

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

System TLS00	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.5	100.43	40	76.92	64.57	36.54	18.84	1.71	0.64	0.33	0.2126
	Y_d	1.0	1.0	0.0	97.14	96.92	103	-21.57	94.49	76.99	92.78	13.85	0.4193	0.5053	1.0472
LabC*h _{ab}	C_d	0.0	1.0	0.0	87.74	119.8	136	-86.18	83.21	35.76	71.52	11.91	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.12	196	-48.07	-14.12	53.81	78.74	106.98	0.2246	0.3287	0.8887
$Y_N = 0.01$	B_d	0.0	0.0	1.0	32.3	133.81	306	79.19	-107.85	18.05	7.22	95.06	0.15	0.06	0.0815
$L^*_d = 0.09$	M_d	1.0	0.0	1.0	60.32	115.54	328	98.23	-60.83	59.28	28.48	96.99	0.3209	0.1542	0.3214
	NO_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01	0.01	0.01	0.3322	0.3322	0.0001
Normalization:	WO_d	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21	88.6	96.48	0.3127	0.329	1.0
	NI_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01	0.01	0.01	0.3322	0.3322	0.0001
white $Y_W=89$	WI_d	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05	100.0	108.9	0.3127	0.329	1.1287
	ZI_d	0.18	0.18	0.18	49.5	0.01	0	0.01	0.0	17.11	18.0	19.6	0.3127	0.329	0.2032

Colorimetric "Adapted data (a)": Television Luminous System TLS00a for CIE lightness $L^*=00a$ of black and for CIE standard illuminant D65

System TLS00a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.5	100.43	40	76.92	64.57	36.54	18.84	1.71	0.64	0.33	0.2126
	Y_d	1.0	1.0	0.0	97.14	96.92	103	-21.57	94.49	76.99	92.78	13.85	0.4193	0.5053	1.0472
LabC*h _{ab}	C_d	0.0	1.0	0.0	87.74	119.8	136	-86.18	83.21	35.76	71.52	11.91	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.12	196	-48.07	-14.12	53.81	78.74	106.98	0.2246	0.3287	0.8887
$Y_N = 0.01$	B_d	0.0	0.0	1.0	32.3	133.81	306	79.19	-107.85	18.05	7.22	95.06	0.15	0.06	0.0815
$L^*_d = 0.09$	M_d	1.0	0.0	1.0	60.32	115.54	328	98.23	-60.83	59.28	28.48	96.99	0.3209	0.1542	0.3214
	NO_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01	0.01	0.01	0.3322	0.3322	0.0001
Normalization:	WO_d	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21	88.6	96.48	0.3127	0.329	1.0
	NI_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01	0.01	0.01	0.3322	0.3322	0.0001
white $Y_W=89$	WI_d	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05	100.0	108.9	0.3127	0.329	1.1287
	ZI_d	0.18	0.18	0.18	49.5	0.01	0	0.01	0.0	17.11	18.0	19.6	0.3127	0.329	0.2032

Colorimetric "Adapted data (b)": Television Luminous System TLS00b for CIE lightness $L^*=00b$ of black and for CIE standard illuminant D65

System TLS00b	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.5	100.43	40	76.92	64.57	36.54(=36.53+0.01)	18.84(=18.83+0.01)	1.71(=1.7+0.01)	0.64	0.33	0.2126
	Y_d	1.0	1.0	0.0	97.14	96.92	103	-21.57	94.49	76.99(=76.98+0.01)	92.78(=92.77+0.01)	13.85(=13.84+0.01)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.8	136	-86.18	83.21	35.76(=35.75+0.01)	71.52(=71.51+0.01)	11.91(=11.9+0.01)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.12	196	-48.07	-14.12	53.81(=53.8+0.01)	78.74(=78.73+0.01)	106.98(=106.97+0.01)	0.2246	0.3287	0.8887
$Y_N = 0.0$	B_d	0.0	0.0	1.0	32.3	133.81	306	79.19	-107.85	18.05(=18.04+0.01)	7.22(=7.21+0.01)	95.06(=95.05+0.01)	0.15	0.06	0.0815
$L^*_d = 0.0$	M_d	1.0	0.0	1.0	60.32	115.54	328	98.23	-60.83	59.28(=59.27+0.01)	28.48(=28.47+0.01)	96.99(=96.98+0.01)	0.3209	0.1542	0.3214
	NO_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
Normalization:	WO_d	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=84.2+0.01)	88.6(=88.59+0.01)	96.48(=96.47+0.01)	0.3127	0.329	1.0
	NI_d	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
white $Y_W=89$	WI_d	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=95.04+0.01)	100.0(=99.99+0.01)	108.9(=108.89+0.01)	0.3127	0.329	1.1287
	ZI_d	0.18	0.18	0.18	49.5	0.01	0	0.01	0.0	17.11(=17.1+0.01)	18.0(=17.99+0.01)	19.6(=19.59+0.01)	0.3127	0.329	0.2032

