

Input: Colorimetric Reflective System NCS11

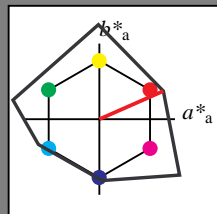
for hue  $h^* = lab^*h = 24/360 = 0.066$

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

D65: hue R

LCH\*Ma: 47 92 24

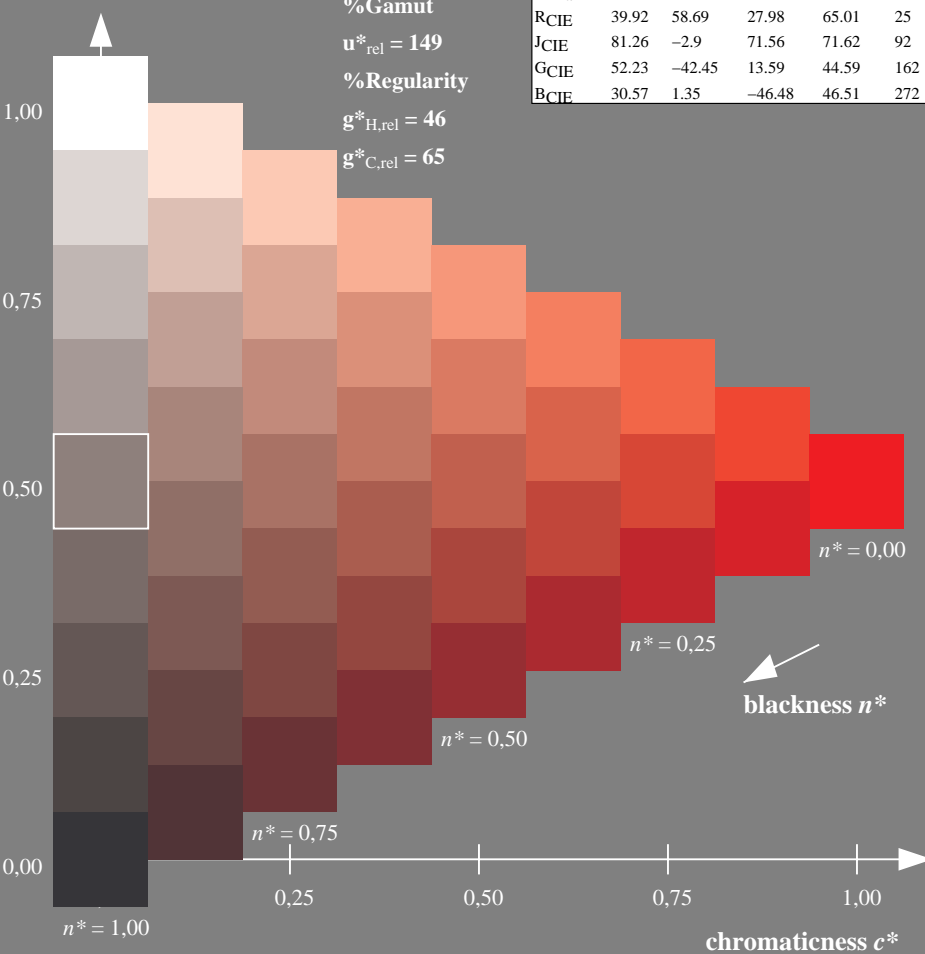
rgb\*Ma: 1.0 0.0 0.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

Output: Colorimetric Reflective System MRS18

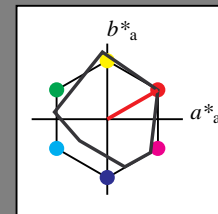
for hue  $h^* = lab^*h = 30/360 = 0.083$

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

D65: hue R

LCH\*Ma: 50 77 30

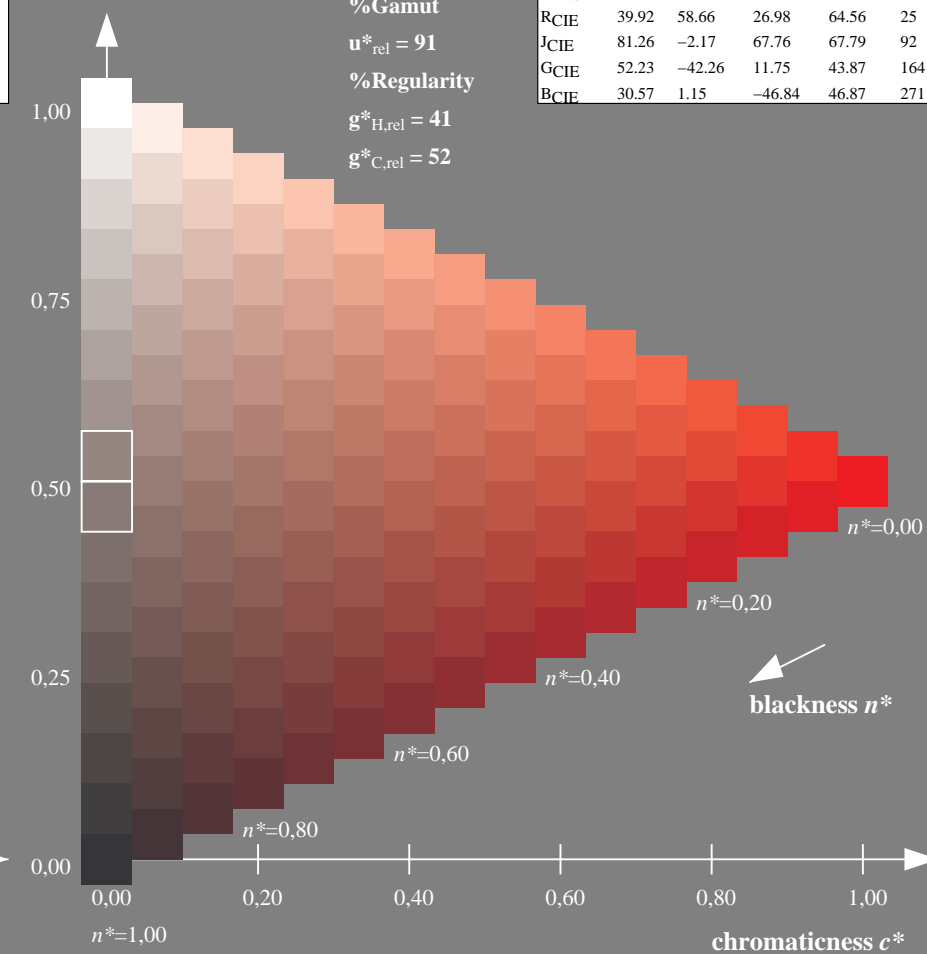
rgb\*Ma: 1.0 0.0 0.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

UE980-7, 9 step scales for constant CIELAB hue 24/360 = 0.066 (left)

16 step scales for constant CIELAB hue 30/360 = 0.083 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\** *setcmYcolor*

D65: 9 and 16 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

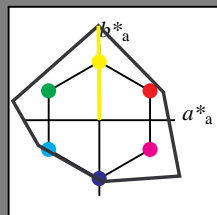
for hue  $h^* = lab^*h = 91/360 = 0.252$

