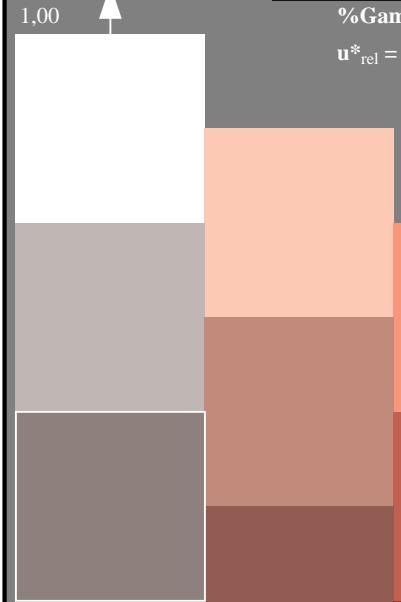
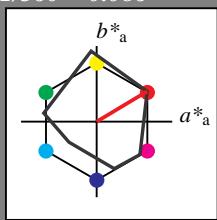
**Input: Colorimetric Reflective System MRS18a**for hue  $h^* = lab^*h = 31/360 = 0.086$  $lab^*tch$  and  $lab^*nch$ 

D65: hue R

LCH\*Ma: 50 78 31

rgb\*Ma: 1.0 0.0 0.0

triangle lightness

**MRS18a; adapted (a) CIELAB data**

	$L^*$	$a^*$	$b^*$	$C^*_{ab,a}$	$h^*_{ab,a}$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

