

Input: Colorimetric Reflective System NCS11

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

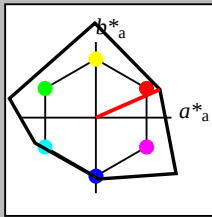
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	L^*	a^*	b^*	$C^*_{ab,a}$	$h^*_{ab,a}$
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
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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*TC _{Ha}	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	0.0 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 0.75 (1.0)
cmyn3*	0.0 0.25 0.25 (0.0)
olvi4*	1.0 0.75 0.75 (1.0)
cmyn4*	0.0 0.25 0.25 (0.0)
standard and adapted CIELAB	
LAB*LAB	83.34 21.17 9.31
LAB*LABa	83.34 21.15 9.31
LAB*TC _{Ha}	97.5 23.11 23.75
relative CIELAB lab*	
lab*lab	0.857 0.229 0.101
lab*tch	0.875 0.25 0.066
lab*nch	0.0 0.25 0.066
relative Natural Colour (NC)	
lab*trj	0.857 0.25 -0.005
lab*tce	0.875 0.25 0.996
lab*nce	0.0 0.25 0.996

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 42.34 18.63
LAB*LABa	71.27 42.31 18.63
LAB*TC _{Ha}	75.0 46.23 23.75
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*tce	0.75 0.5 0.996
lab*nce	0.0 0.5 0.996

relative Inform. Technology (IT)	
olvi3*	1.0 0.25 0.25 (1.0)
cmyn3*	0.0 0.75 0.75 (0.0)
olvi4*	1.0 0.25 0.25 (1.0)
cmyn4*	0.0 0.75 0.75 (0.0)
standard and adapted CIELAB	
LAB*LAB	59.21 63.53 27.94
LAB*LABa	59.21 63.48 27.93
LAB*TC _{Ha}	62.5 69.35 23.75
relative CIELAB lab*	
lab*lab	0.571 0.686 0.302
lab*tch	0.625 0.75 0.066
lab*nch	0.0 0.75 0.066
relative Natural Colour (NC)	
lab*trj	0.571 0.75 -0.017
lab*tce	0.625 0.75 0.996
lab*nce	0.0 0.75 0.996

relative Inform. Technology (IT)	
olvi3*	1.0 0.0 0.0 (1.0)
cmyn3*	0.0 1.0 1.0 (0.0)
olvi4*	1.0 0.0 0.0 (1.0)
cmyn4*	0.0 1.0 1.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	47.15 84.63 37.24
LAB*LABa	47.15 84.63 37.24
LAB*TC _{Ha}	50.0 92.46 23.75
relative CIELAB lab*	
lab*lab	0.428 0.915 0.403
lab*tch	0.5 1.0 0.066
lab*nch	0.0 1.0 0.066
relative Natural Colour (NC)	
lab*trj	0.428 1.0 -0.023
lab*tce	0.5 1.0 0.996
lab*nce	0.0 1.0 0.996

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

chromaticness c^*

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 0.0 0.0
LAB*LABa	32.11 0.0 0.0
LAB*TC _{Ha}	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 0.0 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*	0.5 0.5 0.5 (1.0)
cmyn3*	0.5 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	50.17 42.37 18.64
LAB*LABa	50.17 42.32 18.63
LAB*TC _{Ha}	50.0 46.24 23.75
relative CIELAB lab*	
lab*lab	0.357 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	0.357 0.75 -0.005
lab*tce	0.375 0.75 0.996
lab*nce	0.0 0.75 0.996

relative Inform. Technology (IT)	
olvi3*	0.75 0.0 0.0 (1.0)
cmyn3*	0.25 0.75 0.75 (0.0)
olvi4*	1.0 0.0 0.0 (1.0)
cmyn4*	0.0 0.25 0.25 (0.0)
standard and adapted CIELAB	
LAB*LAB	29.07 42.36 18.64
LAB*LABa	29.07 42.31 18.62
LAB*TC _{Ha}	25.01 46.23 23.75
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*tce	0.25 0.5 0.996
lab*nce	0.0 0.5 0.996

relative Inform. Technology (IT)	
olvi3*	0.0 0.0 0.0 (1.0)
cmyn3*	0.0 1.0 1.0 (0.0)
olvi4*	0.0 0.0 0.0 (1.0)
cmyn4*	0.0 1.0 1.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	11.01 0.0 0.0
LAB*LABa	11.01 0.0 0.0
LAB*TC _{Ha}	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	0.0 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	0.0 0.0 0.0

