

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 24/360 = 0.066$

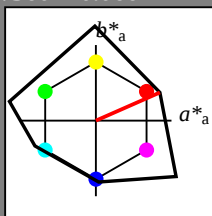
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 -0.01
LAB*LABa 95.41 0.0 0.0
LAB*LABb 95.41 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*LABa 74.31 0.02 0.0
LAB*LABb 74.31 0.02 0.0

relative CIELAB lab*
lab*lab 0.857 0.229 0.101
lab*tch 0.875 0.225 0.066
lab*nch 0.0 0.25 0.066
relative Natural Colour (NC)
lab*trj 0.857 0.225 -0.005
lab*trc 0.875 0.225 0.066
lab*ncc 0.0 0.25 0.066

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*LABa 53.21 0.04 0.0
LAB*LABb 53.21 0.04 0.0

relative CIELAB lab*
lab*lab 0.607 0.229 0.101
lab*tch 0.625 0.225 0.066
lab*nch 0.25 0.25 0.066
relative Natural Colour (NC)
lab*trj 0.607 0.225 -0.005
lab*trc 0.625 0.225 0.066
lab*ncc 0.25 0.25 0.066

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 0.0
LAB*LABa 32.11 0.0 0.0
LAB*LABb 32.11 0.0 0.0

relative CIELAB lab*
lab*lab 0.357 0.229 0.101
lab*tch 0.375 0.225 0.066
lab*nch 0.25 0.25 0.066
relative Natural Colour (NC)
lab*trj 0.357 0.225 -0.005
lab*trc 0.375 0.225 0.066
lab*ncc 0.25 0.25 0.066

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*LABa 11.01 0.07 0.01
LAB*LABb 11.01 0.07 0.01

relative CIELAB lab*
lab*lab 0.107 0.229 0.101
lab*tch 0.125 0.225 0.066
lab*nch 0.25 0.25 0.066
relative Natural Colour (NC)
lab*trj 0.107 0.225 -0.005
lab*trc 0.125 0.225 0.066
lab*ncc 0.25 0.25 0.066

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.01
LAB*LABa 0.01 0.01 0.01
LAB*LABb 0.01 0.01 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.01
LAB*LABa 0.01 0.01 0.01
LAB*LABb 0.01 0.01 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.01
LAB*LABa 0.01 0.01 0.01
LAB*LABb 0.01 0.01 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.01
LAB*LABa 0.01 0.01 0.01
LAB*LABb 0.01 0.01 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.01 0.01 0.01
LAB*LABa 0.01 0.01 0.01
LAB*LABb 0.01 0.01 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 1.0 0.5 0.5 (1.0)
cmyn3* 0.0 0.5 0.5 (0.0)
olvi4* 1.0 0.5 0.5 (1.0)
cmyn4* 0.0 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 71.27 42.31 18.62
LAB*LABa 71.27 42.31 18.62
LAB*LABb 71.27 42.31 18.62

relative CIELAB lab*
lab*lab 0.714 0.458 0.201
lab*tch 0.75 0.5 0.066
lab*nch 0.0 0.5 0.066
relative Natural Colour (NC)
lab*trj 0.714 0.5 -0.011
lab*trc 0.75 0.5 0.066
lab*ncc 0.0 0.5 0.066

relative Inform. Technology (IT)
olvi3* 0.75 0.25 0.25 (1.0)
cmyn3* 0.25 0.75 0.75 (0.0)
olvi4* 1.0 0.5 0.5 (0.0)
cmyn4* 0.0 0.5 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 50.17 42.37 18.64
LAB*LABa 50.17 42.37 18.64
LAB*LABb 50.17 42.37 18.64

relative CIELAB lab*
lab*lab 0.571 0.229 0.101
lab*tch 0.625 0.225 0.066
lab*nch 0.25 0.25 0.066
relative Natural Colour (NC)
lab*trj 0.571 0.225 -0.011
lab*trc 0.625 0.225 0.066
lab*ncc 0.25 0.25 0.066

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.0 (0.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 38.11 63.53 27.95
LAB*LABa 38.11 63.53 27.95
LAB*LABb 38.11 63.53 27.95

relative CIELAB lab*
lab*lab 0.321 0.686 0.302
lab*tch 0.375 0.75 0.066
lab*nch 0.0 0.75 0.066
relative Natural Colour (NC)
lab*trj 0.321 0.75 -0.017
lab*trc 0.375 0.75 0.066
lab*ncc 0.0 0.75 0.066

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.0 (0.0)
cmyn3* 0.25 0.0 0.0 (0.0)
olvi4* 1.0 0.25 0.25 (0.0)
cmyn4* 0.0 0.25 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 29.07 42.38 18.64
LAB*LABa 29.07 42.38 18.64
LAB*LABb 29.07 42.38 18.64

relative CIELAB lab*
lab*lab 0.214 0.458 0.201
lab*tch 0.25 0.5 0.066
lab*nch 0.0 0.5 0.066
relative Natural Colour (NC)
lab*trj 0.214 0.5 -0.011
lab*trc 0.25 0.5 0.066
lab*ncc 0.0 0.5 0.066

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
LAB*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 30/360 = 0.083$

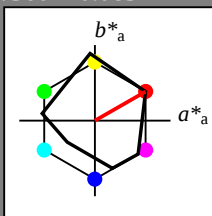
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 50 77 30

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*LABa 95.41 0.0 0.0
LAB*LABb 95.41 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.06 -0.5 3.44
LAB*LABa 76.06 0.0 0.0
LAB*LABb 76.06 0.0 0.0

relative CIELAB lab*
lab*lab 0.852 0.217 0.124
lab*tch 0.875 0.225 0.083
lab*nch 0.0 0.25 0.083
relative Natural Colour (NC)
lab*trj 0.852 0.248 0.03
lab*trc 0.875 0.225 0.019
lab*ncc 0.0 0.25 0.07

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 56.71 0.23 2.14
LAB*LABa 56.71 0.23 2.14
LAB*LABb 56.71 0.23 2.14

relative CIELAB lab*
lab*lab 0.602 0.248 0.03
lab*tch 0.625 0.25 0.019
lab*nch 0.5 0.5 0.0
relative Natural Colour (NC)
lab*trj 0.602 0.248 0.03
lab*trc 0.625 0.25 0.019
lab*ncc 0.5 0.5 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.0 0.0
LAB*LABa 32.11 0.0 0.0
LAB*LABb 32.11 0.0 0.0

relative CIELAB lab*
lab*lab 0.352 0.217 0.124
lab*tch 0.375 0.225 0.083
lab*nch 0.25 0.25 0.083
relative Natural Colour (NC)
lab*trj 0.352 0.248 0.03
lab*trc 0.375 0.225 0.019
lab*ncc 0.25 0.25 0.07

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
LAB*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0
LAB*LABb 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (0.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*LABa 0.0 0.0 0.0

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$

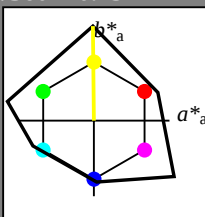
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



$u^*_{rel} = 149$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 -0.01
LAB*Lab 95.41 0.0 0.0
LAB*TCa 99.99 0.01 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.02 0.0
LAB*TCa 75.00 0.01 0.0

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.75 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*Lab 53.21 0.04 0.0
LAB*TCa 50.00 0.01 0.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (1.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.08 0.0
LAB*Lab 32.11 0.08 0.0
LAB*TCa 25.00 0.01 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 1.0$

NCS11; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.5 (1.0)
cmyn3* 0.0 0.0 0.5 (0.0)
olvi4* 1.0 1.0 0.5 (1.0)
cmyn4* 0.0 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 93.38 -0.62 62.5
LAB*Lab 93.38 -0.62 62.5
LAB*TCa 93.38 -0.62 62.5

relative CIELAB lab*
lab*lab 0.976 0.004 0.5
lab*tch 0.75 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*trj 0.976 0.02 0.493
lab*tce 0.75 0.5 0.252
lab*nce 0.0 0.5 0.252

