

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 38/360 = 0.105$

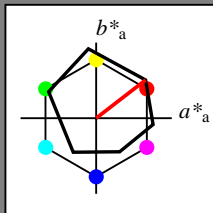
lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 48 83 38

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

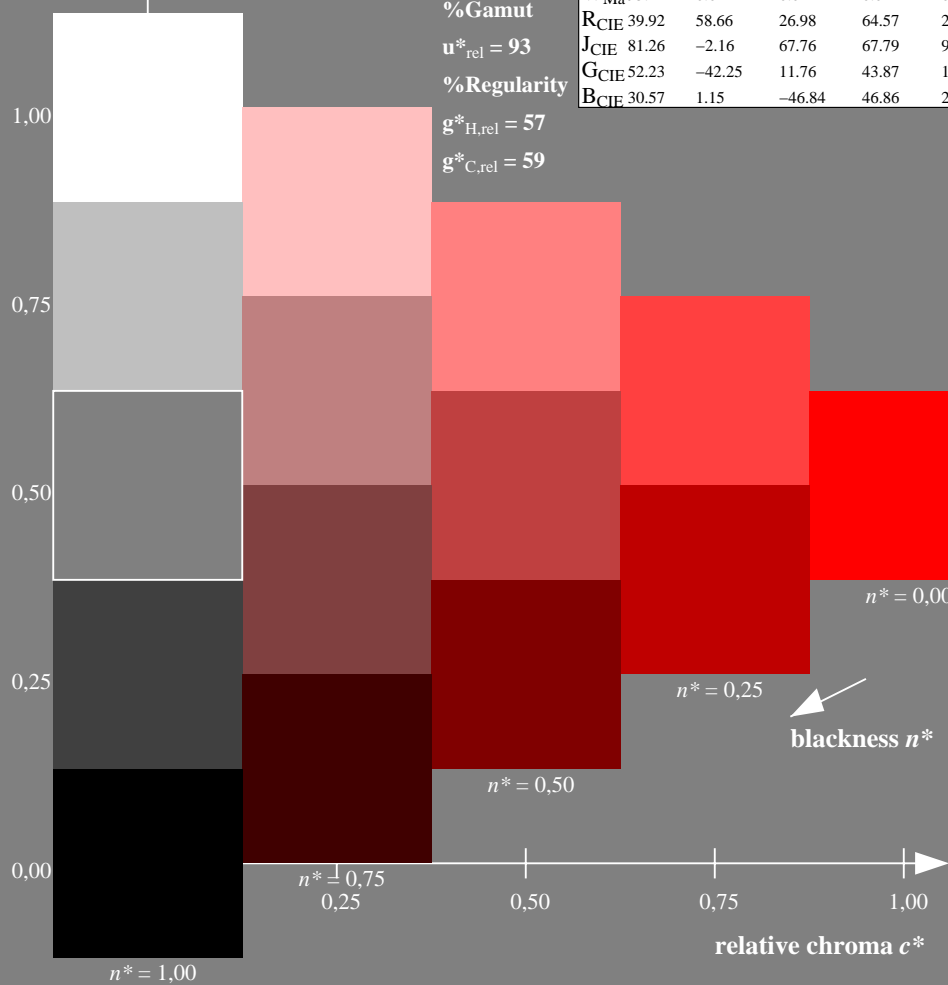
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 38/360 = 0.105$

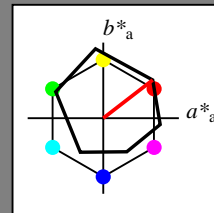
lab^*tch and lab^*nch

D65: hue O

LCH*Ma: 48 83 38

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

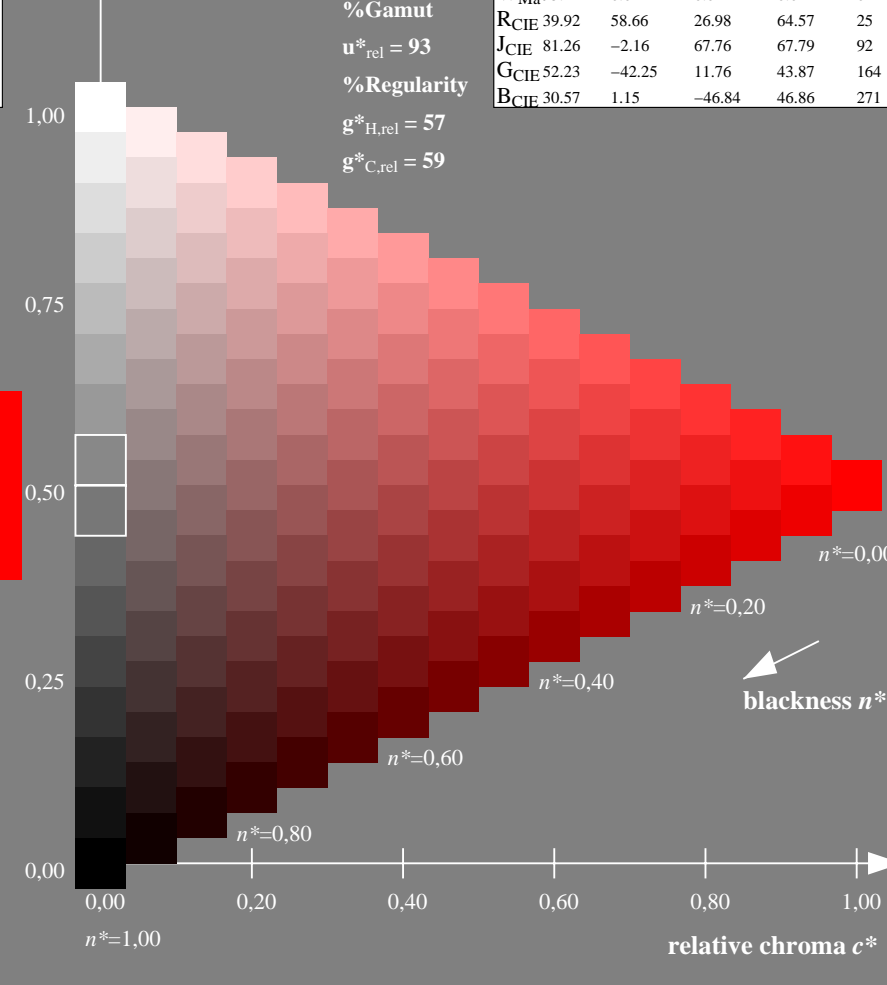
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

Test chart 1 according to DIN 33872-2, Hue O, Page 1/11
 Discrimination of 5 and 16 step colour scales, ORS18a

16 step scales for constant CIELAB hue 38/360 = 0.105 (right)

input: rgb ($\rightarrow olv^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e00NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 96/360 = 0.268$

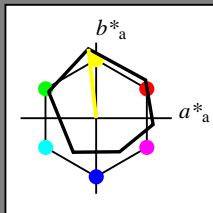
lab*tch and lab*nch

D65: hue Y

LCH*Ma: 90 92 96

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

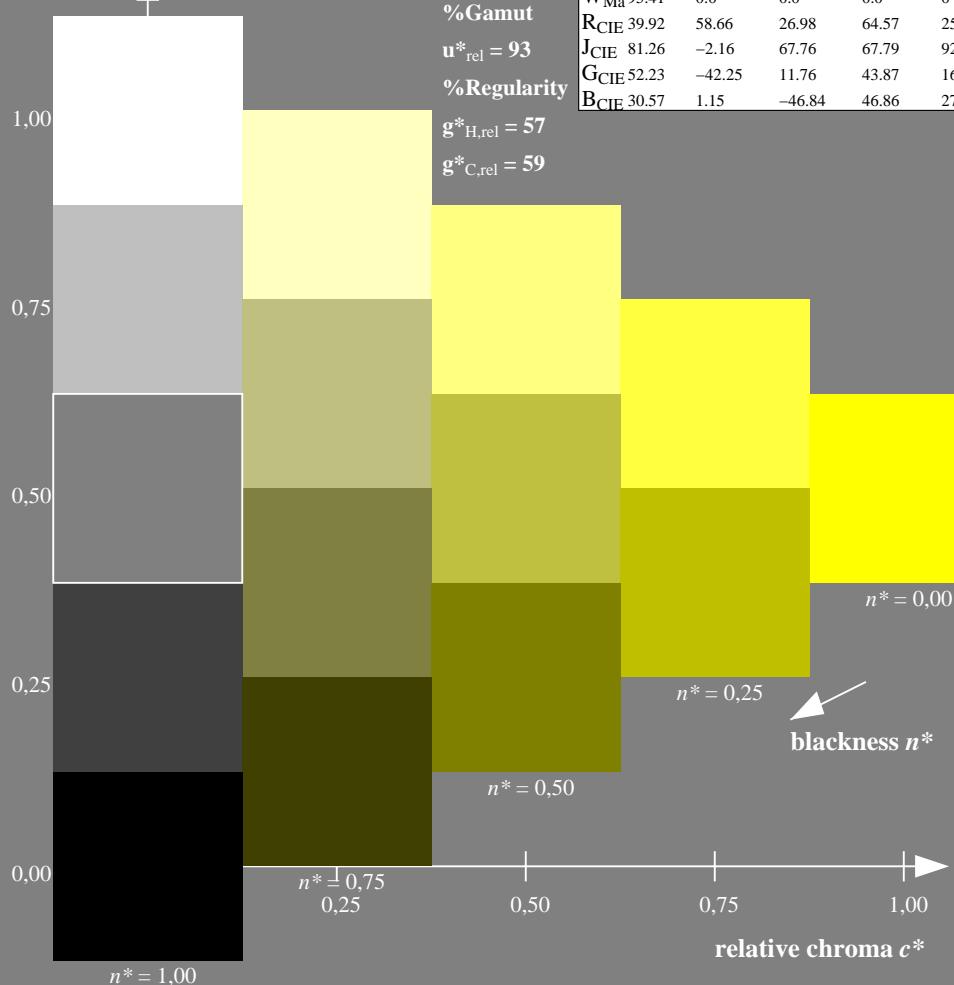
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

