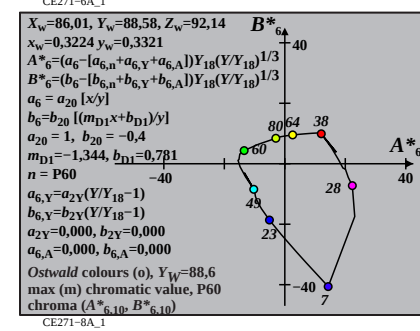
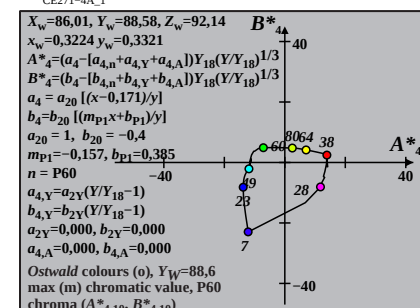
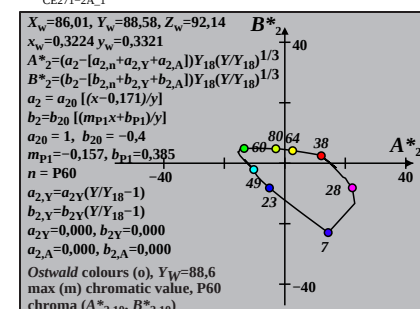
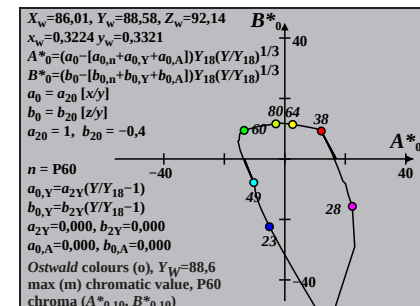
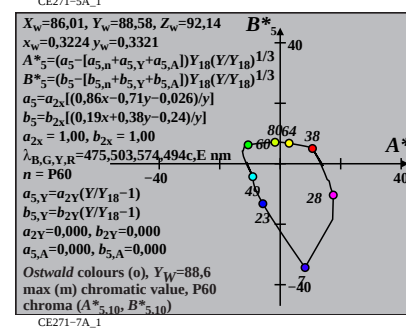
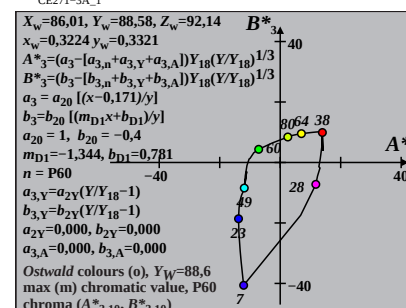
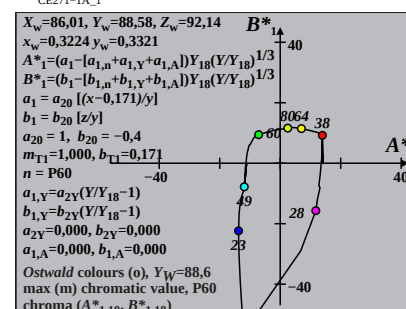
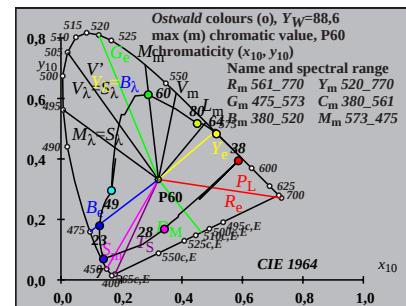


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P60, $Y_{w,10}=88,6$, $Y_m=520-770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a'_{10}	b'_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
1 405 31 557	75.87	-65.41	-32.32	72.96	0.1811	-0.1021	206.2	15 477	37 587	37 587	Cm
7 435 31 559	76.14	-87.74	-8.84	88.18	0.169	-0.0895	185.7	16 483	-1 483c		
9 450 32 561	76.57	-98.92	7.82	99.23	0.1631	-0.0807	175.4	17 489	-1 489c		
12 460 32 563	76.94	-111.3	37.86	117.56	0.1566	-0.0648	161.2	21 505	-1 505c		
13 465 33 566	77.74	-110.42	50.03	121.23	0.1576	-0.0585	155.6	22 514	-1 514c		
14 470 34 571	79.3	-104.41	63.41	122.15	0.1617	-0.0521	148.7	24 524	-1 524c		
14 475 36 580	82.53	-90.99	68.98	114.18	0.1704	-0.0503	142.8	26 531	-1 531c	Gm	
15 480 41 605	88.6	-53.73	89.54	104.43	0.191	-0.0427	120.9	30 550	-1 550c		
16 485 -1 484c	92.68	-18.78	105.89	107.54	0.2082	-0.0368	100.0	32 561	10 453		
18 490 -1 490c	91.45	-13.82	119.98	120.78	0.2104	-0.0298	96.5	32 563	11 458	max	
19 495 -1 495c	90.68	-10.5	125.65	126.09	0.2119	-0.0268	94.7	32 564	12 461		
20 500 -1 500c	89.76	-6.64	130.45	130.62	0.2137	-0.0241	92.9	33 565	12 463		
21 510 -1 509c	88.69	-2.26	134.38	134.4	0.2158	-0.0216	90.9	33 566	12 464		
24 520 -1 520c	84.45	13.53	139.54	140.2	0.2237	-0.0152	84.4	34 571	13 469	Ym	
26 530 -1 530c	80.77	25.33	137.01	139.34	0.2301	-0.0113	79.5	34 574	14 472		
28 540 -1 540c	76.43	37.5	131.23	136.48	0.2373	-0.0074	74.0	35 578	14 474		
29 545 -1 545c	74.04	43.46	127.47	134.68	0.2412	-0.0053	71.1	36 581	15 475		
30 550 -1 550c	71.51	49.23	123.26	132.73	0.2452	-0.003	68.2	36 583	15 476		
31 555 -1 555c	68.83	54.71	118.68	130.68	0.2494	0.0	65.2	37 586	15 476		
31 560 8 442	69.56	69.47	4.54	69.61	0.2578	-0.0822	3.7	-1 485c	17 485		
31 557 1 405	76.27	48.55	57.02	74.89	0.2434	-0.0544	49.5	37 587	15 477	Rm	
31 559 7 435	76.0	60.34	9.99	61.16	0.2499	-0.0795	9.4	-1 483c	16 483		
32 561 9 450	75.56	66.35	-7.27	66.74	0.2534	-0.0887	353.7	-1 489c	17 489		
32 563 12 460	75.18	72.34	-26.17	76.93	0.2568	-0.0989	340.1	-1 505c	21 505		
33 566 13 465	74.33	74.3	-31.93	80.87	0.2583	-0.1022	336.7	-1 514c	22 514		
34 571 14 470	72.6	76.39	-38.29	85.45	0.2603	-0.1061	333.3	-1 524c	24 524		
36 580 14 475	68.54	80.1	-45.28	92.02	0.2646	-0.1112	330.5	-1 531c	26 531	Mm	
41 605 15 480	58.68	74.68	-64.8	98.88	0.2673	-0.1275	319.0	-1 550c	30 550		
-1 484c 16 485	49.21	43.14	-82.96	93.51	0.2502	-0.1475	297.4	10 453	32 561		
-1 490c 18 490	52.42	29.95	-79.7	85.14	0.239	-0.1422	290.6	11 458	32 563	min	
-1 495c 19 495	54.27	22.02	-77.18	80.26	0.2327	-0.1389	285.9	12 461	32 564		
-1 500c 20 500	56.3	13.42	-74.16	75.37	0.2263	-0.1353	280.2	12 463	33 565		
-1 509c 21 510	58.5	4.39	-70.73	70.87	0.2199	-0.1316	273.5	12 464	33 566		
-1 520c 24 520	65.81	-22.44	-58.7	62.84	0.2031	-0.1201	249.0	13 469	34 571	Bm	
-1 530c 26 530	70.84	-36.93	-50.18	62.31	0.1955	-0.1133	233.6	14 472	34 574		
-1 540c 28 540	75.71	-47.2	-41.85	63.08	0.191	-0.1073	221.5	14 474	35 578		
-1 545c 29 545	78.02	-50.53	-37.89	63.16	0.1898	-0.1047	216.8	15 475	36 581		
-1 550c 30 550	80.22	-52.66	-34.09	62.74	0.1894	-0.1023	212.9	15 476	36 583		
-1 555c 31 555	82.32	-53.63	-30.47	61.68	0.1894	-0.1001	209.6	15 476	37 586		
8 442 31 560	81.77	-77.1	-3.3	77.17	0.1772	-0.0865	182.4	17 485	-1 485c		
380	770	95.41	0.0	0.0	0.0	0.2169	-0.0848	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma $(A^*_{i,10}, B^*_{i,10})$