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 (1.0)
cmyn4* 0.0 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 72.29 -0.66 62.52
LAB*Lab 72.29 -0.66 62.52
LAB*TCa 72.29 -0.66 62.52

relative CIELAB lab*
lab*lab 0.726 0.02 0.5
lab*tch 0.726 0.02 0.5
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*trj 0.726 0.02 0.5
lab*tce 0.726 0.02 0.5
lab*nce 0.0 0.5 0.252

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (1.0)
cmyn3* 0.5 0.5 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 51.18 -0.59 62.51
LAB*Lab 51.18 -0.59 62.51
LAB*TCa 51.18 -0.59 62.51

relative CIELAB lab*
lab*lab 0.476 -0.004 0.5
lab*tch 0.25 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*trj 0.476 0.02 0.493
lab*tce 0.25 0.5 0.252
lab*nce 0.0 0.5 0.252

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 31.09 -0.31 62.5
LAB*Lab 31.09 -0.31 62.5
LAB*TCa 31.09 -0.31 62.5

relative CIELAB lab*
lab*lab 0.238 -0.002 0.25
lab*tch 0.125 0.25 0.252
lab*nch 0.0 0.25 0.252
relative Natural Colour (NC)
lab*trj 0.238 0.02 0.493
lab*tce 0.125 0.25 0.252
lab*nce 0.0 0.25 0.252

$n^* = 0.50$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 92.37 -0.94 93.76
LAB*Lab 92.37 -0.94 93.76
LAB*TCa 92.37 -0.94 93.76

relative CIELAB lab*
lab*lab 0.964 -0.007 0.75
lab*tch 0.625 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*trj 0.964 0.031 0.749
lab*tce 0.625 0.75 0.252
lab*nce 0.0 0.75 0.252

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 71.28 -0.92 93.76
LAB*Lab 71.28 -0.92 93.76
LAB*TCa 71.28 -0.92 93.76

relative CIELAB lab*
lab*lab 0.714 -0.007 0.75
lab*tch 0.375 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*trj 0.714 0.031 0.749
lab*tce 0.375 0.75 0.252
lab*nce 0.0 0.75 0.252

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (1.0)
cmyn3* 0.5 0.5 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 50.00 -0.009 1.0
LAB*Lab 50.00 -0.009 1.0
LAB*TCa 50.00 -0.009 1.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.0 (1.0)
cmyn3* 0.75 0.75 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 25.00 0.01 0.0
LAB*Lab 25.00 0.01 0.0
LAB*TCa 25.00 0.01 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

$n^* = 0.25$

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 1.0 1.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.5 0.46
LAB*Lab 18.02 0.5 0.46
LAB*TCa 18.02 0.5 0.46

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 1.0 1.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*Lab 0.0 0.0 0.0
LAB*TCa 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 1.0 1.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*Lab 0.0 0.0 0.0
LAB*TCa 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 1.0 1.0 0.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 0.0 0.0
LAB*Lab 0.0 0.0 0.0
LAB*TCa 0.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 0.00$

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 94/360 = 0.261$

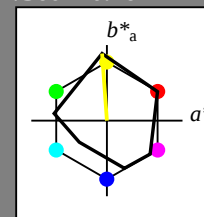
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 91 89 94

rgb*Ma: 1.0 1.0 0.0

triangle lightness t^*



$u^*_{rel} = 91$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*Lab 95.41 0.0 0.0
LAB*TCa 99.99 0.01 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*Lab 76.06 -0.6 3.44
LAB*TCa 76.06 -0.6 3.44

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.75 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 56.71 0.23 2.14
LAB*Lab 56.71 0.23 2.14
LAB*TCa 56.71 0.23 2.14

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 37.36 -0.83 93.76
LAB*Lab 37.36 -0.83 93.76
LAB*TCa 37.36 -0.83 93.76

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.5 0.46
LAB*Lab 18.02 0.5 0.46
LAB*TCa 18.02 0.5 0.46

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 1.0$

MRS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 0.5 (1.0)
cmyn3* 0.0 0.0 0.5 (0.0)
olvi4* 1.0 1.0 0.5 (1.0)
cmyn4* 0.0 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 93.05 -4.11 48.97
LAB*Lab 93.05 -4.11 48.97
LAB*TCa 93.05 -4.11 48.97

relative CIELAB lab*
lab*lab 0.969 -0.035 0.499
lab*tch 0.75 0.5 0.261
lab*nch 0.0 0.5 0.261
relative Natural Colour (NC)
lab*trj 0.969 -0.023 0.499
lab*tce 0.75 0.5 0.261
lab*nce 0.0 0.5 0.261

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.25 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.5 (1.0)
cmyn4* 0.0 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 73.7 -3.74 47.67
LAB*Lab 73.7 -3.74 47.67
LAB*TCa 73.7 -3.74 47.67

relative CIELAB lab*
lab*lab 0.72 -0.023 0.499
lab*tch 0.72 -0.023 0.499
lab*nch 0.0 0.5 0.261
relative Natural Colour (NC)
lab*trj 0.72 -0.023 0.499
lab*tce 0.72 -0.023 0.499
lab*nce 0.0 0.5 0.261

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.0 (1.0)
cmyn3* 0.5 0.5 0.0 (1.0)
olvi4* 1.0 1.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (1.0)
standard and adapted CIELAB
LAB*LAB 50.00 -0.009 1.0
LAB*Lab 50.00 -0.009 1.0
LAB*TCa 50.00 -0.009 1.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 167/360 = 0.465$

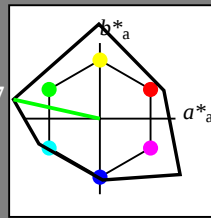
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 63 117 167

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 149$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 -0.01
LAB*LABa 95.41 0.0 0.0
LAB*LABb 95.41 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*LABa 74.31 0.02 0.0
LAB*LABb 74.31 0.02 0.0

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.75 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*LABa 53.21 0.04 0.0
LAB*LABb 53.21 0.04 0.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*LABa 32.11 0.07 0.01
LAB*LABb 32.11 0.07 0.01

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*LABa 11.01 0.07 0.01
LAB*LABb 11.01 0.07 0.01

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 1.0$

NCS11; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

% Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 0.5 1.0 0.5 (1.0)
cmyn3* 0.5 0.0 0.5 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 79.24 -57.12 12.67
LAB*LABa 79.24 -57.12 12.67
LAB*LABb 79.24 -57.12 12.67

relative CIELAB lab*
lab*lab 0.808 -0.487 0.108
lab*tch 0.75 0.5 0.465
lab*nch 0.0 0.5 0.465
relative Natural Colour (NC)
lab*trj 0.808 -0.487 -0.037
lab*tce 0.75 0.5 0.512
lab*nce 0.0 0.5 0.604

relative Inform. Technology (IT)
olvi3* 0.25 0.75 0.25 (1.0)
cmyn3* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 58.14 -57.09 12.68
LAB*LABa 58.14 -57.09 12.68
LAB*LABb 58.14 -57.09 12.68

relative CIELAB lab*
lab*lab 0.598 -0.487 0.108
lab*tch 0.5 0.5 0.465
lab*nch 0.0 0.5 0.465
relative Natural Colour (NC)
lab*trj 0.598 -0.487 -0.037
lab*tce 0.5 0.5 0.512
lab*nce 0.0 0.5 0.604