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

Output: Colorimetric Reflective System NCS11

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

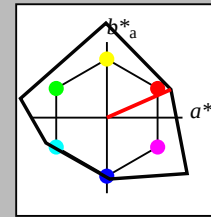
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 47 92 24

rgb*Ma: 1.0 0.0 0.0

triangle lightness t^*



NCS11; adapted (a) CIELAB data

	L^*	a^*	b^*	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	47.15	84.64	37.25	92.48	24
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B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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
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%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*TC _{Ha}	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	0.0 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 0.75 (1.0)
cmyn3*	0.0 0.25 0.25 (0.0)
olvi4*	1.0 0.75 0.75 (1.0)
cmyn4*	0.0 0.25 0.25 (0.0)
standard and adapted CIELAB	
LAB*LAB	83.34 21.17 9.31
LAB*LABa	83.34 21.15 9.31
LAB*TC _{Ha}	97.5 23.11 23.75
relative CIELAB lab*	
lab*lab	0.857 0.229 0.101
lab*tch	0.875 0.25 0.066
lab*nch	0.0 0.25 0.066
relative Natural Colour (NC)	
lab*trj	0.857 0.25 -0.005
lab*tce	0.875 0.25 0.996
lab*nce	0.0 0.25 0.996

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 42.34 18.63
LAB*LABa	71.27 42.31 18.63
LAB*TC _{Ha}	75.0 46.23 23.75
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*tce	0.75 0.5 0.996
lab*nce	0.0 0.5 0.996

relative Inform. Technology (IT)	
olvi3*	1.0 0.25 0.25 (1.0)
cmyn3*	0.0 0.75 0.75 (0.0)
olvi4*	1.0 0.25 0.25 (1.0)
cmyn4*	0.0 0.75 0.75 (0.0)
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LAB*LAB	59.21 63.53 27.94
LAB*LABa	59.21 63.48 27.93
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relative CIELAB lab*	
lab*lab	0.571 0.686 0.302
lab*tch	0.625 0.75 0.066
lab*nch	0.0 0.75 0.066
relative Natural Colour (NC)	
lab*trj	0.571 0.75 -0.017
lab*tce	0.625 0.75 0.996
lab*nce	0.0 0.75 0.996

relative Inform. Technology (IT)	
olvi3*	1.0 0.0 0.0 (1.0)
cmyn3*	0.0 1.0 1.0 (0.0)
olvi4*	1.0 0.0 0.0 (1.0)
cmyn4*	0.0 1.0 1.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	47.15 84.63 37.24
LAB*LABa	47.15 84.63 37.24
LAB*TC _{Ha}	50.0 92.46 23.75
relative CIELAB lab*	
lab*lab	0.428 0.915 0.403
lab*tch	0.5 1.0 0.066
lab*nch	0.0 1.0 0.066
relative Natural Colour (NC)	
lab*trj	0.428 1.0 -0.023
lab*tce	0.5 1.0 0.996
lab*nce	0.0 1.0 0.996

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

chromaticness c^*

UE59-7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

BAM-test chart UE59; Colorimetric systems NCS11a & NCS11ainput: $cmv0^* setcmykcolor$

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

output: $olv^* setrgbcolor$ / $w^* setgray$

Input: Colorimetric Reflective System NCS11

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

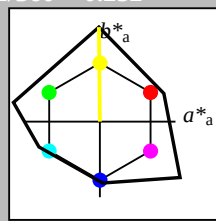
lab^*ch and lab^*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 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*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*ch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 1.0 0.0 0.0
lab*ce 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 0.75
cmyn4* 0.0 0.0 0.0 0.25
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 -

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*ch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.75 0.0 0.0
lab*ce 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 0.5
cmyn4* 0.0 0.0 0.0 0.5
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 -

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*ch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.5 0.0 0.0
lab*ce 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 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*Lab 32.11 0.07 0.01
LAB*TCa 32.11 0.01 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*ch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.25 0.0 0.0
lab*ce 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 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 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 0.0 0.0 0.0
lab*nCe 1.0 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
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W _{Ma}	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
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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 94.39 -0.3 31.24
LAB*Lab 94.39 -0.31 31.24
LAB*TCa 87.5 31.25 90.59

relative CIELAB lab*
lab*lab 0.988 -0.002 0.25
lab*ch 0.875 0.25 0.252
lab*nch 0.0 0.25 0.252
relative Natural Colour (NC)
lab*tr 0.988 0.01 0.25
lab*ce 0.875 0.25 0.243
lab*nCe 0.0 0.25 0.243

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 0.75 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 93.38 -0.62 62.5
LAB*Lab 93.38 -0.63 62.5
LAB*TCa 75.0 62.5 90.59

relative CIELAB lab*
lab*lab 0.976 -0.004 0.5
lab*ch 0.75 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*tr 0.976 0.02 0.499
lab*ce 0.75 0.5 0.243
lab*nCe 0.0 0.5 0.243

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 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 92.37 -0.94 93.76
LAB*Lab 92.37 -0.95 93.76
LAB*TCa 62.5 93.76 90.59

relative CIELAB lab*
lab*lab 0.964 -0.007 0.75
lab*ch 0.625 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*tr 0.964 0.031 0.749
lab*ce 0.625 0.75 0.243
lab*nCe 0.0 0.75 0.243