Ostwald optimal colours for illuminant P60; diagram for illuminant P60, $Y_{w,10}=100$



TUB registration: 20170801-CE27/CE27L0NA.TY
application for measurement of offset print output

TUB material: code=rha4ta

input: *w/rgb/cmyk* $\rightarrow$ *rgb*

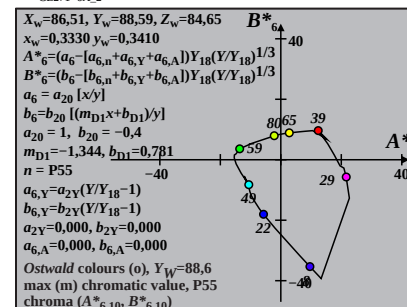
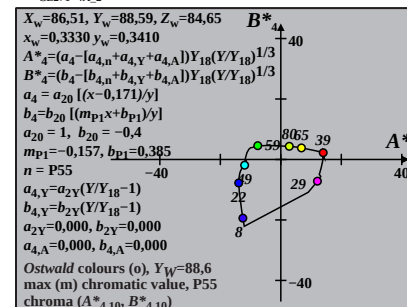
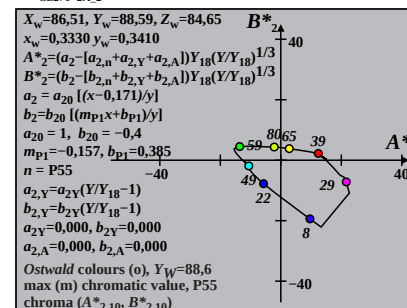
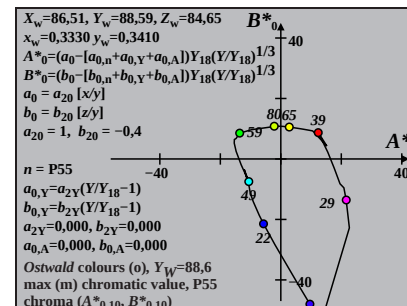
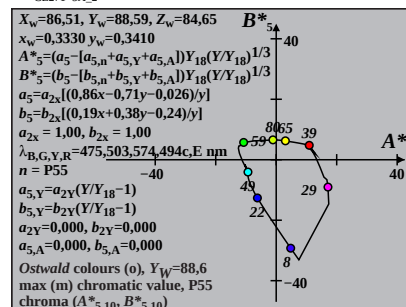
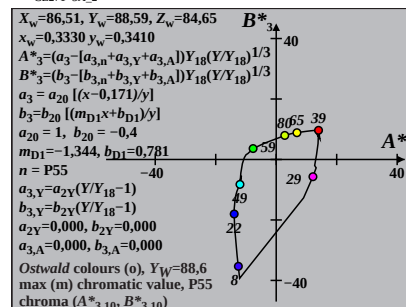
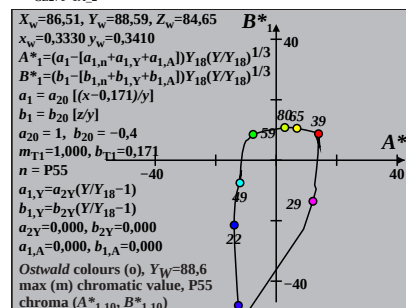
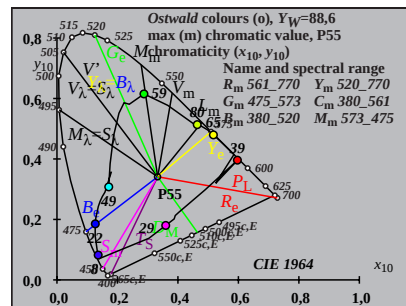
TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma $(A^*_{i,10}, B^*_{i,10})$

Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P55, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{AB,10}$	a^*_{10}	b^*_{10}	$h_{AB,10}$	i_d, λ_d	i_c, λ_c	Code
0 405	31 558	75.75	-67.64	-33.34	75.41	0.1801	-0.0998	206.2	15 477	37 587	Cm
7 435	32 560	75.98	-88.52	-9.83	89.07	0.1688	-0.0876	186.3	16 484	-1 484c	
10 450	32 561	76.16	-103.94	15.21	105.05	0.1604	-0.0745	171.6	18 493	-1 493c	
12 460	32 564	76.72	-109.94	36.26	115.76	0.1575	-0.0637	161.7	21 505	-1 505c	
12 465	33 566	77.82	-106.54	38.17	113.18	0.16	-0.063	160.2	21 507	-1 507c	
14 470	34 571	78.87	-103.63	61.39	120.45	0.1622	-0.0515	149.3	24 523	-1 523c	
15 475	35 579	81.34	-91.17	75.75	118.54	0.1701	-0.0452	140.2	26 533	-1 533c	Gm
16 480	39 599	86.68	-59.13	94.29	111.3	0.1883	-0.0385	122.0	29 548	-1 548c	
16 485	-1 484c	92.88	-16.6	104.96	106.27	0.2096	-0.0363	98.9	32 562	10 454	
17 490	-1 489c	92.34	-14.51	112.57	113.5	0.2106	-0.0327	97.3	32 563	11 456	max
19 495	-1 495c	90.96	-8.71	125.02	125.33	0.2132	-0.0265	93.9	33 565	12 461	
20 500	-1 500c	90.09	-5.0	129.95	130.05	0.2149	-0.0238	92.2	33 566	12 463	
22 510	-1 510c	87.86	3.91	137.27	137.32	0.2192	-0.0191	88.3	33 568	13 467	
24 520	-1 520c	84.94	14.54	140.47	141.22	0.2246	-0.015	84.0	34 571	14 470	Ym
25 530	-1 529c	83.23	20.23	139.74	141.2	0.2276	-0.0131	81.7	34 573	14 471	
27 540	-1 539c	79.3	32.07	135.54	139.28	0.2343	-0.0093	76.6	35 577	14 474	
28 545	-1 544c	77.1	38.06	132.39	137.75	0.2379	-0.0073	73.9	35 579	15 475	
29 550	-1 549c	74.75	43.96	128.7	136.0	0.2418	-0.0052	71.1	36 581	15 475	
31 555	-1 555c	69.61	55.12	120.02	132.08	0.2498	0.0	65.3	37 586	15 477	
32 560	6 430	67.14	67.8	28.85	73.69	0.2585	-0.0658	23.0	45 629	16 482	
31 558	0 405	76.39	49.52	60.13	77.9	0.2444	-0.0513	50.5	37 587	15 477	Rm
32 560	7 435	76.16	60.32	11.18	61.35	0.2503	-0.0766	10.5	-1 484c	16 484	
32 561	10 450	75.98	67.34	-12.79	68.54	0.2543	-0.0891	349.2	-1 493c	18 493	
32 564	12 460	75.42	71.19	-25.22	75.53	0.2566	-0.0957	340.4	-1 505c	21 505	
33 566	12 465	74.25	72.95	-27.24	77.87	0.2581	-0.0969	339.5	-1 507c	21 507	
34 571	14 470	73.09	74.76	-37.08	83.45	0.2597	-0.1024	333.6	-1 523c	24 523	
35 579	15 475	70.11	76.27	-44.8	88.46	0.262	-0.1073	329.5	-1 533c	26 533	Mm
39 599	16 480	62.2	72.31	-60.33	94.18	0.264	-0.1194	320.1	-1 548c	29 548	
-1 484c	16 485	48.66	39.54	-83.67	92.55	0.2482	-0.1444	295.2	10 454	32 562	
-1 489c	17 490	50.15	33.62	-82.49	89.08	0.243	-0.1421	292.1	11 456	32 563	min
-1 495c	19 495	53.6	18.97	-78.24	80.5	0.2311	-0.1363	283.6	12 461	33 565	
-1 500c	20 500	55.6	10.5	-75.31	76.04	0.2247	-0.1328	277.9	12 463	33 566	
-1 510c	22 510	60.09	-7.53	-68.2	68.62	0.2123	-0.1253	263.6	13 467	33 568	
-1 520c	24 520	65.05	-25.07	-59.99	65.02	0.2017	-0.1179	247.3	14 470	34 571	Bm
-1 529c	25 530	67.58	-32.79	-55.73	64.66	0.1975	-0.1144	239.5	14 471	34 573	
-1 539c	27 540	72.59	-45.24	-47.2	65.38	0.1916	-0.1079	226.2	14 474	35 577	
-1 544c	28 545	75.02	-49.77	-43.04	65.8	0.1897	-0.1051	220.8	15 475	35 579	
-1 549c	29 550	77.35	-53.07	-39.03	65.88	0.1886	-0.1025	216.3	15 475	36 581	
-1 555c	31 555	81.73	-56.06	-31.49	64.3	0.1884	-0.0979	209.3	15 477	37 586	
6 430	32 560	83.54	-66.62	-15.0	68.29	0.1836	-0.0897	192.6	16 482	45 629	
380	770	95.41	0.0	0.0	0.0	0.2173	-0.0824	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P55; diagram for illuminant P55, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