Colorimetric "Adapted data (b)": Television Luminous System TLS00b for CIE lightness $L^*=00$ of black and for CIE standard illuminant D65

System TLS00b	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.5	100.43	40	76.92	64.57	36.54(=36.53+0.01)	18.84(=18.83+0.01)	1.71(=1.7+0.01)	0.64	0.33	0.2126
$LabC^*h_{ab}$	Y_d	1.0	1.0	0.0	97.14	96.92	103	-21.57	94.49	76.99(=76.98+0.01)	92.78(=92.77+0.01)	13.85(=13.84+0.01)	0.4193	0.5053	1.0472
	G_d	0.0	1.0	0.0	87.74	119.8	136	-86.16	83.19	35.77(=35.75+0.01)	71.52(=71.51+0.01)	11.91(=11.9+0.01)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.12	196	-48.07	-14.12	53.81(=53.8+0.01)	78.74(=78.73+0.01)	106.98(=106.97+0.01)	0.2247	0.3287	0.8887
$Y_N = 0.0$	B_d	0.0	0.0	1.0	32.3	133.81	306	79.19	-107.85	18.05(=18.04+0.01)	7.22(=7.21+0.01)	95.06(=95.05+0.01)	0.15	0.06	0.0815
$L^*_N = 0.0$	M_d	1.0	0.0	1.0	60.32	115.54	328	98.23	-60.83	59.28(=59.27+0.01)	28.48(=28.47+0.01)	96.99(=96.98+0.01)	0.3209	0.1542	0.3214
	$N0_d$	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=84.2+0.01)	88.6(=88.57+0.01)	96.48(=96.47+0.01)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=95.04+0.01)	100.0(=99.99+0.01)	108.9(=108.89+0.01)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.5	0.01	0	0.01	0.0	17.11(=17.1+0.01)	18.0(=17.99+0.01)	19.6(=19.59+0.01)	0.3127	0.329	0.2032

Calculated colorimetric data: Television Luminous Systems TLSxxa for CIE lightness $L^*=00, 06, 11, 18$ of black and for CIE standard illuminant D65