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 0.5 1.0 0.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 37.04 -57.07 12.69
LAB*LABa 37.04 -57.07 12.69
LAB*LABb 37.04 -57.07 12.69

relative CIELAB lab*
lab*lab 0.463 -0.731 0.162
lab*tch 0.375 0.5 0.465
lab*nch 0.0 0.5 0.465
relative Natural Colour (NC)
lab*trj 0.463 -0.731 -0.055
lab*tce 0.375 0.5 0.512
lab*nce 0.0 0.5 0.604

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 0.5 1.0 0.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
LAB*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 0.00$

$n^* = 0.25$

blackness n^*

$n^* = 0.50$

chromaticness c^*

0.25

0.50

0.75

1.00

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 172/360 = 0.479$

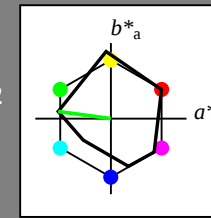
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 52 70 172

rgb*Ma: 0.0 1.0 0.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 91$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*LABa 95.41 -0.97 4.75
LAB*LABb 95.41 -0.97 4.75

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*LABa 76.06 -0.6 3.44
LAB*LABb 76.06 -0.6 3.44

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*tce 0.75 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 56.71 -0.23 2.14
LAB*LABa 56.71 -0.23 2.14
LAB*LABb 56.71 -0.23 2.14

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*tce 0.5 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 37.06 -0.13 0.518
LAB*LABa 37.06 -0.13 0.518
LAB*LABb 37.06 -0.13 0.518

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
LAB*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 1.0$

chromaticness c^*

0.25

0.50

0.75

1.00

MRS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

% Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

relative Inform. Technology (IT)
olvi3* 0.5 1.0 0.5 (1.0)
cmyn3* 0.5 0.0 0.5 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 73.75 -35.42 8.02
LAB*LABa 73.75 -35.42 8.02
LAB*LABb 73.75 -35.42 8.02

relative CIELAB lab*
lab*lab 0.72 -0.494 0.067
lab*tch 0.75 0.5 0.479
lab*nch 0.0 0.5 0.479
relative Natural Colour (NC)
lab*trj 0.72 -0.494 -0.056
lab*tce 0.75 0.5 0.518
lab*nce 0.0 0.5 0.607

relative Inform. Technology (IT)
olvi3* 0.25 0.75 0.25 (1.0)
cmyn3* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 (1.0)
cmyn4* 0.5 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 54.41 -34.80 4.72
LAB*LABa 54.41 -34.80 4.72
LAB*LABb 54.41 -34.80 4.72

relative CIELAB lab*
lab*lab 0.72 -0.494 0.067
lab*tch 0.75 0.5 0.479
lab*nch 0.0 0.5 0.479
relative Natural Colour (NC)
lab*trj 0.72 -0.494 -0.056
lab*tce 0.75 0.5 0.518
lab*nce 0.0 0.5 0.607

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 0.5 1.0 0.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 35.06 -0.13 0.518
LAB*LABa 35.06 -0.13 0.518
LAB*LABb 35.06 -0.13 0.518

relative CIELAB lab*
lab*lab 0.22 -0.494 0.067
lab*tch 0.25 0.5 0.479
lab*nch 0.0 0.5 0.479
relative Natural Colour (NC)
lab*trj 0.22 -0.494 -0.056
lab*tce 0.25 0.5 0.518
lab*nce 0.0 0.5 0.607

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 0.5 1.0 0.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.02 0.0 0.0
LAB*LABa 18.02 0.0 0.0
LAB*LABb 18.02 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

$n^* = 0.00$

chromaticness c^*

0.25

0.50

0.75

1.00

TE580-7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

BAM-test chart TE58; Colorimetric systems NCS11a & MRS18 input: $olv^* setrgbcolor$

D65: 2 coordinate data of 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 273/360 = 0.757$

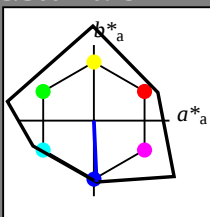
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 -0.01
LAB*LABa 95.41 0.0 0.0
LAB*TCHa 99.99 0.01 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.75 0.75 1.0 (1.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 83.81 0.93 -20.28
LAB*LABa 83.81 0.91 -20.28
LAB*TCHa 97.5 20.31 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 1.0 (1.0)
cmyn3* 0.5 0.5 0.0 (0.0)
olvi4* 0.5 0.5 1.0 (1.0)
cmyn4* 0.5 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 72.21 1.85 -40.58
LAB*LABa 72.21 1.82 -40.58
LAB*TCHa 75.0 40.63 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.25 0.25 1.0 (1.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 60.61 2.77 -60.88
LAB*LABa 60.61 2.74 -60.88
LAB*TCHa 62.5 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*LABa 74.31 0.0 0.0
LAB*TCHa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 62.71 0.95 -20.28
LAB*LABa 62.71 0.91 -20.29
LAB*TCHa 62.5 20.32 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 51.11 1.87 -40.58
LAB*LABa 51.11 1.82 -40.59
LAB*TCHa 50.0 40.64 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 30.51 2.79 -60.87
LAB*LABa 30.51 2.74 -60.88
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*LABa 53.21 0.0 0.0
LAB*TCHa 50.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 41.6 0.96 -20.28
LAB*LABa 41.6 0.91 -20.29
LAB*TCHa 37.5 20.32 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 18.0 2.79 -60.86
LAB*LABa 18.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 30.51 2.79 -60.87
LAB*LABa 30.51 2.74 -60.88
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*LABa 32.11 0.0 0.0
LAB*TCHa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 20.5 0.91 -20.28
LAB*LABa 20.5 0.86 -20.26
LAB*TCHa 12.5 20.31 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 1.07 0.01
LAB*LABa 11.01 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 11.01 1.07 0.01
LAB*LABa 11.01 0.0 0.0
LAB*TCHa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 0.0 2.79 -60.86
LAB*LABa 0.0 2.74 -60.87
LAB*TCHa 37.51 60.95 272.57

TE580-7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 290/360 = 0.806$

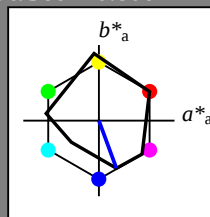
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 37 67 290

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*LABa 95.41 0.0 0.0
LAB*TCHa 99.99 0.01 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.75 0.75 1.0 (1.0)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 80.72 5.1 -11.98
LAB*LABa 80.72 5.79 -15.75
LAB*TCHa 87.5 16.79 290.19

relative Inform. Technology (IT)
olvi3* 0.5 0.5 1.0 (1.0)
cmyn3* 0.5 0.5 0.0 (0.0)
olvi4* 0.5 0.5 1.0 (1.0)
cmyn4* 0.5 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 66.03 11.17 -28.74
LAB*LABa 66.03 11.59 -31.51
LAB*TCHa 75.0 33.59 290.19

relative Inform. Technology (IT)
olvi3* 0.25 0.25 1.0 (1.0)
cmyn3* 0.25 0.25 0.0 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 51.34 17.25 -45.49
LAB*LABa 51.34 17.39 -47.28
LAB*TCHa 62.5 50.38 290.19

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 0.0 0.0 1.0 (0.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 36.65 23.19 -63.05
LAB*LABa 36.65 23.18 -63.03
LAB*TCHa 50.0 67.17 290.19

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*LABa 76.06 0.0 0.0
LAB*TCHa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 0.75 0.75 1.0 (0.75)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 61.37 5.47 -13.29
LAB*LABa 61.37 5.8 -15.75
LAB*TCHa 62.5 16.8 290.19

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 0.25 0.25 1.0 (0.25)
cmyn4* 0.25 0.25 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 46.

