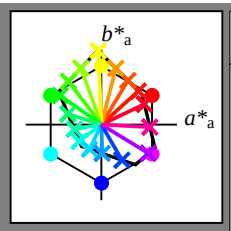
Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
c_R **= 0.9**

FRS15_90a; adapted (a) CIELAB data

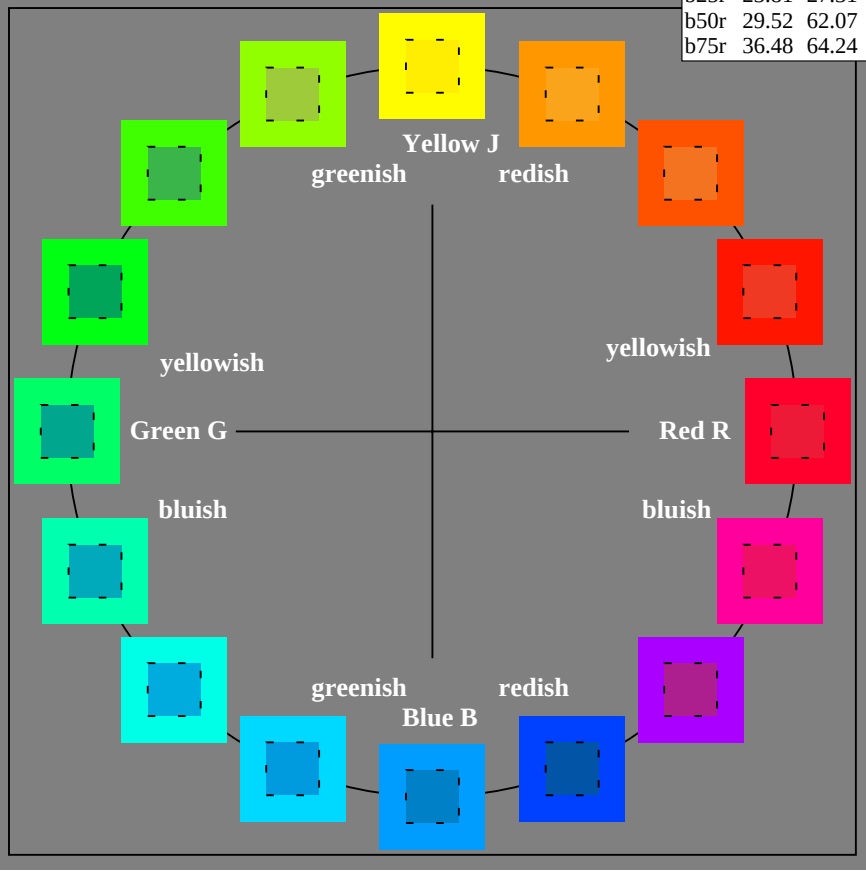
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

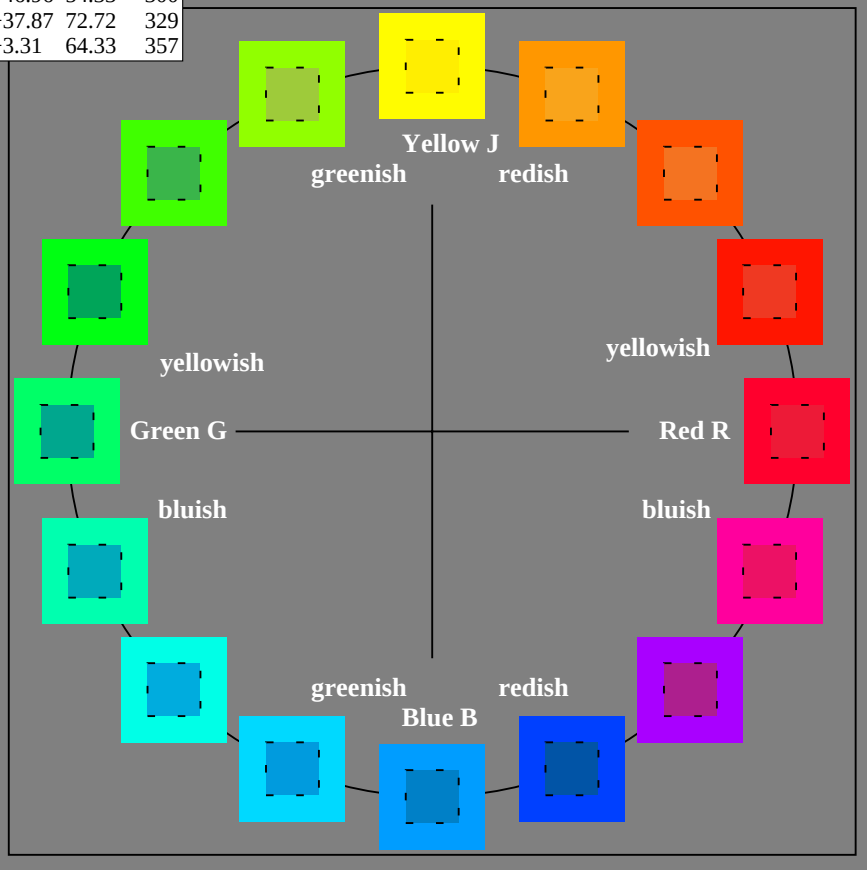


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

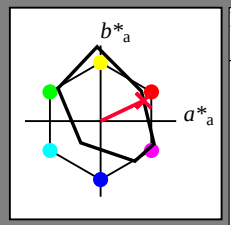
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$ ***u* = r00j***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = r00j
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

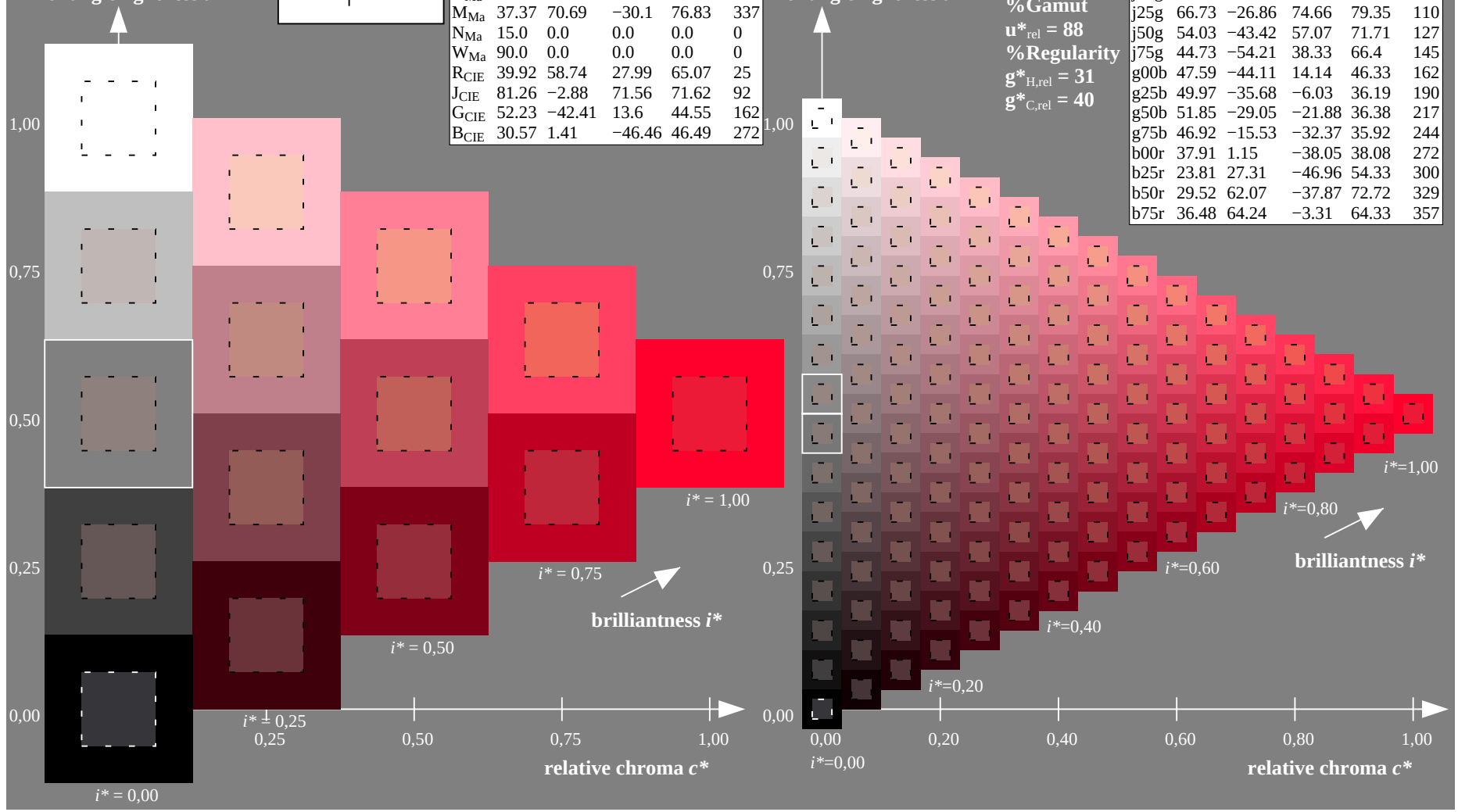
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 35 57 27**
LAB*LCH*$_{Ma}$**: 35 63 25**
lab*rgb*$_{Ma}$**: 1.0 0.0 0.0**
lab*olv*$_{Ma}$**: 1.0 0.0 0.18**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

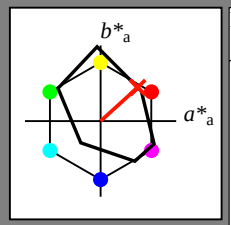
triangle lightness ***t****

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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 49 44**
LAB*LCH*$_{Ma}$**: 39 66 42**
lab*rgb*$_{Ma}$**: 1.0 0.25 0.0**
lab*olv*$_{Ma}$**: 1.0 0.08 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

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

*i** = 0,00
*i** = 0,25
*i** = 0,50
*i** = 0,75
*i** = 1,00

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

relative chroma *c**

brilliantness *i**

*i**=0,00
*i**=0,20
*i**=0,40
*i**=0,60
*i**=0,80
*i**=1,00

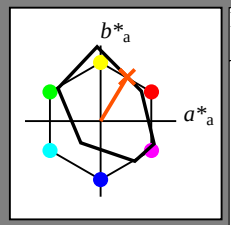
0,00 0,20 0,40 0,60 0,80 1,00

relative chroma *c**

brilliantness *i**

Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

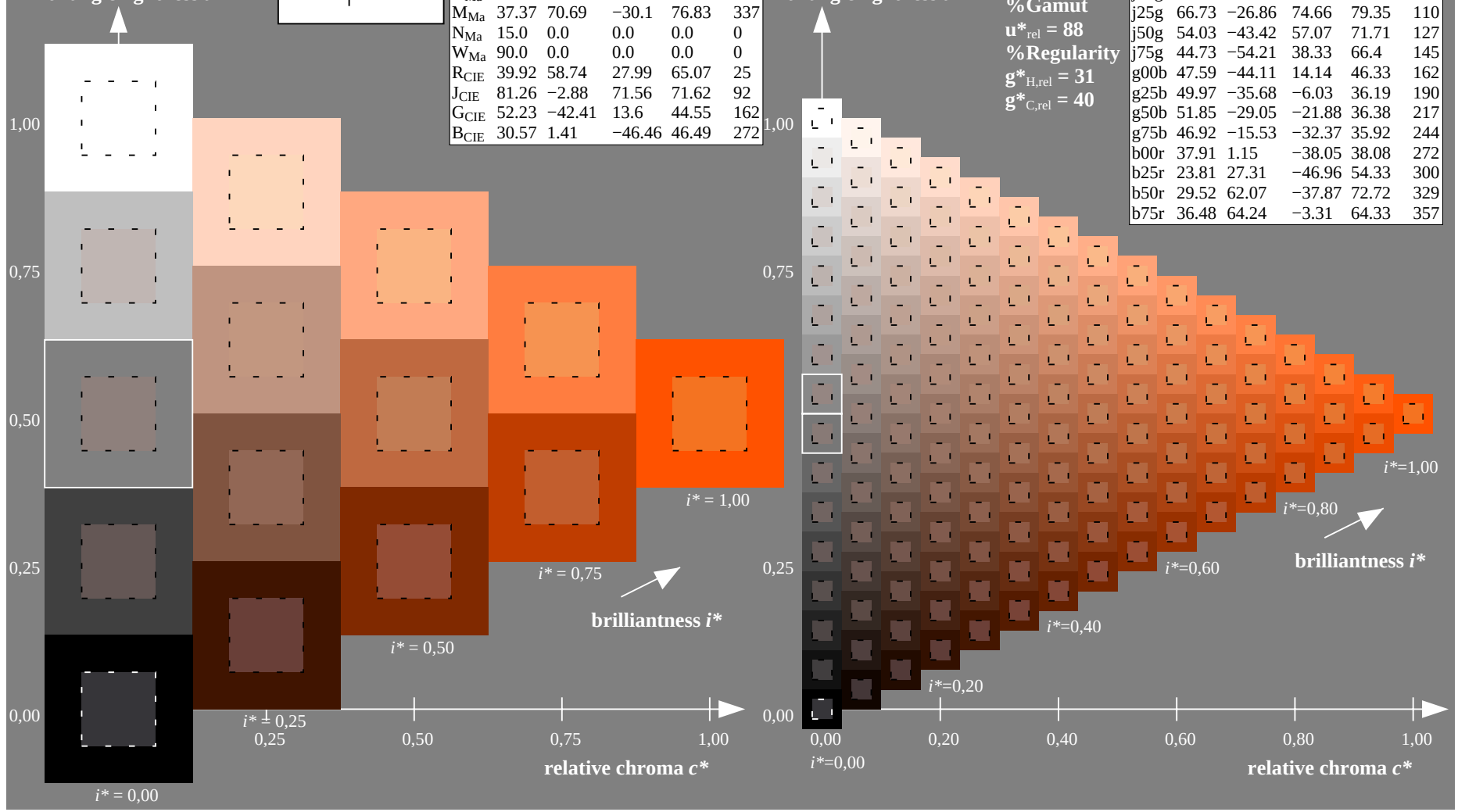
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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 35 58**
***$LAB^*LCH^*_{Ma}$*: 51 68 59**
***$lab^*rgb^*_{Ma}$*: 1.0 0.5 0.0**
***$lab^*olv^*_{Ma}$*: 1.0 0.32 0.0**

FRS15_90a; adapted (a) CIELAB data

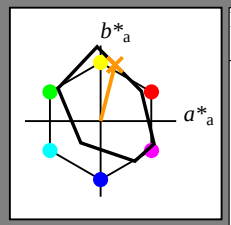
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

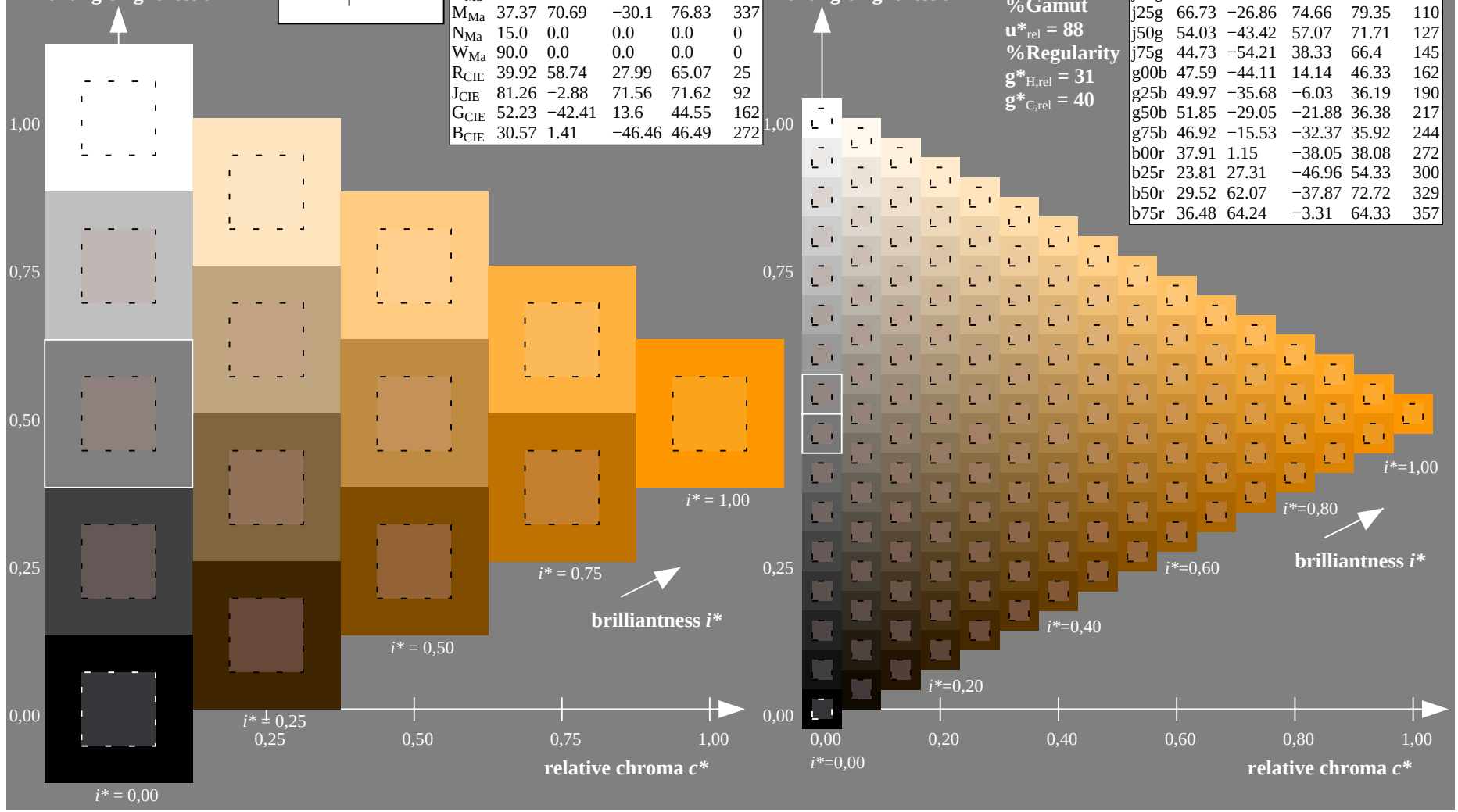
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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 19 74**
LAB*LCH*$_{Ma}$**: 64 77 76**
lab*rgb*$_{Ma}$**: 1.0 0.75 0.0**
lab*olv*$_{Ma}$**: 1.0 0.59 0.0**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

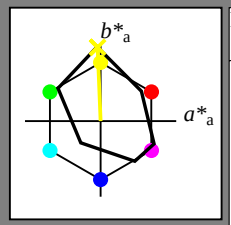
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$ ***u* = j00g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j00g
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

