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S: Output Linearization (OL) data BE39/10L/L39E00SP.DAT in Distiller Startup (S) Directory

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39/ Version 2.0, io=0,0?

The figure shows a 3D coordinate system with axes *X*, *Y*, and *Z*. The *Y*-axis is vertical, pointing upwards. The *X*-axis is horizontal, pointing right. The *Z*-axis is diagonal, pointing towards the viewer. A yellow square at the top center is labeled $\Delta E^* = +4.97$. A red square on the right is labeled $\Delta E^* = -3.87$. A blue square on the left is labeled $\Delta E^* = -2.61$. A magenta square at the bottom right is labeled $\Delta E^* = -6.26$. A black square at the bottom left is labeled $\Delta E^* = -7.68$. A green square at the bottom center is labeled $\Delta E^* = +6.17$. A black dot at the origin is labeled $\Delta E^* = +1.97$. The text "CMYOLV* default color space" is at the top right. The text "B* = LAB₃*" is above the *Z*-axis. The text "A* = LAB₂*" is to the right of the *X*-axis. The text "W" is at the center of the *Z*-axis. The text "O" is at the top right of the *Z*-axis. The text "M" is at the right end of the *X*-axis. The text "V" is at the bottom right of the *Z*-axis. The text "CIELAB" is at the bottom left. The text "LAB* = CIELAB" is above it. The text "Absolute Space" is above that. The text "hexagon" is at the top left. The text "CMYOLV" is at the top left. The text "Television TLS00 colour names of SO/IEC 15775 three basic colors OLV or CMY three mixed colors CMY or OLV" is at the bottom left.

The figure shows a 3D coordinate system representing different color spaces. The vertical axis is $B^* = LAB_3^*$. The horizontal axes are $A^* = LAB_2^*$ and $C^* = CIELAB$.

- CMYOLV hexagon:** A hexagonal arrangement of colors. The top vertex is yellow ($\Delta E^* = 4.81$). The bottom-left vertex is green ($\Delta E^* = -5.98$). The bottom-right vertex is magenta ($\Delta E^* = -6.1$). The left vertex is cyan ($\Delta E^* = -2.55$). The right vertex is red ($\Delta E^* = -5.48$). The top-left vertex is black.
- Absolute Space:** Labeled with L at the top.
- LAB* = CIELAB:** Labeled with C at the bottom-left.
- CMYOLV* default color space:** Labeled with O at the top-right.
- Color points:** Yellow ($\Delta E^* = 4.81$), Green ($\Delta E^* = -5.98$), Magenta ($\Delta E^* = -6.1$), Cyan ($\Delta E^* = -2.55$), Red ($\Delta E^* = -5.48$), Black, and White.
- Television TLS10:** Labeled with M at the bottom-right.
- Colour names of SO/IEC 15775:** Labeled with V at the bottom-left.
- Three basic colors OLV or CMY:** Labeled with W at the center.
- Three mixed colors CMY or OLV:** Labeled with $A^* = LAB_2^*$ at the right.

The figure illustrates the color space relationships and the mapping of color names from the Television TLS27 system. It features:

- CMYOLV hexagon:** A hexagonal color space with vertices labeled with color names: **Absolute L** (top), **Y** (top-right), **O** (right), **M** (bottom-right), **V** (bottom), and **C** (left).
- CMYOLV***: A color space where each vertex has a color difference value (ΔE^*) relative to the center: **Absolute L** ($\Delta E^* = 4.48$), **Y** ($\Delta E^* = 4.38$), **O** ($\Delta E^* = 4.75$), **M** ($\Delta E^* = 5.64$), **V** ($\Delta E^* = 6.32$), and **C** ($\Delta E^* = 2.42$).
- LAB***: A color space with axes $B^* = LAB_3^*$ (vertical) and $A^* = LAB_2^*$ (horizontal). The **Absolute L** vertex is at the origin.
- CIELAB**: A color space with axes C (horizontal) and W (vertical). The **Absolute L** vertex is at the origin.
- Television TLS27**: A color space represented by a shaded gray area containing the color names: **colour names of SO/IEC 15755**, **three basic colors OLV or CMY**, and **three mixed colors CMY or OLV**.
- E300-5 TLS27 in plane A^*B^* of LAB^*** : A plot showing the distribution of the three basic and three mixed colors within the A^*B^* plane of the LAB^* space.