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 325/360 = 0.903$

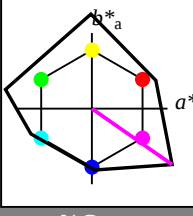
lab^*tch and lab^*nch

D65: hue B50R

LCH*Ma: 44 129 325

rgb*Ma: 1.0 0.0 1.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
olvi3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.0	0.0	(0.0)
olvi4*	0.0	0.0	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	95.41	0.0	-0.01
LAB*LABa	95.41	0.0	0.0
LAB*LABb	99.99	0.01	0.0

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	0.0
lab*nch	0.0	0.0	0.0
lab*trj	1.0	0.0	0.0
lab*tce	1.0	0.0	0.0
lab*nce	0.0	0.0	0.0

relative Inform. Technology (IT)

olvi3*	1.0	0.75	1.0	(1.0)
olvi3*	0.0	0.25	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	82.57	26.53	-18.47
LAB*LABa	82.57	26.53	-18.47
LAB*LABb	97.32	32.32	32.51

relative CIELAB lab*

lab*lab	0.848	0.205	-0.142
lab*tch	0.875	0.25	0.903
lab*nch	0.0	0.25	0.903
lab*trj	0.848	0.198	-0.184
lab*tce	0.875	0.25	0.903
lab*nce	0.0	0.25	0.903

relative Inform. Technology (IT)

olvi3*	1.0	0.5	1.0	(1.0)
olvi3*	0.0	0.5	0.0	(0.0)
olvi4*	1.0	0.5	1.0	(1.0)
olvi4*	0.0	0.5	0.0	(0.0)
olvi4*	0.0	0.5	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	69.73	53.03	-36.95
LAB*LABa	69.73	53.03	-36.95
LAB*LABb	75.0	64.65	32.51

relative CIELAB lab*

lab*lab	0.696	0.41	-0.285
lab*tch	0.75	0.5	0.903
lab*nch	0.0	0.5	0.903
lab*trj	0.696	0.336	-0.369
lab*tce	0.75	0.5	0.903
lab*nce	0.0	0.5	0.903

relative Inform. Technology (IT)

olvi3*	1.0	0.25	1.0	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.25	1.0	(1.0)
olvi4*	0.0	0.75	0.0	(0.0)
olvi4*	0.0	0.75	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	56.89	79.6	-55.43
LAB*LABa	56.89	79.6	-55.43
LAB*LABb	62.5	96.37	32.51

relative CIELAB lab*

lab*lab	0.544	0.615	-0.428
lab*tch	0.625	0.75	0.903
lab*nch	0.0	0.75	0.903
lab*trj	0.544	0.504	-0.554
lab*tce	0.625	0.75	0.903
lab*nce	0.0	0.75	0.903

relative Inform. Technology (IT)

olvi3*	1.0	0.0	1.0	(1.0)
olvi3*	0.0	1.0	0.0	(0.0)
olvi4*	1.0	0.0	1.0	(1.0)
olvi4*	0.0	1.0	0.0	(0.0)
olvi4*	0.0	1.0	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	44.06	106.07	-73.92
LAB*LABa	44.06	106.07	-73.92
LAB*LABb	50.0	129.29	32.51

relative CIELAB lab*

lab*lab	0.392	0.82	-0.571
lab*tch	0.5	1.0	0.903
lab*nch	0.0	1.0	0.903
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	1.0	0.903
lab*nce	0.0	1.0	0.903

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(0.0)
olvi3*	0.0	0.5	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.5	0.0	(0.0)
olvi4*	0.0	0.5	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	56.71	0.23	2.14
LAB*LABa	56.71	0.23	2.14
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.5	0.0	0.0
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.25	0.5	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	41.59	14.34	-9.83
LAB*LABa	41.59	14.34	-9.83
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.392	0.673	-0.739
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.25	0.5	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	41.59	14.34	-9.83
LAB*LABa	41.59	14.34	-9.83
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.392	0.673	-0.739
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.25	0.5	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	41.59	14.34	-9.83
LAB*LABa	41.59	14.34	-9.83
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.392	0.673	-0.739
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.25	0.5	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	41.59	14.34	-9.83
LAB*LABa	41.59	14.34	-9.83
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.392	0.673	-0.739
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.25	0.5	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	41.59	14.34	-9.83
LAB*LABa	41.59	14.34	-9.83
LAB*LABb	50.0	1.0	0.0

relative CIELAB lab*

lab*lab	0.392	0.673	-0.739
lab*tch	0.5	0.0	0.0
lab*nch	0.0	0.5	0.0
lab*trj	0.392	0.673	-0.739
lab*tce	0.5	0.0	0.0
lab*nce	0.0	0.5	0.0

relative Inform. Technology (IT)

olvi3*	0.25	0.25	0.25	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	32.11	0.01	0.01
LAB*LABa	32.11	0.01	0.01
LAB*LABb	25.0	0.01	0.0

relative CIELAB lab*

lab*lab	0.25	0.0	0.0
lab*tch	0.25	0.0	0.0
lab*nch	0.0	0.25	0.0
lab*trj	0.25	0.0	0.0
lab*tce	0.25	0.0	0.0
lab*nce	0.0	0.25	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
olvi3*	0.0	0.5	0.0	(0.0)
olvi4*	1.0	0.75	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	40.36	26.58	-18.46
LAB*LABa	40.36	26.58	-18.46
LAB*LABb	37.5	32.33	32.51

relative CIELAB lab*

lab*lab	0.348	0.205	-0.142
lab*tch	0.375	0.25	0.903
lab*nch	0.0	0.25	0.903
lab*trj	0.348	0.198	-0.184
lab*tce	0.375	0.25	0.903
lab*nce	0.0	0.25	0.903

relative Inform. Technology (IT)

olvi3*	0.5	0.0	1.0	(1.0)
olvi3*	0.0	1.0	0.0	(0.0)
olvi4*	1.0	0.0	1.0	(1.0)
olvi4*	0.0	0.5	0.0	(0.0)
olvi4*	0.0	0.5	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	27.53	53.03	-36.94
LAB*LABa	27.53	53.03	-36.94
LAB*LABb	25.01	64.65	32.51

relative CIELAB lab*

lab*lab	0.196	0.41	-0.285
lab*tch	0.25	0.5	0.903
lab*nch	0.0	0.5	0.903
lab*trj	0.196	0.336	-0.369
lab*tce	0.25	0.5	0.903
lab*nce	0.0	0.5	0.903

relative Inform. Technology (IT)

olvi3*	0.25	0.25	0.25	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	18.02	0.5	0.46
LAB*LABa	18.02	0.5	0.46
LAB*LABb	0.0	0.01	0.0

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	0.0
lab*nch	0.0	0.0	0.0
lab*trj	0.0	0.0	0.0
lab*tce	0.0	0.0	0.0
lab*nce	0.0	0.0	0.0

relative Inform. Technology (IT)

olvi3*	0.25	0.25	0.25	(1.0)
olvi3*	0.0	0.75	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.25	0.0	(0.0)
olvi4*	0.0	0.25	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	18.02	0.5	0.46
LAB*LABa	18.02	0.5	0.46
LAB*LABb	0.0	0.01	0.0

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	0.0
lab*nch	0.0	0.0	0.0
lab*trj	0.0	0.0	0.0
lab*tce	0.0	0.0	0.0
lab*nce	0.0	0.0	0.0

relative Inform. Technology			
olvi3*	0.25	0.25	0.25
cmyn3*	0.75	0.75	0.75
olvi4*	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0
standard and adapted CIELAB			
LAB*LAB	37.36	0.13	0
LAB*LABa	37.36	0.0	0
LAB*LABb	25.0	0.01	0

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 25/360 = 0.071$

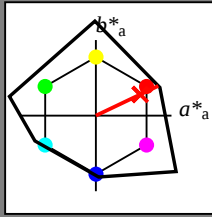
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 91 25

rgb*Ma: 1.0 0.02 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 149$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	95.41	0.0	-0.01
LAB*LABa	95.41	0.0	0.0
LAB*LABb	99.99	0.01	0.0