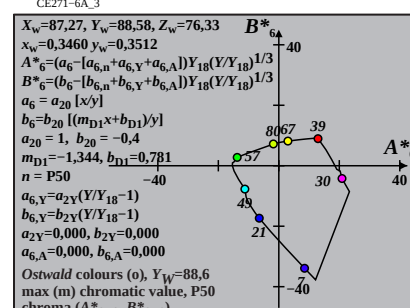
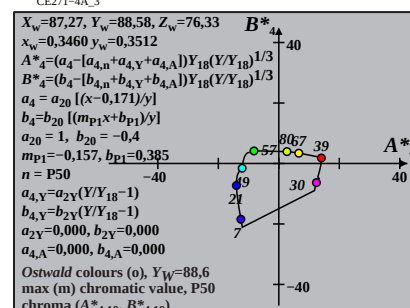
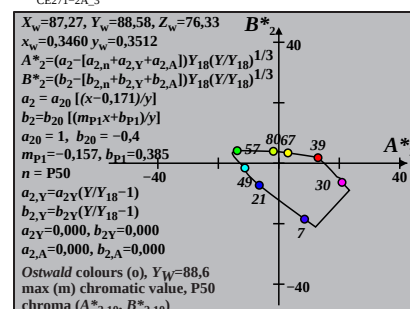
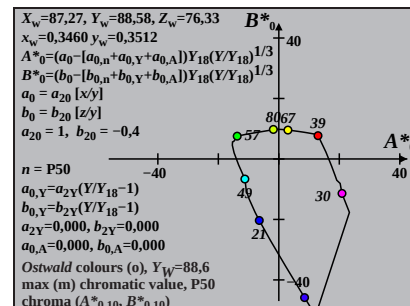
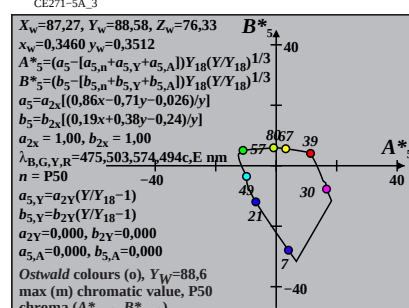
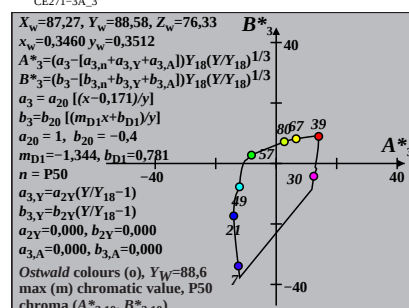
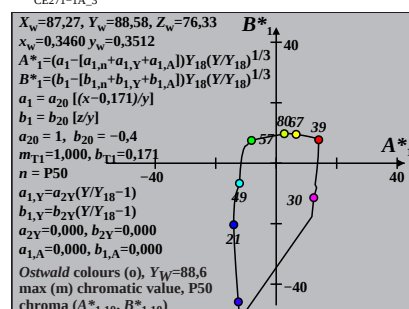
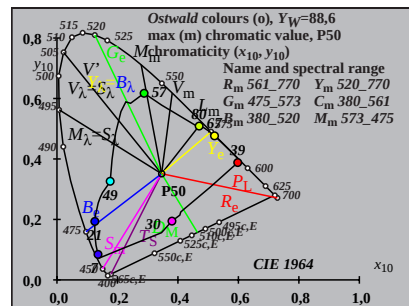


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P50, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a^*_{10}	b^*_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
1 405	32 560	75.56	-71.73	-33.01	78.96	0.1783	-0.0963	204.7	15 479	37 589	Cm
7 435	32 561	75.77	-89.16	-11.03	89.84	0.1688	-0.0852	187.0	17 485	-1 485c	
9 450	32 562	76.14	-98.1	4.96	98.23	0.1641	-0.0772	177.1	18 490	-1 490c	
12 460	33 565	76.44	-108.36	34.32	113.66	0.1587	-0.0625	162.4	21 505	-1 505c	
13 465	33 567	77.1	-107.42	46.14	116.91	0.1596	-0.0567	156.7	22 513	-1 513c	
14 470	34 571	78.38	-102.64	59.0	118.39	0.1629	-0.0507	150.1	24 523	-1 523c	
14 475	35 578	81.05	-92.23	63.6	112.03	0.1699	-0.0494	145.4	25 529	-1 529c	Gm
16 480	38 593	85.22	-65.47	90.23	111.48	0.1852	-0.0384	125.9	29 546	-1 546c	
17 485	-1 485c	92.59	-12.28	111.51	112.19	0.2122	-0.0322	96.2	32 564	11 457	
18 490	-1 490c	92.0	-9.81	118.31	118.72	0.2134	-0.029	94.7	33 565	11 459	max
18 495	-1 494c	92.0	-9.81	118.31	118.72	0.2134	-0.029	94.7	33 565	11 459	
20 500	-1 500c	90.46	-3.28	129.3	129.34	0.2164	-0.0235	91.4	33 566	12 464	
22 510	-1 510c	88.33	5.25	136.95	137.05	0.2205	-0.0189	87.8	33 569	13 467	
24 520	-1 520c	85.52	15.51	141.55	142.4	0.2257	-0.0149	83.7	34 572	14 470	Ym
26 530	-1 530c	82.04	26.75	139.24	141.79	0.2318	-0.0111	79.1	35 575	14 473	
28 540	-1 540c	77.89	38.49	133.75	139.18	0.2387	-0.0072	73.9	35 579	15 475	
29 545	-1 545c	75.59	44.3	130.14	137.48	0.2424	-0.0052	71.2	36 581	15 476	
30 550	-1 550c	73.14	49.95	126.07	135.61	0.2463	-0.003	68.3	36 584	15 477	
31 555	-1 555c	70.54	55.36	121.62	133.63	0.2503	0.0	65.5	37 586	15 478	
32 560	-1 560c	67.78	60.42	116.87	131.57	0.2544	0.0	62.6	37 589	15 479	
32 560	1 405	76.58	51.3	58.08	77.49	0.246	-0.0506	48.5	37 589	15 479	Rm
32 561	7 435	76.36	60.14	12.64	61.45	0.2509	-0.0733	11.8	-1 485c	17 485	
32 562	9 450	76.0	64.9	-4.68	65.07	0.2536	-0.082	355.8	-1 490c	18 490	
33 565	12 460	75.69	69.83	-24.06	73.86	0.2565	-0.0918	340.9	-1 505c	21 505	
33 567	13 465	75.02	71.26	-29.73	77.22	0.2576	-0.0948	337.3	-1 513c	22 513	
34 571	14 470	73.64	72.87	-35.68	81.14	0.2591	-0.0981	333.9	-1 523c	24 523	
35 578	14 475	70.49	75.9	-41.11	86.32	0.2624	-0.1016	331.5	-1 529c	25 529	Mm
38 593	16 480	64.62	72.36	-55.88	91.43	0.2634	-0.1117	322.3	-1 546c	29 546	
-1 485c	17 485	49.46	29.69	-83.45	88.58	0.2409	-0.1386	289.5	11 457	32 564	
-1 490c	18 490	51.04	23.03	-81.76	84.95	0.2353	-0.1361	285.7	11 459	33 565	min
-1 494c	18 495	51.04	23.03	-81.76	84.95	0.2353	-0.1361	285.7	11 459	33 565	
-1 500c	20 500	54.77	7.2	-76.64	76.98	0.2231	-0.1297	275.3	12 464	33 566	
-1 510c	22 510	59.2	-10.58	-69.68	70.48	0.2108	-0.1225	261.3	13 467	33 569	
-1 520c	24 520	64.13	-28.0	-61.54	67.61	0.2003	-0.1152	245.5	14 470	34 572	Bm
-1 530c	26 530	69.21	-42.42	-52.98	67.87	0.1928	-0.1084	231.3	14 473	35 575	
-1 540c	28 540	74.18	-52.63	-44.49	68.92	0.1884	-0.1025	220.2	15 475	35 579	
-1 545c	29 545	76.55	-55.91	-40.42	68.99	0.1874	-0.0999	215.8	15 476	36 581	
-1 550c	30 550	78.83	-57.96	-36.5	68.49	0.187	-0.0975	212.2	15 477	36 584	
-1 555c	31 555	81.01	-58.79	-32.73	67.3	0.1873	-0.0953	209.1	15 478	37 586	
-1 560c	32 560	83.09	-58.47	-29.16	65.34	0.1881	-0.0933	206.5	15 479	37 589	
380	770	95.41	0.0	0.0	0.0	0.218	-0.0797	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P50; diagram for illuminant P50, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