Test chart 1 according to DIN 33872-2, Hue Y, Page 2/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 96/360 = 0.268$

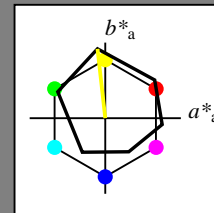
lab*tch and lab*nch

D65: hue Y

LCH*Ma: 90 92 96

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

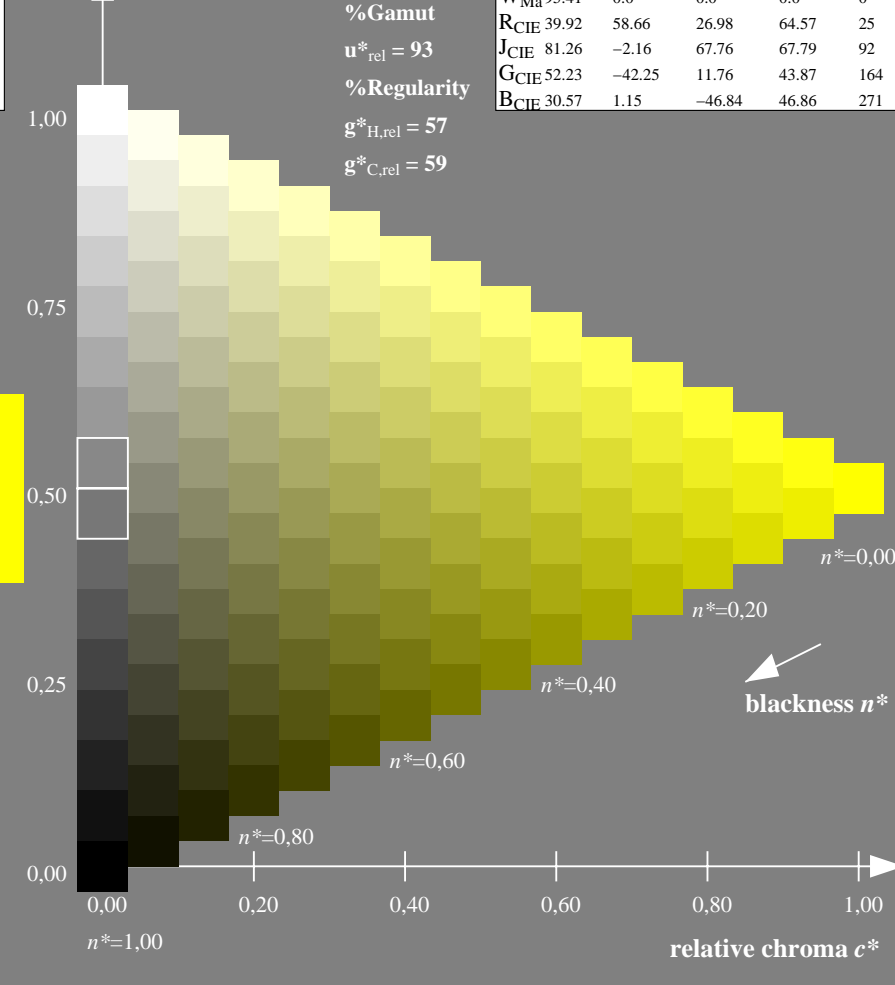
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



16 step scales for constant CIELAB hue 96/360 = 0.268 (right)

input: rgb (->olv*) setrgbcolor
 output: no change compared to input

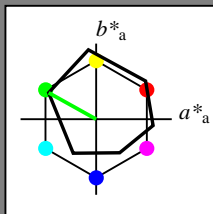
See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e01NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 151/360 = 0.419$
 lab^*tch and lab^*nch
 D65: hue L
 LCH*Ma: 51 72 151
 olv*Ma: 0.0 1.0 0.0
 triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

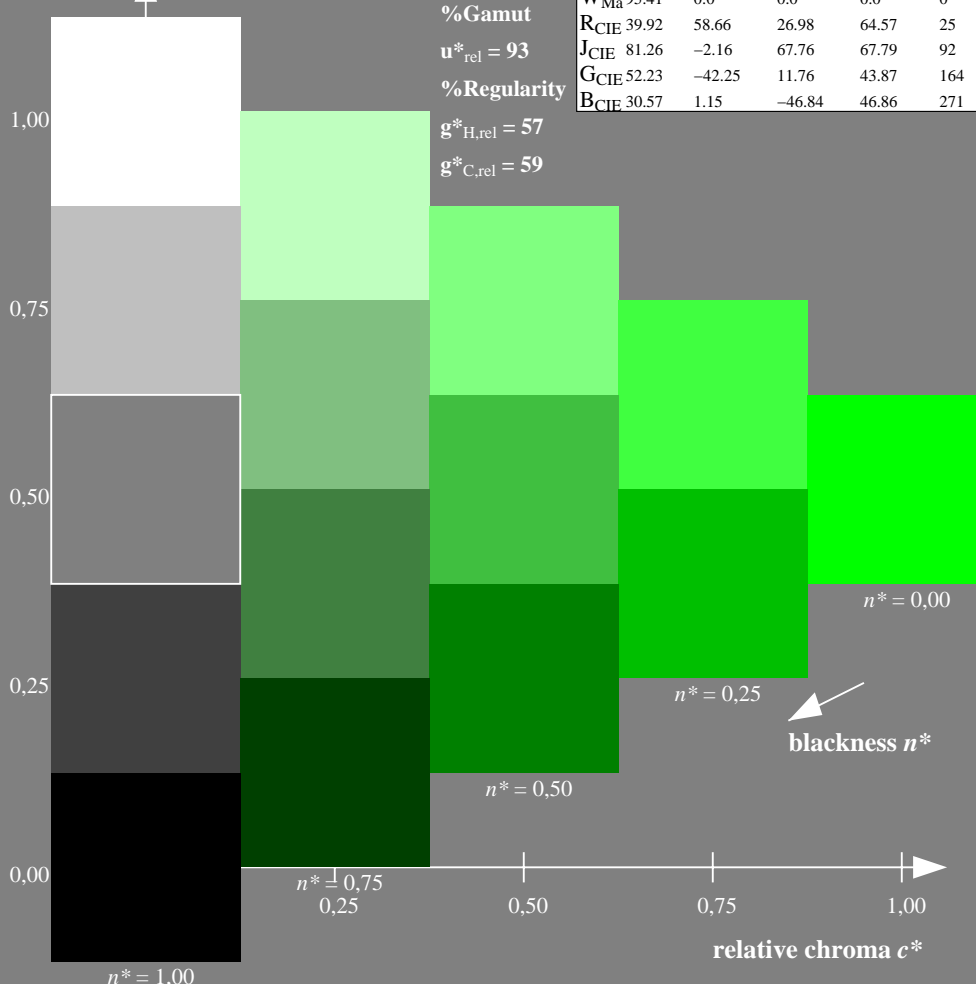
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

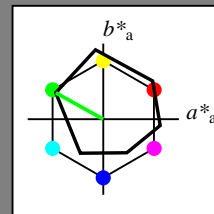


De120-7N, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

Test chart 1 according to DIN 33872-2, Hue L, Page 3/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 151/360 = 0.419$
 lab^*tch and lab^*nch
 D65: hue L
 LCH*Ma: 51 72 151
 olv*Ma: 0.0 1.0 0.0
 triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