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

D65: hue J

LCH\*Ma: 91 125 91

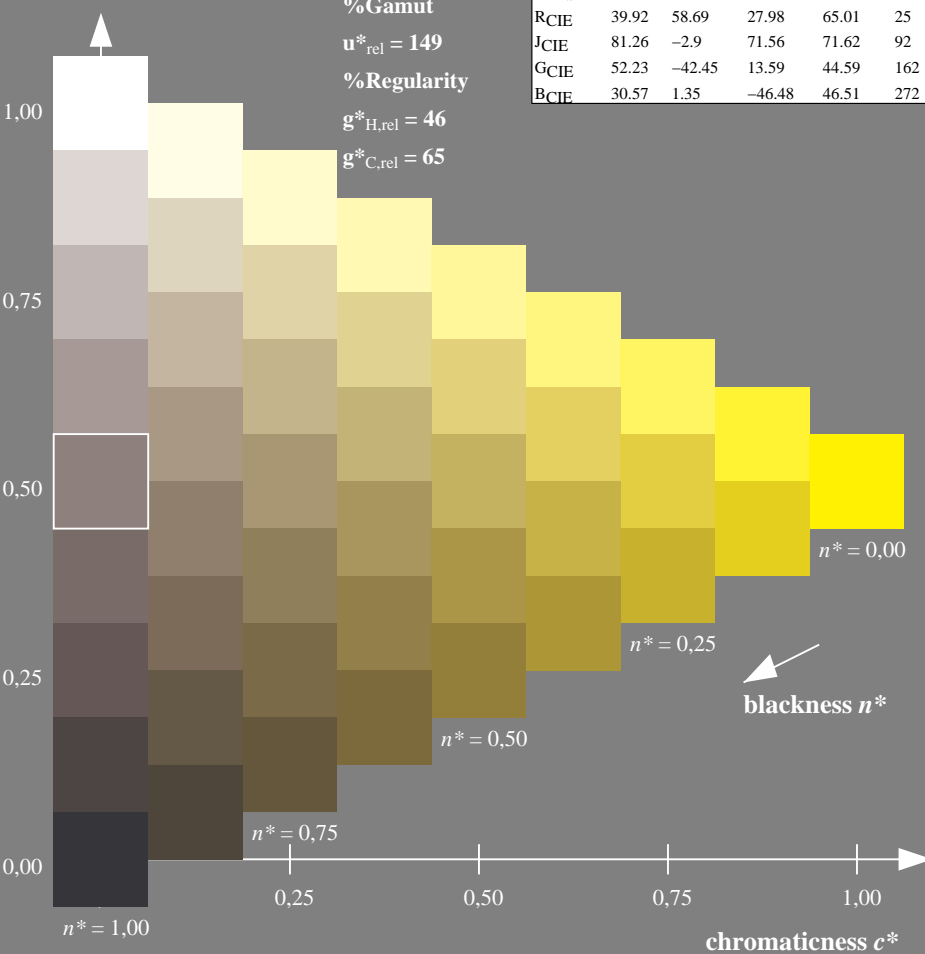
rgb\*Ma: 1.0 1.0 0.0



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

triangle lightness  $t^*$



Output: Colorimetric Reflective System MRS18

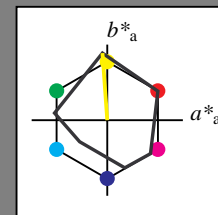
for hue  $h^* = lab^*h = 94/360 = 0.261$

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

D65: hue J

LCH\*Ma: 91 89 94

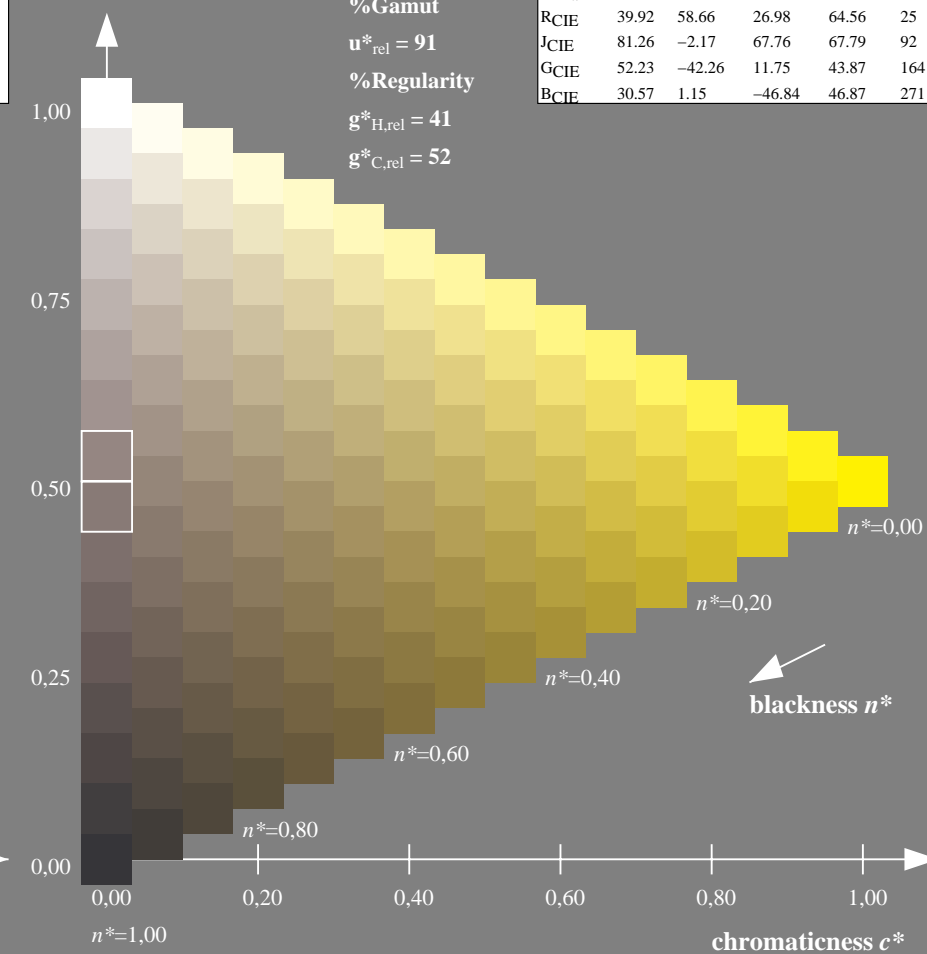
rgb\*Ma: 1.0 1.0 0.0



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

triangle lightness  $t^*$



UE980-7, 9 step scales for constant CIELAB hue 91/360 = 0.252 (left)

16 step scales for constant CIELAB hue 94/360 = 0.261 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\** *setcmYcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

Input: Colorimetric Reflective System NCS11

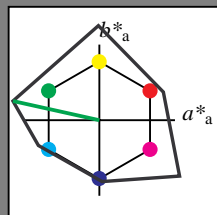
for hue  $h^* = lab^*h = 167/360 = 0.465$

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

D65: hue G

LCH\*Ma: 63 117 167

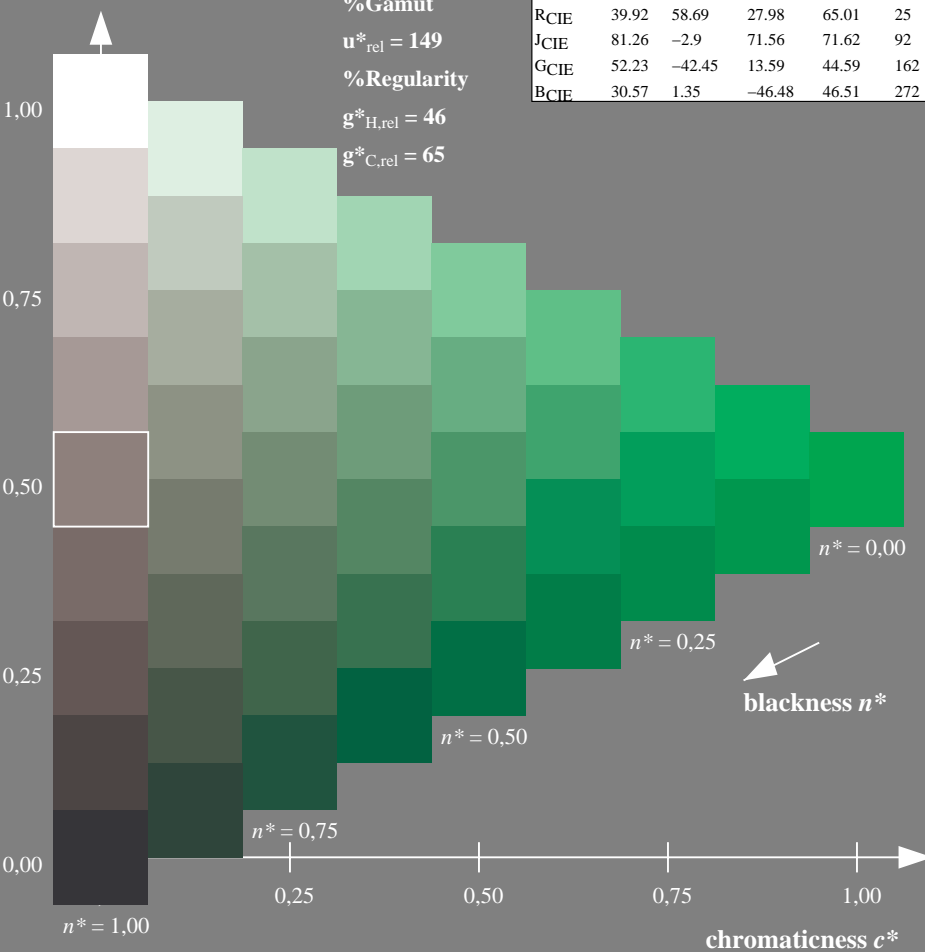
rgb\*Ma: 0.0 1.0 0.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

Output: Colorimetric Reflective System MRS18

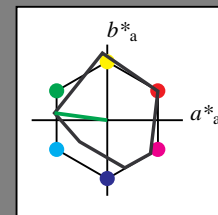
for hue  $h^* = lab^*h = 172/360 = 0.479$