**%Regularity** $g^*_{H,rel} = 42$  $g^*_{C,rel} = 49$ 

triangle lightness

1,00

0,75

0,50

0,25

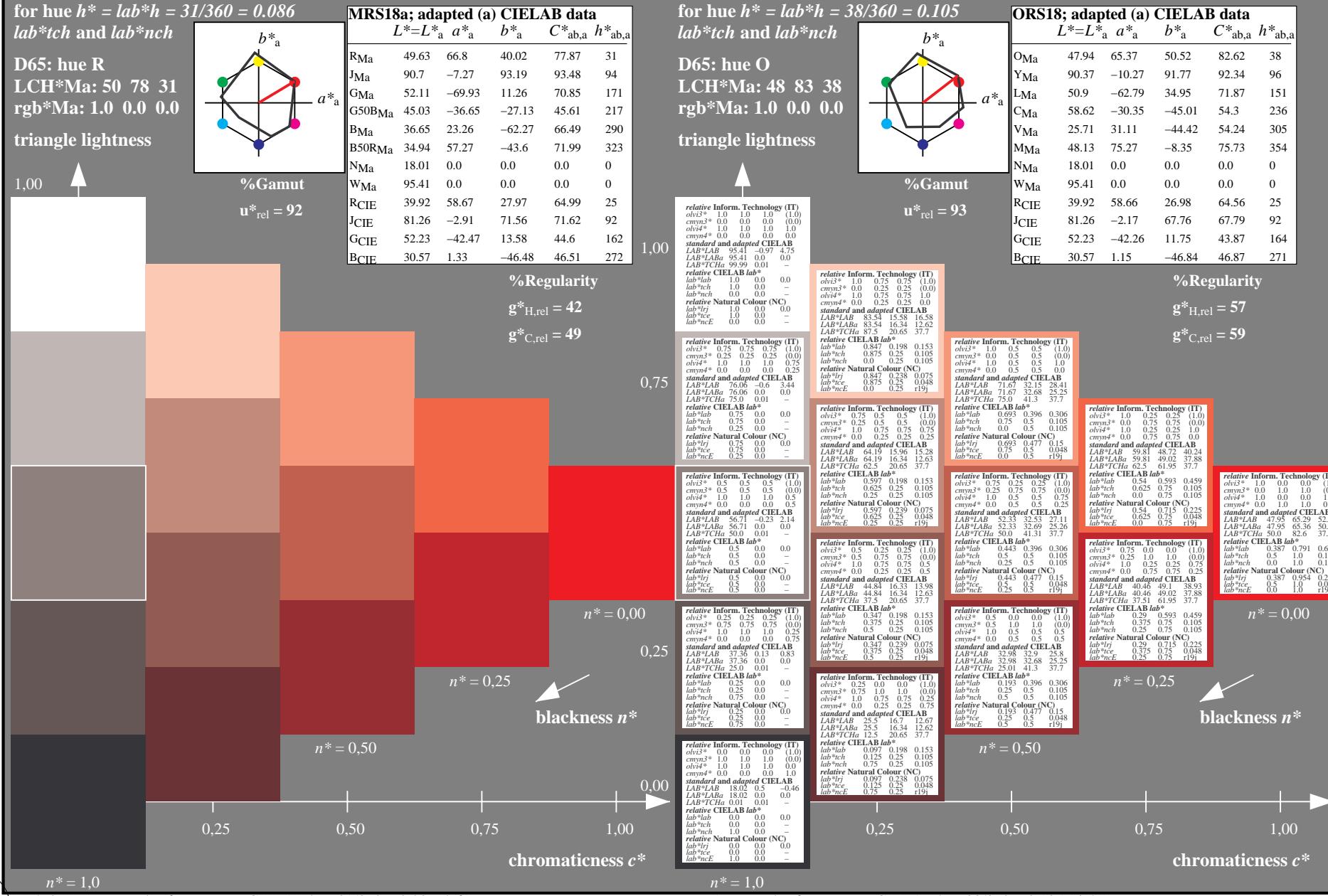
0,00

-0,25

-0,50

-0,75

-1,00

 $n^* = 0,50$  $n^* = 0,25$  $n^* = 0,00$  $n^* = 1,0$ chromaticness  $c^*$ 



$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  73.54 -5.63 49.17

$LAB^{*TCh}$  73.54 -5.63 49.17

$LAB^{*Lab}$  91.37 -11.15 96.17

$LAB^{*LaB}$  90.32 -13.13 96.17

$LAB^{*TCh}$  50.0 92.32 96.17

relative CIELAB lab\*

$lab^{*lab}$  0.951 0.082 0.745

$lab^{*tch}$  0.0 0.25 0.75

$lab^{*nch}$  0.0 0.25 0.75

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

relative Natural Colour (NC)

$lab^{*lr}$  0.951 -0.073 0.746

$lab^{*ce}$  0.375 0.25 0.266

$lab^{*ncE}$  0.0 0.75 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  54.19 -5.13 47.85

$LAB^{*TCh}$  54.19 -5.13 47.85

$LAB^{*Lab}$  46.16 96.39

$LAB^{*LaB}$  69.25 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.953 0.111 0.268

$lab^{*tch}$  0.25 0.75 0.268

$lab^{*nch}$  0.0 1.0 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

relative Natural Colour (NC)

$lab^{*lr}$  0.701 -0.073 0.746

$lab^{*ce}$  0.375 0.25 0.266

$lab^{*ncE}$  0.5 0.5 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.5 0.5 0.268

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  18.02 0.5 -0.46

$LAB^{*TCh}$  0.01 0.01

relative CIELAB lab\*

$lab^{*lab}$  0.0 0.0 0.0

$lab^{*tch}$  1.0 0.0 0.0

$lab^{*nch}$  0.0 0.0 0.0

$oliv4^*$  0.0 0.0 0.0

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268

$lab^{*nch}$  0.25 0.75 0.268

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0

relative Natural Colour (NC)

$lab^{*lr}$  0.234 -0.024 0.249

$lab^{*ce}$  0.75 0.25 0.06g

$lab^{*ncE}$  0.75 0.25 0.06g

relative Inform. Technology (IT)

$oliv3^*$  0.75 0.75 0.25 (1,0)

