	0.3249	0.3287	0.0338
	51 n25w	0.25	0.25	0.25	29.31	4.9	2.18	5.36	24	6.1	5.96	5.96	0.3385	0.3307	0.0738
	52 n38w	0.375	0.375	0.375	43.3	3.64	2.35	4.33	33	13.25	13.36	13.56	0.3298	0.3326	0.1654
	53 n50w	0.5	0.5	0.5	56.02	2.49	1.85	3.1	37	23.3	23.93	24.91	0.3229	0.3317	0.2963
	54 n63w	0.625	0.625	0.625	67.41	1.59	1.52	2.2	44	35.8	37.17	39.2	0.3192	0.3314	0.4602
	55 n75w	0.75	0.75	0.75	77.67	0.96	0.9	1.31	43	50.4	52.66	56.38	0.3161	0.3303	0.6519
	56 n88w	0.875	0.875	0.875	86.93	0.63	0.32	0.71	27	66.68	69.86	75.66	0.3142	0.3292	0.865
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0968

IE360-7N, Colorimetric data of Television Luminous System TLS18a for CIE standard illuminant D65; CRT monitor; Page: 35/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 35/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a

CRT monitor

D65 reflection:

$Y_N = 2.52$

$L^*_N = 18.01$

Y Yellow

$LCH^*_a = 92.0 \ 85.6 \ 102$

$LAB^*_a = 92.0 \ -17.2 \ 83.8$

L Leaf green

$LCH^*_a = 80.7 \ 112.3 \ 142$

$LAB^*_a = 80.7 \ -88.0 \ 69.9$

C Cyan blue

$LCH^*_a = 84.6 \ 55.1 \ 198$

$LAB^*_a = 84.6 \ -52.3 \ -17.3$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*

O Orange red

$LCH^*_a = 57.8 \ 89.5 \ 38$

$LAB^*_a = 57.8 \ 70.4 \ 55.4$

M Magenta red

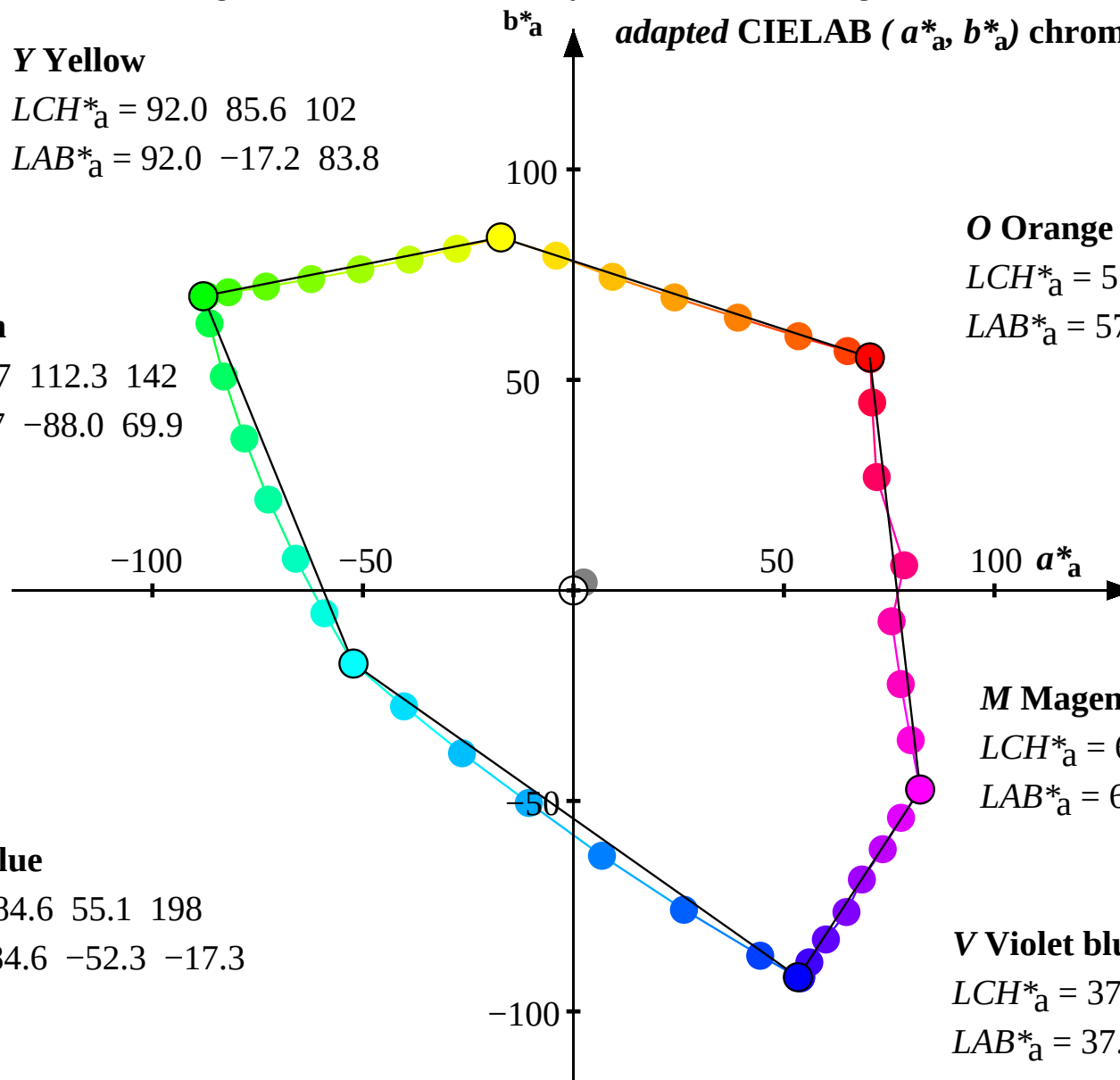
$LCH^*_a = 64.4 \ 95.0 \ 330$

$LAB^*_a = 64.4 \ 82.4 \ -47.3$

V Violet blue

$LCH^*_a = 37.8 \ 106.2 \ 300$

$LAB^*_a = 37.8 \ 53.4 \ -91.8$



Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	59.5	66.32	47.38	81.51	36	45.71	27.57	7.72	0.5643	0.3404	0.3404
	01 o13y	1.0	0.125	0.0	59.5	66.14	47.37	81.35	36	45.65	27.57	7.73	0.5639	0.3406	0.3404
	02 o25y	1.0	0.25	0.0	61.15	61.45	49.1	78.66	39	46.5	29.41	8.04	0.5538	0.3504	0.3632
D65 reflection:	03 o38y	1.0	0.375	0.0	64.88	50.73	52.92	73.31	46	48.42	33.89	8.81	0.5313	0.3719	0.4184
$Y_N = 5.04$	04 o50y	1.0	0.5	0.0	69.8	37.23	57.88	68.82	57	51.28	40.47	9.94	0.5043	0.3979	0.4996
$L^*_N = 26.85$	05 o63y	1.0	0.625	0.0	75.27	22.99	63.17	67.23	70	54.9	48.71	11.37	0.4774	0.4236	0.6014
	06 o75y	1.0	0.75	0.0	80.97	8.93	68.56	69.14	83	59.15	58.41	13.05	0.4529	0.4472	0.7211
	07 o88y	1.0	0.875	0.0	86.59	-3.94	74.0	74.11	93	63.99	69.17	14.82	0.4324	0.4674	0.854
	08 y00l	1.0	1.0	0.0	92.13	-16.65	78.69	80.43	102	69.02	81.0	17.02	0.4132	0.4849	1.0
	09 y13l	0.875	1.0	0.0	89.98	-26.73	76.0	80.57	109	60.48	76.26	16.54	0.3946	0.4975	0.9415
	10 y25l	0.75	1.0	0.0	87.95	-37.54	73.42	82.47	117	52.6	71.97	16.12	0.3739	0.5115	0.8885
	11 y38l	0.625	1.0	0.0	86.05	-48.58	71.01	86.05	121	45.55	68.09	15.73	0.3521	0.5263	0.8406
	12 y50l	0.5	1.0	0.0	84.3	-59.53	68.8	90.99	134	39.39	64.65	15.37	0.3299	0.5414	0.7981
	13 y63l	0.375	1.0	0.0	82.87	-69.66	66.94	96.61	136	34.45	61.93	15.1	0.309	0.5555	0.7645
	14 y75l	0.25	1.0	0.0	81.81	-77.96	65.57	101.87	140	30.86	59.96	14.91	0.2919	0.5671	0.7402
	15 y88l	0.125	1.0	0.0	81.23	-82.79	64.81	105.14	142	28.92	58.89	14.8	0.2818	0.5739	0.7271
	16 l00c	0.0	1.0	0.0	81.16	-83.43	64.7	105.59	142	28.68	58.76	14.79	0.2805	0.5748	0.7255
	17 l13c	0.0	1.0	0.125	81.15	-83.38	64.43	105.38	142	28.68	58.75	14.9	0.2803	0.5741	0.7253
	18 l25c	0.0	1.0	0.25	81.26	-82.04	59.08	101.11	144	29.15	58.95	17.44	0.2762	0.5586	0.7277
	19 l38c	0.0	1.0	0.375	81.56	-78.93	47.82	92.29	149	30.3	59.48	23.74	0.2669	0.524	0.7344
	20 l50c	0.0	1.0	0.5	81.99	-74.37	34.29	81.9	155	32.04	60.28	33.24	0.2552	0.4801	0.7443
	21 l63c	0.0	1.0	0.625	82.59	-69.06	20.63	72.09	163	34.27	61.39	45.33	0.243	0.4354	0.7579
	22 l75c	0.0	1.0	0.75	83.26	-62.96	7.23	63.39	173	36.93	62.65	59.93	0.2315	0.3928	0.7734
	23 l88c	0.0	1.0	0.875	84.03	-56.55	-5.28	56.81	185	39.96	64.12	76.43	0.2214	0.3552	0.7916
	24 c00v	0.0	1.0	1.0	84.92	-50.12	-16.76	52.86	198	43.34	65.85	94.49	0.2128	0.3233	0.813
	25 c13v	0.0	0.875	1.0	78.46	-38.34	-26.56	46.66	215	38.14	54.0	92.52	0.2065	0.2924	0.6666
	26 c25v	0.0	0.75	1.0	71.68	-24.97	-37.17	44.79	236	33.43	43.19	90.95	0.1995	0.2577	0.5332
	27 c38v	0.0	0.675	1.0	64.5	-9.86	-48.27	49.28	258	29.13	33.42	89.1	0.1921	0.2204	0.4126
	28 c50v	0.0	0.5	1.0	57.24	6.24	-59.92	60.25	276	25.37	25.17	87.87	0.1833	0.1819	0.3108
	29 c63v	0.0	0.375	1.0	50.22	23.79	-71.53	75.39	288	22.48	18.6	87.17	0.1753	0.1451	0.2297
	30 c75v	0.0	0.25	1.0	44.41	39.48	-81.13	90.23	296	20.5	14.12	86.57	0.1691	0.1165	0.1743
	31 c88v	0.0	0.125	1.0	41.78	47.52	-85.78	98.07	299	19.83	12.36	86.75	0.1667	0.1039	0.1526
	32 v00m	0.0	0.0	1.0	41.66	46.88	-85.42	97.44	299	19.6	12.28	85.94	0.1663	0.1042	0.1516
	33 v13m	0.125	0.0	1.0	41.91	47.61	-85.48	97.85	299	19.96	12.44	86.63	0.1677	0.1045	0.1536
	34 v25m	0.25	0.0	1.0	43.6	49.92	-82.48	96.42	301	21.96	13.56	86.51	0.1799	0.1111	0.1674
	35 v38m	0.375	0.0	1.0	46.39	54.2	-77.76	94.8	305	25.65	15.56	86.66	0.2006	0.1217	0.1921
	36 v50m	0.5	0.0	1.0	49.94	59.53	-72.04	93.46	310	30.88	18.36	87.2	0.2263	0.1346	0.2267
	37 v63m	0.625	0.0	1.0	53.74	63.69	-65.07	91.06	314	36.75	21.73	86.61	0.2533	0.1497	0.2682
	38 v75m	0.75	0.0	1.0	57.78	69.03	-58.48	90.48	320	44.09	25.73	87.16	0.2809	0.1639	0.3177
	39 v88m	0.875	0.0	1.0	61.77	73.69	-51.58	89.96	325	51.99	30.14	87.12	0.3072	0.1781	0.372
	40 m00o	1.0	0.0	1.0	65.64	78.52	-45.25	90.63	330	60.63	34.86	87.6	0.3311	0.1904	0.4304
	41 m13o	1.0	0.0	0.875	64.29	76.2	-33.81	83.37	336	57.25	33.16	69.56	0.3579	0.2073	0.4094
	42 m25o	1.0	0.0	0.75	63.09	73.82	-21.01	76.75	344	54.24	31.7	53.06	0.3902	0.228	0.3913
	43 m38o	1.0	0.0	0.675	61.99	71.61	-6.85	71.94	355	51.56	30.39	38.42	0.4283	0.2525	0.3752
	44 m50o	1.0	0.0	0.5	61.05	74.35	5.57	74.56	4	51.05	29.3	28.06	0.4709	0.2703	0.3618
	45 m63o	1.0	0.0	0.375	60.28	67.95	24.38	72.19	20	47.47	28.43	16.73	0.5125	0.3069	0.351
	46 m75o	1.0	0.0	0.25	59.77	66.87	39.24	77.53	30	46.31	27.87	10.39	0.5476	0.3295	0.3441
	47 m88o	1.0	0.0	0.125	59.57	66.46	47.07	81.44	35	45.86	27.65	7.84	0.5638	0.3398	0.3413
	48 o00y	1.0	0.0	0.0	59.5	66.32	47.38	81.51	36	45.71	27.57	7.72	0.5643	0.3404	0.3404
	49 n00w	0.0	0.0	0.0	26.85	0.0	0.0	0.01	0	4.79	5.04	5.49	0.3127	0.329	0.0622
	50 n13w	0.125	0.125	0.125	27.41	1.26	0.41	1.32	18	5.08	5.24	5.61	0.3189	0.3289	0.0647
	51 n25w	0.25	0.25	0.25	34.76	3.82	1.67	4.17	24	8.39	8.38	8.61	0.3305	0.3302	0.1034
	52 n38w	0.375	0.375	0.375	46.39	3.2	2.05	3.8	33	15.32	15.56	15.99	0.3269	0.332	0.1921
	53 n50w	0.5	0.5	0.5	57.87	2.3	1.7	2.86	37	25.08	25.83	27.01	0.3219	0.3315	0.3189
	54 n63w	0.625	0.625	0.625	68.52	1.51	1.44	2.08	44	37.22	38.68	40.88	0.3187	0.3312	0.4775
	55 n75w	0.75	0.75	0.75	78.29	0.92	0.86	1.26	43	51.39	53.71	57.56	0.3159	0.3302	0.6631
	56 n88w	0.875	0.875	0.875	87.2	0.61	0.31	0.68	27	67.2	70.41	76.27	0.3142	0.3292	0.8693
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0937

IE360-7N, Colorimetric data of Television Luminous System TLS27a for CIE standard illuminant D65; CRT monitor; Page: 37/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 37/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a

CRT monitor

D65 reflection:

$Y_N = 5.04$

$L^*_N = 26.85$

Y Yellow

$LCH^*_a = 92.1 \ 80.4 \ 102$

$LAB^*_a = 92.1 \ -16.7 \ 78.7$

L Leaf green

$LCH^*_a = 81.2 \ 105.6 \ 142$

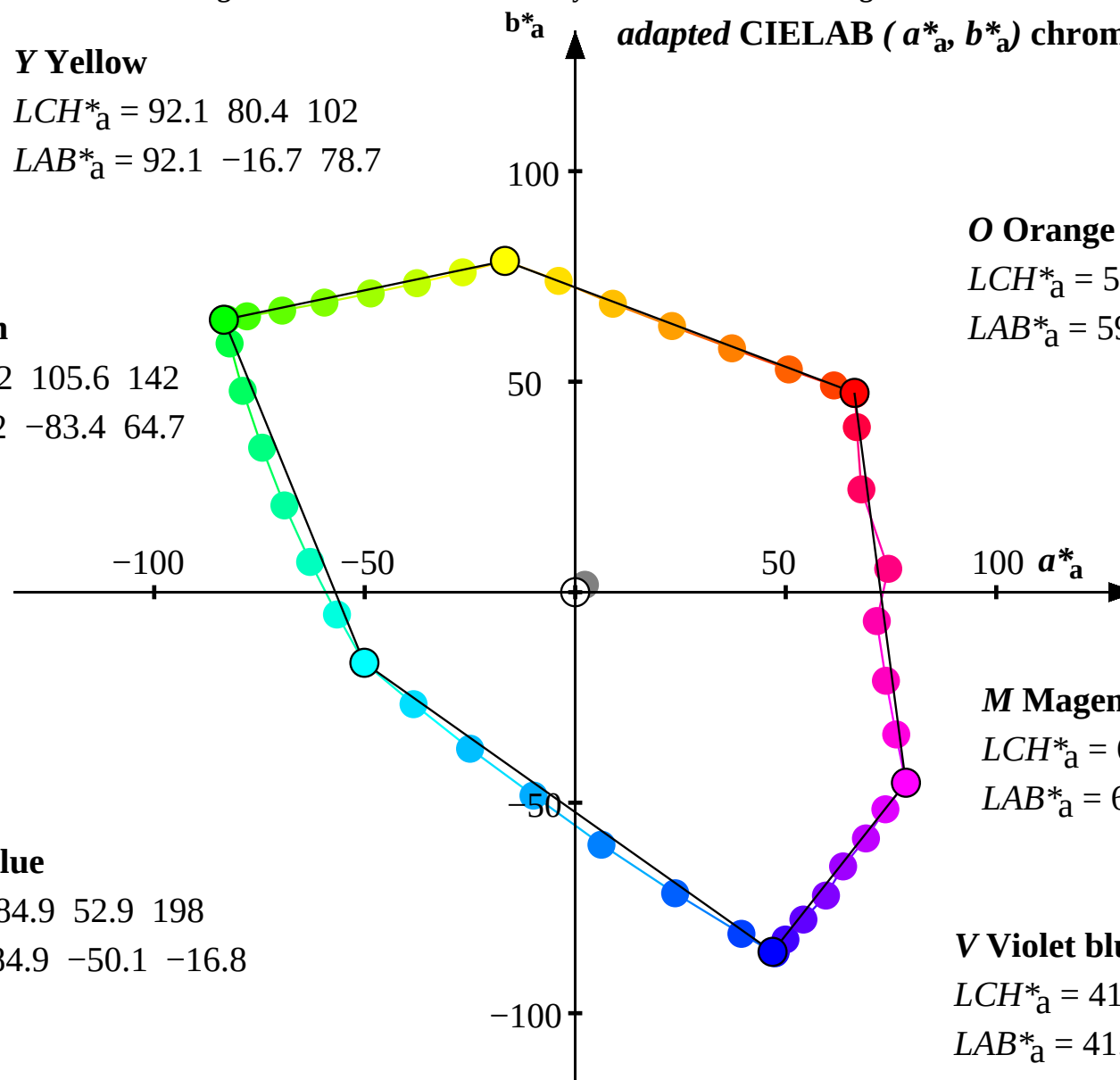
$LAB^*_a = 81.2 \ -83.4 \ 64.7$

C Cyan blue

$LCH^*_a = 84.9 \ 52.9 \ 198$

$LAB^*_a = 84.9 \ -50.1 \ -16.8$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 59.5 \ 81.5 \ 36$

$LAB^*_a = 59.5 \ 66.3 \ 47.4$

M Magenta red

$LCH^*_a = 65.6 \ 90.6 \ 330$

$LAB^*_a = 65.6 \ 78.5 \ -45.3$

V Violet blue

$LCH^*_a = 41.7 \ 97.4 \ 299$

$LAB^*_a = 41.7 \ 46.9 \ -85.4$

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	62.72	58.96	37.05	69.64	32	48.03	31.25	13.08	0.5201	0.3384	0.3837
	01 o13y	1.0	0.125	0.0	62.72	58.8	37.04	69.49	32	47.97	31.25	13.08	0.5197	0.3386	0.3837
	02 o25y	1.0	0.25	0.0	64.15	54.83	38.76	67.15	35	48.77	32.98	13.38	0.5127	0.3467	0.4049
D65 reflection:	03 o38y	1.0	0.375	0.0	67.42	45.61	42.64	62.43	43	50.57	37.19	14.1	0.4965	0.3651	0.4566
$Y_N = 10.08$	04 o50y	1.0	0.5	0.0	71.8	33.78	47.73	58.48	55	53.27	43.37	15.16	0.4765	0.3879	0.5324
$L^*_N = 37.99$	05 o63y	1.0	0.625	0.0	76.75	21.04	53.27	57.28	68	56.67	51.12	16.51	0.4559	0.4113	0.6276
	06 o75y	1.0	0.75	0.0	81.96	8.24	58.96	59.54	82	60.66	60.23	18.08	0.4365	0.4334	0.7394
	07 o88y	1.0	0.875	0.0	87.16	-3.66	64.67	64.77	93	65.21	70.34	19.74	0.4199	0.453	0.8636
	08 y00l	1.0	1.0	0.0	92.33	-15.55	69.75	71.47	103	69.93	81.46	21.82	0.4038	0.4703	1.0
	09 y13l	0.875	1.0	0.0	90.32	-24.85	67.1	71.55	110	61.91	77.0	21.36	0.3863	0.4804	0.9453
	10 y25l	0.75	1.0	0.0	88.43	-34.71	64.56	73.31	118	54.51	72.97	20.97	0.3672	0.4916	0.8958
	11 y38l	0.625	1.0	0.0	86.67	-44.67	62.2	76.58	126	47.88	69.33	20.6	0.3474	0.5031	0.8511
	12 y50l	0.5	1.0	0.0	85.04	-54.39	60.03	81.01	132	42.09	66.09	20.26	0.3277	0.5145	0.8114
	13 y63l	0.375	1.0	0.0	83.72	-63.25	58.22	85.98	137	37.45	63.53	20.01	0.3095	0.5251	0.78
	14 y75l	0.25	1.0	0.0	82.74	-70.41	56.89	90.53	141	34.07	61.68	19.83	0.2948	0.5337	0.7572
	15 y88l	0.125	1.0	0.0	82.21	-74.53	56.16	93.33	143	32.25	60.68	19.72	0.2863	0.5386	0.745
	16 l00c	0.0	1.0	0.0	82.14	-75.08	56.06	93.71	143	32.03	60.56	19.72	0.2852	0.5393	0.7435
	17 l13c	0.0	1.0	0.125	82.13	-75.04	55.84	93.54	143	32.03	60.55	19.82	0.2849	0.5387	0.7433
	18 l25c	0.0	1.0	0.25	82.24	-73.89	51.65	90.16	145	32.47	60.73	22.2	0.2813	0.5263	0.7456
	19 l38c	0.0	1.0	0.375	82.51	-71.22	42.46	82.92	149	33.55	61.24	28.13	0.2729	0.4982	0.7518
	20 l50c	0.0	1.0	0.5	82.91	-67.29	30.9	74.05	155	35.19	61.99	37.05	0.2622	0.4618	0.761
	21 l63c	0.0	1.0	0.625	83.46	-62.68	18.82	65.45	163	37.28	63.03	48.42	0.2507	0.4238	0.7738
	22 l75c	0.0	1.0	0.75	84.08	-57.34	6.66	57.73	173	39.78	64.21	62.13	0.2395	0.3865	0.7883
	23 l88c	0.0	1.0	0.875	84.79	-51.68	-4.89	51.92	185	42.63	65.6	77.64	0.2294	0.3529	0.8053
	24 c00v	0.0	1.0	1.0	85.62	-45.96	-15.64	48.56	199	45.81	67.22	94.61	0.2206	0.3237	0.8252
	25 c13v	0.0	0.875	1.0	79.66	-34.78	-24.65	42.64	215	40.92	56.08	92.76	0.2156	0.2956	0.6885
	26 c25v	0.0	0.75	1.0	73.5	-22.33	-34.27	40.92	237	36.5	45.93	91.29	0.2101	0.2644	0.5638
	27 c38v	0.0	0.675	1.0	67.09	-8.66	-44.12	44.97	259	32.45	36.75	89.54	0.2044	0.2315	0.4511
	28 c50v	0.0	0.5	1.0	60.78	5.36	-54.18	54.46	276	28.92	29.0	88.39	0.1977	0.1982	0.356
	29 c63v	0.0	0.375	1.0	54.89	19.86	-63.87	66.9	287	26.2	22.83	87.73	0.1916	0.1669	0.2802
	30 c75v	0.0	0.25	1.0	50.23	32.04	-71.51	78.37	294	24.34	18.61	87.17	0.1871	0.143	0.2285
	31 c88v	0.0	0.125	1.0	48.21	38.03	-75.12	84.21	297	23.72	16.96	87.34	0.1853	0.1325	0.2082
	32 v00m	0.0	0.0	1.0	48.11	37.46	-74.74	83.61	297	23.49	16.88	86.58	0.1851	0.133	0.2073
	33 v13m	0.125	0.0	1.0	48.3	38.15	-74.87	84.04	297	23.83	17.03	87.22	0.1861	0.133	0.2091
	34 v25m	0.25	0.0	1.0	49.6	40.61	-72.56	83.16	299	25.71	18.09	87.11	0.1964	0.1382	0.222
	35 v38m	0.375	0.0	1.0	51.8	45.09	-68.86	82.32	303	29.19	19.97	87.25	0.214	0.1464	0.2451
	36 v50m	0.5	0.0	1.0	54.66	50.71	-64.3	81.9	308	34.09	22.6	87.76	0.236	0.1565	0.2775
	37 v63m	0.625	0.0	1.0	57.81	55.35	-58.47	80.52	313	39.61	25.76	87.21	0.2596	0.1688	0.3163
	38 v75m	0.75	0.0	1.0	61.24	61.08	-52.92	80.82	319	46.51	29.52	87.72	0.284	0.1803	0.3624
	39 v88m	0.875	0.0	1.0	64.69	66.13	-46.94	81.1	325	53.93	33.66	87.69	0.3077	0.192	0.4132
	40 m00o	1.0	0.0	1.0	68.09	71.27	-41.39	82.43	330	62.05	38.1	88.14	0.3295	0.2024	0.4677
	41 m13o	1.0	0.0	0.875	66.9	68.9	-30.64	75.4	336	58.88	36.51	71.19	0.3535	0.2192	0.4482
	42 m25o	1.0	0.0	0.75	65.85	66.49	-18.81	69.1	344	56.04	35.13	55.68	0.3816	0.2392	0.4313
	43 m38o	1.0	0.0	0.675	64.89	64.26	-6.03	64.55	355	53.52	33.9	41.92	0.4138	0.2621	0.4162
	44 m50o	1.0	0.0	0.5	64.06	66.59	4.81	66.76	4	53.05	32.88	32.18	0.4492	0.2784	0.4036
	45 m63o	1.0	0.0	0.375	63.39	60.59	20.34	63.92	19	49.69	32.06	21.54	0.4811	0.3104	0.3936
	46 m75o	1.0	0.0	0.25	62.95	59.51	31.51	67.34	28	48.6	31.53	15.58	0.5077	0.3294	0.3871
	47 m88o	1.0	0.0	0.125	62.78	59.1	36.87	69.66	32	48.17	31.32	13.19	0.5198	0.3379	0.3845
	48 o00y	1.0	0.0	0.0	62.72	58.96	37.05	69.64	32	48.03	31.25	13.08	0.5201	0.3384	0.3837
	49 n00w	0.0	0.0	0.0	37.99	0.0	0.0	0.01	0	9.58	10.08	10.98	0.3127	0.329	0.1237
	50 n13w	0.125	0.125	0.125	38.32	0.76	0.24	0.8	18	9.85	10.27	11.09	0.3157	0.3289	0.1261
	51 n25w	0.25	0.25	0.25	43.09	2.67	1.15	2.9	23	12.96	13.22	13.91	0.3233	0.3297	0.1623
	52 n38w	0.375	0.375	0.375	51.8	2.55	1.63	3.03	32	19.48	19.97	20.85	0.3231	0.3312	0.2451
	53 n50w	0.5	0.5	0.5	61.32	1.97	1.46	2.45	36	28.65	29.61	31.2	0.3202	0.331	0.3635
	54 n63w	0.625	0.625	0.625	70.66	1.35	1.28	1.86	44	40.05	41.69	44.23	0.3179	0.3309	0.5118
	55 n75w	0.75	0.75	0.75	79.51	0.84	0.79	1.15	43	53.37	55.81	59.9	0.3156	0.3301	0.6852
	56 n88w	0.875	0.875	0.875	87.73	0.57	0.29	0.63	27	68.22	71.51	77.49	0.3141	0.3292	0.8779
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	85	84.2	88.59	96.46	0.3127	0.329	1.0876