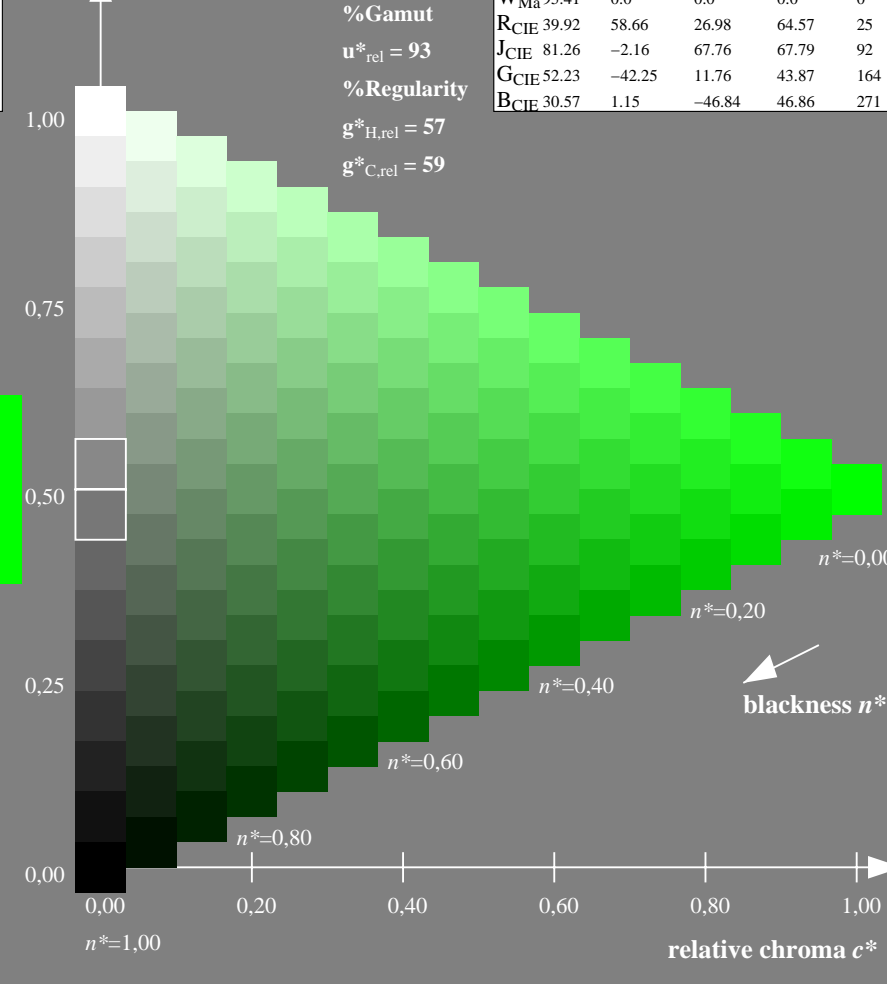
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

input: rgb ($\rightarrow olv^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e02NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

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

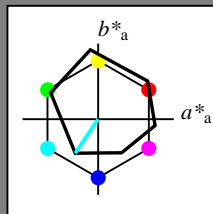
lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 59 54 236

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

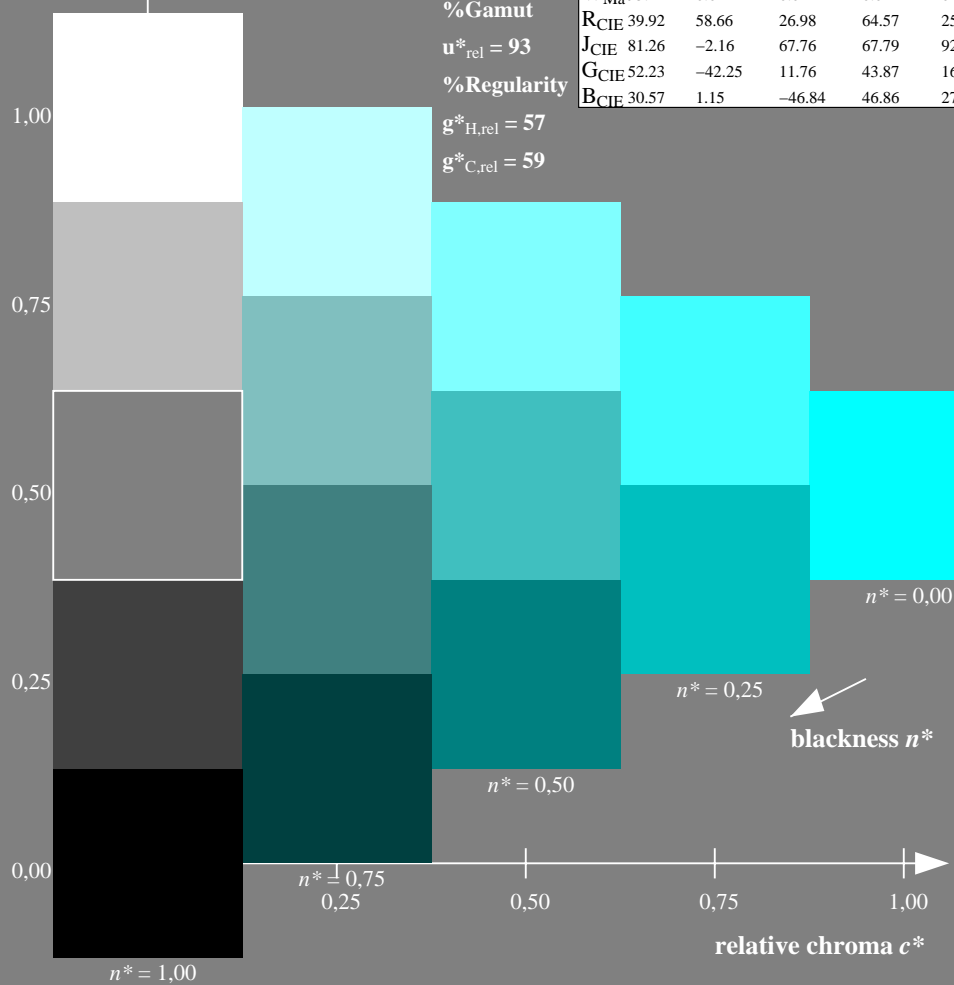
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

Test chart 1 according to DIN 33872-2, Hue C, Page 4/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

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

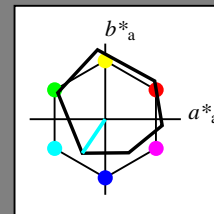
lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 59 54 236

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

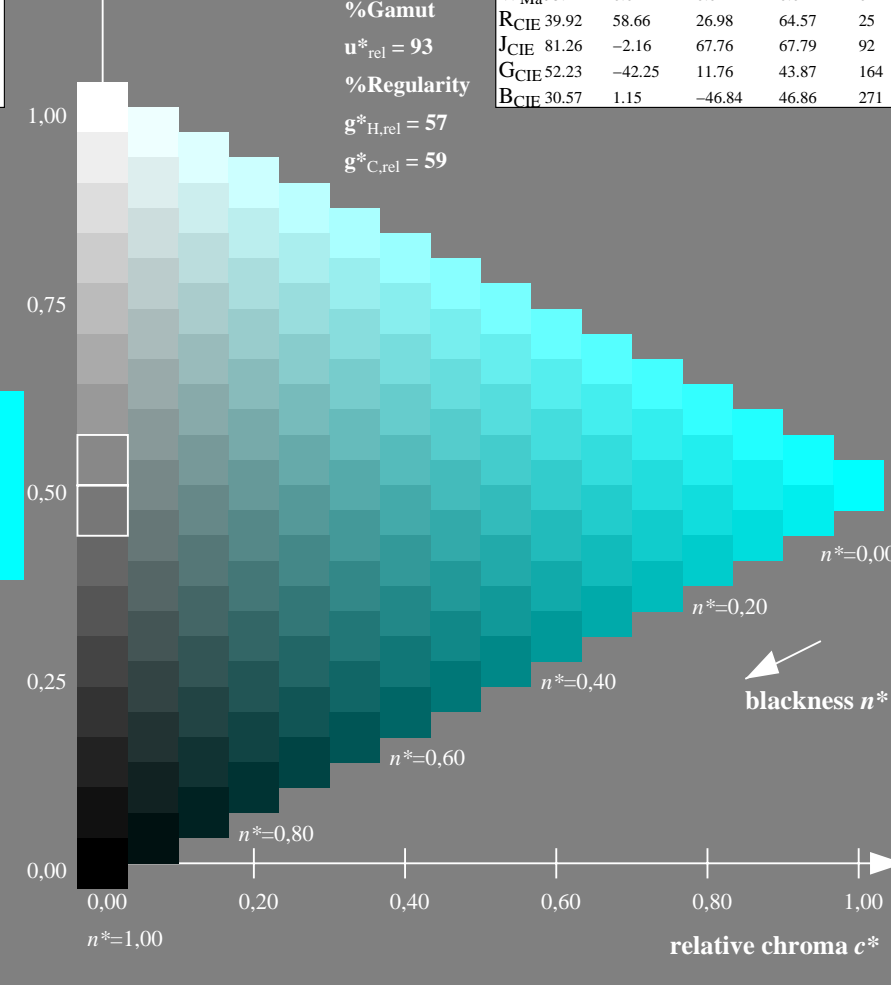
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

input: $rgb (-> olv^*)$ $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e03NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 305/360 = 0.847$

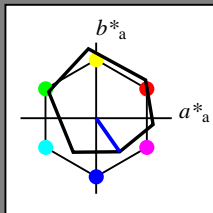
lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 26 54 305