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 0.25 0.25
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 71.28 -0.92 93.76
LAB*Lab 71.28 -0.93 93.76
LAB*TCa 37.51 93.76 90.59

relative CIELAB lab*
lab*lab 0.714 -0.007 0.75
lab*ch 0.375 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*tr 0.714 0.031 0.749
lab*ce 0.375 0.75 0.243
lab*nCe 0.0 0.75 0.243

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 1.0
standard and adapted CIELAB
LAB*LAB 51.18 -0.59 62.51
LAB*Lab 51.18 -0.62 62.51
LAB*TCa 25.01 62.5 90.59

relative CIELAB lab*
lab*lab 0.488 -0.007 0.75
lab*ch 0.375 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*tr 0.488 0.01 0.25
lab*ce 0.375 0.75 0.243
lab*nCe 0.0 0.75 0.243

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.0 (1.0)
cmyn3* 0.25 0.25 0.75 (0.0)
olvi4* 1.0 1.0 0.75 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 72.29 -0.6 62.52
LAB*Lab 72.29 -0.63 62.51
LAB*TCa 50.0 62.52 90.59

relative CIELAB lab*
lab*lab 0.736 -0.004 0.5
lab*ch 0.5 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*tr 0.736 0.02 0.499
lab*ce 0.5 0.5 0.243
lab*nCe 0.0 0.5 0.243

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 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5
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 CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*ch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.5 0.0 0.0
lab*ce 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 (0.0)
olvi4* 1.0 1.0 0.25 0.25
cmyn4* 0.0 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*Lab 32.11 0.07 0.01
LAB*TCa 32.11 0.01 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*ch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.25 0.0 0.0
lab*ce 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 0.0 (0.0)
olvi4* 1.0 1.0 0.0 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 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 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 0.0 0.0 0.0
lab*nCe 1.0 0.0 0.0

Output: Colorimetric Reflective System NCS11

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

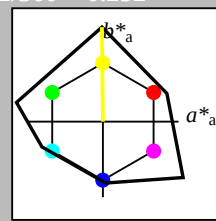
lab^*ch and lab^*nch

D65: hue J

LCH*Ma: 91 125 91

rgb*Ma: 1.0 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*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*ch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 1.0 0.0 0.0
lab*ce 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 0.75
cmyn4* 0.0 0.0 0.0 0.25
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 -

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*ch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.75 0.0 0.0
lab*ce 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 0.5
cmyn4* 0.0 0.0 0.0 0.5
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 CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*ch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.5 0.0 0.0
lab*ce 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 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 32.11 0.07 0.01
LAB*Lab 32.11 0.07 0.01
LAB*TCa 32.11 0.01 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*ch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.25 0.0 0.0
lab*ce 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 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 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 -

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*ch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*ce 0.0 0.0 0.0
lab*nCe 1.0 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
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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 94.39 -0.3 31.24
LAB*Lab 94.39 -0.31 31.24
LAB*TCa 87.5 31.25 90.59

relative CIELAB lab*
lab*lab 0.976 -0.004 0.5
lab*ch 0.75 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*tr 0.976 0.02 0.499
lab*ce 0.75 0.5 0.243
lab*nCe 0.0 0.5 0.243

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 0.75 0.75
cmyn4* 0.0 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 93.38 -0.62 62.5
LAB*Lab 93.38 -0.63 62.5
LAB*TCa 75.0 62.5 90.59

relative CIELAB lab*
lab*lab 0.964 -0.007 0.75
lab*ch 0.625 0.75 0.252
lab*nch 0.0 0.75 0.252
relative Natural Colour (NC)
lab*tr 0.964 0.031 0.749
lab*ce 0.625 0.75 0.243
lab*nCe 0.0 0.75 0.243

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 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 92.37 -0.94 93.76
LAB*Lab 92.37 -0.95 93.76
LAB*TCa 62.5 93.76 90.59

relative CIELAB lab*
lab*lab 0.976 -0.004 0.5
lab*ch 0.75 0.5 0.252
lab*nch 0.0 0.5 0.252
relative Natural Colour (NC)
lab*tr 0.976 0.02 0.499
lab*ce 0.75 0.5 0.243
lab*nCe 0.0 0.5 0.243

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (0.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.