IE360-7N, Colorimetric data of Television Luminous System TLS38a for CIE standard illuminant D65; CRT monitor; Page: 39/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 39/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a

CRT monitor

D65 reflection:

$Y_N = 10.08$

$L^*_N = 37.99$

Y Yellow

$LCH^*_a = 92.3 \ 71.5 \ 103$

$LAB^*_a = 92.3 \ -15.6 \ 69.8$

L Leaf green

$LCH^*_a = 82.1 \ 93.7 \ 143$

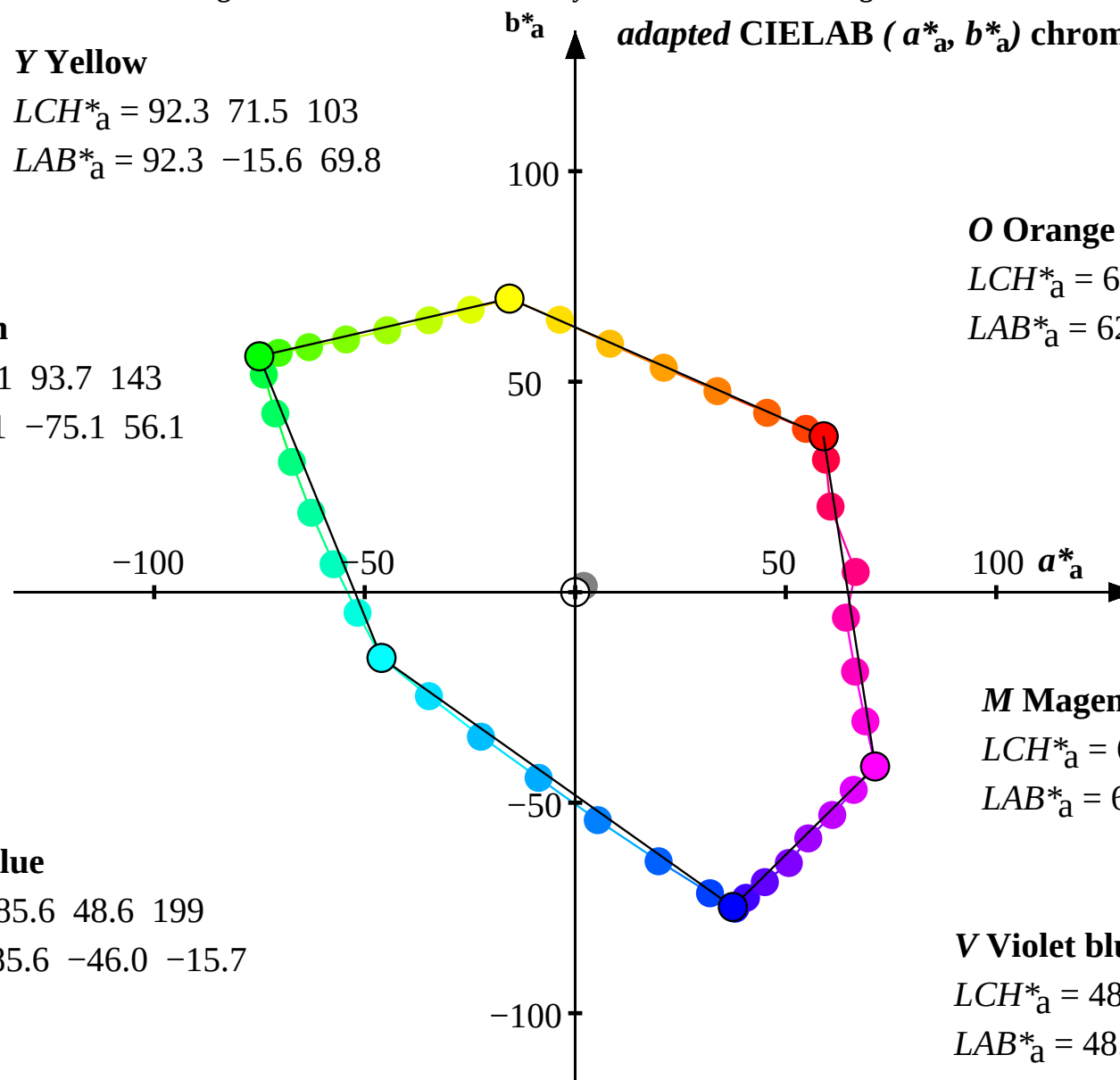
$LAB^*_a = 82.1 \ -75.1 \ 56.1$

C Cyan blue

$LCH^*_a = 85.6 \ 48.6 \ 199$

$LAB^*_a = 85.6 \ -46.0 \ -15.7$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 62.7 \ 69.6 \ 32$

$LAB^*_a = 62.7 \ 59.0 \ 37.1$

M Magenta red

$LCH^*_a = 68.1 \ 82.4 \ 330$

$LAB^*_a = 68.1 \ 71.3 \ -41.4$

V Violet blue

$LCH^*_a = 48.1 \ 83.6 \ 297$

$LAB^*_a = 48.1 \ 37.5 \ -74.8$

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_{1a}$	$Y_a=XYZ^*_{2a}$	$Z_a=XYZ^*_{3a}$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	68.47	46.61	25.2	52.99	28	52.68	38.62	23.78	0.4578	0.3356	0.4688
	01 o13y	1.0	0.125	0.0	68.47	46.48	25.19	52.87	28	52.63	38.62	23.78	0.4575	0.3357	0.4688
D65 reflection:	02 o25y	1.0	0.25	0.0	69.56	43.59	26.63	51.08	31	53.32	40.12	24.04	0.4538	0.3415	0.4871
$Y_N = 20.16$	03 o38y	1.0	0.375	0.0	72.09	36.7	29.94	47.36	39	54.89	43.79	24.68	0.445	0.355	0.5316
$L^*_N = 52.02$	04 o50y	1.0	0.5	0.0	75.56	27.59	34.43	44.12	51	57.24	49.17	25.6	0.4336	0.3725	0.597
	05 o63y	1.0	0.625	0.0	79.57	17.45	39.49	43.17	66	60.2	55.93	26.77	0.4213	0.3914	0.679
	06 o75y	1.0	0.75	0.0	83.9	6.93	44.83	45.36	81	63.68	63.87	28.15	0.409	0.4102	0.7754
	07 o88y	1.0	0.875	0.0	88.3	-3.12	50.27	50.37	94	67.65	72.69	29.59	0.3981	0.4277	0.8824
	08 y00l	1.0	1.0	0.0	92.74	-13.39	55.35	56.94	104	71.76	82.37	31.4	0.3868	0.444	1.0
	09 y13l	0.875	1.0	0.0	91.0	-21.2	52.91	57.0	112	64.77	78.49	31.01	0.3717	0.4504	0.9529
	10 y25l	0.75	1.0	0.0	89.38	-29.33	50.6	58.49	120	58.32	74.97	30.66	0.3557	0.4573	0.9102
	11 y38l	0.625	1.0	0.0	87.87	-37.35	48.46	61.19	128	52.54	71.8	30.34	0.3397	0.4642	0.8717
	12 y50l	0.5	1.0	0.0	86.49	-44.98	46.51	64.71	134	47.5	68.98	30.04	0.3242	0.4708	0.8374
	13 y63l	0.375	1.0	0.0	85.38	-51.77	44.9	68.53	139	43.45	66.75	29.63	0.3103	0.4767	0.8103
	14 y75l	0.25	1.0	0.0	84.55	-57.13	43.71	71.94	143	40.51	65.14	29.66	0.2994	0.4814	0.7908
	15 y88l	0.125	1.0	0.0	84.1	-60.16	43.06	73.99	144	38.92	64.27	29.58	0.2932	0.4841	0.7802
	16 l00c	0.0	1.0	0.0	84.05	-60.56	42.98	74.27	145	38.72	64.16	29.57	0.2924	0.4844	0.7789
	17 l13c	0.0	1.0	0.125	84.04	-60.52	42.83	74.16	145	38.73	64.15	29.66	0.2922	0.484	0.7787
	18 l25c	0.0	1.0	0.25	84.13	-59.68	40.03	71.86	146	39.11	64.31	31.74	0.2894	0.4758	0.7807
	19 l38c	0.0	1.0	0.375	84.35	-57.69	33.58	66.76	150	40.05	64.75	36.9	0.2826	0.4569	0.7861
	20 l50c	0.0	1.0	0.5	84.69	-54.74	24.99	60.18	155	41.48	65.41	44.68	0.2737	0.4315	0.794
	21 l63c	0.0	1.0	0.625	85.15	-51.26	15.52	53.56	163	43.3	66.31	54.59	0.2637	0.4038	0.805
	22 l75c	0.0	1.0	0.75	85.68	-47.15	5.58	47.49	173	45.48	67.34	66.54	0.2536	0.3755	0.8175
	23 l88c	0.0	1.0	0.875	86.28	-42.75	-4.16	42.97	186	47.97	68.55	80.05	0.244	0.3487	0.8322
	24 c00v	0.0	1.0	1.0	86.98	-38.26	-13.45	40.56	199	50.74	69.96	94.85	0.2354	0.3246	0.8494
	25 c13v	0.0	0.875	1.0	81.98	-28.39	-20.98	35.32	216	46.47	60.26	93.23	0.2324	0.3013	0.7315
	26 c25v	0.0	0.75	1.0	76.92	-17.81	-28.82	33.89	238	42.62	51.4	91.95	0.2292	0.2764	0.624
	27 c38v	0.0	0.675	1.0	71.83	-6.71	-36.56	37.18	260	39.09	43.4	90.43	0.2261	0.251	0.5269
	28 c50v	0.0	0.5	1.0	67.01	4.01	-44.16	44.36	275	36.02	36.65	89.42	0.2222	0.2261	0.4449
	29 c63v	0.0	0.375	1.0	62.73	14.35	-51.14	53.12	286	33.65	31.27	88.85	0.2188	0.2034	0.3796
	30 c75v	0.0	0.25	1.0	59.52	22.4	-56.33	60.63	292	32.03	27.6	88.36	0.2164	0.1865	0.335
	31 c88v	0.0	0.125	1.0	58.18	26.2	-58.74	64.33	294	31.48	26.15	88.51	0.2154	0.179	0.3175
	32 v00m	0.0	0.0	1.0	58.12	25.76	-58.38	63.82	294	31.29	26.09	87.84	0.2154	0.1796	0.3167
	33 v13m	0.125	0.0	1.0	58.25	26.31	-58.57	64.21	294	31.58	26.22	88.41	0.216	0.1793	0.3183
	34 v25m	0.25	0.0	1.0	59.1	28.49	-57.02	63.75	297	33.22	27.14	88.31	0.2234	0.1825	0.3295
	35 v38m	0.375	0.0	1.0	60.58	32.5	-54.55	63.51	301	36.25	28.78	88.44	0.2362	0.1875	0.3494
	36 v50m	0.5	0.0	1.0	62.57	37.68	-51.44	63.78	306	40.53	31.07	88.88	0.2525	0.1936	0.3772
	37 v63m	0.625	0.0	1.0	64.83	42.3	-47.21	63.39	312	45.34	33.83	88.39	0.2706	0.2019	0.4107
	38 v75m	0.75	0.0	1.0	67.36	47.93	-43.16	64.5	318	51.35	37.11	88.84	0.2896	0.2093	0.4505
	39 v88m	0.875	0.0	1.0	69.98	53.08	-38.63	65.65	324	57.82	40.71	88.81	0.3086	0.2173	0.4943
	40 m00o	1.0	0.0	1.0	72.62	58.31	-34.35	67.68	329	64.89	44.58	89.2	0.3266	0.2244	0.5412
	41 m13o	1.0	0.0	0.875	71.69	55.99	-24.99	61.32	336	62.13	43.19	74.43	0.3456	0.2403	0.5244
	42 m25o	1.0	0.0	0.75	70.87	53.69	-15.02	59.75	344	59.66	41.99	60.91	0.367	0.2583	0.5098
	43 m38o	1.0	0.0	0.675	70.12	51.58	-4.69	51.79	355	57.46	40.92	48.92	0.3901	0.2778	0.4968
	44 m50o	1.0	0.0	0.5	69.49	53.28	3.64	53.41	4	57.05	40.03	40.44	0.4149	0.2911	0.486
	45 m63o	1.0	0.0	0.375	68.98	48.13	14.72	50.34	17	54.12	39.32	31.16	0.4344	0.3156	0.4773
	46 m75o	1.0	0.0	0.25	68.65	47.13	21.92	51.97	25	53.17	38.86	25.97	0.4506	0.3293	0.4717
	47 m88o	1.0	0.0	0.125	68.51	46.75	25.1	53.06	28	52.8	38.67	23.88	0.4577	0.3353	0.4695
	48 o00y	1.0	0.0	0.0	68.47	46.61	25.2	52.99	28	52.68	38.62	23.78	0.4578	0.3356	0.4688
	49 n00w	0.0	0.0	0.0	52.02	0.0	0.0	0.01	0	19.16	20.16	21.95	0.3127	0.329	0.2447
	50 n13w	0.125	0.125	0.125	52.2	0.42	0.13	0.44	18	19.4	20.32	22.05	0.314	0.329	0.2467
	51 n25w	0.25	0.25	0.25	54.96	1.62	0.69	1.76	23	22.11	22.89	24.51	0.318	0.3294	0.2779
	52 n38w	0.375	0.375	0.375	60.58	1.75	1.11	2.07	32	27.79	28.78	30.55	0.319	0.3303	0.3494
	53 n50w	0.5	0.5	0.5	67.42	1.48	1.09	1.84	36	35.78	37.19	39.58	0.3179	0.3304	0.4514
	54 n63w	0.625	0.625	0.625	74.64	1.07	1.02	1.48	44	45.72	47.71	50.94	0.3167	0.3305	0.5792
	55 n75w	0.75	0.75	0.75	81.85	0.7	0.65	0.95	43	57.33	60.02	64.6	0.3151	0.3299	0.7287
	56 n88w	0.875	0.875	0.875	88.78	0.48	0.24	0.54	27	70.27	73.7	79.92	0.3139	0.3292	0.8947
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0755

IE360-7N, Colorimetric data of Television Luminous System TLS52a for CIE standard illuminant D65; CRT monitor; Page: 41/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 41/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a

CRT monitor

D65 reflection:

$Y_N = 20.16$

$L^*_N = 52.02$

Y Yellow

$LCH^*_a = 92.7 \ 56.9 \ 104$

$LAB^*_a = 92.7 \ -13.4 \ 55.3$

L Leaf green

$LCH^*_a = 84.0 \ 74.3 \ 145$

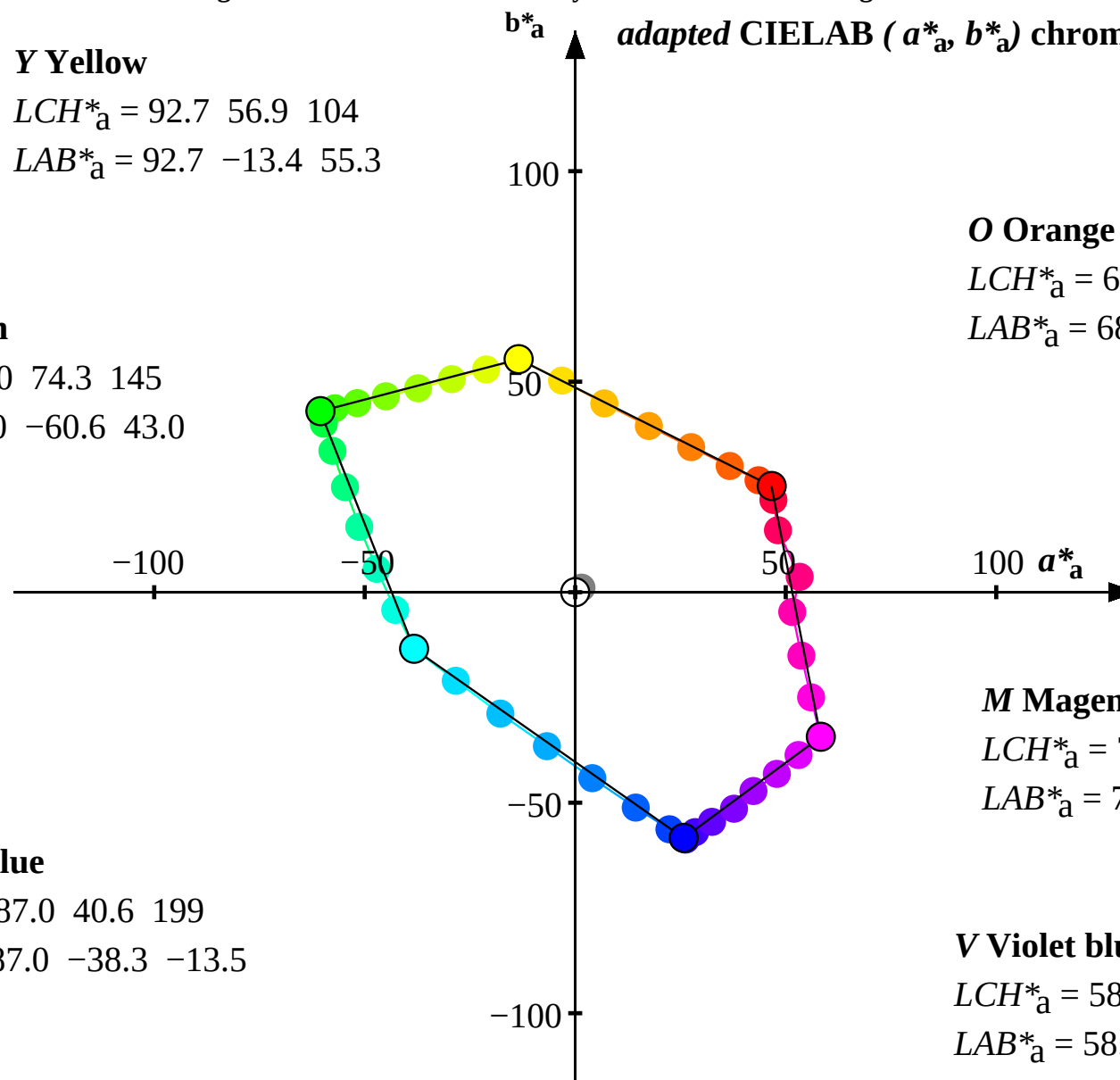
$LAB^*_a = 84.0 \ -60.6 \ 43.0$

C Cyan blue

$LCH^*_a = 87.0 \ 40.6 \ 199$

$LAB^*_a = 87.0 \ -38.3 \ -13.5$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
CRT monitor	00 o00y	1.0	0.0	0.0	78.07	28.06	13.01	30.93	25	61.96	53.34	45.19	0.3861	0.3323	0.6334
	01 o13y	1.0	0.125	0.0	78.07	27.98	13.01	30.85	25	61.93	53.34	45.19	0.3859	0.3324	0.6334
	02 o25y	1.0	0.25	0.0	78.7	26.44	13.88	29.86	28	62.42	54.4	45.38	0.3848	0.3354	0.6461
D65 reflection:	03 o38y	1.0	0.375	0.0	80.17	22.63	15.94	27.68	35	63.52	56.99	45.82	0.3819	0.3426	0.6768
$Y_N = 40.32$	04 o50y	1.0	0.5	0.0	82.26	17.38	18.84	25.63	47	65.18	60.79	46.47	0.378	0.3525	0.7219
$L^*_N = 69.7$	05 o63y	1.0	0.625	0.0	84.77	11.25	22.26	24.95	63	67.27	65.55	47.3	0.3735	0.3639	0.7785
	06 o75y	1.0	0.75	0.0	87.56	4.57	26.05	26.45	80	69.72	71.15	48.27	0.3686	0.3762	0.845
	07 o88y	1.0	0.875	0.0	90.49	-2.1	30.04	30.11	94	72.52	77.37	49.29	0.3641	0.3884	0.9189
	08 y00l	1.0	1.0	0.0	93.54	-9.22	33.98	35.21	105	75.43	84.2	50.57	0.3588	0.4006	1.0
	09 y13l	0.875	1.0	0.0	92.34	-14.36	32.19	35.26	114	70.49	81.47	50.29	0.3485	0.4028	0.9675
	10 y25l	0.75	1.0	0.0	91.23	-19.53	30.53	36.25	123	65.94	78.99	50.04	0.3382	0.4051	0.938
	11 y38l	0.625	1.0	0.0	90.2	-24.44	29.0	37.93	130	61.87	76.75	49.82	0.3283	0.4073	0.9114
	12 y50l	0.5	1.0	0.0	89.28	-28.92	27.62	39.99	136	58.31	74.76	49.61	0.3192	0.4092	0.8878
	13 y63l	0.375	1.0	0.0	88.54	-32.76	26.49	42.14	141	55.46	73.18	49.46	0.3114	0.4109	0.8691
	14 y75l	0.25	1.0	0.0	87.99	-35.69	25.67	43.98	144	53.38	72.05	49.34	0.3054	0.4122	0.8556
	15 y88l	0.125	1.0	0.0	87.69	-37.32	25.23	45.05	146	52.26	71.43	49.28	0.3021	0.413	0.8483
	16 l00c	0.0	1.0	0.0	87.66	-37.53	25.17	45.2	146	52.12	71.36	49.28	0.3017	0.4131	0.8474
	17 l13c	0.0	1.0	0.125	87.65	-37.51	25.09	45.13	146	52.12	71.35	49.34	0.3016	0.4129	0.8473
	18 l25c	0.0	1.0	0.25	87.71	-37.04	23.69	43.98	147	52.39	71.46	50.8	0.3	0.4092	0.8487
	19 l38c	0.0	1.0	0.375	87.86	-35.96	20.32	41.31	151	53.06	71.77	54.45	0.2959	0.4003	0.8524
	20 l50c	0.0	1.0	0.5	88.08	-34.33	15.54	37.69	156	54.07	72.24	59.93	0.2903	0.3879	0.8579
	21 l63c	0.0	1.0	0.625	88.39	-32.39	9.93	33.89	163	55.35	72.87	66.92	0.2836	0.3734	0.8655
	22 l75c	0.0	1.0	0.75	88.73	-30.05	3.67	30.28	173	56.89	73.6	75.35	0.2764	0.3576	0.8741
	23 l88c	0.0	1.0	0.875	89.14	-27.49	-2.8	27.65	186	58.64	74.45	84.89	0.269	0.3416	0.8842
	24 c00v	0.0	1.0	1.0	89.6	-24.84	-9.24	26.52	200	60.59	75.45	95.32	0.2619	0.3261	0.8961
	25 c13v	0.0	0.875	1.0	86.31	-17.87	-14.16	22.81	218	57.59	68.6	94.18	0.2613	0.3113	0.8147
	26 c25v	0.0	0.75	1.0	83.1	-10.83	-19.07	21.94	240	54.87	62.36	93.28	0.2607	0.2962	0.7406
	27 c38v	0.0	0.675	1.0	80.02	-3.92	-23.66	23.99	261	52.38	56.72	92.21	0.2602	0.2817	0.6735
	28 c50v	0.0	0.5	1.0	77.25	2.26	-27.95	28.05	275	50.21	51.95	91.5	0.2593	0.2683	0.617
	29 c63v	0.0	0.375	1.0	74.92	7.76	-31.68	32.63	284	48.54	48.16	91.09	0.2585	0.2564	0.5719
	30 c75v	0.0	0.25	1.0	73.26	11.75	-34.3	36.27	289	47.39	45.57	90.75	0.258	0.248	0.5411
	31 c88v	0.0	0.125	1.0	72.59	13.56	-35.53	38.04	291	47.01	44.55	90.85	0.2577	0.2442	0.5291
	32 v00m	0.0	0.0	1.0	72.56	13.31	-35.26	37.7	291	46.87	44.5	90.38	0.2579	0.2448	0.5285
	33 v13m	0.125	0.0	1.0	72.62	13.63	-35.43	37.97	291	47.08	44.59	90.78	0.2581	0.2444	0.5296
	34 v25m	0.25	0.0	1.0	73.05	15.0	-34.65	37.76	293	48.24	45.24	90.71	0.2619	0.2456	0.5373
	35 v38m	0.375	0.0	1.0	73.8	17.56	-33.41	37.75	298	50.37	46.4	90.8	0.2686	0.2474	0.551
	36 v50m	0.5	0.0	1.0	74.84	21.03	-31.84	38.17	303	53.39	48.02	91.11	0.2773	0.2494	0.5703
	37 v63m	0.625	0.0	1.0	76.05	24.38	-29.52	38.3	310	56.79	49.96	90.77	0.2875	0.2529	0.5933
	38 v75m	0.75	0.0	1.0	77.44	28.58	-27.33	39.55	316	61.02	52.27	91.08	0.2986	0.2558	0.6208
	39 v88m	0.875	0.0	1.0	78.94	32.64	-24.74	40.96	323	65.59	54.82	91.06	0.3101	0.2592	0.651
	40 m00o	1.0	0.0	1.0	80.49	36.89	-22.26	43.09	329	70.58	57.55	91.34	0.3216	0.2622	0.6834
	41 m13o	1.0	0.0	0.875	79.94	35.07	-15.75	38.44	336	68.63	56.57	80.92	0.333	0.2744	0.6718
	42 m25o	1.0	0.0	0.75	79.45	33.31	-9.16	34.55	345	66.89	55.72	71.39	0.3448	0.2872	0.6617
	43 m38o	1.0	0.0	0.675	79.02	31.71	-2.75	31.83	355	65.34	54.97	62.93	0.3566	0.3	0.6528
	44 m50o	1.0	0.0	0.5	78.66	32.63	2.07	32.69	4	65.05	54.34	56.94	0.3689	0.3082	0.6453
	45 m63o	1.0	0.0	0.375	78.36	29.17	7.99	30.25	15	62.98	53.83	50.4	0.3767	0.322	0.6393
	46 m75o	1.0	0.0	0.25	78.17	28.44	11.5	30.68	22	62.31	53.51	46.73	0.3833	0.3292	0.6355
	47 m88o	1.0	0.0	0.125	78.1	28.16	12.97	31.0	25	62.05	53.38	45.26	0.3861	0.3322	0.6339
	48 o00y	1.0	0.0	0.0	78.07	28.06	13.01	30.93	25	61.96	53.34	45.19	0.3861	0.3323	0.6334
	49 n00w	0.0	0.0	0.0	69.7	0.0	0.0	0.01	0	38.32	40.32	43.9	0.3127	0.329	0.4788
	50 n13w	0.125	0.125	0.125	69.78	0.19	0.06	0.2	18	38.49	40.44	43.97	0.3132	0.329	0.4802
	51 n25w	0.25	0.25	0.25	71.04	0.76	0.32	0.83	23	40.4	42.25	45.71	0.3147	0.3292	0.5017
	52 n38w	0.375	0.375	0.375	73.8	0.9	0.56	1.06	32	44.41	46.4	49.97	0.3154	0.3296	0.551
	53 n50w	0.5	0.5	0.5	77.48	0.83	0.61	1.03	36	50.04	52.33	56.33	0.3153	0.3297	0.6215
	54 n63w	0.625	0.625	0.625	81.7	0.65	0.62	0.9	43	57.06	59.75	64.35	0.3149	0.3298	0.7096
	55 n75w	0.75	0.75	0.75	86.23	0.45	0.42	0.62	43	65.24	68.44	73.98	0.3142	0.3296	0.8128
	56 n88w	0.875	0.875	0.875	90.82	0.33	0.17	0.37	27	74.37	78.09	84.79	0.3135	0.3291	0.9274
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0521