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

D65: hue G

LCH\*Ma: 52 70 172

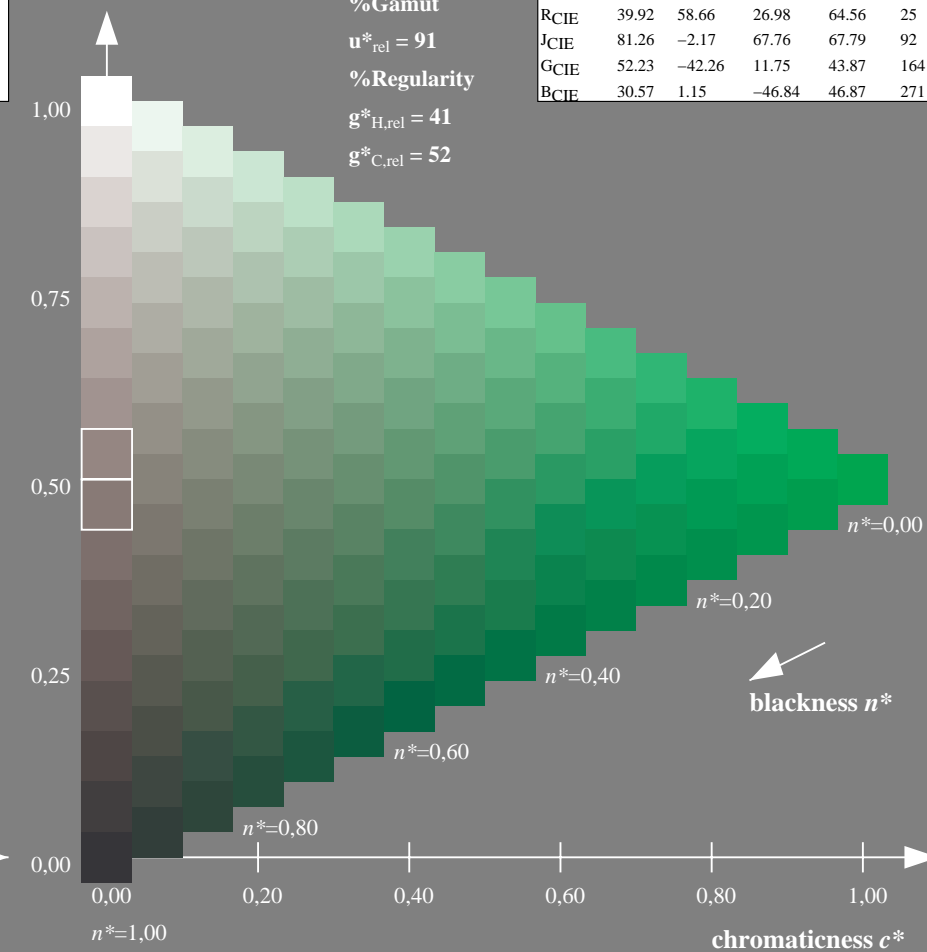
rgb\*Ma: 0.0 1.0 0.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

UE980-7, 9 step scales for constant CIELAB hue 167/360 = 0.465 (left)

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

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\* setcmykcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

Input: Colorimetric Reflective System NCS11

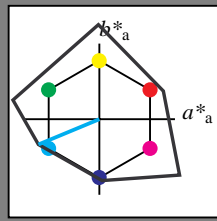
for hue  $h^* = lab^*h = 203/360 = 0.563$

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

D65: hue G50B

LCH\*Ma: 59 87 203

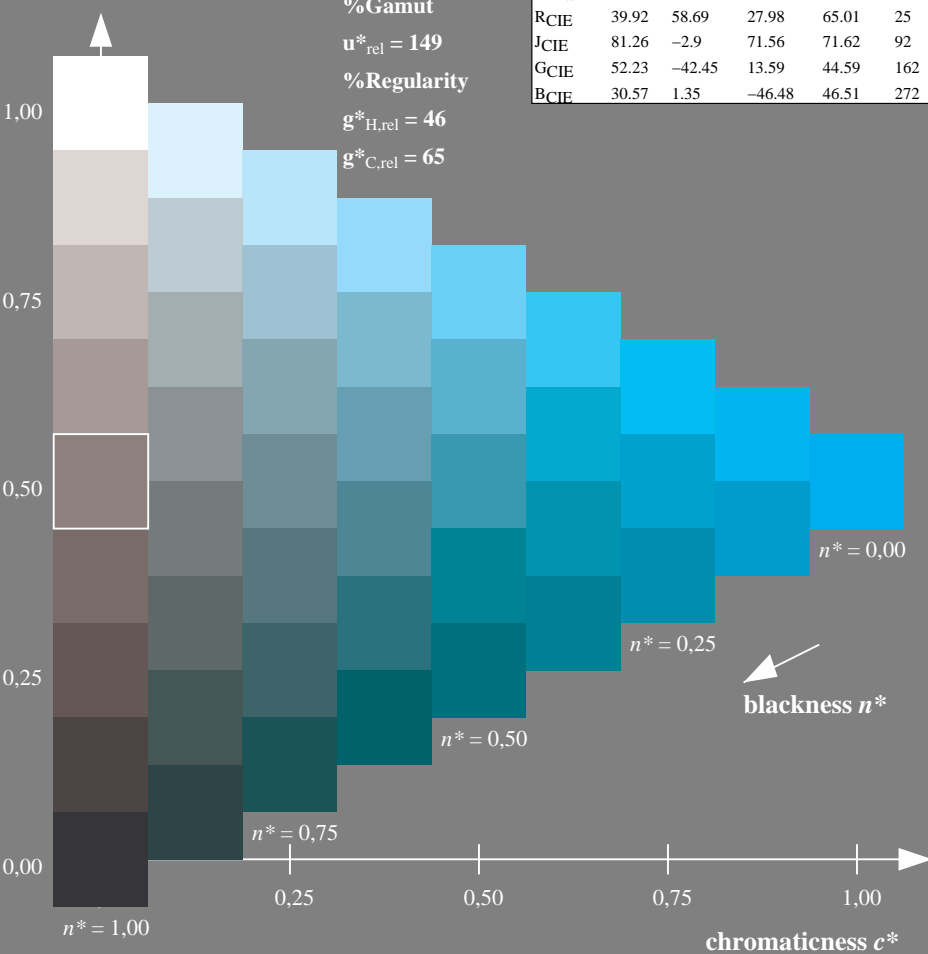
rgb\*Ma: 0.0 1.0 1.0



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

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 149$   
 %Regularity  
 $g^*_{H,rel} = 46$   
 $g^*_{C,rel} = 65$

Output: Colorimetric Reflective System MRS18

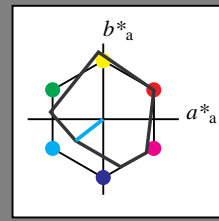
for hue  $h^* = lab^*h = 218/360 = 0.605$