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

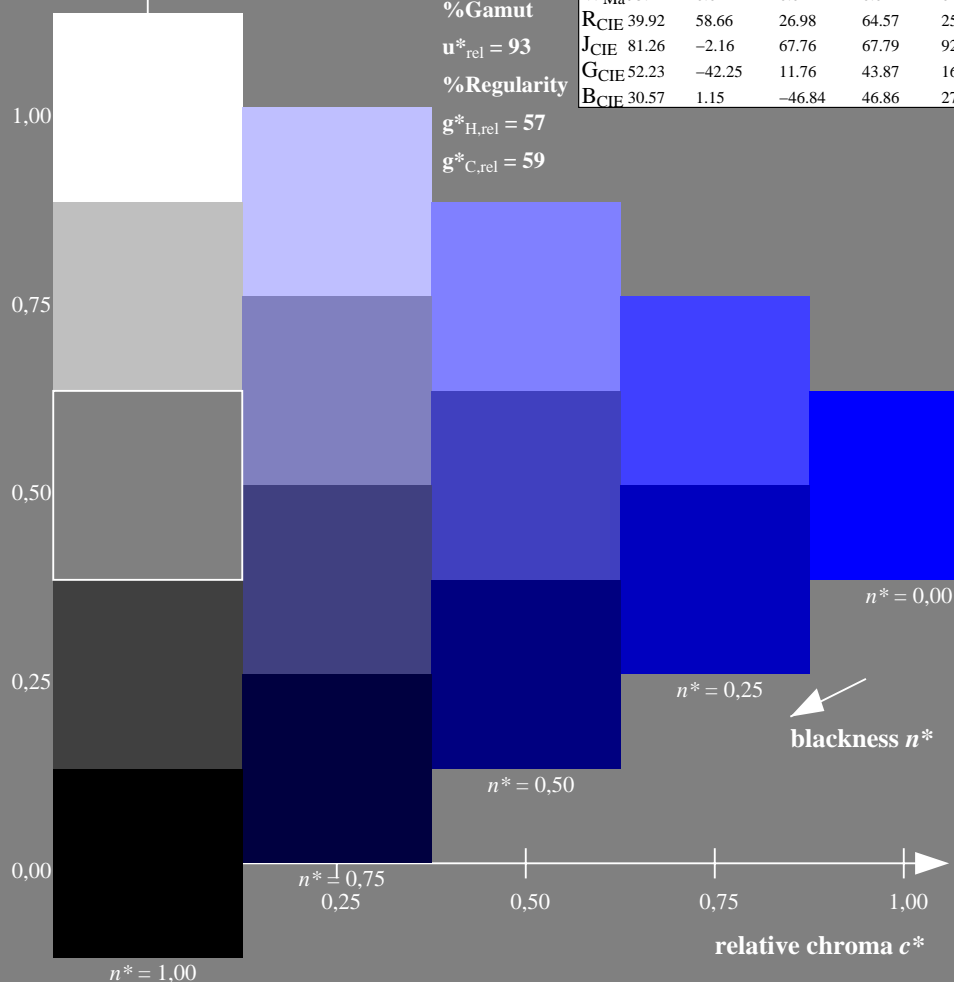
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

Test chart 1 according to DIN 33872-2, Hue V, Page 5/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 305/360 = 0.847$

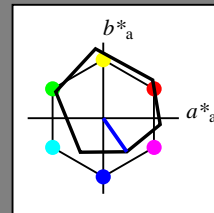
lab^*tch and lab^*nch

D65: hue V

LCH*Ma: 26 54 305

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

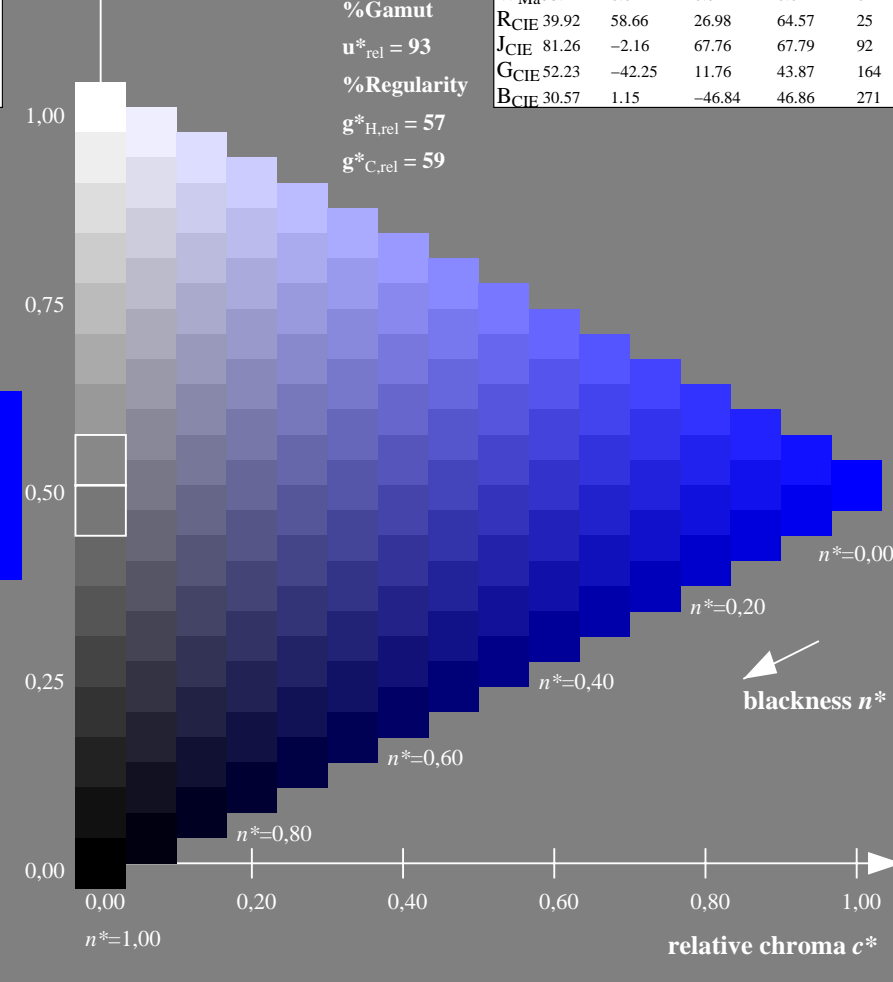
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



16 step scales for constant CIELAB hue 305/360 = 0.847 (right)

input: rgb ($\rightarrow olv^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e04NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 354/360 = 0.982$

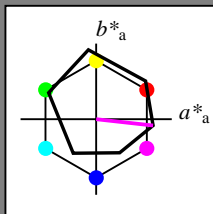
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 48 76 354

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
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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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

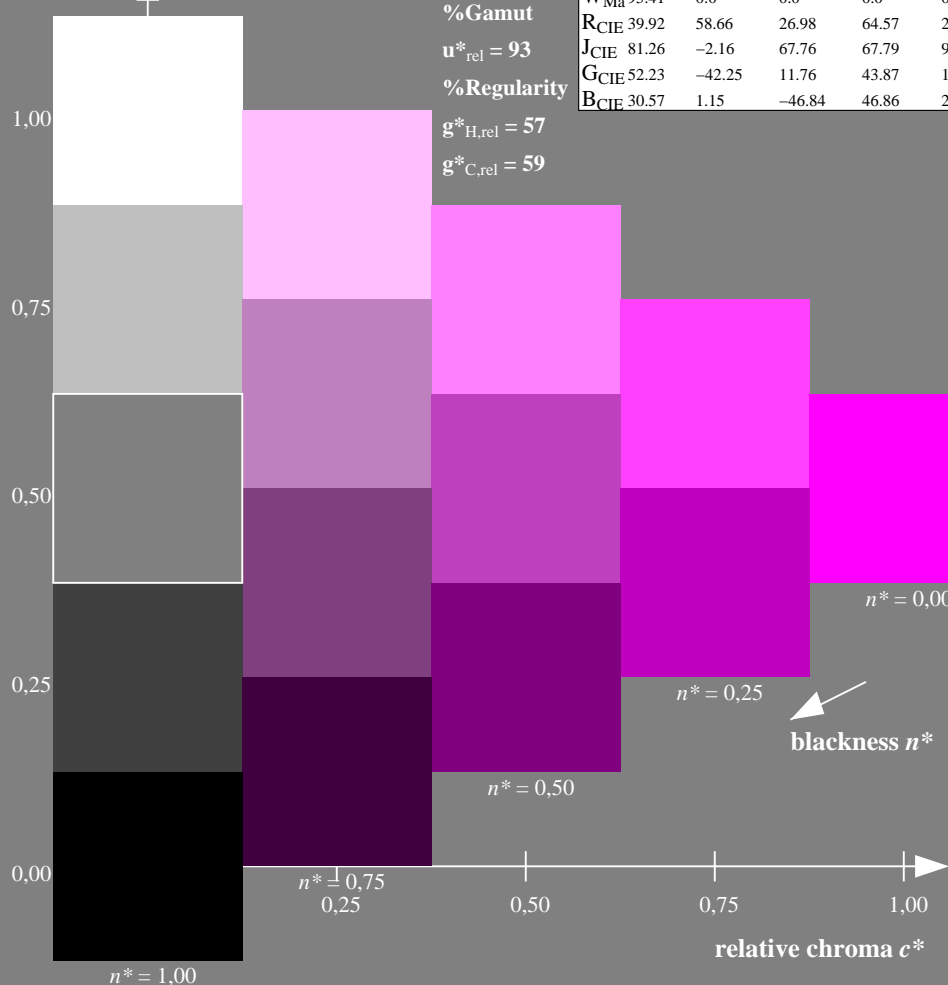
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

Test chart 1 according to DIN 33872-2, Hue M, Page 6/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

for hue $h^* = lab^*h = 354/360 = 0.982$

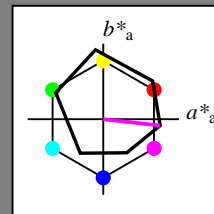
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 48 76 354