Input: Colorimetric Reflective System NCS11

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

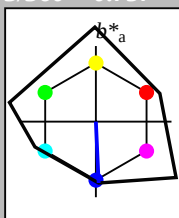
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 149$

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)
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)
olvi4* 0.25 0.25 0.25 (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)
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
LAB*TCMa 75.0 0.01 -

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)
olvi4* 0.5 0.5 0.5 (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)
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
LAB*TCMa 50.0 0.01 -

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)
olvi4* 0.75 0.75 0.75 (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)
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
LAB*TCMa 25.0 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)
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)
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
LAB*TCMa 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*tce 0.0 0.0 0.0
lab*nce 0.0 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 0.5 0.5 (1.0)
olvi4* 0.5 0.5 0.5 (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)
standard and adapted CIELAB
LAB*LAB 72.21 1.85 -40.58
LAB*LABa 72.21 1.85 -40.58
LAB*LABb 72.21 1.85 -40.58
LAB*TCMa 75.0 40.63 272.57

relative CIELAB lab*
lab*lab 0.725 0.022 -0.498
lab*tch 0.725 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.725 0.006 -0.499
lab*tce 0.725 0.0 0.572
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
olvi4* 0.75 0.75 0.25 (0.0)
olvi5* 0.5 0.5 1.0 (0.75)
olvi6* 0.5 0.5 0.0 (0.25)
olvi7* 0.5 0.5 0.0 (0.25)
standard and adapted CIELAB
LAB*LAB 51.11 1.87 -40.58
LAB*LABa 51.11 1.87 -40.58
LAB*LABb 51.11 1.87 -40.58
LAB*TCMa 50.0 40.64 272.57

relative CIELAB lab*
lab*lab 0.475 0.022 -0.498
lab*tch 0.475 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.475 0.006 -0.499
lab*tce 0.475 0.0 0.572
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.5 (1.0)
olvi4* 0.0 0.0 0.5 (0.0)
olvi5* 1.0 1.0 0.5 (0.0)
olvi6* 0.0 0.0 0.5 (0.0)
olvi7* 0.0 0.0 0.5 (0.0)
standard and adapted CIELAB
LAB*LAB 30.01 1.89 -40.56
LAB*LABa 30.01 1.89 -40.56
LAB*LABb 30.01 1.89 -40.56
LAB*TCMa 25.01 40.63 272.57

relative CIELAB lab*
lab*lab 0.225 0.022 -0.498
lab*tch 0.225 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.225 0.006 -0.499
lab*tce 0.225 0.0 0.572
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
olvi4* 0.0 0.0 0.0 (0.0)
olvi5* 1.0 1.0 0.0 (0.0)
olvi6* 0.0 0.0 0.0 (0.0)
olvi7* 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
LAB*TCMa 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*tce 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0

$n^* = 0.50$

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
olvi4* 0.75 0.75 0.25 (0.0)
olvi5* 0.5 0.5 1.0 (0.75)
olvi6* 0.5 0.5 0.0 (0.25)
olvi7* 0.5 0.5 0.0 (0.25)
standard and adapted CIELAB
LAB*LAB 60.61 2.77 -60.88
LAB*LABa 60.61 2.77 -60.88
LAB*LABb 60.61 2.77 -60.88
LAB*TCMa 62.5 60.95 272.57

relative CIELAB lab*
lab*lab 0.588 0.034 -0.748
lab*tch 0.588 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.588 0.009 -0.749
lab*tce 0.588 0.0 0.752
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
olvi4* 0.0 0.0 0.0 (0.0)
olvi5* 1.0 1.0 0.0 (0.0)
olvi6* 0.0 0.0 0.0 (0.0)
olvi7* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 49.02 3.65 -81.18
LAB*LABa 49.02 3.65 -81.18
LAB*LABb 49.02 3.65 -81.18
LAB*TCMa 50.0 81.27 272.57

relative CIELAB lab*
lab*lab 0.45 0.045 -0.998
lab*tch 0.45 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.45 0.013 -0.999
lab*tce 0.45 0.0 0.999
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
olvi4* 0.0 0.0 0.0 (0.0)
olvi5* 1.0 1.0 0.0 (0.0)
olvi6* 0.0 0.0 0.0 (0.0)
olvi7* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 39.51 2.79 -60.87
LAB*LABa 39.51 2.79 -60.87
LAB*LABb 39.51 2.79 -60.87
LAB*TCMa 37.51 60.95 272.57

relative CIELAB lab*
lab*lab 0.338 0.034 -0.748
lab*tch 0.338 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.338 0.009 -0.749
lab*tce 0.338 0.0 0.752
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
olvi4* 0.0 0.0 0.0 (0.0)
olvi5* 1.0 1.0 0.0 (0.0)
olvi6* 0.0 0.0 0.0 (0.0)
olvi7* 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
LAB*TCMa 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*tce 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0

$n^* = 0.25$

blackness n^*

chromaticness c^*

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

$n^* = 1.0$

Output: Colorimetric Reflective System NCS11

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

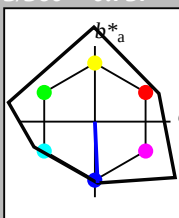
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 49 81 273

rgb*Ma: 0.0 0.0 1.0

triangle lightness t^*



% Gamut

$u^*_{rel} = 149$

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)
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)
olvi4* 0.25 0.25 0.25 (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)
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
LAB*TCMa 75.0 0.01 -