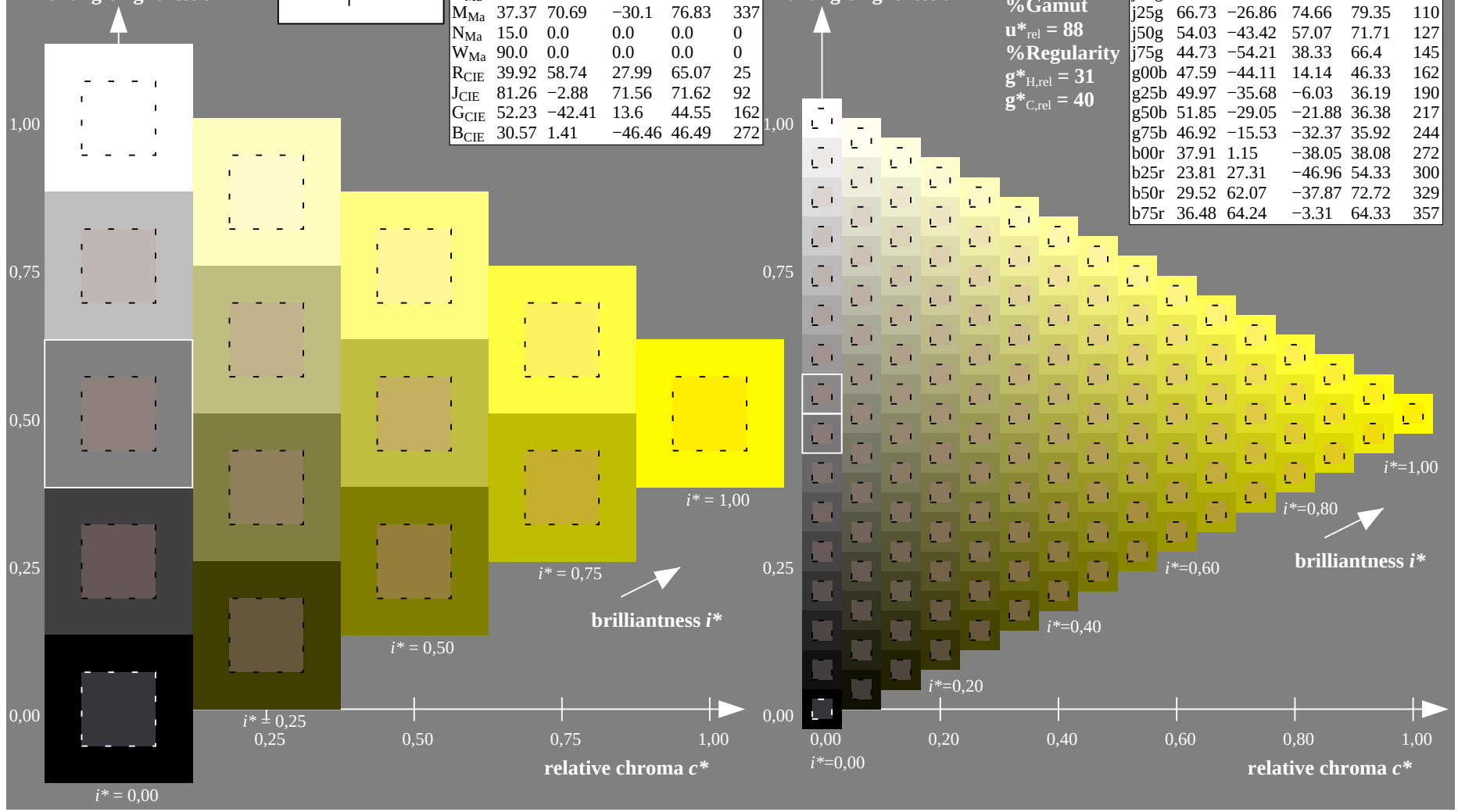
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 83 −3 98**
LAB*LCH*$_{Ma}$**: 83 98 92**
lab*rgb*$_{Ma}$**: 1.0 1.0 0.0**
lab*olv*$_{Ma}$**: 1.0 0.99 0.0**

FRS15_90a; adapted (a) CIELAB data

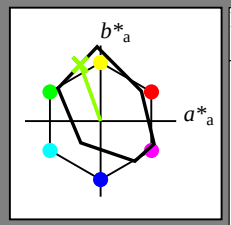
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$ ***u* = j25g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j25g
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

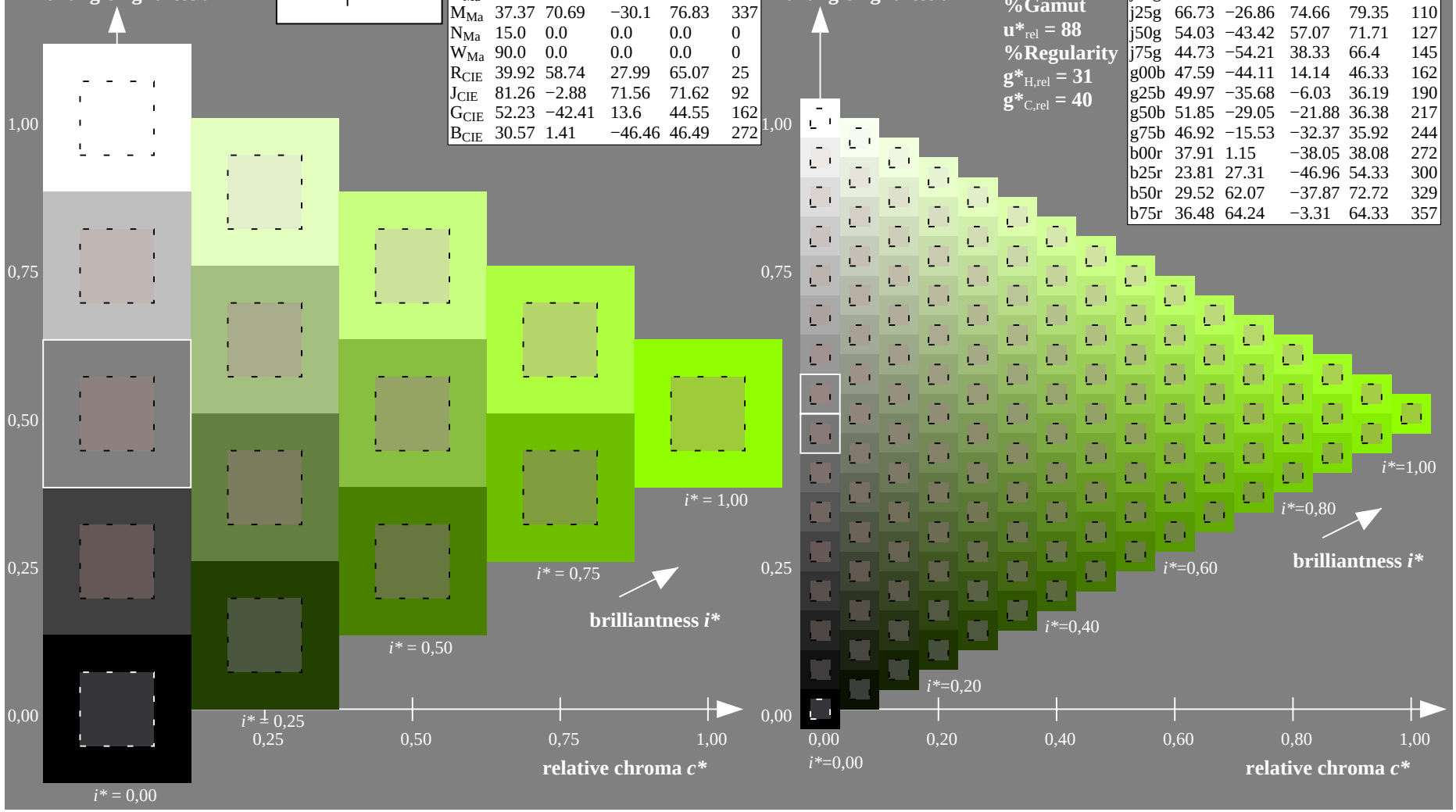
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 67 −26 75**
LAB*LCH*$_{Ma}$**: 67 79 110**
lab*rgb*$_{Ma}$**: 0.75 1.0 0.0**
lab*olv*$_{Ma}$**: 0.57 1.0 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

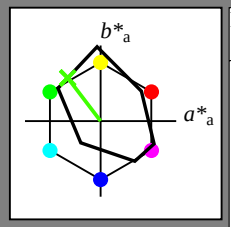
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$ ***u* = j50g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j50g
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

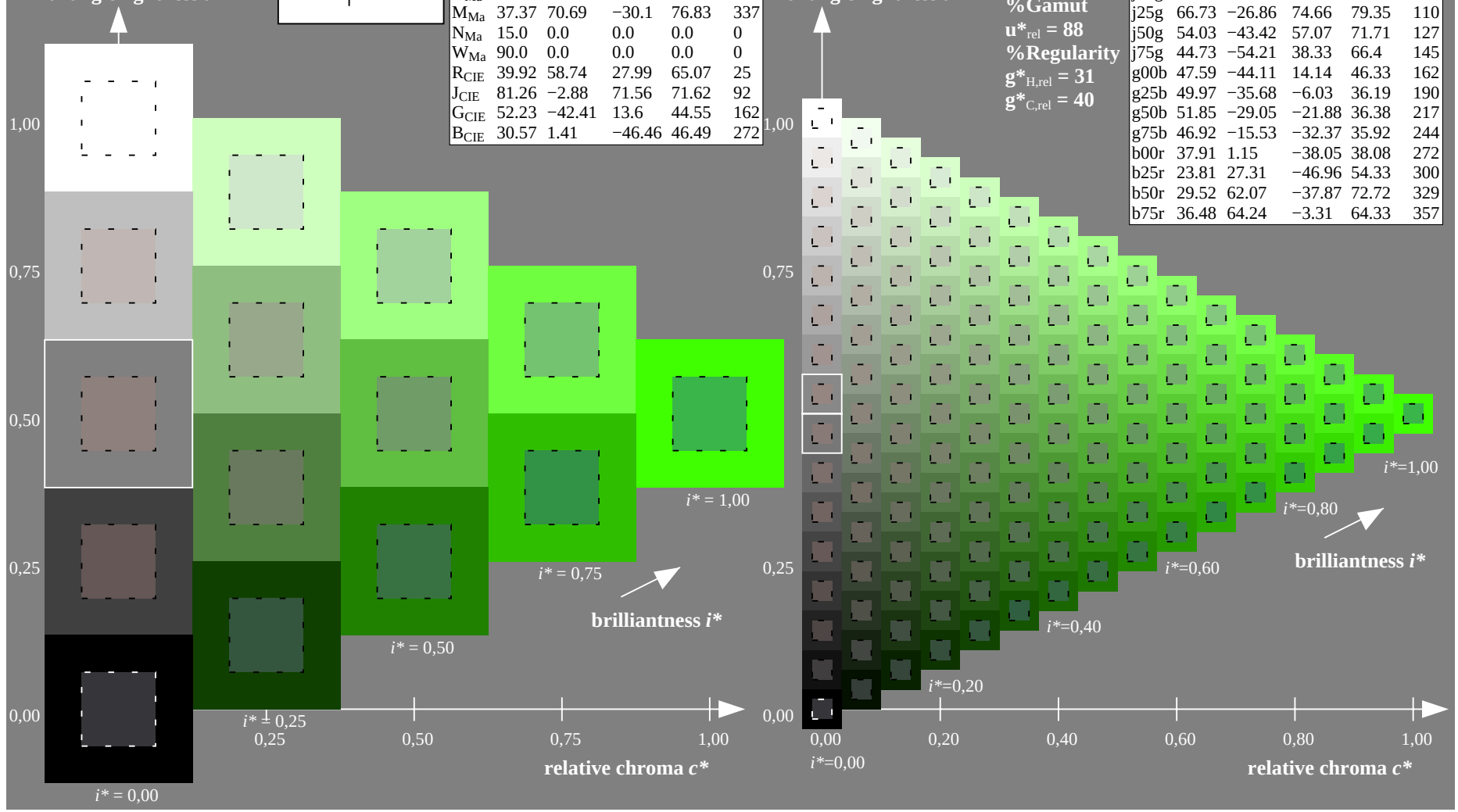
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 54 −42 57**
LAB*LCH*$_{Ma}$**: 54 72 127**
lab*rgb*$_{Ma}$**: 0.5 1.0 0.0**
lab*olv*$_{Ma}$**: 0.25 1.0 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

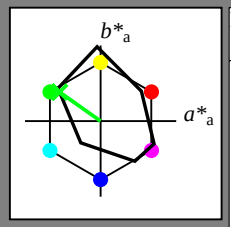
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$ ***u* = j75g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j75g
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

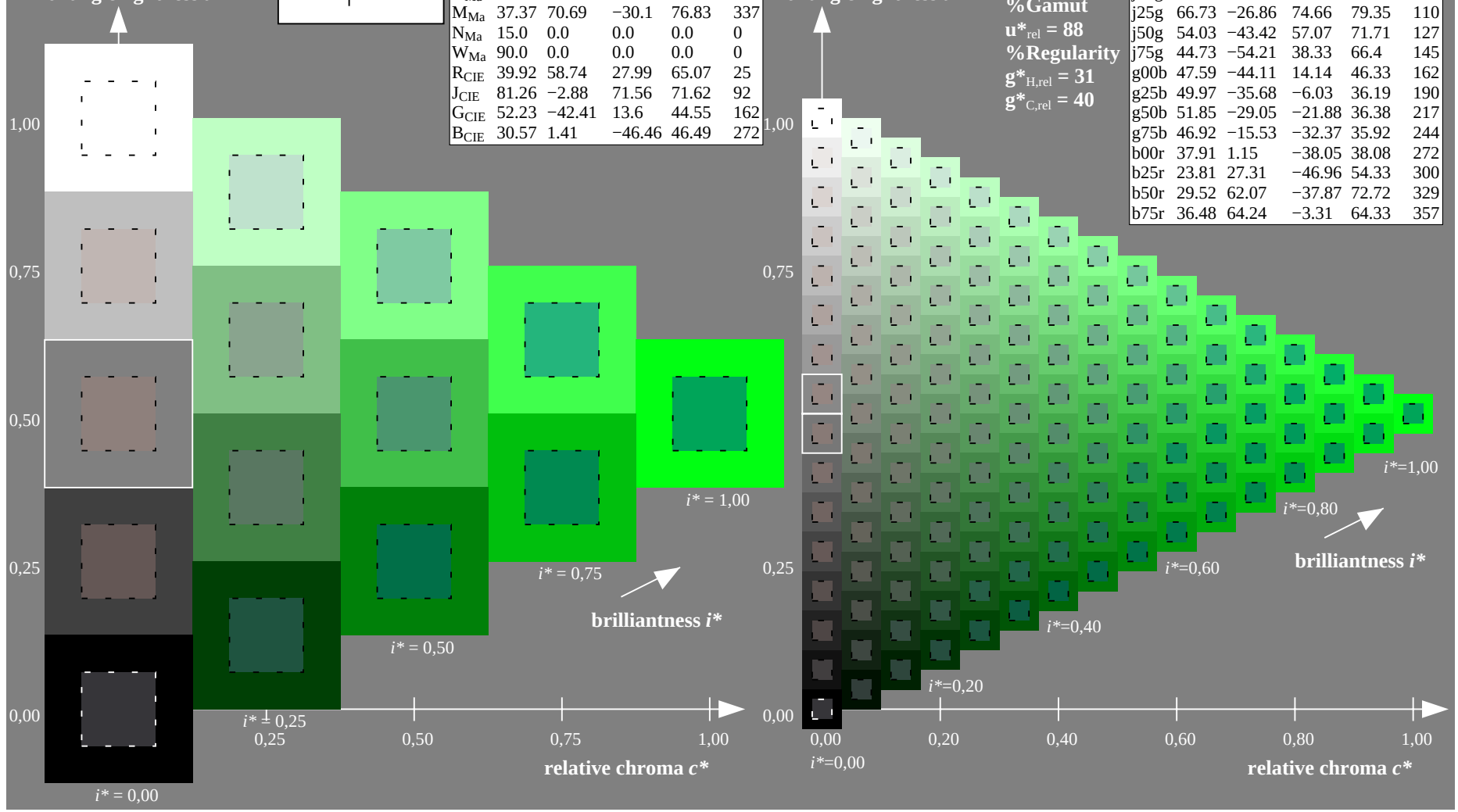
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 45 −53 38**
LAB*LCH*$_{Ma}$**: 45 66 145**
lab*rgb*$_{Ma}$**: 0.25 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.07**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

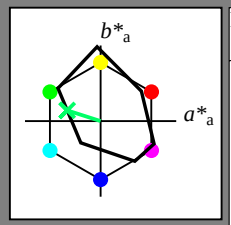
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$ ***u* = g00b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g00b
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

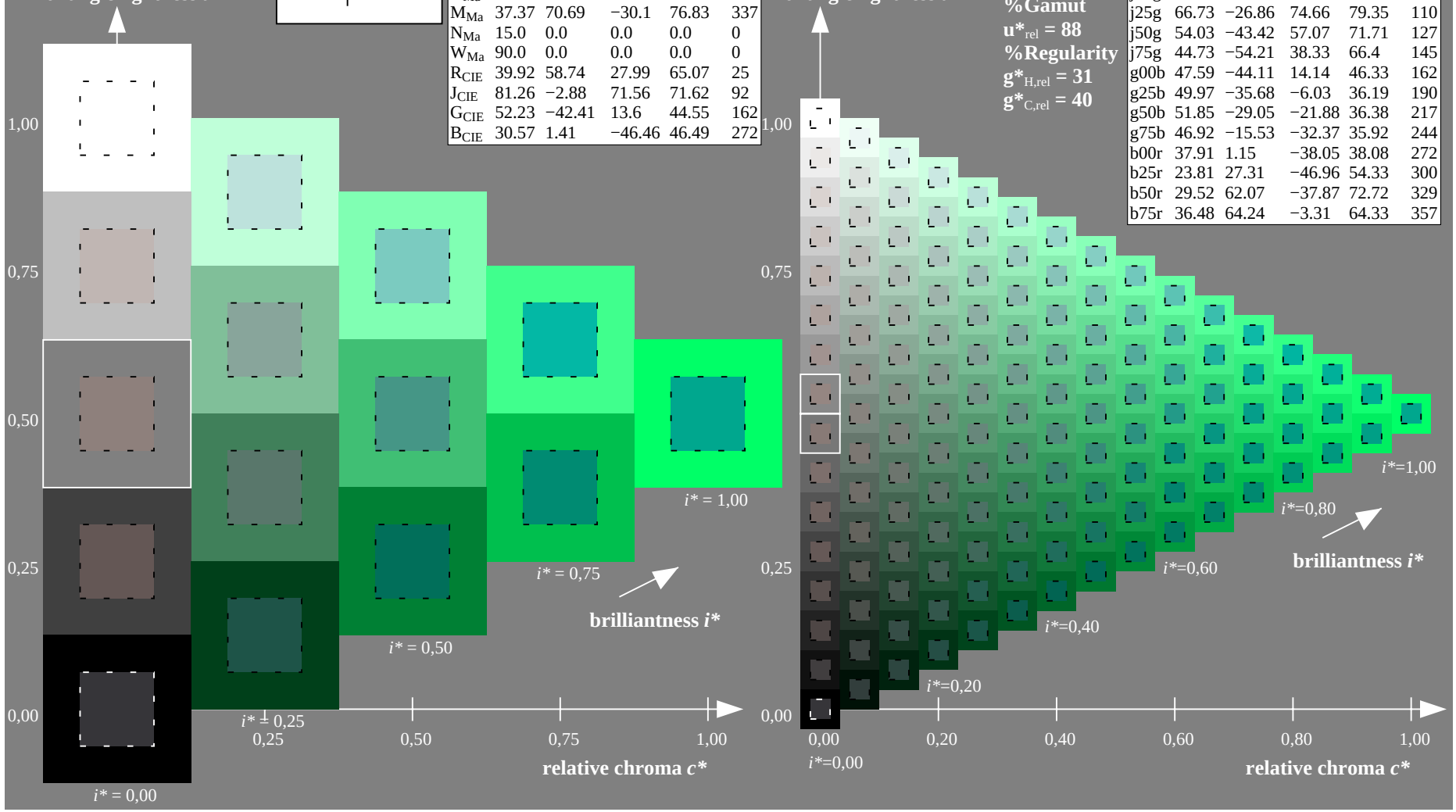
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 48 −43 14**
LAB*LCH*$_{Ma}$**: 48 46 162**
lab*rgb*$_{Ma}$**: 0.0 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.41**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

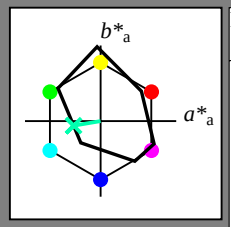
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$ ***u* = g25b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g25b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