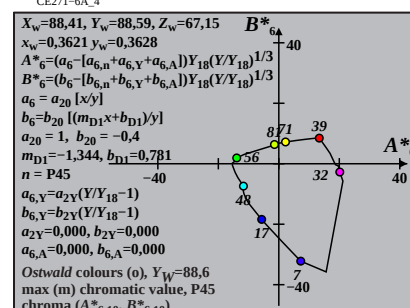
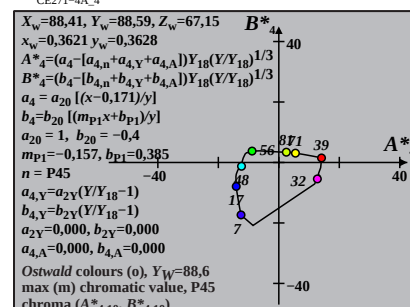
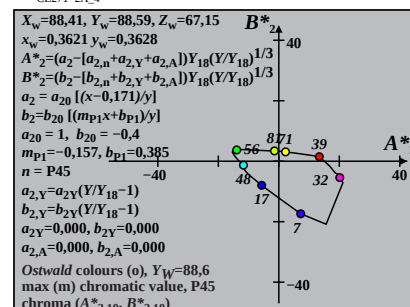
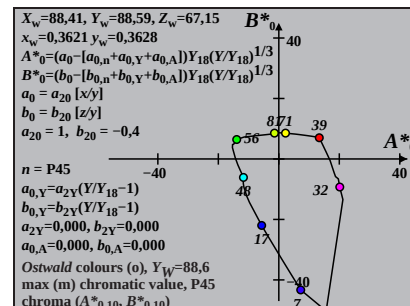
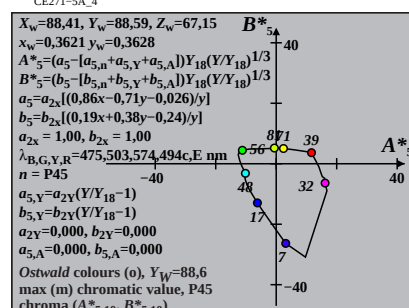
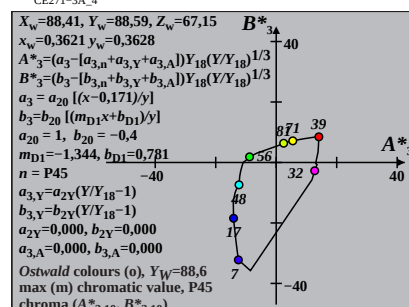
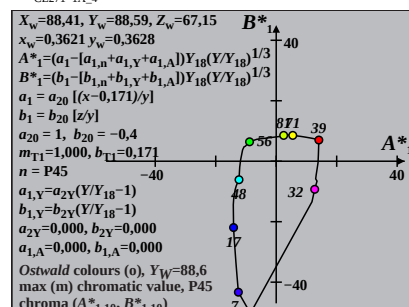
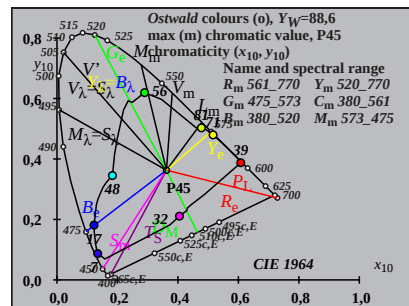


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P45, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a'_{10}	b'_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
1 405	32 561	75.32	-75.02	-33.52	82.17	0.1772	-0.0926	204.0	16 480	38 590	Cm
7 435	32 562	75.52	-89.87	-12.48	90.73	0.169	-0.0824	187.9	17 486	-1 486c	
10 450	32 564	75.67	-101.82	11.53	102.47	0.1625	-0.0707	173.5	18 494	-1 494c	
11 460	33 566	76.37	-103.24	22.25	105.61	0.1621	-0.0656	167.8	19 499	-1 499c	
13 465	33 568	76.69	-105.51	43.56	114.15	0.1611	-0.0555	157.5	22 513	-1 513c	
13 470	34 571	78.18	-100.66	46.14	110.74	0.1646	-0.0546	155.3	23 516	-1 516c	
15 475	35 577	79.72	-92.1	69.51	115.39	0.17	-0.0441	142.9	26 532	-1 532c	Gm
15 480	37 589	84.13	-72.5	77.09	105.83	0.1821	-0.0422	133.2	28 542	-1 542c	
17 485	51 659	92.59	-11.97	109.67	110.33	0.2133	-0.0316	96.2	32 564	10 454	
18 490	-1 490c	92.32	-7.62	117.09	117.34	0.2153	-0.0284	93.7	33 566	12 460	max
19 495	-1 495c	91.67	-4.82	123.16	123.25	0.2166	-0.0256	92.2	33 566	12 462	
20 500	-1 500c	90.88	-1.51	128.41	128.42	0.2182	-0.0231	90.6	33 567	12 464	
22 510	-1 510c	88.88	6.56	136.47	136.63	0.2221	-0.0186	87.2	34 570	13 468	
23 520	-1 519c	87.62	11.29	142.34	142.79	0.2244	-0.0166	85.4	34 571	14 470	Ym
25 530	-1 529c	84.61	21.7	142.21	143.86	0.2299	-0.0128	81.3	34 574	14 473	
27 540	-1 539c	80.92	32.92	138.34	142.21	0.2362	-0.0091	76.6	35 578	15 475	
29 545	-1 545c	76.59	44.38	131.87	139.14	0.2433	-0.0051	71.3	36 582	15 477	
29 550	-1 549c	76.59	44.38	131.87	139.14	0.2433	-0.0051	71.3	36 582	15 477	
30 555	-1 554c	74.2	49.95	127.9	137.3	0.247	-0.0029	68.6	36 584	15 478	
32 560	-1 560c	68.94	60.34	118.86	133.3	0.255	0.0	63.0	38 590	16 480	
32 561	1 405	76.81	52.48	58.82	78.83	0.2476	-0.0482	48.2	38 590	16 480	Rm
32 562	7 435	76.62	59.85	14.45	61.57	0.2517	-0.0694	13.5	-1 486c	17 486	
32 564	10 450	76.46	65.25	-9.9	65.99	0.2548	-0.0811	351.3	-1 494c	18 494	
33 566	11 460	75.77	67.61	-17.52	69.84	0.2563	-0.0848	345.4	-1 499c	19 499	
33 568	13 465	75.44	69.37	-28.28	74.91	0.2574	-0.09	337.8	-1 513c	22 513	
34 571	13 470	73.86	71.44	-31.02	77.89	0.2593	-0.0916	336.5	-1 516c	23 516	
35 577	15 475	72.1	71.82	-40.55	82.49	0.2603	-0.0967	330.5	-1 532c	26 532	Mm
37 589	15 480	66.29	73.87	-50.58	89.53	0.2645	-0.1036	325.5	-1 542c	28 542	
51 659	17 485	49.45	29.02	-83.18	88.1	0.2414	-0.1326	289.2	10 454	32 564	
-1 490c	18 490	50.18	18.82	-83.04	85.14	0.2334	-0.1319	282.7	12 460	33 566	min
-1 495c	19 495	51.89	11.53	-80.9	81.72	0.2275	-0.1291	278.1	12 462	33 566	
-1 500c	20 500	53.79	3.49	-78.21	78.29	0.2215	-0.126	272.5	12 464	33 567	
-1 510c	22 510	58.13	-13.92	-71.46	72.8	0.2094	-0.119	258.9	13 468	34 570	
-1 519c	23 520	60.53	-22.75	-67.54	71.28	0.2038	-0.1154	251.3	14 470	34 571	Bm
-1 529c	25 530	65.56	-38.83	-59.16	70.76	0.1947	-0.1085	236.7	14 473	34 574	
-1 539c	27 540	70.65	-51.24	-50.54	71.97	0.1889	-0.1022	224.6	15 475	35 578	
-1 545c	29 545	75.55	-59.02	-42.15	72.52	0.1861	-0.0967	215.5	15 477	36 582	
-1 549c	29 550	75.55	-59.02	-42.15	72.52	0.1861	-0.0967	215.5	15 477	36 582	
-1 554c	30 555	77.87	-61.04	-38.14	71.98	0.1859	-0.0943	212.0	15 478	36 584	
-1 560c	32 560	82.24	-61.43	-30.61	68.63	0.1871	-0.0901	206.4	16 480	38 590	
380	770	95.41	0.0	0.0	0.0	0.2189	-0.0763	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P45; diagram for illuminant P45, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