IE360-7N, Colorimetric data of Television Luminous System TLS70a for CIE standard illuminant D65; CRT monitor; Page: 43/66

$n = 88.59 / (88.59 - 0.05) = 1.001$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 43/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a

CRT monitor

D65 reflection:

$Y_N = 40.32$

$L^*_N = 69.7$

Y Yellow

$LCH^*_a = 93.5 \ 35.2 \ 105$

$LAB^*_a = 93.5 \ -9.2 \ 34.0$

L Leaf green

$LCH^*_a = 87.7 \ 45.2 \ 146$

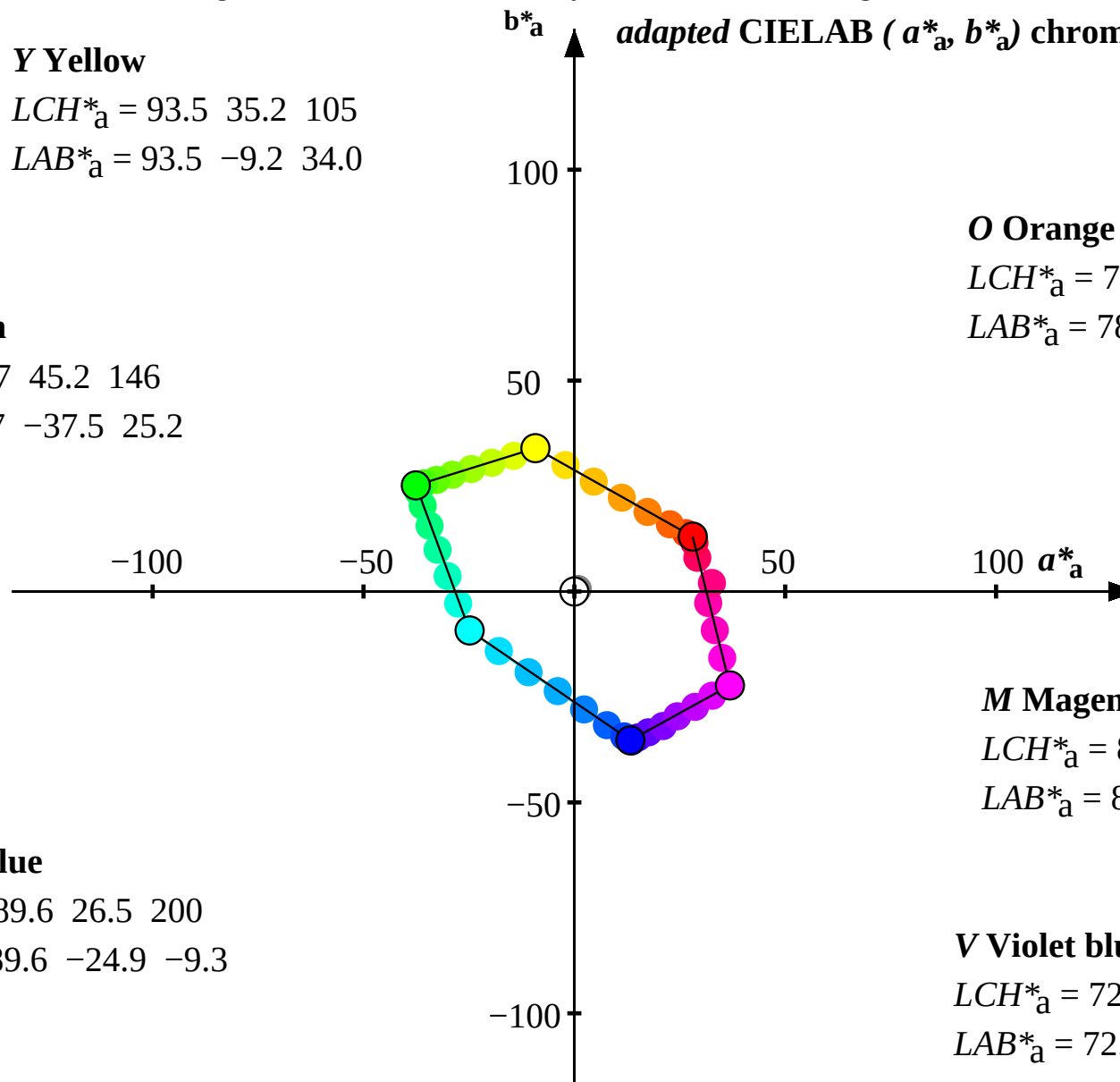
$LAB^*_a = 87.7 \ -37.5 \ 25.2$

C Cyan blue

$LCH^*_a = 89.6 \ 26.5 \ 200$

$LAB^*_a = 89.6 \ -24.9 \ -9.3$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 78.1 \ 30.9 \ 25$

$LAB^*_a = 78.1 \ 28.1 \ 13.0$

M Magenta red

$LCH^*_a = 80.5 \ 43.1 \ 329$

$LAB^*_a = 80.5 \ 36.9 \ -22.3$

V Violet blue

$LCH^*_a = 72.6 \ 37.7 \ 291$

$LAB^*_a = 72.6 \ 13.3 \ -35.3$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS03 for CIE lightness $L^*_N=03$ of black for illuminant D65

System TLS03	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_c=LAB^*_1c$	$a^*_c=LAB^*_2c$	$b^*_c=LAB^*_3c$	$C^*_{ab,c}=LAB^*_{rc}$	$h_{ab,c}$	$X_c=XYZ_1c$	$Y_c=XYZ_2c$	$Z_c=XYZ_3c$	x_c	y_c	$Y_c/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	37.1	58.78	56.51	81.54	44	18.1	9.59	0.52	0.6415	0.34	0.1083
	01 o13y	1.0	0.125	0.0	37.41	58.02	56.42	80.93	44	18.21	9.76	0.57	0.6381	0.3421	0.1102
	02 o25y	1.0	0.25	0.0	38.83	54.44	57.1	78.89	46	18.69	10.56	0.69	0.6243	0.3527	0.1192
	03 o38y	1.0	0.375	0.0	42.44	42.95	59.04	73.01	54	19.48	12.78	0.99	0.5859	0.3844	0.1443
	04 o50y	1.0	0.5	0.0	47.08	35.41	60.09	69.75	59	22.06	16.08	1.57	0.5556	0.4049	0.1815
	05 o63y	1.0	0.625	0.0	54.15	21.26	63.91	67.35	71	25.77	22.11	2.53	0.5112	0.4387	0.2496
	06 o75y	1.0	0.75	0.0	62.27	7.09	69.0	69.37	84	31.07	30.71	3.9	0.473	0.4676	0.3467
	07 o88y	1.0	0.875	0.0	70.64	-4.64	74.95	75.09	93	38.14	41.66	5.61	0.4465	0.4878	0.4703
	08 y00l	1.0	1.0	0.0	83.13	-16.8	84.65	86.31	101	52.58	62.4	8.73	0.425	0.5044	0.7044
	09 y13l	0.875	1.0	0.0	81.19	-24.79	81.99	85.66	106	46.56	58.82	8.53	0.4087	0.5164	0.664
	10 y25l	0.75	1.0	0.0	75.03	-33.74	75.48	82.68	114	35.07	48.33	7.36	0.3864	0.5325	0.5455
	11 y38l	0.625	1.0	0.0	74.08	-40.51	73.85	84.23	118	31.97	46.83	7.36	0.3711	0.5435	0.5286
	12 y50l	0.5	1.0	0.0	73.46	-45.58	72.79	85.89	122	29.89	45.87	7.36	0.3596	0.5519	0.5178
	13 y63l	0.375	1.0	0.0	73.1	-48.78	72.15	87.1	124	28.66	45.32	7.36	0.3523	0.5572	0.5116
	14 y75l	0.25	1.0	0.0	72.92	-50.49	71.84	87.82	125	28.02	45.04	7.36	0.3484	0.5601	0.5084
	15 y88l	0.125	1.0	0.0	72.84	-51.23	71.69	88.12	125	27.75	44.92	7.36	0.3467	0.5613	0.5071
	16 l00c	0.0	1.0	0.0	72.83	-51.36	71.66	88.17	125	27.7	44.91	7.37	0.3464	0.5615	0.5069
	17 l13c	0.0	1.0	0.125	72.87	-51.21	70.8	87.39	126	27.78	44.96	7.62	0.3457	0.5595	0.5075
	18 l25c	0.0	1.0	0.25	72.97	-50.7	67.1	84.11	127	28.02	45.12	8.75	0.3422	0.551	0.5093
	19 l38c	0.0	1.0	0.375	73.17	-49.55	59.71	77.6	129	28.53	45.42	11.31	0.3346	0.5327	0.5127
	20 l50c	0.0	1.0	0.5	73.55	-47.47	48.77	68.07	134	29.49	46.01	16.04	0.3222	0.5026	0.5193
	21 l63c	0.0	1.0	0.625	74.19	-44.2	34.93	56.34	141	31.09	47.0	23.86	0.305	0.461	0.5305
	22 l75c	0.0	1.0	0.75	74.8	-39.66	19.62	44.25	153	33.08	47.96	34.95	0.2852	0.4135	0.5414
	23 l88c	0.0	1.0	0.875	76.29	-33.9	3.44	34.08	174	36.63	50.36	51.35	0.2648	0.364	0.5684
	24 c00v	0.0	1.0	1.0	77.63	-27.89	-10.73	29.9	201	40.31	52.59	69.46	0.2483	0.3239	0.5936
	25 c13v	0.0	0.875	1.0	69.94	-19.11	-22.45	29.5	230	32.97	40.66	67.61	0.2334	0.2879	0.459
	26 c25v	0.0	0.75	1.0	60.8	-7.27	-36.62	37.35	260	25.8	29.02	65.75	0.214	0.2407	0.3276
	27 c38v	0.0	0.675	1.0	51.55	6.79	-51.31	51.77	278	20.11	19.75	64.29	0.1931	0.1896	0.2229
	28 c50v	0.0	0.5	1.0	43.25	21.59	-64.77	68.28	289	16.15	13.32	63.31	0.1741	0.1436	0.1504
	29 c63v	0.0	0.375	1.0	36.87	34.74	-75.21	82.86	295	13.78	9.47	62.69	0.1603	0.1102	0.1069
	30 c75v	0.0	0.25	1.0	32.68	44.51	-82.18	93.47	299	12.51	7.39	62.38	0.152	0.0898	0.0834
	31 c88v	0.0	0.125	1.0	30.75	49.23	-85.41	98.59	300	11.99	6.55	62.29	0.1483	0.081	0.0739
	32 v00m	0.0	0.0	1.0	30.28	50.46	-86.21	99.9	301	11.87	6.35	62.28	0.1475	0.0789	0.0717
	33 v13m	0.125	0.0	1.0	30.52	50.74	-86.47	100.26	301	12.06	6.45	63.03	0.1479	0.0791	0.0728
	34 v25m	0.25	0.0	1.0	30.67	50.94	-85.47	99.51	301	12.18	6.51	62.19	0.1506	0.0805	0.0735
	35 v38m	0.375	0.0	1.0	31.48	51.96	-83.92	98.71	302	12.85	6.86	62.02	0.1572	0.0839	0.0774
	36 v50m	0.5	0.0	1.0	33.02	53.8	-81.29	97.49	304	14.17	7.55	62.06	0.1691	0.0901	0.0852
	37 v63m	0.625	0.0	1.0	35.31	56.61	-76.94	95.53	307	16.3	8.66	61.6	0.1883	0.1	0.0977
	38 v75m	0.75	0.0	1.0	38.29	60.25	-71.06	93.17	310	19.37	10.25	60.77	0.2143	0.1134	0.1157
	39 v88m	0.875	0.0	1.0	43.55	65.86	-65.4	92.82	315	25.51	13.53	64.62	0.2461	0.1305	0.1527
	40 m00o	1.0	0.0	1.0	48.39	71.08	-60.47	93.32	320	32.22	17.11	68.65	0.2731	0.145	0.1931
	41 m13o	1.0	0.0	0.875	44.49	67.04	-44.55	80.49	327	26.78	14.18	44.89	0.3119	0.1652	0.1601
	42 m25o	1.0	0.0	0.75	41.5	64.08	-26.13	69.21	338	23.08	12.18	26.76	0.3721	0.1964	0.1375
	43 m38o	1.0	0.0	0.675	39.82	62.04	-9.33	62.74	351	21.08	11.14	16.02	0.4369	0.231	0.1258
	44 m50o	1.0	0.0	0.5	38.6	60.58	8.07	61.11	7	19.7	10.43	8.68	0.5077	0.2687	0.1177
	45 m63o	1.0	0.0	0.375	37.83	59.69	25.05	64.73	23	18.87	9.99	4.23	0.5702	0.3019	0.1128
	46 m75o	1.0	0.0	0.25	37.41	59.19	40.82	71.9	34	18.43	9.76	1.83	0.6138	0.3251	0.1102
	47 m88o	1.0	0.0	0.125	37.23	58.94	53.08	79.32	42	18.24	9.67	0.78	0.6359	0.337	0.1091
	48 o00y	1.0	0.0	0.0	37.1	58.78	56.51	81.54	44	18.1	9.59	0.52	0.6415	0.34	0.1083
	49 n00w	0.0	0.0	0.0	2.5	-0.41	0.23	0.48	0	0.25	0.28	0.29	0.3103	0.3398	0.0031
	50 n13w	0.125	0.125	0.125	4.56	-0.87	-0.48	1.01	238	0.46	0.5	0.58	0.2962	0.3263	0.0057
	51 n25w	0.25	0.25	0.25	12.6	-1.6	-1.79	1.79	260	1.4	1.5	1.8	0.2978	0.3193	0.0169
	52 n38w	0.375	0.375	0.375	23.36	-0.66	-1.79	1.92	264	3.67	3.91	4.6	0.3013	0.3208	0.0441
	53 n50w	0.5	0.5	0.5	34.78	-0.55	-1.92	2.01	267	7.91	8.39	9.75	0.3037	0.322	0.0947
	54 n63w	0.625	0.625	0.625	46.81	-0.46	-2.0	2.06	270	15.01	15.88	18.26	0.3054	0.323	0.1792
	55 n75w	0.75	0.75	0.75	61.39	-0.67	-1.71	1.84	264	28.05	29.7	33.6	0.3071	0.3251	0.3352
	56 n88w	0.875	0.875	0.875	80.86	-0.46	-0.03	0.48	324	55.14	58.21	63.43	0.3119	0.3293	0.6571
	57 n99w	1.0	1.0	1.0	95.41	-0.54	-0.04	0.55	0	83.91	88.59	96.53	0.3119	0.3293	1.0

Colorimetric data of "Standard Original": Television Luminous System TLS03 for CIE lightness $L^*_N=03$ of black for illuminant D65
System TLS03
LCD projector

Y Yellow

$LCH^* = 83.1 \ 86.3 \ 101$

$LAB^* = 83.1 \ -16.8 \ 84.7$

L Leaf green

$LCH^* = 72.8 \ 88.2 \ 126$

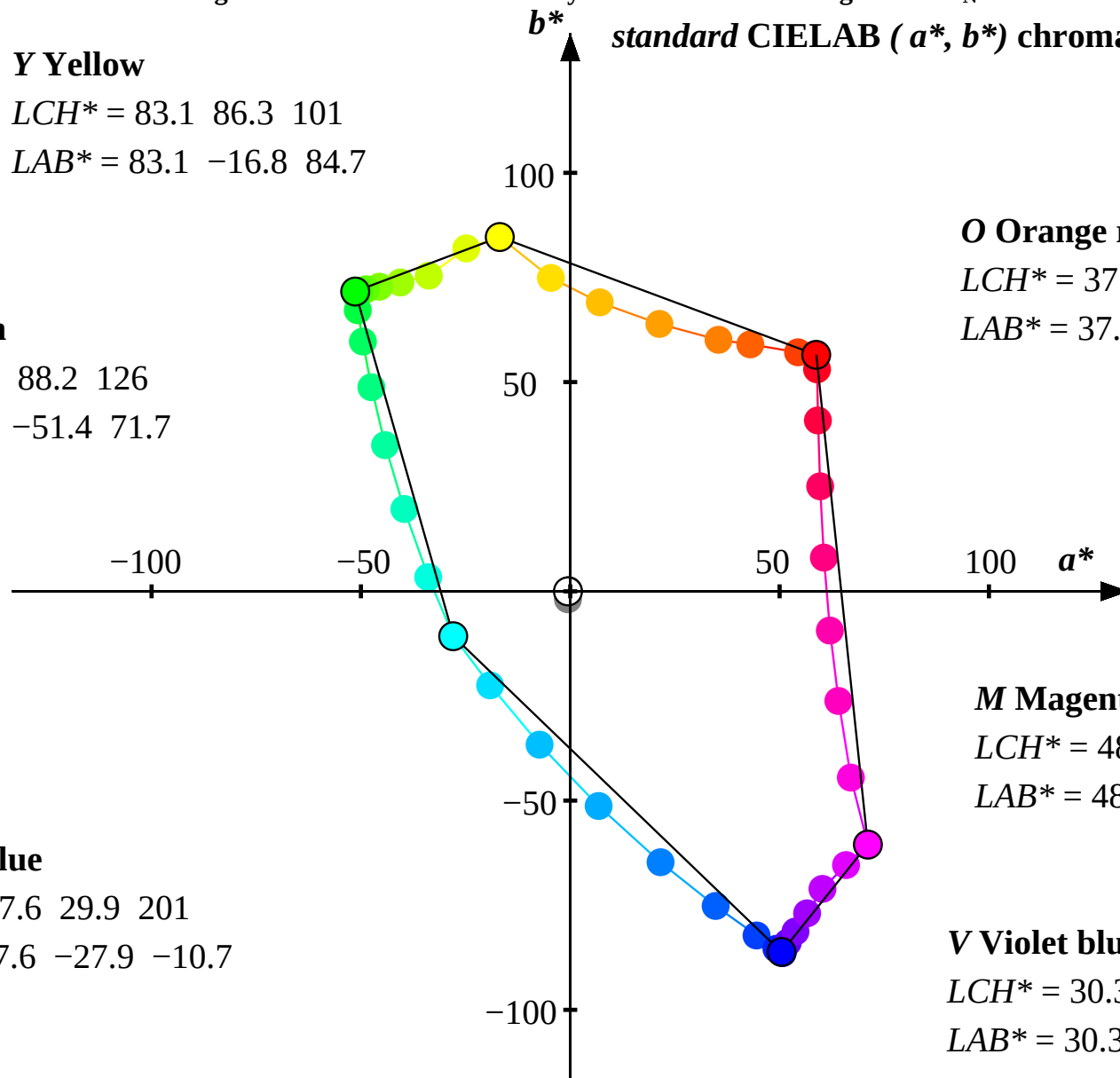
$LAB^* = 72.8 \ -51.4 \ 71.7$

C Cyan blue

$LCH^* = 77.6 \ 29.9 \ 201$

$LAB^* = 77.6 \ -27.9 \ -10.7$

standard CIELAB (a^* , b^*) chroma diagram



O Orange red

$LCH^* = 37.1 \ 81.5 \ 44$

$LAB^* = 37.1 \ 58.8 \ 56.5$

M Magenta red

$LCH^* = 48.4 \ 93.3 \ 320$

$LAB^* = 48.4 \ 71.1 \ -60.5$

V Violet blue

$LCH^* = 30.3 \ 99.9 \ 300$

$LAB^* = 30.3 \ 50.5 \ -86.2$

Colorimetric data of "Standard Original": Television Luminous System TLS03a for CIE lightness $L^*_N=03$ of black for illuminant D65

System TLS03a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ra}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	37.1	59.25	56.38	81.79	44	18.19	9.59	0.53	0.6424	0.3388	0.1083
	01 o13y	1.0	0.125	0.0	37.41	58.49	56.29	81.18	44	18.3	9.76	0.57	0.639	0.3409	0.1102
	02 o25y	1.0	0.25	0.0	38.83	54.91	56.97	79.13	46	18.78	10.56	0.7	0.6253	0.3515	0.1192
	03 o38y	1.0	0.375	0.0	42.44	43.43	58.93	73.2	54	19.58	12.78	1.0	0.5869	0.3832	0.1443
	04 o50y	1.0	0.5	0.0	47.08	35.89	59.99	69.91	59	22.17	16.08	1.58	0.5566	0.4037	0.1815
	05 o63y	1.0	0.625	0.0	54.15	21.75	63.83	67.43	71	25.88	22.11	2.54	0.5122	0.4376	0.2496
	06 o75y	1.0	0.75	0.0	62.27	7.59	68.95	69.37	84	31.21	30.71	3.91	0.474	0.4666	0.3467
	07 o88y	1.0	0.875	0.0	70.64	-4.13	74.92	75.03	93	38.3	41.66	5.62	0.4475	0.4869	0.4703
	08 y00l	1.0	1.0	0.0	83.13	-16.27	84.66	86.21	101	52.78	62.4	8.73	0.426	0.5036	0.7044
	09 y13l	0.875	1.0	0.0	81.19	-24.26	82.0	85.51	106	46.74	58.82	8.53	0.4097	0.5156	0.664
	10 y25l	0.75	1.0	0.0	75.03	-33.22	75.46	82.45	114	35.22	48.33	7.36	0.3874	0.5316	0.5455
	11 y38l	0.625	1.0	0.0	74.08	-40.07	73.83	83.97	118	32.12	46.83	7.36	0.3721	0.5426	0.5286
	12 y50l	0.5	1.0	0.0	73.46	-45.07	72.77	85.6	122	30.03	45.87	7.36	0.3606	0.551	0.5178
	13 y63l	0.375	1.0	0.0	73.1	-48.26	72.13	86.79	124	28.79	45.32	7.37	0.3533	0.5563	0.5116
	14 y75l	0.25	1.0	0.0	72.92	-49.98	71.82	87.5	125	28.15	45.04	7.37	0.3494	0.5592	0.5084
	15 y88l	0.125	1.0	0.0	72.84	-50.71	71.67	87.8	125	27.88	44.92	7.37	0.3477	0.5603	0.5071
	16 l00c	0.0	1.0	0.0	72.83	-50.84	71.64	87.85	125	27.83	44.91	7.37	0.3474	0.5605	0.5069
	17 l13c	0.0	1.0	0.125	72.87	-50.69	70.78	87.07	126	27.91	44.96	7.62	0.3467	0.5586	0.5075
	18 l25c	0.0	1.0	0.25	72.97	-50.18	67.08	83.78	127	28.15	45.12	8.75	0.3432	0.5501	0.5093
	19 l38c	0.0	1.0	0.375	73.17	-49.03	59.69	77.25	129	28.66	45.42	11.32	0.3356	0.5318	0.5127
	20 l50c	0.0	1.0	0.5	73.55	-46.95	48.75	67.69	134	29.63	46.01	16.05	0.3232	0.5018	0.5193
	21 l63c	0.0	1.0	0.625	74.19	-43.69	34.91	55.93	141	31.23	47.0	23.87	0.3059	0.4603	0.5305
	22 l75c	0.0	1.0	0.75	74.8	-39.14	19.6	43.78	153	33.23	47.96	34.96	0.2861	0.4129	0.5414
	23 l88c	0.0	1.0	0.875	76.29	-33.38	3.42	33.56	174	36.79	50.36	51.36	0.2656	0.3636	0.5684
	24 c00v	0.0	1.0	1.0	77.63	-27.37	-10.73	29.41	201	40.48	52.59	69.47	0.2491	0.3235	0.5936
	25 c13v	0.0	0.875	1.0	69.94	-18.6	-22.48	29.19	230	33.11	40.66	67.65	0.2341	0.2875	0.459
	26 c25v	0.0	0.75	1.0	60.8	-6.77	-36.68	37.31	260	25.92	29.02	65.82	0.2147	0.2403	0.3276
	27 c38v	0.0	0.675	1.0	51.55	7.28	-51.4	51.92	278	20.21	19.75	64.39	0.1937	0.1892	0.2229
	28 c50v	0.0	0.5	1.0	43.25	22.07	-64.88	68.54	289	16.24	13.32	63.43	0.1746	0.1433	0.1504
	29 c63v	0.0	0.375	1.0	36.87	35.21	-75.34	83.17	295	13.85	9.47	62.84	0.1607	0.1099	0.1069
	30 c75v	0.0	0.25	1.0	32.68	44.97	-82.32	93.81	299	12.57	7.39	62.54	0.1524	0.0895	0.0834
	31 c88v	0.0	0.125	1.0	30.75	49.69	-85.56	98.95	300	12.05	6.55	62.46	0.1487	0.0808	0.0739
	32 v00m	0.0	0.0	1.0	30.28	50.92	-86.36	100.27	301	11.94	6.35	62.45	0.1479	0.0787	0.0717
	33 v13m	0.125	0.0	1.0	30.52	51.2	-86.62	100.62	301	12.13	6.45	63.2	0.1483	0.0789	0.0728
	34 v25m	0.25	0.0	1.0	30.67	51.4	-85.62	99.88	301	12.25	6.51	62.36	0.151	0.0803	0.0735
	35 v38m	0.375	0.0	1.0	31.48	52.42	-84.07	99.08	302	12.92	6.86	62.19	0.1576	0.0837	0.0774
	36 v50m	0.5	0.0	1.0	33.02	54.26	-81.43	97.86	304	14.24	7.55	62.22	0.1695	0.0898	0.0852
	37 v63m	0.625	0.0	1.0	35.31	57.08	-77.07	95.92	307	16.38	8.66	61.75	0.1887	0.0997	0.0977
	38 v75m	0.75	0.0	1.0	38.29	60.72	-71.18	93.57	310	19.46	10.25	60.91	0.2148	0.1131	0.1157
	39 v88m	0.875	0.0	1.0	43.55	66.34	-65.51	93.24	315	25.62	13.53	64.75	0.2466	0.1302	0.1527
	40 m00o	1.0	0.0	1.0	48.39	71.56	-60.56	93.75	320	32.35	17.11	68.77	0.2737	0.1447	0.1931
	41 m13o	1.0	0.0	0.875	44.49	67.52	-44.66	80.95	327	26.9	14.18	44.99	0.3125	0.1648	0.1601
	42 m25o	1.0	0.0	0.75	41.5	64.56	-26.25	69.69	338	23.18	12.18	26.84	0.3727	0.1958	0.1375
	43 m38o	1.0	0.0	0.675	39.82	62.51	-9.45	63.22	351	21.18	11.14	16.08	0.4375	0.2303	0.1258
	44 m50o	1.0	0.0	0.5	38.6	61.05	7.94	61.56	7	19.8	10.43	8.71	0.5084	0.2678	0.1177
	45 m63o	1.0	0.0	0.375	37.83	60.16	24.93	65.12	23	18.97	9.99	4.26	0.571	0.3009	0.1128
	46 m75o	1.0	0.0	0.25	37.41	59.66	40.69	72.21	34	18.52	9.76	1.85	0.6147	0.324	0.1102
	47 m88o	1.0	0.0	0.125	37.23	59.41	52.95	79.58	42	18.33	9.67	0.79	0.6368	0.3359	0.1091
	48 o00y	1.0	0.0	0.0	37.1	59.25	56.38	81.79	44	18.19	9.59	0.53	0.6424	0.3388	0.1083
	49 n00w	0.0	0.0	0.0	2.5	0.0	0.0	0.01	0	0.26	0.28	0.3	0.3127	0.329	0.0031
	50 n13w	0.125	0.125	0.125	4.56	-0.45	-0.71	0.85	238	0.47	0.5	0.6	0.2978	0.3208	0.0057
	51 n25w	0.25	0.25	0.25	12.6	-1.81	-1.85	1.85	260	1.41	1.5	1.82	0.2987	0.3168	0.0169
	52 n38w	0.375	0.375	0.375	23.36	-0.21	-1.97	1.99	264	3.7	3.91	4.64	0.3021	0.3191	0.0441
	53 n50w	0.5	0.5	0.5	34.78	-0.08	-2.06	2.07	267	7.96	8.39	9.8	0.3045	0.3208	0.0947
	54 n63w	0.625	0.625	0.625	46.81	0.02	-2.1	2.11	270	15.09	15.88	18.31	0.3062	0.3221	0.1792
	55 n75w	0.75	0.75	0.75	61.39	-0.17	-1.76	1.78	264	28.18	29.7	33.64	0.3079	0.3245	0.3352
	56 n88w	0.875	0.875	0.875	80.86	0.05	-0.03	0.07	324	55.35	58.21	63.43	0.3127	0.3289	0.6571
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.0

