



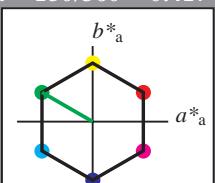
für Bunton  $h^* = lab$   
 $lab*tch$  und  $lab*nch$

Eingabe: Farbmétrisches Standard-Reflektiv-System SRS18

für Bunton  $h^* = lab^*h = 150/360 = 0.417$   
 $lab^*tch$  und  $lab^*nch$

D65: Bunton L  
LCH\*Ma: 57 77 150  
ely\*Ma: 0 0 1 0 0 0

## Dreiecks-Helligkeit



SRS18; adaptierte CIELAB-Daten					
	$L^* = L^*_a$	$a^* = a^*_a$	$b^* = b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	56.71	67.03	38.7	77.4	30
Y <sub>Ma</sub>	56.71	0.0	77.4	77.4	90
L <sub>Ma</sub>	56.71	-67.02	38.7	77.4	150
C <sub>Ma</sub>	56.71	-67.02	-38.69	77.4	210
V <sub>Ma</sub>	56.71	0.0	-77.39	77.4	270
M <sub>Ma</sub>	56.71	67.03	-38.69	77.4	330
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.74	27.99	65.07	25
J <sub>CIE</sub>	81.26	-2.88	71.56	71.62	92
G <sub>CIE</sub>	52.23	-42.41	13.6	44.55	162
B <sub>CIE</sub>	30.57	1.41	-46.46	46.49	272

A 3D bar chart illustrating the distribution of a variable across four categories (A, B, C, D) for two groups (Group 1 and Group 2). The Y-axis represents the value, ranging from 0 to 100. Group 1 (light gray bars) shows values of approximately 40, 50, 50, 50. Group 2 (dark gray bars) shows values of approximately 50, 50, 50, 50. A horizontal red line is drawn at Y=50, serving as a reference point.

Category	Group 1	Group 2
A	~40	~50
B	~50	~50
C	~50	~50
D	~50	~50

The diagram illustrates the relationship between relative colorimetric purity ( $c^*$ ) and relative brightness ( $n^*$ ). A horizontal axis at the bottom represents  $c^*$ , ranging from 0,50 to 1,00. Three vertical bars above the axis represent different  $n^*$  values: 0,00 (top), 0,25 (middle), and 0,50 (bottom). The bar at  $n^* = 0,00$  is labeled "Schwarzheit  $n^*$ " with an arrow pointing to it.

**BAM-Prüffolie OG47; Farbmietrische Systeme SRS18 & ORS18 input: cmy0\* setcmykcolor**  
**D65: 5stufige Farbreihen und Koordinatendaten für 10 Bunttöne output: cmy0\* / 000n\* setcmykcolor**

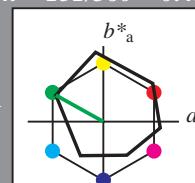
Ausgabe: Farbmétrisches Offset-Reflektiv-System ORS18

für Buntton  $h^* = lab^*$   
 $lab^*tch$  und  $lab^*nch$

D65: Buntton L

LCH\*Ma: 51 72 151  
ely\*Ma: 0 0 10 0 0

## Dreiecks-Helligkeit



ORS18; adaptierte CIELAB-Daten					
	$L^* = L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab}$
O <sub>Ma</sub>	47.94	65.39	50.52	82.63	38
Y <sub>Ma</sub>	90.37	-10.26	91.75	92.32	96
L <sub>Ma</sub>	50.9	-62.83	34.96	71.91	151
C <sub>Ma</sub>	58.62	-30.34	-45.01	54.3	236
V <sub>Ma</sub>	25.72	31.1	-44.4	54.22	305
M <sub>Ma</sub>	48.13	75.28	-8.36	75.74	354
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.66	26.98	64.57	25
J <sub>CIE</sub>	81.26	-2.16	67.76	67.79	92
G <sub>CIE</sub>	52.23	-42.25	11.76	43.87	164
B <sub>CIE</sub>	30.57	1.15	-46.84	46.86	271