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

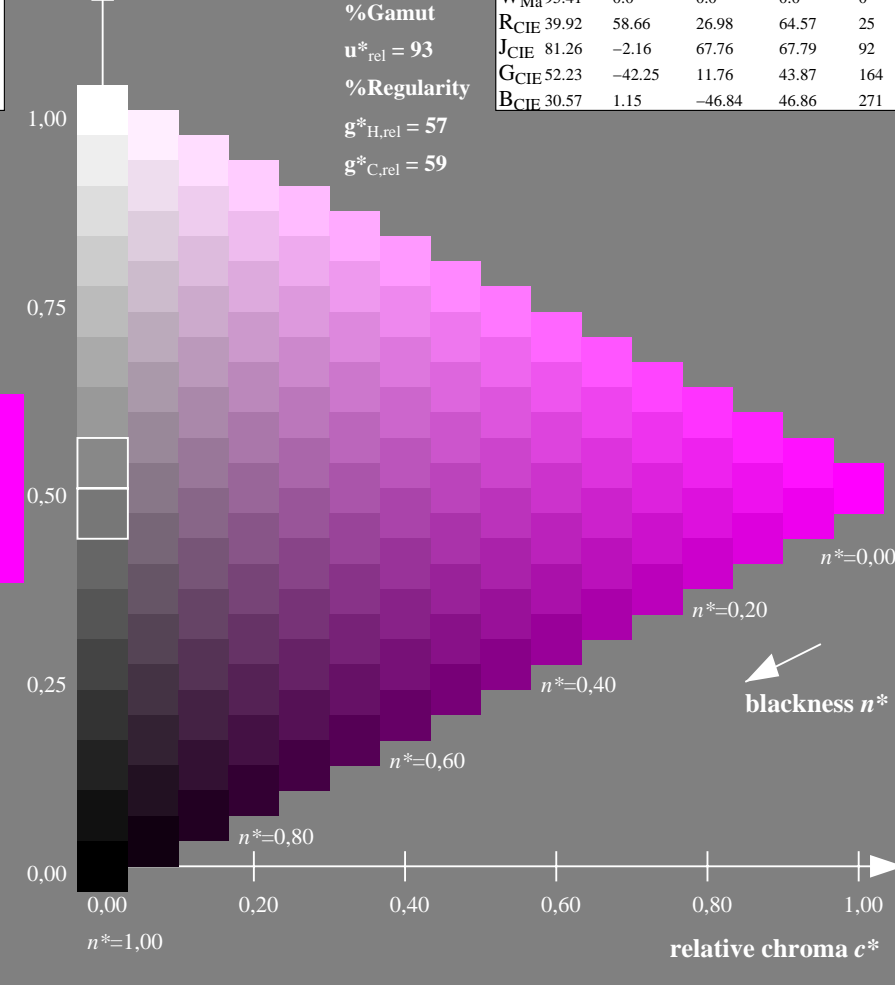
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



16 step scales for constant CIELAB hue 354/360 = 0.982 (right)

input: rgb ($\rightarrow olv^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e05NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

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

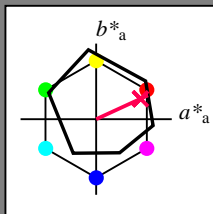
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 75 25

olv*Ma: 1.0 0.0 0.32

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	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
BCIE	30.57	1.15	-46.84	46.86	271

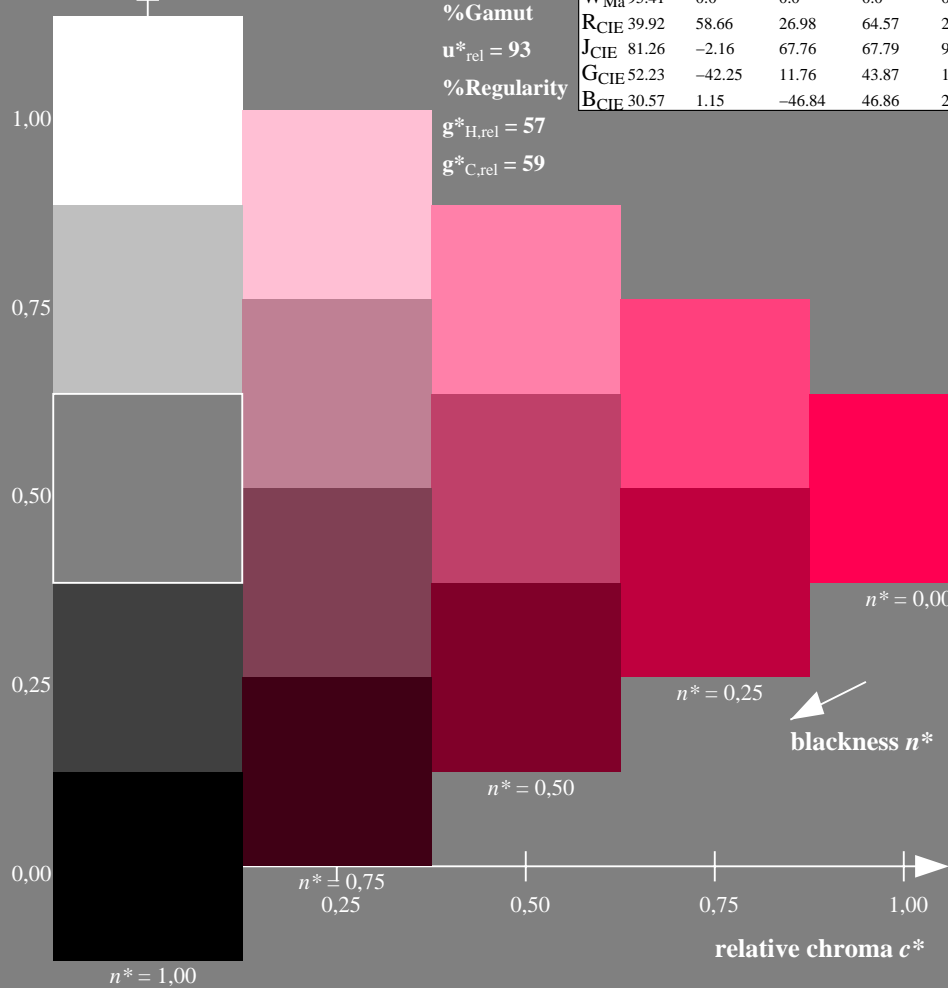
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

Test chart 1 according to DIN 33872-2, Hue R, Page 7/11
 Discrimination of 5 and 16 step colour scales, ORS18a

Output: Colorimetric Offset Reflective System ORS18a

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

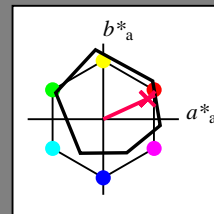
lab^*tch and lab^*nch

D65: hue R

LCH*Ma: 48 75 25

olv*Ma: 1.0 0.0 0.32

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	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
BCIE	30.57	1.15	-46.84	46.86	271

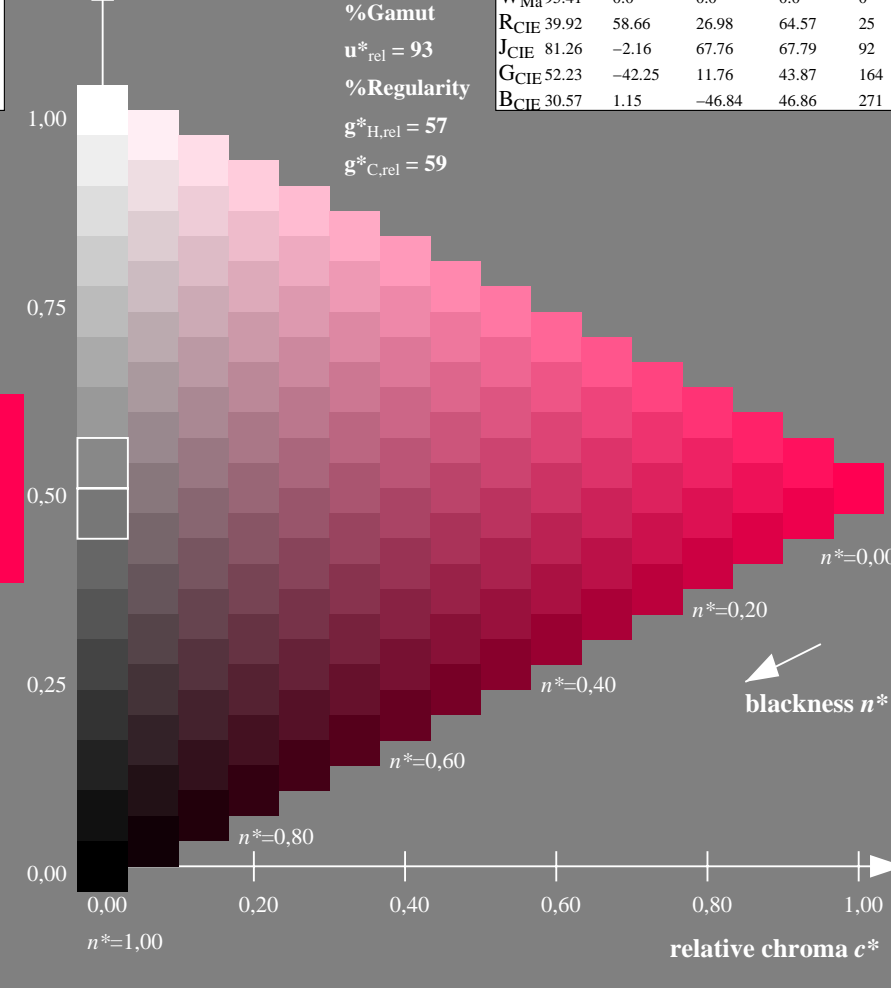
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

input: rgb ($\rightarrow rgb^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e06NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

