

Input and output:
Colorimetric Printer Reflective System FRS09_92aM
data for any colour:
 $lab*_{tch*}$ and $lab*_{icu*}$

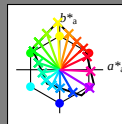
elementary hue text:

$u^* = 16$ hues $r00j$, $r25j$, ..., $b75r$

contrast reduction factor:

$c_R = 1.0$

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



%Gamut

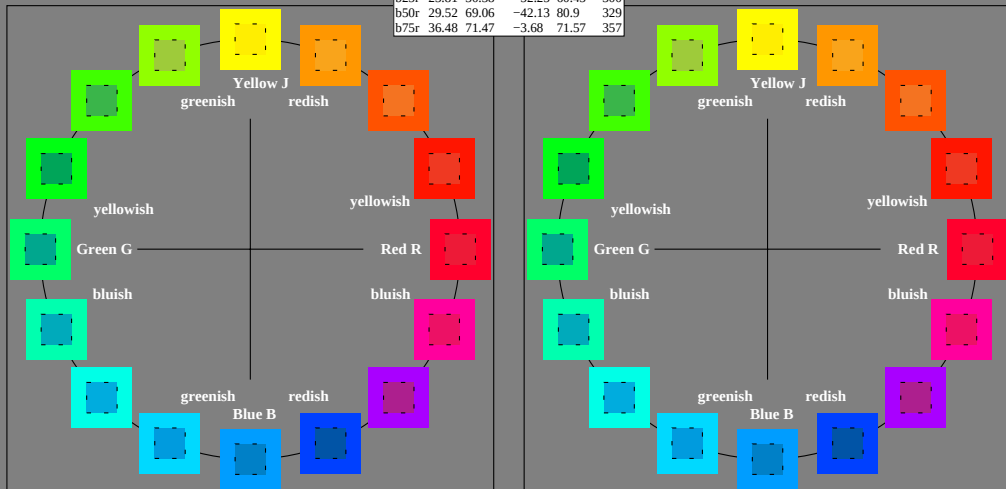
$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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



$$u^* = r00j$$

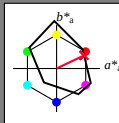
(Ma):

LAB*LAB* M_a : 35 63 30
LAB*LCH* M_a : 35 70 25

lab*rah* : 1.0 0.0 0.0

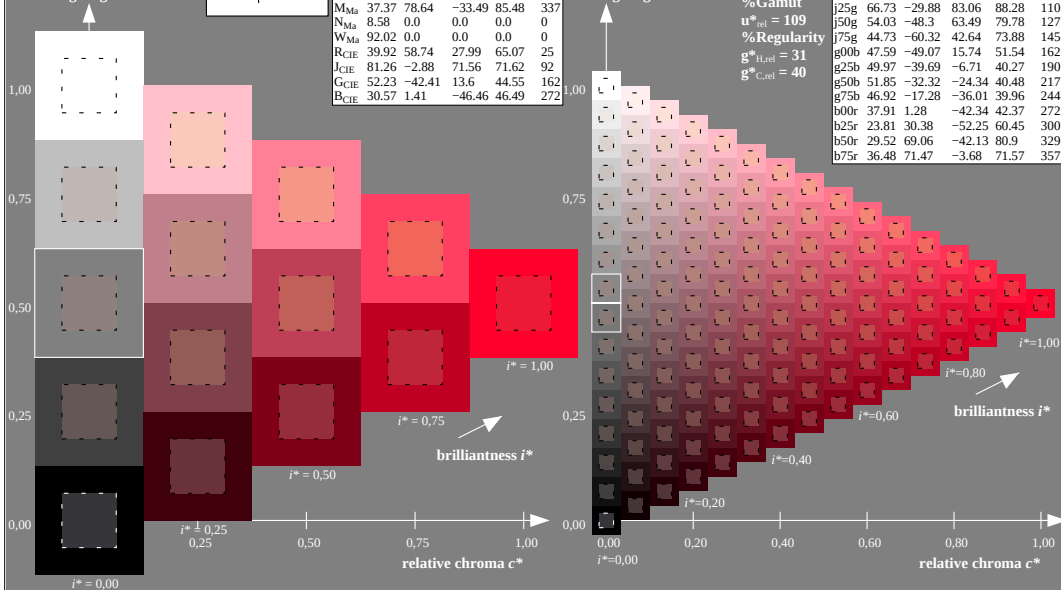
ind-19d Ma. 1.0 0.0 0.0

lab*olv*Ma: 1.0 0.0 0.18

triangle lightness t^* 

FRS09_92aM; adapted (a) CIELAB data					
	L^*	a^*	b^*	C^*_{ab}	h^*_{ab}
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	147
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