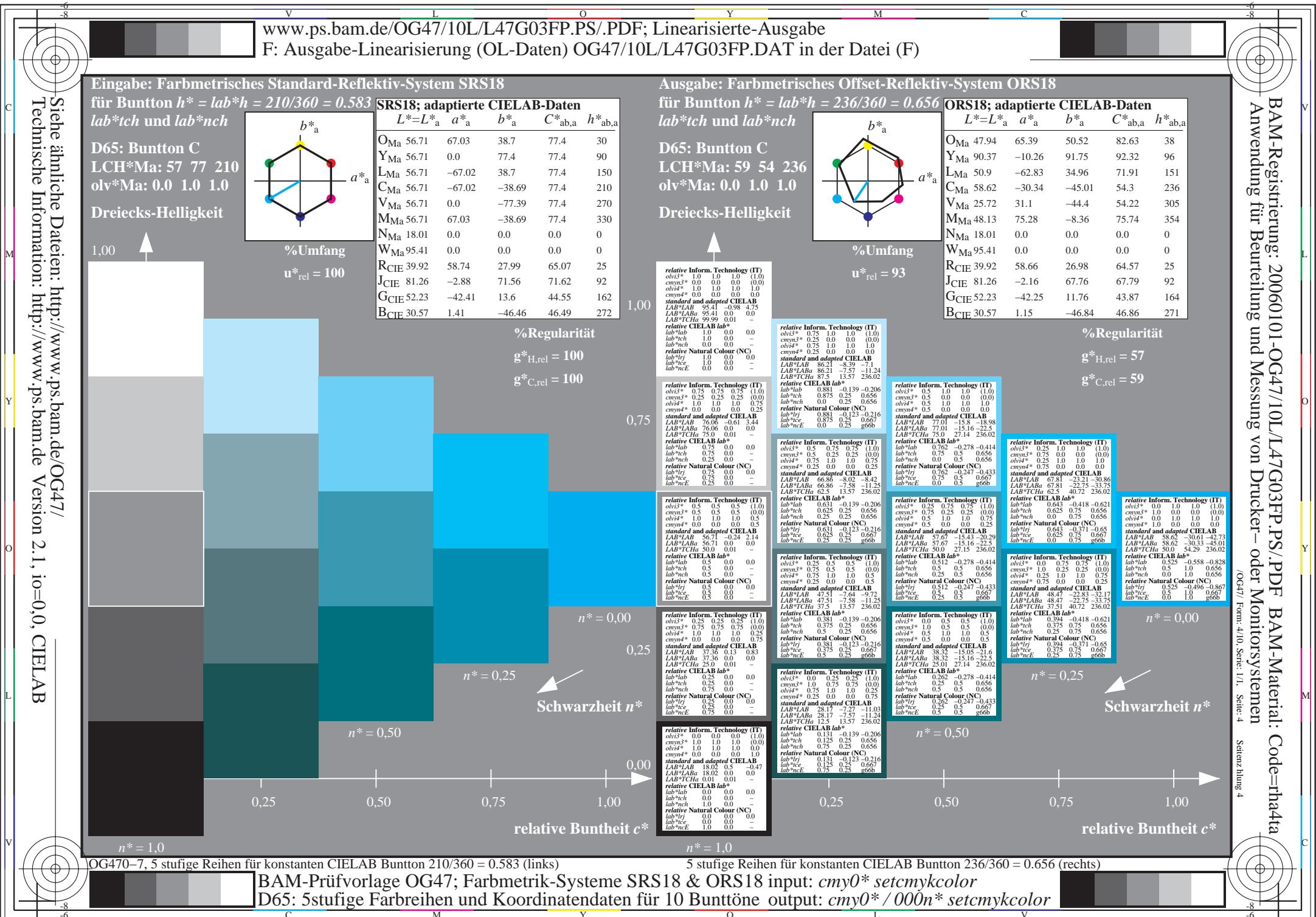
	Inform. Technology (IT)	
0.75	1.0	0.75 (1.0)
0.25	0.5	0.25 (0.0)
0.75	1.0	0.75 (1.0)
0.25	0.5	0.25 (0.0)
<i>and adapted CIELAB</i>		
Ba	84.28	-16.47 12.74
Ha	84.85	-15.69 8.74
Gu	84.93	-15.78 15.04
<i>CIELAB</i> color		
0.856	-0.217	0.121
0.0	0.25	0.419
0.0	0.25	0.419
<i>Natural Colour (NC)</i>		
0.856	-0.238	0.072
0.0	0.25	0.431
0.0	0.25	0.431
<i>Inform. Technology (IT)</i>		
0.75	0.5	0.5 (0.0)
0.25	0.5	0.5 (0.0)
0.75	1.0	0.75 (0.75)
0.25	0.5	0.25 (0.25)
<i>and adapted CIELAB</i>		
Da	64.93	-11.74
Ba	64.93	-15.78 8.74
Gu	64.93	-15.78 15.04
<i>CIELAB</i> color		
0.606	-0.217	0.121
0.626	0.25	0.419
0.626	0.25	0.419
<i>Natural Colour (NC)</i>		
0.606	-0.238	0.072
0.625	0.25	0.431
0.25	0.25	0.431
<i>Inform. Technology (IT)</i>		
0.25	0.5	0.25 (1.0)
0.75	0.5	0.5 (0.0)
0.25	0.5	0.25 (0.0)
0.75	1.0	0.75 (1.0)
0.25	0.5	0.25 (0.5)
<i>and adapted CIELAB</i>		
Ba	45.58	-15.78 8.74
Ha	45.58	-15.78 15.04
Gu	45.58	-15.78 8.74
<i>CIELAB</i> color		
0.75	1.0	0.75 (1.0)
0.25	0.5	0.25 (0.0)
0.75	1.0	0.75 (1.0)
0.25	0.5	0.25 (0.0)
<i>relative In</i>		
ab* <sup>3</sup>	0.18	0.18
cmy3 <sup>3</sup>	0.18	0.18
oliv <sup>3</sup>	0.18	0.18
can <sup>3</sup>	0.18	0.18
standard	0.18	0.18
LAB <sup>3</sup>	0.18	0.18
LAB <sup>1</sup>	0.18	0.18
LAB <sup>1</sup> *T <sup>1</sup>	0.18	0.18
<i>relative C</i>		
lab <sup>3</sup>	0.18	0.18
lab <sup>1</sup>	0.18	0.18
lab <sup>1</sup> *nc <sup>3</sup>	0.18	0.18
<i>relative N</i>		
lab <sup>3</sup>	0.18	0.18
lab <sup>1</sup>	0.18	0.18
lab <sup>1</sup> *nc <sup>3</sup>	0.18	0.18
<i>relative In</i>		
ab* <sup>3</sup>	0.18	0.18
cmy3 <sup>3</sup>	0.18	0.18
oliv <sup>3</sup>	0.18	0.18
can <sup>3</sup>	0.18	0.18
standard	0.18	0.18
LAB <sup>3</sup>	0.18	0.18
LAB <sup>1</sup>	0.18	0.18
LAB <sup>1</sup> *T <sup>1</sup>	0.18	0.18
<i>relative C</i>		
lab <sup>3</sup>	0.18	0.18
lab <sup>1</sup>	0.18	0.18
lab <sup>1</sup> *nc <sup>3</sup>	0.18	0.18
<i>relative N</i>		
lab <sup>3</sup>	0.18	0.18
lab <sup>1</sup>	0.18	0.18
lab <sup>1</sup> *nc <sup>3</sup>	0.18	0.18