$cmy3^*$  0.25 0.25 0.25 (0,0)

$oliv4^*$  1.0 1.0 0.25 (0,0)

$cmy4^*$  0.0 0.0 0.0 (0,0)

standard and adapted CIELAB

$LAB^{*LAB}$  36.1 2.4 23.69

$LAB^{*TCh}$  36.1 2.4 23.69

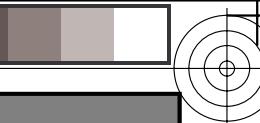
$LAB^{*Lab}$  23.25 23.08 96.39

$LAB^{*LaB}$  46.16 96.39

relative CIELAB lab\*

$lab^{*lab}$  0.467 -0.055 0.497

$lab^{*tch}$  0.25 0.5 0.268



C

M

Y

O

L

V

BAM registration: 20060101-UE46/10L/L46E02SP.PDF

application for evaluation and measurement of printer or monitor systems

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C

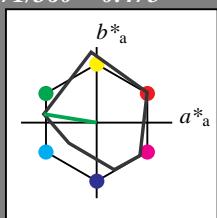
**Input: Colorimetric Reflective System MRS18a**for hue  $h^* = lab^*h = 171/360 = 0.475$  $lab^*tch$  and  $lab^*nch$ 

D65: hue G

LCH\*Ma: 52 71 171

rgb\*Ma: 0.0 1.0 0.0

triangle lightness

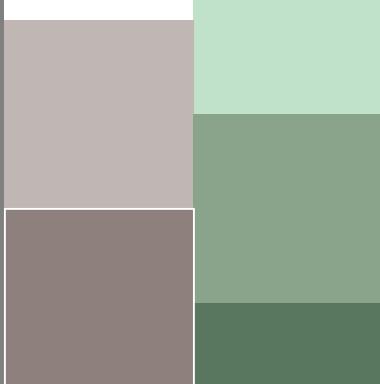
**MRS18a; adapted (a) CIELAB data**

	$L^*$	$a^*$	$b^*$	$C^*$	$h^*$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272

1,00



%Gamut

 $u^*_{rel} = 92$ **%Regularity** $g^*_{H,rel} = 42$  $g^*_{C,rel} = 49$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$ **Output: Colorimetric Reflective System ORS18**for hue  $h^* = lab^*h = 151/360 = 0.419$  $lab^*tch$  and  $lab^*nch$ 

D65: hue L

LCH\*Ma: 51 72 151

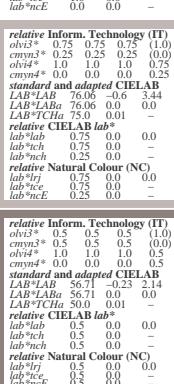
rgb\*Ma: 0.0 1.0 0.0

triangle lightness

1,00



%Gamut

 $u^*_{rel} = 93$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$ **ORS18; adapted (a) CIELAB data**

	$L^*$	$a^*$	$b^*$	$C^*$	$h^*$
OMa	47.94	65.37	50.52	82.62	38
YMa	90.37	-10.27	91.77	92.34	96
LMa	50.9	-62.79	34.95	71.87	151
CMa	58.62	-30.35	-45.01	54.3	236
VMa	25.71	31.11	-44.42	54.24	305
MMa	48.13	75.27	-8.35	75.73	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	26.98	64.56	25
JCIE	81.26	-2.91	67.76	67.79	92
GCIE	52.23	-42.47	11.75	43.87	164
BCIE	30.57	1.15	-46.84	46.87	271

**%Regularity** $g^*_{H,rel} = 57$  $g^*_{C,rel} = 59$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 0,00$  $n^* = 0,25$  $n^* = 0,50$  $n^* = 0,75$  $n^* = 1,00$  $chromaticness c^*$  $n^* = 1,00$ 

BAM-test chart UE46; Colorimetric systems ORS18 &amp; ORS18

D65: 5 step colour scales and coordinate data for 10 hues

UE46-7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

input:  $cmy0*$  setcmykcolor  
output: Startup (S) data dependend

See for similar files: <http://www.ps.bam.de/UE46/>

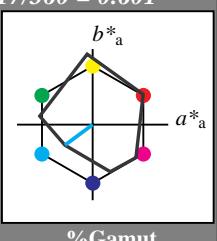
Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0?