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

D65: hue G50B

LCH\*Ma: 45 46 218

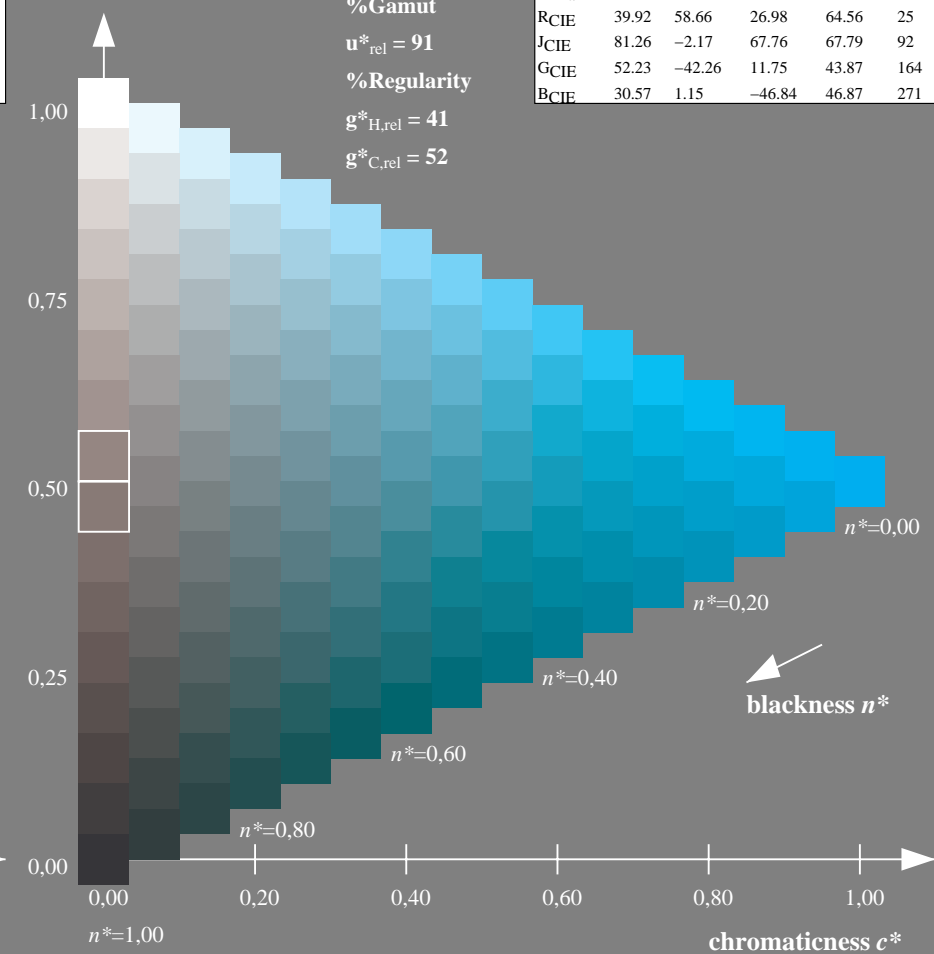
rgb\*Ma: 0.0 1.0 1.0



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

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 91$   
 %Regularity  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$

UE980-7, 9 step scales for constant CIELAB hue 203/360 = 0.563 (left)

16 step scales for constant CIELAB hue 218/360 = 0.605 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\** *setcmYcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

See for similar files: <http://www.ps.bam.de/UE98/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=0,0

BAM registration: 20060101-UE98/10S/S98E03NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /UE98/ Form: 4/10, Serie: 1/1, Page: 4 Page count: 4

Input: Colorimetric Reflective System NCS11

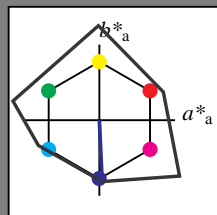
for hue  $h^* = lab^*h = 273/360 = 0.757$

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

D65: hue B

LCH\*Ma: 49 81 273

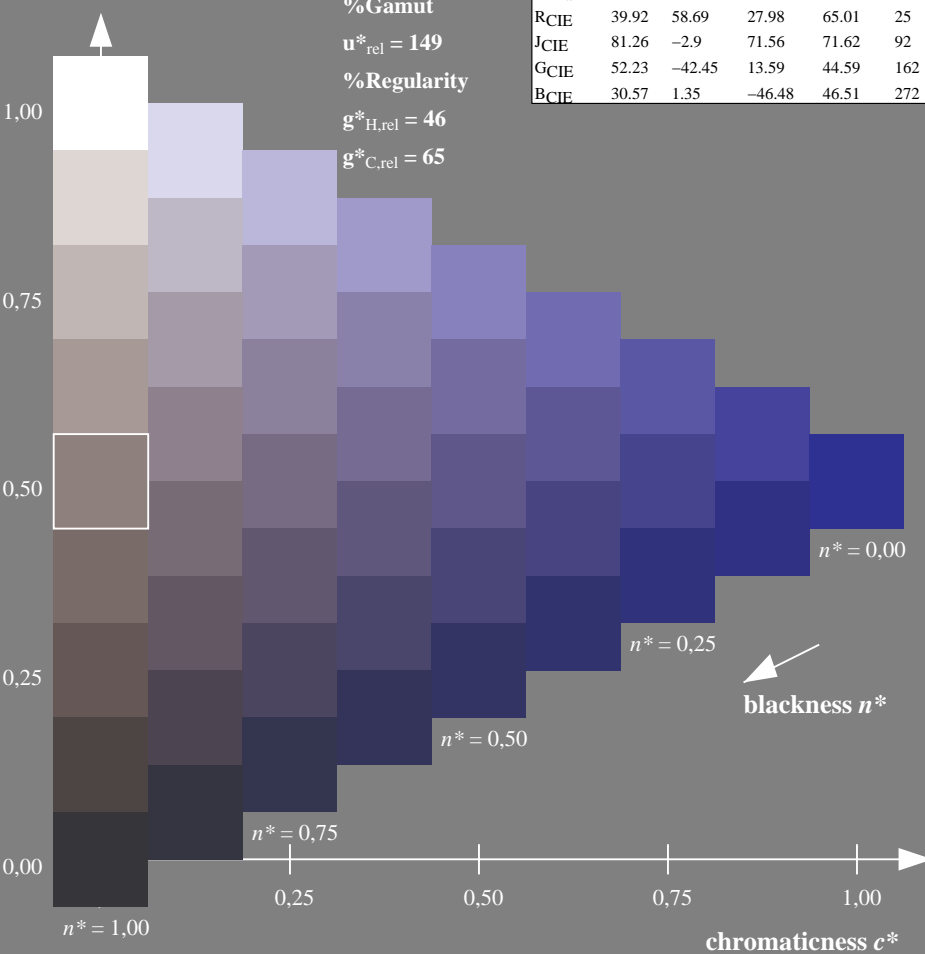
rgb\*Ma: 0.0 0.0 1.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 149$

%Regularity

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

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

Output: Colorimetric Reflective System MRS18

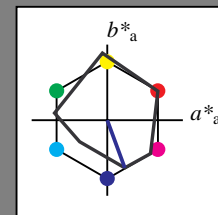
for hue  $h^* = lab^*h = 290/360 = 0.806$

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

D65: hue B

LCH\*Ma: 37 67 290

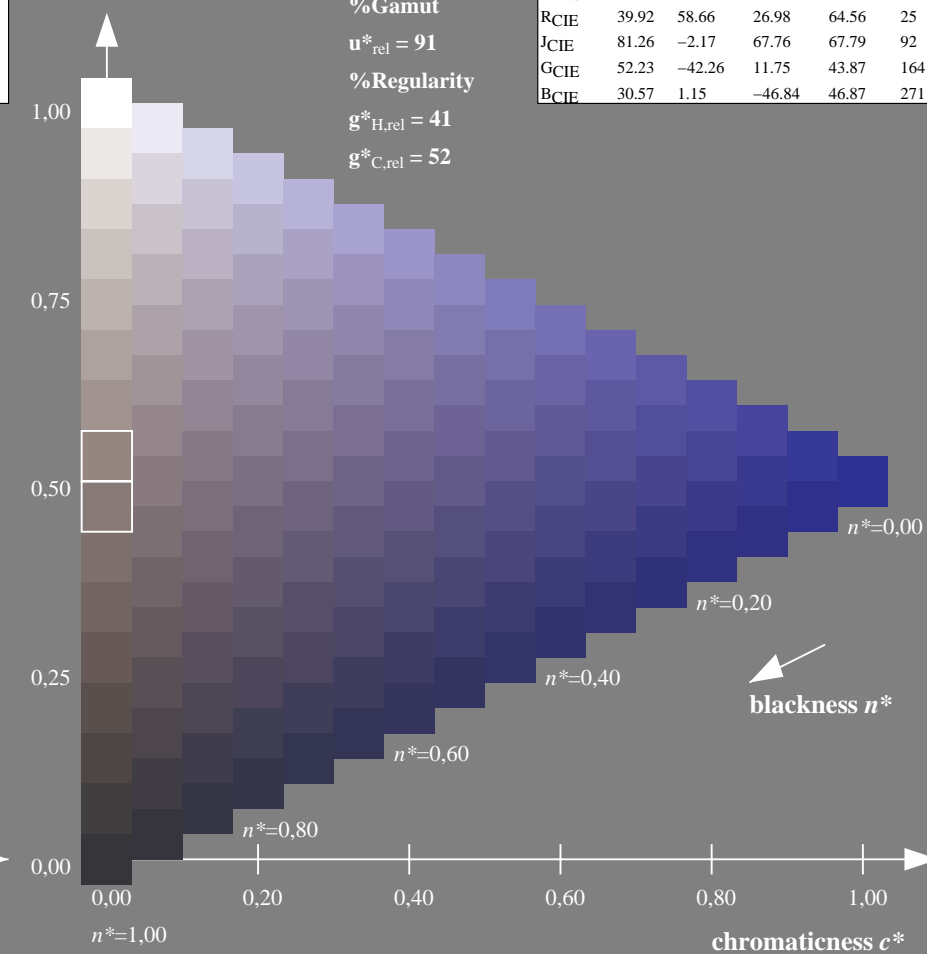
rgb\*Ma: 0.0 0.0 1.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

UE980-7, 9 step scales for constant CIELAB hue 273/360 = 0.757 (left)

16 step scales for constant CIELAB hue 290/360 = 0.806 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\** *setcmYcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