Form, Technology (IT)	
0	0.0
0.5	0.0
1.0	0.5
1.5	0.5
2.0	0.5
<i>and adapted CIELAB</i>	
$L^*$	34.46
$a^*$	-31.47
$b^*$	17.48
$a'$	25.01
$b'$	35.95
$l'$	150.70
<i>IELAB tab</i>	
$L'$	31.13
$a'$	-0.436
$b'$	0.243
$L'$	0.25
$a'$	0.5
$b'$	0.419
<i>Standard Colour (NC)</i>	
$L^*$	31.13
$a^*$	-47.89
$b^*$	1.44
$L'$	0.25
$a'$	0.5
$b'$	0.453
$L'$	0.5
$a'$	0.5
$b'$	0.81 $\pm$

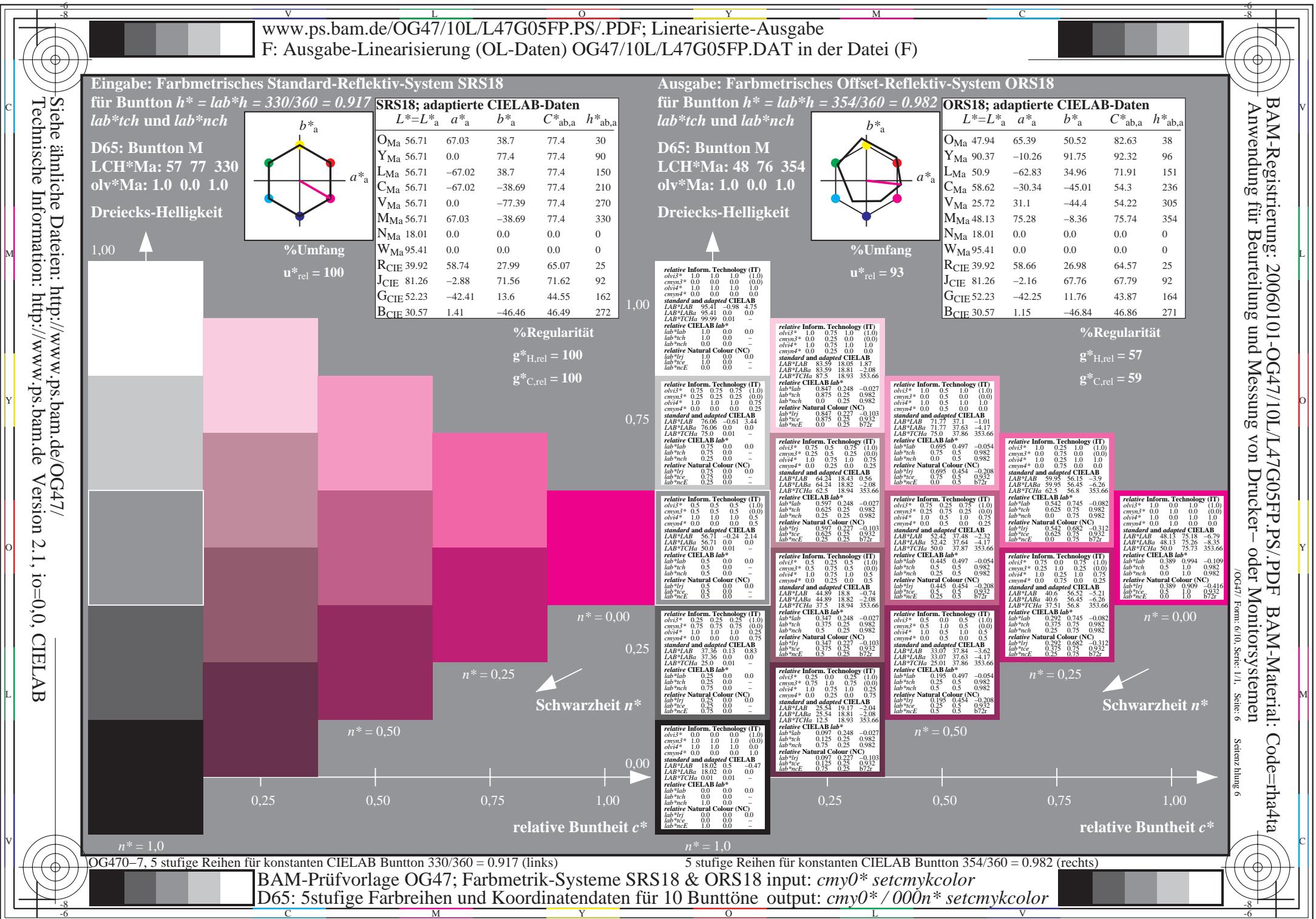
	relative Inform. Technology (IT)		relative Inform. Technology (IT)	
	wh3*	cm3**	wh3*	cm3**
wh3*	0.0	0.75	0.0	1.0
cm3**	0.0	0.75	0.0	1.0
wh4*	0.25	0.75	0.25	1.0
cm4**	0.25	1.0	0.25	1.0
nmw*	0.75	1.0	0.75	0.5
nmw**	0.75	1.0	0.75	0.5
standard and adapted CIELAB	62.03	-47.46	52.72	62.02
LAB*LAB	62.03	-47.46	52.72	62.02
AB*LAB	62.03	-47.46	52.72	62.02
AB*TChu	62.03	-53.92	150.91	62.02
relative Natural Colour (NC)	0.0	0.75	0.0	1.0
lab*lab	0.569	-0.717	0.127	0.569
lab*nc	0.625	0.75	0.453	0.625
lab*ncE	0.0	0.75	0.181	0.0
	relative Inform. Technology (IT)		relative Inform. Technology (IT)	
	wh3*	cm3**	wh3*	cm3**
wh3*	0.0	0.75	0.0	1.0
cm3**	0.0	0.75	0.0	1.0
wh4*	0.25	0.75	0.25	1.0
cm4**	0.25	1.0	0.25	1.0
nmw*	0.75	1.0	0.75	0.5
nmw**	0.75	1.0	0.75	0.5
standard and adapted CIELAB	62.03	-47.46	52.72	62.02
LAB*LAB	62.03	-47.46	52.72	62.02
AB*LAB	62.03	-47.46	52.72	62.02
AB*TChu	62.03	-53.92	150.91	62.02
relative Natural Colour (NC)	0.0	0.75	0.0	1.0
lab*lab	0.569	-0.717	0.127	0.569
lab*nc	0.625	0.75	0.453	0.625
lab*ncE	0.0	0.75	0.181	0.0