**Input: Colorimetric Reflective System MRS18a**  
for hue  $h^* = lab^*h = 217/360 = 0.601$   
 $lab^*tch$  and  $lab^*nch$

D65: hue G50B  
LCH\*Ma: 45 46 217  
rgb\*Ma: 0.0 1.0 1.0

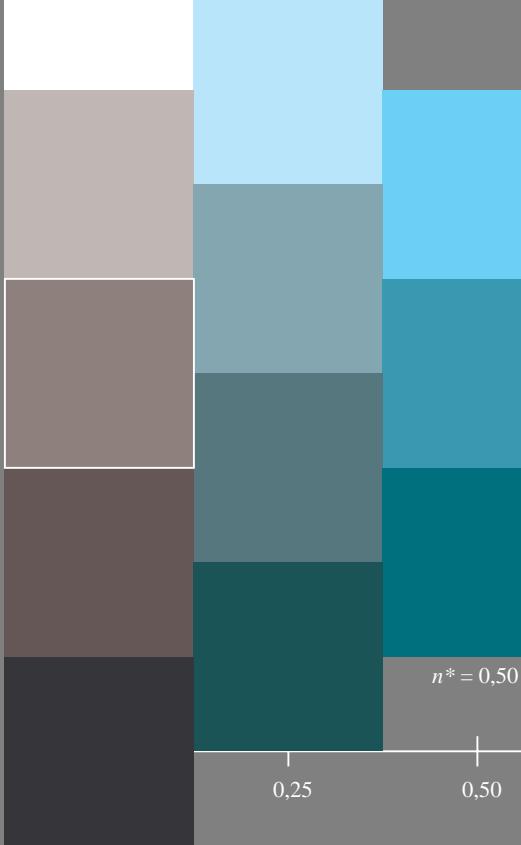
triangle lightness

1,00



%Gamut  
 $u^*_{rel} = 92$

	$L^*$	$a^*$	$b^*$	$C^*$	$h^*$
RMa	49.63	66.8	40.02	77.87	31
JMa	90.7	-7.27	93.19	93.48	94
GMa	52.11	-69.93	11.26	70.85	171
G50BMa	45.03	-36.65	-27.13	45.61	217
BMa	36.65	23.26	-62.27	66.49	290
B50RMa	34.94	57.27	-43.6	71.99	323
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.67	27.97	64.99	25
JCIE	81.26	-2.91	71.56	71.62	92
GCIE	52.23	-42.47	13.58	44.6	162
BCIE	30.57	1.33	-46.48	46.51	272