System TLS00a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=36.55+0.0)	18.85(=18.85+0.0)	1.72(=1.72+0.0)	0.6399	0.33	0.2127
$LabC^*h_{ab}$	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=76.99+0.0)	92.78(=92.78+0.0)	13.86(=13.86+0.0)	0.4193	0.5053	1.0472
	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=35.77+0.0)	71.52(=71.52+0.0)	11.92(=11.92+0.0)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=53.81+0.0)	78.74(=78.74+0.0)	106.98(=106.98+0.0)	0.2247	0.3287	0.8887
$Y_N = 0.0$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=18.06+0.0)	7.23(=7.23+0.0)	95.06(=95.06+0.0)	0.15	0.0601	0.0816
$L^*_N = 0.0$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=59.28+0.0)	28.49(=28.49+0.0)	96.99(=96.99+0.0)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=0.02+0.0)	0.02(=0.02+0.0)	0.02(=0.02+0.0)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=84.21+0.0)	88.6(=88.6+0.0)	96.48(=96.48+0.0)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=0.02+0.0)	0.02(=0.02+0.0)	0.02(=0.02+0.0)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=95.05+0.0)	100.0(=100.0+0.0)	108.9(=108.9+0.0)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=17.12+0.0)	18.01(=18.01+0.0)	19.61(=19.61+0.0)	0.3127	0.329	0.2032
System TLS06a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=35.95+0.6)	18.85(=18.22+0.63)	1.72(=1.03+0.69)	0.6399	0.33	0.2127
$LabC^*h_{ab}$	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=76.39+0.6)	92.78(=92.15+0.63)	13.86(=13.17+0.69)	0.4193	0.5053	1.0472
	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=35.17+0.6)	71.52(=70.89+0.63)	11.92(=11.23+0.69)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=53.21+0.6)	78.74(=78.11+0.63)	106.98(=106.29+0.69)	0.2247	0.3287	0.8887
$Y_N = 0.63$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=17.46+0.6)	7.23(=6.6+0.63)	95.06(=94.37+0.69)	0.15	0.0601	0.0816
$L^*_N = 5.69$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=58.68+0.6)	28.49(=27.86+0.63)	96.99(=96.3+0.69)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=0.57+0.6)	0.02(=0.6+0.63)	0.02(=0.66+0.69)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=83.61+0.6)	88.6(=87.97+0.63)	96.48(=95.79+0.69)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=0.57+0.6)	0.02(=0.66+0.63)	0.02(=0.66+0.69)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=94.45+0.6)	100.0(=99.37+0.63)	108.9(=108.21+0.69)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=16.52+0.6)	18.01(=17.38+0.63)	19.61(=18.92+0.69)	0.3127	0.329	0.2032
System TLS11a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=35.35+1.2)	18.85(=17.59+1.26)	1.72(=0.35+1.37)	0.6399	0.33	0.2127
$LabC^*h_{ab}$	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=75.79+1.2)	92.78(=91.52+1.26)	13.86(=12.49+1.37)	0.4193	0.5053	1.0472
	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=34.57+1.2)	71.52(=70.26+1.26)	11.92(=10.55+1.37)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=52.62+1.2)	78.74(=77.48+1.26)	106.98(=105.61+1.37)	0.2247	0.3287	0.8887
$Y_N = 1.26$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=16.86+1.2)	7.23(=5.97+1.26)	95.06(=93.69+1.37)	0.15	0.0601	0.0816
$L^*_N = 11.0$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=58.09+1.2)	28.49(=27.23+1.26)	96.99(=95.62+1.37)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=1.17+1.2)	0.02(=1.23+1.26)	0.02(=1.34+1.37)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=83.01+1.2)	88.6(=87.34+1.26)	96.48(=95.11+1.37)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=1.17+1.2)	0.02(=1.23+1.26)	0.02(=1.34+1.37)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=93.85+1.2)	100.0(=98.74+1.26)	108.9(=107.53+1.37)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=15.92+1.2)	18.01(=16.75+1.26)	19.61(=18.24+1.37)	0.3127	0.329	0.2032
System TLS18a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=34.15+2.4)	18.85(=16.33+2.52)	1.72(=1.01+2.74)	0.6399	0.33	0.2127
$LabC^*h_{ab}$	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=74.6+2.4)	92.78(=90.26+2.52)	13.86(=11.11+2.74)	0.4193	0.5053	1.0472
	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=33.37+2.4)	71.52(=69.0+2.52)	11.92(=9.17+2.74)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=51.42+2.4)	78.74(=76.22+2.52)	106.98(=104.24+2.74)	0.2247	0.3287	0.8887
$Y_N = 2.52$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=15.66+2.4)	7.23(=4.71+2.52)	95.06(=92.32+2.74)	0.15	0.0601	0.0816
$L^*_N = 18.01$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=56.89+2.4)	28.49(=25.97+2.52)	96.99(=94.25+2.74)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=2.37+2.4)	0.02(=2.49+2.52)	0.02(=2.71+2.74)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=81.81+2.4)	88.6(=86.08+2.52)	96.48(=93.74+2.74)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=2.37+2.4)	0.02(=2.49+2.52)	0.02(=2.71+2.74)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=92.65+2.4)	100.0(=97.48+2.52)	108.9(=106.15+2.74)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=14.72+2.4)	18.01(=15.49+2.52)	19.61(=16.86+2.74)	0.3127	0.329	0.2032

AEH40-7N, Colorimetric data of Television Luminous System TLS00a for CIE standard illuminant D65; TLS00-System; Page: 2/3

Test chart AEH4; 8 basic colors $RYGCBMNW_d$ for $TLS00 \dots TLS70$ input: $rgb/cmy0/000n/w$
Calculation of $LabC^*h_{ab}$ data for sRGB display for 8 reflections for normalization white $Y_W=89$

Colorimetric "Adapted data (b)": Television Luminous System TLS00b for CIE lightness $L^*=00$ of black and for CIE standard illuminant D65