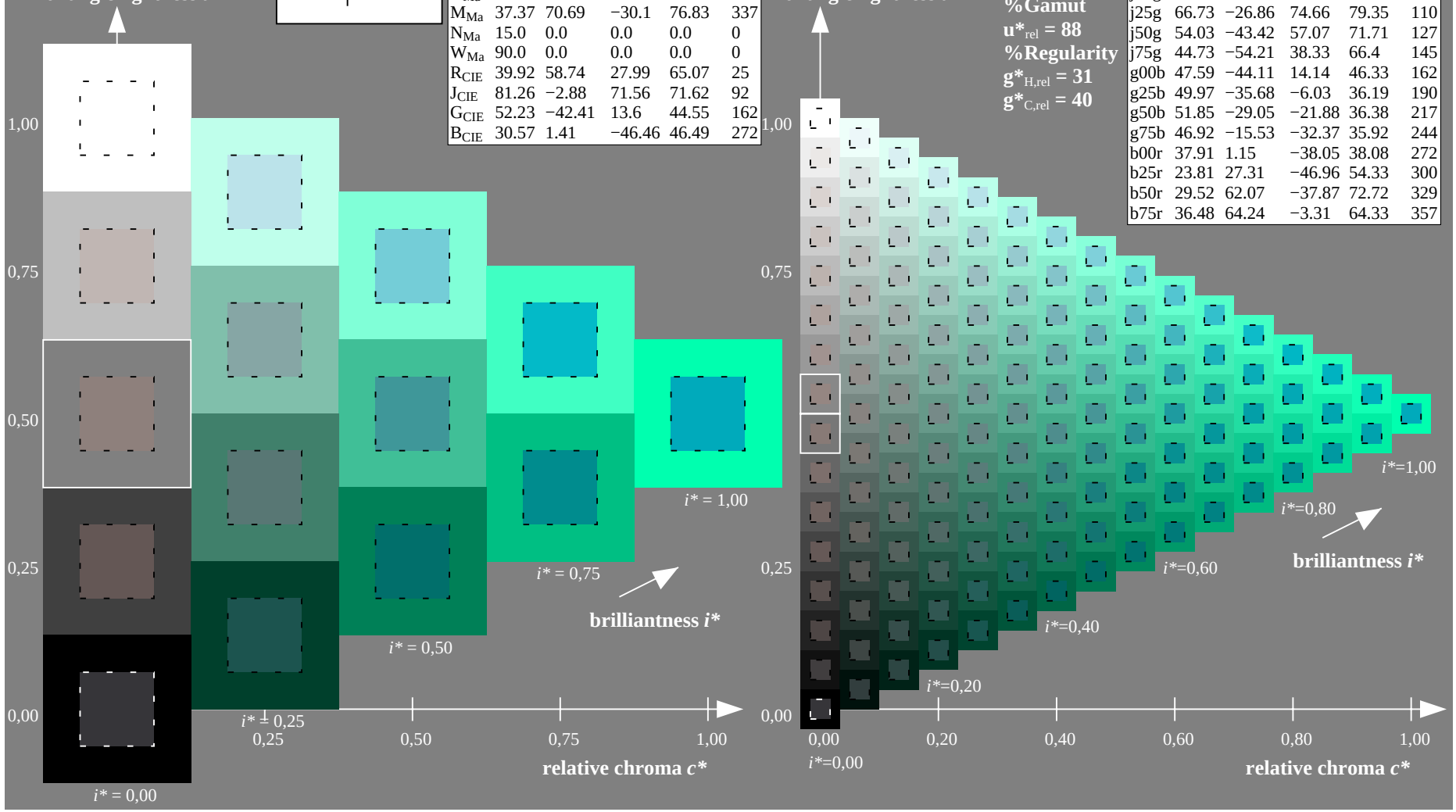
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 50 −35 −5**
LAB*LCH*$_{Ma}$**: 50 36 190**
lab*rgb*$_{Ma}$**: 0.0 1.0 0.5**
lab*olv*$_{Ma}$**: 0.0 1.0 0.69**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

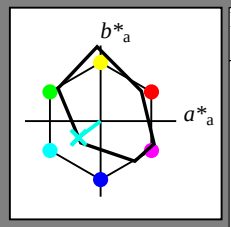
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$ ***u* = g50b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g50b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

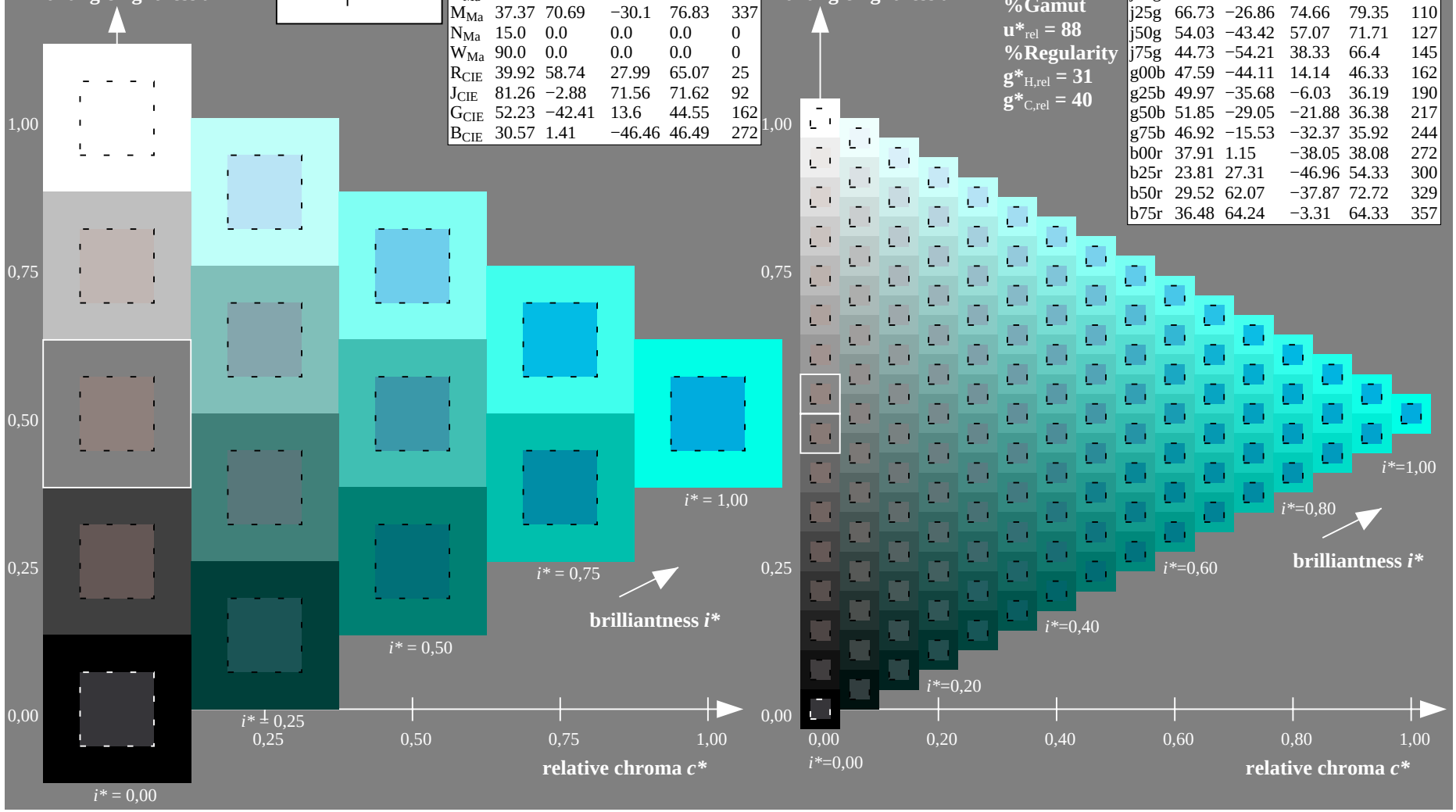
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 52 −28 −21**
LAB*LCH*$_{Ma}$**: 52 36 217**
lab*rgb*$_{Ma}$**: 0.0 1.0 1.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.9**
triangle lightness *t**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

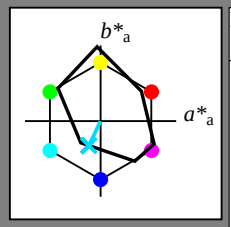
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$ ***u* = g75b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g75b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

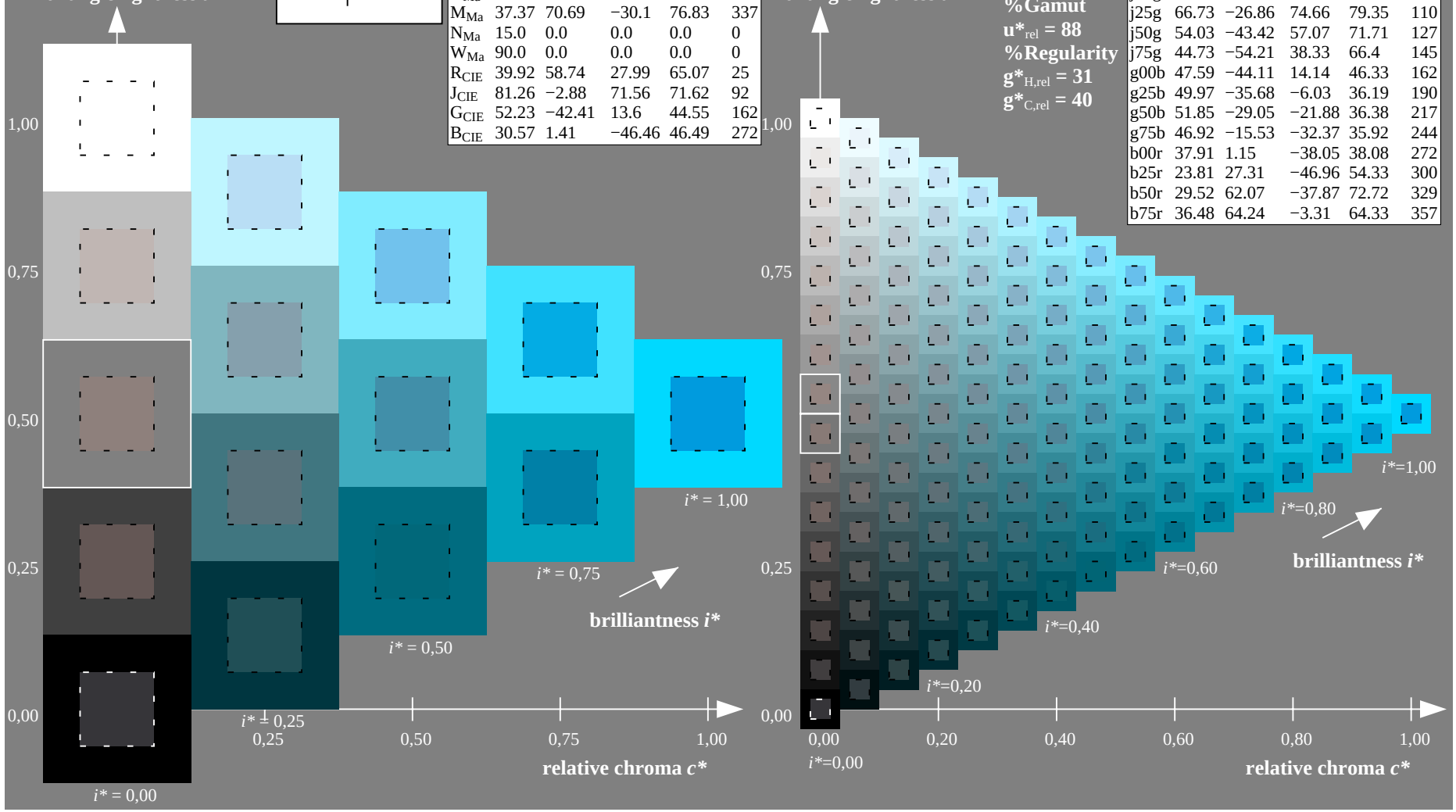
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 47 −15 −31**
LAB*LCH*$_{Ma}$**: 47 36 244**
lab*rgb*$_{Ma}$**: 0.0 0.5 1.0**
lab*olv*$_{Ma}$**: 0.0 0.85 1.0**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

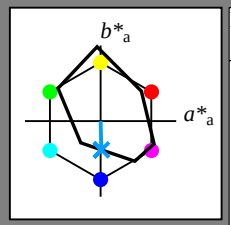
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$ ***u* = b00r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b00r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

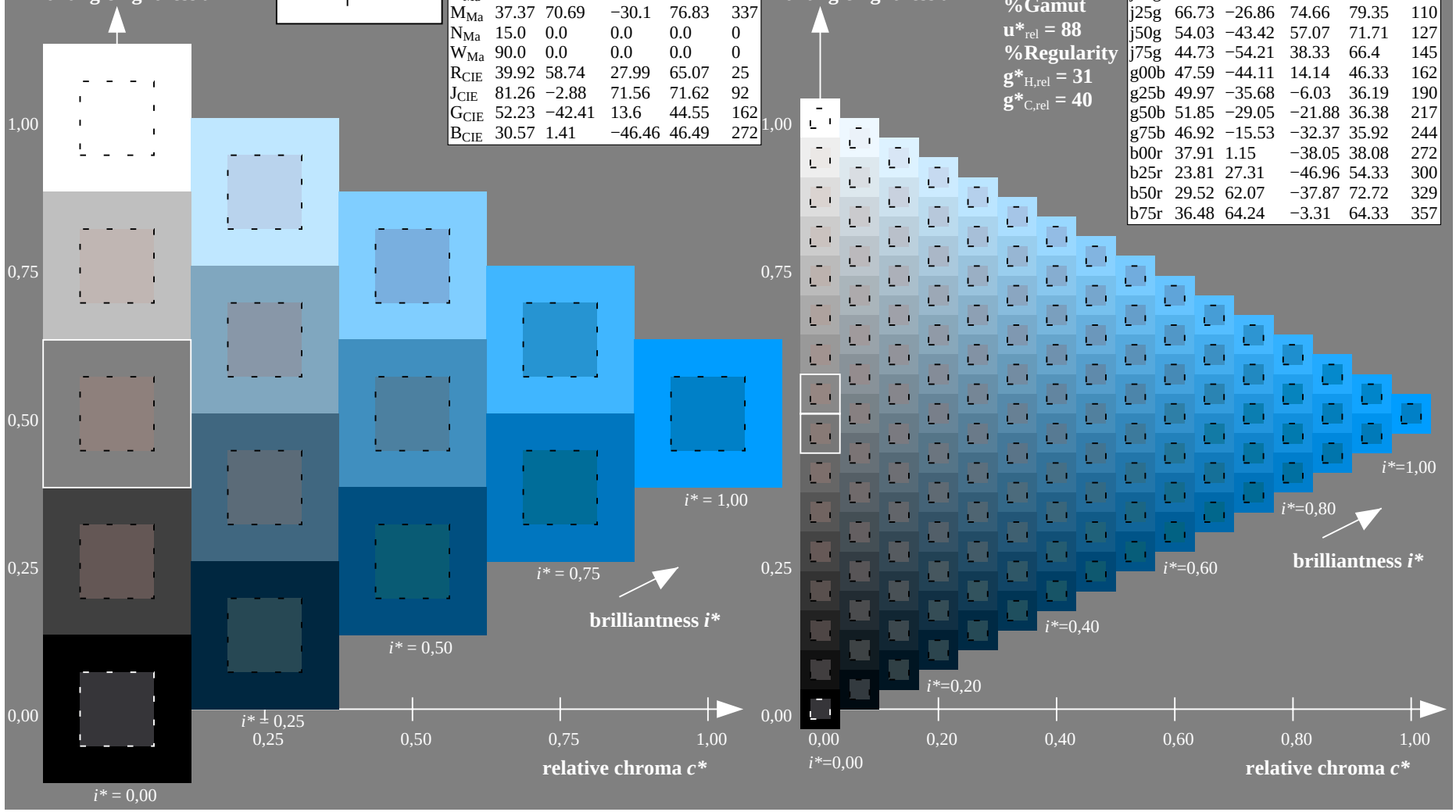
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 38 1 −37**
LAB*LCH*$_{Ma}$**: 38 38 272**
lab*rgb*$_{Ma}$**: 0.0 0.0 1.0**
lab*olv*$_{Ma}$**: 0.0 0.62 1.0**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

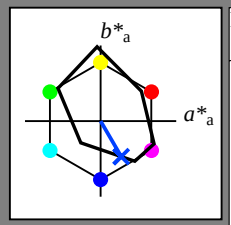
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$ ***u* = b25r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b25r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

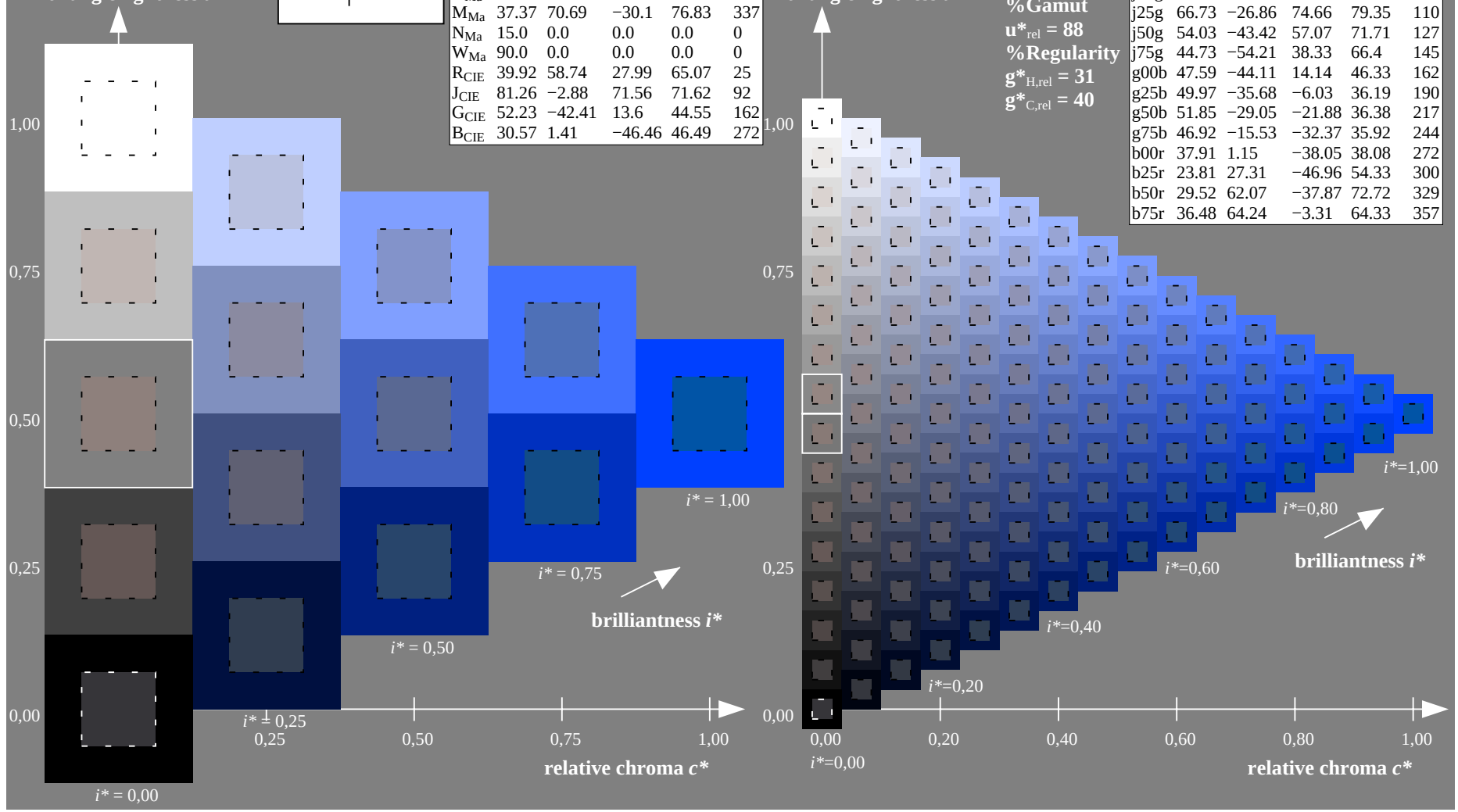
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 24 27 −46**
LAB*LCH*$_{Ma}$**: 24 54 300**
lab*rgb*$_{Ma}$**: 0.5 0.0 1.0**
lab*olv*$_{Ma}$**: 0.0 0.25 1.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

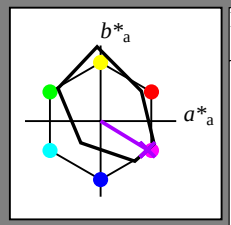
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$ ***u* = b50r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b50r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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*$_{Ma}$**: 30 62 −37**
LAB*LCH*$_{Ma}$**: 30 73 329**
lab*rgb*$_{Ma}$**: 1.0 0.0 1.0**
lab*olv*$_{Ma}$**: 0.66 0.0 1.0**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

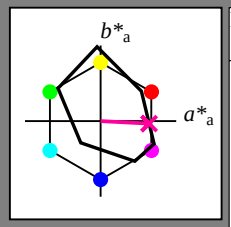
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

1,00
0,75
0,50
0,25
0,00
*i** = 0,00
*i** = 0,25
*i** = 0,50
*i** = 0,75
*i** = 1,00
0,25
0,50
0,75
1,00
relative chroma *c**
brilliantness *i**

1,00
0,75
0,25
0,00
*i**=0,00
*i**=0,20
*i**=0,40
*i**=0,60
*i**=0,80
*i**=1,00
0,00
0,20
0,40
0,60
0,80
1,00
relative chroma *c**
brilliantness *i**

Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$ ***u* = b75r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b75r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