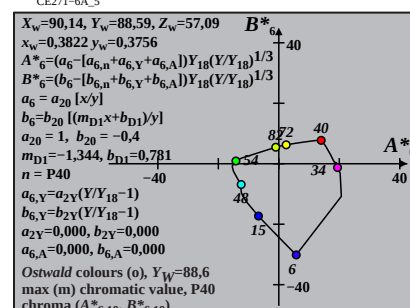
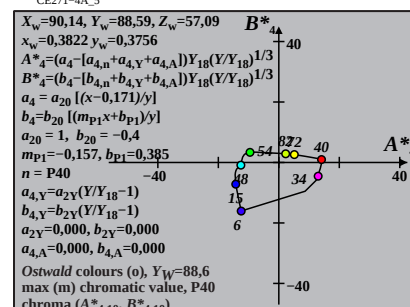
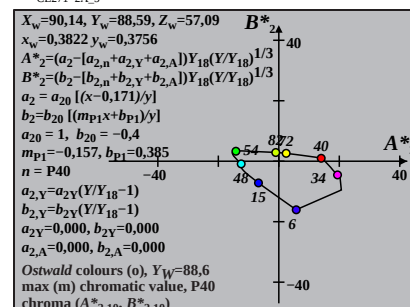
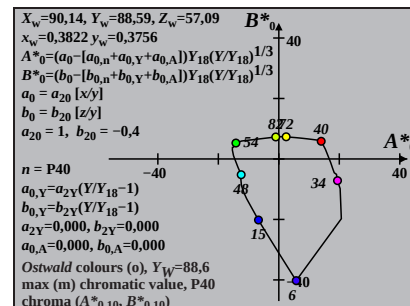
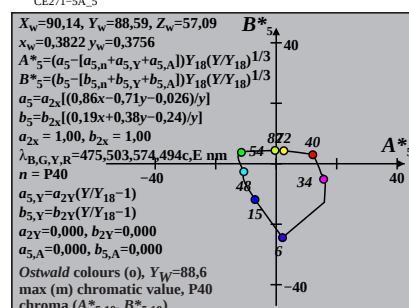
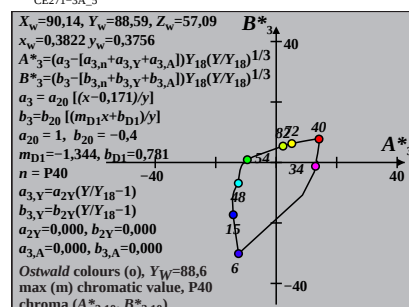
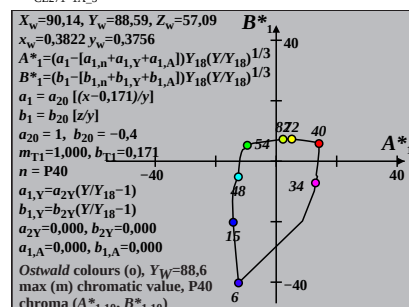
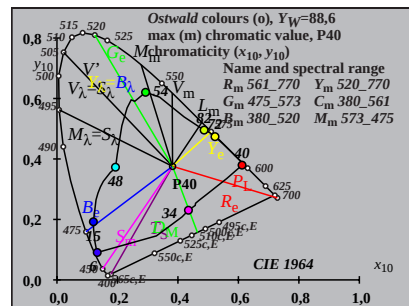


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P40, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a^*_{10}	b^*_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
0 405	32 563	75.01	-78.15	-34.74	85.53	0.1764	-0.0883	203.9	16 481	38 591	Cm
7 435	32 564	75.18	-90.63	-14.29	91.75	0.1695	-0.0789	188.9	17 487	-1 487c	
10 450	33 565	75.32	-100.3	9.01	100.71	0.1642	-0.0682	174.8	19 495	-1 495c	
12 460	33 567	75.69	-103.79	29.0	107.76	0.1624	-0.059	164.3	21 505	-1 505c	
12 465	33 568	76.47	-101.63	30.33	106.06	0.1641	-0.0585	163.3	21 506	-1 506c	
14 470	34 571	77.13	-99.72	52.55	112.72	0.1656	-0.0486	152.2	24 521	-1 521c	
15 475	35 576	78.75	-92.17	65.41	113.02	0.1706	-0.0433	144.6	26 531	-1 531c	Gm
16 480	37 585	81.96	-75.87	80.35	110.51	0.1807	-0.0379	133.3	28 542	-1 542c	
17 485	42 611	88.62	-36.75	100.49	107.0	0.2024	-0.032	110.0	31 558	-1 558c	
17 490	-1 489c	93.2	-7.47	108.37	108.63	0.2168	-0.0306	93.9	33 566	11 458	max
19 495	-1 495c	92.1	-2.82	121.72	121.75	0.219	-0.025	91.3	33 568	12 463	
20 500	-1 500c	91.38	0.21	127.19	127.19	0.2204	-0.0226	89.9	33 569	13 465	
22 510	-1 510c	89.51	7.73	135.74	135.96	0.2241	-0.0183	86.7	34 571	13 469	
23 520	-1 519c	88.34	12.18	143.87	144.38	0.2263	-0.0163	85.1	34 572	14 471	Ym
25 530	-1 529c	85.49	22.06	143.82	145.5	0.2314	-0.0126	81.2	35 575	14 474	
28 540	-1 540c	79.96	38.44	137.33	142.61	0.2408	-0.007	74.3	36 581	15 477	
28 545	-1 544c	79.96	38.44	137.33	142.61	0.2408	-0.007	74.3	36 581	15 477	
30 550	-1 550c	75.47	49.47	130.1	139.19	0.248	-0.0029	69.1	37 585	15 479	
31 555	-1 555c	72.99	54.76	125.85	137.25	0.2518	0.0	66.4	37 587	16 480	
31 560	-1 559c	72.99	54.76	125.85	137.25	0.2518	0.0	66.4	37 587	16 480	
32 563	0 405	77.11	53.37	61.87	81.71	0.2496	-0.0444	49.2	38 591	16 481	Rm
32 564	7 435	76.94	59.41	16.73	61.73	0.253	-0.0647	15.7	-1 487c	17 487	
33 565	10 450	76.81	63.77	-7.84	64.25	0.2555	-0.0758	352.9	-1 495c	19 495	
33 567	12 460	76.45	66.07	-20.78	69.26	0.2569	-0.0817	342.5	-1 505c	21 505	
33 568	12 465	75.67	67.2	-22.12	70.75	0.2578	-0.0824	341.7	-1 506c	21 506	
34 571	14 470	74.99	68.14	-32.02	75.29	0.2586	-0.0871	334.8	-1 521c	24 521	
35 576	15 475	73.23	69.08	-38.0	78.84	0.2599	-0.0902	331.1	-1 531c	26 531	Mm
37 585	16 480	69.31	69.27	-46.95	83.69	0.2618	-0.0954	325.8	-1 542c	28 542	
42 611	17 485	58.64	56.13	-66.97	87.38	0.2588	-0.11	309.9	-1 558c	31 558	
-1 489c	17 490	47.74	20.07	-85.76	88.08	0.2364	-0.1288	283.1	11 458	33 566	min
-1 495c	19 495	50.79	7.17	-82.57	82.88	0.2258	-0.1242	274.9	12 463	33 568	
-1 500c	20 500	52.61	-0.53	-80.07	80.07	0.2199	-0.1213	269.6	13 465	33 569	
-1 510c	22 510	56.83	-17.46	-73.6	75.65	0.2081	-0.1147	256.6	13 469	34 571	
-1 519c	23 520	59.19	-26.14	-69.79	74.52	0.2025	-0.1113	249.4	14 471	34 572	Bm
-1 529c	25 530	64.19	-42.07	-61.49	74.51	0.1935	-0.1045	235.6	14 474	35 575	
-1 540c	28 540	71.82	-59.01	-48.54	76.41	0.186	-0.0955	219.4	15 477	36 581	
-1 544c	28 545	71.82	-59.01	-48.54	76.41	0.186	-0.0955	219.4	15 477	36 581	
-1 550c	30 550	76.66	-64.32	-40.23	75.87	0.1848	-0.0905	212.0	15 479	37 585	
-1 555c	31 555	78.96	-65.09	-36.27	74.51	0.1853	-0.0883	209.1	16 480	37 587	
-1 559c	31 560	78.96	-65.09	-36.27	74.51	0.1853	-0.0883	209.1	16 480	37 587	
380	770	95.41	0.0	0.0	0.0	0.2203	-0.0723	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P40; diagram for illuminant P40, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