IE360-7N, Colorimetric data of Television Luminous System TLS03a for CIE standard illuminant D65; LCD projector; Page: 47/66

TUB-test chart IE36; Hue circle and colorimetric data

Display measurement: LCD, CRT, and LCD projector, page 47/66

input: $olv^* setrgbcolor$

output: $olv^* setrgbcolor / w^* setgray$

See original or copy: <http://web.me.com/klaus.richter/IE36/IE36L0FP.PDF> /.PS
Technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ
TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS03a for CIE lightness $L^*_N=03$ of black for illuminant D65
System TLS03a

LCD projector

Y Yellow

$LCH^*_a = 83.1 \ 86.2 \ 101$

$LAB^*_a = 83.1 \ -16.3 \ 84.7$

L Leaf green

$LCH^*_a = 72.8 \ 87.9 \ 125$

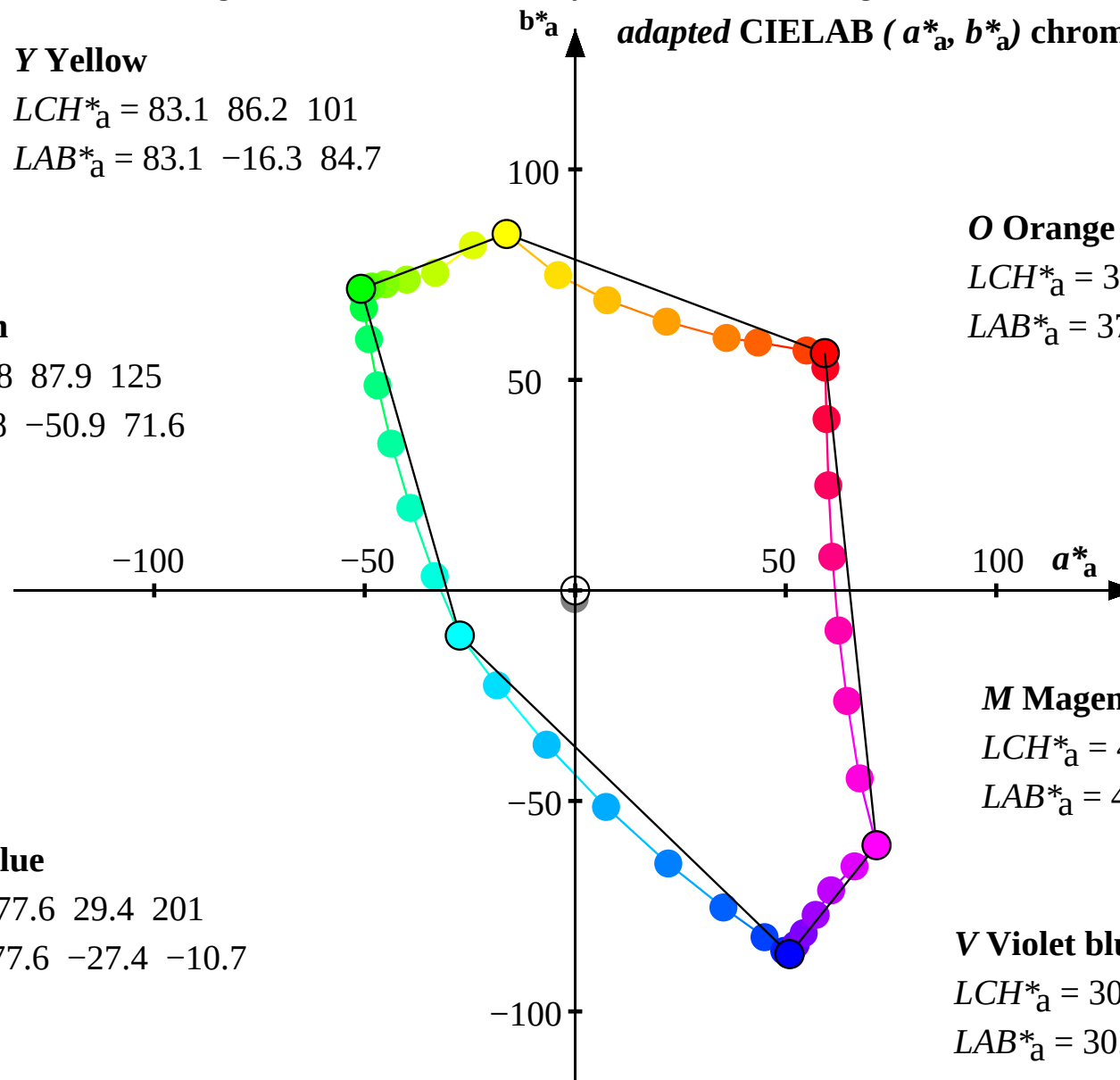
$LAB^*_a = 72.8 \ -50.9 \ 71.6$

C Cyan blue

$LCH^*_a = 77.6 \ 29.4 \ 201$

$LAB^*_a = 77.6 \ -27.4 \ -10.7$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 37.1 \ 81.8 \ 44$

$LAB^*_a = 37.1 \ 59.3 \ 56.4$

M Magenta red

$LCH^*_a = 48.4 \ 93.8 \ 320$

$LAB^*_a = 48.4 \ 71.6 \ -60.6$

V Violet blue

$LCH^*_a = 30.3 \ 100.3 \ 301$

$LAB^*_a = 30.3 \ 50.9 \ -86.4$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	36.64	60.14	59.89	84.88	45	17.98	9.35	0.23	0.6525	0.3391	0.15
	01 o13y	1.0	0.125	0.0	36.96	59.36	59.82	84.27	45	18.09	9.52	0.27	0.6489	0.3413	0.1527
	02 o25y	1.0	0.25	0.0	38.4	55.69	60.54	82.25	47	18.58	10.32	0.4	0.6343	0.3522	0.1655
	03 o38y	1.0	0.375	0.0	42.07	43.97	62.58	76.48	55	19.38	12.55	0.7	0.594	0.3846	0.2013
	04 o50y	1.0	0.5	0.0	46.78	36.28	62.76	72.49	60	21.97	15.85	1.28	0.5619	0.4054	0.2544
	05 o63y	1.0	0.625	0.0	53.92	21.94	65.75	69.31	72	25.7	21.9	2.24	0.5156	0.4394	0.3515
	06 o75y	1.0	0.75	0.0	62.11	7.64	70.36	70.77	84	31.04	30.53	3.62	0.4761	0.4683	0.4899
	07 o88y	1.0	0.875	0.0	70.54	-4.15	76.03	76.14	93	38.15	41.52	5.33	0.4488	0.4884	0.6662
	08 y00l	1.0	1.0	0.0	83.08	-16.34	85.5	87.05	101	52.69	62.32	8.46	0.4267	0.5048	1.0
	09 y13l	0.875	1.0	0.0	81.14	-24.37	82.84	86.35	106	46.63	58.73	8.26	0.4104	0.5169	0.9424
	10 y25l	0.75	1.0	0.0	74.95	-33.4	76.37	83.36	114	35.07	48.2	7.08	0.3881	0.5335	0.7734
	11 y38l	0.625	1.0	0.0	74.0	-40.23	74.73	86.87	118	31.95	46.7	7.08	0.3727	0.5447	0.7493
	12 y50l	0.5	1.0	0.0	73.38	-45.34	73.66	84.5	122	29.86	45.74	7.08	0.3611	0.5532	0.7339
	13 y63l	0.375	1.0	0.0	73.02	-48.56	73.02	87.7	124	28.62	45.19	7.09	0.3538	0.5586	0.7251
	14 y75l	0.25	1.0	0.0	72.83	-50.28	72.71	88.41	125	27.97	44.9	7.08	0.3498	0.5616	0.7205
	15 y88l	0.125	1.0	0.0	72.75	-51.03	72.56	88.71	125	27.7	44.79	7.09	0.3481	0.5628	0.7187
	16 l00c	0.0	1.0	0.0	72.74	-51.16	72.53	88.76	125	27.66	44.77	7.09	0.3478	0.563	0.7184
	17 l13c	0.0	1.0	0.125	72.78	-51.0	71.64	87.95	125	27.73	44.82	7.35	0.3471	0.561	0.7192
	18 l25c	0.0	1.0	0.25	72.88	-50.49	67.84	84.57	127	27.98	44.98	8.48	0.3435	0.5524	0.7218
	19 l38c	0.0	1.0	0.375	73.08	-49.33	60.28	77.9	129	28.49	45.29	11.05	0.3358	0.5338	0.7266
	20 l50c	0.0	1.0	0.5	73.46	-47.23	49.16	68.18	134	29.46	45.87	15.79	0.3233	0.5034	0.736
	21 l63c	0.0	1.0	0.625	74.1	-43.94	35.15	56.27	141	31.07	46.87	23.64	0.3059	0.4614	0.752
	22 l75c	0.0	1.0	0.75	74.72	-39.36	19.71	44.03	153	33.07	47.84	34.77	0.2859	0.4135	0.7676
	23 l88c	0.0	1.0	0.875	76.21	-33.56	3.44	33.74	174	36.64	50.24	51.22	0.2653	0.3638	0.8061
	24 c00v	0.0	1.0	1.0	77.56	-27.51	-10.78	29.55	201	40.34	52.47	69.38	0.2487	0.3235	0.842
	25 c13v	0.0	0.875	1.0	69.83	-18.71	-22.59	29.34	230	32.95	40.51	67.56	0.2337	0.2873	0.6501
	26 c25v	0.0	0.75	1.0	60.64	-6.82	-36.88	37.52	260	25.74	28.84	65.72	0.214	0.2397	0.4627
	27 c38v	0.0	0.675	1.0	51.3	7.35	-51.74	52.27	278	20.01	19.53	64.29	0.1927	0.1881	0.3134
	28 c50v	0.0	0.5	1.0	42.9	22.36	-65.4	69.12	289	16.02	13.09	63.33	0.1733	0.1416	0.21
	29 c63v	0.0	0.375	1.0	36.41	35.81	-76.05	84.07	295	13.63	9.22	62.73	0.1592	0.1078	0.148
	30 c75v	0.0	0.25	1.0	32.11	45.89	-83.2	95.03	299	12.35	7.13	62.44	0.1508	0.0871	0.1145
	31 c88v	0.0	0.125	1.0	30.13	50.78	-86.54	100.35	300	11.83	6.29	62.35	0.147	0.0782	0.1009
	32 v00m	0.0	0.0	1.0	29.65	52.07	-87.36	101.71	301	11.71	6.09	62.34	0.1461	0.076	0.0978
	33 v13m	0.125	0.0	1.0	29.89	52.33	-87.61	102.06	301	11.9	6.19	63.09	0.1466	0.0763	0.0993
	34 v25m	0.25	0.0	1.0	30.04	52.53	-86.6	101.3	301	12.02	6.25	62.26	0.1493	0.0777	0.1003
	35 v38m	0.375	0.0	1.0	30.88	53.51	-85.01	100.46	302	12.69	6.6	62.08	0.156	0.0811	0.1059
	36 v50m	0.5	0.0	1.0	32.47	55.29	-82.3	99.16	304	14.02	7.29	62.11	0.1681	0.0874	0.117
	37 v63m	0.625	0.0	1.0	34.81	58.03	-77.84	97.1	307	16.17	8.4	61.64	0.1875	0.0975	0.1349
	38 v75m	0.75	0.0	1.0	37.85	61.58	-71.84	94.62	311	19.26	10.0	60.8	0.2139	0.1111	0.1605
	39 v88m	0.875	0.0	1.0	43.2	67.07	-66.02	94.12	315	25.44	13.29	64.65	0.2461	0.1286	0.2133
	40 m00o	1.0	0.0	1.0	48.11	72.19	-60.98	94.51	320	32.19	16.88	68.68	0.2734	0.1434	0.2709
	41 m13o	1.0	0.0	0.875	44.16	68.22	-45.05	81.76	327	26.72	13.95	44.83	0.3125	0.1632	0.2238
	42 m25o	1.0	0.0	0.75	41.12	65.33	-26.56	70.53	338	22.99	11.94	26.62	0.3735	0.194	0.1916
	43 m38o	1.0	0.0	0.675	39.41	63.33	-9.6	64.05	351	20.98	10.9	15.83	0.4398	0.2285	0.1749
	44 m50o	1.0	0.0	0.5	38.17	61.9	8.12	62.43	7	19.59	10.18	8.44	0.5127	0.2664	0.1634
	45 m63o	1.0	0.0	0.375	37.38	61.03	25.73	66.23	23	18.76	9.75	3.97	0.5777	0.3001	0.1564
	46 m75o	1.0	0.0	0.25	36.96	60.54	42.82	74.15	35	18.32	9.52	1.55	0.6234	0.3238	0.1527
	47 m88o	1.0	0.0	0.125	36.78	60.29	56.46	82.6	43	18.12	9.42	0.49	0.6466	0.3361	0.1511
	48 o00y	1.0	0.0	0.0	36.64	60.14	59.89	84.88	45	17.98	9.35	0.23	0.6525	0.3391	0.15
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	2.06	-0.45	-0.71	0.86	238	0.21	0.23	0.3	0.2807	0.3114	0.0037
	51 n25w	0.25	0.25	0.25	10.74	-2.06	-2.06	2.1	259	1.15	1.23	1.52	0.2956	0.3142	0.0197
	52 n38w	0.375	0.375	0.375	22.45	-0.22	-2.06	2.09	264	3.45	3.64	4.35	0.3014	0.3184	0.0584
	53 n50w	0.5	0.5	0.5	34.27	-0.08	-2.1	2.12	267	7.72	8.14	9.52	0.3043	0.3205	0.1306
	54 n63w	0.625	0.625	0.625	46.51	0.02	-2.12	2.13	270	14.87	15.65	18.07	0.3061	0.322	0.2511
	55 n75w	0.75	0.75	0.75	61.23	-0.17	-1.78	1.79	264	28.0	29.51	33.44	0.3079	0.3245	0.4735
	56 n88w	0.875	0.875	0.875	80.8	0.05	-0.03	0.07	324	55.26	58.12	63.32	0.3127	0.3289	0.9326
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.4215

IE360-7N, Colorimetric data of Television Luminous System TLS03a for CIE standard illuminant D65; LCD projector; Page: 49/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 49/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65
System TLS00a

LCD projector

Y Yellow

$LCH^*_a = 83.1 \ 87.1 \ 101$

$LAB^*_a = 83.1 \ -16.3 \ 85.5$

L Leaf green

$LCH^*_a = 72.7 \ 88.8 \ 125$

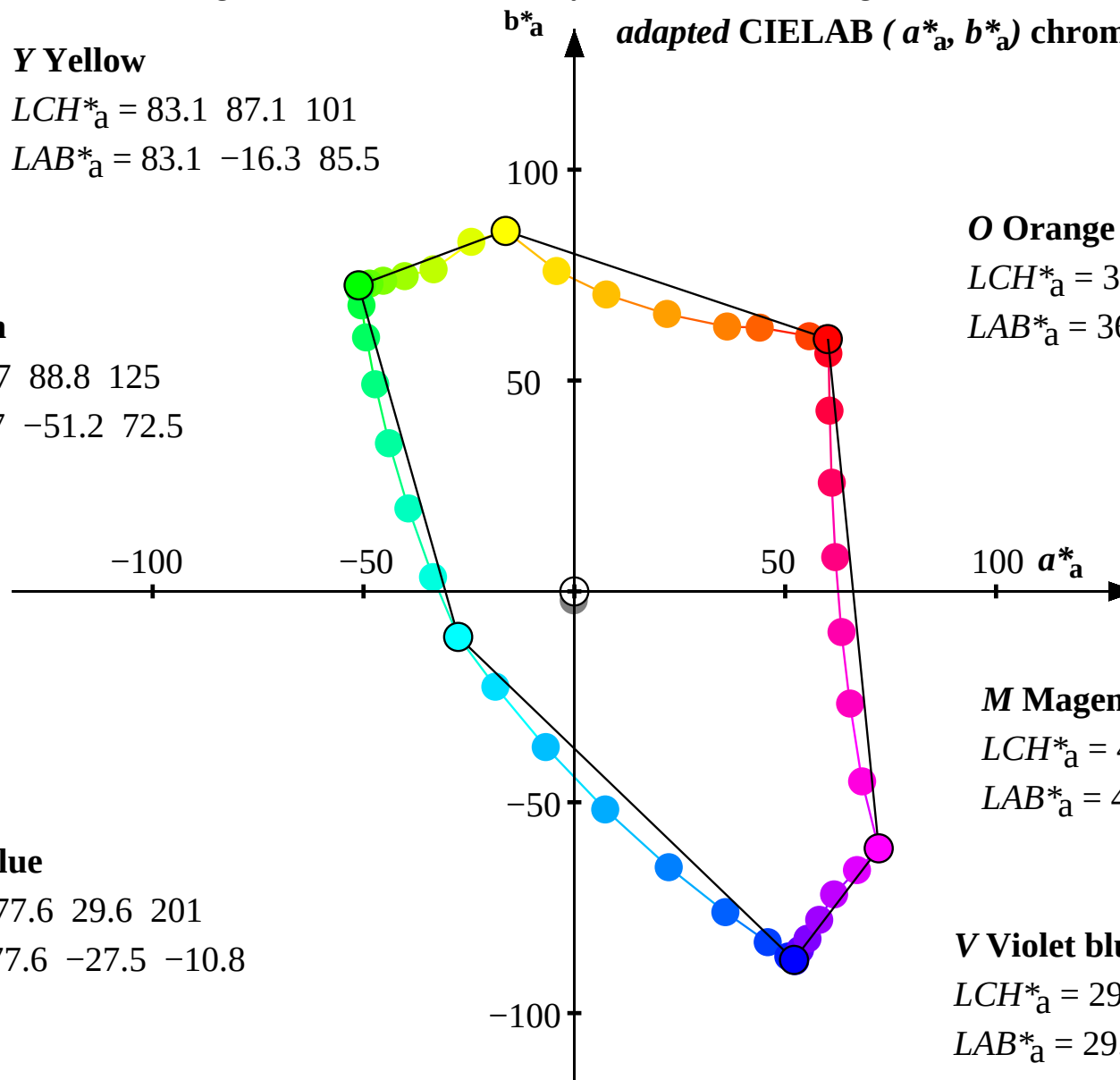
$LAB^*_a = 72.7 \ -51.2 \ 72.5$

C Cyan blue

$LCH^*_a = 77.6 \ 29.6 \ 201$

$LAB^*_a = 77.6 \ -27.5 \ -10.8$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 36.6 \ 84.9 \ 45$

$LAB^*_a = 36.6 \ 60.1 \ 59.9$

M Magenta red

$LCH^*_a = 48.1 \ 94.5 \ 320$

$LAB^*_a = 48.1 \ 72.2 \ -61.0$

V Violet blue

$LCH^*_a = 29.6 \ 101.7 \ 301$

$LAB^*_a = 29.6 \ 52.1 \ -87.4$

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	36.64	60.14	59.89	84.88	45	17.98	9.35	0.23	0.6525	0.3391	0.15
	01 o13y	1.0	0.125	0.0	36.96	59.36	59.82	84.27	45	18.09	9.52	0.27	0.6489	0.3413	0.1527
D65 reflection:	02 o25y	1.0	0.25	0.0	38.4	55.69	60.54	82.25	47	18.58	10.32	0.4	0.6343	0.3522	0.1655
	03 o38y	1.0	0.375	0.0	42.07	43.97	62.58	76.48	55	19.38	12.55	0.7	0.594	0.3846	0.2013
	04 o50y	1.0	0.5	0.0	46.78	36.28	62.76	72.49	60	21.97	15.85	1.28	0.5619	0.4054	0.2544
	05 o63y	1.0	0.625	0.0	53.92	21.94	65.75	69.31	72	25.7	21.9	2.24	0.5156	0.4394	0.3515
	06 o75y	1.0	0.75	0.0	62.11	7.64	70.36	70.77	84	31.04	30.53	3.62	0.4761	0.4683	0.4899
	07 o88y	1.0	0.875	0.0	70.54	-4.15	76.03	76.14	93	38.15	41.52	5.33	0.4488	0.4884	0.6662
	08 y00l	1.0	1.0	0.0	83.08	-16.34	85.5	87.05	101	52.69	62.32	8.46	0.4267	0.5048	1.0
	09 y13l	0.875	1.0	0.0	81.14	-24.37	82.84	86.35	106	46.63	58.73	8.26	0.4104	0.5169	0.9424
	10 y25l	0.75	1.0	0.0	74.95	-33.4	76.37	83.36	114	35.07	48.2	7.08	0.3881	0.5335	0.7734
	11 y38l	0.625	1.0	0.0	74.0	-40.23	74.73	84.87	118	31.95	46.7	7.08	0.3727	0.5447	0.7493
	12 y50l	0.5	1.0	0.0	73.38	-45.34	73.66	86.5	122	29.86	45.74	7.08	0.3611	0.5532	0.7339
	13 y63l	0.375	1.0	0.0	73.02	-48.56	73.02	87.7	124	28.62	45.19	7.09	0.3538	0.5586	0.7251
	14 y75l	0.25	1.0	0.0	72.83	-50.28	72.71	88.41	125	27.97	44.9	7.08	0.3498	0.5616	0.7205
	15 y88l	0.125	1.0	0.0	72.75	-51.03	72.56	88.71	125	27.7	44.79	7.09	0.3481	0.5628	0.7187
	16 l00c	0.0	1.0	0.0	72.74	-51.16	72.53	88.76	125	27.66	44.77	7.09	0.3478	0.563	0.7184
	17 l13c	0.0	1.0	0.125	72.78	-51.0	71.64	87.95	125	27.73	44.82	7.35	0.3471	0.561	0.7192
	18 l25c	0.0	1.0	0.25	72.88	-50.49	67.84	84.57	127	27.98	44.98	8.48	0.3435	0.5524	0.7218
	19 l38c	0.0	1.0	0.375	73.08	-49.33	60.28	77.9	129	28.49	45.29	11.05	0.3358	0.5338	0.7266
	20 l50c	0.0	1.0	0.5	73.46	-47.23	49.16	68.18	134	29.46	45.87	15.79	0.3233	0.5034	0.736
	21 l63c	0.0	1.0	0.625	74.1	-43.94	35.15	56.27	141	31.07	46.87	23.64	0.3059	0.4614	0.752
	22 l75c	0.0	1.0	0.75	74.72	-39.36	19.71	44.03	153	33.07	47.84	34.77	0.2859	0.4135	0.7676
	23 l88c	0.0	1.0	0.875	76.21	-33.56	3.44	33.74	174	36.64	50.24	51.22	0.2653	0.3638	0.8061
	24 c00v	0.0	1.0	1.0	77.56	-27.51	-10.78	29.55	201	40.34	52.47	69.38	0.2487	0.3235	0.842
	25 c13v	0.0	0.875	1.0	69.83	-18.71	-22.59	29.34	230	32.95	40.51	67.56	0.2337	0.2873	0.6501
	26 c25v	0.0	0.75	1.0	60.64	-6.82	-36.88	37.52	260	25.74	28.84	65.72	0.214	0.2397	0.4627
	27 c38v	0.0	0.675	1.0	51.3	7.35	-51.74	52.27	278	20.01	19.53	64.29	0.1927	0.1881	0.3134
	28 c50v	0.0	0.5	1.0	42.9	22.36	-65.4	69.12	289	16.02	13.09	63.33	0.1733	0.1416	0.21
	29 c63v	0.0	0.375	1.0	36.41	35.81	-76.05	84.07	295	13.63	9.22	62.73	0.1592	0.1078	0.148
	30 c75v	0.0	0.25	1.0	32.11	45.89	-83.2	95.03	299	12.35	7.13	62.44	0.1508	0.0871	0.1145
	31 c88v	0.0	0.125	1.0	30.13	50.78	-86.54	100.35	300	11.83	6.29	62.35	0.147	0.0782	0.1009
	32 v00m	0.0	0.0	1.0	29.65	52.07	-87.36	101.71	301	11.71	6.09	62.34	0.1461	0.076	0.0978
	33 v13m	0.125	0.0	1.0	29.89	52.33	-87.61	102.06	301	11.9	6.19	63.09	0.1466	0.0763	0.0993
	34 v25m	0.25	0.0	1.0	30.04	52.53	-86.6	101.3	301	12.02	6.25	62.26	0.1493	0.0777	0.1003
	35 v38m	0.375	0.0	1.0	30.88	53.51	-85.01	100.46	302	12.69	6.6	62.08	0.156	0.0811	0.1059
	36 v50m	0.5	0.0	1.0	32.47	55.29	-82.3	99.16	304	14.02	7.29	62.11	0.1681	0.0874	0.117
	37 v63m	0.625	0.0	1.0	34.81	58.03	-77.84	97.1	307	16.17	8.4	61.64	0.1875	0.0975	0.1349
	38 v75m	0.75	0.0	1.0	37.85	61.58	-71.84	94.62	311	19.26	10.0	60.8	0.2139	0.1111	0.1605
	39 v88m	0.875	0.0	1.0	43.2	67.07	-66.02	94.12	315	25.44	13.29	64.65	0.2461	0.1286	0.2133
	40 m00o	1.0	0.0	1.0	48.11	72.19	-60.98	94.51	320	32.19	16.88	68.68	0.2734	0.1434	0.2709
	41 m13o	1.0	0.0	0.875	44.16	68.22	-45.05	81.76	327	26.72	13.95	44.83	0.3125	0.1632	0.2238
	42 m25o	1.0	0.0	0.75	41.12	65.33	-26.56	70.53	338	22.99	11.94	26.62	0.3735	0.194	0.1916
	43 m38o	1.0	0.0	0.675	39.41	63.33	-9.6	64.05	351	20.98	10.9	15.83	0.4398	0.2285	0.1749
	44 m50o	1.0	0.0	0.5	38.17	61.9	8.12	62.43	7	19.59	10.18	8.44	0.5127	0.2664	0.1634
	45 m63o	1.0	0.0	0.375	37.38	61.03	25.73	66.23	23	18.76	9.75	3.97	0.5777	0.3001	0.1564
	46 m75o	1.0	0.0	0.25	36.96	60.54	42.82	74.15	35	18.32	9.52	1.55	0.6234	0.3238	0.1527
	47 m88o	1.0	0.0	0.125	36.78	60.29	56.46	82.6	43	18.12	9.42	0.49	0.6466	0.3361	0.1511
	48 o00y	1.0	0.0	0.0	36.64	60.14	59.89	84.88	45	17.98	9.35	0.23	0.6525	0.3391	0.15
	49 n00w	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0	0.0	0.0	0.0	0.0	0.0	0.0
	50 n13w	0.125	0.125	0.125	2.06	-0.45	-0.71	0.86	238	0.21	0.23	0.3	0.2807	0.3114	0.0037
	51 n25w	0.25	0.25	0.25	10.74	-2.06	-2.06	2.1	259	1.15	1.23	1.52	0.2956	0.3142	0.0197
	52 n38w	0.375	0.375	0.375	22.45	-0.22	-2.06	2.09	264	3.45	3.64	4.35	0.3014	0.3184	0.0584
	53 n50w	0.5	0.5	0.5	34.27	-0.08	-2.1	2.12	267	7.72	8.14	9.52	0.3043	0.3205	0.1306
	54 n63w	0.625	0.625	0.625	46.51	0.02	-2.12	2.13	270	14.87	15.65	18.07	0.3061	0.322	0.2511
	55 n75w	0.75	0.75	0.75	61.23	-0.17	-1.78	1.79	264	28.0	29.51	33.44	0.3079	0.3245	0.4735
	56 n88w	0.875	0.875	0.875	80.8	0.05	-0.03	0.07	324	55.26	58.12	63.32	0.3127	0.3289	0.9326
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.4215