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)
olvi4* 0.5 0.5 0.5 (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)
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
LAB*TCMa 50.0 0.01 -

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)
olvi4* 0.75 0.75 0.25 (0.0)
olvi5* 0.5 0.5 1.0 (0.75)
olvi6* 0.5 0.5 0.0 (0.25)
olvi7* 0.5 0.5 0.0 (0.25)
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
LAB*TCMa 25.0 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)
olvi4* 0.0 0.0 0.0 (0.0)
olvi5* 1.0 1.0 0.0 (0.0)
olvi6* 0.0 0.0 0.0 (0.0)
olvi7* 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
LAB*TCMa 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*tce 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0

$n^* = 1.0$

blackness n^*

chromaticness c^*

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.00$

$n^* = 1.0$

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 0.5 0.5 (1.0)
olvi4* 0.5 0.5 0.5 (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)
standard and adapted CIELAB
LAB*LAB 72.21 1.85 -40.58
LAB*LABa 72.21 1.85 -40.58
LAB*LABb 72.21 1.85 -40.58
LAB*TCMa 75.0 40.63 272.57

relative CIELAB lab*
lab*lab 0.725 0.022 -0.498
lab*tch 0.725 0.0 0.0
lab*nch 0.0 0.5 0.757
relative Natural Colour (NC)
lab*trj 0.725 0.006 -0.499
lab*tce 0.725 0.0 0.572
lab*nce 0.0 0.5 0.007

relative Inform. Technology (IT)<

www.ps.bam.de/UE59/10Q/Q59E05FP.PS/.PDF; linearized output
F: Output Linearization (OL) data UE59/10Q/Q59E05FP.DAT in File (F)

Input: Colorimetric Reflective System NCS11

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

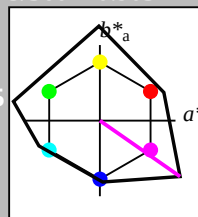
lab^*tch and lab^*nch

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
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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*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
lab*lab	1.0 0.0 0.0
relative Natural Colour (NC)	
lab*lab	1.0 0.0 0.0
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*	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
lab*lab	0.75 0.0 0.0
relative Natural Colour (NC)	
lab*lab	0.75 0.0 0.0
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*	0.5 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	55.00 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
lab*lab	0.5 0.0 0.0
relative Natural Colour (NC)	
lab*lab	0.5 0.0 0.0
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*	0.25 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 0.0 0.0
LAB*LABb	32.11 0.01 0.0
relative CIELAB lab*	
lab*lab	0.25 0.0 0.0
lab*lab	0.25 0.0 0.0
lab*lab	0.25 0.0 0.0
lab*lab	0.25 0.0 0.0
relative Natural Colour (NC)	
lab*lab	0.25 0.0 0.0
lab*lab	0.25 0.0 0.0
lab*lab	0.25 0.0 0.0
lab*lab	0.25 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 0.0 0.0
LAB*LABb	11.01 0.01 0.0
relative CIELAB lab*	
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0
relative Natural Colour (NC)	
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0
lab*lab	0.0 0.0 0.0

$n^* = 1.0$

relative Inform. Technology (IT)	
olvi3*	1.0 0.75 1.0 (1.0)
cmyn3*	0.0 0.25 0.0 (0.0)
olvi4*	1.0 0.75 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	82.57 26.53 -18.47
LAB*LABa	82.57 26.51 -18.47
LAB*LABb	87.5 32.32 325.12
relative CIELAB lab*	
lab*lab	0.848 0.205 -0.142
lab*lab	0.875 0.25 0.903
lab*lab	0.0 0.25 0.903
lab*lab	0.0 0.25 0.903
relative Natural Colour (NC)	
lab*lab	0.848 0.168 -0.184
lab*lab	0.875 0.25 0.867
lab*lab	0.0 0.25 0.867

relative Inform. Technology (IT)	
olvi3*	0.75 0.5 0.75 (1.0)
cmyn3*	0.25 0.5 0.25 (0.0)
olvi4*	1.0 0.75 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	61.47 26.56 -18.47
LAB*LABa	61.47 26.52 -18.47
LAB*LABb	62.5 32.33 325.12
relative CIELAB lab*	
lab*lab	0.598 0.205 -0.142
lab*lab	0.625 0.25 0.903
lab*lab	0.25 0.25 0.903
relative Natural Colour (NC)	
lab*lab	0.598 0.168 -0.184
lab*lab	0.625 0.25 0.867
lab*lab	0.25 0.25 0.867