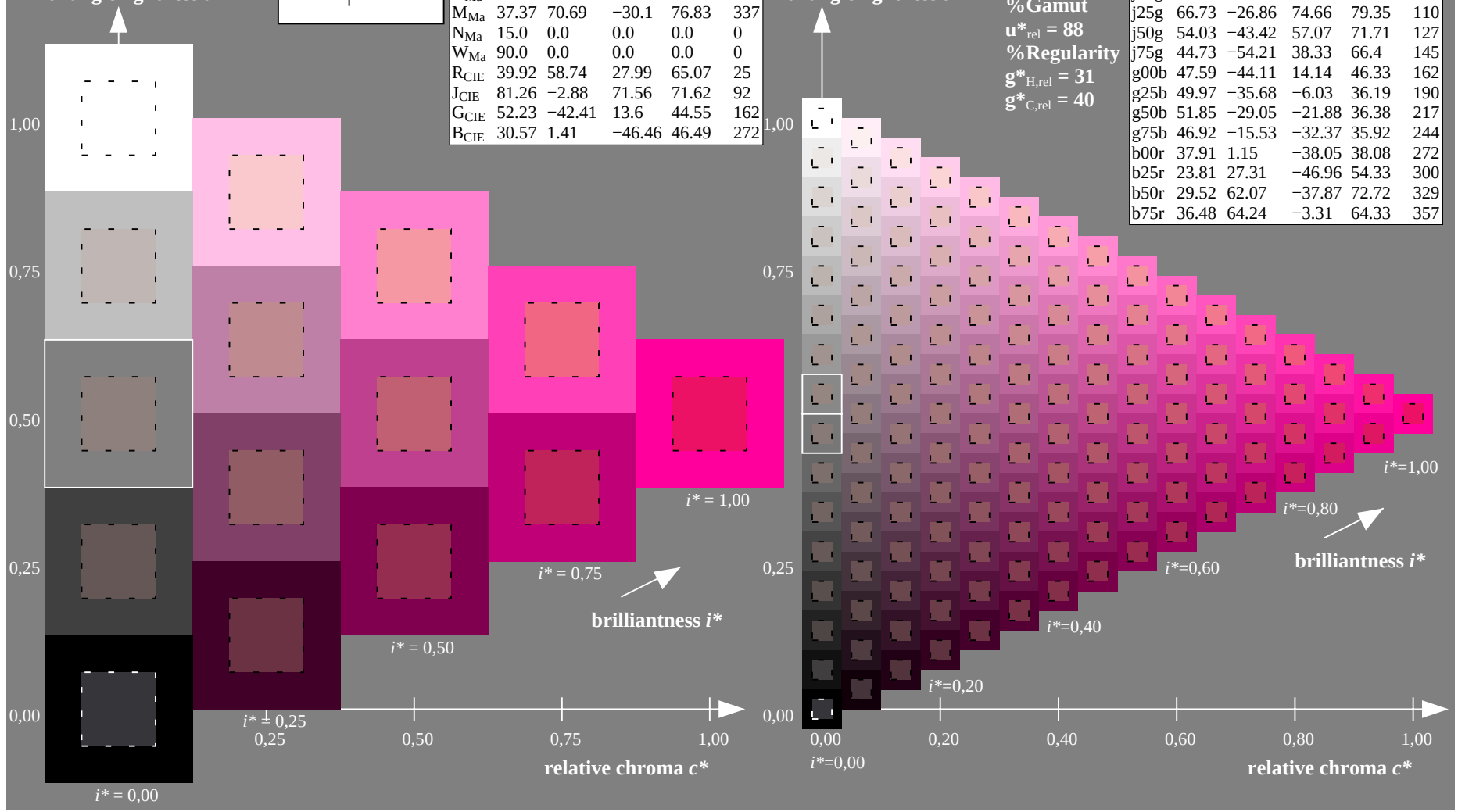
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 36 64 −2**
LAB*LCH*$_{Ma}$**: 36 64 357**
lab*rgb*$_{Ma}$**: 1.0 0.0 0.5**
lab*olv*$_{Ma}$**: 1.0 0.0 0.62**

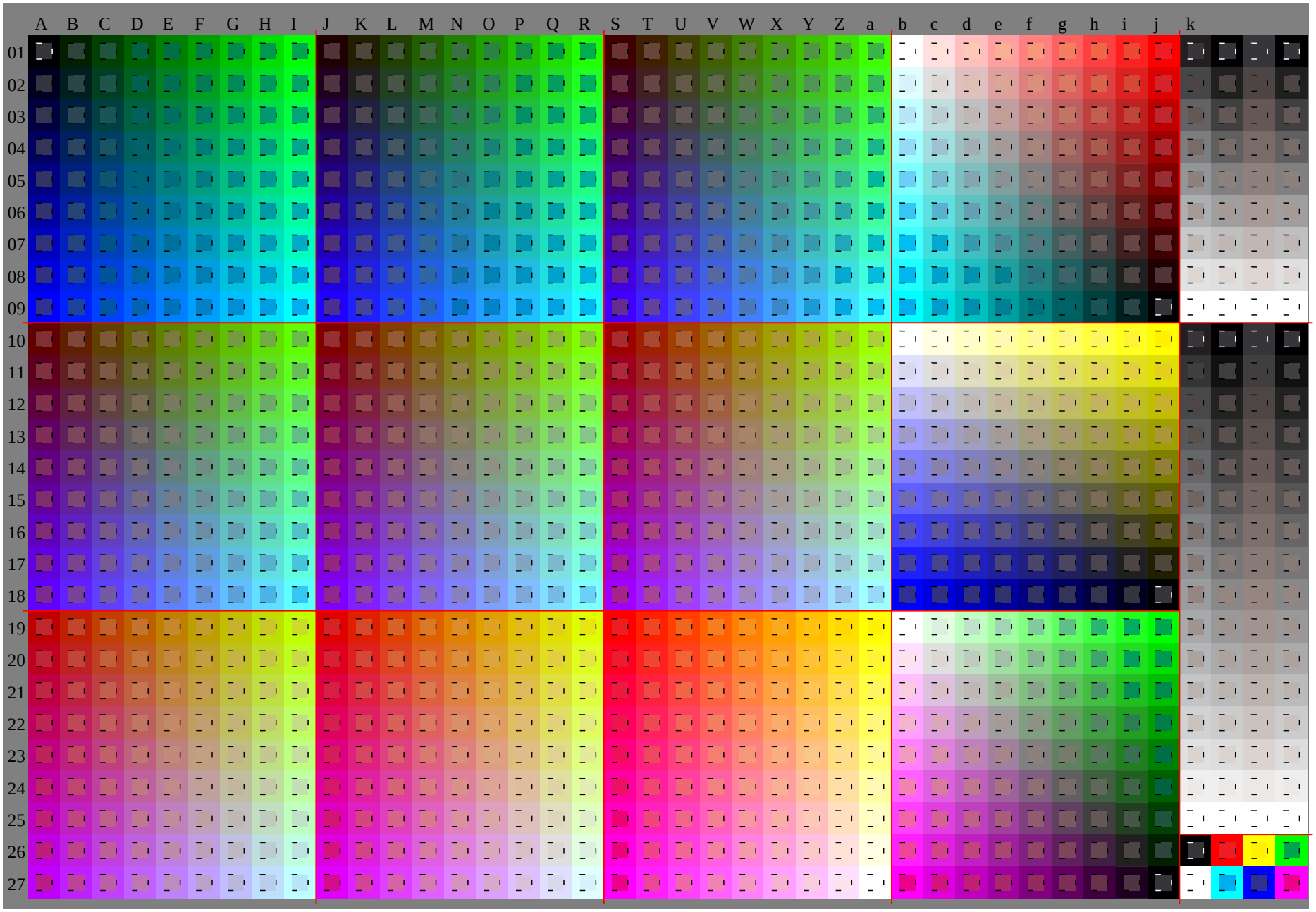
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

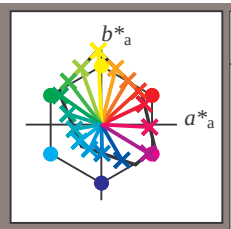



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
c_R **= 0.9**

FRS15_90a; adapted (a) CIELAB data

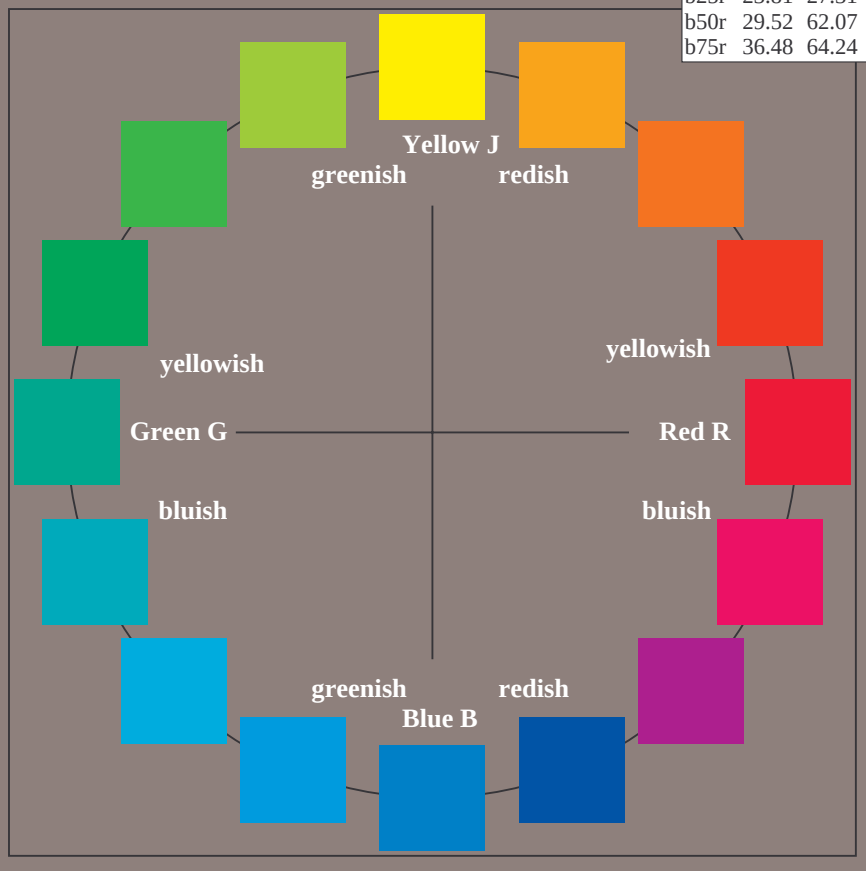
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

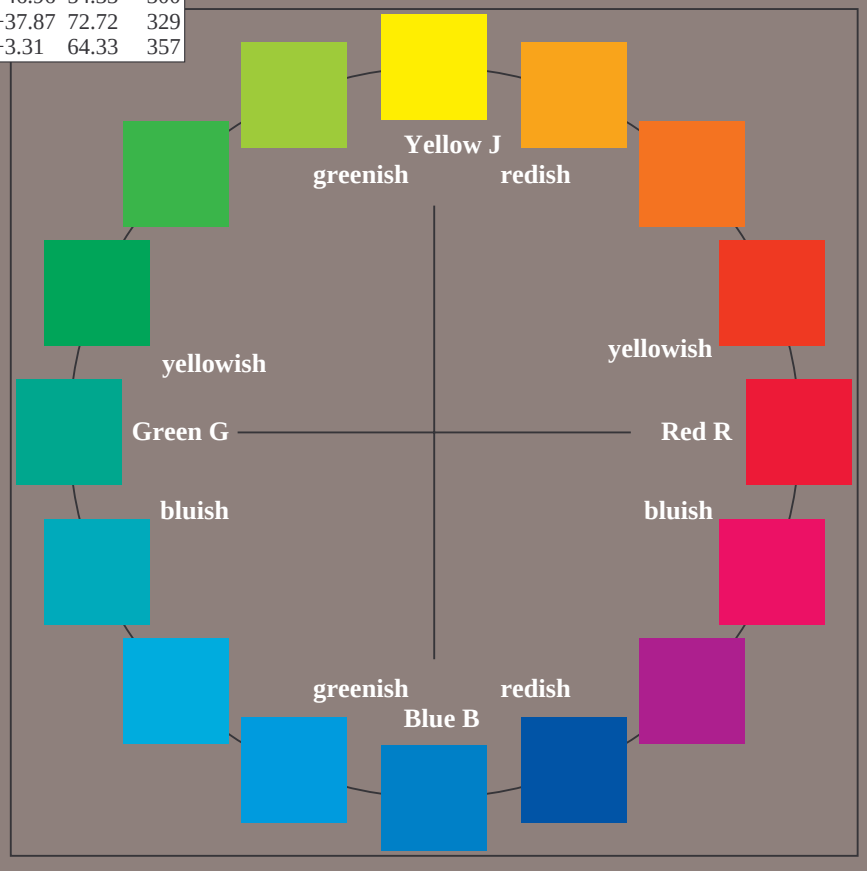


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

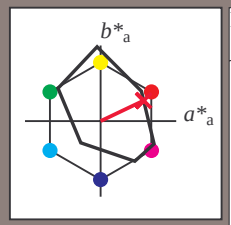
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$ ***u* = r00j***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = r00j
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

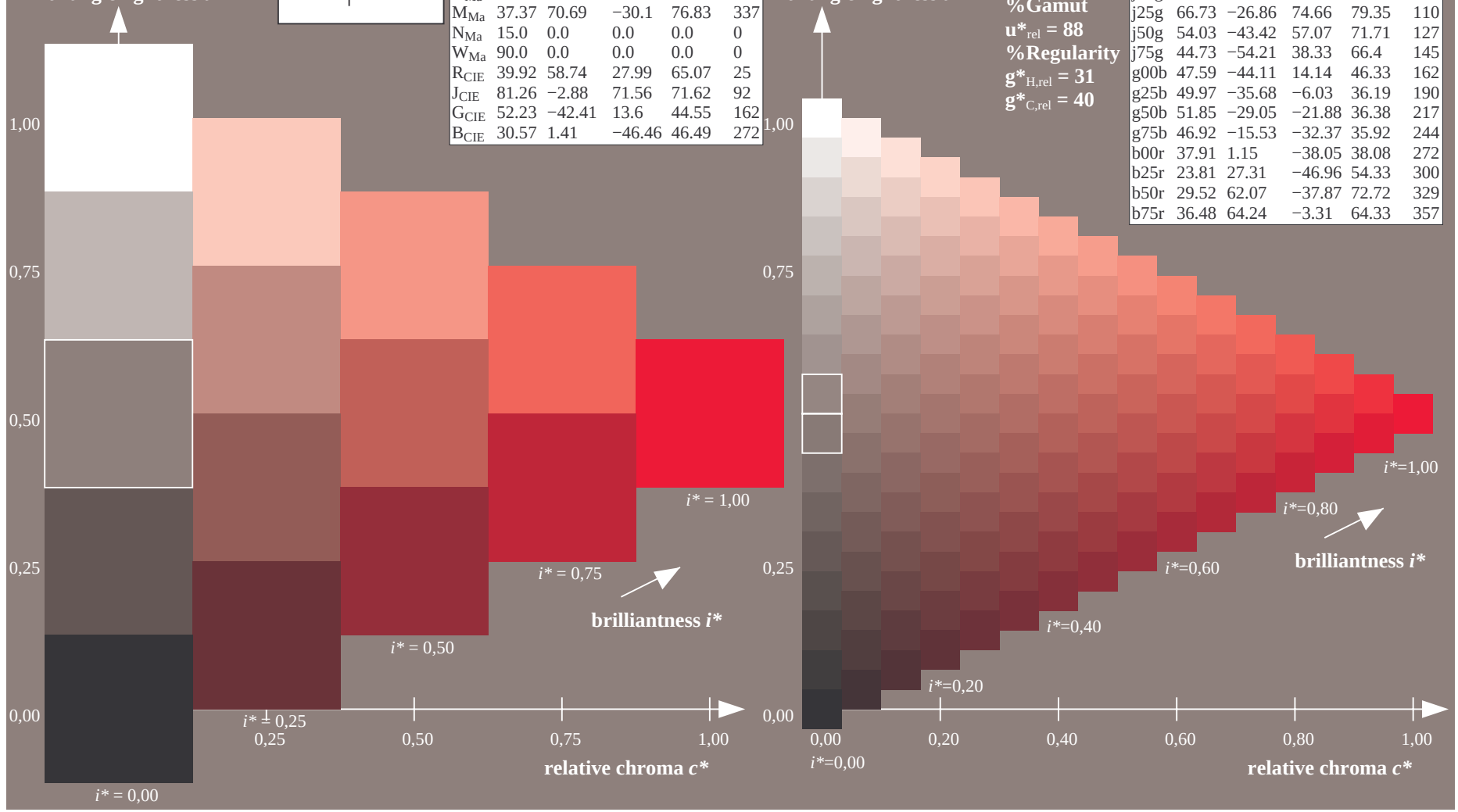
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 35 57 27**
LAB*LCH*$_{Ma}$**: 35 63 25**
lab*rgb*$_{Ma}$**: 1.0 0.0 0.0**
lab*olv*$_{Ma}$**: 1.0 0.0 0.18**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

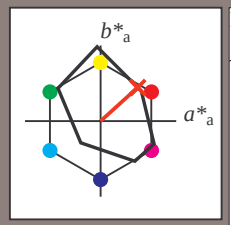
triangle lightness ***t****

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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 49 44**
***$LAB^*LCH^*_{Ma}$*: 39 66 42**
***$lab^*rgb^*_{Ma}$*: 1.0 0.25 0.0**
***$lab^*olv^*_{Ma}$*: 1.0 0.08 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

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

*i** = 0,00
*i** = 0,25
*i** = 0,50
*i** = 0,75
*i** = 1,00

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

relative chroma *c**

brilliantness *i**

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

*i**=0,00
*i**=0,20
*i**=0,40
*i**=0,60
*i**=0,80
*i**=1,00

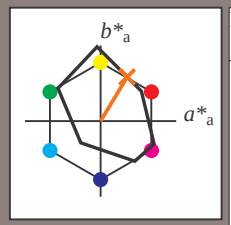
0,00 0,20 0,40 0,60 0,80 1,00

relative chroma *c**

brilliantness *i**

Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness ***t****

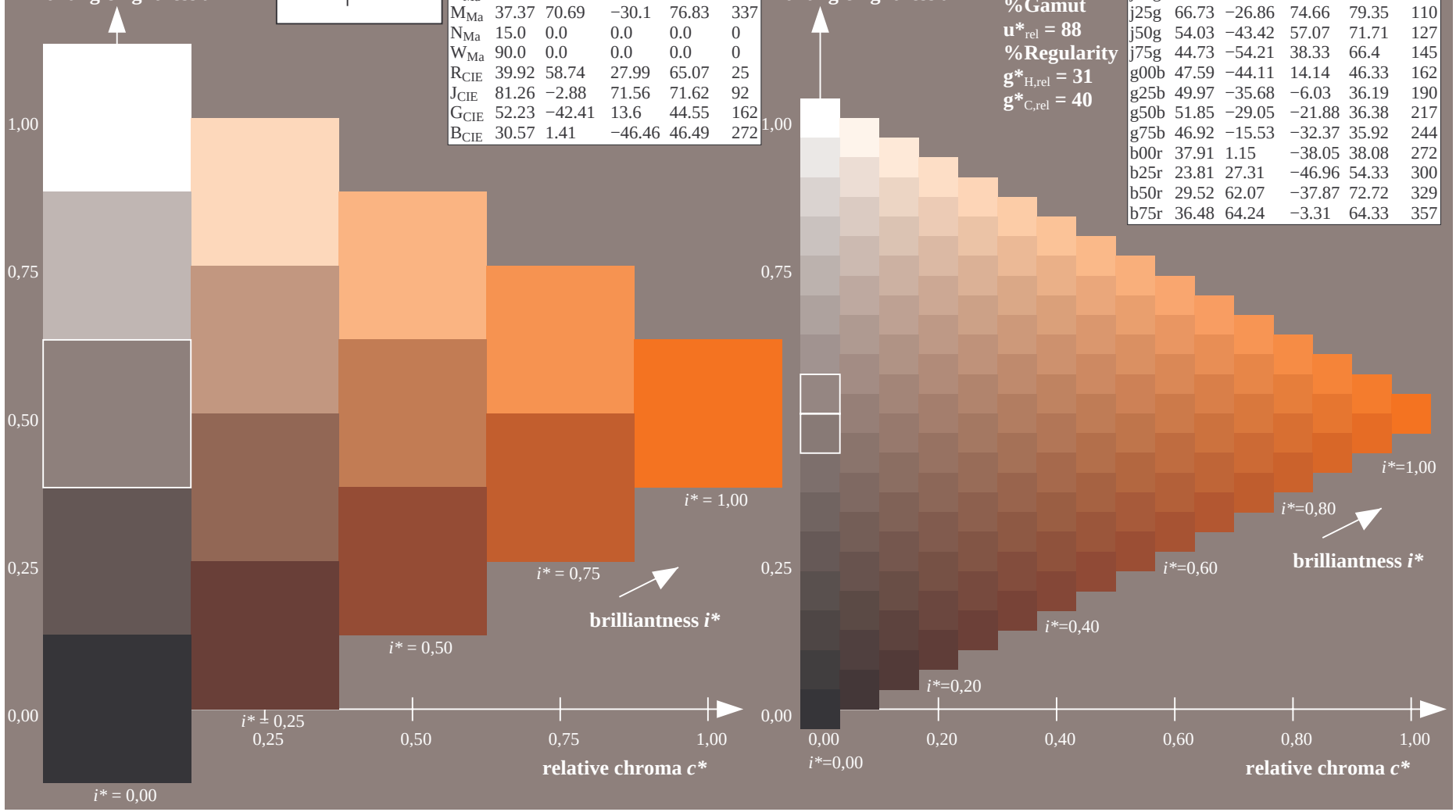


FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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 35 58**
LAB*LCH*$_{Ma}$**: 51 68 59**
lab*rgb*$_{Ma}$**: 1.0 0.5 0.0**
lab*olv*$_{Ma}$**: 1.0 0.32 0.0**