FRS09_92aM; adapted (a) CIELAB					
	L^*	a^*	b^*	$C^*_{\text{ab},a}$	$h^*_{\text{ab},a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	63.18	-4.37	108.53	108.62	92
j25g	88.76	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

$u^* = r25j$

data for any colour:

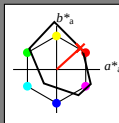
lab^*tch^* and lab^*icu^*
elementary hue text:

$u^* = r25j$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 39 55 49

$LAB^*LCH^*_{Ma}$: 39 74 42

$lab^*rgb^*_{Ma}$: 1.0 0.25 0.0

$lab^*olv^*_{Ma}$: 1.0 0.08 0.0

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

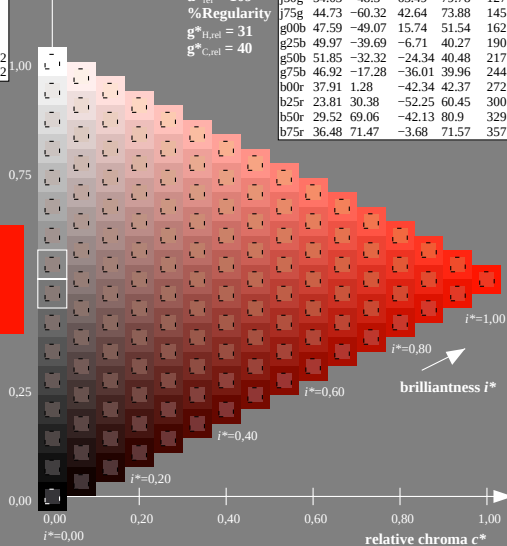
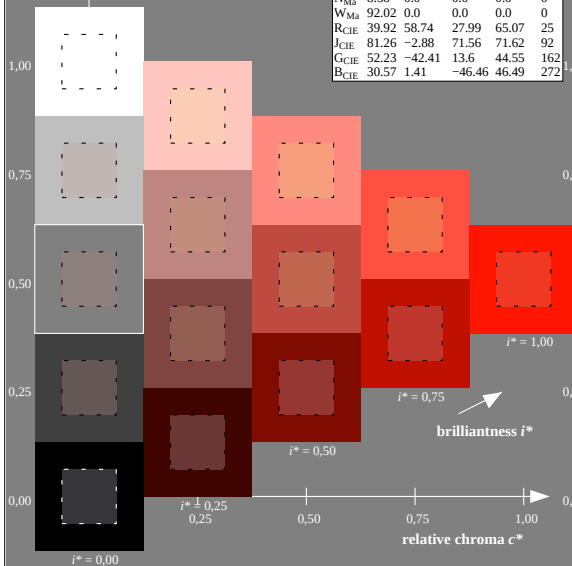
%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

$u^* = r50j$

data for any colour:

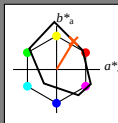
lab^*tch^* and lab^*icu^*
elementary hue text:

$u^* = r50j$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 51 39 65

$LAB^*LCH^*_{Ma}$: 51 76 59

$lab^*rgb^*_{Ma}$: 1.0 0.5 0.0

$lab^*olv^*_{Ma}$: 1.0 0.32 0.0

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

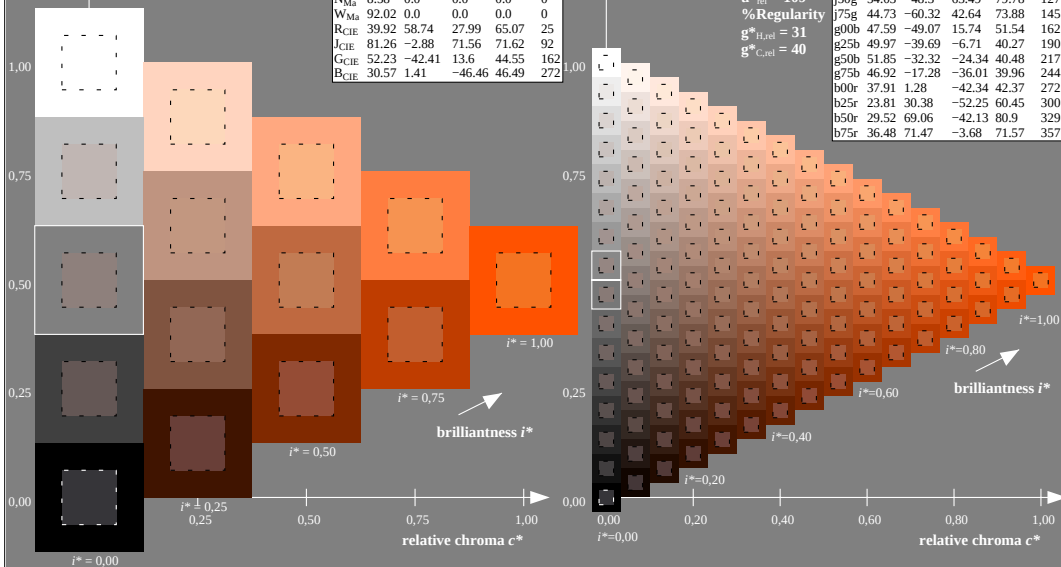
%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

