

# Colorimetric data of Television Luminous System TLS00a for CIE lightness $L^*_N=00$ of black

System:

TLS00a

Monitor:

CRT

Reflection:

$Y_N = 0.0$

$L^*_N = 0.0$

| Color   | $r=0.0$ | $g=0.0$ | $b=0.0$ | $L^*_N=LAB^*_{1a}$ | $a^*=LAB^*_{2a}$ | $b^*=LAB^*_{3a}$ | $C^*_{ab,a}=LAB^*_{ab,a}h_{ab,a}$ | $X_N=XYZ_{1a}$ | $Y_N=XYZ_{2a}$ | $Z_N=XYZ_{3a}$ | $X_a$ | $Y_a$  | $Y_N/88.59$ |        |
|---------|---------|---------|---------|--------------------|------------------|------------------|-----------------------------------|----------------|----------------|----------------|-------|--------|-------------|--------|
| 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     | 70.98              | 40.5             | 84.63            | 67.7                              | 61             | 49.3           | 41.72          | 4.402 | 0.538  | 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                            | 139            | 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          | 9.9   | 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            | 95.52                             | 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     | 61.33              | -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            | -91.18           | 106.06                            | 299            | 16.86          | 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 | 0.1328      | 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   | 56.25              | 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 o00w | 0.0     | 0.0     | 0.0     | 0.0                | 0.0              | 0.0              | 0.0                               | 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              | 3.3              | 2.01             | 5.37                              | 37             | 21.52          | 22.82          | 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 |

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

TUB-test chart KE46; Hue circle and colorimetric data  
Measurement of CRT display and for  $L_r = 0.05$

input:  $olv^* \text{ setrgbcolor}$   
output: no change compared to input