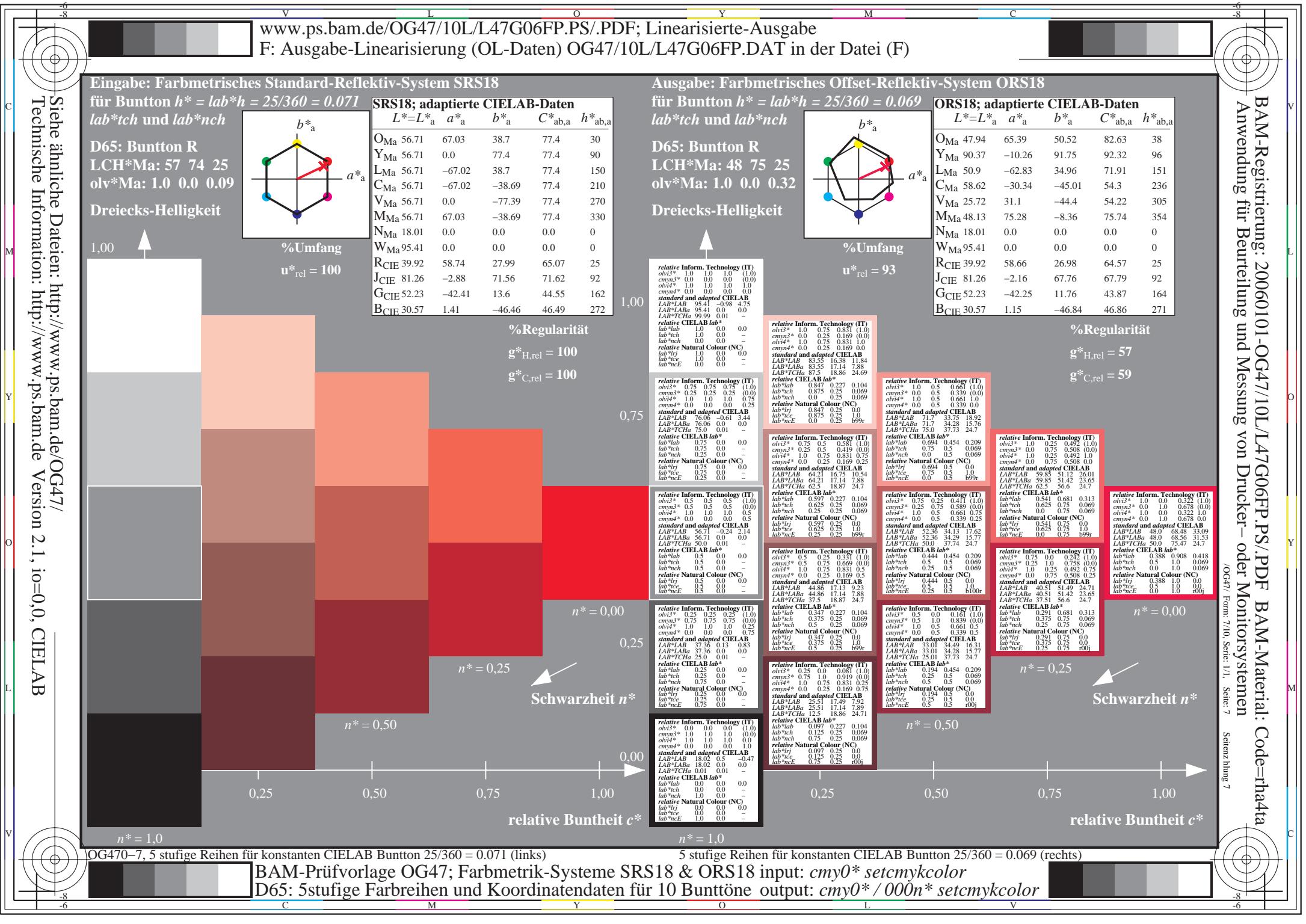
$\Delta b^*$	Color Pairs
0,319	$b^*_{\text{tr}}/b^*_{\text{ch}}$ , $b^*_{\text{tr}}/b^*_{\text{ce}}$
0,375	$b^*_{\text{ch}}/b^*_{\text{ch}}$ , $b^*_{\text{ce}}/b^*_{\text{ce}}$
0,419	$b^*_{\text{tr}}/b^*_{\text{ce}}$
0,453	$b^*_{\text{tr}}/b^*_{\text{ce}}$
0,539	$b^*_{\text{ch}}/b^*_{\text{ch}}$
0,654	$b^*_{\text{tr}}/b^*_{\text{ch}}$
0,753	$b^*_{\text{ch}}/b^*_{\text{ch}}$
1,00	$b^*_{\text{tr}}/b^*_{\text{tr}}$