$u^* = r75j$

data for any colour:

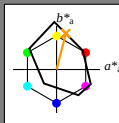
lab^*tch^* and lab^*icu^*
elementary hue text:

$u^* = r75j$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	60.0	44.0	74.4	36
Y_{Ma}	83.77	-5.16	109.32	109.44	93
L_{Ma}	44.13	-62.66	48.24	79.09	142
C_{Ma}	52.66	-29.13	-31.98	43.27	228
V_{Ma}	14.15	50.3	-59.03	77.57	310
M_{Ma}	37.37	78.64	-33.49	85.48	337
N_{Ma}	8.58	0.0	0.0	0.0	0
W_{Ma}	92.02	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

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 64 21 83

$LAB^*LCH^*_{Ma}$: 64 86 76

$lab^*rgb^*_{Ma}$: 1.0 0.75 0.0

$lab^*olv^*_{Ma}$: 1.0 0.59 0.0

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

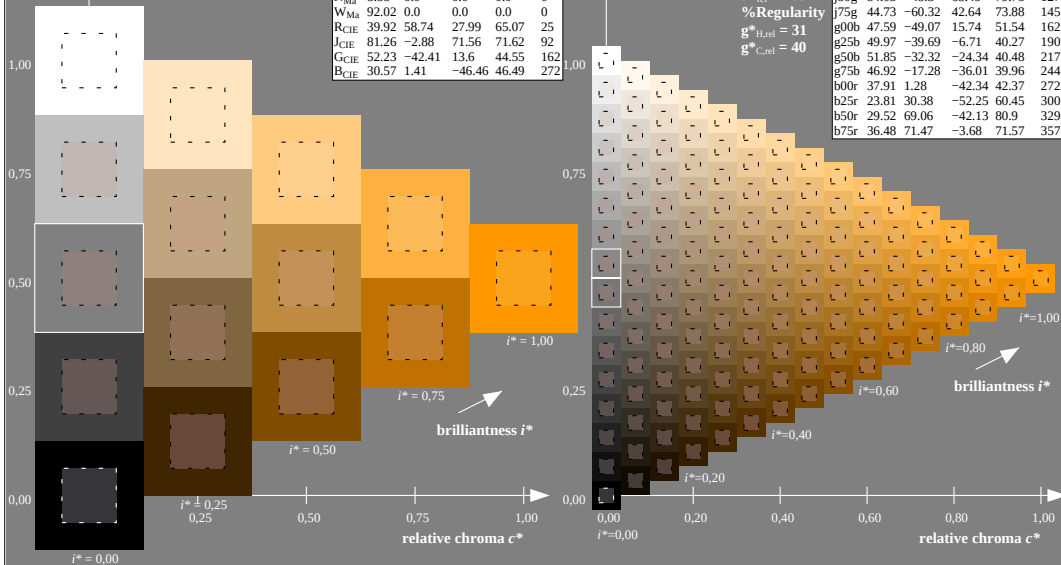
%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



$$u^* = j25g$$

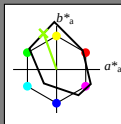
Data for maximum colour (Ma):