IE360-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; LCD projector; Page: 51/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 51/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black for illuminant D65

System TLS00a

LCD projector

D65 reflection:

$Y_N = 0.0$

$L^*_N = 0.0$

Y Yellow

$LCH^*_a = 83.1 \ 87.1 \ 101$

$LAB^*_a = 83.1 \ -16.3 \ 85.5$

L Leaf green

$LCH^*_a = 72.7 \ 88.8 \ 125$

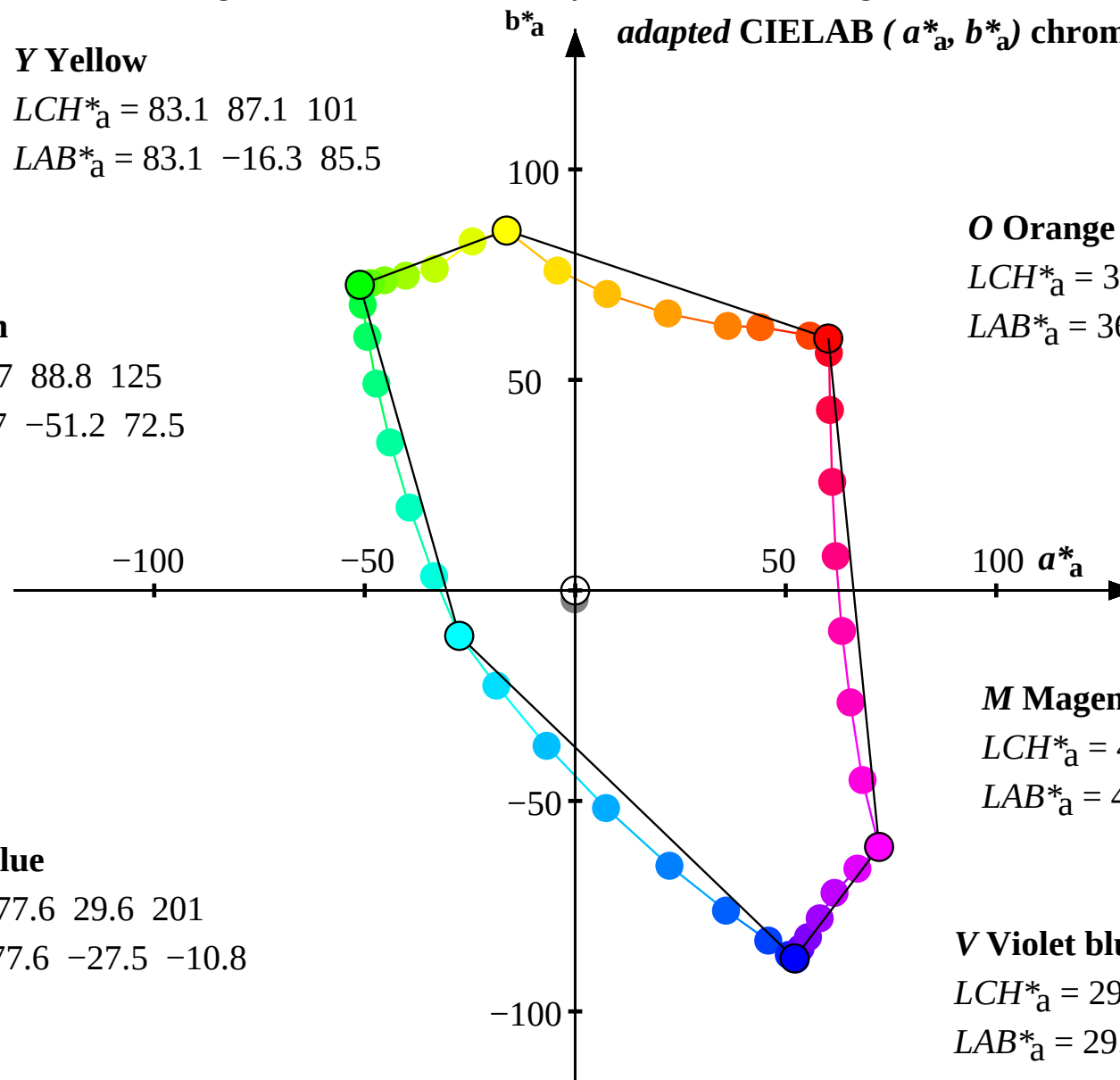
$LAB^*_a = 72.7 \ -51.2 \ 72.5$

C Cyan blue

$LCH^*_a = 77.6 \ 29.6 \ 201$

$LAB^*_a = 77.6 \ -27.5 \ -10.8$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 36.6 \ 84.9 \ 45$

$LAB^*_a = 36.6 \ 60.1 \ 59.9$

M Magenta red

$LCH^*_a = 48.1 \ 94.5 \ 320$

$LAB^*_a = 48.1 \ 72.2 \ -61.0$

V Violet blue

$LCH^*_a = 29.6 \ 101.7 \ 301$

$LAB^*_a = 29.6 \ 52.1 \ -87.4$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65

System TLS06a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	37.68	58.16	51.89	77.94	42	18.45	9.91	0.91	0.6303	0.3385	0.1585
	01 o13y	1.0	0.125	0.0	37.98	57.42	51.8	77.33	42	18.56	10.08	0.96	0.6272	0.3405	0.1612
D65 reflection:	02 o25y	1.0	0.25	0.0	39.36	53.95	52.48	75.27	44	19.04	10.87	1.08	0.6144	0.3507	0.1739
$Y_N = 0.63$	03 o38y	1.0	0.375	0.0	42.89	42.74	54.94	69.61	52	19.84	13.09	1.38	0.5783	0.3815	0.2094
$L^*_N = 5.69$	04 o50y	1.0	0.5	0.0	47.45	35.41	57.01	67.12	58	22.42	16.37	1.96	0.5502	0.4018	0.2619
	05 o63y	1.0	0.625	0.0	54.43	21.51	61.62	65.27	71	26.12	22.38	2.91	0.5081	0.4353	0.358
	06 o75y	1.0	0.75	0.0	62.46	7.52	67.27	67.69	84	31.42	30.95	4.28	0.4714	0.4643	0.4951
	07 o88y	1.0	0.875	0.0	70.77	-4.1	73.57	73.69	93	38.48	41.85	5.98	0.4458	0.4849	0.6695
	08 y00l	1.0	1.0	0.0	83.18	-16.18	83.62	85.17	101	52.91	62.51	9.08	0.425	0.5021	1.0
	09 y13l	0.875	1.0	0.0	81.26	-24.12	80.95	84.47	107	46.89	58.94	8.88	0.4088	0.5138	0.943
	10 y25l	0.75	1.0	0.0	75.13	-32.99	74.34	81.34	114	35.42	48.49	7.72	0.3865	0.5292	0.7757
	11 y38l	0.625	1.0	0.0	74.19	-39.71	72.72	82.86	119	32.33	47.0	7.72	0.3714	0.5399	0.7518
	12 y50l	0.5	1.0	0.0	73.57	-44.73	71.67	84.49	122	30.24	46.04	7.72	0.36	0.5481	0.7366
	13 y63l	0.375	1.0	0.0	73.22	-47.89	71.03	85.68	124	29.01	45.5	7.72	0.3528	0.5533	0.7278
	14 y75l	0.25	1.0	0.0	73.03	-49.59	70.73	86.38	125	28.37	45.21	7.72	0.3489	0.5561	0.7233
	15 y88l	0.125	1.0	0.0	72.96	-50.32	70.58	86.68	125	28.1	45.1	7.73	0.3473	0.5573	0.7215
	16 l00c	0.0	1.0	0.0	72.95	-50.44	70.55	86.73	126	28.06	45.08	7.73	0.347	0.5575	0.7212
	17 l13c	0.0	1.0	0.125	72.98	-50.29	69.72	85.97	126	28.13	45.13	7.98	0.3463	0.5555	0.7221
	18 l25c	0.0	1.0	0.25	73.08	-49.79	66.14	82.8	127	28.38	45.29	9.1	0.3428	0.5472	0.7246
	19 l38c	0.0	1.0	0.375	73.28	-48.66	58.95	76.44	130	28.88	45.59	11.66	0.3353	0.5293	0.7294
	20 l50c	0.0	1.0	0.5	73.66	-46.6	48.24	67.08	134	29.85	46.18	16.37	0.323	0.4998	0.7387
	21 l63c	0.0	1.0	0.625	74.29	-43.37	34.6	55.49	141	31.45	47.16	24.16	0.306	0.4589	0.7545
	22 l75c	0.0	1.0	0.75	74.9	-38.86	19.46	43.47	153	33.43	48.13	35.21	0.2863	0.4122	0.7699
	23 l88c	0.0	1.0	0.875	76.38	-33.16	3.4	33.34	174	36.98	50.51	51.54	0.266	0.3633	0.808
	24 c00v	0.0	1.0	1.0	77.72	-27.2	-10.67	29.23	201	40.66	52.73	69.57	0.2495	0.3236	0.8436
	25 c13v	0.0	0.875	1.0	70.07	-18.46	-22.34	29.0	230	33.31	40.85	67.76	0.2347	0.2878	0.6536
	26 c25v	0.0	0.75	1.0	61.01	-6.7	-36.42	37.05	260	26.16	29.26	65.94	0.2155	0.2411	0.4681
	27 c38v	0.0	0.675	1.0	51.86	7.19	-50.97	51.49	278	20.47	20.02	64.52	0.1949	0.1907	0.3203
	28 c50v	0.0	0.5	1.0	43.69	21.7	-64.23	67.81	289	16.51	13.62	63.57	0.1762	0.1454	0.218
	29 c63v	0.0	0.375	1.0	37.46	34.47	-74.46	82.06	295	14.13	9.79	62.97	0.1626	0.1126	0.1566
	30 c75v	0.0	0.25	1.0	33.38	43.86	-81.23	92.33	298	12.86	7.71	62.68	0.1545	0.0926	0.1234
	31 c88v	0.0	0.125	1.0	31.52	48.36	-84.36	97.25	300	12.34	6.87	62.6	0.1508	0.084	0.11
	32 v00m	0.0	0.0	1.0	31.07	49.54	-85.13	98.51	300	12.23	6.68	62.59	0.1501	0.082	0.1069
	33 v13m	0.125	0.0	1.0	31.29	49.83	-85.4	98.88	300	12.41	6.78	63.33	0.1504	0.0821	0.1084
	34 v25m	0.25	0.0	1.0	31.44	50.04	-84.42	98.14	301	12.54	6.84	62.5	0.1531	0.0835	0.1094
	35 v38m	0.375	0.0	1.0	32.22	51.1	-82.91	97.4	302	13.2	7.18	62.32	0.1596	0.0869	0.1149
	36 v50m	0.5	0.0	1.0	33.71	53.01	-80.36	96.28	303	14.52	7.87	62.36	0.1713	0.0929	0.1259
	37 v63m	0.625	0.0	1.0	35.94	55.92	-76.12	94.46	306	16.65	8.97	61.89	0.1903	0.1025	0.1436
	38 v75m	0.75	0.0	1.0	38.83	59.66	-70.37	92.26	310	19.72	10.56	61.05	0.2159	0.1157	0.169
	39 v88m	0.875	0.0	1.0	43.98	65.44	-64.87	92.15	315	25.86	13.83	64.88	0.2473	0.1322	0.2212
	40 m00o	1.0	0.0	1.0	48.75	70.77	-60.04	92.81	320	32.56	17.39	68.88	0.274	0.1464	0.2782
	41 m13o	1.0	0.0	0.875	44.91	66.64	-44.16	79.94	326	27.12	14.48	45.2	0.3125	0.1668	0.2317
	42 m25o	1.0	0.0	0.75	41.98	63.6	-25.86	68.66	338	23.43	12.49	27.12	0.3717	0.1981	0.1998
	43 m38o	1.0	0.0	0.675	40.33	61.5	-9.27	62.2	351	21.43	11.45	16.4	0.4348	0.2324	0.1832
	44 m50o	1.0	0.0	0.5	39.14	60.0	7.73	60.5	7	20.05	10.74	9.07	0.5031	0.2694	0.1718
	45 m63o	1.0	0.0	0.375	38.39	59.08	23.98	63.77	22	19.23	10.31	4.63	0.5628	0.3017	0.1649
	46 m75o	1.0	0.0	0.25	37.98	58.57	38.38	70.03	33	18.78	10.08	2.23	0.6042	0.3242	0.1612
	47 m88o	1.0	0.0	0.125	37.81	58.31	48.66	75.95	40	18.59	9.98	1.17	0.6251	0.3356	0.1597
	48 o00y	1.0	0.0	0.0	37.68	58.16	51.89	77.94	42	18.45	9.91	0.91	0.6303	0.3385	0.1585
	49 n00w	0.0	0.0	0.0	5.69	0.0	0.0	0.01	0	0.6	0.63	0.69	0.3127	0.329	0.0101
	50 n13w	0.125	0.125	0.125	7.74	-0.44	-0.71	0.85	238	0.8	0.86	0.98	0.3039	0.3242	0.0137
	51 n25w	0.25	0.25	0.25	14.66	-0.28	-1.58	1.61	260	1.74	1.85	2.2	0.3013	0.3191	0.0295
	52 n38w	0.375	0.375	0.375	24.47	-0.2	-1.86	1.88	264	4.02	4.25	5.0	0.303	0.3199	0.0679
	53 n50w	0.5	0.5	0.5	35.42	-0.08	-2.0	2.01	267	8.27	8.71	10.14	0.3049	0.3211	0.1393
	54 n63w	0.625	0.625	0.625	47.19	0.02	-2.06	2.07	270	15.37	16.17	18.63	0.3064	0.3223	0.2586
	55 n75w	0.75	0.75	0.75	61.59	-0.16	-1.75	1.76	264	28.4	29.93	33.89	0.308	0.3246	0.4788
	56 n88w	0.875	0.875	0.875	80.92	0.05	-0.03	0.06	324	55.46	58.33	63.56	0.3127	0.3289	0.9332
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.4173

IE360-7N, Colorimetric data of Television Luminous System TLS06a for CIE standard illuminant D65; LCD projector; Page: 53/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 53/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS06a for CIE lightness $L^*_N=06$ of black for illuminant D65
System TLS06a

LCD projector

Y Yellow

D65 reflection:

$Y_N = 0.63$

$L^*_N = 5.69$

$LCH^*_a = 83.2 \ 85.2 \ 101$

$LAB^*_a = 83.2 \ -16.2 \ 83.6$

L Leaf green

$LCH^*_a = 72.9 \ 86.7 \ 126$

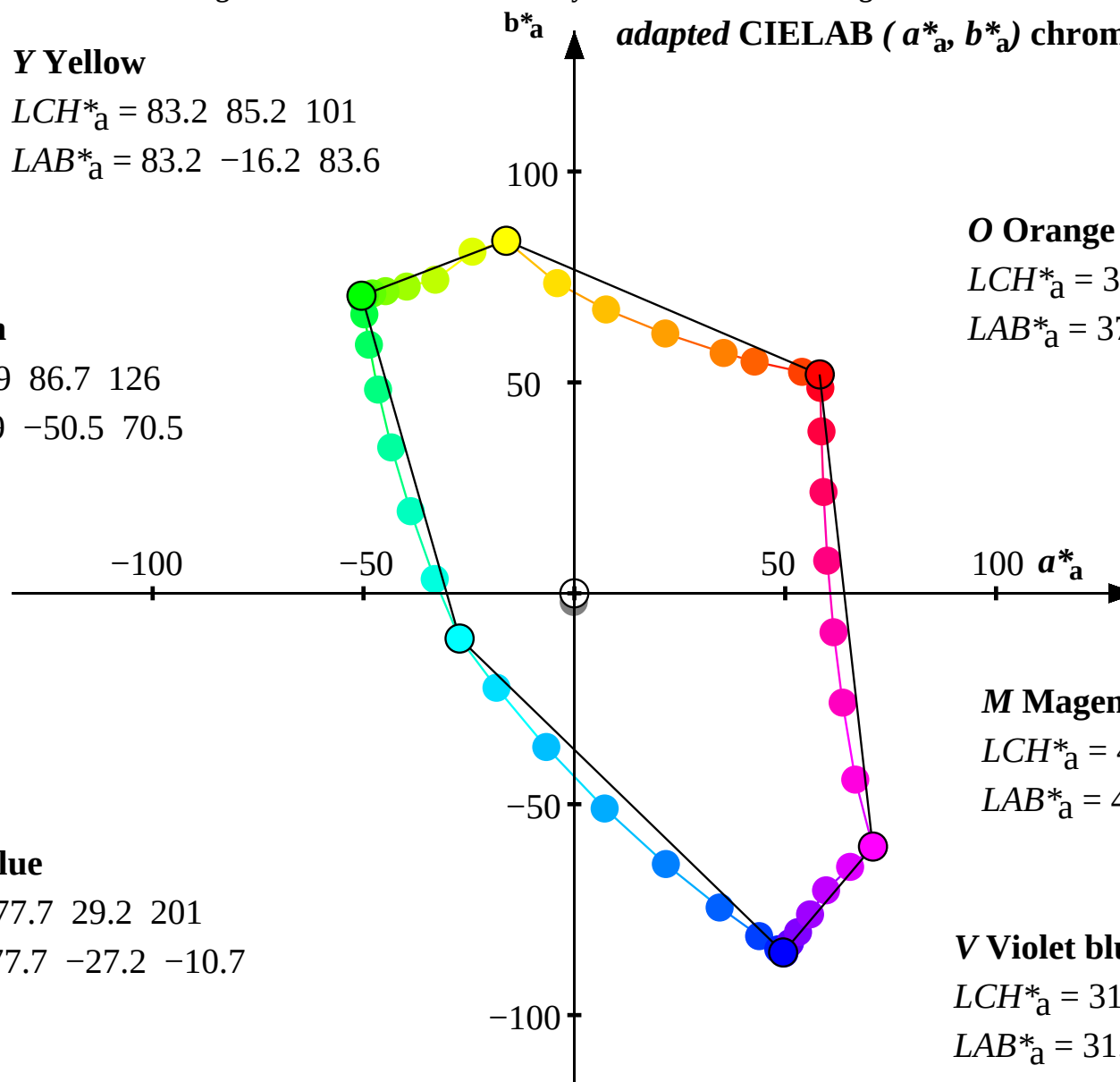
$LAB^*_a = 72.9 \ -50.5 \ 70.5$

C Cyan blue

$LCH^*_a = 77.7 \ 29.2 \ 201$

$LAB^*_a = 77.7 \ -27.2 \ -10.7$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 37.7 \ 77.9 \ 42$