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 0.75 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	40.36 26.58 -18.46
LAB*LABa	40.36 26.52 -18.46
LAB*LABb	37.5 32.33 325.12
relative CIELAB lab*	
lab*lab	0.348 0.205 -0.142
lab*lab	0.375 0.25 0.903
lab*lab	0.25 0.25 0.903
relative Natural Colour (NC)	
lab*lab	0.348 0.168 -0.184
lab*lab	0.375 0.25 0.867
lab*lab	0.25 0.25 0.867

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	27.53 33.03 -36.94
LAB*LABa	27.53 33.03 -36.94
LAB*LABb	25.01 64.65 325.12
relative CIELAB lab*	
lab*lab	0.196 0.41 -0.285
lab*lab	0.25 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.196 0.336 -0.369
lab*lab	0.25 0.5 0.867
lab*lab	0.0 0.5 0.867

relative Inform. Technology (IT)	
olvi3*	0.0 0.0 0.0 (1.0)
cmyn3*	0.75 1.0 0.75 (0.0)
olvi4*	1.0 0.75 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	19.26 26.58 -18.45
LAB*LABa	19.26 26.51 -18.47
LAB*LABb	12.5 32.32 325.12
relative CIELAB lab*	
lab*lab	0.098 0.205 -0.142
lab*lab	0.125 0.25 0.903
lab*lab	0.0 0.25 0.903
relative Natural Colour (NC)	
lab*lab	0.098 0.168 -0.184
lab*lab	0.125 0.25 0.867
lab*lab	0.0 0.25 0.867

$n^* = 0.50$

relative Inform. Technology (IT)	
olvi3*	1.0 0.5 1.0 (1.0)
cmyn3*	0.0 0.5 0.0 (0.0)
olvi4*	1.0 0.5 1.0 (1.0)
cmyn4*	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 64.65 325.12
relative CIELAB lab*	
lab*lab	0.696 0.41 -0.285
lab*lab	0.75 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.696 0.336 -0.369
lab*lab	0.75 0.5 0.867
lab*lab	0.0 0.5 0.867

relative Inform. Technology (IT)	
olvi3*	0.75 0.25 0.75 (1.0)
cmyn3*	0.25 0.75 0.25 (0.0)
olvi4*	1.0 0.5 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	48.63 53.09 -36.95
LAB*LABa	48.63 53.04 -36.96
LAB*LABb	50.0 64.66 325.12
relative CIELAB lab*	
lab*lab	0.446 0.41 -0.285
lab*lab	0.5 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.446 0.336 -0.369
lab*lab	0.5 0.5 0.867
lab*lab	0.0 0.5 0.867

relative Inform. Technology (IT)	
olvi3*	0.5 0.0 0.5 (1.0)
cmyn3*	0.5 0.0 0.5 (0.0)
olvi4*	1.0 0.5 1.0 (1.0)
cmyn4*	0.0 0.5 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	35.8 79.61 -55.42
LAB*LABa	35.8 79.56 -55.44
LAB*LABb	37.51 96.97 325.12
relative CIELAB lab*	
lab*lab	0.294 0.615 -0.428
lab*lab	0.375 0.75 0.903
lab*lab	0.25 0.75 0.903
relative Natural Colour (NC)	
lab*lab	0.294 0.504 -0.554
lab*lab	0.375 0.75 0.867
lab*lab	0.25 0.75 0.867

relative Inform. Technology (IT)	
olvi3*	0.25 0.0 0.25 (1.0)
cmyn3*	0.75 0.0 0.25 (0.0)
olvi4*	1.0 0.5 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	25.01 64.65 325.12
LAB*LABa	25.01 64.65 325.12
LAB*LABb	25.01 64.65 325.12
relative CIELAB lab*	
lab*lab	0.196 0.41 -0.285
lab*lab	0.25 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.196 0.336 -0.369
lab*lab	0.25 0.5 0.867
lab*lab	0.0 0.5 0.867

relative Inform. Technology (IT)	
olvi3*	0.0 0.25 0.0 (1.0)
cmyn3*	0.75 1.0 0.75 (0.0)
olvi4*	1.0 0.75 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	11.01 0.07 0.01
LAB*LABa	11.01 0.0 0.0
LAB*LABb	11.01 0.01 0.0
relative CIELAB lab*	
lab*lab	0.0 0.25 0.0
lab*lab	0.25 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.0 0.25 0.0
lab*lab	0.25 0.5 0.867
lab*lab	0.0 0.5 0.867