Absolute Space $LAB^* = CIELAB$

CMYOLV* default color space

$B^* = LAB_3^*$

$\Delta E^* = -3.12$

$\Delta E^* = 3.99$

$\Delta E^* = 3.09$

$\Delta E^* = -1.89$

$\Delta E^* = -4.12$

$\Delta E^* = 4.11$

CMYOLV*
hexagon

Television TLS52
colour names of
SO/IEC 15775
three basic colors OLV or CMY
three mixed colors CMY or OLV

The diagram illustrates the CMYOLV* color space and its relationship to the LAB* and CIELAB color spaces. The CMYOLV* space is a hexagon with vertices labeled C, M, Y, O, V, and W. The LAB* space is a cube with vertices labeled L, A*, B*. The CIELAB space is also a cube with vertices labeled C, M, Y, O, V, and W. The diagram shows the conversion between these spaces using color difference values (ΔE*). The vertices of the hexagon are connected by dashed lines to the corresponding vertices of the cubes. The color difference values are as follows:

- CMYOLV* to LAB*:
 - C to L: $\Delta E^* = -5.8$
 - M to A*: $\Delta E^* = -4.66$
 - Y to B*: $\Delta E^* = -5.18$
 - O to CIELAB: $\Delta E^* = -2.51$
 - V to M: $\Delta E^* = -5.7$
 - W to V: $\Delta E^* = -6.92$
- CMYOLV* to CIELAB:
 - C to CIELAB: $\Delta E^* = -2.51$
 - M to M: $\Delta E^* = -6.92$
 - Y to Y: $\Delta E^* = -4.66$
 - O to O: $\Delta E^* = -5.18$
 - V to V: $\Delta E^* = -5.7$
 - W to W: $\Delta E^* = -5.8$

CMYOLV $cmyolv^*$ default color space

complementary
hue planes

colour names of
ISO/IEC 15775

LS27: Television Luminous System
black lightness $L^* = 27$

key sample difference = $\Delta L^* = 4.57$
lightness range $L_{\text{max}}^* - L_{\text{min}}^* = 95.41 - 26.85 = 68.56$
 $C^* \times C^* = 78.78 \times 44.57 = 123.34$
television colour gamut $= [68.56 \times 123.34] / [95.41 \times 148.5] = 0.6$

$L^* = LAB_z$
 $\Delta E^* = -2.42$
 $\Delta E^* = +4.72$
 $C^* = LAB_r$
 $C_{ab} = LAB_g$
 O

CMYOLV $cmyolv^*$ default color space

complementary
hue planes

colour names of
ISO/IEC 15755

$L^* = LAB_z^*$

$C^* = LAB_r^*$

$b^* = LAB_b^*$

$a^* = LAB_a^*$

$\Delta E^* = 1.89$

$\Delta E^* = -3.09$

$L^* = 100$

$a^* = -1.89$

$b^* = 52$

$L^* = 100$

$a^* = -3.09$

$b^* = 52$

black lightness $L^* = 52$

sample difference $\Delta E^* = 4.78$, luminance contrast $Y_w / Y_n = 4.44$

chromatic range $C_w / C_n = 95.41 / 52.02 = 1.84$, chromatic range $C_w / C_n = 49.7 / 34.76 = 84.47$

relative colour gamut green $[43.39 : 84.47] / [195.41 : 148.5] = 0.26$

LS52: Television Luminous System

CMYOLV $cmyolv^*$ default color space

complementary hue planes

colour names of SO/IEC 15775

LTS06: Television Luminous System

Black lightness $L^* = 06$

grey sample difference = $\Delta L^* = 5.98$

brightness range $L_w - L_n = 95.41 - 5.69 = 89.72$

chroma range $C^*a + C^*b = 96.28 + 47.65 = 143.93$

relative colour gamut $g_c = [89.27 * 143.93 / (95.41 * 148.5)] = 0.91$

E391-2, LTS06 in hue plane $C-O$ of LAB^*

CMYOLV *cmyolv** default color space

complementary hue planes

$L^* = LAB_z^*$

$AE = -2.51$

$AE = -5.18$

$C^*_{ab} = LAB_r^*$

colour names of SO/IEC 15775

LMS18: Television Luminous System

Black lightness $L^ = 18$*

grey point difference = $AL^* = 5.16$

luminance contrast $Y_w / Y_n = 35.56$

brightness range $L^*_{w,n} - L^*_{n,w} = 95.41 - 18.01 = 77.4$

chroma range $C^*_{O,n} - C^*_{n,O} = 87.29 + 46.32 = 133.6$

relative colour gamut $grel = [77.4 * 133.6] / (95.41 * 148.5) = 0.73$

The figure consists of two parts. The top part is a diagram of the CMYOLV color space, which is a hexagonal prism. It shows three primary planes (CMY, OLV, and their complementaries) and three secondary planes (MOL, YOL, and LVL). The bottom part is a 2D diagram of the L* color space, which is a square. The horizontal axis is labeled $L^* = LAB_z$ and the vertical axis is labeled $C_{ab}^* = LAB_r$. A point in the L* space is projected onto the L* axis at 70, the C_{ab}^* axis, and the L^* axis. The distance from the origin to the point is labeled $\Delta E^* = 1.25$. The angle between the C_{ab}^* axis and the line to the point is labeled $\Delta E^* = 1.82$.

BAM-test chart no. BE39; AB* and CL* of LAB* (CIELAB)
Colour gamut for 8 different contrast ratios; TLSxx

input: cmy0* / 000n* setcmykcolor
output: *Startup (S) data dependend*