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*lab	1.0	0.0	0.0
lab*lab	1.0	0.0	0.0

relative Inform. Technology (IT)

olvi3*	1.0	0.756	0.75	(1.0)
cmyn3*	0.0	0.244	0.25	(0.0)
olvi4*	1.0	0.756	0.75	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	83.61	20.65	9.84
LAB*LABa	83.61	20.64	9.84
LAB*LABb	97.51	25.86	25.49

relative CIELAB lab*

lab*lab	0.86	0.26	0.108
lab*lab	0.875	0.25	0.071
lab*lab	0.875	0.25	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.512	0.5	(1.0)
cmyn3*	0.0	0.488	0.5	(0.0)
olvi4*	1.0	0.512	0.5	(1.0)
cmyn4*	0.0	0.488	0.5	(0.0)

standard and adapted CIELAB

LAB*LAB	71.81	41.31	19.68
LAB*LABa	71.81	41.28	19.68
LAB*LABb	75.00	45.73	25.49

relative CIELAB lab*

lab*lab	0.72	0.451	0.215
lab*lab	0.75	0.5	0.071
lab*lab	0.75	0.5	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.268	0.25	(1.0)
cmyn3*	0.0	0.732	0.25	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	60.01	61.96	29.53
LAB*LABa	60.01	61.92	29.52
LAB*LABb	62.5	68.6	25.49

relative CIELAB lab*

lab*lab	0.581	0.677	0.323
lab*lab	0.625	0.75	0.071
lab*lab	0.625	0.75	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.024	0.0	(1.0)
cmyn3*	0.0	0.976	0.0	(0.0)
olvi4*	1.0	0.024	0.0	(1.0)
cmyn4*	0.0	0.976	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	48.21	82.61	39.36
LAB*LABa	48.21	82.57	39.35
LAB*LABb	50.0	91.46	25.49

relative CIELAB lab*

lab*lab	0.441	0.903	0.43
lab*lab	0.5	1.0	0.071
lab*lab	0.5	1.0	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.75	0.75	(1.0)
cmyn3*	0.25	0.25	0.25	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	74.31	0.02	0.0
LAB*LABa	74.31	0.0	0.0
LAB*LABb	75.00	0.01	0.0

relative CIELAB lab*

lab*lab	0.75	0.0	0.0
lab*lab	0.75	0.0	0.0
lab*lab	0.75	0.0	0.0

relative Inform. Technology (IT)

olvi3*	0.75	0.506	0.5	(1.0)
cmyn3*	0.25	0.494	0.5	(0.0)
olvi4*	1.0	0.756	0.75	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	62.51	20.68	9.85
LAB*LABa	62.51	20.64	9.84
LAB*LABb	62.5	22.87	25.49

relative CIELAB lab*

lab*lab	0.625	0.25	0.108
lab*lab	0.625	0.25	0.071
lab*lab	0.625	0.25	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.262	0.25	(1.0)
cmyn3*	0.25	0.738	0.25	(0.0)
olvi4*	1.0	0.512	0.5	(1.0)
cmyn4*	0.0	0.488	0.5	(0.0)

standard and adapted CIELAB

LAB*LAB	50.71	41.33	19.69
LAB*LABa	50.71	41.29	19.68
LAB*LABb	50.0	45.74	25.49

relative CIELAB lab*

lab*lab	0.581	0.677	0.323
lab*lab	0.625	0.75	0.071
lab*lab	0.625	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.982	0.0	(0.0)
olvi4*	1.0	0.268	0.25	(1.0)
cmyn4*	0.0	0.732	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	38.91	61.99	29.53
LAB*LABa	38.91	61.93	29.51
LAB*LABb	37.51	68.6	25.49

relative CIELAB lab*

lab*lab	0.331	0.677	0.323
lab*lab	0.375	0.75	0.071
lab*lab	0.375	0.75	0.071

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.0	0.0	(0.0)

standard and adapted CIELAB

LAB*LAB	53.21	0.04	0.0
LAB*LABa	53.21	0.0	0.0
LAB*LABb	50.0	0.01	0.0

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*lab	0.5	0.0	0.0
lab*lab	0.5	0.0	0.0

relative Inform. Technology (IT)

olvi3*	0.5	0.256	0.25	(1.0)
cmyn3*	0.5	0.744	0.25	(0.0)
olvi4*	1.0	0.756	0.75	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)

standard and adapted CIELAB

LAB*LAB	41.4	20.7	9.86
LAB*LABa	41.4	20.64	9.84
LAB*LABb	37.5	22.87	25.49

relative CIELAB lab*

lab*lab	0.36	0.25	0.108
lab*lab	0.36	0.25	0.071
lab*lab	0.36	0.25	0.071

relative Inform. Technology (IT)

olvi3*	0.5	0.012	0.0	(1.0)
cmyn3*	0.5	0.988	0.0	(0.0)
olvi4*	1.0	0.512	0.5	(1.0)
cmyn4*	0.0	0.488	0.5	(0.0)

standard and adapted CIELAB

LAB*LAB	29.6	41.29	19.67
LAB*LABa	29.6	41.25	19.66
LAB*LABb	25.01	45.73	25.49

relative CIELAB lab*

lab*lab	0.22	0.451	0.215
lab*lab	0.25	0.5	0.071
lab*lab	0.25	0.5	0.071

relative Inform. Technology (IT)

olvi3*	1.0	0.268	0.25	(1.0)
cmyn3*	0.0	0.732	0.75	(0.0)
olvi4*	1.0	0.268	0.25	1.0
cmyn4*	0.0	0.732	0.75	0.0

standard and adapted CIELAB

LAB*LAB	60.01	61.96	29.53
LAB*LAB	60.01	61.96	29.53

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 92/360 = 0.256$

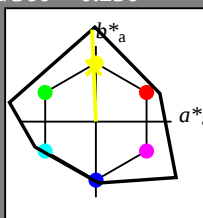
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



$u^*_{rel} = 149$

NCS11; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
JMa	91.37	-1.27	125.03	125.03	91
GMa	63.07	-114.28	25.35	117.06	167
G50BMa	59.47	-80.6	-33.45	87.28	203
BMa	49.01	3.65	-81.19	81.28	273
B50RMa	44.06	106.09	-73.93	129.32	325
NMa	10.99	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.69	27.98	65.01	25
JCIE	81.26	-2.9	71.56	71.62	92
GCIE	52.23	-42.45	13.59	44.59	162
BCIE	30.57	1.35	-46.48	46.51	272

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 -0.01
LAB*Lab 95.41 0.0 0.0
LAB*TCa 99.99 0.01 0.0

relative Inform. Technology (IT)
olvi3* 0.992 1.0 0.75 (1.0)
cmyn3* 0.008 0.0 0.25 (0.0)
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 94.16 -1.21 30.44
LAB*Lab 94.16 -1.22 30.44
LAB*TCa 97.5 30.47 92.31

relative Inform. Technology (IT)
olvi3* 0.985 -0.009 0.25
cmyn3* 0.875 0.25 0.256
olvi4* 0.985 0.0 0.25
cmyn4* 0.875 0.25 0.256
standard and adapted CIELAB
LAB*LAB 92.52 -2.44 60.89
LAB*Lab 92.52 -2.46 60.89
LAB*TCa 75.0 60.94 92.32

relative Inform. Technology (IT)
olvi3* 0.976 1.0 0.5 (1.0)
cmyn3* 0.016 0.0 0.5 (0.0)
olvi4* 0.976 1.0 0.5 (1.0)
cmyn4* 0.016 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 92.52 -2.44 60.89
LAB*Lab 92.52 -2.46 60.89
LAB*TCa 75.0 60.94 92.32

relative Inform. Technology (IT)
olvi3* 0.976 1.0 0.5 (1.0)
cmyn3* 0.016 0.0 0.5 (0.0)
olvi4* 0.976 1.0 0.5 (1.0)
cmyn4* 0.016 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 92.52 -2.44 60.89
LAB*Lab 92.52 -2.46 60.89
LAB*TCa 75.0 60.94 92.32