$n^* = 0,00$   
 $n^* = 0,25$   
 $n^* = 0,50$   
 $n^* = 0,75$   
 $n^* = 1,00$

blackness  $n^*$   
chromaticness  $c^*$

$n^* = 0,00$

**Output: Colorimetric Reflective System ORS18**

for hue  $h^* = lab^*h = 236/360 = 0.656$

$lab^*tch$  and  $lab^*nch$

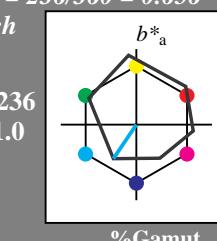
D65: hue C

LCH\*Ma: 59 54 236

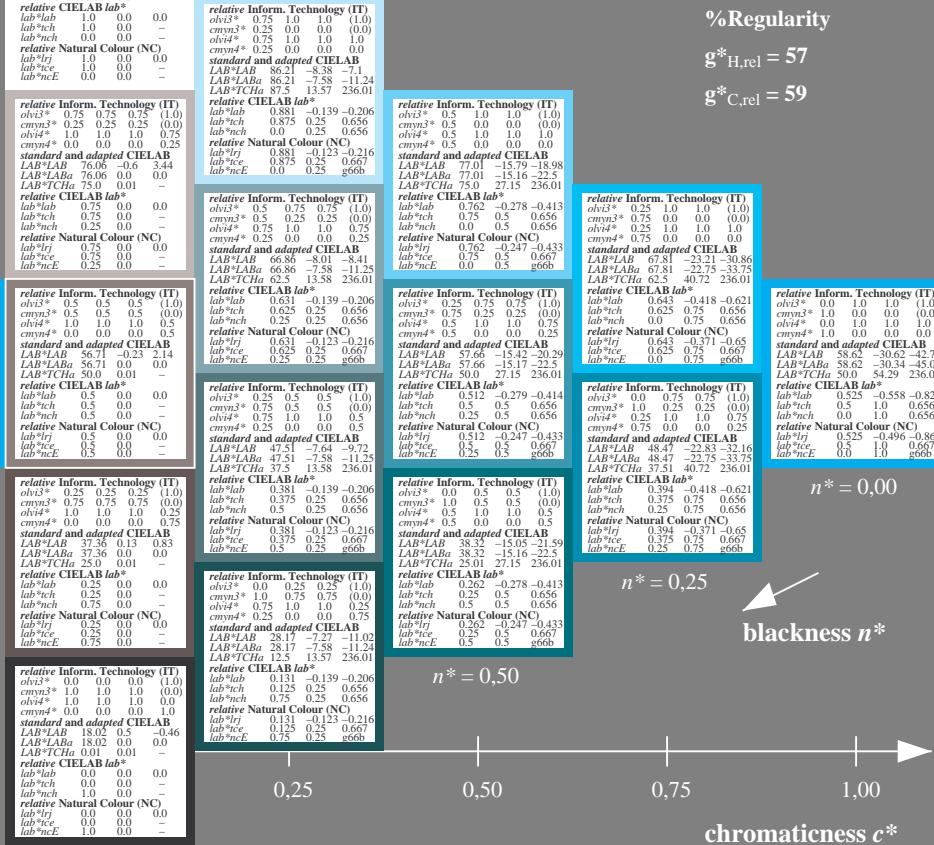