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

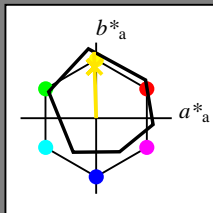
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 86 88 92

olv*Ma: 1.0 0.9 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

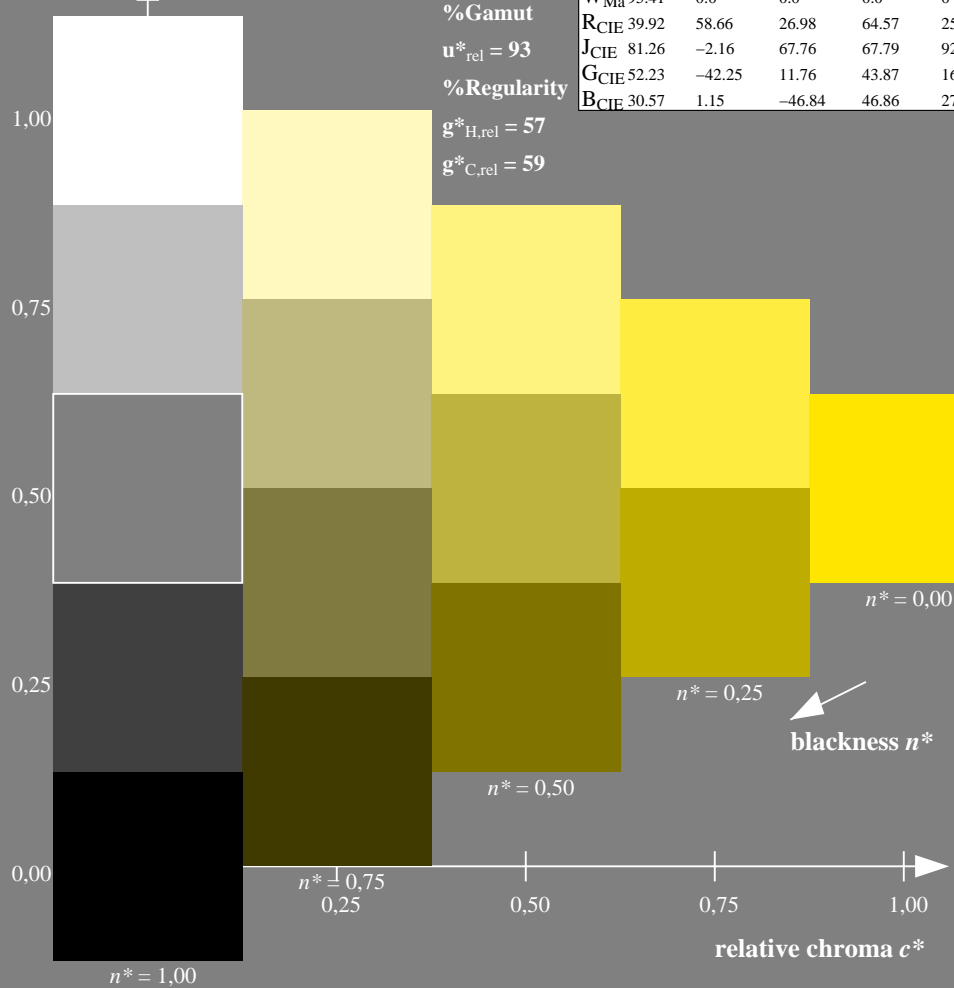
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

Output: Colorimetric Offset Reflective System ORS18a

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

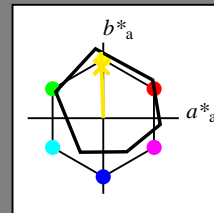
lab^*tch and lab^*nch

D65: hue J

LCH*Ma: 86 88 92

olv*Ma: 1.0 0.9 0.0

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

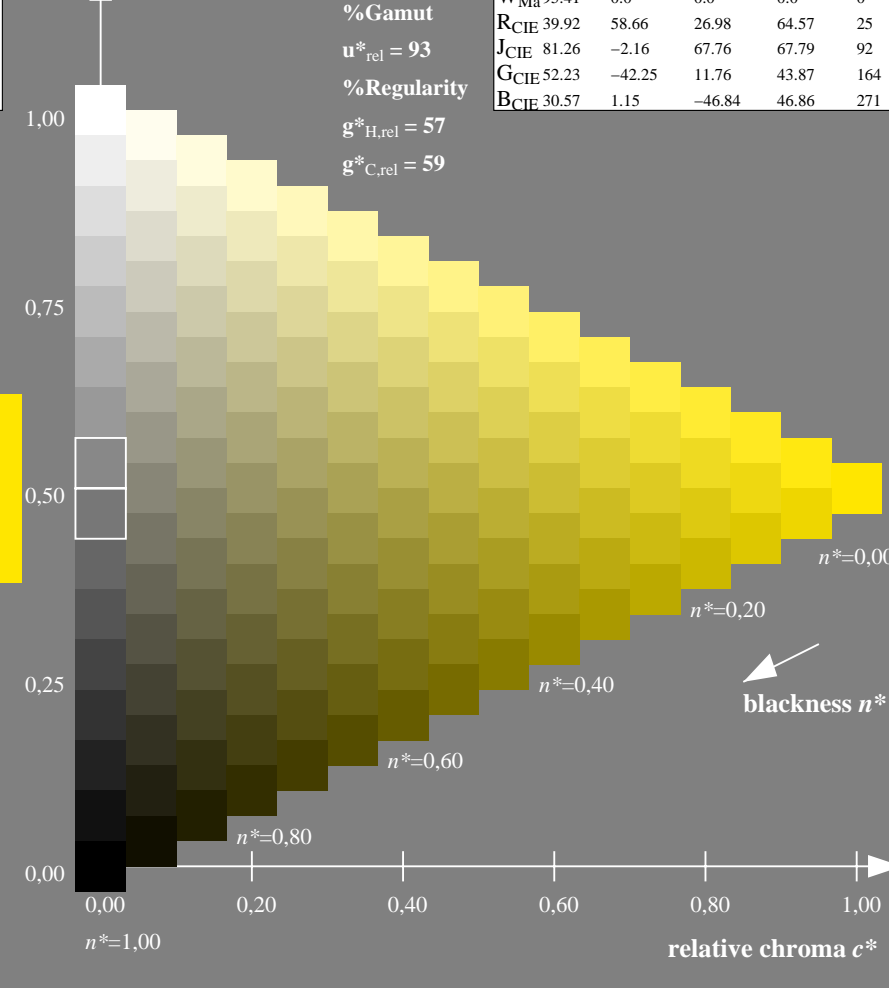
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

Test chart 1 according to DIN 33872-2, Hue J, Page 8/11
 Discrimination of 5 and 16 step colour scales, ORS18a

input: rgb ($\rightarrow rgb^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e07NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Input: Colorimetric Offset Reflective System ORS18a

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

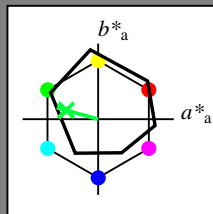
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 57 164

ol v^*Ma : 0.0 1.0 0.25

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

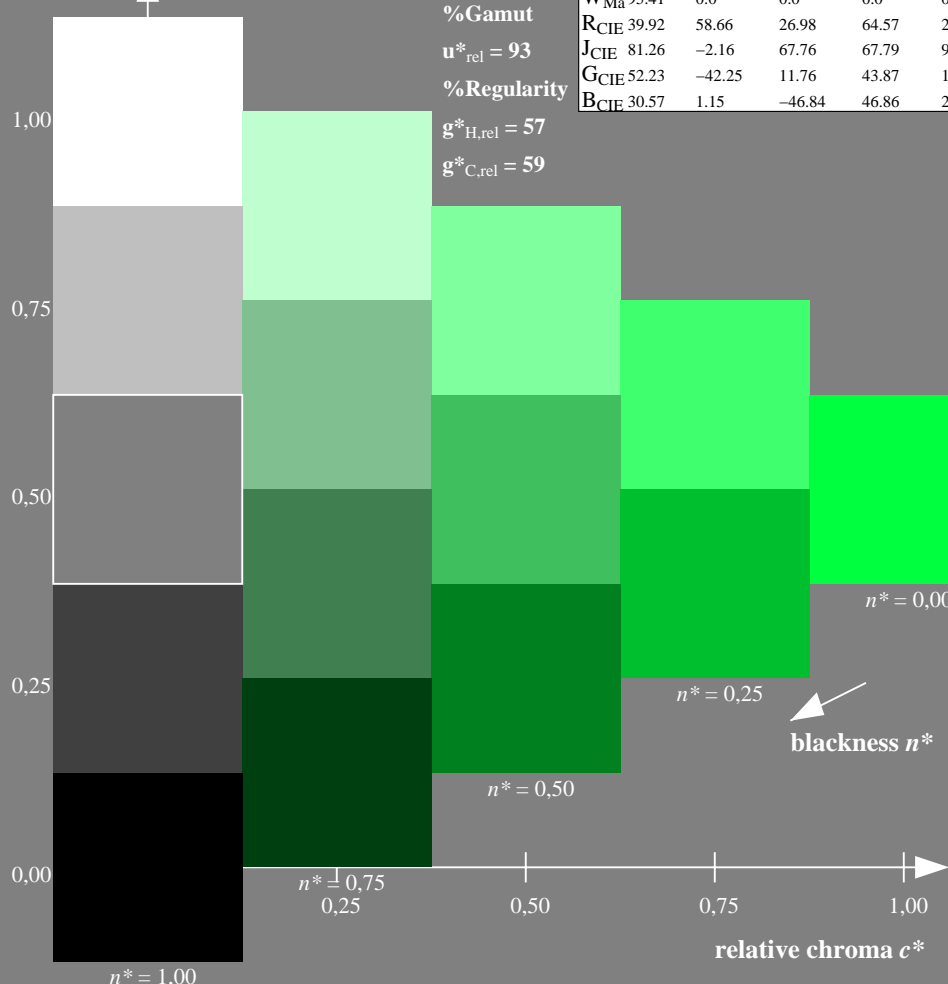
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