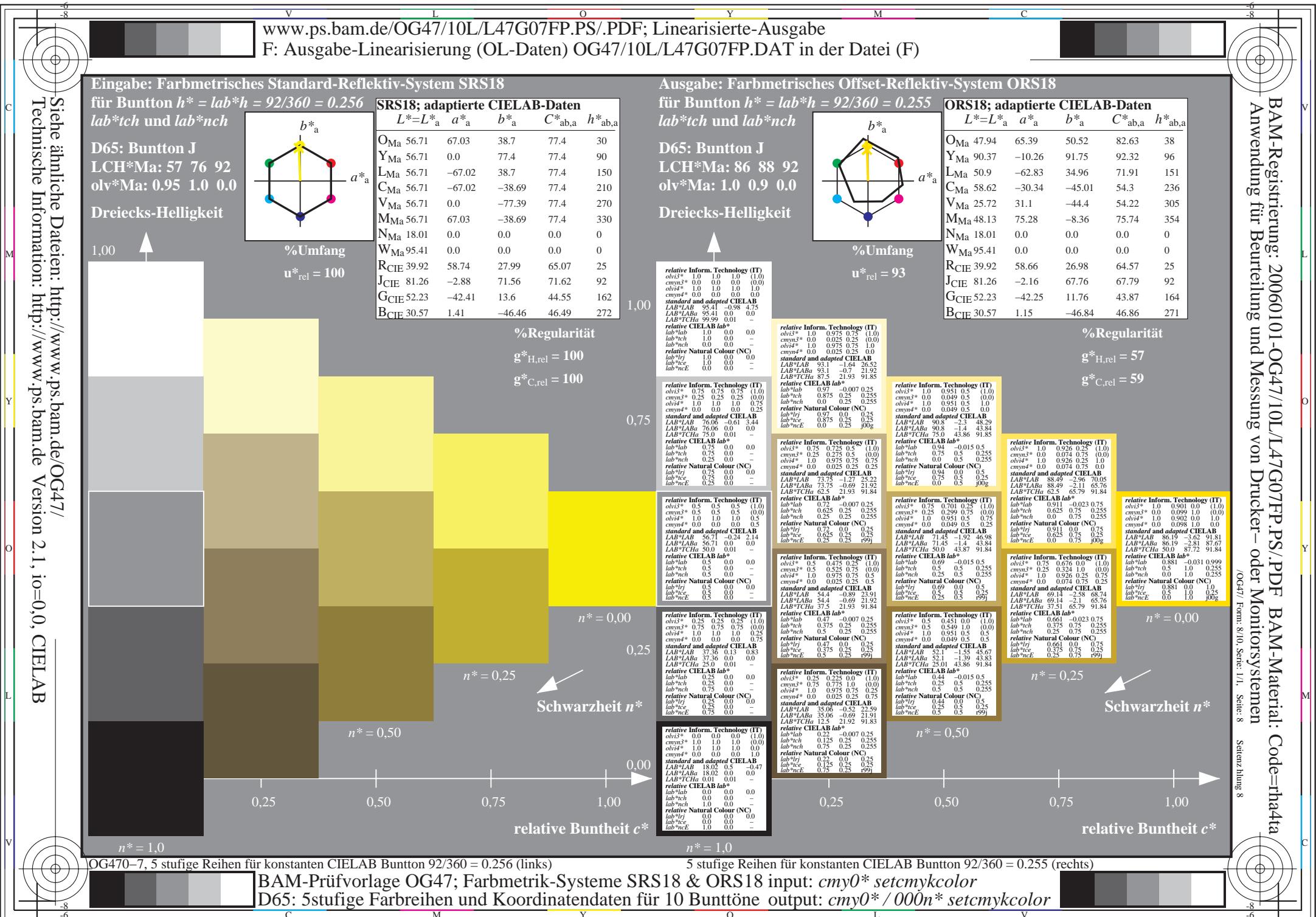
BAM-Registrierung: 20060101-OG47/10L/L47G02FP.PS./PDF BAM-Materialien  
Anwendung für Beurteilung und Messung von Drucker- oder Monitorsystemen  
OG47 Form: 3/10, Serie: 1/1, Seite: 3