Input: Colorimetric Reflective System NCS11

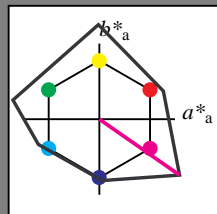
for hue  $h^* = lab^*h = 325/360 = 0.903$

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

D65: hue B50R

LCH\*Ma: 44 129 325

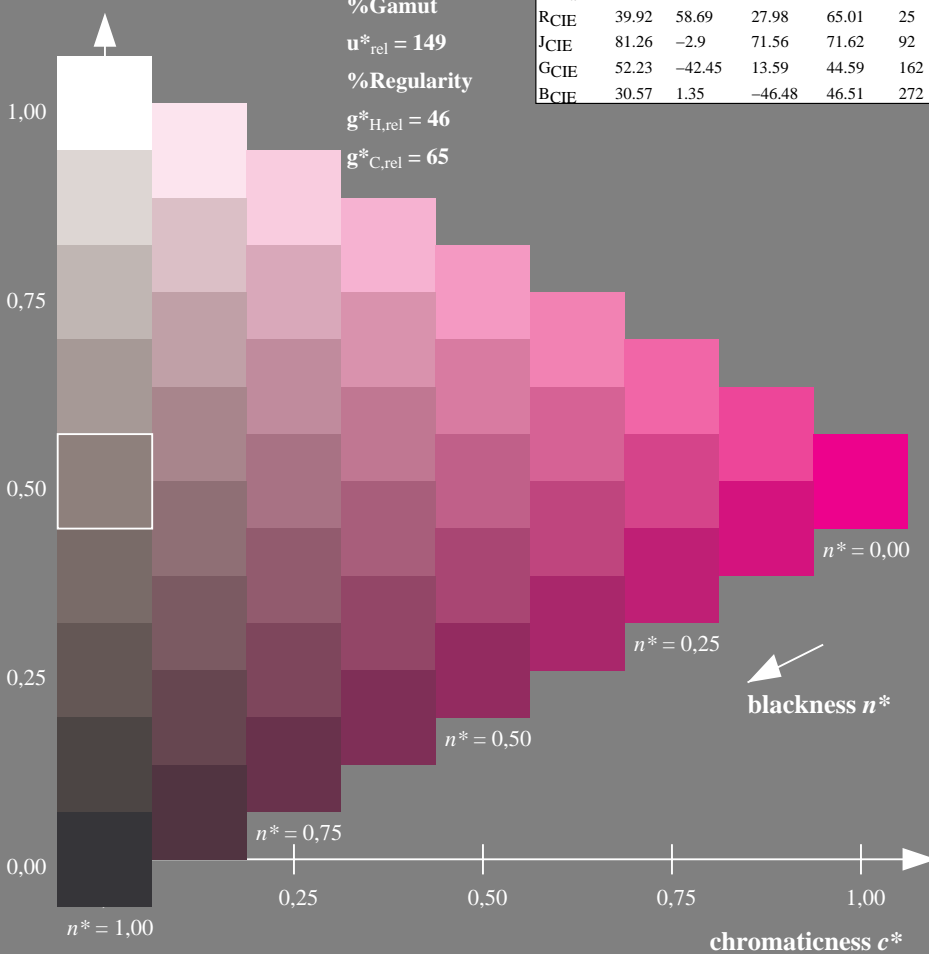
rgb\*Ma: 1.0 0.0 1.0



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

triangle lightness  $t^*$



Output: Colorimetric Reflective System MRS18

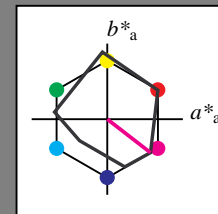
for hue  $h^* = lab^*h = 322/360 = 0.895$

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

D65: hue B50R

LCH\*Ma: 35 72 322

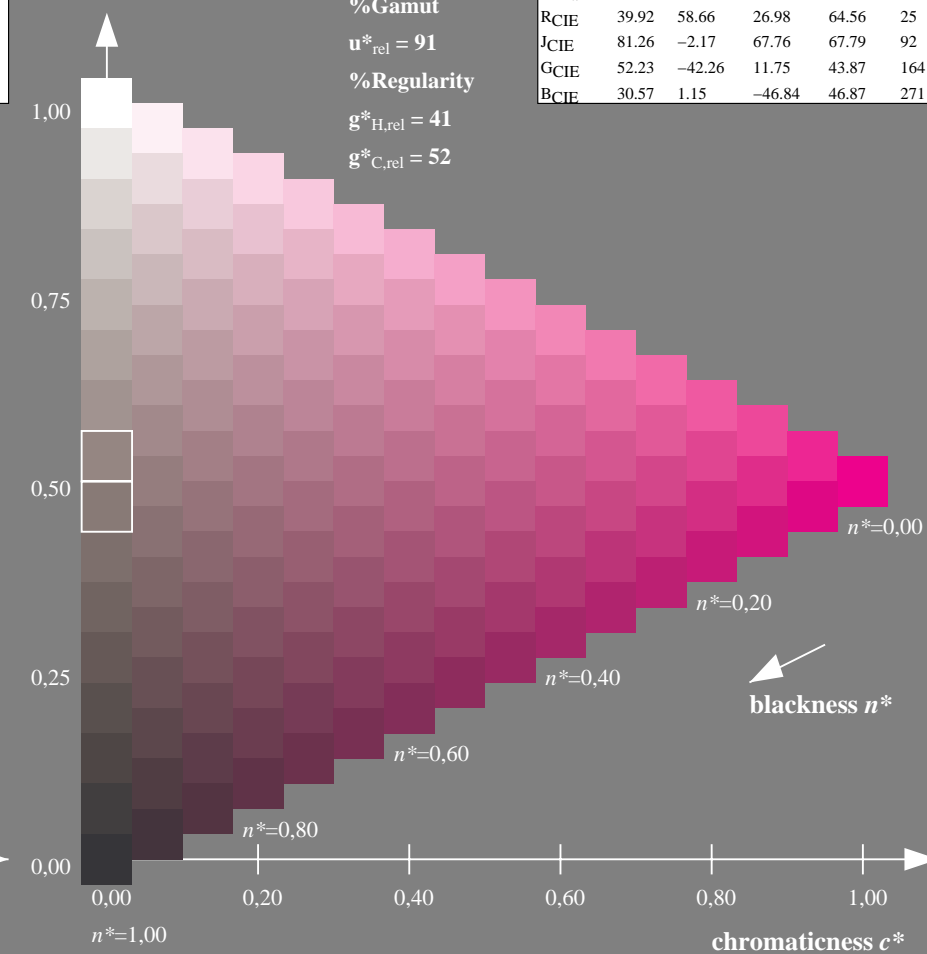
rgb\*Ma: 1.0 0.0 1.0



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

triangle lightness  $t^*$



UE980-7, 9 step scales for constant CIELAB hue 325/360 = 0.903 (left)

16 step scales for constant CIELAB hue 322/360 = 0.895 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\** *setcmYcolor*

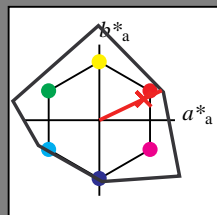
D65: 9 and 16 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System NCS11

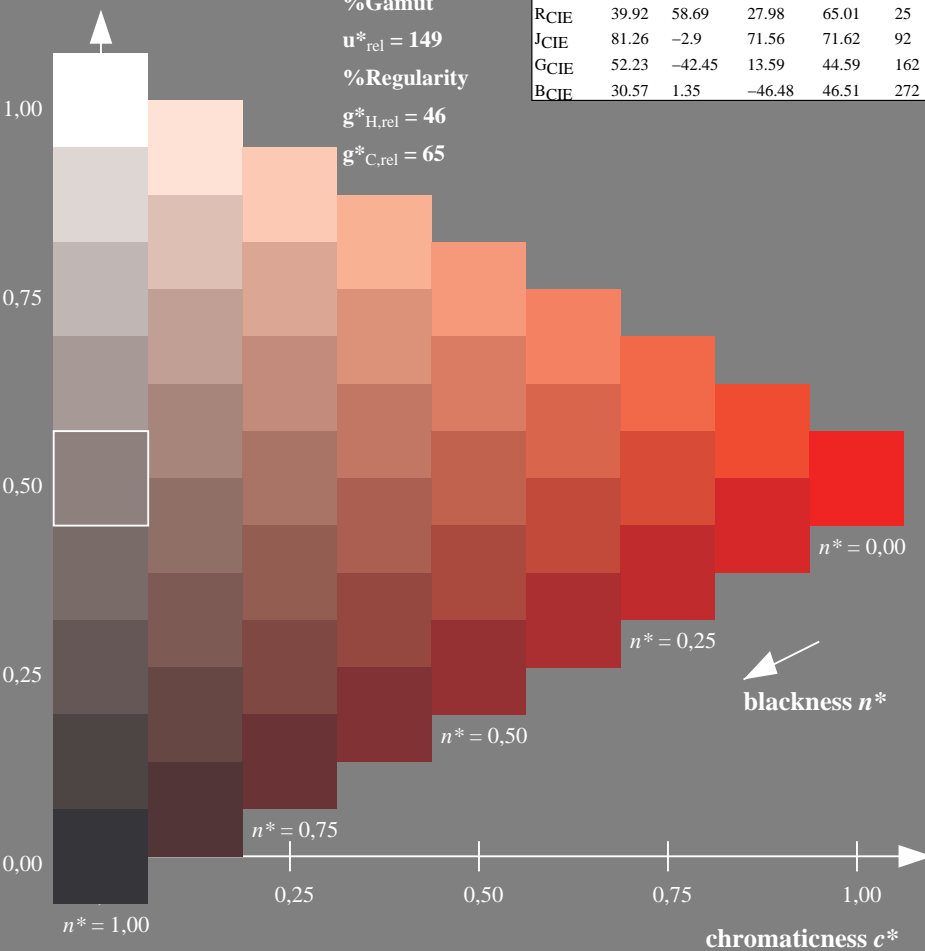
for hue  $h^* = lab^*h = 25/360 = 0.071$   
 $lab^*tch$  and  $lab^*nch$