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 74.31 0.02 0.0
LAB*Lab 74.31 0.02 0.0
LAB*TCa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.742 0.75 0.5 (1.0)
cmyn3* 0.258 0.25 0.256
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 73.07 -1.2 30.45
LAB*Lab 73.07 -1.23 30.45
LAB*TCa 62.5 30.47 92.33

relative Inform. Technology (IT)
olvi3* 0.734 0.75 0.25 (1.0)
cmyn3* 0.266 0.25 0.75 (0.0)
olvi4* 0.984 1.0 0.5 (1.0)
cmyn4* 0.016 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 71.83 -2.44 60.89
LAB*Lab 71.83 -2.47 60.89
LAB*TCa 50.0 60.94 92.33

relative Inform. Technology (IT)
olvi3* 0.726 0.75 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 70.58 -3.68 91.34
LAB*Lab 70.58 -3.71 91.34
LAB*TCa 62.5 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.726 0.75 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 70.58 -3.68 91.34
LAB*Lab 70.58 -3.71 91.34
LAB*TCa 62.5 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 53.21 0.04 0.0
LAB*Lab 53.21 0.04 0.0
LAB*TCa 50.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.492 0.5 0.25 (1.0)
cmyn3* 0.508 0.5 0.75 (0.0)
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 51.96 -1.18 30.46
LAB*Lab 51.96 -1.23 30.45
LAB*TCa 37.5 30.47 92.33

relative Inform. Technology (IT)
olvi3* 0.484 0.5 0.0 (1.0)
cmyn3* 0.516 0.5 0.0 (0.0)
olvi4* 0.984 1.0 0.5 (1.0)
cmyn4* 0.016 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 50.72 -2.42 60.89
LAB*Lab 50.72 -2.47 60.89
LAB*TCa 25.01 60.93 92.33

relative Inform. Technology (IT)
olvi3* 0.476 0.5 0.25 (1.0)
cmyn3* 0.524 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 49.45 -3.68 91.34
LAB*Lab 49.45 -3.71 91.34
LAB*TCa 50.0 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.476 0.5 0.25 (1.0)
cmyn3* 0.524 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 49.45 -3.68 91.34
LAB*Lab 49.45 -3.71 91.34
LAB*TCa 50.0 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*Lab 32.11 0.07 0.01
LAB*TCa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.242 0.25 0.25 (1.0)
cmyn3* 0.758 0.75 1.0 (0.0)
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 30.86 -1.17 30.45
LAB*Lab 30.86 -1.23 30.45
LAB*TCa 12.5 30.46 92.33

relative Inform. Technology (IT)
olvi3* 0.235 -0.009 0.25
cmyn3* 0.125 0.25 0.256
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 29.52 -2.42 60.89
LAB*Lab 29.52 -2.47 60.89
LAB*TCa 25.01 60.93 92.33

relative Inform. Technology (IT)
olvi3* 0.226 0.25 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 28.28 -3.68 91.34
LAB*Lab 28.28 -3.71 91.34
LAB*TCa 25.0 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.226 0.25 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 28.28 -3.68 91.34
LAB*Lab 28.28 -3.71 91.34
LAB*TCa 25.0 91.41 92.32

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*Lab 11.01 0.07 0.01
LAB*TCa 0.01 0.01 -

Output: Colorimetric Reflective System MRS18

for hue $h^* = lab^*h = 92/360 = 0.255$

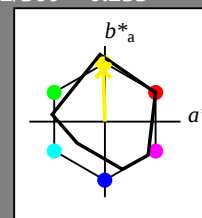
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 89 86 92

rgb*Ma: 1.0 0.95 0.0

triangle lightness t^*



$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.96	38.37	77.18	30
JMa	90.7	-6.36	88.75	88.98	94
GMa	52.11	-69.73	9.44	70.37	172
G50BMa	45.03	-36.57	-28.47	46.36	218
BMa	36.65	23.19	-63.05	67.18	290
B50RMa	34.94	57.17	-44.26	72.31	322
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.56	25
JCIE	81.26	-2.17	67.76	67.79	92
GCIE	52.23	-42.26	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 -0.97 4.75
LAB*Lab 95.41 0.0 0.0
LAB*TCa 99.99 0.01 0.0

relative Inform. Technology (IT)
olvi3* 0.998 0.75 (1.0)
cmyn3* 0.012 0.25 (0.0)
olvi4* 0.998 0.75 (1.0)
cmyn4* 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 93.72 -1.64 26.21
LAB*Lab 93.72 -1.69 26.21
LAB*TCa 87.5 21.58 91.86

relative Inform. Technology (IT)
olvi3* 0.978 -0.007 0.25
cmyn3* 0.875 0.25 0.255
olvi4* 0.978 0.0 0.25
cmyn4* 0.875 0.25 0.255
standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*Lab 92.04 -2.39 47.67
LAB*TCa 75.0 43.16 91.85

relative Inform. Technology (IT)
olvi3* 0.976 0.5 (1.0)
cmyn3* 0.024 0.5 0.25
olvi4* 0.976 0.5 (1.0)
cmyn4* 0.024 0.5 0.25
standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*Lab 92.04 -2.39 47.67
LAB*TCa 75.0 43.16 91.85

relative Inform. Technology (IT)
olvi3* 0.976 0.5 (1.0)
cmyn3* 0.024 0.5 0.25
olvi4* 0.976 0.5 (1.0)
cmyn4* 0.024 0.5 0.25
standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*Lab 92.04 -2.39 47.67
LAB*TCa 75.0 43.16 91.85

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.06 -0.6 3.44
LAB*Lab 76.06 -0.6 3.44
LAB*TCa 75.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.738 0.5 (1.0)
cmyn3* 0.262 0.25 (0.0)
olvi4* 0.978 0.5 (1.0)
cmyn4* 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 74.38 -1.26 24.91
LAB*Lab 74.38 -1.26 24.91
LAB*TCa 62.5 21.58 91.84

relative Inform. Technology (IT)
olvi3* 0.738 0.5 (1.0)
cmyn3* 0.262 0.25 (0.0)
olvi4* 0.978 0.5 (1.0)
cmyn4* 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 74.38 -1.26 24.91
LAB*Lab 74.38 -1.26 24.91
LAB*TCa 62.5 21.58 91.84

relative Inform. Technology (IT)
olvi3* 0.726 0.75 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 72.7 -1.92 46.37
LAB*Lab 72.7 -1.92 46.37
LAB*TCa 50.0 43.16 91.84

relative Inform. Technology (IT)
olvi3* 0.726 0.75 0.0 (1.0)
cmyn3* 0.276 0.25 0.0 (0.0)
olvi4* 0.976 1.0 0.25 (1.0)
cmyn4* 0.024 0.0 0.75 (0.0)
standard and adapted CIELAB
LAB*LAB 72.7 -1.92 46.37
LAB*Lab 72.7 -1.92 46.37
LAB*TCa 50.0 43.16 91.84