für Bunton  $h^* = lab$   
 $lab*tch$  und  $lab*nch$

D65: Bunton G  
LCH\*Ma: 57 70 16  
olv\*Ma: 0.0 1.0 0.2

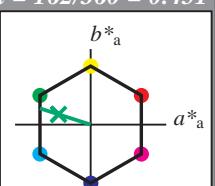
Dreiecks-Helligkeit

**Eingabe: Farbmetrisches Standard-Reflektiv-System SRS18**

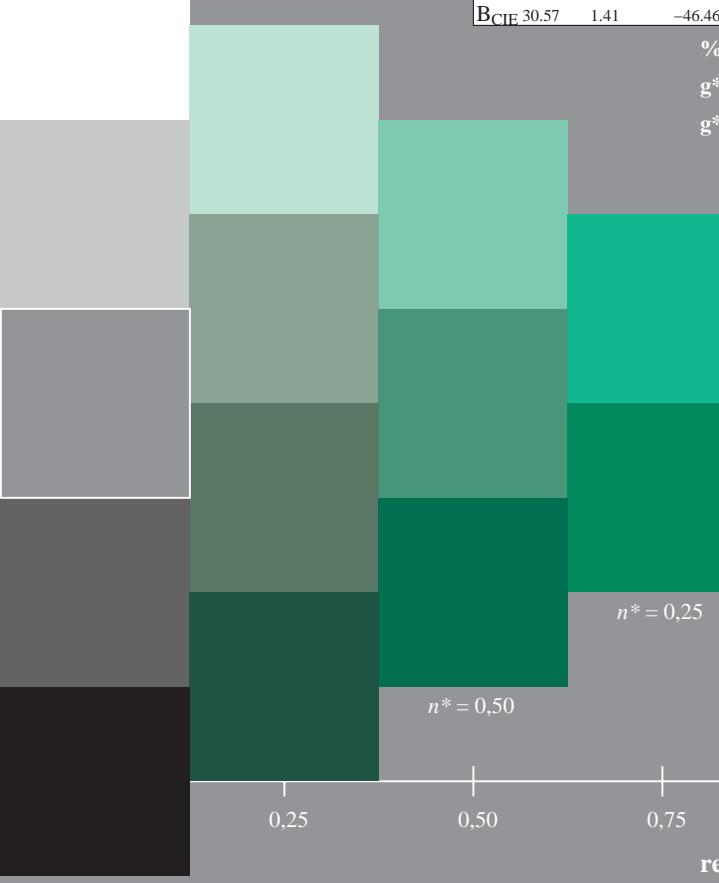
für Buntton  $h^* = lab^*$   
 $lab^*tch$  und  $lab^*nch$

D65: Bunton G  
LCH\*Ma: 57 70 162  
ely\*Ma: 0.0 1.0 0.22

## Dreiecks-Helligkeit



SRS18; adaptierte CIELAB-Daten					
	$L^* = L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	56.71	67.03	38.7	77.4	30
Y <sub>Ma</sub>	56.71	0.0	77.4	77.4	90
L <sub>Ma</sub>	56.71	-67.02	38.7	77.4	150
C <sub>Ma</sub>	56.71	-67.02	-38.69	77.4	210
V <sub>Ma</sub>	56.71	0.0	-77.39	77.4	270
M <sub>Ma</sub>	56.71	67.03	-38.69	77.4	330
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.74	27.99	65.07	25
J <sub>CIE</sub>	81.26	-2.88	71.56	71.62	92
G <sub>CIE</sub>	52.23	-42.41	13.6	44.55	162
B <sub>CIE</sub>	30.57	1.41	-46.46	46.49	272



OG470-7\_5 stufige Reihen für konstanten CIELAB Bunnton 162/360 = 0.451 (links)

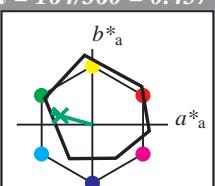
BAM-Prüfvorlage OG47; Farbmatrik-Systeme SRS18 & ORS18 input: *cmy0\** *setcmykcolor*  
D65: 5stufige Farbreihen und Koordinatendaten für 10 Bunttöne output: *cmy0\*/000n\** *setcmykcolor*