D65: hue R  
 LCH\*Ma: 48 91 25  
 rgb\*Ma: 1.0 0.02 0.0



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 149$

%Regularity

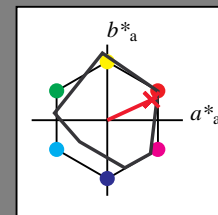
$g^*_{H,rel} = 46$

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

Output: Colorimetric Reflective System MRS18

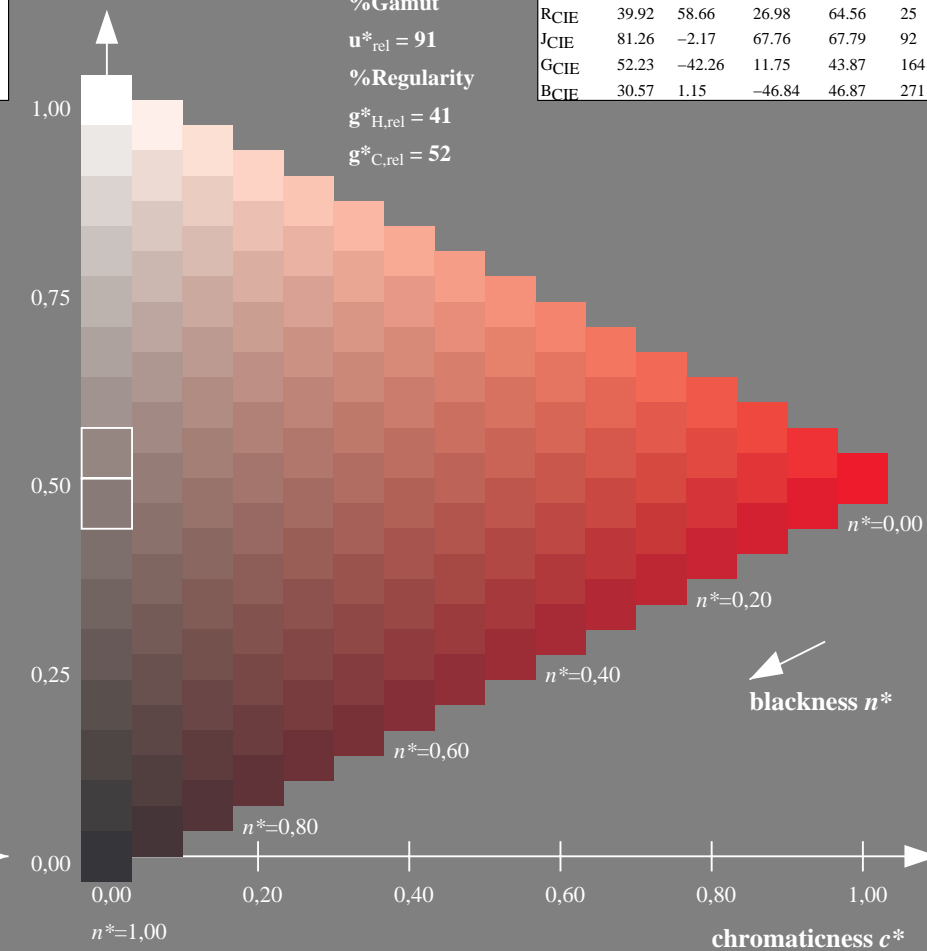
for hue  $h^* = lab^*h = 25/360 = 0.069$   
 $lab^*tch$  and  $lab^*nch$

D65: hue R  
 LCH\*Ma: 48 73 25  
 rgb\*Ma: 1.0 0.0 0.1



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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 91$

%Regularity

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

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

UE980-7, 9 step scales for constant CIELAB hue 25/360 = 0.071 (left)

16 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\* setcmykcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

Input: Colorimetric Reflective System NCS11

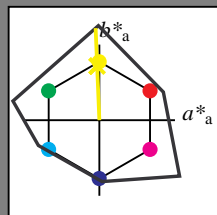
for hue  $h^* = lab^*h = 92/360 = 0.256$

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

D65: hue J

LCH\*Ma: 90 122 92

rgb\*Ma: 0.97 1.0 0.0



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

%Gamut

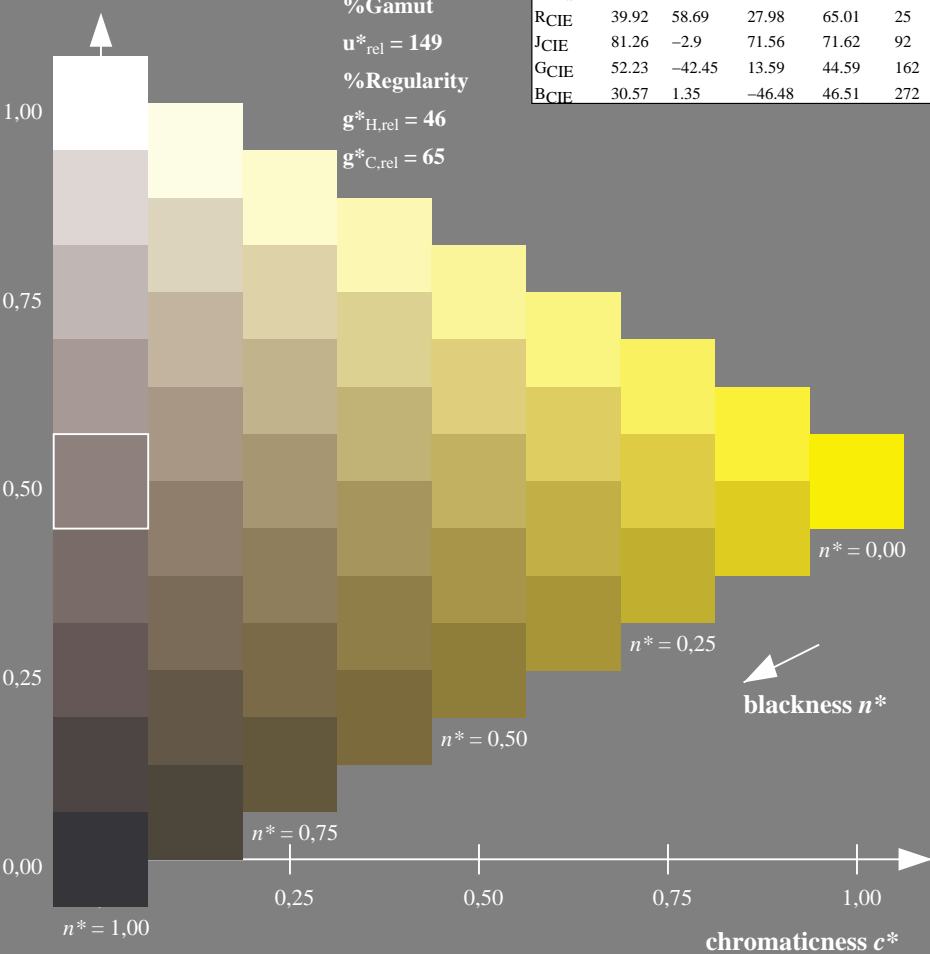
$u^*_{rel} = 149$

%Regularity

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

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

triangle lightness  $t^*$



Output: Colorimetric Reflective System MRS18

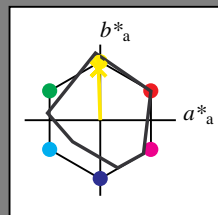
for hue  $h^* = lab^*h = 92/360 = 0.255$