$n^* = 0.25$

relative Inform. Technology (IT)	
olvi3*	1.0 0.0 1.0 (1.0)
cmyn3*	0.0 0.0 1.0 (0.0)
olvi4*	1.0 0.0 1.0 (1.0)
cmyn4*	0.0 0.0 1.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	56.89 79.6 -55.43
LAB*LABa	56.89 79.56 -55.44
LAB*LABb	62.5 96.97 325.12
relative CIELAB lab*	
lab*lab	0.544 0.615 -0.428
lab*lab	0.625 0.75 0.903
lab*lab	0.0 0.75 0.903
relative Natural Colour (NC)	
lab*lab	0.544 0.504 -0.554
lab*lab	0.625 0.75 0.867
lab*lab	0.0 0.75 0.867

relative Inform. Technology (IT)	
olvi3*	0.75 0.0 0.75 (1.0)
cmyn3*	0.25 0.0 0.25 (0.0)
olvi4*	1.0 0.0 1.0 (1.0)
cmyn4*	0.0 0.0 0.25 (0.0)
standard and adapted CIELAB	
LAB*LAB	44.06 106.07 -73.91
LAB*LABa	44.06 106.07 -73.91
LAB*LABb	50.0 129.29 325.12
relative CIELAB lab*	
lab*lab	0.392 0.82 -0.571
lab*lab	0.5 1.0 0.903
lab*lab	0.0 1.0 0.903
relative Natural Colour (NC)	
lab*lab	0.392 0.673 -0.739
lab*lab	0.5 1.0 0.867
lab*lab	0.0 1.0 0.867

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 0.5 1.0 (1.0)
cmyn4*	0.0 0.5 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	35.8 79.61 -55.42
LAB*LABa	35.8 79.56 -55.44
LAB*LABb	37.51 96.97 325.12
relative CIELAB lab*	
lab*lab	0.294 0.615 -0.428
lab*lab	0.375 0.75 0.903
lab*lab	0.25 0.75 0.903
relative Natural Colour (NC)	
lab*lab	0.294 0.504 -0.554
lab*lab	0.375 0.75 0.867
lab*lab	0.25 0.75 0.867

relative Inform. Technology (IT)	
olvi3*	0.25 0.25 0.25 (1.0)
cmyn3*	0.75 0.25 0.25 (0.0)
olvi4*	1.0 0.25 1.0 (1.0)
cmyn4*	0.0 0.25 0.0 (0.0)
standard and adapted CIELAB	
LAB*LAB	25.01 64.65 325.12
LAB*LABa	25.01 64.65 325.12
LAB*LABb	25.01 64.65 325.12
relative CIELAB lab*	
lab*lab	0.196 0.41 -0.285
lab*lab	0.25 0.5 0.903
lab*lab	0.0 0.5 0.903
relative Natural Colour (NC)	
lab*lab	0.196 0.336 -0.369
lab*lab	0.25 0.5 0.867
lab*lab	0.0 0.5 0.867

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 0.0 0.0
LAB*LABb	11.

Input: Colorimetric Reflective System NCS11

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

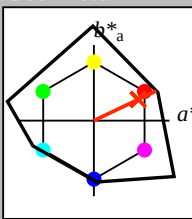
lab^*tch and lab^*nch

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*Lab	95.41	0.0	0.0	
LAB*TCb	99.99	0.01	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*Lab	83.61	20.64	9.84	
LAB*TCb	87.5	25.86	25.49	

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*Lab	71.81	41.28	19.68	
LAB*TCb	75.0	45.73	25.49	

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	61.92	29.52	
LAB*TCb	62.5	68.6	25.49	

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.738	0.75	(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*Lab	50.71	41.29	19.68	
LAB*TCb	50.0	45.74	25.49	

relative Inform. Technology (IT)

olvi3*	0.5	0.012	0.0	(1.0)
cmyn3*	0.5	0.744	0.75	(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*Lab	41.4	20.64	9.84	
LAB*TCb	37.5	22.87	25.49	

relative Inform. Technology (IT)

olvi3*	0.25	0.025	0.0	(1.0)
cmyn3*	0.75	0.756	0.75	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	29.6	41.29	19.69	
LAB*Lab	29.6	41.29	19.68	
LAB*TCb	25.01	45.73	25.47	

relative Inform. Technology (IT)

olvi3*	0.25	0.006	0.0	(1.0)
cmyn3*	0.75	0.994	1.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	20.3	20.64	9.83	
LAB*Lab	20.3	20.64	9.83	
LAB*TCb	12.5	22.86	25.46	

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	0.0	0.0	
LAB*Lab	11.01	0.0	0.0	
LAB*TCb	0.01	0.01	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	0.0	0.0	0.0	
LAB*Lab	0.0	0.0	0.0	
LAB*TCb	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	0.0	0.0	0.0	
LAB*Lab	0.0	0.0	0.0	
LAB*TCb	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

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

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

$n^* = 0.00$

$n^* = 0.25$

$n^* = 0.50$

$n^* = 0.75$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

$n^* = 1.0$

Output: Colorimetric Reflective System NCS11

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

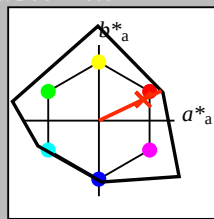
lab^*tch and lab^*nch

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*Lab	95.41	0.0	0.0	
LAB*TCb	99.99	0.01	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*Lab	83.61	20.64	9.84	
LAB*TCb	87.5	25.86	25.49	