Ausgabe: Farbmetrisches Offset-Reflektiv-System ORS18

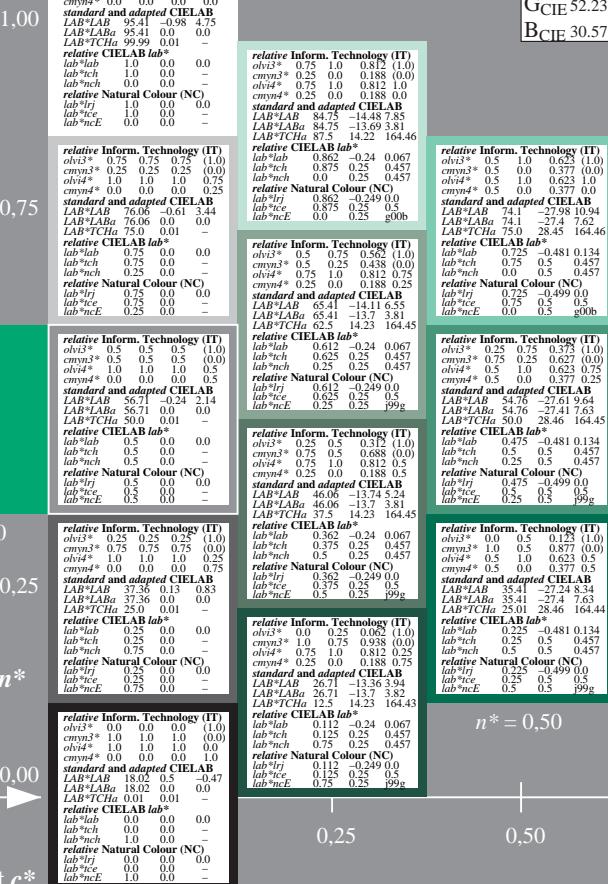
für Buntton  $h^* = lab$   
 $lab^*tch$  und  $lab^*nch$

D65: Bunton G  
LCH\*Ma: 53 57 164  
ely\*Ma: 0.0 1.0 0.25

## Dreiecks-Helligkeit

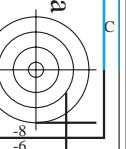


ORS18; adaptierte CIELAB-Daten					
	$L^* = L^*_a$	$a^* = a^*_a$	$b^* = b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.39	50.52	82.63	38
Y <sub>Ma</sub>	90.37	-10.26	91.75	92.32	96
L <sub>Ma</sub>	50.9	-62.83	34.96	71.91	151
C <sub>Ma</sub>	58.62	-30.34	-45.01	54.3	236
V <sub>Ma</sub>	25.72	31.1	-44.4	54.22	305
M <sub>Ma</sub>	48.13	75.28	-8.36	75.74	354
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.66	26.98	64.57	25
C <sub>I</sub> <sub>E</sub>	81.26	-2.16	67.76	67.79	92
G <sub>CIE</sub>	52.23	-42.25	11.76	43.87	164
B <sub>CIE</sub>	30.57	1.15	-46.84	46.86	271



5stufige Reihen für konstanten CIELAB Buntton 164/360 = 0.457 (rechts)

BAM-Registrierung: 20060101-OG47/10L/L47G08FP.PS/PDF BAM-Materialien  
Anwendung für Beurteilung und Messung von Drucker- oder Monitorsystemen  
(OG47// Form: 9/10, Serie: 1/1, Seite: 9)



C

M

M

Y

O

L

V

-8

L

O

Y

Y

M

C

-6

### Eingabe: Farbmatisches Standard-Reflektiv-System SRS18

für Bunton  $h^* = lab^*h = 272/360 = 0.755$

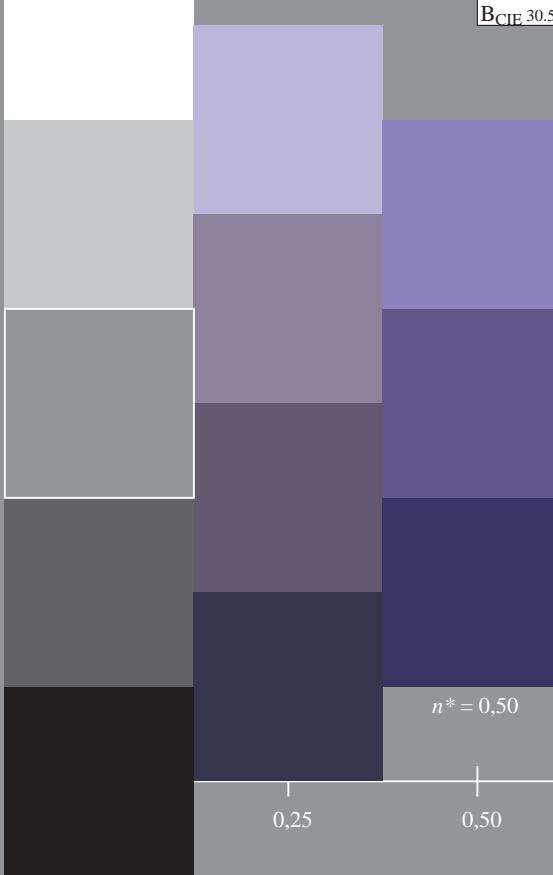
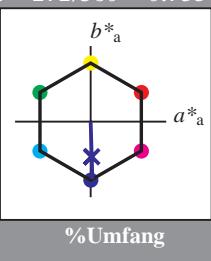
$lab^*tch$  und  $lab^*nch$