$LAB^*_a = 37.7 \ 58.2 \ 51.9$

M Magenta red

$LCH^*_a = 48.8 \ 92.8 \ 320$

$LAB^*_a = 48.8 \ 70.8 \ -60.0$

V Violet blue

$LCH^*_a = 31.1 \ 98.5 \ 300$

$LAB^*_a = 31.1 \ 49.5 \ -85.1$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	38.68	56.29	45.3	72.26	39	18.93	10.47	1.6	0.6105	0.3379	0.1671
	01 o13y	1.0	0.125	0.0	38.97	55.6	45.37	71.76	39	19.03	10.64	1.64	0.6078	0.3398	0.1697
D65 reflection:	02 o25y	1.0	0.25	0.0	40.29	52.32	46.46	69.97	42	19.51	11.43	1.76	0.5966	0.3495	0.1823
	03 o38y	1.0	0.375	0.0	43.69	41.57	49.64	64.75	50	20.3	13.63	2.06	0.5641	0.3787	0.2174
$Y_N = 1.26$	04 o50y	1.0	0.5	0.0	48.12	34.58	52.7	63.03	57	22.86	16.89	2.63	0.5394	0.3985	0.2693
$L^*_N = 11.0$	05 o63y	1.0	0.625	0.0	54.92	21.1	58.2	61.9	70	26.53	22.85	3.58	0.5009	0.4314	0.3645
	06 o75y	1.0	0.75	0.0	62.81	7.4	64.54	64.96	83	31.79	31.36	4.94	0.4669	0.4605	0.5002
	07 o88y	1.0	0.875	0.0	71.0	-4.05	71.32	71.43	93	38.81	42.19	6.63	0.4429	0.4815	0.6729
	08 y00l	1.0	1.0	0.0	83.28	-16.03	81.83	83.38	101	53.13	62.69	9.71	0.4233	0.4994	1.0
	09 y13l	0.875	1.0	0.0	81.38	-23.87	79.16	82.68	107	47.16	59.16	9.51	0.4072	0.5107	0.9435
	10 y25l	0.75	1.0	0.0	75.31	-32.59	72.44	79.44	114	35.76	48.77	8.36	0.385	0.525	0.778
	11 y38l	0.625	1.0	0.0	74.38	-39.19	70.84	80.96	119	32.7	47.29	8.35	0.3701	0.5353	0.7543
	12 y50l	0.5	1.0	0.0	73.77	-44.13	69.8	82.58	122	30.63	46.35	8.35	0.3589	0.5432	0.7393
	13 y63l	0.375	1.0	0.0	73.42	-47.24	69.17	83.77	124	29.41	45.8	8.36	0.3519	0.5481	0.7306
	14 y75l	0.25	1.0	0.0	73.24	-48.9	68.87	84.47	125	28.77	45.52	8.36	0.3481	0.5508	0.7261
	15 y88l	0.125	1.0	0.0	73.16	-49.62	68.72	84.76	126	28.51	45.41	8.36	0.3465	0.5519	0.7243
	16 l00c	0.0	1.0	0.0	73.15	-49.74	68.69	84.81	126	28.46	45.39	8.36	0.3462	0.5521	0.724
	17 l13c	0.0	1.0	0.125	73.18	-49.6	67.91	84.1	126	28.54	45.45	8.61	0.3455	0.5502	0.7249
	18 l25c	0.0	1.0	0.25	73.29	-49.1	64.53	81.1	127	28.78	45.6	9.73	0.3421	0.5422	0.7274
	19 l38c	0.0	1.0	0.375	73.48	-47.99	57.67	75.04	130	29.28	45.9	12.27	0.3348	0.5249	0.7321
	20 l50c	0.0	1.0	0.5	73.86	-45.97	47.35	66.0	134	30.24	46.48	16.94	0.3228	0.4963	0.7414
	21 l63c	0.0	1.0	0.625	74.48	-42.8	34.07	54.71	141	31.82	47.46	24.67	0.3061	0.4565	0.757
	22 l75c	0.0	1.0	0.75	75.09	-38.37	19.2	42.92	153	33.79	48.42	35.65	0.2867	0.4108	0.7722
	23 l88c	0.0	1.0	0.875	76.55	-32.76	3.37	32.95	174	37.32	50.78	51.86	0.2666	0.3628	0.81
	24 c00v	0.0	1.0	1.0	77.87	-26.89	-10.57	28.91	201	40.97	52.99	69.77	0.2502	0.3236	0.8452
	25 c13v	0.0	0.875	1.0	70.31	-18.21	-22.1	28.65	231	33.68	41.2	67.97	0.2358	0.2884	0.6571
	26 c25v	0.0	0.75	1.0	61.38	-6.59	-35.97	36.58	260	26.57	29.69	66.16	0.2171	0.2425	0.4735
	27 c38v	0.0	0.675	1.0	52.41	7.03	-50.22	50.72	278	20.92	20.51	64.75	0.197	0.1932	0.3272
	28 c50v	0.0	0.5	1.0	44.46	21.07	-63.1	66.54	288	16.99	14.16	63.8	0.179	0.1491	0.2259
	29 c63v	0.0	0.375	1.0	38.46	33.22	-72.93	80.15	294	14.63	10.35	63.21	0.1659	0.1174	0.1651
	30 c75v	0.0	0.25	1.0	34.58	42.02	-79.37	89.81	298	13.37	8.29	62.92	0.1581	0.098	0.1323
	31 c88v	0.0	0.125	1.0	32.83	46.18	-82.31	94.39	299	12.86	7.46	62.84	0.1546	0.0897	0.119
	32 v00m	0.0	0.0	1.0	32.41	47.27	-83.04	95.56	300	12.74	7.27	62.83	0.1538	0.0877	0.1159
	33 v13m	0.125	0.0	1.0	32.62	47.57	-83.32	95.95	300	12.93	7.36	63.57	0.1542	0.0878	0.1174
	34 v25m	0.25	0.0	1.0	32.75	47.79	-82.36	95.23	300	13.05	7.42	62.74	0.1568	0.0892	0.1184
	35 v38m	0.375	0.0	1.0	33.49	48.9	-80.94	94.57	301	13.71	7.77	62.57	0.1631	0.0924	0.1239
	36 v50m	0.5	0.0	1.0	34.9	50.91	-78.53	93.6	303	15.02	8.45	62.6	0.1745	0.0982	0.1348
	37 v63m	0.625	0.0	1.0	37.01	53.96	-74.48	91.98	306	17.13	9.54	62.14	0.1929	0.1075	0.1522
	38 v75m	0.75	0.0	1.0	39.78	57.86	-68.96	90.02	310	20.18	11.12	61.3	0.2179	0.1201	0.1774
	39 v88m	0.875	0.0	1.0	44.75	63.88	-63.74	90.25	315	26.28	14.36	65.1	0.2485	0.1358	0.2291
	40 m00o	1.0	0.0	1.0	49.38	69.39	-59.12	91.17	320	32.93	17.9	69.08	0.2746	0.1493	0.2855
	41 m13o	1.0	0.0	0.875	45.65	65.11	-43.29	78.2	326	27.53	15.01	45.56	0.3125	0.1704	0.2394
	42 m25o	1.0	0.0	0.75	42.81	61.94	-25.19	66.87	338	23.86	13.03	27.61	0.3699	0.202	0.2079
	43 m38o	1.0	0.0	0.675	41.23	59.77	-8.96	60.44	351	21.88	12.01	16.97	0.4302	0.2361	0.1915
	44 m50o	1.0	0.0	0.5	40.08	58.21	7.38	58.68	7	20.51	11.3	9.69	0.4943	0.2722	0.1802
	45 m63o	1.0	0.0	0.375	39.36	57.26	22.49	61.52	21	19.69	10.87	5.28	0.5494	0.3032	0.1733
	46 m75o	1.0	0.0	0.25	38.97	56.72	35.03	66.67	32	19.25	10.64	2.9	0.5871	0.3244	0.1697
	47 m88o	1.0	0.0	0.125	38.8	56.46	43.06	71.0	37	19.06	10.54	1.85	0.606	0.3352	0.1682
	48 o00y	1.0	0.0	0.0	38.68	56.29	45.3	72.26	39	18.93	10.47	1.6	0.6105	0.3379	0.1671
	49 n00w	0.0	0.0	0.0	10.99	0.0	0.0	0.01	0	1.2	1.26	1.37	0.3127	0.329	0.0201
	50 n13w	0.125	0.125	0.125	12.51	-0.31	-0.49	0.59	237	1.4	1.49	1.67	0.3076	0.3262	0.0237
	51 n25w	0.25	0.25	0.25	17.77	-0.23	-1.3	1.33	260	2.33	2.47	2.87	0.3041	0.3216	0.0394
	52 n38w	0.375	0.375	0.375	26.3	-0.18	-1.69	1.71	264	4.6	4.85	5.66	0.3042	0.3211	0.0774
	53 n50w	0.5	0.5	0.5	36.52	-0.07	-1.91	1.92	267	8.81	9.28	10.76	0.3054	0.3217	0.1481
	54 n63w	0.625	0.625	0.625	47.86	0.02	-2.01	2.02	270	15.86	16.68	19.18	0.3066	0.3225	0.2661
	55 n75w	0.75	0.75	0.75	61.96	-0.16	-1.72	1.74	264	28.8	30.35	34.34	0.3081	0.3246	0.4841
	56 n88w	0.875	0.875	0.875	81.04	0.05	-0.03	0.06	324	55.67	58.55	63.79	0.3127	0.3289	0.9339
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.413

IE360-7N, Colorimetric data of Television Luminous System TLS11a for CIE standard illuminant D65; LCD projector; Page: 55/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 55/66 output: $olv^* setrgbcolor / w^* setgray$

Colorimetric data of "Standard Original": Television Luminous System TLS11a for CIE lightness $L^*_N=11$ of black for illuminant D65

System TLS11a

LCD projector

D65 reflection:

$Y_N = 1.26$

$L^*_N = 11.0$

Y Yellow

$LCH^*_a = 83.3 \ 83.4 \ 101$

$LAB^*_a = 83.3 \ -16.0 \ 81.8$

L Leaf green

$LCH^*_a = 73.1 \ 84.8 \ 126$

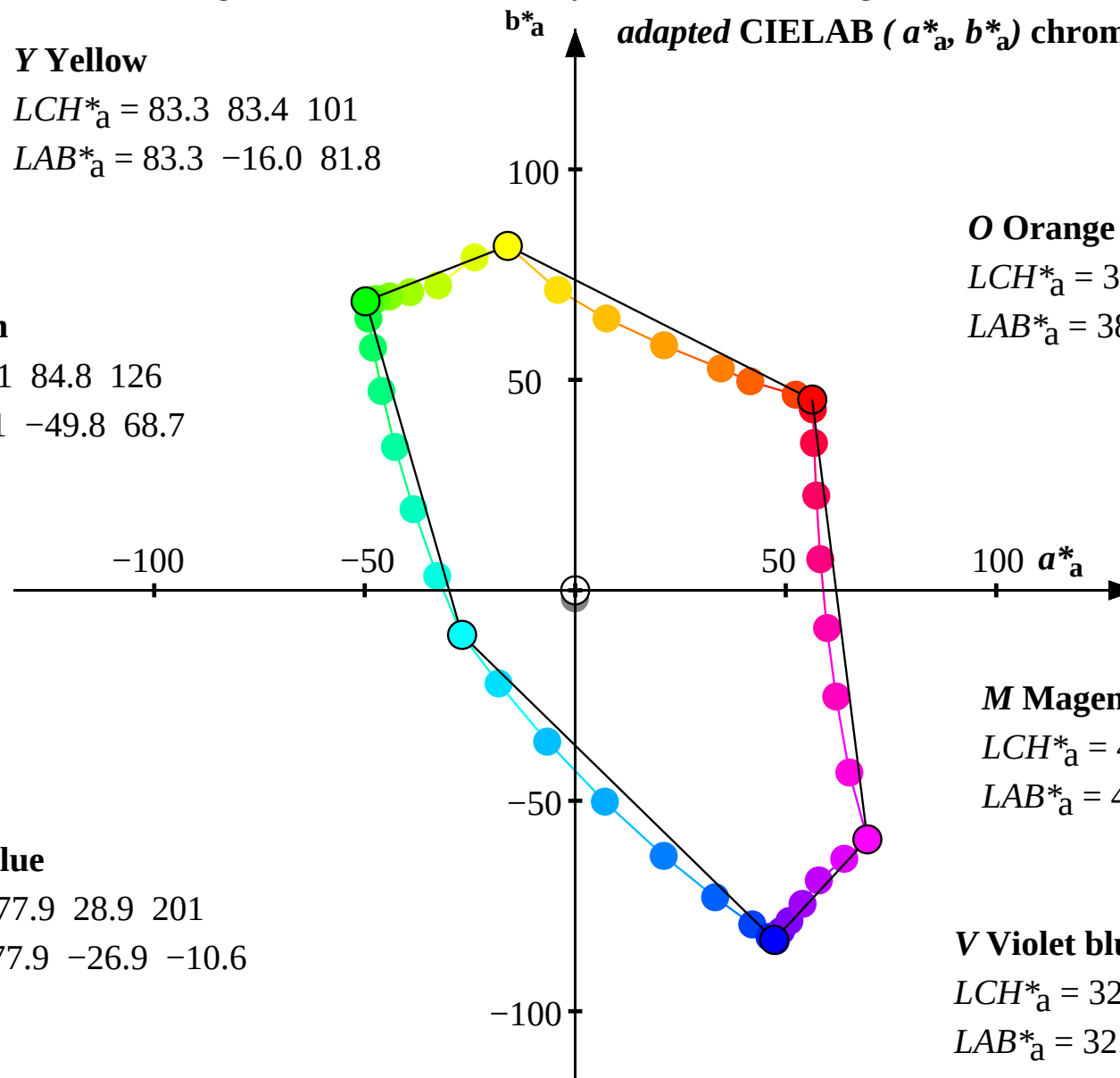
$LAB^*_a = 73.1 \ -49.8 \ 68.7$

C Cyan blue

$LCH^*_a = 77.9 \ 28.9 \ 201$

$LAB^*_a = 77.9 \ -26.9 \ -10.6$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 38.7 \ 72.3 \ 39$

$LAB^*_a = 38.7 \ 56.3 \ 45.3$

M Magenta red

$LCH^*_a = 49.4 \ 91.2 \ 320$

$LAB^*_a = 49.4 \ 69.4 \ -59.1$

V Violet blue

$LCH^*_a = 32.4 \ 95.6 \ 300$

$LAB^*_a = 32.4 \ 47.3 \ -83.0$

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_{1a}$	$Y_a=XYZ^*_{2a}$	$Z_a=XYZ^*_{3a}$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	40.57	52.89	37.36	64.75	35	19.87	11.6	2.97	0.577	0.3369	0.1839
	01 o13y	1.0	0.125	0.0	40.84	52.27	37.53	64.35	36	19.97	11.76	3.01	0.5748	0.3386	0.1865
D65 reflection:	02 o25y	1.0	0.25	0.0	42.06	49.31	38.85	62.78	38	20.44	12.54	3.13	0.5661	0.3473	0.1989
$Y_N = 2.52$	03 o38y	1.0	0.375	0.0	45.23	39.4	42.47	57.93	47	21.22	14.71	3.42	0.5393	0.3738	0.2332
$L^*_N = 18.01$	04 o50y	1.0	0.5	0.0	49.4	33.01	46.34	56.89	55	23.74	17.92	3.99	0.5201	0.3926	0.2841
	05 o63y	1.0	0.625	0.0	55.89	20.31	52.7	56.48	69	27.36	23.8	4.92	0.4879	0.4244	0.3774
	06 o75y	1.0	0.75	0.0	63.49	7.18	59.86	60.29	83	32.55	32.18	6.26	0.4585	0.4533	0.5103
	07 o88y	1.0	0.875	0.0	71.46	-3.94	67.28	67.4	93	39.46	42.86	7.92	0.4373	0.4749	0.6795
	08 y00l	1.0	1.0	0.0	83.48	-15.72	78.48	80.04	101	53.58	63.07	10.96	0.4199	0.4942	1.0
	09 y13l	0.875	1.0	0.0	81.61	-23.39	75.81	79.34	107	47.69	59.58	10.76	0.4041	0.5048	0.9447
	10 y25l	0.75	1.0	0.0	75.67	-31.79	68.95	75.93	115	36.46	49.35	9.63	0.3821	0.5171	0.7825
	11 y38l	0.625	1.0	0.0	74.76	-38.19	67.38	77.45	120	33.44	47.89	9.63	0.3677	0.5265	0.7593
	12 y50l	0.5	1.0	0.0	74.16	-42.96	66.36	79.06	123	31.4	46.96	9.62	0.3569	0.5337	0.7445
	13 y63l	0.375	1.0	0.0	73.82	-45.96	65.75	80.23	125	30.2	46.42	9.63	0.3501	0.5382	0.7361
	14 y75l	0.25	1.0	0.0	73.64	-47.56	65.45	80.92	126	29.57	46.15	9.63	0.3465	0.5407	0.7317
	15 y88l	0.125	1.0	0.0	73.57	-48.25	65.31	81.21	126	29.31	46.03	9.63	0.3449	0.5417	0.7299
	16 l00c	0.0	1.0	0.0	73.56	-48.37	65.28	81.26	127	29.26	46.02	9.63	0.3446	0.5419	0.7296
	17 l13c	0.0	1.0	0.125	73.59	-48.23	64.59	80.62	127	29.34	46.07	9.88	0.344	0.5402	0.7304
	18 l25c	0.0	1.0	0.25	73.69	-47.76	61.55	77.91	128	29.58	46.22	10.98	0.3408	0.5327	0.7329
	19 l38c	0.0	1.0	0.375	73.88	-46.69	55.27	72.36	130	30.07	46.52	13.48	0.3339	0.5164	0.7376
	20 l50c	0.0	1.0	0.5	74.25	-44.75	45.65	63.93	134	31.01	47.09	18.09	0.3224	0.4895	0.7466
	21 l63c	0.0	1.0	0.625	74.86	-41.69	33.04	53.2	142	32.58	48.05	25.71	0.3064	0.4519	0.7619
	22 l75c	0.0	1.0	0.75	75.45	-37.41	18.71	41.84	153	34.52	48.99	36.52	0.2876	0.4082	0.7769
	23 l88c	0.0	1.0	0.875	76.88	-31.99	3.29	32.17	174	37.99	51.33	52.51	0.2679	0.3619	0.8138
	24 c00v	0.0	1.0	1.0	78.17	-26.29	-10.37	28.27	202	41.59	53.5	70.15	0.2517	0.3238	0.8483
	25 c13v	0.0	0.875	1.0	70.79	-17.72	-21.63	27.98	231	34.41	41.88	68.38	0.2378	0.2895	0.664
	26 c25v	0.0	0.75	1.0	62.11	-6.37	-35.08	35.67	260	27.4	30.54	66.6	0.22	0.2452	0.4842
	27 c38v	0.0	0.675	1.0	53.49	6.72	-48.77	49.24	278	21.84	21.5	65.21	0.2012	0.198	0.3408
	28 c50v	0.0	0.5	1.0	45.96	19.9	-60.94	64.12	288	17.96	15.24	64.27	0.1843	0.1563	0.2416
	29 c63v	0.0	0.375	1.0	40.38	30.97	-70.06	76.61	294	15.64	11.48	63.69	0.1722	0.1264	0.182
	30 c75v	0.0	0.25	1.0	36.84	38.77	-75.91	85.24	297	14.39	9.45	63.41	0.165	0.1083	0.1498
	31 c88v	0.0	0.125	1.0	35.26	42.38	-78.55	89.26	298	13.88	8.63	63.32	0.1618	0.1005	0.1368
	32 v00m	0.0	0.0	1.0	34.88	43.32	-79.19	90.28	299	13.78	8.44	63.31	0.1611	0.0987	0.1338
	33 v13m	0.125	0.0	1.0	35.07	43.64	-79.5	90.7	299	13.96	8.54	64.04	0.1613	0.0986	0.1353
	34 v25m	0.25	0.0	1.0	35.19	43.87	-78.58	90.01	299	14.08	8.6	63.23	0.1639	0.1001	0.1363
	35 v38m	0.375	0.0	1.0	35.85	45.05	-77.3	89.47	300	14.73	8.93	63.06	0.1698	0.103	0.1416
	36 v50m	0.5	0.0	1.0	37.13	47.19	-75.13	88.73	302	16.02	9.61	63.09	0.1806	0.1083	0.1523
	37 v63m	0.625	0.0	1.0	39.05	50.42	-71.42	87.43	305	18.1	10.69	62.63	0.198	0.1169	0.1694
	38 v75m	0.75	0.0	1.0	41.59	54.54	-66.29	85.85	309	21.11	12.24	61.81	0.2218	0.1286	0.1941
	39 v88m	0.875	0.0	1.0	46.22	60.94	-61.59	86.65	315	27.11	15.43	65.56	0.2508	0.1428	0.2447
	40 m00o	1.0	0.0	1.0	50.6	66.74	-57.35	88.0	319	33.67	18.92	69.47	0.2758	0.155	0.3
	41 m13o	1.0	0.0	0.875	47.07	62.23	-41.64	74.89	326	28.35	16.07	66.3	0.3125	0.1772	0.2548
	42 m25o	1.0	0.0	0.75	44.41	58.85	-23.93	63.53	338	24.73	14.12	28.61	0.3666	0.2093	0.2239
	43 m38o	1.0	0.0	0.675	42.93	56.57	-8.39	57.19	352	22.78	13.11	18.12	0.4217	0.2428	0.2079
	44 m50o	1.0	0.0	0.5	41.86	54.92	6.78	55.34	7	21.43	12.41	10.94	0.4785	0.2771	0.1968
	45 m63o	1.0	0.0	0.375	41.2	53.91	20.06	57.52	20	20.62	11.99	6.6	0.5259	0.3058	0.1901
	46 m75o	1.0	0.0	0.25	40.84	53.34	30.15	61.27	29	20.19	11.76	4.25	0.5576	0.3249	0.1865
	47 m88o	1.0	0.0	0.125	40.69	53.06	35.91	64.07	34	20.0	11.67	3.22	0.5733	0.3345	0.185
	48 o00y	1.0	0.0	0.0	40.57	52.89	37.36	64.75	35	19.87	11.6	2.97	0.577	0.3369	0.1839
	49 n00w	0.0	0.0	0.0	18.01	0.0	0.0	0.01	0	2.4	2.52	2.74	0.3127	0.329	0.04
	50 n13w	0.125	0.125	0.125	18.98	-0.2	-0.32	0.39	237	2.6	2.74	3.03	0.31	0.3275	0.0435
	51 n25w	0.25	0.25	0.25	22.69	-0.17	-0.98	1.01	260	3.52	3.71	4.22	0.3071	0.3241	0.0588
	52 n38w	0.375	0.375	0.375	29.56	-0.15	-1.44	1.46	264	5.74	6.06	6.97	0.306	0.3227	0.0961
	53 n50w	0.5	0.5	0.5	38.6	-0.07	-1.74	1.75	267	9.9	10.43	12.0	0.3063	0.3226	0.1653
	54 n63w	0.625	0.625	0.625	49.16	0.01	-1.9	1.91	270	16.85	17.72	20.3	0.307	0.323	0.281
	55 n75w	0.75	0.75	0.75	62.67	-0.16	-1.66	1.68	264	29.6	31.19	35.23	0.3083	0.3248	0.4946
	56 n88w	0.875	0.875	0.875	81.28	0.05	-0.03	0.06	324	56.08	58.98	64.26	0.3127	0.3289	0.9352
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.4047

IE360-7N, Colorimetric data of Television Luminous System TLS18a for CIE standard illuminant D65; LCD projector; Page: 57/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 57/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black for illuminant D65

System TLS18a

LCD projector

Y Yellow

D65 reflection:

$Y_N = 2.52$

$L^*_N = 18.01$

$LCH^*_a = 83.5 \ 80.0 \ 101$

$LAB^*_a = 83.5 \ -15.7 \ 78.5$

L Leaf green

$LCH^*_a = 73.6 \ 81.3 \ 127$

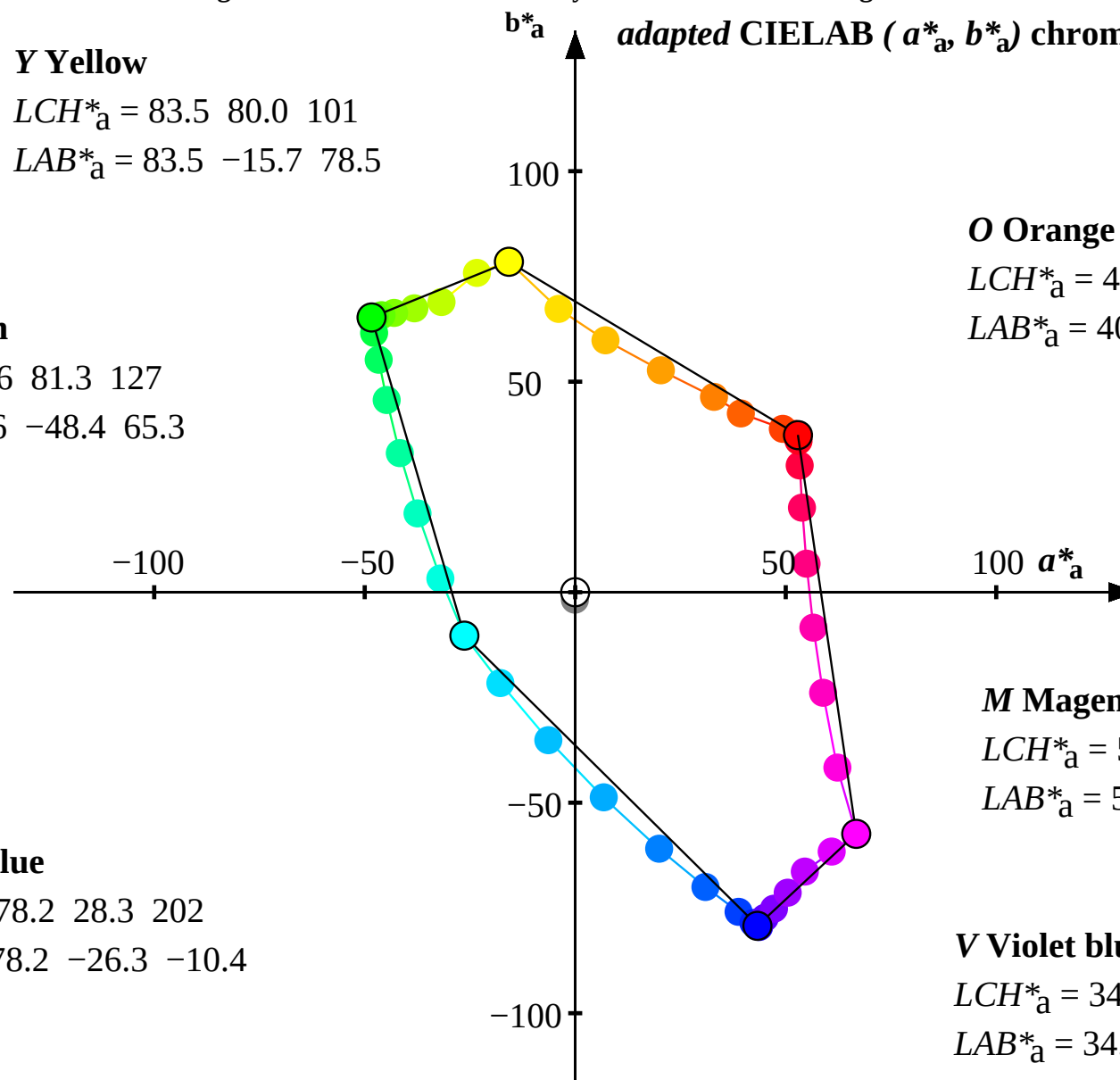
$LAB^*_a = 73.6 \ -48.4 \ 65.3$

C Cyan blue

$LCH^*_a = 78.2 \ 28.3 \ 202$

$LAB^*_a = 78.2 \ -26.3 \ -10.4$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 40.6 \ 64.8 \ 35$