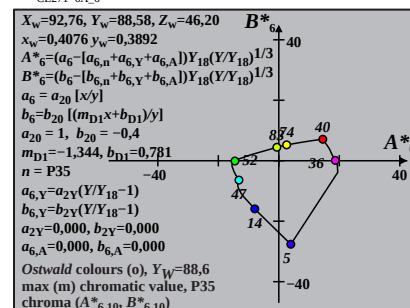
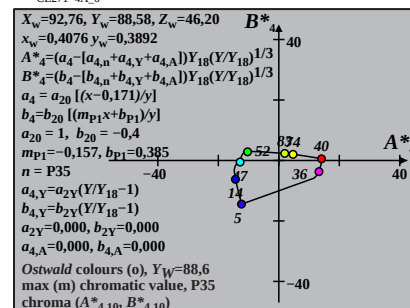
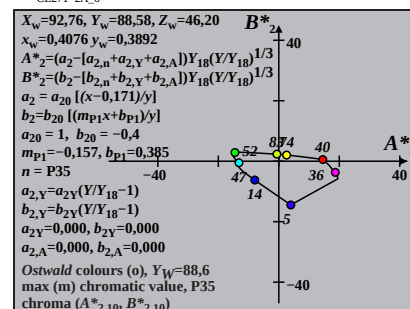
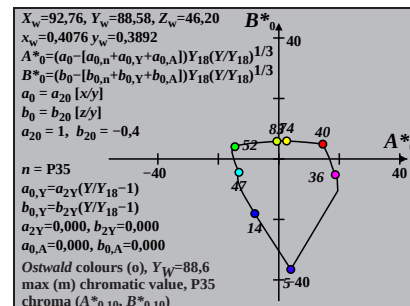
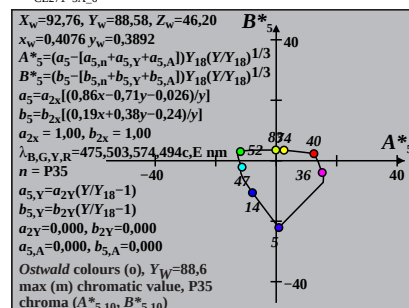
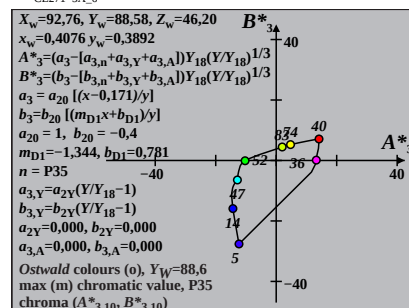
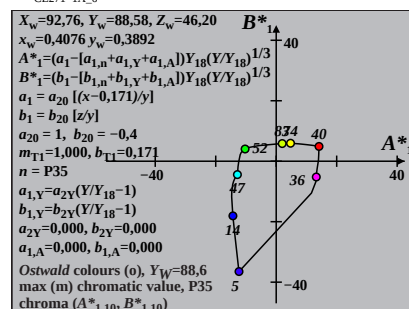
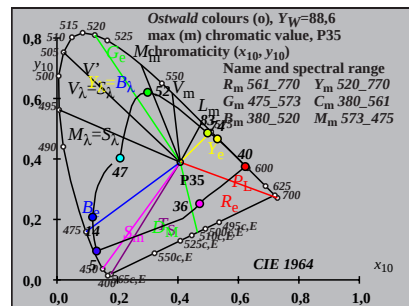


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P35, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{AB,10}$	a^*_{10}	b^*_{10}	$h_{AB,10}$	i_d, λ_d	i_c, λ_c	Code
1 405	33 566	74.58	-81.93	-35.03	89.11	0.1757	-0.0825	203.1	16 484	38 594	Cm
7 435	33 566	74.73	-90.73	-16.59	92.24	0.1708	-0.0745	190.3	17 488	58 694	
10 450	33 567	74.85	-98.14	5.78	98.31	0.1667	-0.0649	176.6	19 496	-1 496c	
12 460	33 568	75.16	-100.96	25.23	104.06	0.1653	-0.0565	165.9	21 505	-1 505c	
12 465	34 570	75.8	-99.25	26.33	102.69	0.1666	-0.0562	165.1	21 506	-1 506c	
14 470	34 572	76.31	-97.55	48.07	108.75	0.1679	-0.047	153.7	24 521	-1 521c	
14 475	35 576	77.96	-92.11	50.91	105.24	0.1718	-0.0462	151.0	24 524	-1 524c	Gm
16 480	36 583	80.14	-79.5	74.09	108.68	0.1797	-0.0372	137.0	28 540	-1 540c	
17 485	39 598	84.97	-54.16	91.13	106.02	0.1947	-0.0321	120.7	30 552	-1 552c	
17 490	-1 489c	93.56	-5.04	105.94	106.06	0.2201	-0.0295	92.7	33 568	11 459	max
18 495	-1 494c	93.12	-3.2	113.21	113.25	0.2209	-0.0268	91.6	33 569	12 461	
19 500	-1 499c	92.58	-0.93	119.69	119.7	0.222	-0.0242	90.4	34 570	12 464	
22 510	-1 510c	90.25	8.61	134.59	134.87	0.2266	-0.0178	86.3	34 572	14 470	
24 520	-1 520c	87.93	17.17	146.23	147.24	0.231	-0.0141	83.3	35 575	14 473	Ym
26 530	-1 530c	84.97	26.93	144.42	146.91	0.2362	-0.0105	79.4	35 578	15 476	
27 540	-1 539c	83.23	32.16	142.37	145.96	0.2392	-0.0088	77.2	36 580	15 478	
28 545	-1 544c	81.33	37.52	139.69	144.64	0.2423	-0.0069	74.9	36 581	15 479	
30 550	-1 550c	77.04	48.21	132.8	141.28	0.2492	-0.0028	70.0	37 586	16 481	
31 555	-1 555c	74.65	53.41	128.7	139.35	0.2529	0.0	67.4	37 588	16 482	
32 560	-1 560c	72.09	58.35	124.29	137.31	0.2566	0.0	64.8	38 591	16 483	
33 566	1 405	77.52	54.23	60.89	81.54	0.2524	-0.0419	48.3	38 594	16 484	Rm
33 566	7 435	77.37	58.44	19.7	61.67	0.2548	-0.0591	18.6	58 694	17 488	
33 567	10 450	77.26	61.77	-5.12	61.98	0.2566	-0.0695	35.2	-1 496c	19 496	
33 568	12 460	76.97	63.63	-18.38	66.23	0.2578	-0.0751	34.8	-1 505c	21 505	
34 570	12 465	76.34	64.51	-19.45	67.38	0.2585	-0.0756	34.2	-1 506c	21 506	
34 572	14 470	75.83	65.1	-29.53	71.49	0.259	-0.08	33.5	-1 521c	24 521	
35 576	14 475	74.1	66.92	-32.51	74.4	0.2608	-0.0815	33.4	-1 524c	24 524	Mm
36 583	16 480	71.61	66.24	-42.32	78.61	0.2615	-0.0863	32.7	-1 540c	28 540	
39 598	17 485	65.0	62.33	-55.46	83.43	0.2622	-0.0942	31.8	-1 552c	30 552	
-1 489c	17 490	46.66	14.45	-87.09	88.28	0.2344	-0.1217	27.9	11 459	33 568	min
-1 494c	18 495	47.97	8.97	-86.14	86.61	0.2297	-0.1201	27.5	12 461	33 569	
-1 499c	19 500	49.47	2.53	-84.51	84.55	0.2244	-0.1179	27.1	12 464	34 570	
-1 510c	22 510	55.23	-20.92	-76.22	79.04	0.2073	-0.1092	25.4	14 470	34 572	
-1 520c	24 520	59.96	-37.53	-68.59	78.19	0.1969	-0.1027	24.1	14 473	35 575	Bm
-1 530c	26 530	65.01	-51.79	-60.15	79.37	0.1894	-0.0964	22.9	15 476	35 578	
-1 539c	27 540	67.58	-57.52	-55.79	80.14	0.1869	-0.0935	22.4	15 478	36 580	
-1 544c	28 545	70.14	-62.12	-51.44	80.66	0.1852	-0.0907	21.9	15 479	36 581	
-1 550c	30 550	75.08	-67.57	-42.96	80.07	0.1841	-0.0858	21.2	16 481	37 586	
-1 555c	31 555	77.45	-68.38	-38.87	78.66	0.1847	-0.0836	20.9	16 482	37 588	
-1 560c	32 560	79.74	-67.96	-34.93	76.41	0.1858	-0.0816	20.7	16 483	38 591	
380	770	95.41	0.0	0.0	0.0	0.2224	-0.0674	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P35; diagram for illuminant P35, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