System TLS00b	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.5	100.43	40	76.92	64.57	36.54(=36.53+0.01)	18.84(=18.83+0.01)	1.71(=1.7+0.01)	0.64	0.33	0.2126
	Y_d	1.0	1.0	0.0	97.14	96.92	103	-21.57	94.49	76.99(=76.98+0.01)	92.78(=92.77+0.01)	13.85(=13.84+0.01)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.8	136	-86.18	83.21	35.76(=35.75+0.01)	71.52(=71.51+0.01)	11.91(=11.9+0.01)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.12	196	-48.07	-14.12	53.81(=53.8+0.01)	78.74(=78.73+0.01)	106.98(=106.97+0.01)	0.2247	0.3287	0.8887
$Y_N = 0.0$	B_d	0.0	0.0	1.0	32.3	133.81	306	79.19	-107.85	18.05(=18.04+0.01)	7.22(=7.21+0.01)	95.06(=95.05+0.01)	0.15	0.06	0.0815
$L^*_N = 0.0$	M_d	1.0	0.0	1.0	60.32	115.54	328	98.23	-60.83	59.28(=59.27+0.01)	28.48(=28.47+0.01)	96.99(=96.98+0.01)	0.3209	0.1542	0.3214
	$N0_d$	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=84.2+0.01)	88.6(=88.59+0.01)	96.48(=96.47+0.01)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.09	0.02	0	0.02	0.01	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.01(=0.0+0.01)	0.3322	0.3322	0.0001
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=95.04+0.01)	100.0(=99.99+0.01)	108.9(=108.89+0.01)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.5	0.01	0	0.01	0.0	17.11(=17.1+0.01)	18.0(=17.99+0.01)	19.6(=19.59+0.01)	0.3127	0.329	0.2032

Calculated colorimetric data: Television Luminous Systems TLSxxa for CIE lightness $L^*=27, 33, 52, 70$ of black and for CIE standard illuminant D65