D65: Bunton B

LCH\*Ma: 57 76 272

olv\*Ma: 0.03 0.0 1.0

Dreiecks-Helligkeit



relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00

$n^* = 0,50$

Schwarzheit  $n^*$

$n^* = 0,25$

$n^* = 0,00$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

$n^* = 0,50$

$n^* = 0,00$

$n^* = 0,50$

$n^* = 0,00$

OG470-7, 5 stufige Reihen für konstanten CIELAB Bunton 272/360 = 0.755 (links)

### Ausgabe: Farbmatisches Offset-Reflektiv-System ORS18

für Bunton  $h^* = lab^*h = 271/360 = 0.754$

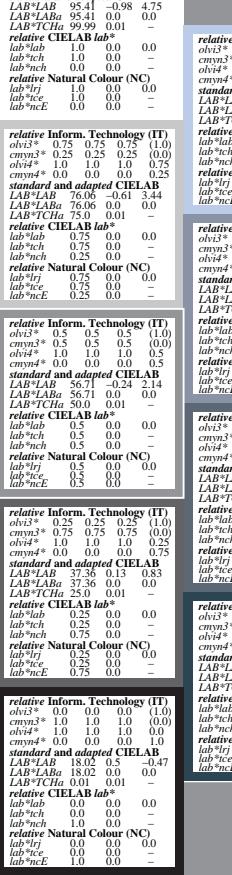
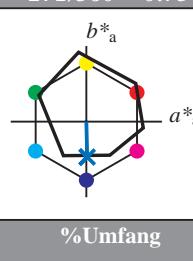
$lab^*tch$  und  $lab^*nch$

D65: Bunton B

LCH\*Ma: 42 45 271

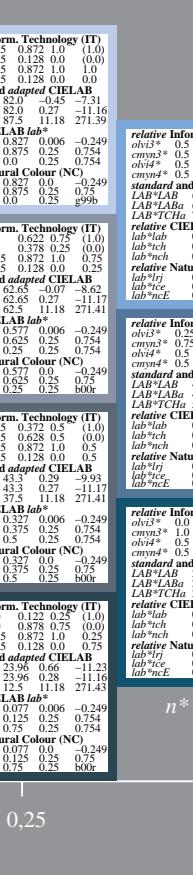
olv\*Ma: 0.0 0.49 1.0

Dreiecks-Helligkeit



relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00



relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00

### ORS18; adaptierte CIELAB-Daten

$L^*=L^*_a$   $a^*_a$   $b^*_a$   $C^*_{ab,a}$   $h^*_{ab,a}$

$O_{Ma}$	56.71	67.03	38.7	77.4	30
$Y_{Ma}$	56.71	0.0	77.4	77.4	90
$L_{Ma}$	56.71	-67.02	38.7	77.4	150
$C_{Ma}$	56.71	-67.02	-38.69	77.4	210
$V_{Ma}$	56.71	0.0	-77.39	77.4	270
$M_{Ma}$	56.71	67.03	-38.69	77.4	330
$N_{Ma}$	18.01	0.0	0.0	0.0	0
$W_{Ma}$	95.41	0.0	0.0	0.0	0
$R_{CIE}$	39.92	58.74	27.99	65.07	25
$J_{CIE}$	81.26	-2.88	71.56	71.62	92
$G_{CIE}$	52.23	-42.41	13.6	44.55	162
$B_{CIE}$	30.57	1.41	-46.46	46.49	272

%Regularität

$g^*_{H,rel} = 100$

$g^*_{C,rel} = 100$

%Regularität

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

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

%Regularität

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

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

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 0,75$

$n^* = 1,00$

relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00

0,00 0,25 0,50 0,75 1,00

0,00

0,25

0,50

0,75

1,00

relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00

0,00 0,25 0,50 0,75 1,00

C

M

O

Y

M

V

-8

L

O

Y

Y

M

C

-6

5 stufige Reihen für konstanten CIELAB Bunton 271/360 = 0.754 (rechts)

relative Buntheit  $c^*$

0,00 0,25 0,50 0,75 1,00

0,00 0,25 0,50 0,75 1,00

### ORS18; adaptierte CIELAB-Daten

$L^*=L^*_a$   $a^*_a$   $b^*_a$   $C^*_{ab,a}$   $h^*_{ab,a}$

$O_{Ma}$	47.94	65.39	50.52	82.63	38
$Y_{Ma}$	90.37	-10.26	91.75	92.32	96
$L_{Ma}$	50.9	-62.83	34.96	71.91	151
$C_{Ma}$	58.62	-30.34	-45.01	54.3	236
$V_{Ma}$	25.72	31.1	-44.4	54.22	305
$M_{Ma}$	48.13	75.28	-8.36	75.74	354
$N_{Ma}$	18.01	0.0	0.0	0.0	0
$W_{Ma}$	95.41	0.0	0.0	0.0	0
$R_{CIE}$	39.92	58.66	26.98	64.57	25
$J_{CIE}$	81.26	-2.16	67.76	67.79	92
$G_{CIE}$	52.23	-42.25	11.76	43.87	164
$B_{CIE}$	30.57	1.15	-46.84	46.86	271

%Regularität

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

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

%Regularität

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