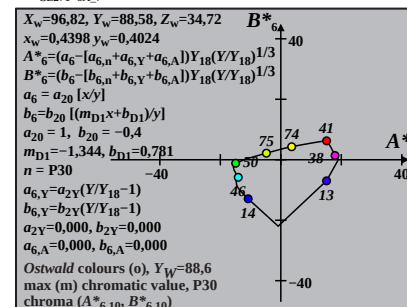
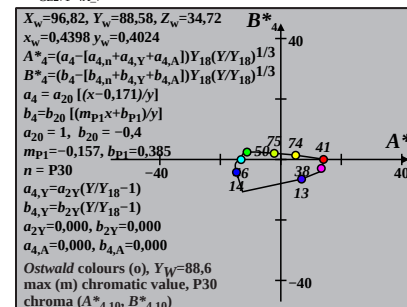
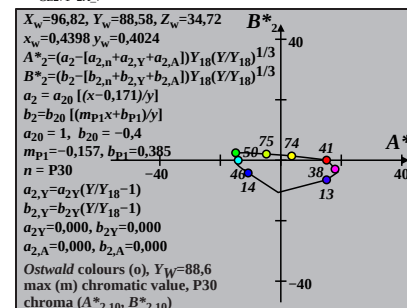
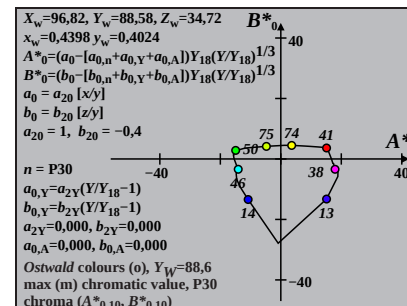
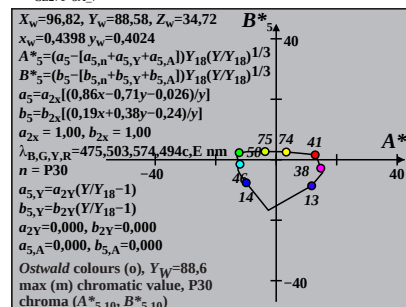
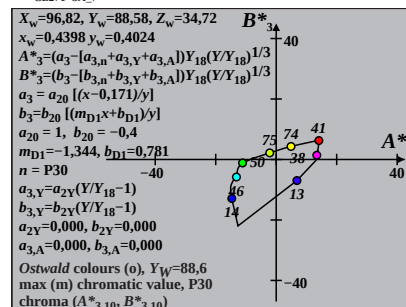
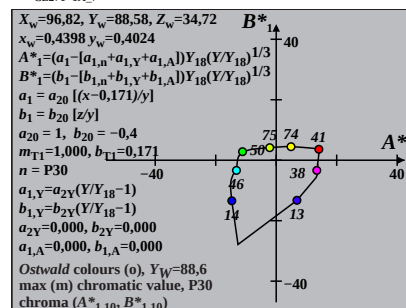
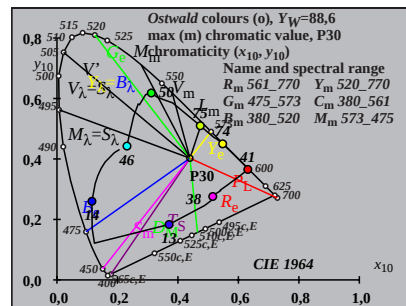


Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P30, $Y_{w,10}=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a^*_{10}	b^*_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
1 405	33 569	73.98	-84.49	-36.21	91.93	0.1765	-0.0756	203.2	17 486	39 596	Cm
6 435	33 569	74.15	-88.64	-24.52	91.97	0.1741	-0.0709	195.4	17 489	43 615	
9 450	34 570	74.3	-93.6	-6.21	93.8	0.1713	-0.0637	183.8	18 494	-1 494c	
12 460	34 571	74.43	-97.24	20.24	99.33	0.1693	-0.0533	168.2	21 505	-1 505c	
13 465	34 572	74.73	-96.74	30.92	101.56	0.1698	-0.0491	162.2	22 512	-1 512c	
14 470	34 573	75.31	-94.7	42.23	103.69	0.1713	-0.0448	155.9	24 520	-1 520c	
14 475	35 576	76.57	-90.72	44.4	101.01	0.1743	-0.0442	153.9	24 523	-1 523c Gm	
15 480	36 581	78.48	-82.85	57.66	100.95	0.1797	-0.0395	145.1	26 534	-1 534c	
16 485	38 590	81.87	-67.58	72.88	99.39	0.1895	-0.0348	132.8	29 546	-1 546c	
18 490	44 620	89.53	-23.99	102.97	105.73	0.2137	-0.0265	103.1	32 564	-1 564c max	
19 495	-1 495c	93.14	0.66	116.72	116.72	0.226	-0.0232	89.6	34 572	13 465	
20 500	-1 500c	92.59	2.99	122.77	122.81	0.2271	-0.021	88.6	34 572	13 467	
21 510	-1 509c	91.92	5.76	128.1	128.23	0.2284	-0.019	87.4	34 573	13 469	
23 520	-1 519c	90.16	12.6	136.86	137.44	0.2319	-0.0154	84.7	35 575	14 473	Ym
26 530	-1 530c	86.36	25.57	146.92	149.13	0.2387	-0.0102	80.1	35 579	15 478	
28 540	-1 540c	83.0	35.48	142.6	146.95	0.2444	-0.0067	76.0	36 583	16 481	
29 545	-1 545c	81.08	40.59	139.62	145.4	0.2475	-0.0048	73.7	37 585	16 482	
30 550	-1 550c	78.99	45.71	136.16	143.63	0.2508	-0.0028	71.4	37 587	16 483	
31 555	-1 555c	76.72	50.76	132.28	141.68	0.2543	0.0	69.0	37 589	16 484	
32 560	-1 560c	74.28	55.61	128.07	139.62	0.2579	0.0	66.5	38 592	17 485	
33 569	1 405	78.07	54.13	62.39	82.6	0.2558	-0.0377	49.0	39 596	17 486	Rm
33 569	6 435	77.91	56.27	32.4	64.93	0.257	-0.049	29.9	43 615	17 489	
34 570	9 450	77.78	58.66	6.23	58.99	0.2584	-0.0589	6.0	-1 494c	18 494	
34 571	12 460	77.65	60.44	-15.08	62.29	0.2594	-0.067	345.9	-1 505c	21 505	
34 572	13 465	77.37	60.93	-20.96	64.43	0.2598	-0.0692	341.0	-1 512c	22 512	
34 573	14 470	76.82	61.44	-26.32	66.84	0.2603	-0.0713	336.8	-1 520c	24 520	
35 576	14 475	75.57	62.73	-28.47	68.89	0.2615	-0.0723	335.5	-1 523c	24 523	Mm
36 581	15 480	73.53	63.68	-35.42	72.87	0.2629	-0.0753	330.9	-1 534c	26 534	
38 590	16 485	69.44	63.6	-45.07	77.96	0.2646	-0.08	324.6	-1 546c	29 546	
44 620	18 490	56.8	41.95	-70.3	81.86	0.2558	-0.0956	300.8	-1 564c	32 564	min
-1 495c	19 495	47.91	-1.95	-86.73	86.75	0.224	-0.1095	268.7	13 465	34 572	
-1 500c	20 500	49.47	-8.56	-84.86	85.29	0.2188	-0.1074	264.2	13 467	34 572	
-1 509c	21 510	51.25	-15.87	-82.41	83.93	0.2133	-0.1048	259.1	13 469	34 573	
-1 519c	23 520	55.43	-31.77	-76.01	82.38	0.2023	-0.0991	247.3	14 473	35 575	Bm
-1 530c	26 530	62.75	-53.85	-64.0	83.65	0.1898	-0.0902	229.9	15 478	35 579	
-1 540c	28 540	67.9	-64.43	-55.29	84.9	0.1854	-0.0847	220.6	16 481	36 583	
-1 545c	29 545	70.45	-67.97	-50.93	84.93	0.1845	-0.0822	216.8	16 482	37 585	
-1 550c	30 550	72.95	-70.24	-46.62	84.31	0.1843	-0.0799	213.5	16 483	37 587	
-1 555c	31 555	75.41	-71.24	-42.39	82.9	0.1848	-0.0777	210.7	16 484	37 589	
-1 560c	32 560	77.8	-70.96	-38.28	80.63	0.186	-0.0758	208.3	17 485	38 592	
380	770	95.41	0.0	0.0	0.0	0.2256	-0.0613	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P30; diagram for illuminant P30, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb