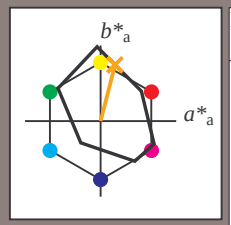
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

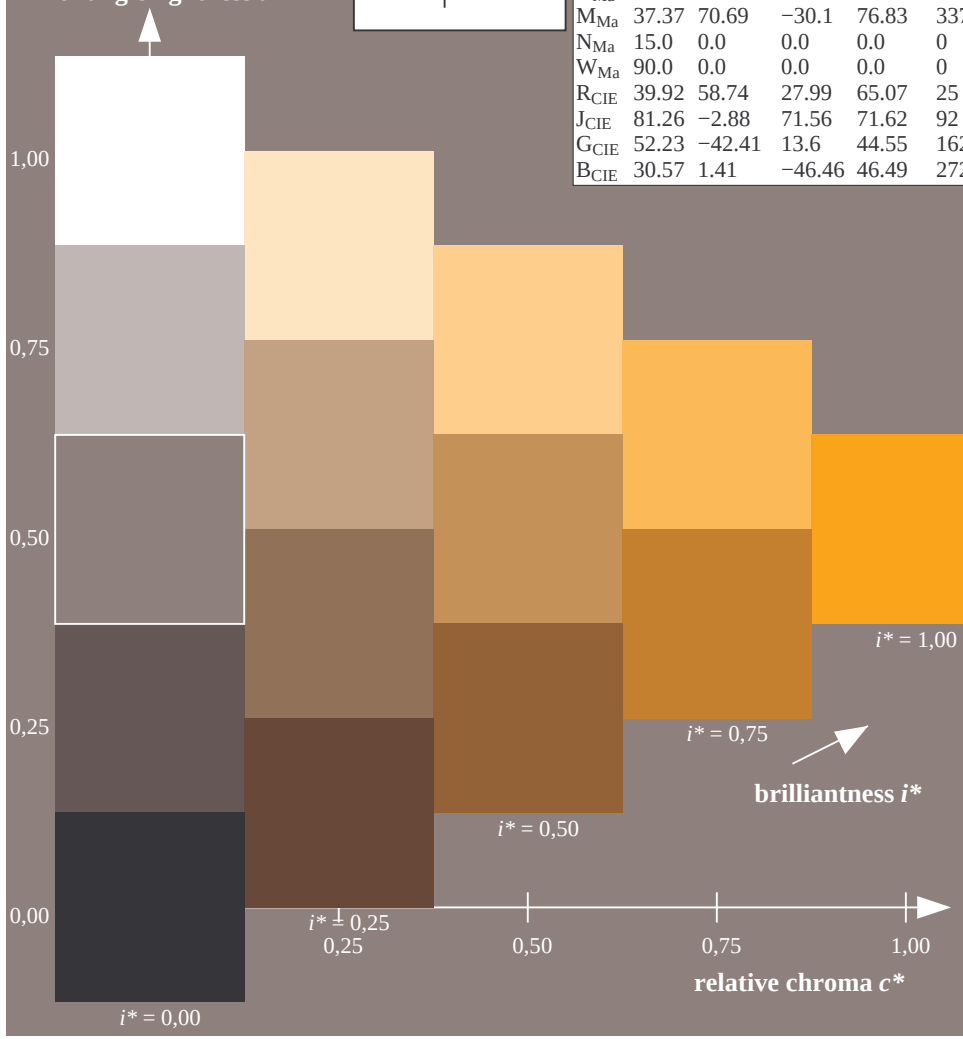
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

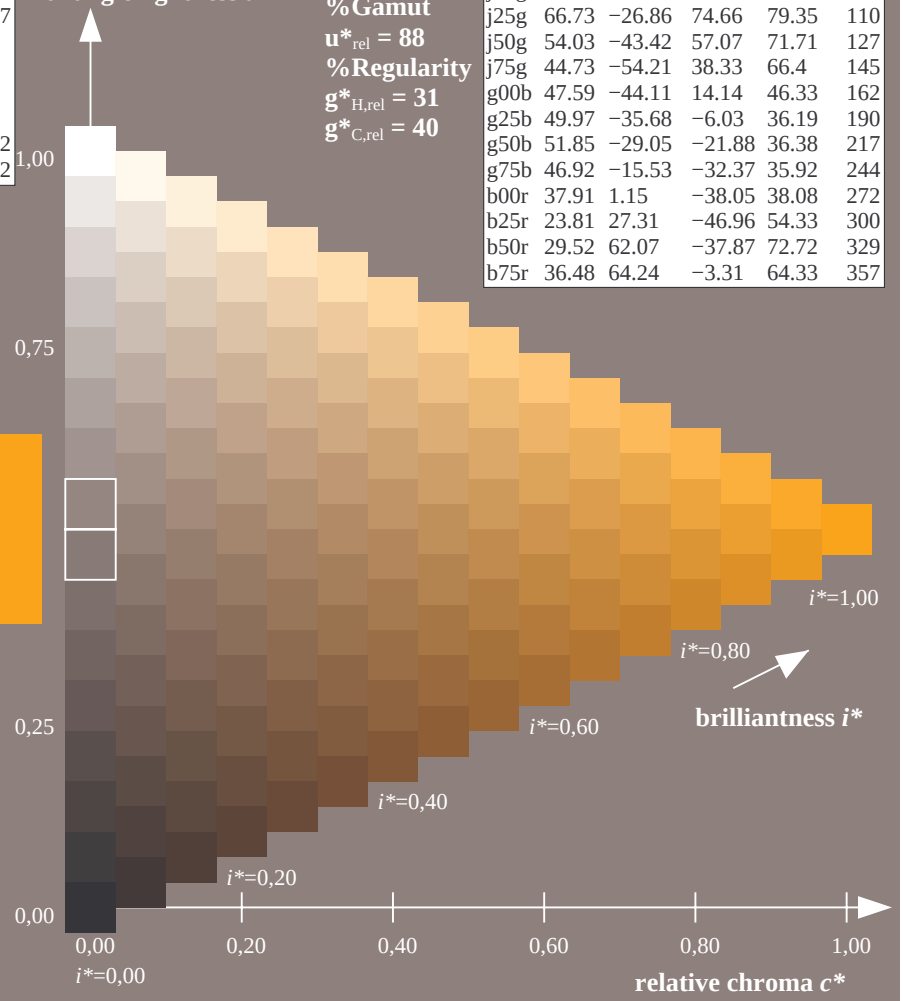
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 64 19 74**
LAB*LCH*$_{Ma}$**: 64 77 76**
lab*rgb*$_{Ma}$**: 1.0 0.75 0.0**
lab*olv*$_{Ma}$**: 1.0 0.59 0.0**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

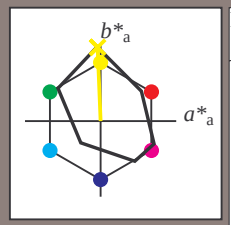
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$ ***u* = j00g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j00g
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

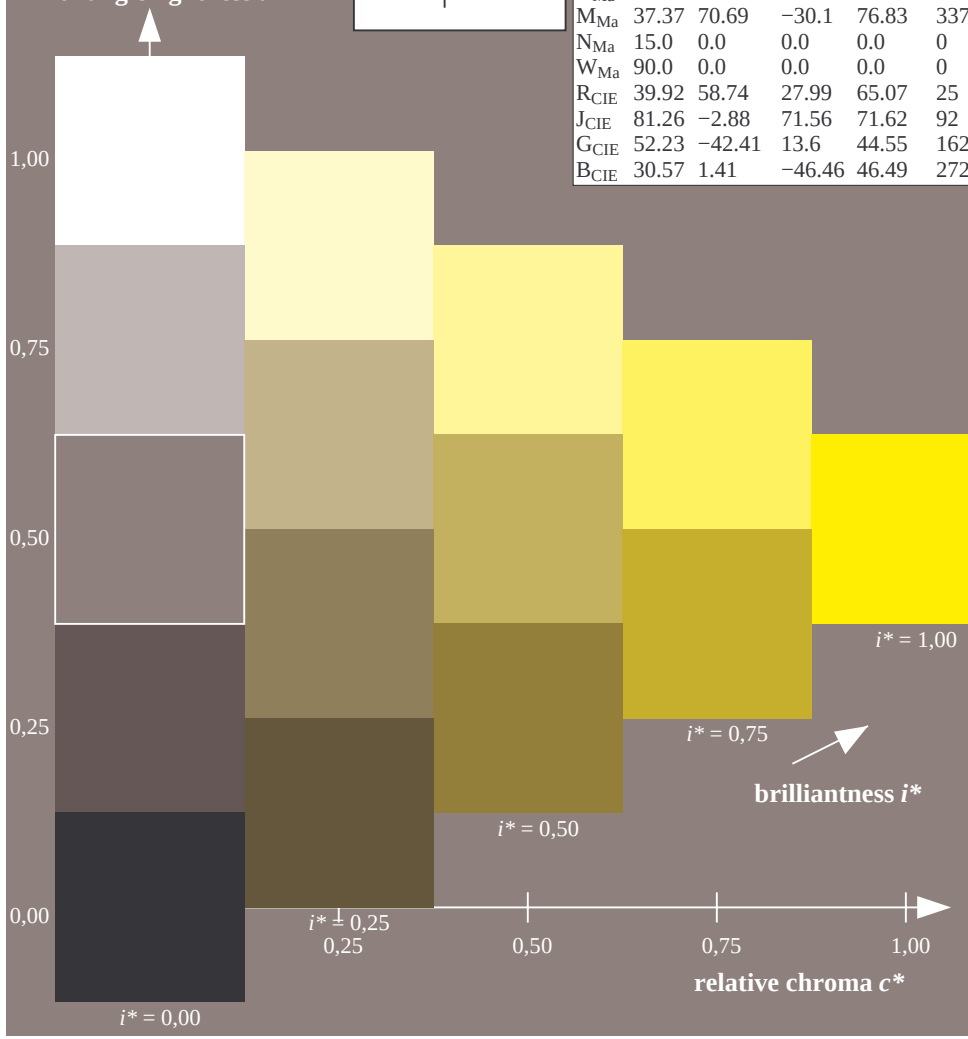
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

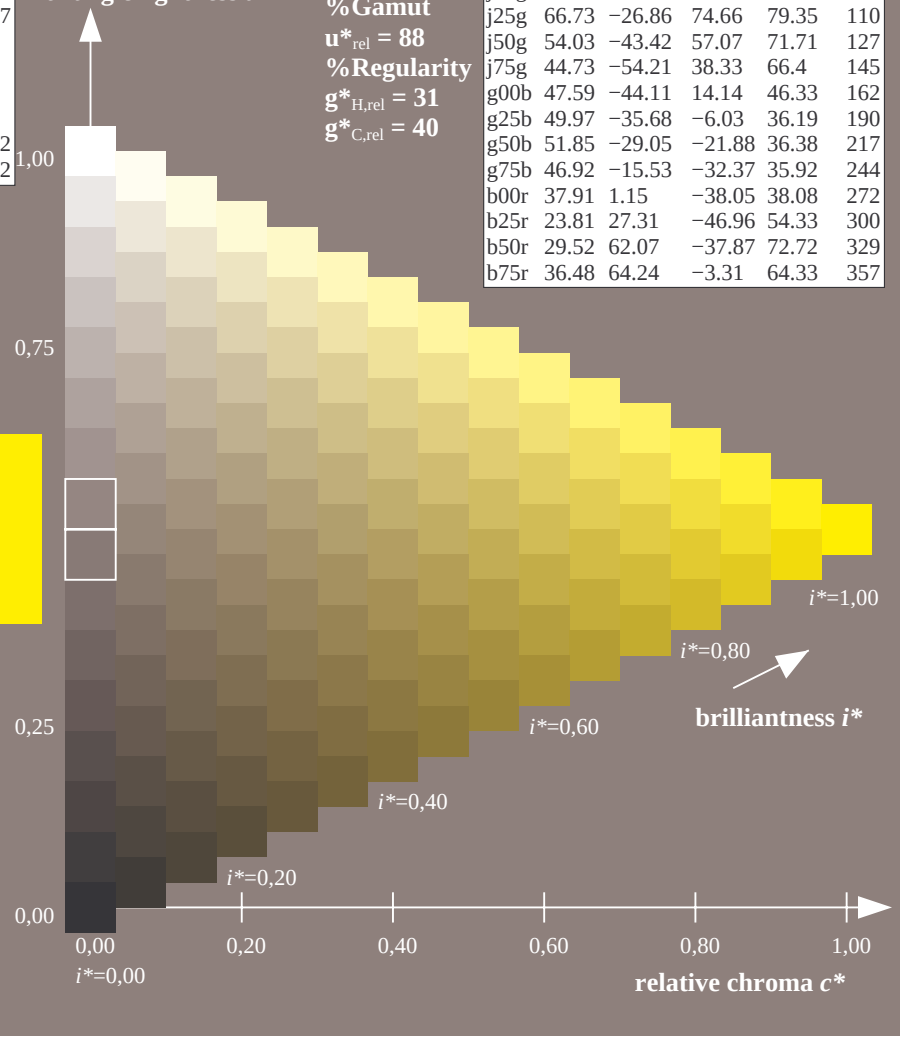
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 83 −3 98**
LAB*LCH*$_{Ma}$**: 83 98 92**
lab*rgb*$_{Ma}$**: 1.0 1.0 0.0**
lab*olv*$_{Ma}$**: 1.0 0.99 0.0**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

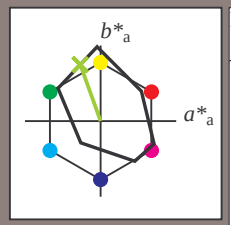
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$ ***u* = j25g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j25g
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

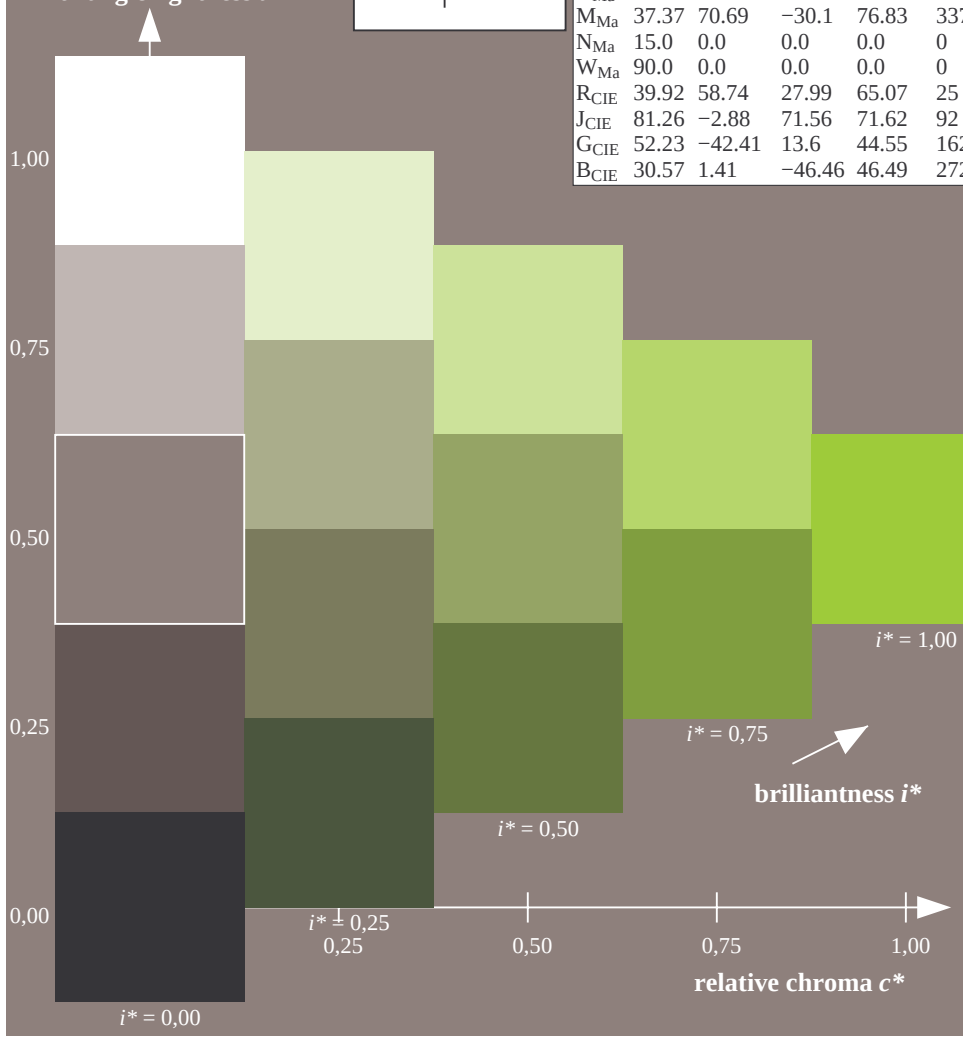
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

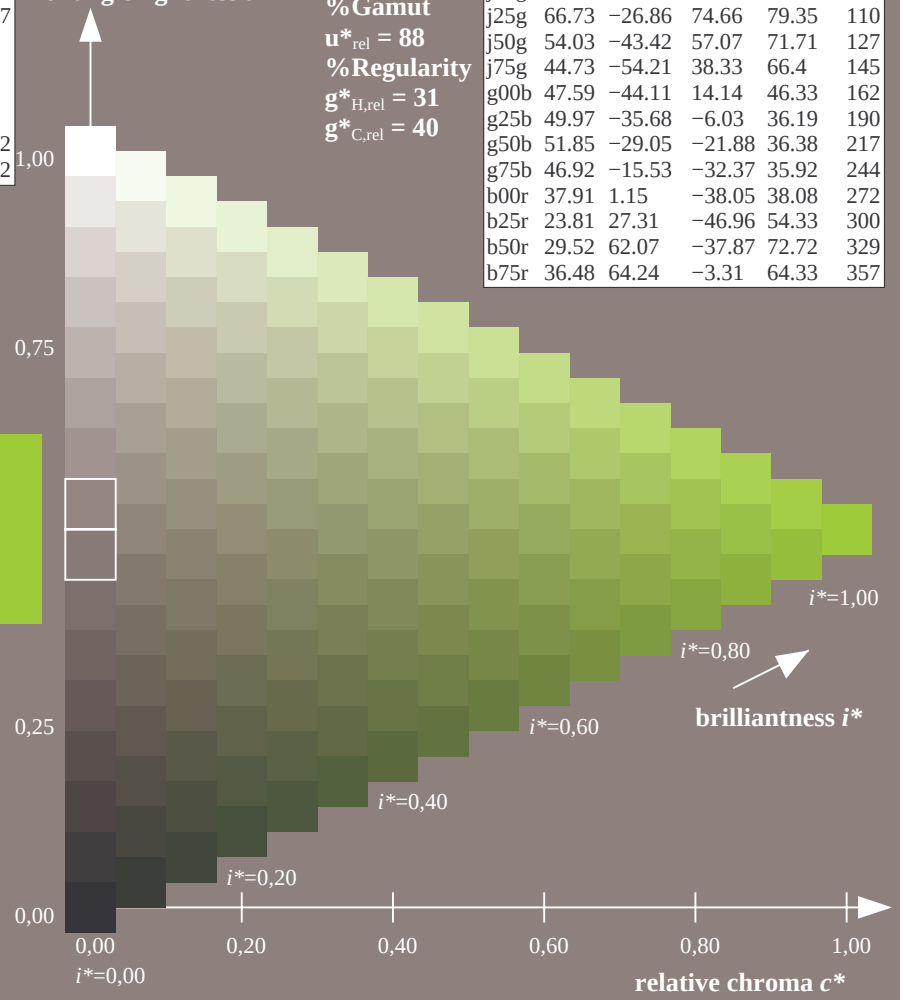
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 67 −26 75**
LAB*LCH*$_{Ma}$**: 67 79 110**
lab*rgb*$_{Ma}$**: 0.75 1.0 0.0**
lab*olv*$_{Ma}$**: 0.57 1.0 0.0**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

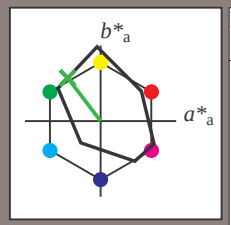
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$ ***u* = j50g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j50g
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