$LAB^*_a = 40.6 \ 52.9 \ 37.4$

M Magenta red

$LCH^*_a = 50.6 \ 88.0 \ 319$

$LAB^*_a = 50.6 \ 66.7 \ -57.4$

V Violet blue

$LCH^*_a = 34.9 \ 90.3 \ 299$

$LAB^*_a = 34.9 \ 43.3 \ -79.2$

Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	44.02	47.12	28.65	55.14	31	21.75	13.85	5.7	0.5265	0.3354	0.2171
	01 o13y	1.0	0.125	0.0	44.25	46.61	28.87	54.82	32	21.85	14.01	5.75	0.5252	0.3368	0.2196
D65 reflection:	02 o25y	1.0	0.25	0.0	45.32	44.15	30.2	53.49	34	22.31	14.77	5.86	0.5196	0.3439	0.2314
$Y_N = 5.04$	03 o38y	1.0	0.375	0.0	48.1	35.59	33.8	49.08	44	23.06	16.87	6.14	0.5005	0.3661	0.2644
$L^*_N = 26.85$	04 o50y	1.0	0.5	0.0	51.83	30.19	38.0	48.53	52	25.51	19.99	6.7	0.4888	0.383	0.3132
	05 o63y	1.0	0.625	0.0	57.75	18.84	44.8	48.6	67	29.03	25.7	7.6	0.4658	0.4123	0.4027
	06 o75y	1.0	0.75	0.0	64.83	6.75	52.56	52.99	83	34.06	33.84	8.9	0.4435	0.4406	0.5302
	07 o88y	1.0	0.875	0.0	72.36	-3.75	60.58	60.69	94	40.77	44.2	10.52	0.427	0.4629	0.6925
	08 y00l	1.0	1.0	0.0	83.87	-15.12	72.55	74.11	102	54.48	63.82	13.46	0.4135	0.4843	1.0
	09 y13l	0.875	1.0	0.0	82.07	-22.43	69.92	73.43	108	48.76	60.43	13.27	0.3982	0.4934	0.9469
	10 y25l	0.75	1.0	0.0	76.37	-30.25	62.93	69.82	116	37.86	50.5	12.17	0.3766	0.5023	0.7913
	11 y38l	0.625	1.0	0.0	75.5	-36.25	61.43	71.33	121	34.93	49.08	12.17	0.3632	0.5103	0.7691
	12 y50l	0.5	1.0	0.0	74.94	-40.71	60.45	72.89	124	32.95	48.18	12.17	0.3532	0.5164	0.7549
	13 y63l	0.375	1.0	0.0	74.61	-43.51	59.87	74.02	126	31.78	47.66	12.17	0.3469	0.5202	0.7468
	14 y75l	0.25	1.0	0.0	74.44	-45.0	59.59	74.68	127	31.17	47.39	12.17	0.3436	0.5223	0.7426
	15 y88l	0.125	1.0	0.0	74.37	-45.64	59.46	74.96	128	30.92	47.28	12.17	0.3421	0.5232	0.7409
	16 l00c	0.0	1.0	0.0	74.36	-45.75	59.43	75.01	128	30.87	47.26	12.18	0.3418	0.5233	0.7406
	17 l13c	0.0	1.0	0.125	74.39	-45.62	58.86	74.48	128	30.94	47.31	12.41	0.3413	0.5218	0.7414
	18 l25c	0.0	1.0	0.25	74.49	-45.19	56.32	72.22	129	31.17	47.46	13.48	0.3384	0.5152	0.7438
	19 l38c	0.0	1.0	0.375	74.67	-44.2	50.97	67.47	131	31.66	47.75	15.91	0.3321	0.5009	0.7482
	20 l50c	0.0	1.0	0.5	75.01	-42.4	42.51	60.05	135	32.57	48.3	20.38	0.3217	0.477	0.7569
	21 l63c	0.0	1.0	0.625	75.6	-39.56	31.08	50.32	142	34.09	49.24	27.78	0.3068	0.4432	0.7716
	22 l75c	0.0	1.0	0.75	76.16	-35.55	17.75	39.75	153	35.98	50.15	38.28	0.2892	0.4031	0.7859
	23 l88c	0.0	1.0	0.875	77.53	-30.48	3.15	30.66	174	39.35	52.42	53.79	0.2703	0.3601	0.8214
	24 c00v	0.0	1.0	1.0	78.77	-25.11	-9.96	27.03	202	42.84	54.53	70.92	0.2546	0.324	0.8545
	25 c13v	0.0	0.875	1.0	71.72	-16.79	-20.7	26.67	231	35.87	43.25	69.2	0.2418	0.2916	0.6777
	26 c25v	0.0	0.75	1.0	63.54	-5.95	-33.37	33.91	260	29.07	32.23	67.47	0.2257	0.2503	0.5051
	27 c38v	0.0	0.675	1.0	55.54	6.17	-46.01	46.43	278	23.66	23.46	66.12	0.2089	0.2072	0.3676
	28 c50v	0.0	0.5	1.0	48.74	17.87	-56.96	59.71	287	19.9	17.38	65.22	0.1942	0.1696	0.2724
	29 c63v	0.0	0.375	1.0	43.85	27.24	-64.9	70.39	293	17.64	13.74	64.65	0.1837	0.143	0.2153
	30 c75v	0.0	0.25	1.0	40.84	33.56	-69.84	77.49	296	16.44	11.77	64.37	0.1775	0.1271	0.1844
	31 c88v	0.0	0.125	1.0	39.53	36.39	-72.04	80.72	297	15.94	10.97	64.29	0.1748	0.1203	0.1719
	32 v00m	0.0	0.0	1.0	39.22	37.13	-72.57	81.52	297	15.84	10.79	64.28	0.1742	0.1187	0.169
	33 v13m	0.125	0.0	1.0	39.38	37.46	-72.91	81.98	297	16.01	10.88	64.99	0.1743	0.1184	0.1705
	34 v25m	0.25	0.0	1.0	39.48	37.7	-72.05	81.33	298	16.13	10.94	64.2	0.1767	0.1198	0.1714
	35 v38m	0.375	0.0	1.0	40.02	38.92	-70.97	80.94	299	16.76	11.26	64.04	0.1821	0.1224	0.1765
	36 v50m	0.5	0.0	1.0	41.09	41.15	-69.16	80.48	301	18.01	11.92	64.07	0.1916	0.1268	0.1868
	37 v63m	0.625	0.0	1.0	42.71	44.52	-65.97	79.59	304	20.04	12.97	63.62	0.2074	0.1342	0.2032
	38 v75m	0.75	0.0	1.0	44.91	48.85	-61.48	78.54	308	22.95	14.47	62.82	0.229	0.1444	0.2268
	39 v88m	0.875	0.0	1.0	48.98	55.7	-57.61	80.14	314	28.78	17.58	66.46	0.2551	0.1558	0.2754
	40 m00o	1.0	0.0	1.0	52.91	61.89	-54.01	82.15	319	35.15	20.96	70.26	0.2781	0.1659	0.3285
	41 m13o	1.0	0.0	0.875	49.73	57.06	-38.63	68.91	326	29.99	18.2	47.77	0.3125	0.1896	0.2851
	42 m25o	1.0	0.0	0.75	47.37	53.41	-21.73	57.66	338	26.47	16.3	30.59	0.3608	0.2222	0.2555
	43 m38o	1.0	0.0	0.675	46.07	51.0	-7.44	51.54	352	24.58	15.32	20.41	0.4075	0.254	0.2401
	44 m50o	1.0	0.0	0.5	45.14	49.26	5.82	49.6	7	23.27	14.64	13.45	0.4531	0.2851	0.2294
	45 m63o	1.0	0.0	0.375	44.56	48.18	16.56	50.95	19	22.48	14.23	9.23	0.4894	0.3098	0.223
	46 m75o	1.0	0.0	0.25	44.25	47.59	23.95	53.28	27	22.06	14.01	6.95	0.5128	0.3257	0.2196
	47 m88o	1.0	0.0	0.125	44.12	47.3	27.78	54.85	30	21.88	13.92	5.95	0.5241	0.3335	0.2182
	48 o00y	1.0	0.0	0.0	44.02	47.12	28.65	55.14	31	21.75	13.85	5.7	0.5265	0.3354	0.2171
	49 n00w	0.0	0.0	0.0	26.85	0.0	0.0	0.01	0	4.79	5.04	5.49	0.3127	0.329	0.079
	50 n13w	0.125	0.125	0.125	27.45	-0.12	-0.2	0.25	238	4.98	5.26	5.77	0.3113	0.3283	0.0824
	51 n25w	0.25	0.25	0.25	29.9	-0.11	-0.68	0.7	260	5.88	6.2	6.92	0.3094	0.3262	0.0971
	52 n38w	0.375	0.375	0.375	34.95	-0.11	-1.12	1.14	264	8.04	8.47	9.59	0.308	0.3246	0.1328
	53 n50w	0.5	0.5	0.5	42.33	-0.06	-1.49	1.5	268	12.07	12.71	14.47	0.3076	0.3239	0.1992
	54 n63w	0.625	0.625	0.625	51.61	0.01	-1.72	1.73	270	18.82	19.8	22.53	0.3078	0.3238	0.3102
	55 n75w	0.75	0.75	0.75	64.06	-0.14	-1.56	1.58	264	31.2	32.87	37.03	0.3086	0.3252	0.5151
	56 n88w	0.875	0.875	0.875	81.76	0.05	-0.03	0.06	324	56.9	59.85	65.21	0.3127	0.3289	0.9379
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.3882

IE360-7N, Colorimetric data of Television Luminous System TLS27a for CIE standard illuminant D65; LCD projector; Page: 59/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 59/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS27a for CIE lightness $L^*_N=27$ of black for illuminant D65

System TLS27a

LCD projector

D65 reflection:

$Y_N = 5.04$

$L^*_N = 26.85$

Y Yellow

$LCH^*_a = 83.9 \ 74.1 \ 102$

$LAB^*_a = 83.9 \ -15.1 \ 72.6$

L Leaf green

$LCH^*_a = 74.4 \ 75.0 \ 128$

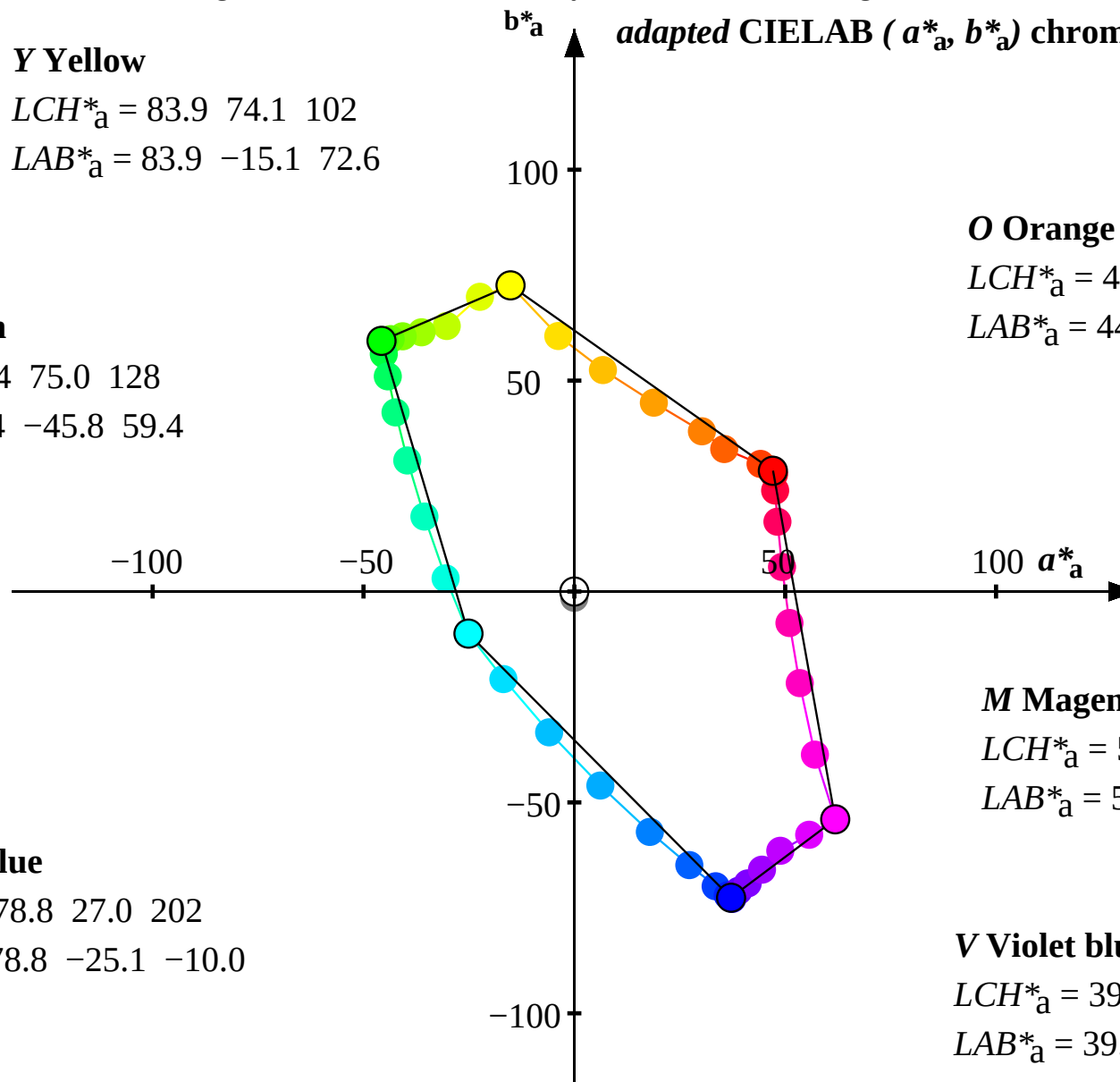
$LAB^*_a = 74.4 \ -45.8 \ 59.4$

C Cyan blue

$LCH^*_a = 78.8 \ 27.0 \ 202$

$LAB^*_a = 78.8 \ -25.1 \ -10.0$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 44.0 \ 55.1 \ 31$

$LAB^*_a = 44.0 \ 47.1 \ 28.7$

M Magenta red

$LCH^*_a = 52.9 \ 82.1 \ 319$

$LAB^*_a = 52.9 \ 61.9 \ -54.0$

V Violet blue

$LCH^*_a = 39.2 \ 81.5 \ 297$

$LAB^*_a = 39.2 \ 37.1 \ -72.6$

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_{1a}$	$Y_a=XYZ^*_{2a}$	$Z_a=XYZ^*_{3a}$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	49.93	38.37	20.03	43.28	28	25.52	18.36	11.18	0.4635	0.3335	0.2812
	01 o13y	1.0	0.125	0.0	50.11	38.0	20.23	43.05	28	25.61	18.51	11.22	0.4628	0.3345	0.2835
	02 o25y	1.0	0.25	0.0	50.95	36.21	21.36	42.04	31	26.04	19.22	11.33	0.4602	0.3396	0.2943
D65 reflection:	03 o38y	1.0	0.375	0.0	53.17	29.55	24.46	38.36	40	26.75	21.2	11.59	0.4493	0.356	0.3246
$Y_N = 10.08$	04 o50y	1.0	0.5	0.0	56.22	25.55	28.33	38.15	48	29.05	24.13	12.11	0.445	0.3695	0.3694
$L^*_N = 37.99$	05 o63y	1.0	0.625	0.0	61.21	16.32	34.74	38.38	65	32.36	29.49	12.96	0.4325	0.3942	0.4516
	06 o75y	1.0	0.75	0.0	67.38	5.98	42.37	42.79	82	37.09	37.14	14.18	0.4195	0.4201	0.5687
	07 o88y	1.0	0.875	0.0	74.11	-3.38	50.48	50.59	94	43.39	46.87	15.7	0.4095	0.4423	0.7177
	08 y00l	1.0	1.0	0.0	84.64	-13.95	62.81	64.34	103	56.27	65.31	18.47	0.4018	0.4663	1.0
	09 y13l	0.875	1.0	0.0	82.98	-20.59	60.3	63.72	109	50.9	62.13	18.29	0.3876	0.4731	0.9513
	10 y25l	0.75	1.0	0.0	77.75	-27.36	53.42	60.02	117	40.66	52.8	17.25	0.3672	0.4769	0.8084
	11 y38l	0.625	1.0	0.0	76.96	-32.65	52.05	61.45	122	37.9	51.46	17.25	0.3555	0.4827	0.788
	12 y50l	0.5	1.0	0.0	76.44	-36.56	51.16	62.89	126	36.04	50.61	17.25	0.3468	0.4871	0.775
	13 y63l	0.375	1.0	0.0	76.15	-38.99	50.64	63.92	128	34.94	50.13	17.26	0.3415	0.4899	0.7675
	14 y75l	0.25	1.0	0.0	75.99	-40.28	50.38	64.51	129	34.37	49.87	17.25	0.3386	0.4914	0.7636
	15 y88l	0.125	1.0	0.0	75.93	-40.84	50.26	64.77	129	34.13	49.77	17.26	0.3374	0.492	0.7621
	16 l00c	0.0	1.0	0.0	75.92	-40.94	50.24	64.81	129	34.09	49.76	17.26	0.3372	0.4921	0.7618
	17 l13c	0.0	1.0	0.125	75.95	-40.83	49.82	64.42	129	34.16	49.8	17.48	0.3367	0.4909	0.7626
	18 l25c	0.0	1.0	0.25	76.04	-40.46	47.93	62.73	130	34.37	49.94	18.49	0.3344	0.4858	0.7647
	19 l38c	0.0	1.0	0.375	76.2	-39.6	43.83	59.08	132	34.83	50.21	20.77	0.3291	0.4745	0.7688
	20 l50c	0.0	1.0	0.5	76.52	-38.05	37.09	53.15	136	35.68	50.73	24.97	0.3204	0.4555	0.7768
	21 l63c	0.0	1.0	0.625	77.05	-35.6	27.56	45.03	142	37.11	51.61	31.92	0.3076	0.4278	0.7903
	22 l75c	0.0	1.0	0.75	77.56	-32.09	15.97	35.85	154	38.89	52.47	41.79	0.2921	0.3941	0.8034
	23 l88c	0.0	1.0	0.875	78.81	-27.65	2.87	27.81	174	42.05	54.6	56.37	0.2748	0.3568	0.836
	24 c00v	0.0	1.0	1.0	79.94	-22.88	-9.18	24.66	202	45.33	56.58	72.46	0.26	0.3245	0.8664
	25 c13v	0.0	0.875	1.0	73.53	-15.06	-18.93	24.2	231	38.78	45.98	70.85	0.2492	0.2955	0.7041
	26 c25v	0.0	0.75	1.0	66.24	-5.22	-30.17	30.63	260	32.39	35.63	69.22	0.236	0.2596	0.5456
	27 c38v	0.0	0.675	1.0	59.33	5.25	-41.02	41.37	277	27.31	27.39	67.95	0.2227	0.2233	0.4194
	28 c50v	0.0	0.5	1.0	53.68	14.71	-50.04	52.17	286	23.78	21.68	67.1	0.2113	0.1926	0.3319
	29 c63v	0.0	0.375	1.0	49.8	21.78	-56.29	60.37	291	21.66	18.25	66.57	0.2034	0.1714	0.2795
	30 c75v	0.0	0.25	1.0	47.5	26.28	-60.04	65.55	294	20.52	16.4	66.31	0.1988	0.1589	0.2511
	31 c88v	0.0	0.125	1.0	46.52	28.23	-61.67	67.83	295	20.06	15.65	66.23	0.1968	0.1535	0.2397
	32 v00m	0.0	0.0	1.0	46.29	28.74	-62.06	68.4	295	19.96	15.48	66.22	0.1963	0.1523	0.237
	33 v13m	0.125	0.0	1.0	46.4	29.05	-62.42	68.86	295	20.13	15.57	66.89	0.1962	0.1518	0.2384
	34 v25m	0.25	0.0	1.0	46.47	29.27	-61.66	68.27	295	20.23	15.62	66.15	0.1984	0.1532	0.2392
	35 v38m	0.375	0.0	1.0	46.88	30.41	-60.83	68.02	297	20.83	15.93	65.99	0.2027	0.155	0.2439
	36 v50m	0.5	0.0	1.0	47.68	32.55	-59.48	67.81	299	22.01	16.54	66.02	0.2104	0.1582	0.2533
	37 v63m	0.625	0.0	1.0	48.92	35.81	-56.98	67.31	302	23.91	17.53	65.6	0.2234	0.1638	0.2684
	38 v75m	0.75	0.0	1.0	50.62	40.09	-53.4	66.78	307	26.65	18.95	64.85	0.2413	0.1715	0.2901
	39 v88m	0.875	0.0	1.0	53.88	47.1	-50.69	69.2	313	32.13	21.86	68.27	0.2628	0.1788	0.3347
	40 m00o	1.0	0.0	1.0	57.12	53.55	-48.04	71.95	318	38.11	25.04	71.84	0.2823	0.1855	0.3834
	41 m13o	1.0	0.0	0.875	54.49	48.49	-33.47	58.92	325	33.26	22.44	50.7	0.3126	0.2109	0.3436
	42 m25o	1.0	0.0	0.75	52.58	44.68	-18.19	48.24	338	29.96	20.66	34.57	0.3517	0.2426	0.3164
	43 m38o	1.0	0.0	0.675	51.54	42.25	-6.01	42.67	352	28.17	19.74	25.0	0.3864	0.2707	0.3023
	44 m50o	1.0	0.0	0.5	50.81	40.5	4.5	40.75	6	26.94	19.1	18.45	0.4177	0.2962	0.2925
	45 m63o	1.0	0.0	0.375	50.35	39.43	12.29	41.3	17	26.21	18.72	14.49	0.4411	0.315	0.2866
	46 m75o	1.0	0.0	0.25	50.11	38.83	17.17	42.46	24	25.81	18.51	12.35	0.4554	0.3266	0.2835
	47 m88o	1.0	0.0	0.125	50.01	38.55	19.53	43.21	27	25.64	18.43	11.41	0.4622	0.3322	0.2821
	48 o00y	1.0	0.0	0.0	49.93	38.37	20.03	43.28	28	25.52	18.36	11.18	0.4635	0.3335	0.2812
	49 n00w	0.0	0.0	0.0	37.99	0.0	0.0	0.01	0	9.58	10.08	10.98	0.3127	0.329	0.1543
	50 n13w	0.125	0.125	0.125	38.34	-0.07	-0.11	0.15	238	9.76	10.28	11.24	0.312	0.3287	0.1574
	51 n25w	0.25	0.25	0.25	39.86	-0.07	-0.43	0.44	260	10.6	11.17	12.32	0.311	0.3275	0.171
	52 n38w	0.375	0.375	0.375	43.22	-0.08	-0.78	0.8	264	12.63	13.31	14.83	0.3099	0.3264	0.2038
	53 n50w	0.5	0.5	0.5	48.63	-0.04	-1.14	1.15	268	16.43	17.29	19.42	0.3091	0.3254	0.2648
	54 n63w	0.625	0.625	0.625	56.03	0.01	-1.43	1.44	270	22.76	23.95	26.99	0.3089	0.3249	0.3667
	55 n75w	0.75	0.75	0.75	66.7	-0.13	-1.37	1.39	264	34.4	36.23	40.61	0.3092	0.3257	0.5548
	56 n88w	0.875	0.875	0.875	82.69	0.04	-0.02	0.06	324	58.55	61.58	67.09	0.3127	0.3289	0.943
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.3565

IE360-7N, Colorimetric data of Television Luminous System TLS38a for CIE standard illuminant D65; LCD projector; Page: 61/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 61/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5, XYZ$

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS38a for CIE lightness $L^*_N=38$ of black for illuminant D65

System TLS38a

LCD projector

D65 reflection:

$Y_N = 10.08$

$L^*_N = 37.99$

Y Yellow

$LCH^*_a = 84.6 \ 64.3 \ 103$

$LAB^*_a = 84.6 \ -14.0 \ 62.8$

L Leaf green

$LCH^*_a = 75.9 \ 64.8 \ 129$

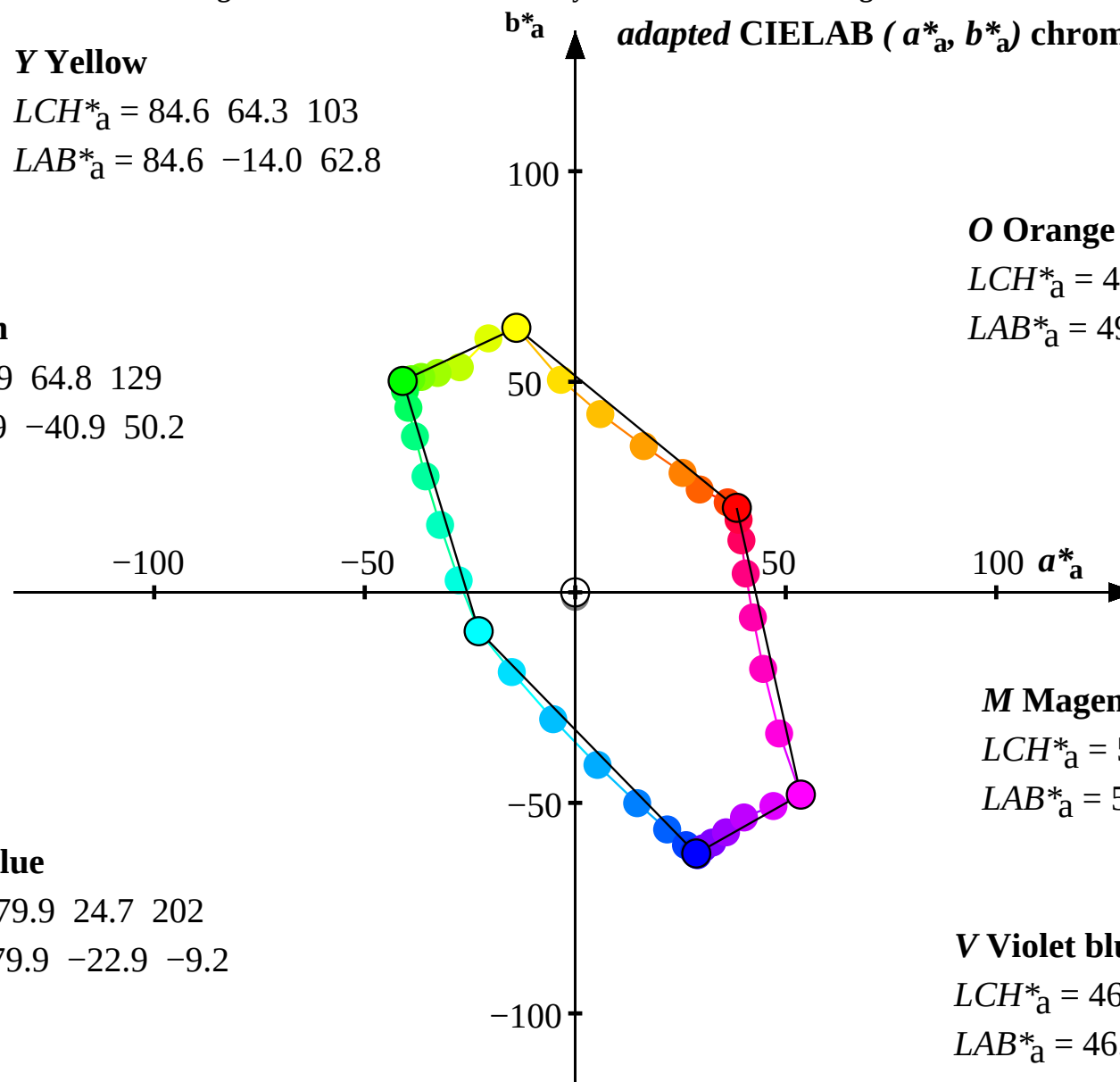
$LAB^*_a = 75.9 \ -40.9 \ 50.2$

C Cyan blue

$LCH^*_a = 79.9 \ 24.7 \ 202$

$LAB^*_a = 79.9 \ -22.9 \ -9.2$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