Ostwald optimal colours (o) of maximum (m) $C_{AB,10}$ for P25, $Y_{w,10}=88,6$, $Y_m=520,770$

i_1, λ_1	i_2, λ_2	L^*_{10}	a^*_{10}	b^*_{10}	$C^*_{ab,10}$	a'_{10}	b'_{10}	$h_{ab,10}$	i_d, λ_d	i_c, λ_c	Code
1 405	34 573	73.07	-85.16	-37.95	93.24	0.1794	-0.0667	204.0	18 490	39 599	Cm
6 435	34 573	73.19	-87.3	-28.08	91.71	0.1781	-0.0633	197.8	18 492	42 613	
9 450	34 573	73.3	-90.12	-11.56	90.86	0.1765	-0.0575	187.3	19 497	-1 497c	
12 460	34 574	73.4	-92.41	13.36	93.37	0.1752	-0.0489	171.7	21 506	-1 506c	
12 465	35 575	73.75	-91.58	13.95	92.63	0.1759	-0.0487	171.3	21 507	-1 507c	
13 470	35 576	74.17	-90.41	24.5	93.67	0.1769	-0.0451	164.8	22 513	-1 513c	
15 475	35 577	74.66	-87.61	45.2	98.58	0.1788	-0.038	152.7	25 527	-1 527c	Gm
16 480	36 580	75.89	-82.34	56.66	99.95	0.1826	-0.0343	145.4	27 536	-1 536c	
17 485	37 586	77.99	-73.22	69.05	100.64	0.1888	-0.0307	136.6	28 544	-1 544c	
18 490	39 597	82.28	-54.48	84.65	100.66	0.2009	-0.0267	122.7	31 555	-1 555c	max
19 495	58 690	93.68	1.32	111.98	111.99	0.2312	-0.0218	89.3	35 575	13 466	
20 500	-1 500c	93.31	3.56	118.56	118.61	0.2323	-0.0198	88.2	35 575	13 469	
21 510	-1 509c	92.77	5.8	124.35	124.49	0.2334	-0.018	87.3	35 576	14 471	
24 520	-1 520c	90.38	14.93	138.61	139.41	0.238	-0.013	83.8	35 579	15 477	Ym
26 530	-1 530c	88.06	22.77	150.0	151.72	0.2422	-0.0098	81.3	36 581	16 481	
27 540	-1 539c	86.65	27.14	148.39	150.85	0.2447	-0.0082	79.6	36 583	16 482	
28 545	-1 544c	85.09	31.72	146.22	149.62	0.2473	-0.0064	77.7	37 585	16 484	
29 550	-1 549c	83.35	36.45	143.55	148.1	0.2501	-0.0046	75.7	37 586	17 485	
31 555	-1 555c	79.36	46.05	136.84	144.38	0.2564	0.0	71.4	38 591	17 487	
31 560	-1 559c	79.36	46.05	136.84	144.38	0.2564	0.0	71.4	38 591	17 487	
34 573	1 405	78.89	52.57	64.44	83.16	0.2602	-0.0324	50.7	39 599	18 490	Rm
34 573	6 435	78.78	53.71	37.72	65.63	0.2608	-0.0411	35.0	42 613	18 492	
34 573	9 450	78.68	55.1	11.92	56.37	0.2617	-0.0496	12.2	-1 497c	19 497	
34 574	12 460	78.59	56.23	-10.27	57.16	0.2623	-0.0569	349.6	-1 506c	21 506	
35 575	12 465	78.28	56.63	-10.8	57.65	0.2627	-0.0571	349.1	-1 507c	21 507	
35 576	13 470	77.89	57.06	-17.3	59.63	0.263	-0.0592	343.1	-1 513c	22 513	
35 577	15 475	77.44	56.93	-26.74	62.9	0.2631	-0.0624	334.8	-1 527c	25 527	Mm
36 580	16 480	76.25	57.26	-31.75	65.47	0.2637	-0.0642	330.9	-1 536c	27 536	
37 586	17 485	74.06	57.32	-37.77	68.65	0.2646	-0.0665	326.6	-1 544c	28 544	
39 597	18 490	68.89	55.26	-48.43	73.48	0.2654	-0.0712	318.7	-1 555c	31 555	min
58 690	19 495	46.29	-4.19	-88.71	88.81	0.2269	-0.0978	267.2	13 466	35 575	
-1 500c	20 500	47.4	-11.12	-87.8	88.5	0.2211	-0.0965	262.7	13 469	35 575	
-1 509c	21 510	48.96	-17.54	-85.88	87.65	0.2161	-0.0946	258.4	14 471	35 576	
-1 520c	24 520	54.95	-39.58	-76.92	86.51	0.2007	-0.0872	242.7	15 477	35 579	Bm
-1 530c	26 530	59.72	-53.52	-69.14	87.43	0.1927	-0.0819	232.2	16 481	36 581	
-1 539c	27 540	62.25	-59.5	-64.91	88.06	0.1898	-0.0793	227.4	16 482	36 583	
-1 544c	28 545	64.83	-64.54	-60.56	88.5	0.1878	-0.0768	223.1	16 484	37 585	
-1 549c	29 550	67.41	-68.45	-56.16	88.55	0.1866	-0.0744	219.3	17 485	37 586	
-1 555c	31 555	72.52	-72.59	-47.37	86.68	0.1866	-0.0701	213.1	17 487	38 591	
-1 559c	31 560	72.52	-72.59	-47.37	86.68	0.1866	-0.0701	213.1	17 487	38 591	
380	770	95.41	0.0	0.0	0.0	0.2305	-0.0535	0.0			

TUB-test chart CE27; CIE (x_{10}, y_{10}) and chroma ($A^*_{i,10}, B^*_{i,10}$)
Ostwald optimal colours for illuminant P25; diagram for illuminant P25, $Y_{w,10}=100$

input: w/rgb/cmyk -> rgb