Output: Colorimetric Offset Reflective System ORS18a

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

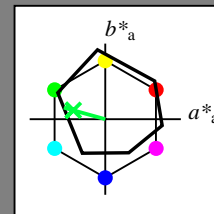
lab^*tch and lab^*nch

D65: hue G

LCH*Ma: 53 57 164

ol v^*Ma : 0.0 1.0 0.25

triangle lightness t^*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

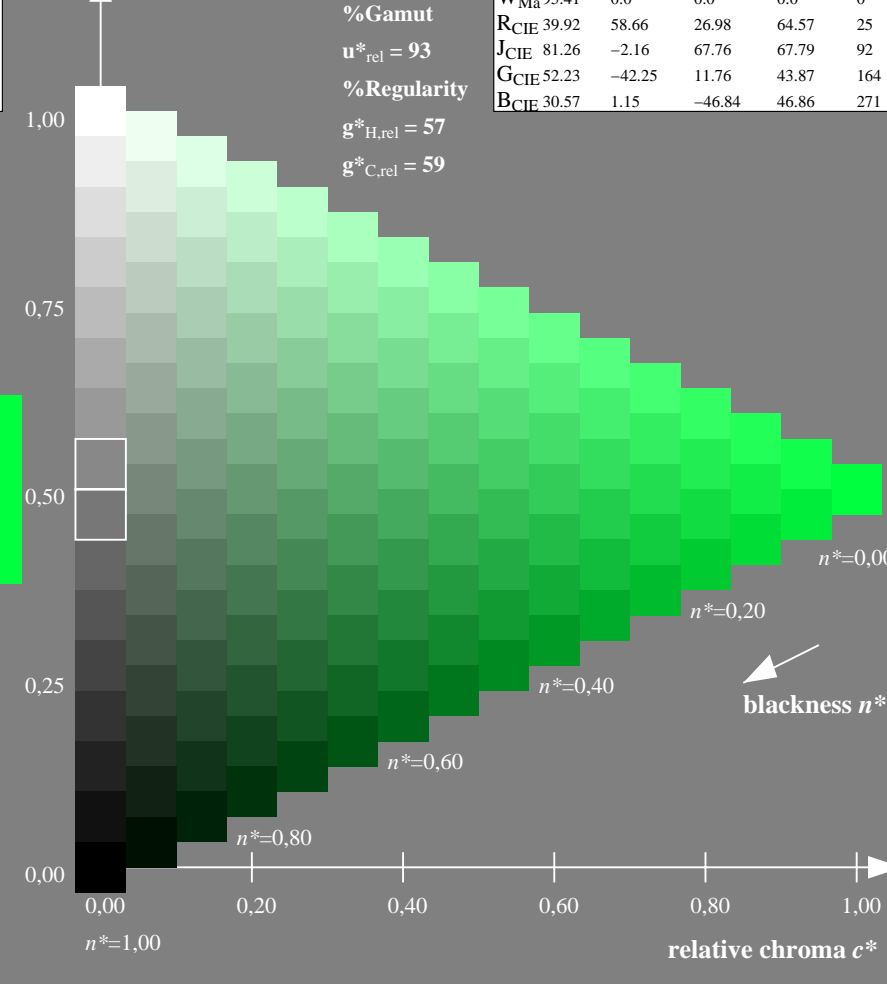
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



De120-7N, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

Test chart 1 according to DIN 33872-2, Hue G, Page 9/11
 Discrimination of 5 and 16 step colour scales, ORS18a

input: rgb ($\rightarrow rgb^*$) $setrgbcolor$
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e08NP.PS /.PDF BAM material: code=rhadtta
 application for output of monitor, data projector, or printer systems

Input: Colorimetric Offset Reflective System ORS18a

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

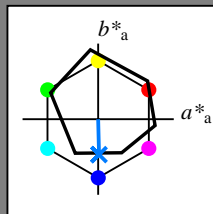
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 42 45 271

olv*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

Output: Colorimetric Offset Reflective System ORS18a

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

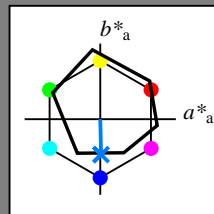
lab^*tch and lab^*nch

D65: hue B

LCH*Ma: 42 45 271

olv*Ma: 0.0 0.49 1.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 93$

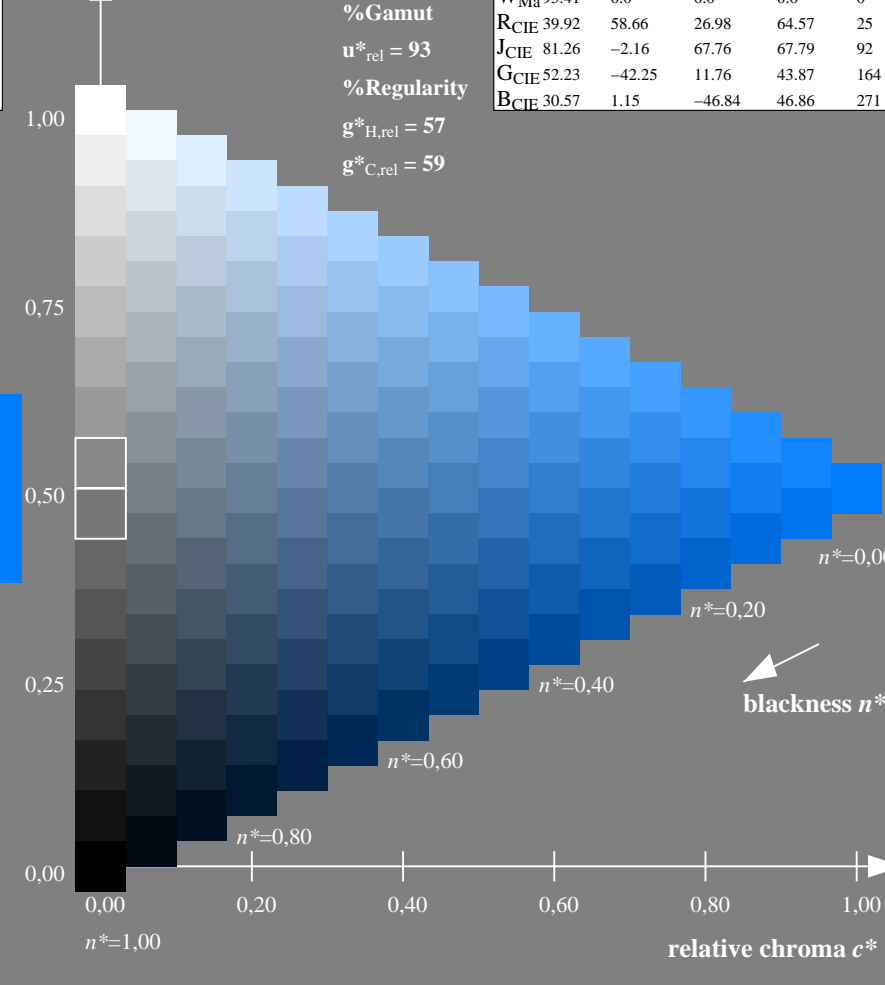
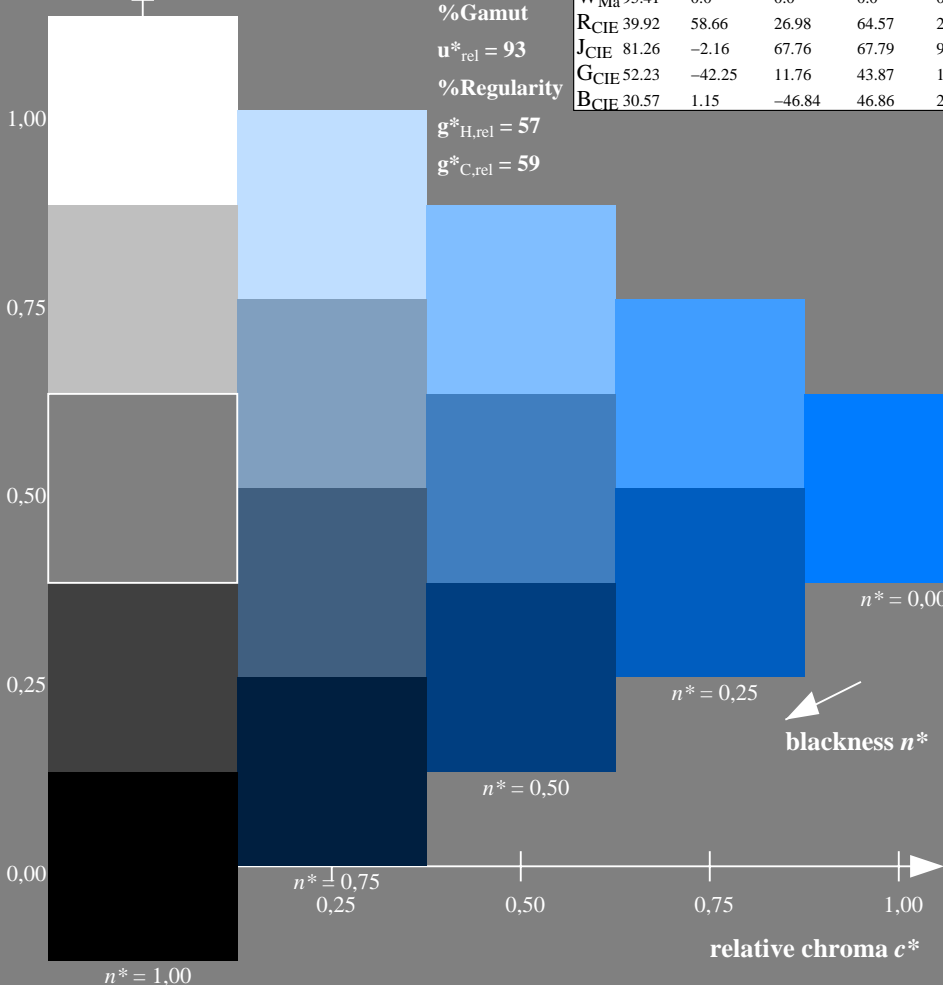
%Regularity