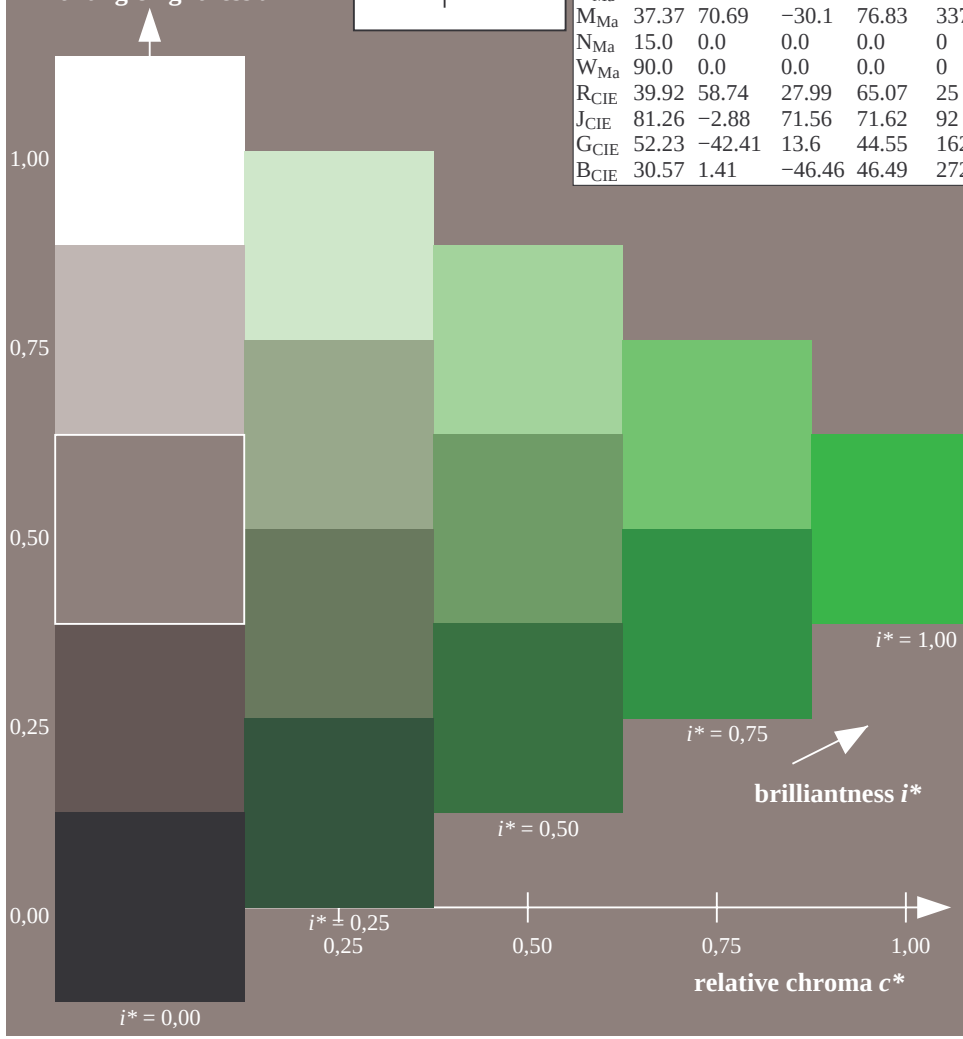
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

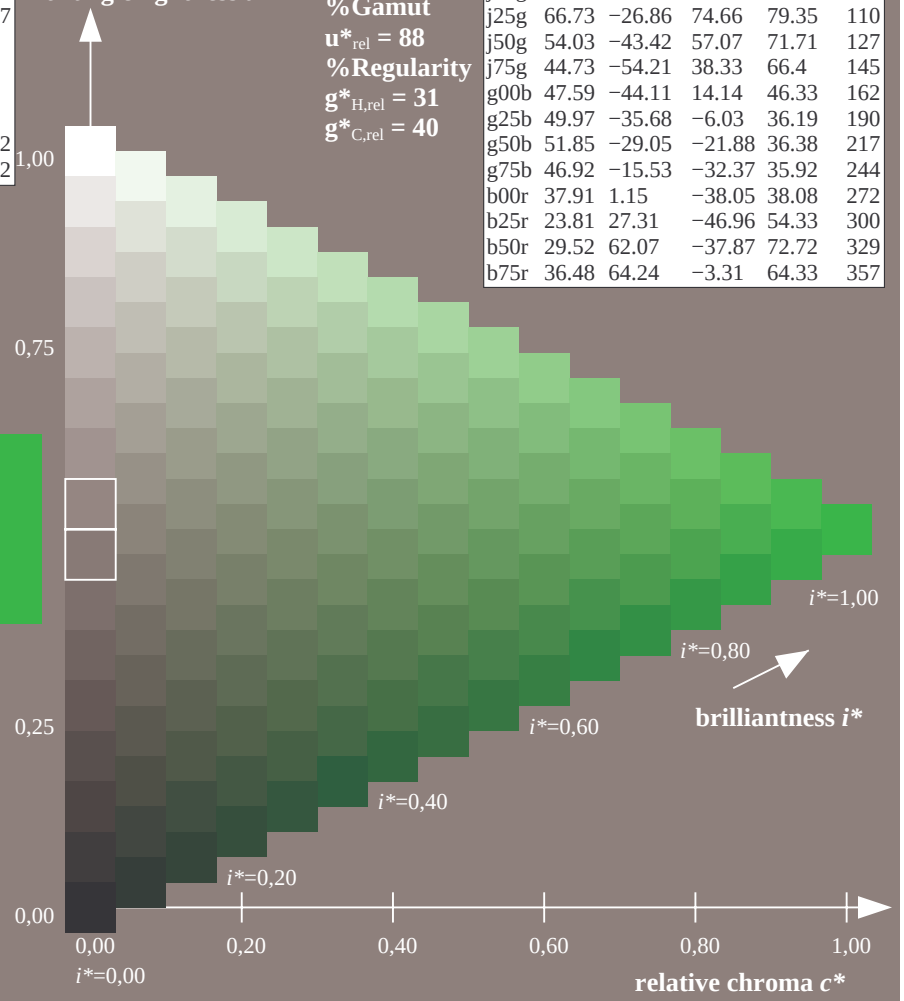
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 54 −42 57**
LAB*LCH*$_{Ma}$**: 54 72 127**
lab*rgb*$_{Ma}$**: 0.5 1.0 0.0**
lab*olv*$_{Ma}$**: 0.25 1.0 0.0**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

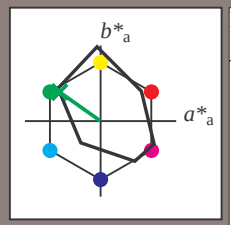
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$ ***u* = j75g***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = j75g
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

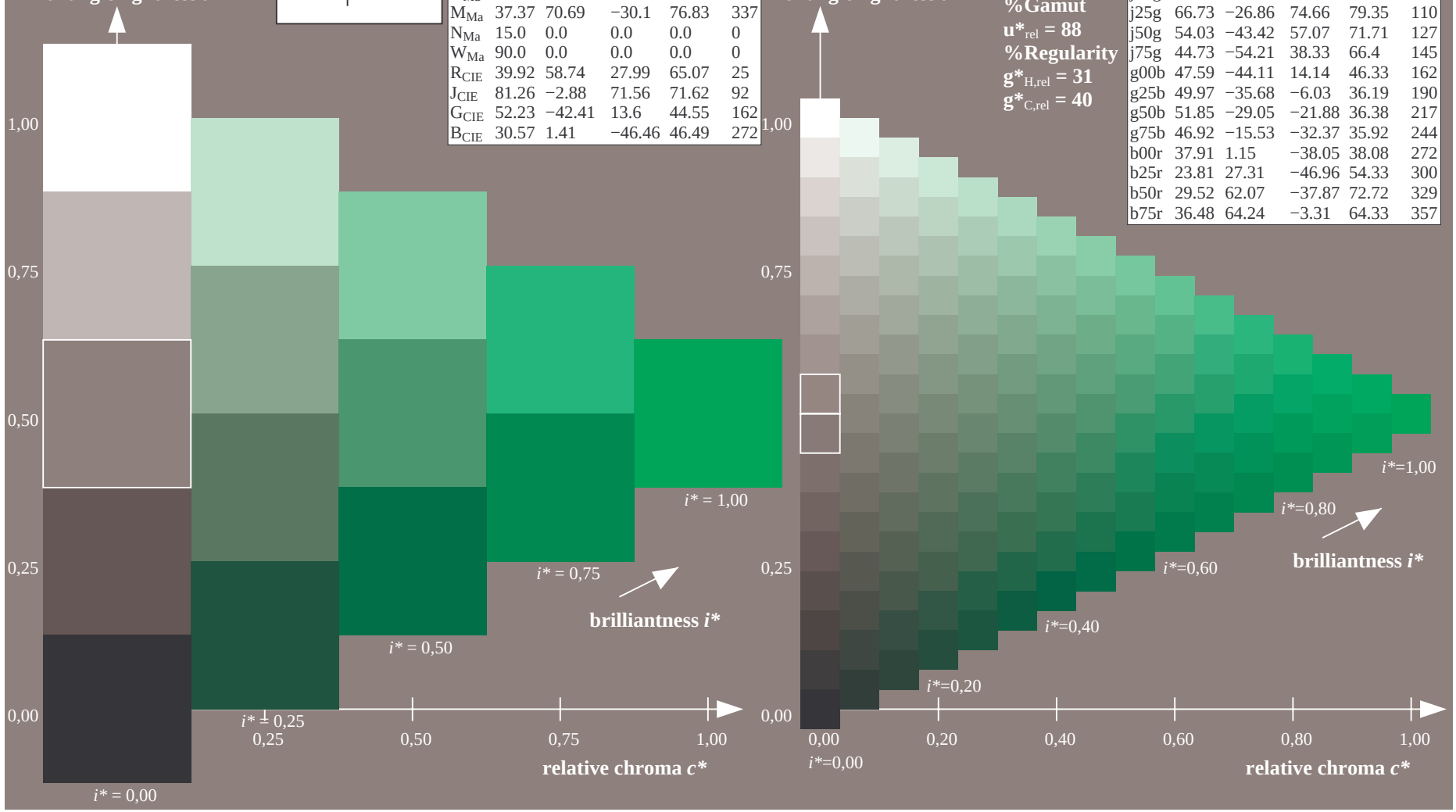
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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 −53 38**
LAB*LCH*$_{Ma}$**: 45 66 145**
lab*rgb*$_{Ma}$**: 0.25 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.07**

FRS15_90a; adapted (a) CIELAB data

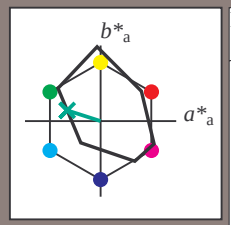
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$ ***u* = g00b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g00b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

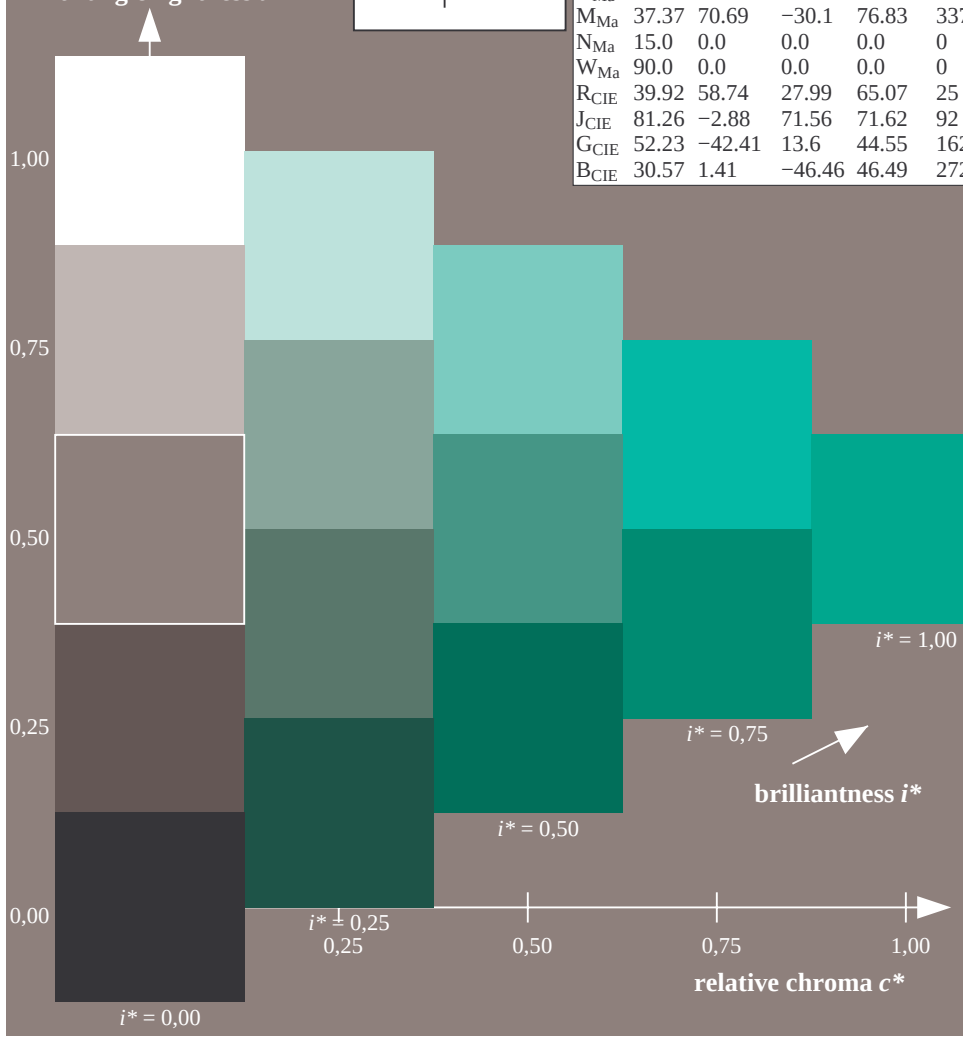
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

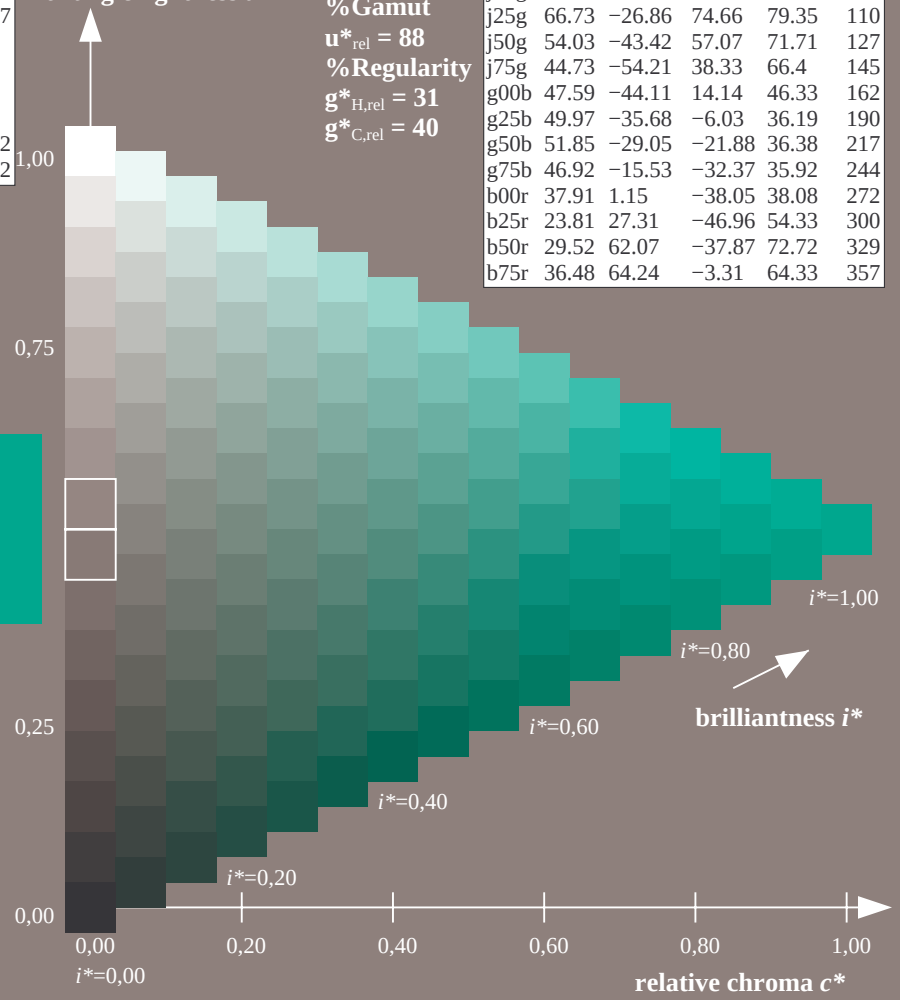
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 48 −43 14**
LAB*LCH*$_{Ma}$**: 48 46 162**
lab*rgb*$_{Ma}$**: 0.0 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.41**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

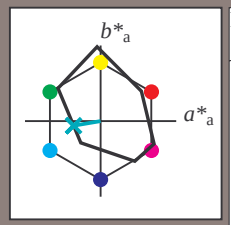
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$ ***u* = g25b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g25b
contrast reduction factor:
$c_R = 0.9$
triangle lightness ***t****



FRS15_90a; adapted (a) CIELAB data

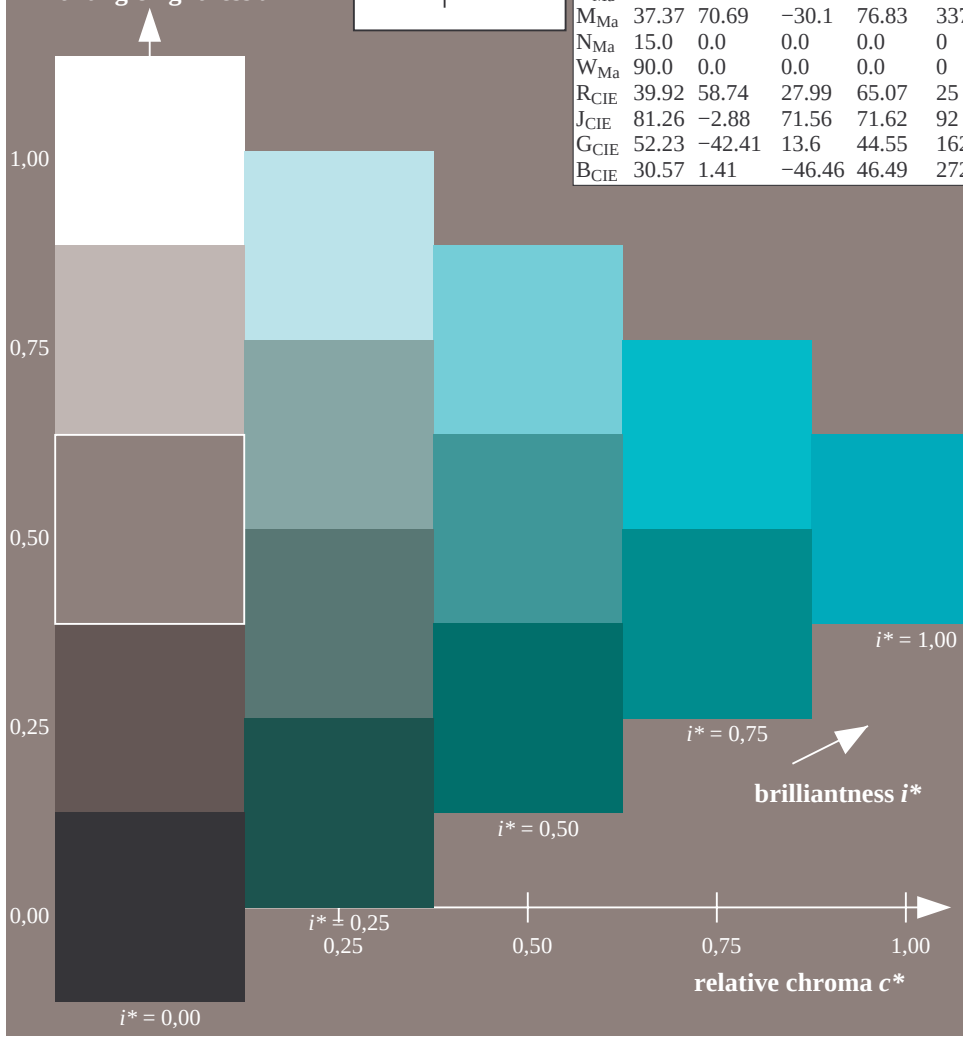
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