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*Lab	71.81	41.28	19.68	
LAB*TCb	75.0	45.73	25.49	

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	61.92	29.52	
LAB*TCb	62.5	68.6	25.49	

relative Inform. Technology (IT)

olvi3*	0.75	0.018	0.0	(1.0)
cmyn3*	0.25	0.738	0.75	(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*Lab	50.71	41.29	19.68	
LAB*TCb	50.0	45.74	25.49	

relative Inform. Technology (IT)

olvi3*	0.5	0.012	0.0	(1.0)
cmyn3*	0.5	0.744	0.75	(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*Lab	41.4	20.64	9.84	
LAB*TCb	37.5	22.87	25.49	

relative Inform. Technology (IT)

olvi3*	0.25	0.025	0.0	(1.0)
cmyn3*	0.75	0.756	0.75	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	29.6	41.29	19.69	
LAB*Lab	29.6	41.29	19.68	
LAB*TCb	25.01	45.73	25.47	

relative Inform. Technology (IT)

olvi3*	0.25	0.006	0.0	(1.0)
cmyn3*	0.75	0.994	1.0	(0.0)
olvi4*	1.0	1.0	1.0	(1.0)
cmyn4*	0.0	0.244	0.25	(0.0)
standard and adapted CIELAB				
LAB*LAB	20.3	20.64	9.83	
LAB*Lab	20.3	20.64	9.83	
LAB*TCb	12.5	22.86	25.46	

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	0.0	0.0	
LAB*Lab	11.01	0.0	0.0	
LAB*TCb	0.01	0.01	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	0.0	0.0	0.0	
LAB*Lab	0.0	0.0	0.0	
LAB*TCb	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	0.0	0.0	0.0	
LAB*Lab	0.0	0.0	0.0	
LAB*TCb	0.0	0.0	0.0	

$n^* = 1.0$

BAM-test chart UE59; Colorimetric systems NCS11a & NCS11ainput: $cmY0^* setcmykcolor$

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

output: $olV^* setrgbcolor / w^* setgray$

Input: Colorimetric Reflective System NCS11

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

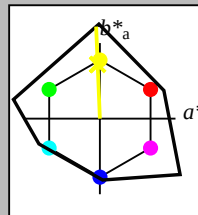
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



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
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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*TC_{Ma} 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*tr 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*TC_{Ma} 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*tr 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* 0.75 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*TC_{Ma} 50.00 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*tr 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 32.11 0.07 0.01
LAB*LABa 32.11 0.07 0.01
LAB*TC_{Ma} 25.00 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*tr 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 11.01 0.07 0.01
LAB*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 0.01 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*tr 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* 0.25 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 0.07 0.01
LAB*LABa 32.11 0.07 0.01
LAB*TC_{Ma} 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*tr 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* 0.25 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*TC_{Ma} 0.01 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*tr 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 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* 0.0 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 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* 0.0 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0

UE59-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

BAM-test chart UE59; Colorimetric systems NCS11a & NCS11ainput: $cmY0^* setcmykcolor$

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

Output: Colorimetric Reflective System NCS11

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

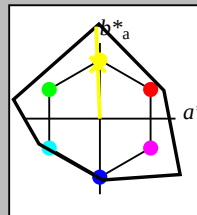
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 90 122 92

rgb*Ma: 0.97 1.0 0.0

triangle lightness t^*



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
G50B _{Ma}	59.47	-80.6	-33.45	87.28	203
B _{Ma}	49.01	3.65	-81.19	81.28	273
B50R _{Ma}	44.06	106.09	-73.93	129.32	325
N _{Ma}	10.99	0.0	0.0	0.0	0
W _{Ma}	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*TC_{Ma} 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*tr 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*TC_{Ma} 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*tr 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* 0.75 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*TC_{Ma} 50.00 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*tr 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 32.11 0.07 0.01
LAB*LABa 32.11 0.07 0.01
LAB*TC_{Ma} 25.00 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*tr 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 11.01 0.07 0.01
LAB*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 0.01 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*tr 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* 0.25 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 0.07 0.01
LAB*LABa 32.11 0.07 0.01
LAB*TC_{Ma} 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*tr 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* 0.25 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*TC_{Ma} 0.01 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*tr 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 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* 0.0 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 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* 0.0 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*LABa 11.01 0.07 0.01
LAB*TC_{Ma} 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 0.0 0.0 0.0
relative Natural Colour (NC)
lab*tr 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 0.0 0.0 0.0

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

output: $olv^* setrgbcolor$ / $w^* setgray$