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

D65: hue J

LCH\*Ma: 89 86 92

rgb\*Ma: 1.0 0.95 0.0



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

%Gamut

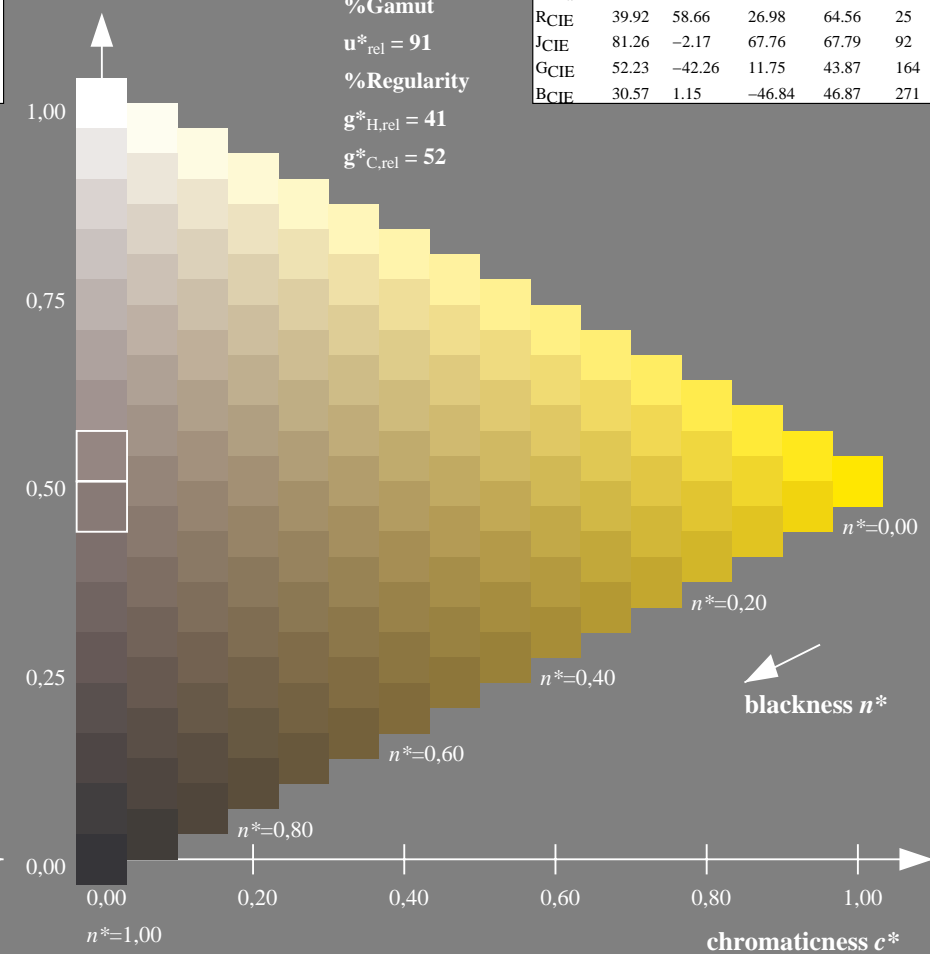
$u^*_{rel} = 91$

%Regularity

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

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

triangle lightness  $t^*$



UE980-7, 9 step scales for constant CIELAB hue 92/360 = 0.256 (left)

16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\* setcmykcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*



Input: Colorimetric Reflective System NCS11

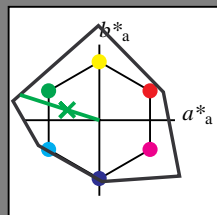
for hue  $h^* = lab^*h = 162/360 = 0.451$

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

D65: hue G

LCH\*Ma: 65 110 162

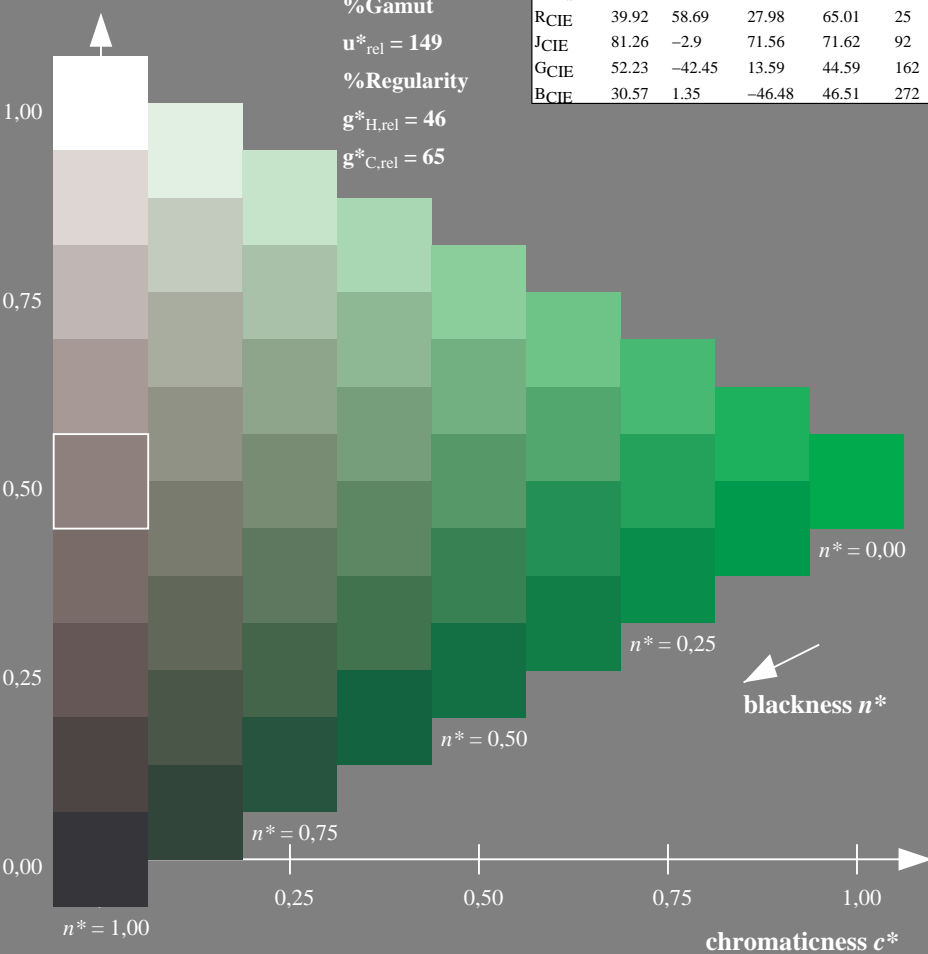
rgb\*Ma: 0.08 1.0 0.0



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

triangle lightness  $t^*$



Output: Colorimetric Reflective System MRS18

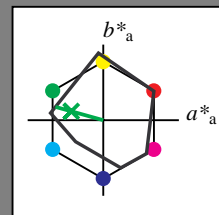
for hue  $h^* = lab^*h = 164/360 = 0.457$