O Orange red

$LCH^*_a = 49.9 \ 43.3 \ 28$

$LAB^*_a = 49.9 \ 38.4 \ 20.0$

M Magenta red

$LCH^*_a = 57.1 \ 71.9 \ 318$

$LAB^*_a = 57.1 \ 53.5 \ -48.1$

V Violet blue

$LCH^*_a = 46.3 \ 68.4 \ 295$

$LAB^*_a = 46.3 \ 28.7 \ -62.1$

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	59.32	26.94	12.28	29.61	25	33.05	27.38	22.13	0.4003	0.3316	0.4009
	01 o13y	1.0	0.125	0.0	59.44	26.72	12.43	29.47	25	33.13	27.51	22.16	0.4002	0.3322	0.4028
D65 reflection:	02 o25y	1.0	0.25	0.0	60.0	25.63	13.23	28.84	27	33.51	28.13	22.26	0.3994	0.3353	0.4118
	03 o38y	1.0	0.375	0.0	61.53	21.23	15.44	26.25	36	34.13	29.85	22.49	0.3947	0.3452	0.4371
$Y_N = 20.16$	04 o50y	1.0	0.5	0.0	63.68	18.79	18.36	26.27	44	36.13	32.4	22.94	0.395	0.3542	0.4744
$L^*_N = 52.02$	05 o63y	1.0	0.625	0.0	67.34	12.39	23.41	26.48	62	39.01	37.08	23.68	0.391	0.3716	0.5429
	06 o75y	1.0	0.75	0.0	72.06	4.69	29.77	30.14	81	43.14	43.74	24.75	0.3864	0.3919	0.6405
	07 o88y	1.0	0.875	0.0	77.42	-2.74	36.87	36.98	94	48.63	52.23	26.07	0.3831	0.4115	0.7647
	08 y00l	1.0	1.0	0.0	86.16	-11.73	48.22	49.63	104	59.86	68.3	28.48	0.3821	0.436	1.0
	09 y13l	0.875	1.0	0.0	84.75	-17.17	46.04	49.14	110	55.18	65.53	28.33	0.3702	0.4397	0.9594
	10 y25l	0.75	1.0	0.0	80.4	-22.23	39.9	45.68	119	46.25	57.39	27.42	0.3529	0.4379	0.8403
	11 y38l	0.625	1.0	0.0	79.75	-26.35	38.78	46.89	124	43.84	56.23	27.42	0.3439	0.441	0.8233
	12 y50l	0.5	1.0	0.0	79.32	-29.35	38.05	48.06	128	42.22	55.49	27.42	0.3374	0.4435	0.8125
	13 y63l	0.375	1.0	0.0	79.08	-31.2	37.62	48.88	130	41.26	55.06	27.42	0.3334	0.445	0.8062
	14 y75l	0.25	1.0	0.0	78.95	-32.19	37.41	49.35	131	40.77	54.84	27.42	0.3313	0.4458	0.803
	15 y88l	0.125	1.0	0.0	78.9	-32.61	37.31	49.56	131	40.56	54.76	27.43	0.3304	0.4461	0.8017
	16 l00c	0.0	1.0	0.0	78.89	-32.68	37.29	49.59	131	40.52	54.74	27.43	0.3303	0.4462	0.8015
	17 l13c	0.0	1.0	0.125	78.92	-32.6	37.04	49.35	131	40.58	54.78	27.62	0.33	0.4454	0.8021
	18 l25c	0.0	1.0	0.25	78.99	-32.33	35.84	48.27	132	40.77	54.91	28.5	0.3283	0.4422	0.8039
	19 l38c	0.0	1.0	0.375	79.12	-31.69	33.16	45.87	134	41.16	55.14	30.49	0.3247	0.4349	0.8073
	20 l50c	0.0	1.0	0.5	79.38	-30.53	28.56	41.82	137	41.91	55.59	34.15	0.3184	0.4223	0.814
	21 l63c	0.0	1.0	0.625	79.82	-28.69	21.72	35.99	143	43.16	56.36	40.21	0.3089	0.4034	0.8252
	22 l75c	0.0	1.0	0.75	80.24	-25.98	12.87	29.0	154	44.7	57.11	48.81	0.2968	0.3792	0.8362
	23 l88c	0.0	1.0	0.875	81.27	-22.57	2.37	22.71	174	47.46	58.96	61.52	0.2826	0.3511	0.8633
	24 c00v	0.0	1.0	1.0	82.21	-18.82	-7.71	20.35	202	50.32	60.69	75.54	0.2697	0.3253	0.8886
	25 c13v	0.0	0.875	1.0	76.95	-12.07	-15.68	19.8	232	44.61	51.45	74.13	0.2621	0.3023	0.7534
	26 c25v	0.0	0.75	1.0	71.17	-4.03	-24.52	24.86	261	39.04	42.43	72.72	0.2532	0.2752	0.6213
	27 c38v	0.0	0.675	1.0	65.94	-32.64	3.89	32.88	277	34.62	35.25	71.61	0.2447	0.2491	0.5161
	28 c50v	0.0	0.5	1.0	61.89	-39.03	10.45	40.41	285	31.54	30.27	70.87	0.2377	0.2281	0.4432
	29 c63v	0.0	0.375	1.0	59.24	-43.22	14.96	45.75	289	29.69	27.28	70.41	0.2331	0.2142	0.3995
	30 c75v	0.0	0.25	1.0	57.72	-45.64	17.68	48.96	291	28.7	25.67	70.18	0.2304	0.2061	0.3758
	31 c88v	0.0	0.125	1.0	57.09	-46.68	18.81	50.33	292	28.29	25.02	70.11	0.2292	0.2027	0.3663
	32 v00m	0.0	0.0	1.0	56.95	19.1	-46.92	50.67	292	28.21	24.87	70.11	0.229	0.2019	0.3641
	33 v13m	0.125	0.0	1.0	57.02	19.35	-47.27	51.09	292	28.35	24.94	70.68	0.2287	0.2012	0.3652
	34 v25m	0.25	0.0	1.0	57.07	19.52	-46.66	50.59	293	28.45	24.99	70.04	0.2304	0.2024	0.3659
	35 v38m	0.375	0.0	1.0	57.33	20.42	-46.1	50.43	294	28.96	25.26	69.9	0.2333	0.2035	0.3698
	36 v50m	0.5	0.0	1.0	57.84	22.12	-45.23	50.36	296	29.99	25.79	69.93	0.2386	0.2052	0.3777
	37 v63m	0.625	0.0	1.0	58.65	24.79	-43.54	50.11	300	31.65	26.65	69.56	0.2475	0.2084	0.3902
	38 v75m	0.75	0.0	1.0	59.79	28.41	-41.04	49.92	305	34.04	27.89	68.91	0.2602	0.2131	0.4083
	39 v88m	0.875	0.0	1.0	62.02	34.66	-39.62	52.65	311	38.81	30.43	71.89	0.275	0.2156	0.4455
	40 m00o	1.0	0.0	1.0	64.32	40.66	-38.13	55.75	317	44.03	33.2	75.0	0.2892	0.2181	0.4861
	41 m13o	1.0	0.0	0.875	62.45	35.91	-25.52	44.06	325	39.8	30.94	56.58	0.3126	0.243	0.4529
	42 m25o	1.0	0.0	0.75	61.12	32.42	-13.2	35.93	338	36.92	29.38	42.51	0.3393	0.27	0.4302
	43 m38o	1.0	0.0	0.675	60.41	30.28	-4.17	30.57	352	35.37	28.58	34.17	0.3604	0.2913	0.4185
	44 m50o	1.0	0.0	0.5	59.91	28.77	2.99	28.92	6	34.29	28.02	28.47	0.3777	0.3087	0.4103
	45 m63o	1.0	0.0	0.375	59.61	27.84	7.86	28.93	16	33.65	27.69	25.02	0.3897	0.3206	0.4054
	46 m75o	1.0	0.0	0.25	59.44	27.33	10.71	29.36	21	33.31	27.51	23.15	0.3967	0.3276	0.4028
	47 m88o	1.0	0.0	0.125	59.37	27.1	12.02	29.64	24	33.16	27.43	22.33	0.3999	0.3309	0.4017
	48 o00y	1.0	0.0	0.0	59.32	26.94	12.28	29.61	25	33.05	27.38	22.13	0.4003	0.3316	0.4009
	49 n00w	0.0	0.0	0.0	52.02	0.0	0.0	0.01	0	19.16	20.16	21.95	0.3127	0.329	0.2952
	50 n13w	0.125	0.125	0.125	52.22	-0.03	-0.06	0.08	238	19.32	20.34	22.18	0.3124	0.3289	0.2978
	51 n25w	0.25	0.25	0.25	53.07	-0.03	-0.24	0.25	260	20.05	21.11	23.13	0.3119	0.3283	0.309
	52 n38w	0.375	0.375	0.375	55.04	-0.04	-0.47	0.48	264	21.82	22.97	25.31	0.3113	0.3277	0.3364
	53 n50w	0.5	0.5	0.5	58.46	-0.02	-0.75	0.76	268	25.13	26.45	29.31	0.3107	0.327	0.3872
	54 n63w	0.625	0.625	0.625	63.55	0.01	-1.02	1.03	270	30.65	32.25	35.91	0.3102	0.3264	0.4721
	55 n75w	0.75	0.75	0.75	71.52	-0.1	-1.07	1.09	264	40.79	42.96	47.78	0.3101	0.3266	0.6289
	56 n88w	0.875	0.875	0.875	84.51	0.04	-0.02	0.05	324	61.84	65.05	70.86	0.3127	0.329	0.9525
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.2971

IE360-7N, Colorimetric data of Television Luminous System TLS52a for CIE standard illuminant D65; LCD projector; Page: 63/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* setrgbcolor$

Display measurement: LCD, CRT, and LCD projector, page 63/66 output: $olv^* setrgbcolor / w^* setgray$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, $Y_r=2.5$, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS52a for CIE lightness $L^*_N=52$ of black for illuminant D65

System TLS52a

LCD projector

D65 reflection:

$Y_N = 20.16$

$L^*_N = 52.02$

Y Yellow

$LCH^*_a = 86.2 \ 49.6 \ 104$

$LAB^*_a = 86.2 \ -11.7 \ 48.2$

L Leaf green

$LCH^*_a = 78.9 \ 49.6 \ 131$

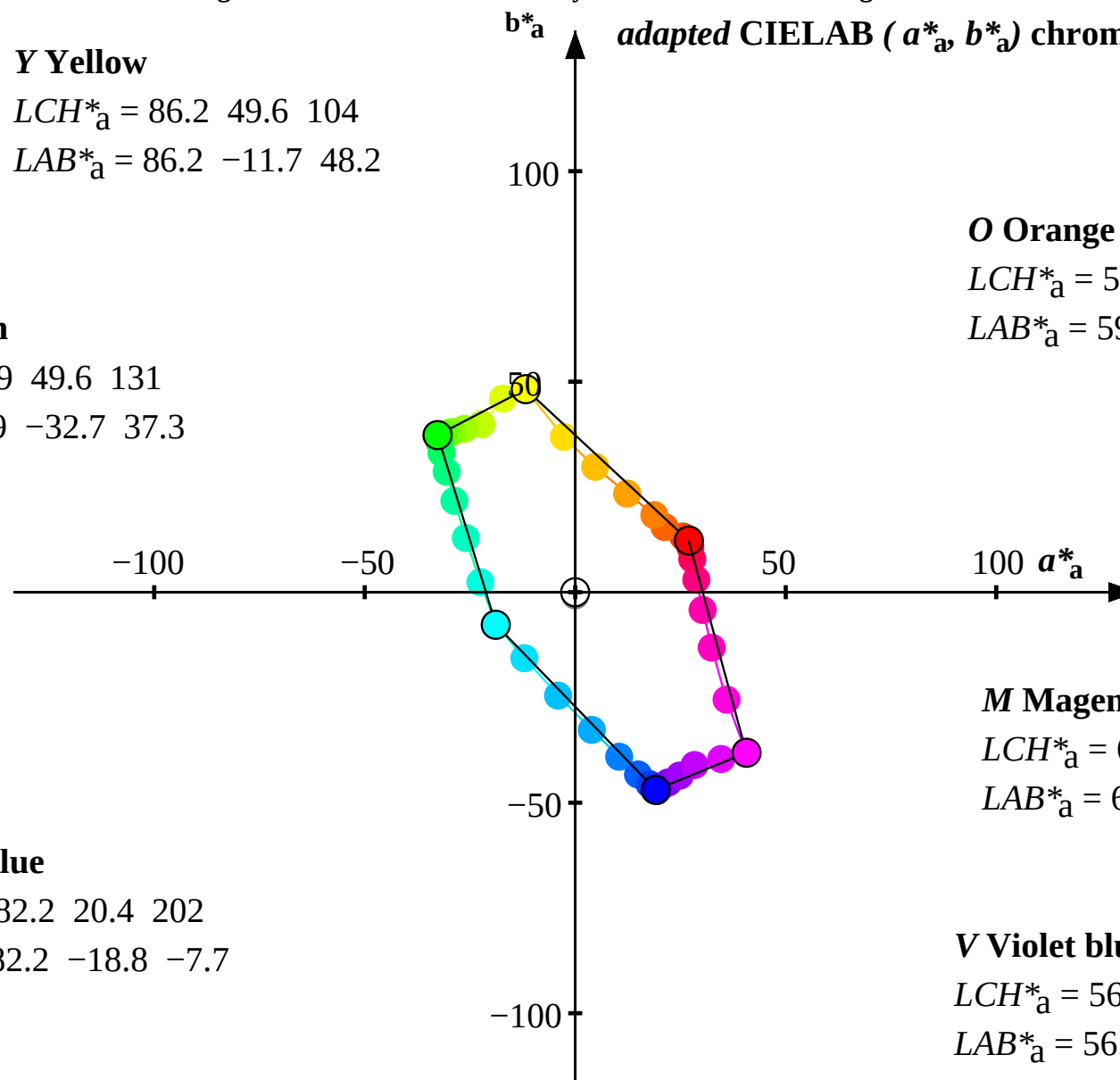
$LAB^*_a = 78.9 \ -32.7 \ 37.3$

C Cyan blue

$LCH^*_a = 82.2 \ 20.4 \ 202$

$LAB^*_a = 82.2 \ -18.8 \ -7.7$

*adapted CIELAB (a^*_a , b^*_a) chroma diagram*



TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a	Color	$r=olv*_1$	$g=olv*_2$	$b=olv*_3$	$L^*_a=LAB^*_1a$	$a^*_a=LAB^*_2a$	$b^*_a=LAB^*_3a$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ^*_1a$	$Y_a=XYZ^*_2a$	$Z_a=XYZ^*_3a$	x_a	y_a	$Y_a/88.59$
LCD projector	00 o00y	1.0	0.0	0.0	73.16	14.19	5.84	15.34	22	48.12	45.41	44.03	0.3498	0.3301	0.6114
	01 o13y	1.0	0.125	0.0	73.22	14.09	5.91	15.28	23	48.18	45.5	44.05	0.3498	0.3304	0.6126
D65 reflection:	02 o25y	1.0	0.25	0.0	73.51	13.6	6.33	15.0	25	48.44	45.94	44.12	0.3498	0.3317	0.6185
$Y_N = 40.32$	03 o38y	1.0	0.375	0.0	74.29	11.42	7.49	13.66	33	48.88	47.16	44.28	0.3483	0.3361	0.6349
$L^*_N = 69.7$	04 o50y	1.0	0.5	0.0	75.42	10.35	9.1	13.78	41	50.29	48.96	44.6	0.3496	0.3403	0.6591
	05 o63y	1.0	0.625	0.0	77.43	7.07	11.98	13.91	59	52.32	52.25	45.12	0.3495	0.3491	0.7035
	06 o75y	1.0	0.75	0.0	80.16	2.79	15.85	16.09	80	55.23	56.96	45.87	0.3494	0.3603	0.7668
	07 o88y	1.0	0.875	0.0	83.41	-1.7	20.46	20.53	95	59.11	62.94	46.81	0.3501	0.3728	0.8474
	08 y00l	1.0	1.0	0.0	89.05	-7.75	28.37	29.42	105	67.03	74.28	48.51	0.3531	0.3913	1.0
	09 y13l	0.875	1.0	0.0	88.12	-11.17	26.89	29.12	113	63.72	72.32	48.4	0.3455	0.3921	0.9737
	10 y25l	0.75	1.0	0.0	85.29	-13.89	22.68	26.6	122	57.43	66.58	47.76	0.3343	0.3876	0.8964
	11 y38l	0.625	1.0	0.0	84.88	-16.3	21.96	27.35	127	55.73	65.76	47.76	0.3293	0.3886	0.8854
	12 y50l	0.5	1.0	0.0	84.61	-18.02	21.5	28.06	130	54.59	65.24	47.76	0.3257	0.3893	0.8784
	13 y63l	0.375	1.0	0.0	84.45	-19.08	21.23	28.55	132	53.91	64.94	47.76	0.3236	0.3898	0.8743
	14 y75l	0.25	1.0	0.0	84.37	-19.63	21.1	28.83	133	53.56	64.79	47.76	0.3224	0.39	0.8722
	15 y88l	0.125	1.0	0.0	84.34	-19.87	21.04	28.94	133	53.41	64.72	47.76	0.322	0.3901	0.8714
	16 l00c	0.0	1.0	0.0	84.34	-19.91	21.03	28.97	133	53.39	64.71	47.76	0.3219	0.3902	0.8712
	17 l13c	0.0	1.0	0.125	84.35	-19.87	20.91	28.85	134	53.43	64.74	47.9	0.3217	0.3898	0.8716
	18 l25c	0.0	1.0	0.25	84.4	-19.72	20.33	28.34	134	53.56	64.83	48.52	0.3209	0.3884	0.8728
	19 l38c	0.0	1.0	0.375	84.48	-19.38	19.02	27.16	136	53.84	64.99	49.92	0.319	0.3851	0.875
	20 l50c	0.0	1.0	0.5	84.65	-18.74	16.69	25.1	138	54.37	65.31	52.51	0.3158	0.3793	0.8793
	21 l63c	0.0	1.0	0.625	84.92	-17.71	13.02	21.99	144	55.25	65.86	56.78	0.3106	0.3702	0.8866
	22 l75c	0.0	1.0	0.75	85.19	-16.14	7.95	18.0	154	56.34	66.38	62.84	0.3036	0.3577	0.8937
	23 l88c	0.0	1.0	0.875	85.85	-14.21	1.52	14.3	174	58.28	67.69	71.81	0.2947	0.3422	0.9113
	24 c00v	0.0	1.0	1.0	86.46	-11.98	-5.08	13.03	203	60.3	68.91	81.7	0.2859	0.3267	0.9278
	25 c13v	0.0	0.875	1.0	83.12	-7.38	-10.09	12.52	234	56.27	62.39	80.71	0.2822	0.3129	0.84
	26 c25v	0.0	0.75	1.0	79.63	-2.34	-15.36	15.55	261	52.34	56.03	79.71	0.2783	0.2979	0.7544
	27 c38v	0.0	0.675	1.0	76.66	2.16	-19.9	20.03	276	49.22	50.96	78.93	0.2748	0.2845	0.6861
	28 c50v	0.0	0.5	1.0	74.48	5.55	-23.26	23.92	283	47.05	47.45	78.41	0.2721	0.2744	0.6388
	29 c63v	0.0	0.375	1.0	73.12	7.72	-25.36	26.51	287	45.75	45.34	78.08	0.2704	0.268	0.6105
	30 c75v	0.0	0.25	1.0	72.37	8.96	-26.53	28.01	289	45.05	44.21	77.92	0.2695	0.2644	0.5952
	31 c88v	0.0	0.125	1.0	72.06	9.46	-27.02	28.64	289	44.76	43.75	77.87	0.269	0.2629	0.589
	32 v00m	0.0	0.0	1.0	71.99	9.59	-27.14	28.8	289	44.7	43.64	77.87	0.2689	0.2626	0.5875
	33 v13m	0.125	0.0	1.0	72.02	9.73	-27.39	29.08	290	44.8	43.69	78.28	0.2686	0.262	0.5883
	34 v25m	0.25	0.0	1.0	72.05	9.83	-27.01	28.75	290	44.87	43.73	77.82	0.2696	0.2628	0.5887
	35 v38m	0.375	0.0	1.0	72.17	10.33	-26.71	28.65	291	45.24	43.92	77.73	0.2711	0.2632	0.5913
	36 v50m	0.5	0.0	1.0	72.42	11.32	-26.29	28.63	293	45.96	44.29	77.74	0.2736	0.2637	0.5963
	37 v63m	0.625	0.0	1.0	72.83	12.89	-25.41	28.5	297	47.13	44.9	77.49	0.278	0.2649	0.6045
	38 v75m	0.75	0.0	1.0	73.4	15.09	-24.07	28.41	302	48.81	45.77	77.03	0.2844	0.2667	0.6162
	39 v88m	0.875	0.0	1.0	74.55	19.13	-23.69	30.45	309	52.18	47.56	79.13	0.2917	0.2659	0.6403
	40 m00o	1.0	0.0	1.0	75.77	23.26	-23.22	32.87	315	55.86	49.52	81.32	0.2992	0.2652	0.6667
	41 m13o	1.0	0.0	0.875	74.77	19.96	-14.71	24.8	324	52.88	47.92	68.33	0.3127	0.2833	0.6452
	42 m25o	1.0	0.0	0.75	74.08	17.64	-7.19	19.05	338	50.85	46.83	58.4	0.3258	0.3	0.6304
	43 m38o	1.0	0.0	0.675	73.71	16.27	-2.17	16.41	352	49.75	46.26	52.52	0.3349	0.3114	0.6228
	44 m50o	1.0	0.0	0.5	73.46	15.32	1.5	15.39	6	49.0	45.87	48.5	0.3418	0.3199	0.6175
	45 m63o	1.0	0.0	0.375	73.31	14.74	3.83	15.23	15	48.54	45.63	46.06	0.3461	0.3254	0.6143
	46 m75o	1.0	0.0	0.25	73.22	14.43	5.14	15.32	20	48.3	45.5	44.75	0.3486	0.3284	0.6126
	47 m88o	1.0	0.0	0.125	73.19	14.28	5.72	15.39	22	48.19	45.45	44.17	0.3497	0.3298	0.6119
	48 o00y	1.0	0.0	0.0	73.16	14.19	5.84	15.34	22	48.12	45.41	44.03	0.3498	0.3301	0.6114
	49 n00w	0.0	0.0	0.0	69.7	0.0	0.0	0.01	0	38.32	40.32	43.9	0.3127	0.329	0.5428
	50 n13w	0.125	0.125	0.125	69.78	-0.01	-0.02	0.04	238	38.43	40.44	44.06	0.3126	0.329	0.5445
	51 n25w	0.25	0.25	0.25	70.17	-0.01	-0.1	0.12	260	38.95	40.99	44.73	0.3124	0.3288	0.5518
	52 n38w	0.375	0.375	0.375	71.08	-0.01	-0.22	0.23	264	40.2	42.3	46.27	0.3122	0.3285	0.5695
	53 n50w	0.5	0.5	0.5	72.73	-0.01	-0.37	0.38	268	42.53	44.75	49.09	0.3119	0.3282	0.6025
	54 n63w	0.625	0.625	0.625	75.36	0.0	-0.54	0.55	270	46.42	48.85	53.75	0.3115	0.3278	0.6576
	55 n75w	0.75	0.75	0.75	79.84	-0.05	-0.63	0.64	264	53.58	56.4	62.12	0.3113	0.3277	0.7593
	56 n88w	0.875	0.875	0.875	87.96	0.02	-0.01	0.03	324	68.43	71.99	78.4	0.3127	0.329	0.9692
	57 n99w	1.0	1.0	1.0	95.41	0.0	0.0	0.01	0	84.2	88.59	96.46	0.3127	0.329	1.1927

IE360-7N, Colorimetric data of Television Luminous System TLS70a for CIE standard illuminant D65; LCD projector; Page: 65/66

$n = 88.59 / (88.59 - 0.28) = 1.003$

TUB-test chart IE36; Hue circle and colorimetric data

input: $olv^* \text{ setrgbcolor}$

Display measurement: LCD, CRT, and LCD projector, page 65/66 output: $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$

Colorimetric data of "Standard Original": Television Luminous System TLS70a for CIE lightness $L^*_N=70$ of black for illuminant D65

System TLS70a

LCD projector

D65 reflection:

$Y_N = 40.32$

$L^*_N = 69.7$

Y Yellow

$LCH^*_a = 89.1 \ 29.4 \ 105$

$LAB^*_a = 89.1 \ -7.8 \ 28.4$

L Leaf green

$LCH^*_a = 84.3 \ 29.0 \ 133$

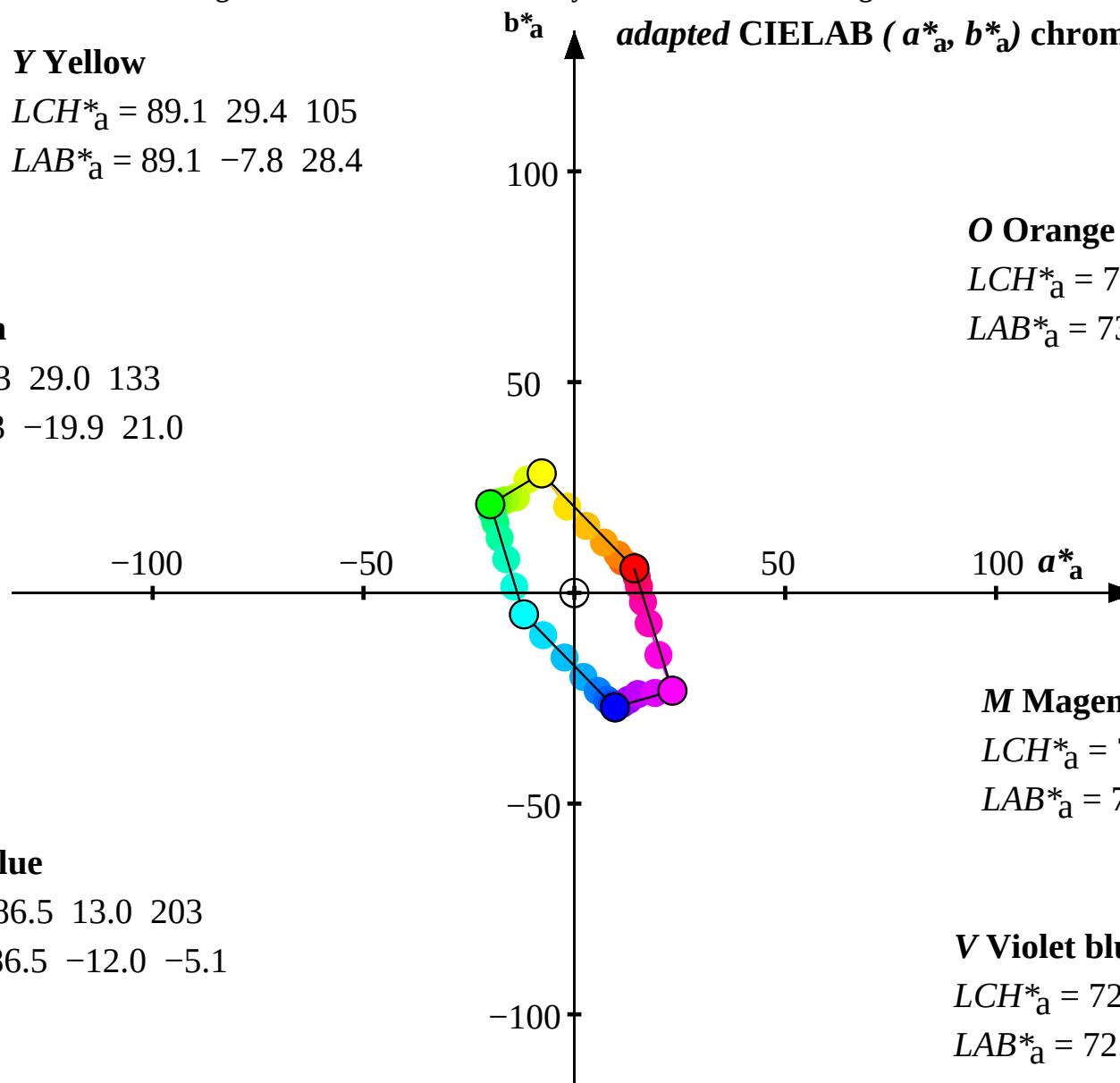
$LAB^*_a = 84.3 \ -19.9 \ 21.0$

C Cyan blue

$LCH^*_a = 86.5 \ 13.0 \ 203$

$LAB^*_a = 86.5 \ -12.0 \ -5.1$

adapted CIELAB (a^*_a , b^*_a) chroma diagram



O Orange red

$LCH^*_a = 73.2 \ 15.3 \ 22$

$LAB^*_a = 73.2 \ 14.2 \ 5.8$

M Magenta red

$LCH^*_a = 75.8 \ 32.9 \ 315$

$LAB^*_a = 75.8 \ 23.3 \ -23.2$

V Violet blue

$LCH^*_a = 72.0 \ 28.8 \ 289$

$LAB^*_a = 72.0 \ 9.6 \ -27.2$

TUB registration: 20090901-IE36/IE36L0FP.PDF /.PS
application for measurement of printer or monitor systems, Yr=2.5, XYZ

TUB material: code=rha4ta