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

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

ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271



De120-7N, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

Test chart 1 according to DIN 33872-2, Hue B, Page 10/11
 Discrimination of 5 and 16 step colour scales, ORS18a

input: rgb ($\rightarrow rgb^*$) $setrgbcolor$
 output: no change compared to input

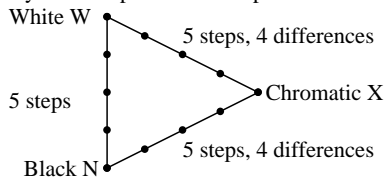
See for similar files: <http://www.ps.bam.de/De12/>; www.ps.bam.de/De.HTM
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e09NP.PS /.PDF
 application for output of monitor, data projector, or printer systems

BAM material: code=rhadtta

Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series



There are three basic colours on each page:
Black N, White W and Chromatic X.
Ten pages include 10 hue planes
X = OYLCVM and RJGB.
There are at maximum 12 distinguishable steps.

All steps of the three series N-W, W-X and X-N should be distinguishable on all pages.

Are the three 5step series distinguishable on all pages? underline: Yes/No

only in case of No: Are the three 5 step series on Page x of 10 pages distinguishable?

Underline Yes/No and give in case of No the number of distinguishable steps?

- Page 1: Yes/No, if No ../12 step differences are distinguishable of O = Orange Red
- Page 2: Yes/No, if No ../12 step differences are distinguishable of Y = Yellow
- Page 3: Yes/No, if No ../12 step differences are distinguishable of L = Leaf green
- Page 4: Yes/No, if No ../12 step differences are distinguishable of C = Cyan blue
- Page 5: Yes/No, if No ../12 step differences are distinguishable of V = Violett blue
- Page 6: Yes/No, if No ../12 step differences are distinguishable of M = Magenta Red
- Page 7: Yes/No, if No ../12 step differences are distinguishable of R = Elementary Red
- Page 8: Yes/No, if No ../12 step differences are distinguishable of J = Elementary yellow
- Page 9: Yes/No, if No ../12 step differences are distinguishable of G = Elementary Green
- Page 10: Yes/No, if No ../12 step differences are distinguishable of B = Elementary blue

Sum: ../10 Yes-Pages and ../120 step differences are distinguishable

Part 1

De120-3

Documentation of file format, hardware and software for this test:

PDF-File: either www.ps.bam.de/De12/10L/L12e00NP.PDF underline Yes/No
or www.ps.bam.de/De12/10P/P12e00NP.PDF or underline Yes/No
PS-File: either www.ps.bam.de/De12/10L/L12e00NA.PS or underline Yes/No
or www.ps.bam.de/De12/10P/P12e00NA.PS or underline Yes/No

Used computer operating system:

either one of Windows/Mac/Unix/other and version:.....

This evaluation is for the device output: underline monitor/data projector/printer

Device model, driver and version:.....

Device output with PDF/PS-file: underline PDF/PS-file

For device output with PDF-file (L/P)12e00NP.PDF:

- either PDF-file transfer "download, copy" to PDF device.....
- or with computer system interpretation by "Display-PDF":.....
- or with software. e. g. Adobe-Reader/-Acrobat and version:.....
- or with software e. g. Ghostscript and version:.....

For device output with PS-file (L/P)12e00NA.PS:

- either PS-file transfer "download, copy" to PS device.....
- or with computer system interpretation by "Display-PS":.....
- or with software e. g. Ghostscript and version:.....
- or with software e. g. Mac-Yap and version:.....

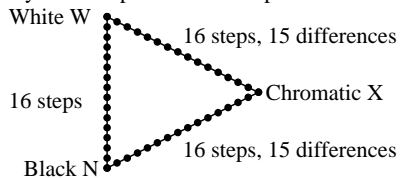
Special remarks, e. g. output of Landscape (L) file L12e00NA.PS was cutted,
Portrait (P) file P12e00NA.PS was used:.....

Part 3

De120-5

Discriminability of 16 step colour series (Yes/No decision)

Layout example: three 16 step colour series



There are three basic colours on each page:
Black N, White W and Chromatic X.
Ten pages include 10 hue planes
X = OYLCVM and RJGB.
There are at maximum 45 distinguishable steps.

All steps of the three series N-W, W-X and X-N should be distinguishable on all pages.

Are the three 16step series distinguishable on all pages? underline: Yes/No

only in case of No: Are the three 16 step series on Page x of 10 pages distinguishable?

Underline Yes/No and give in case of No the number of distinguishable steps?

- Page 1: Yes/No, if No ../45 step differences are distinguishable of O = Orange Red
- Page 2: Yes/No, if No ../45 step differences are distinguishable of Y = Yellow
- Page 3: Yes/No, if No ../45 step differences are distinguishable of L = Leaf green
- Page 4: Yes/No, if No ../45 step differences are distinguishable of C = Cyan blue
- Page 5: Yes/No, if No ../45 step differences are distinguishable of V = Violett blue
- Page 6: Yes/No, if No ../45 step differences are distinguishable of M = Magenta Red
- Page 7: Yes/No, if No ../45 step differences are distinguishable of R = Elementary Red
- Page 8: Yes/No, if No ../45 step differences are distinguishable of J = Elementary yellow
- Page 9: Yes/No, if No ../45 step differences are distinguishable of G = Elementary Green
- Page 10: Yes/No, if No ../45 step differences are distinguishable of B = Elementary blue

Sum: ../10 Yes-Pages and ../450 step differences are distinguishable

Part 2

De121-3

Documentation of assessor colour vision properties for visual assessment

The assessor has normal colour vision according to one test: underline Yes/No
either according to DIN 6160:1996 with Anomaloskop of Nagel underline Yes/unknown
or with test charts using colour points according to Ishihara underline Yes/unknown
or tested with, please specify: underline Yes/unknown

Only for display (monitor, data projector) output:

Office workplace illumination is daylight (clouded/north sky) underline Yes/No
PDF-file output with www.ps.bam.de/De13/10L/L13e00NP.PDF underline Yes/No
Comparison of contrast range of 16 steps F to 0 with test chart no. 3 of DIN 33866-1:2000
give contrast range: (>F:0) (F:0) (E:0) (D:0) (C:0) (A:0) (9:0) (7:0) (5:0) (3:0) (<3:0)

Remark: In daylighted offices the contrast range is in many cases:
on paper between: >F:0 (highly glossy), F:0 (silk glossy) and E:0 (matte)
on display between: >F:0 and E:0 (monitor), D:0 and 3:0 (data projector)

Only for optional colorimetric specification with PDF/PS file output

PDF-File: either www.ps.bam.de/De11/10L/L11e00NP.PDF underline Yes/No
or www.ps.bam.de/De11/10P/P11e00NP.PDF or underline Yes/No
PS-File: either www.ps.bam.de/De11/10L/L11e00NA.PS or underline Yes/No
or www.ps.bam.de/De11/10P/P11e00NA.PS or underline Yes/No

colour measurement and specification for:

CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: underline Yes/No
If No, please give other parameters:

Colorimetric specification with PS file for colours in the columns A to T

Exchange of CIELAB data in file www.ps.bam.de/De17/10L/L17e00NP.PS and transfer
of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF underline Yes/No
If No, please describe other method:

Part 4

De121-5

See for similar files: http://www.ps.bam.de/De12/; www.ps.bam.de/De.HTM
Technical information: http://www.ps.bam.de/33872E Version 2.1, io=1,1

BAM registration: 20080301-De12/10P/P12e0ANP.PS /.PDF
application for output of monitor, data projector, or printer systems
BAM material: code=rhadtta