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 56.71 0.23 2.14
LAB*Lab 56.71 0.23 2.14
LAB*TCa 50.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.488 0.5 (1.0)
cmyn3* 0.512 0.75 (0.0)
olvi4* 0.988 0.75 (1.0)
cmyn4* 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 55.03 -0.89 23.6
LAB*Lab 55.03 -0.89 23.6
LAB*TCa 37.5 21.58 91.84

relative Inform. Technology (IT)
olvi3* 0.488 0.5 (1.0)
cmyn3* 0.512 0.75 (0.0)
olvi4* 0.988 0.75 (1.0)
cmyn4* 0.012 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 55.03 -0.89 23.6
LAB*Lab 55.03 -0.89 23.6
LAB*TCa 37.5 21.58 91.84

relative Inform. Technology (IT)
olvi3* 0.478 -0.007 0.25
cmyn3* 0.875 0.25 0.255
olvi4* 0.978 0.0 0.25
cmyn4* 0.875 0.25 0.255
standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*Lab 92.04 -2.39 47.67
LAB*TCa 75.0 43.16 91.85

relative Inform. Technology (IT)
olvi3* 0.478 -0.007 0.25
cmyn3* 0.875 0.25 0.255
olvi4* 0.978 0.0 0.25
cmyn4* 0.875 0.25 0.255
standard and adapted CIELAB
LAB*LAB 92.04 -2.3 47.67
LAB*Lab 92.04 -2.39 47.67
LAB*TCa 75.0 43.16 91.85

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*Lab 32.11 0.07 0.01
LAB*TCa 25.0 0.01 -

relative Inform. Technology (IT)
olvi3* 0.242 0.25 0.25 (1.0)
cmyn3* 0.758 0.75 1.0 (0.0)
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 30.86 -1.17 30.45
LAB*Lab 30.86 -1.23 30.45
LAB*TCa 12.5 30.46 92.33

relative Inform. Technology (IT)
olvi3* 0.235 -0.009 0.25
cmyn3* 0.125 0.25 0.256
olvi4* 0.992 1.0 0.75 (1.0)
cmyn4* 0.008 0.0 0.25 (0.0)
standard and adapted CIELAB
LAB*LAB 29.52 -2.42 60.89
LAB

Input: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 162/360 = 0.451$

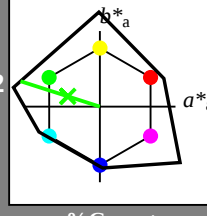
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 65 110 162

rgb*Ma: 0.08 1.0 0.0

triangle lightness t^*



relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
olvi4*	0.0	0.0	0.0	(0.0)
olvi5*	1.0	1.0	1.0	(1.0)
olvi6*	0.0	0.0	0.0	(0.0)
olvi7*	0.0	0.0	0.0	(0.0)
olvi8*	0.0	0.0	0.0	(0.0)
olvi9*	0.0	0.0	0.0	(0.0)
olvi10*	0.0	0.0	0.0	(0.0)
olvi11*	0.0	0.0	0.0	(0.0)
olvi12*	0.0	0.0	0.0	(0.0)
olvi13*	0.0	0.0	0.0	(0.0)
olvi14*	0.0	0.0	0.0	(0.0)
olvi15*	0.0	0.0	0.0	(0.0)
olvi16*	0.0	0.0	0.0	(0.0)
olvi17*	0.0	0.0	0.0	(0.0)
olvi18*	0.0	0.0	0.0	(0.0)
olvi19*	0.0	0.0	0.0	(0.0)
olvi20*	0.0	0.0	0.0	(0.0)
olvi21*	0.0	0.0	0.0	(0.0)
olvi22*	0.0	0.0	0.0	(0.0)
olvi23*	0.0	0.0	0.0	(0.0)
olvi24*	0.0	0.0	0.0	(0.0)
olvi25*	0.0	0.0	0.0	(0.0)
olvi26*	0.0	0.0	0.0	(0.0)
olvi27*	0.0	0.0	0.0	(0.0)
olvi28*	0.0	0.0	0.0	(0.0)
olvi29*	0.0	0.0	0.0	(0.0)
olvi30*	0.0	0.0	0.0	(0.0)
olvi31*	0.0	0.0	0.0	(0.0)
olvi32*	0.0	0.0	0.0	(0.0)
olvi33*	0.0	0.0	0.0	(0.0)
olvi34*	0.0	0.0	0.0	(0.0)
olvi35*	0.0	0.0	0.0	(0.0)
olvi36*	0.0	0.0	0.0	(0.0)
olvi37*	0.0	0.0	0.0	(0.0)
olvi38*	0.0	0.0	0.0	(0.0)
olvi39*	0.0	0.0	0.0	(0.0)
olvi40*	0.0	0.0	0.0	(0.0)
olvi41*	0.0	0.0	0.0	(0.0)
olvi42*	0.0	0.0	0.0	(0.0)
olvi43*	0.0	0.0	0.0	(0.0)
olvi44*	0.0	0.0	0.0	(0.0)
olvi45*	0.0	0.0	0.0	(0.0)
olvi46*	0.0	0.0	0.0	(0.0)
olvi47*	0.0	0.0	0.0	(0.0)
olvi48*	0.0	0.0	0.0	(0.0)
olvi49*	0.0	0.0	0.0	(0.0)
olvi50*	0.0	0.0	0.0	(0.0)
olvi51*	0.0	0.0	0.0	(0.0)
olvi52*	0.0	0.0	0.0	(0.0)
olvi53*	0.0	0.0	0.0	(0.0)
olvi54*	0.0	0.0	0.0	(0.0)
olvi55*	0.0	0.0	0.0	(0.0)
olvi56*	0.0	0.0	0.0	(0.0)
olvi57*	0.0	0.0	0.0	(0.0)
olvi58*	0.0	0.0	0.0	(0.0)
olvi59*	0.0	0.0	0.0	(0.0)
olvi60*	0.0	0.0	0.0	(0.0)
olvi61*	0.0	0.0	0.0	(0.0)
olvi62*	0.0	0.0	0.0	(0.0)
olvi63*	0.0	0.0	0.0	(0.0)
olvi64*	0.0	0.0	0.0	(0.0)
olvi65*	0.0	0.0	0.0	(0.0)
olvi66*	0.0	0.0	0.0	(0.0)
olvi67*	0.0	0.0	0.0	(0.0)
olvi68*	0.0	0.0	0.0	(0.0)
olvi69*	0.0	0.0	0.0	(0.0)
olvi70*	0.0	0.0	0.0	(0.0)
olvi71*	0.0	0.0	0.0	(0.0)
olvi72*	0.0	0.0	0.0	(0.0)
olvi73*	0.0	0.0	0.0	(0.0)
olvi74*	0.0	0.0	0.0	(0.0)
olvi75*	0.0	0.0	0.0	(0.0)
olvi76*	0.0	0.0	0.0	(0.0)
olvi77*	0.0	0.0	0.0	(0.0)
olvi78*	0.0	0.0	0.0	(0.0)
olvi79*	0.0	0.0	0.0	(0.0)
olvi80*	0.0	0.0	0.0	(0.0)
olvi81*	0.0	0.0	0.0	(0.0)
olvi82*	0.0	0.0	0.0	(0.0)
olvi83*	0.0	0.0	0.0	(0.0)
olvi84*	0.0	0.0	0.0	(0.0)
olvi85*	0.0	0.0	0.0	(0.0)
olvi86*	0.0	0.0	0.0	(0.0)
olvi87*	0.0	0.0	0.0	(0.0)
olvi88*	0.0	0.0	0.0	(0.0)
olvi89*	0.0	0.0	0.0	(0.0)
olvi90*	0.0	0.0	0.0	(0.0)
olvi91*	0.0	0.0	0.0	(0.0)
olvi92*	0.0	0.0	0.0	(0.0)
olvi93*	0.0	0.0	0.0	(0.0)
olvi94*	0.0	0.0	0.0	(0.0)
olvi95*	0.0	0.0	0.0	(0.0)
olvi96*	0.0	0.0	0.0	(0.0)
olvi97*	0.0	0.0	0.0	(0.0)
olvi98*	0.0	0.0	0.0	(0.0)
olvi99*	0.0	0.0	0.0	(0.0)
olvi100*	0.0	0.0	0.0	(0.0)

relative Inform. Technology (IT)