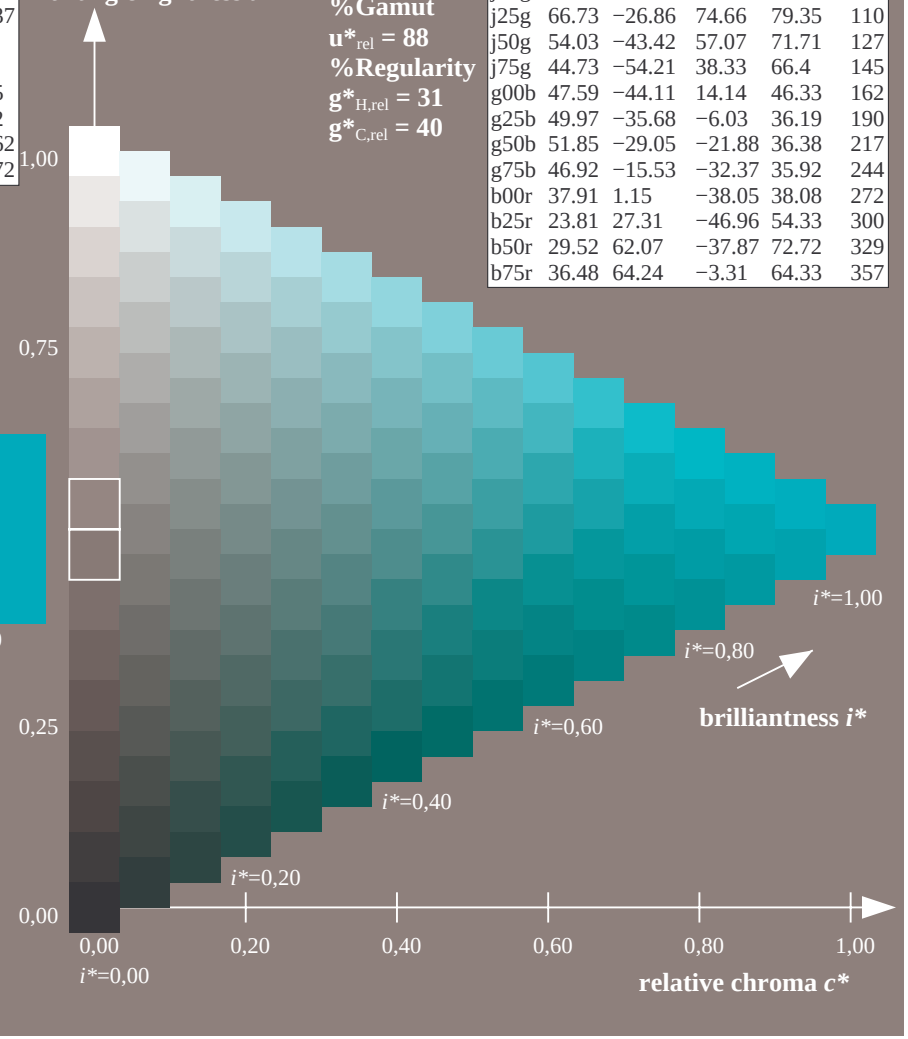
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 50 −35 −5**
LAB*LCH*$_{Ma}$**: 50 36 190**
lab*rgb*$_{Ma}$**: 0.0 1.0 0.5**
lab*olv*$_{Ma}$**: 0.0 1.0 0.69**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

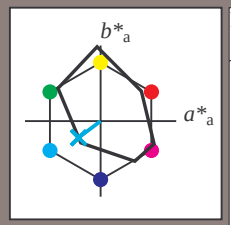
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$ ***u* = g50b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g50b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

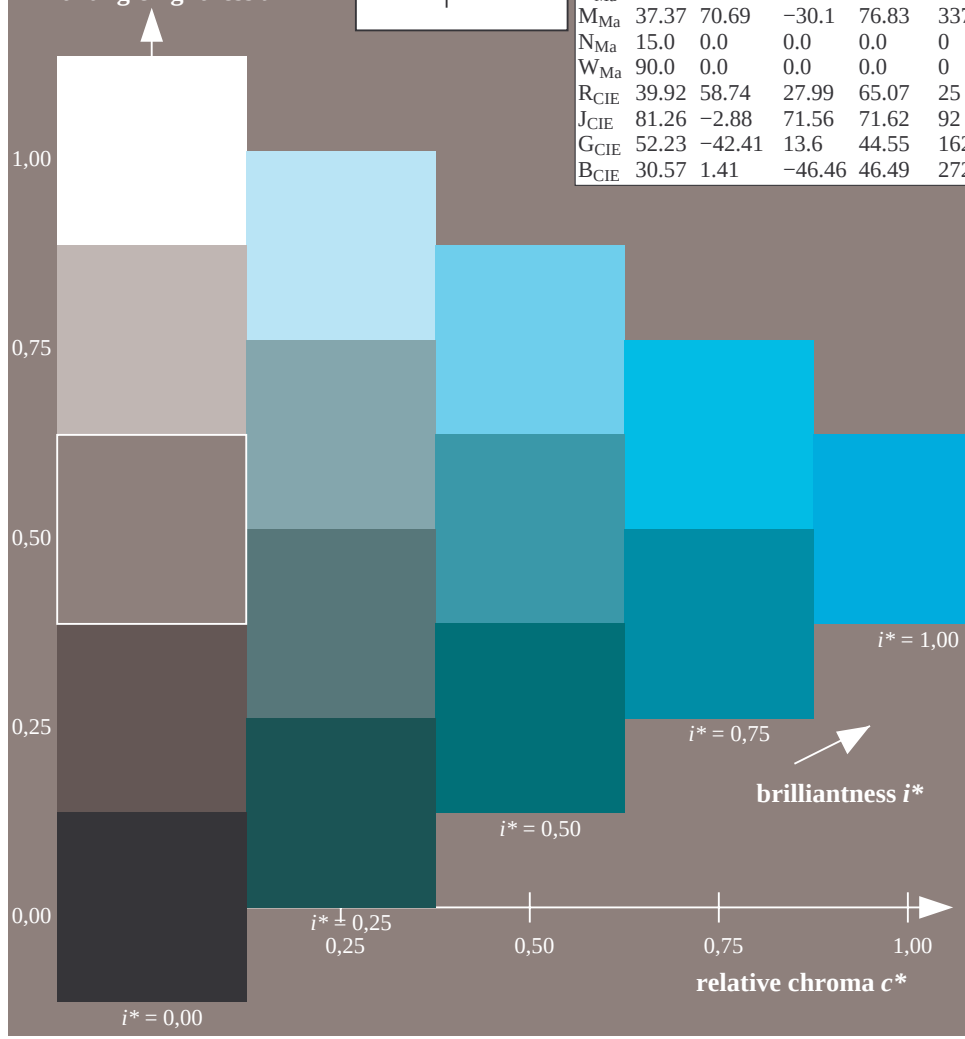
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

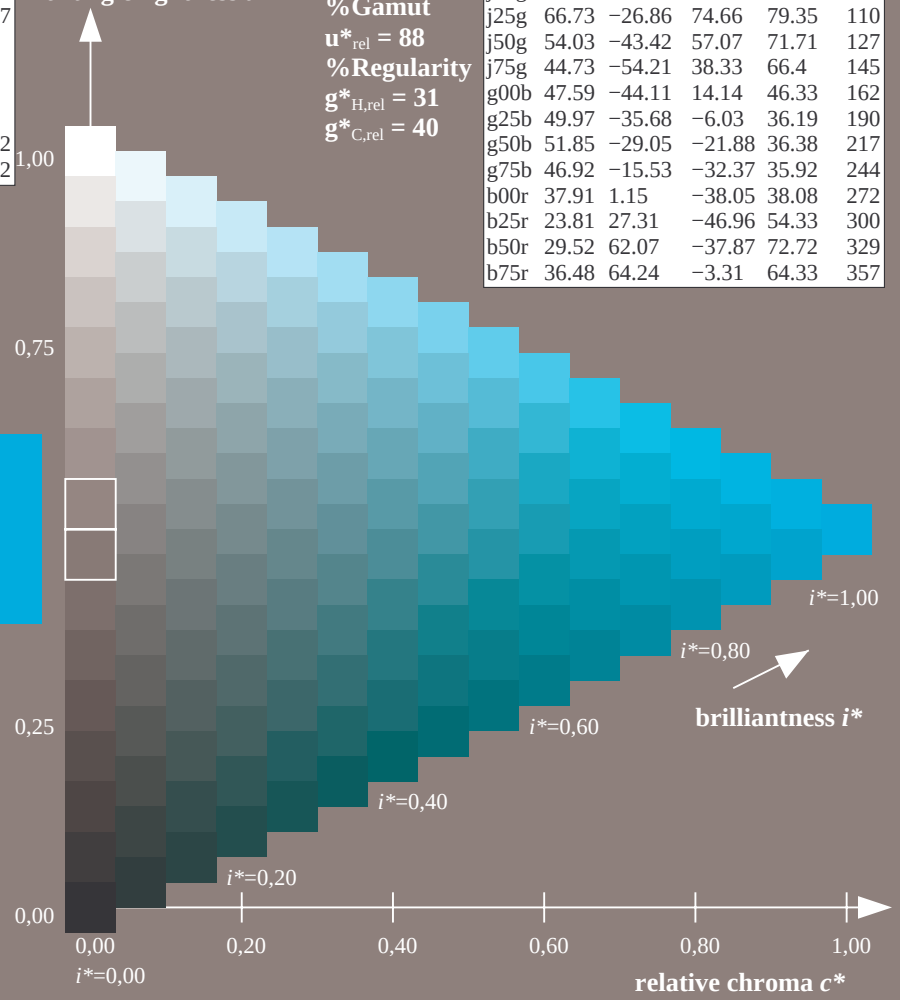
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 52 −28 −21**
LAB*LCH*$_{Ma}$**: 52 36 217**
lab*rgb*$_{Ma}$**: 0.0 1.0 1.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.9**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

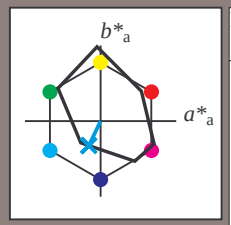
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$ ***u* = g75b***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = g75b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

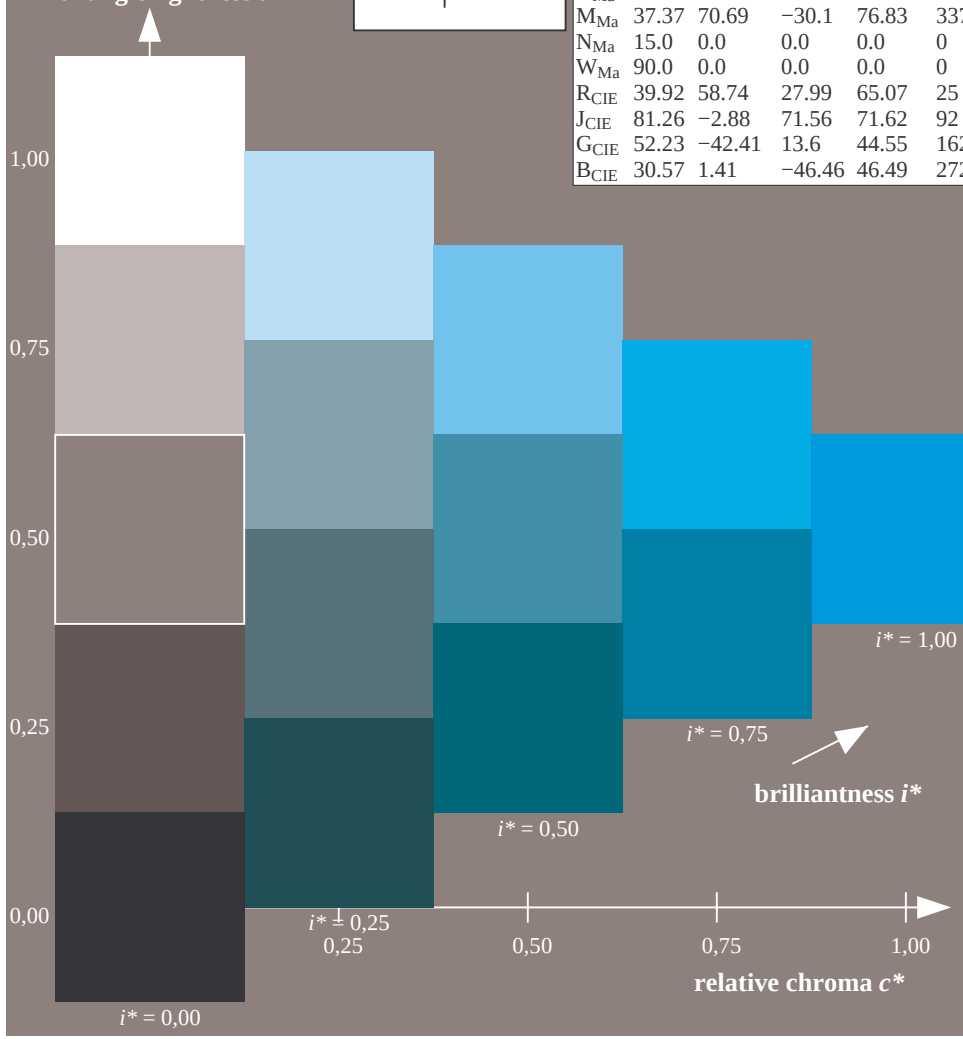
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

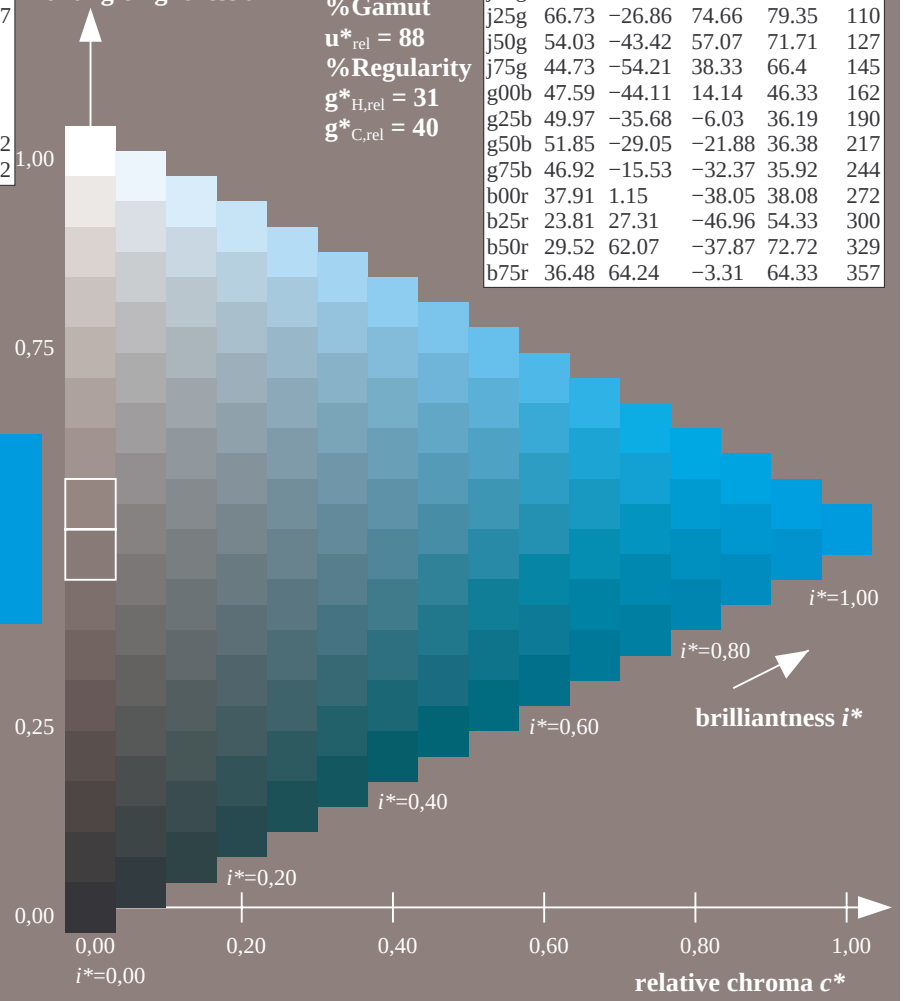
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 47 −15 −31**
LAB*LCH*$_{Ma}$**: 47 36 244**
lab*rgb*$_{Ma}$**: 0.0 0.5 1.0**
lab*olv*$_{Ma}$**: 0.0 0.85 1.0**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

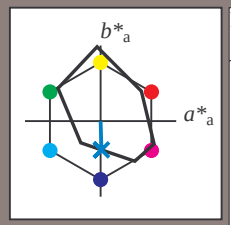
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$ ***u* = b00r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b00r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

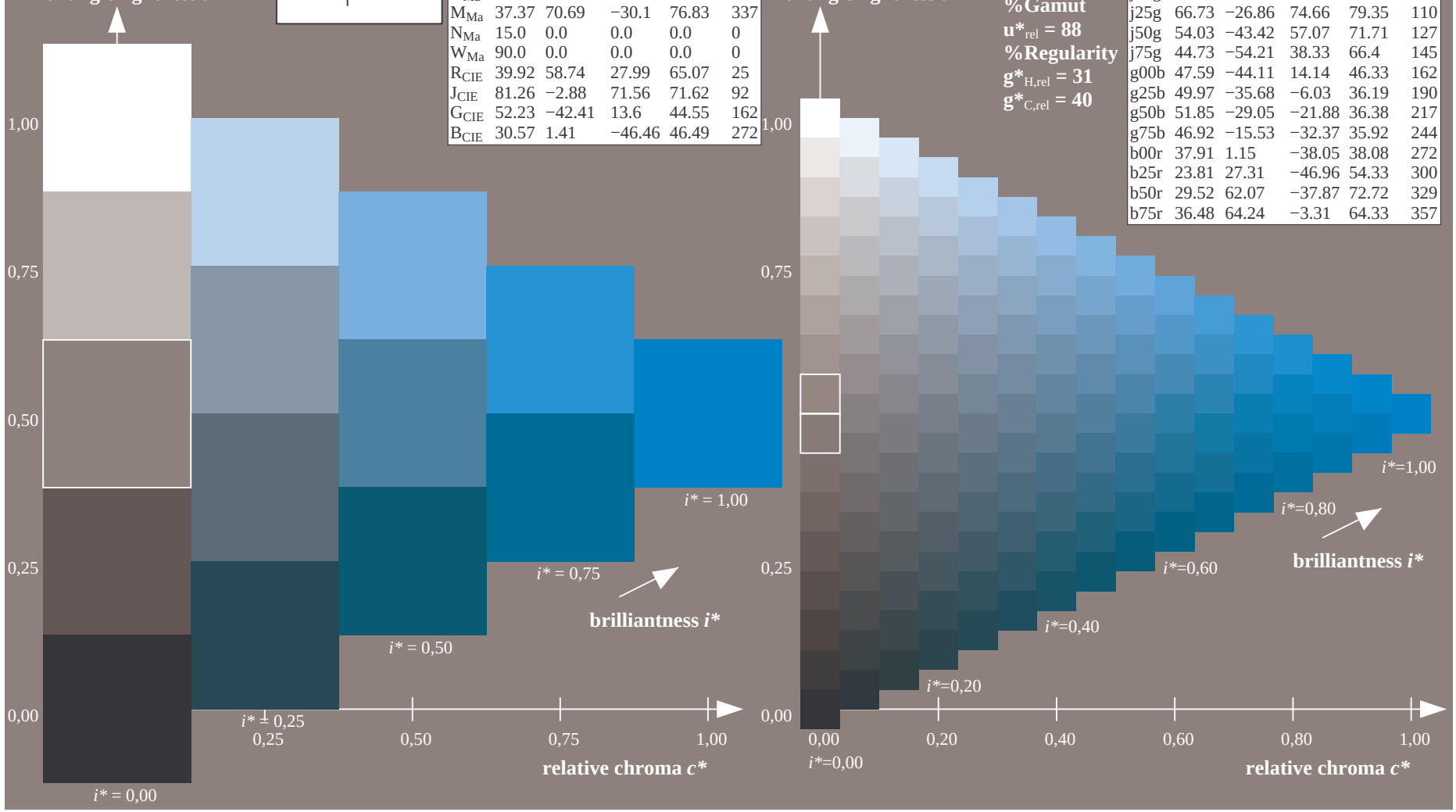
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 38 1 −37**
LAB*LCH*$_{Ma}$**: 38 38 272**
lab*rgb*$_{Ma}$**: 0.0 0.0 1.0**
lab*olv*$_{Ma}$**: 0.0 0.62 1.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

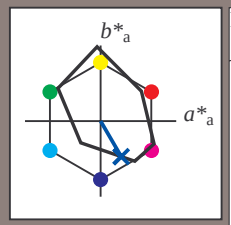
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$ ***u* = b25r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b25r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