*LAB*LAB**Ma: 67 -29 83

LAB*LCH*Ma: 67 88 110

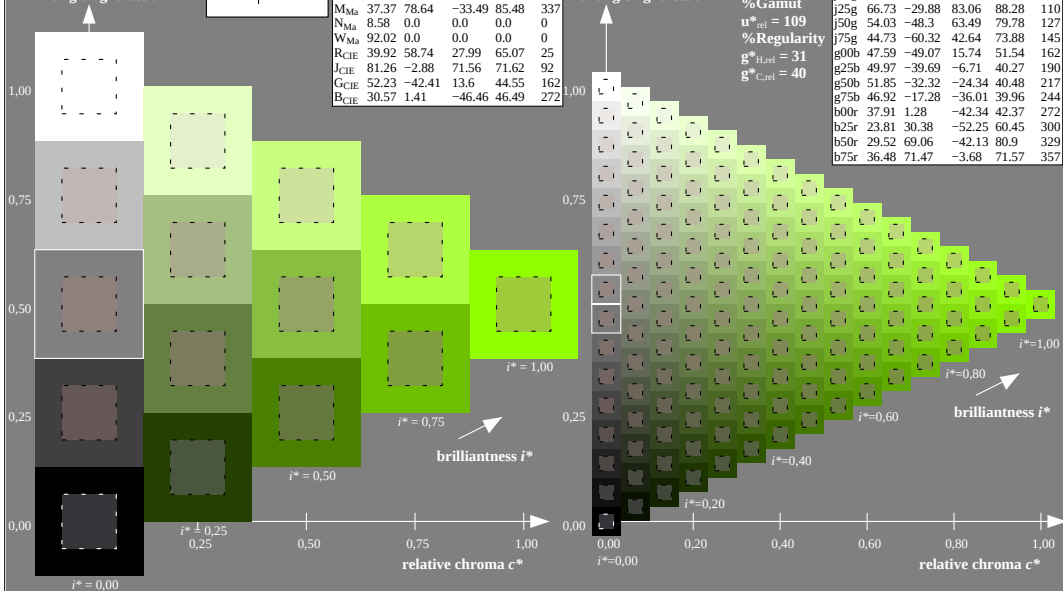
 $lab*rgb*Ma: 0.75 \quad 1.0 \quad 0.0$

*lab*oly**M_a: 0.57 1.0 0.0

triangle lightness t^* triangle lightness t^* 

FRS09_92aM; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	C^*_{ab}	h^*_{ab}
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	143
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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	13.46	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

FRS9_92aM; adapted (a)			CIE Lab h*		
L*	a*	b*	C*ab	h*ab	
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	60.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	25.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.354$

$u^* = j50g$

data for any colour:

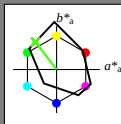
lab^*tch^* and lab^*icu^*
elementary hue text:

$u^* = j50g$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

$LAB^*LAB^*_{Ma}$: 54 -47 63

$LAB^*LCH^*_{Ma}$: 54 80 127

$lab^*rgb^*_{Ma}$: 0.5 1.0 0.0

$lab^*olv^*_{Ma}$: 0.25 1.0 0.0

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

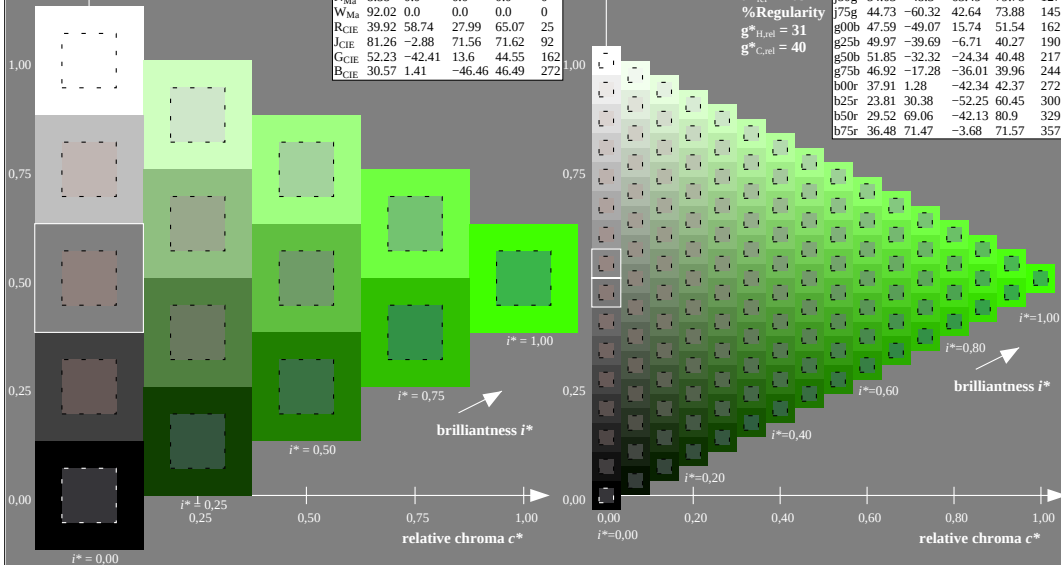
%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

data for any colour:

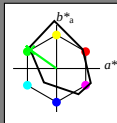
lab^*tch^* and lab^*icu^*
elementary hue text:

$u^* = j75g$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 45 -59 43

$LAB^*LCH^*_{Ma}$: 45 74 145

$lab^*rgb^*_{Ma}$: 0.25 1.0 0.0

$lab^*olv^*_{Ma}$: 0.0 1.0 0.07

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

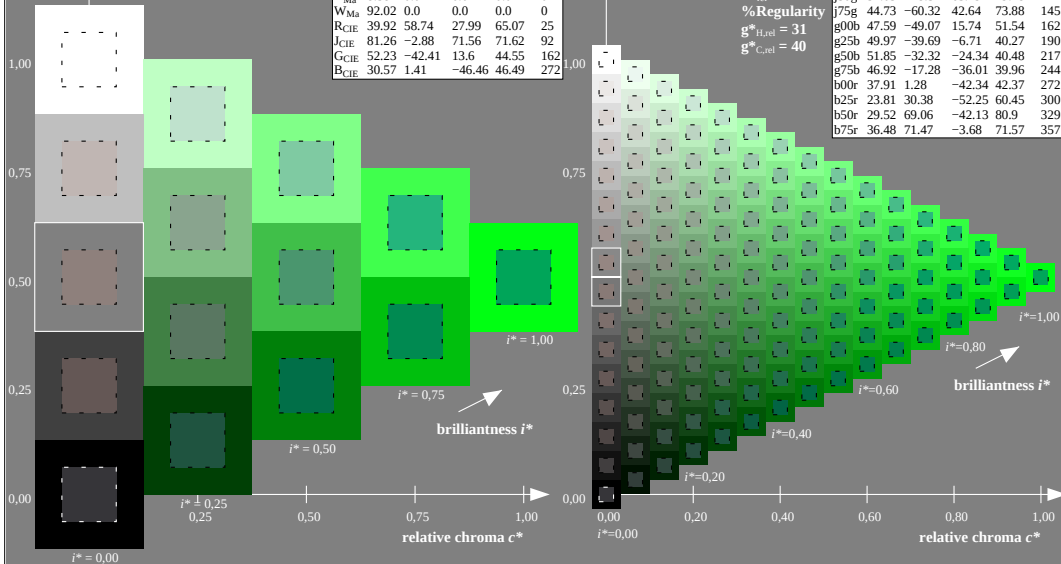
%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357



Input and output: Colorimetric Printer Reflective System FRS09_92aM for relative CIELAB hue $h^* = lab \cdot h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:

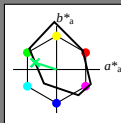
$lab \cdot tch^*$ and $lab \cdot icu^*$
elementary hue text:

$u^* = g00b$

contrast reduction factor:

$c_R = 1.0$

triangle lightness t^*



FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	35.06	60.0	44.0	74.4	36
Y _{Ma}	83.77	-5.16	109.32	109.44	93
L _{Ma}	44.13	-62.66	48.24	79.09	142
C _{Ma}	52.66	-29.13	-31.98	43.27	228
V _{Ma}	14.15	50.3	-59.03	77.57	310
M _{Ma}	37.37	78.64	-33.49	85.48	337
N _{Ma}	8.58	0.0	0.0	0.0	0
W _{Ma}	92.02	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

Data for maximum colour (Ma):

$LAB \cdot LAB^*_{Ma}$: 48 -48 16

$LAB \cdot LCH^*_{Ma}$: 48 52 162

$lab \cdot rgb^*_{Ma}$: 0.0 1.0 0.0

$lab \cdot olv^*_{Ma}$: 0.0 1.0 0.41

triangle lightness t^*

%Gamut

$u^*_{rel} = 109$

%Regularity

$g^*_{H,rel} = 31$

$g^*_{C,rel} = 40$

FRS09_92aM; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	63.32	30.17	70.15	25
r25j	39.12	54.56	49.45	73.64	42
r50j	50.64	39.15	64.89	75.79	59
r75j	64.01	21.26	82.83	85.52	76
j00g	83.18	-4.37	108.53	108.62	92
j25g	66.73	-29.88	83.06	88.28	110
j50g	54.03	-48.3	63.49	79.78	127
j75g	44.73	-60.32	42.64	73.88	145
g00b	47.59	-49.07	15.74	51.54	162
g25b	49.97	-39.69	-6.71	40.27	190
g50b	51.85	-32.32	-24.34	40.48	217
g75b	46.92	-17.28	-36.01	39.96	244
b00r	37.91	1.28	-42.34	42.37	272
b25r	23.81	30.38	-52.25	60.45	300
b50r	29.52	69.06	-42.13	80.9	329
b75r	36.48	71.47	-3.68	71.57	357