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

D65: hue G

LCH\*Ma: 56 66 164

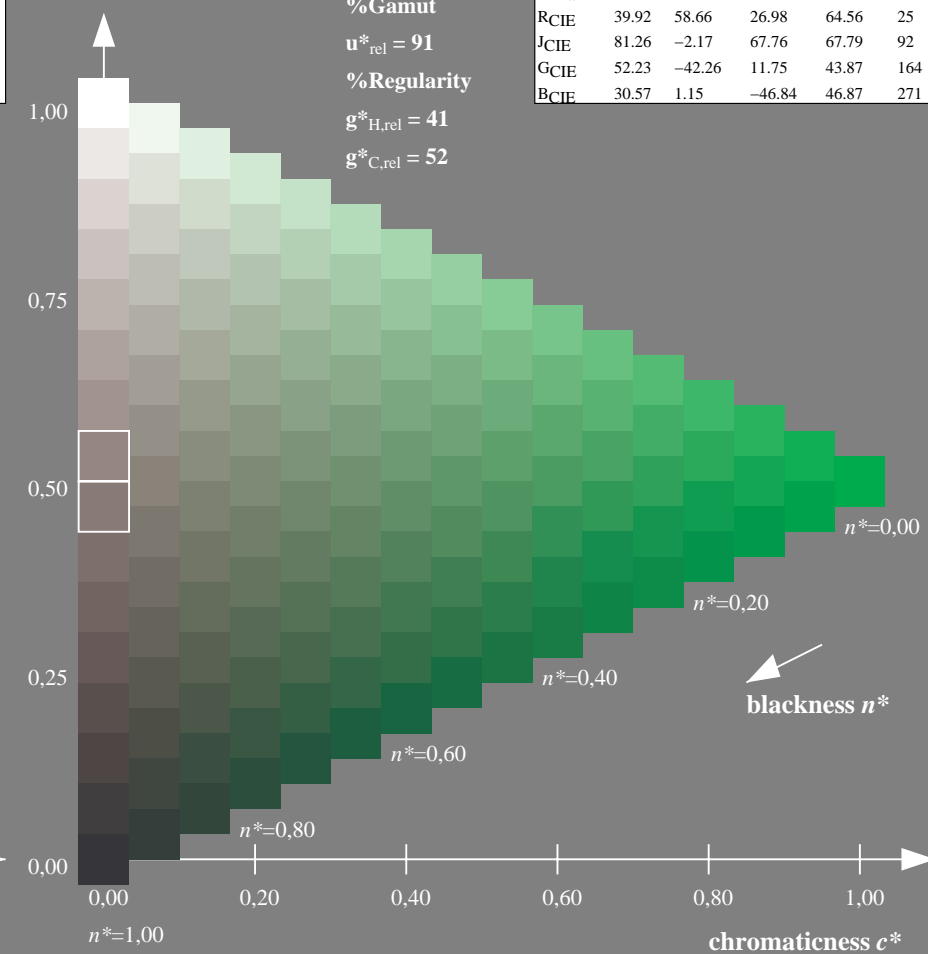
rgb\*Ma: 0.1 1.0 0.0



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

triangle lightness  $t^*$



UE980-7, 9 step scales for constant CIELAB hue 162/360 = 0.451 (left)

16 step scales for constant CIELAB hue 164/360 = 0.457 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmy0\* setcmykcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

Input: Colorimetric Reflective System NCS11

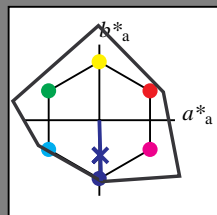
for hue  $h^* = lab^*h = 272/360 = 0.755$

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

D65: hue B

LCH\*Ma: 49 80 272

rgb\*Ma: 0.0 0.02 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

%Gamut

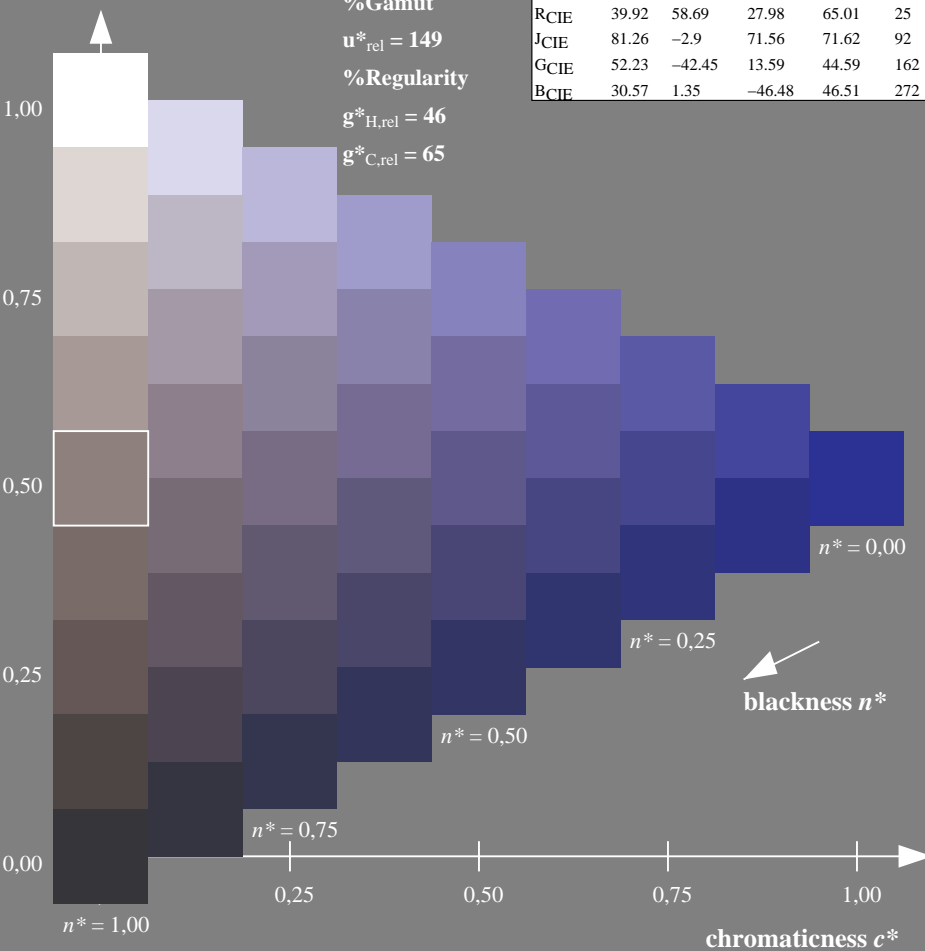
$u^*_{rel} = 149$

%Regularity

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

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

triangle lightness  $t^*$



Output: Colorimetric Reflective System MRS18

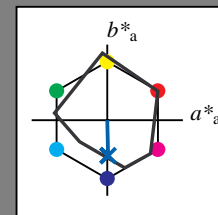
for hue  $h^* = lab^*h = 271/360 = 0.754$

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

D65: hue B

LCH\*Ma: 40 50 271

rgb\*Ma: 0.0 0.37 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

%Gamut

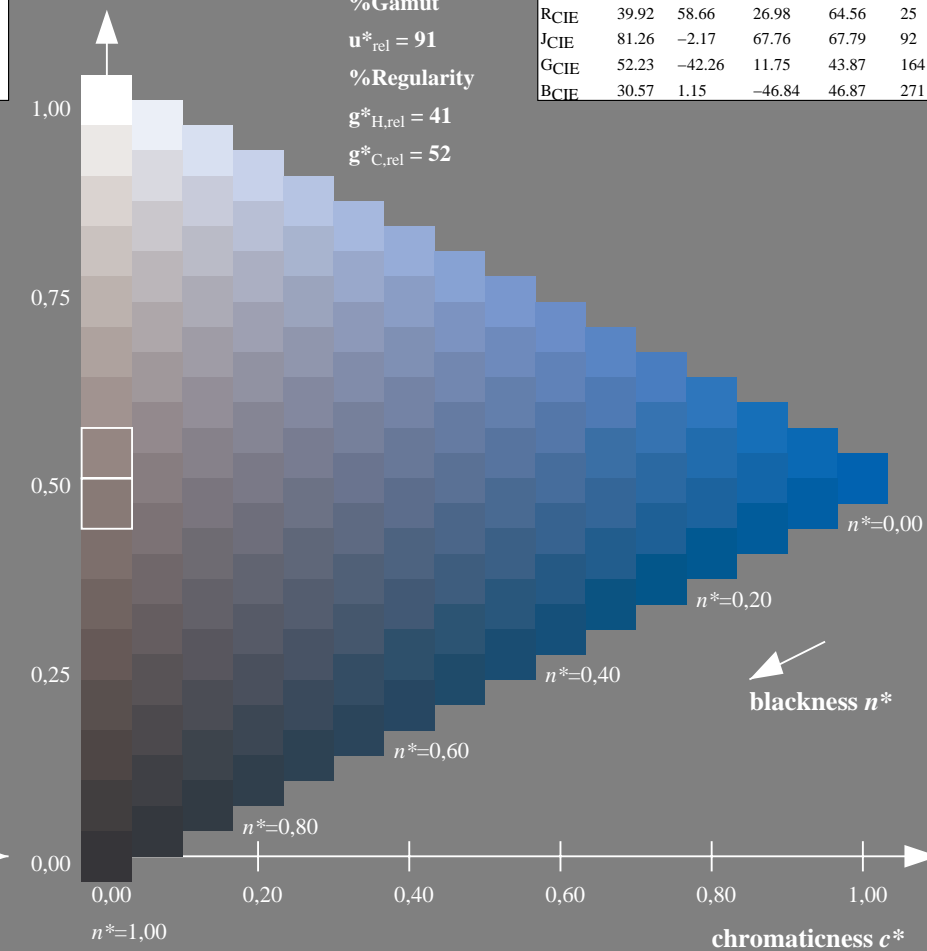
$u^*_{rel} = 91$

%Regularity

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

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

triangle lightness  $t^*$



UE980-7, 9 step scales for constant CIELAB hue 272/360 = 0.755 (left)

16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart UE98; Colorimetric systems NCS11a & MRS18 input: *cmY0\* setcmykcolor*

D65: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*