rgb\*Ma: 0.0 1.0 1.0

triangle lightness

1,00



%Gamut  
 $u^*_{rel} = 93$



$n^* = 0,00$   
 $n^* = 0,25$   
 $n^* = 0,50$   
 $n^* = 0,75$   
 $n^* = 1,00$

chromaticness  $c^*$

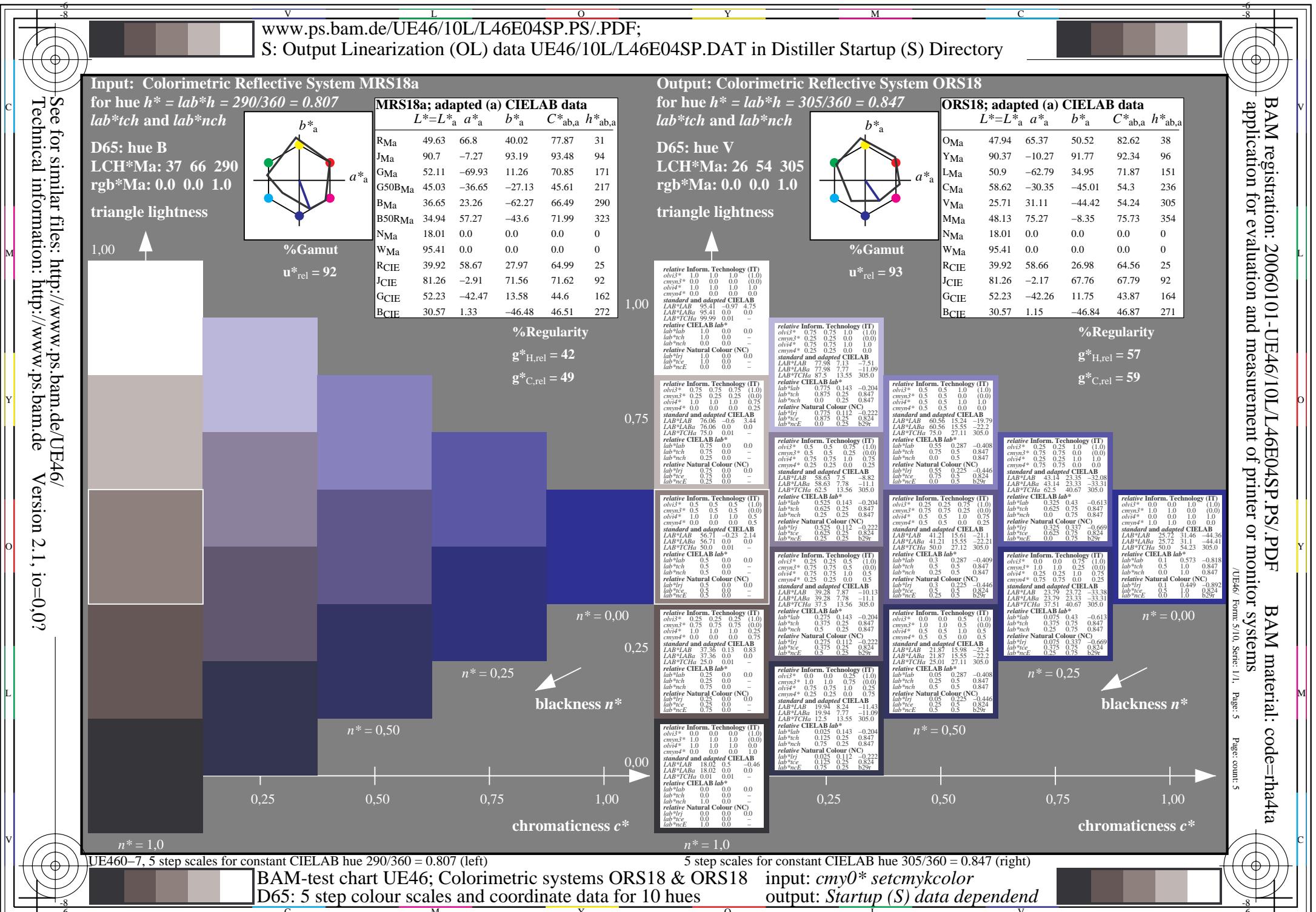
$n^* = 0,00$

UE46-7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

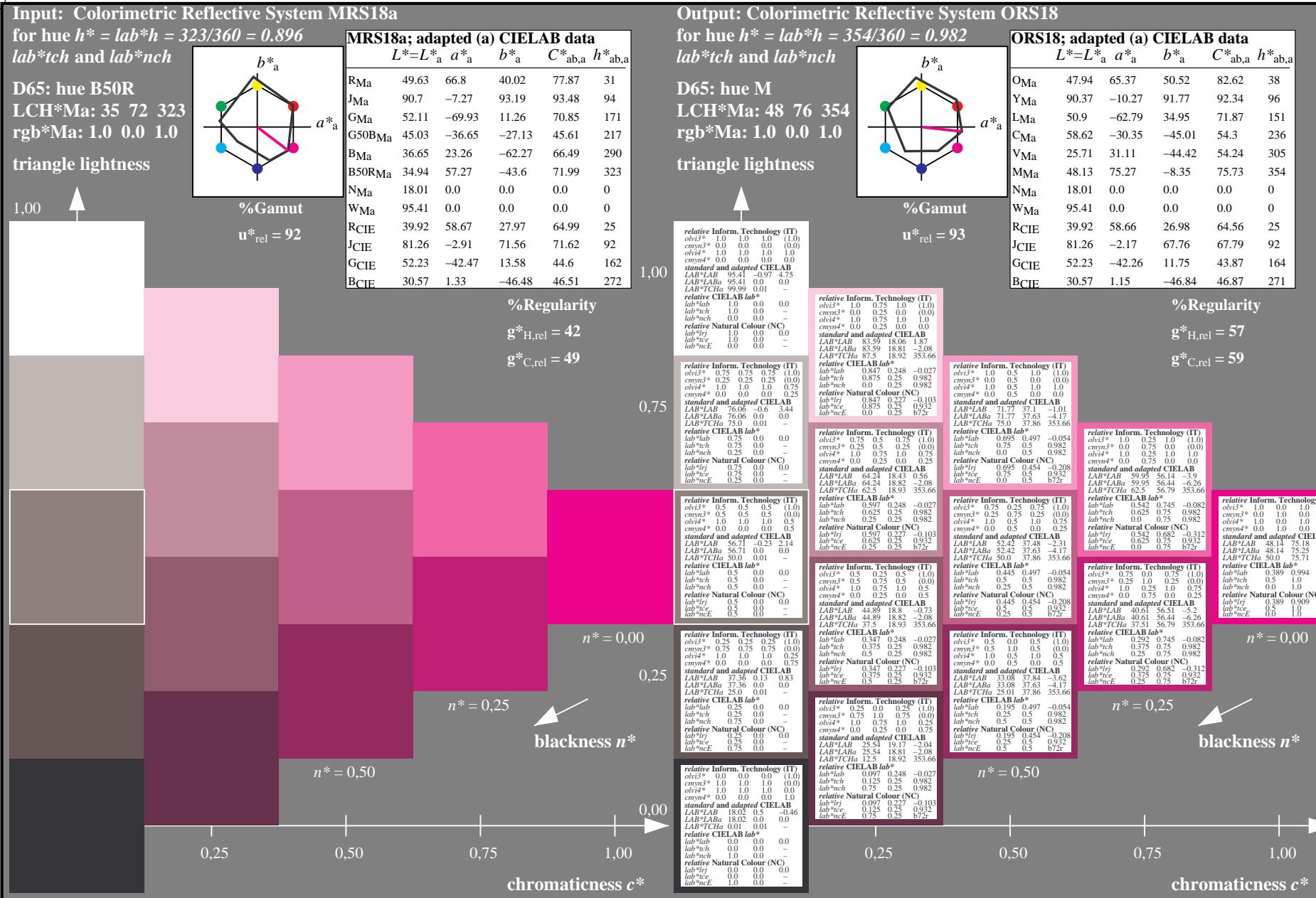
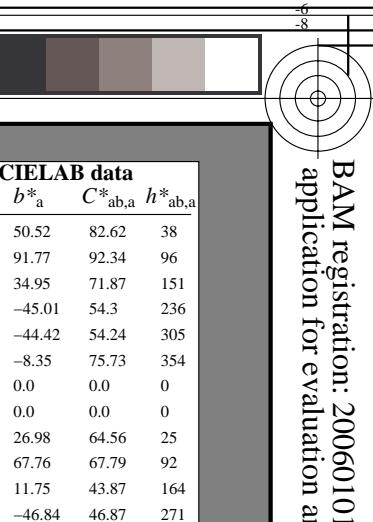
BAM-test chart UE46; Colorimetric systems ORS18 & ORS18  
D65: 5 step colour scales and coordinate data for 10 hues

input:  $cmy0^* \text{ setcmykcolor}$   
output: Startup (S) data dependend



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$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 0,75$

$n^* = 1,00$

$c^* = 0,00$

$c^* = 0,25$

$c^* = 0,50$

$c^* = 0,75$

$c^* = 1,00$