System TLS27a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=31.76+4.79)	18.85(=13.81+5.04)	1.72(=-3.76+5.49)	0.6399	0.33	0.2127
	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=72.2+4.79)	92.78(=87.74+5.04)	13.86(=-8.37+5.49)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=30.98+4.79)	71.52(=66.48+5.04)	11.92(=6.43+5.49)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=49.02+4.79)	78.74(=73.7+5.04)	106.98(=-101.49+5.49)	0.2247	0.3287	0.8887
$Y_N = 5.04$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=13.27+4.79)	7.23(=-2.19+5.04)	95.06(=89.57+5.49)	0.15	0.0601	0.0816
$L^*_N = 26.85$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=54.49+4.79)	28.49(=23.45+5.04)	96.99(=91.5+5.49)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-4.76+4.79)	0.02(=-5.01+5.04)	0.02(=-5.46+5.49)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=79.42+4.79)	88.6(=83.56+5.04)	96.48(=90.99+5.49)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-4.76+4.79)	0.02(=-5.01+5.04)	0.02(=-5.46+5.49)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=90.26+4.79)	100.0(=94.96+5.04)	108.9(=103.41+5.49)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=12.33+4.79)	18.01(=12.97+5.04)	19.61(=14.12+5.49)	0.3127	0.329	0.2032
System TLS38a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=26.97+9.58)	18.85(=8.77+10.08)	1.72(=-9.25+10.98)	0.6399	0.33	0.2127
	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=67.41+9.58)	92.78(=82.7+10.08)	13.86(=-2.88+10.98)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=26.19+9.58)	71.52(=61.44+10.08)	11.92(=-0.94+10.98)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=44.23+9.58)	78.74(=68.66+10.08)	106.98(=-96.0+10.98)	0.2247	0.3287	0.8887
$Y_N = 10.08$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=8.48+9.58)	7.23(=-2.84+10.08)	95.06(=84.09+10.98)	0.15	0.0601	0.0816
$L^*_N = 37.99$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=49.7+9.58)	28.49(=18.41+10.08)	96.99(=86.01+10.98)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-9.55+9.58)	0.02(=-10.95+10.98)	0.02(=-10.95+10.98)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=74.63+9.58)	88.6(=78.52+10.08)	96.48(=85.5+10.98)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-9.55+9.58)	0.02(=-10.95+10.98)	0.02(=-10.95+10.98)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=85.47+9.58)	100.0(=89.92+10.08)	108.9(=97.92+10.98)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=7.54+9.58)	18.01(=7.93+10.08)	19.61(=-8.63+10.98)	0.3127	0.329	0.2032
System TLS52a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=17.39+19.16)	18.85(=-1.3+20.16)	1.72(=-20.22+21.95)	0.6399	0.33	0.2127
	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=57.83+19.16)	92.78(=72.62+20.16)	13.86(=-8.08+21.95)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=16.61+19.16)	71.52(=51.36+20.16)	11.92(=-10.02+21.95)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=34.65+19.16)	78.74(=58.58+20.16)	106.98(=-85.03+21.95)	0.2247	0.3287	0.8887
$Y_N = 20.16$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=-1.09+19.16)	7.23(=-12.92+20.16)	95.06(=73.11+21.95)	0.15	0.0601	0.0816
$L^*_N = 52.02$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=40.12+19.16)	28.49(=8.33+20.16)	96.99(=75.04+21.95)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-19.13+19.16)	0.02(=-20.13+20.16)	0.02(=-21.92+21.95)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=65.05+19.16)	88.6(=68.44+20.16)	96.48(=74.53+21.95)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-19.13+19.16)	0.02(=-20.13+20.16)	0.02(=-21.92+21.95)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=75.89+19.16)	100.0(=79.84+20.16)	108.9(=86.95+21.95)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=-2.03+19.16)	18.01(=-2.14+20.16)	19.61(=-2.33+21.95)	0.3127	0.329	0.2032
System TLS70a	Colour	r_d	g_d	b_d	L^*_d	$C^*_{ab,d}$	$h_{ab,d}$	a^*_d	b^*_d	X_d	Y_d	Z_d	x_d	y_d	$Y_d/88.59$
sRGB	R_d	1.0	0.0	0.0	50.51	100.37	40	76.9	64.49	36.55(=-1.76+38.32)	18.85(=-21.46+40.32)	1.72(=-42.17+43.9)	0.6399	0.33	0.2127
	Y_d	1.0	1.0	0.0	97.14	96.9	103	-21.57	94.47	76.99(=38.67+38.32)	92.78(=52.46+40.32)	13.86(=-30.03+43.9)	0.4193	0.5053	1.0472
LabC*h _{ab}	G_d	0.0	1.0	0.0	87.74	119.78	136	-86.16	83.19	35.77(=-2.54+38.32)	71.52(=31.2+40.32)	11.92(=-31.97+43.9)	0.3	0.6	0.8072
D65 reflection:	C_d	0.0	1.0	1.0	91.12	50.11	196	-48.07	-14.12	53.81(=15.49+38.32)	78.74(=38.42+40.32)	106.98(=-63.08+43.9)	0.2247	0.3287	0.8887
$Y_N = 40.32$	B_d	0.0	0.0	1.0	32.32	133.76	306	79.15	-107.82	18.06(=-20.25+38.32)	7.23(=-33.08+40.32)	95.06(=51.16+43.9)	0.15	0.0601	0.0816
$L^*_N = 69.7$	M_d	1.0	0.0	1.0	60.33	115.52	328	98.21	-60.82	59.28(=20.96+38.32)	28.49(=-11.82+40.32)	96.99(=53.09+43.9)	0.3209	0.1542	0.3215
	$N0_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-38.29+38.32)	0.02(=-40.29+40.32)	0.02(=-43.87+43.9)	0.3328	0.3328	0.0002
Normalization:	$W0_d$	1.0	1.0	1.0	95.41	0.01	0	0.0	0.0	84.21(=45.89+38.32)	88.6(=48.28+40.32)	96.48(=52.58+43.9)	0.3127	0.329	1.0
	$N1_d$	0.0	0.0	0.0	0.18	0.05	0	0.04	0.03	0.02(=-38.29+38.32)	0.02(=-40.29+40.32)	0.02(=-43.87+43.9)	0.3328	0.3328	0.0002
white $Y_W=89$	$W1_d$	1.13	1.13	1.13	100.0	0.0	0	0.0	0.0	95.05(=56.73+38.32)	100.0(=59.68+40.32)	108.9(=65.07+43.9)	0.3127	0.329	1.1287
	$Z1_d$	0.18	0.18	0.18	49.51	0.01	0	0.01	0.01	17.12(=-21.19+38.32)	18.01(=-22.3+40.32)	19.61(=-24.28+43.9)	0.3127	0.329	0.2032