

# Colorimetric data of Television Luminous System TLS18a for CIE lightness $L^*_N=18$ of black

System:	Color	$r=olv^*_1$	$g=olv^*_2$	$b=olv^*_3$	$L^*_a=LAB^*_{1a}$	$a^*_a=LAB^*_{2a}$	$b^*_a=LAB^*_{3a}$	$C^*_{ab,a}=LAB^*_{ab,a}$	$h_{ab,a}$	$X_a=XYZ_{1a}$	$Y_a=XYZ_{2a}$	$Z_a=XYZ_{3a}$	$x_a$	$y_a$	$Y_a/88.59$
TLS18a	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
Projector:	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
LCD	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
Reflection:	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
$Y_N = 2.52$	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
$L^*_N = 18.01$	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	46.3	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

$$\bar{n} = 88.59 / (88.59 - 0.28) = 1.003$$