olvi3*	0.771	1.0	0.75	(1.0)
olvi4*	0.229	0.0	0.25	(0.0)
olvi5*	0.771	1.0	0.75	(1.0)
olvi6*	0.229	0.0	0.25	(0.0)
olvi7*	0.771	1.0	0.75	(1.0)
olvi8*	0.229	0.0	0.25	(0.0)
olvi9*	0.771	1.0	0.75	(1.0)
olvi10*	0.229	0.0	0.25	(0.0)
olvi11*	0.771	1.0	0.75	(1.0)
olvi12*	0.229	0.0	0.25	(0.0)
olvi13*	0.771	1.0	0.75	(1.0)
olvi14*	0.229	0.0	0.25	(0.0)
olvi15*	0.771	1.0	0.75	(1.0)
olvi16*	0.229	0.0	0.25	(0.0)
olvi17*	0.771	1.0	0.75	(1.0)
olvi18*	0.229	0.0	0.25	(0.0)
olvi19*	0.771	1.0	0.75	(1.0)
olvi20*	0.229	0.0	0.25	(0.0)
olvi21*	0.771	1.0	0.75	(1.0)
olvi22*	0.229	0.0	0.25	(0.0)
olvi23*	0.771	1.0	0.75	(1.0)
olvi24*	0.229	0.0	0.25	(0.0)
olvi25*	0.771	1.0	0.75	(1.0)
olvi26*	0.229	0.0	0.25	(0.0)
olvi27*	0.771	1.0	0.75	(1.0)
olvi28*	0.229	0.0	0.25	(0.0)
olvi29*	0.771	1.0	0.75	(1.0)
olvi30*	0.229	0.0	0.25	(0.0)
olvi31*	0.771	1.0	0.75	(1.0)
olvi32*	0.229	0.0	0.25	(0.0)
olvi33*	0.771	1.0	0.75	(1.0)
olvi34*	0.229	0.0	0.25	(0.0)
olvi35*	0.771	1.0	0.75	(1.0)
olvi36*	0.229	0.0	0.25	(0.0)
olvi37*	0.771	1.0	0.75	(1.0)
olvi38*	0.229	0.0	0.25	(0.0)
olvi39*	0.771	1.0	0.75	(1.0)
olvi40*	0.229	0.0	0.25	(0.0)
olvi41*	0.771	1.0	0.75	(1.0)
olvi42*	0.229	0.0	0.25	(0.0)
olvi43*	0.771	1.0	0.75	(1.0)
olvi44*	0.229	0.0	0.25	(0.0)
olvi45*	0.771	1.0	0.75	(1.0)
olvi46*	0.229	0.0	0.25	(0.0)
olvi47*	0.771	1.0	0.75	(1.0)
olvi48*	0.229	0.0	0.25	(0.0)
olvi49*	0.771	1.0	0.75	(1.0)
olvi50*	0.229	0.0	0.25	(0.0)
olvi51*	0.771	1.0	0.75	(1.0)
olvi52*	0.229	0.0	0.25	(0.0)
olvi53*	0.771	1.0	0.75	(1.0)
olvi54*	0.229	0.0	0.25	(0.0)
olvi55*	0.771	1.0	0.75	(1.0)
olvi56*	0.229	0.0	0.25	(0.0)
olvi57*	0.771	1.0	0.75	(1.0)
olvi58*	0.229	0.0	0.25	(0.0)
olvi59*	0.771	1.0	0.75	(1.0)
olvi60*	0.229	0.0	0.25	(0.0)
olvi61*	0.771	1.0	0.75	(1.0)
olvi62*	0.229	0.0	0.25	(0.0)
olvi63*	0.771	1.0	0.75	(1.0)
olvi64*	0.229	0.0	0.25	(0.0)
olvi65*	0.771	1.0	0.75	(1.0)
olvi66*	0.229	0.0	0.25	(0.0)
olvi67*	0.771	1.0	0.75	(1.0)
olvi68*	0.229	0.0	0.25	(0.0)
olvi69*	0.771	1.0	0.75	(1.0)
olvi70*	0.229	0.0	0.25	(0.0)
olvi71*	0.771	1.0	0.75	(1.0)
olvi72*	0.229	0.0	0.25	(0.0)
olvi73*	0.771	1.0	0.75	(1.0)
olvi74*	0.229	0.0	0.25	(0.0)
olvi75*	0.771	1.0	0.75	(1.0)
olvi76*	0.229	0.0	0.25	(0.0)
olvi77*	0.771	1.0	0.75	(1.0)
olvi78*	0.229	0.0	0.25	(0.0)
olvi79*	0.771	1.0	0.75	(1.0)
olvi80*	0.229	0.0	0.25	(0.0)
olvi81*	0.771	1.0	0.75	(1.0)
olvi82*	0.229	0.0	0.25	(0.0)
olvi83*	0.771	1.0	0.75	(1.0)
olvi84*	0.229	0.0	0.25	(0.0)
olvi85*	0.771	1.0	0.75	(1.0)
olvi86*	0.229	0.0	0.25	(0.0)
olvi87*	0.771	1.0	0.75	(1.0)
olvi88*	0.229	0.0	0.25	(0.0)
olvi89*	0.771	1.0	0.75	(1.0)
olvi90*	0.229	0.0	0.25	(0.0)
olvi91*	0.771	1.0	0.75	(1.0)
olvi92*	0.229	0.0	0.25	(0.0)
olvi93*	0.771	1.0	0.75	(1.0)
olvi94*	0.229	0.0	0.25	(0.0)
olvi95*	0.771	1.0	0.75	(1.0)
olvi96*	0.229	0.0	0.25	(0.0)
olvi97*	0.771	1.0	0.75	(1.0)
olvi98*	0.229	0.0	0.25	(0.0)
olvi99*	0.771	1.0	0.75	(1.0)
olvi100*	0.229	0.0	0.25	(0.0)

relative Inform. Technology (IT)

olvi3*	0.771	1.0	0.75	(1.0)
olvi4*	0.229	0.0	0.25	(0.0)
olvi5*	0.771	1.0	0.75	(1.0)
olvi6*	0.229	0.0	0.25	(0.0)
olvi7*	0.771	1.0	0.75	(1.0)
olvi8*	0.229	0.0	0.25	(0.0)
olvi9*	0.771	1.0	0.75	(1.0)
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olvi14*	0.229	0.0	0.25	(0.0)
olvi15*	0.771	1.0	0.75	(1.0)
olvi16*	0.229	0.0	0.25	(0.0)
olvi17*	0.771	1.0	0.75	(1.0)
olvi18*	0.229	0.0	0.25	(0.0)
olvi19*	0.771	1.0	0.75	(1.0)
olvi20*	0.229	0.0	0.25	(0.0)
olvi21*	0.771	1.0	0.75	(1.0)
olvi22*	0.229	0.0	0.25	(0.0)
olvi23*	0.771	1.0	0.75	(1.0)
olvi24*	0.229	0.0	0.25	(0.0)
olvi25*	0.771	1.0	0.75	(1.0)
olvi26*	0.229	0.0	0.25	(0.0)
olvi27*	0.771	1.0	0.75	(1.0)
olvi28*	0.229	0.0	0.25	(0.0)
olvi29*	0.771	1.0	0.75	(1.0)
olvi30*	0.229	0.0	0.25	(0.0)
olvi31*	0.771	1.0	0.75	(1.0)
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olvi35*	0.771	1.0	0.75	(1.0)
olvi36*	0.229	0.0	0.25	(0.0)
olvi37*	0.771	1.0	0.75	(1.0)
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olvi48*	0.229	0.0	0.25	(0.0)
olvi49*	0.771	1.0	0.75	(1.0)
olvi50*	0.229	0.0	0.25	(0.0)
olvi51*	0.771	1.0	0.75	(1.0)
olvi52*	0.229	0.0	0.25	(0.0)
olvi53*	0.771	1.0	0.75	(1.0)

output: *no change compared to input*