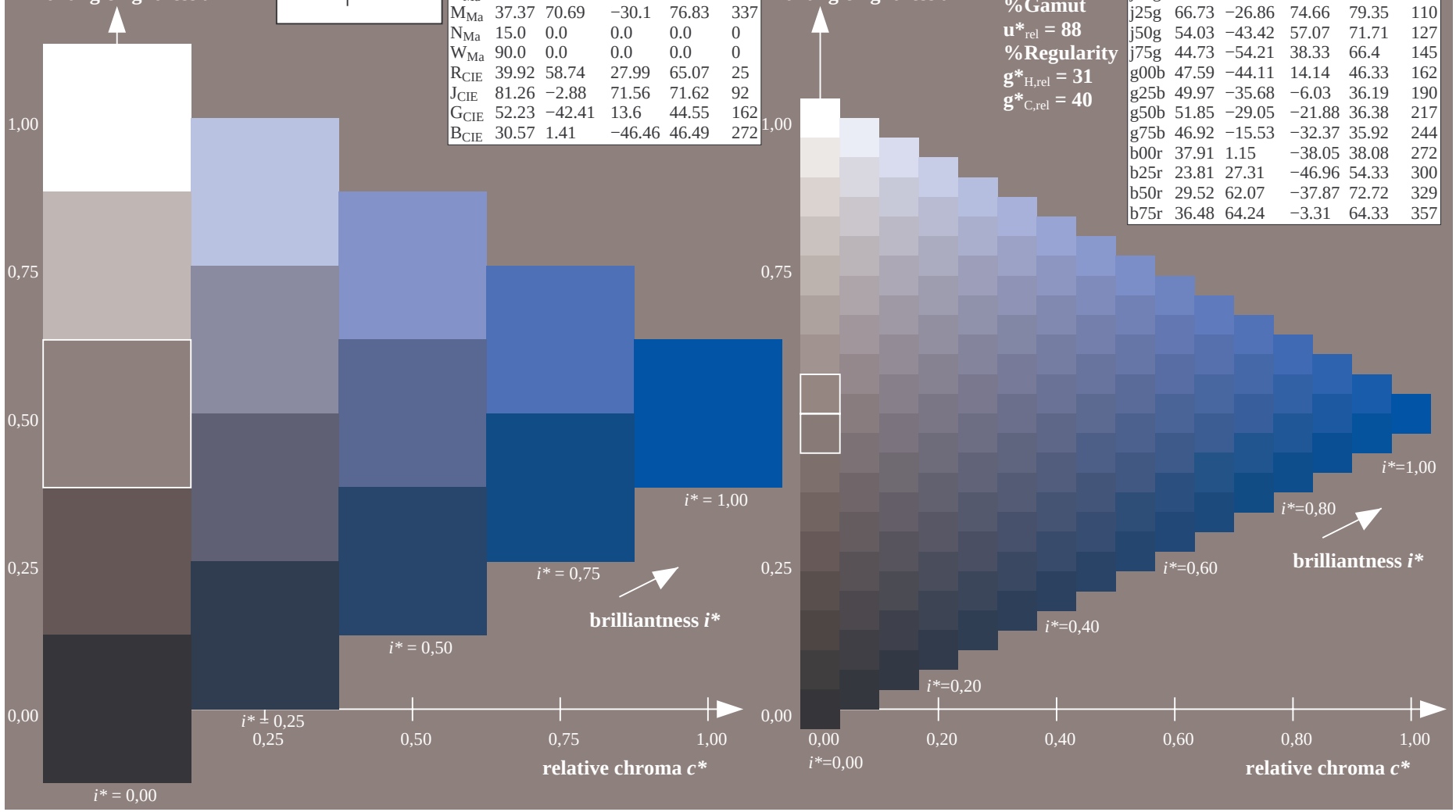
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*$_{Ma}$**: 24 27 −46**
LAB*LCH*$_{Ma}$**: 24 54 300**
lab*rgb*$_{Ma}$**: 0.5 0.0 1.0**
lab*olv*$_{Ma}$**: 0.0 0.25 1.0**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

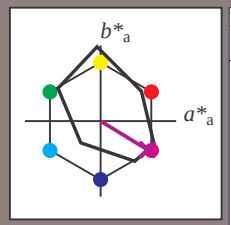
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$ ***u* = b50r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b50r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

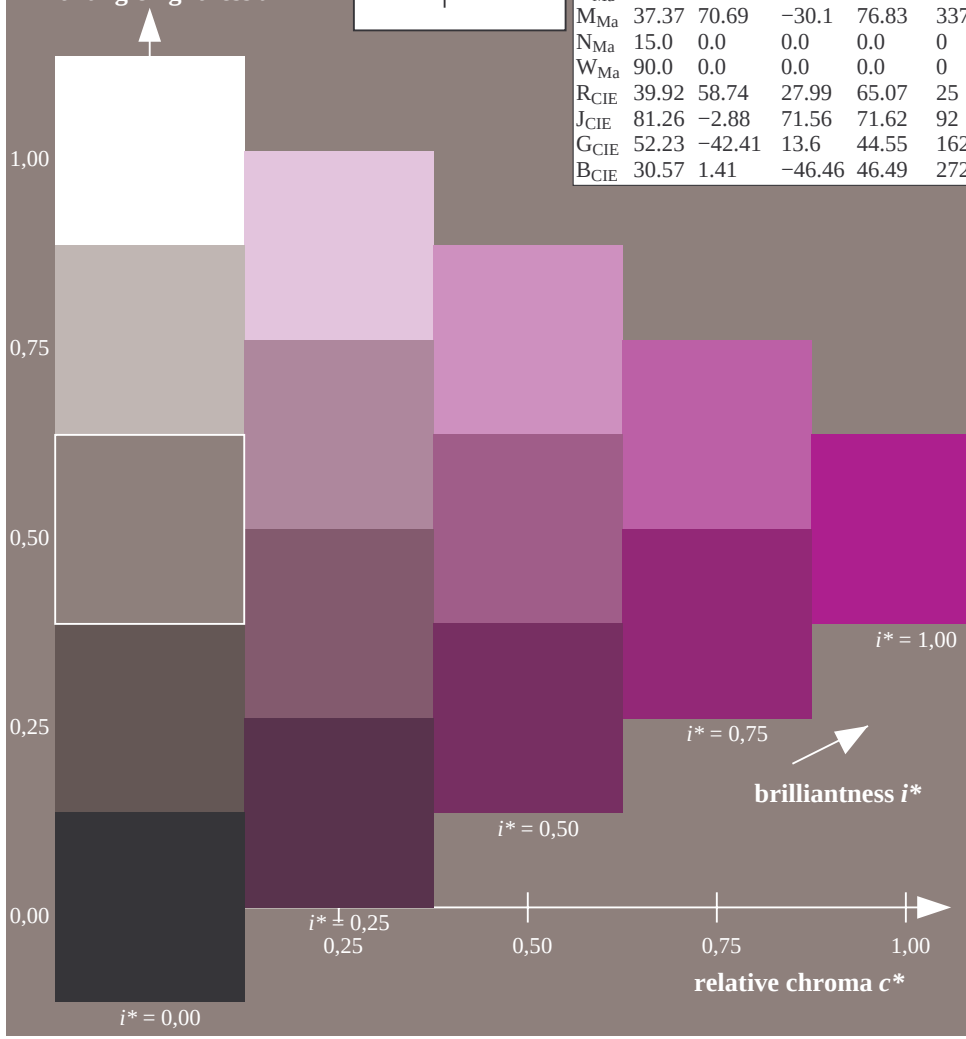
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

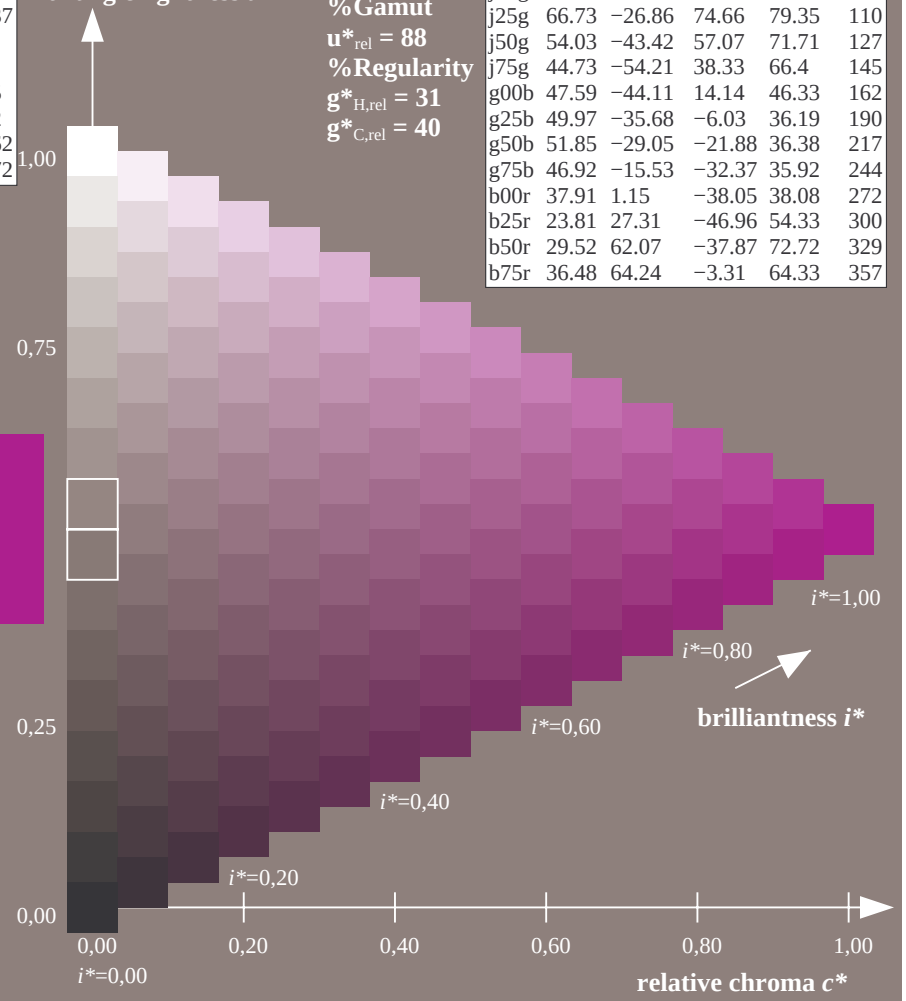
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 30 62 −37**
LAB*LCH*$_{Ma}$**: 30 73 329**
lab*rgb*$_{Ma}$**: 1.0 0.0 1.0**
lab*olv*$_{Ma}$**: 0.66 0.0 1.0**
triangle lightness *t**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

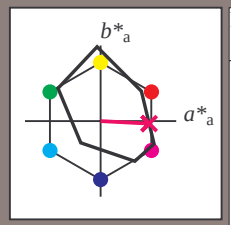
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$ ***u* = b75r***

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b75r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**

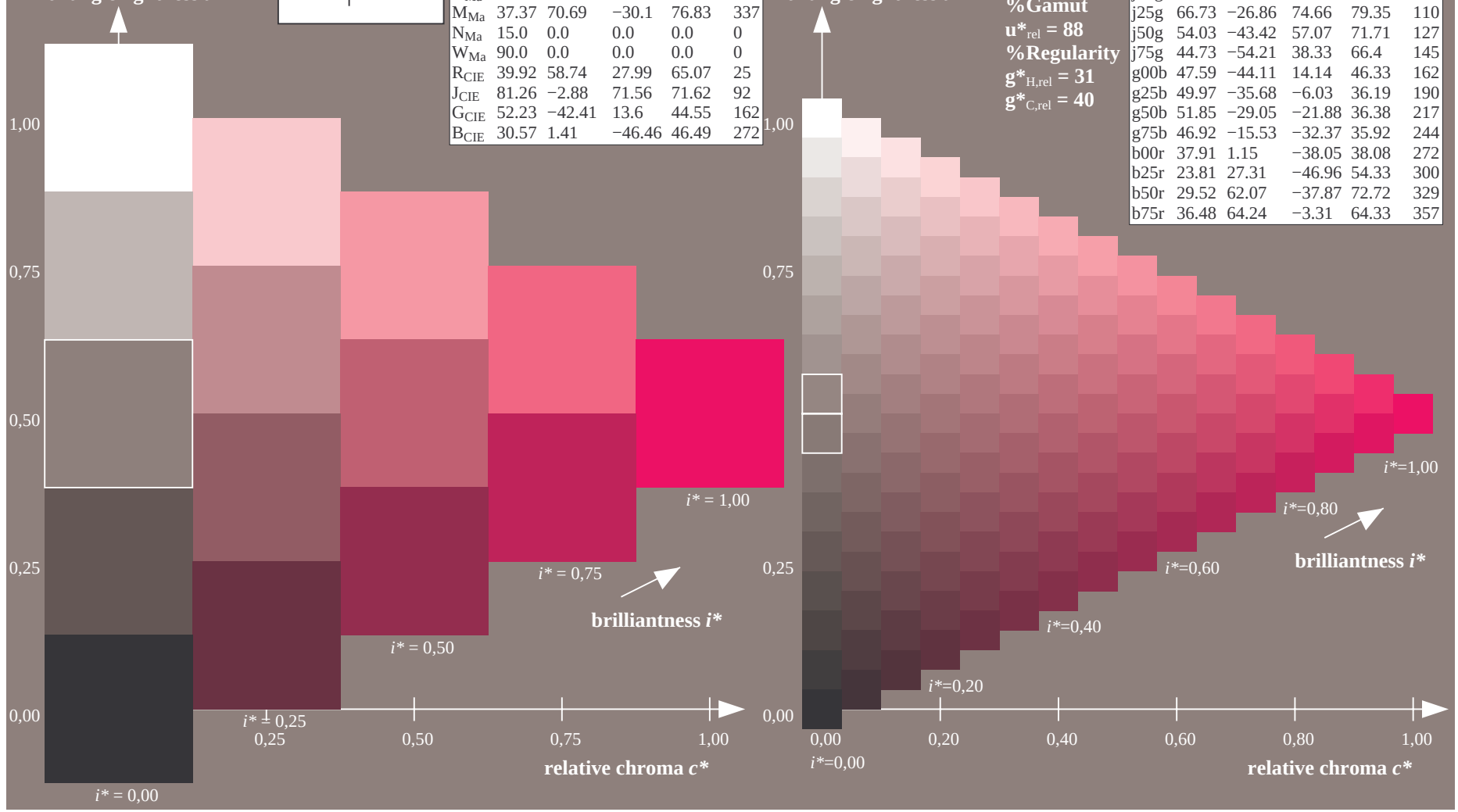


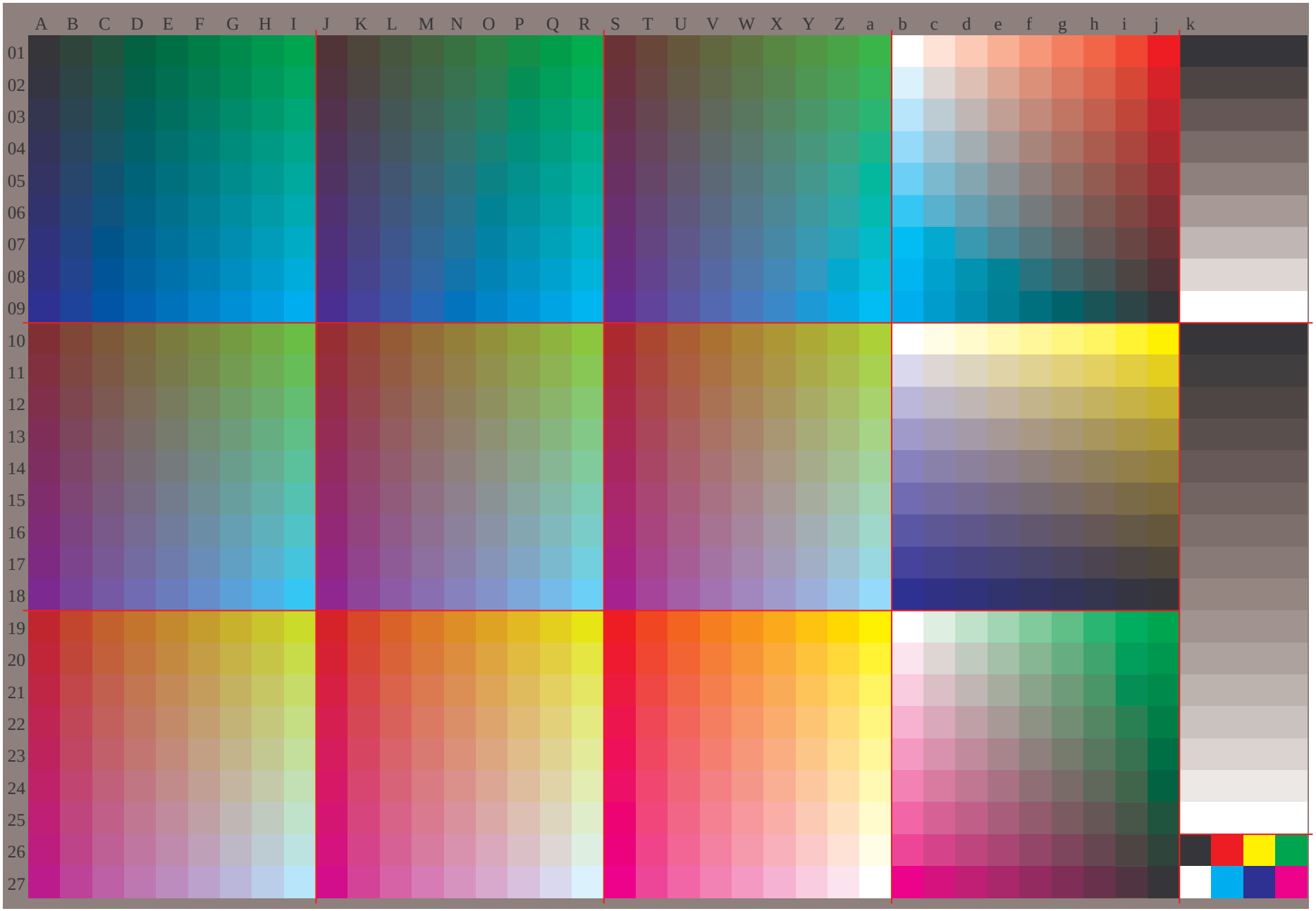
FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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*$_{Ma}$**: 36 64 −2**
LAB*LCH*$_{Ma}$**: 36 64 357**
lab*rgb*$_{Ma}$**: 1.0 0.0 0.5**
lab*olv*$_{Ma}$**: 1.0 0.0 0.62**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

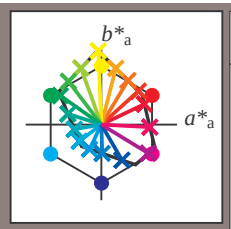



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k
01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

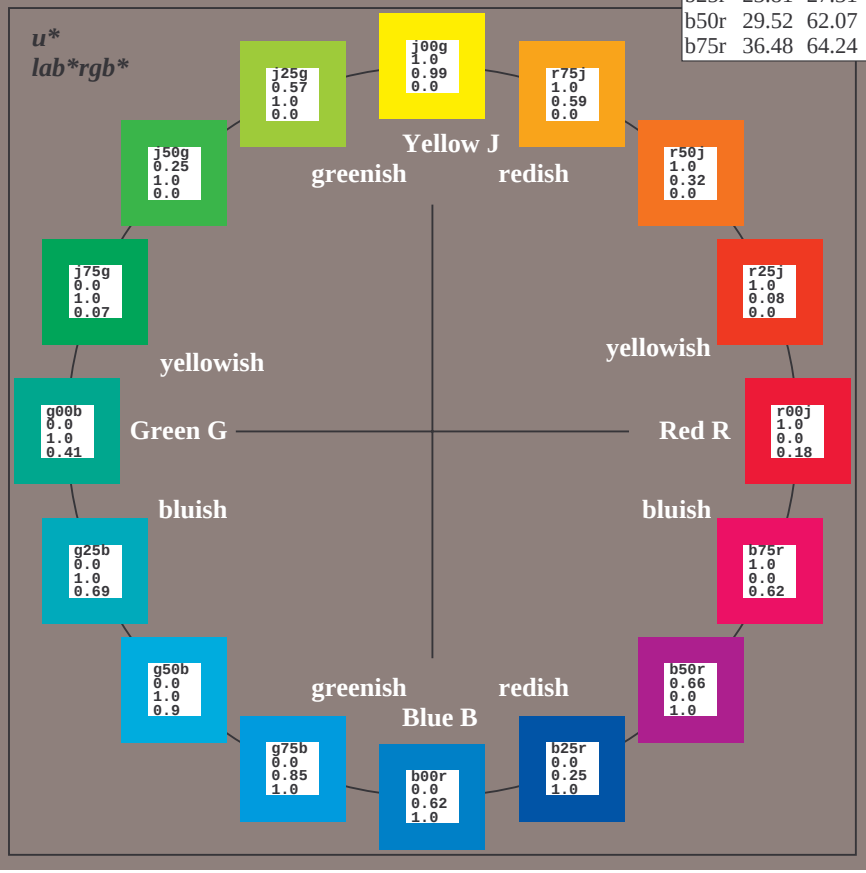
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

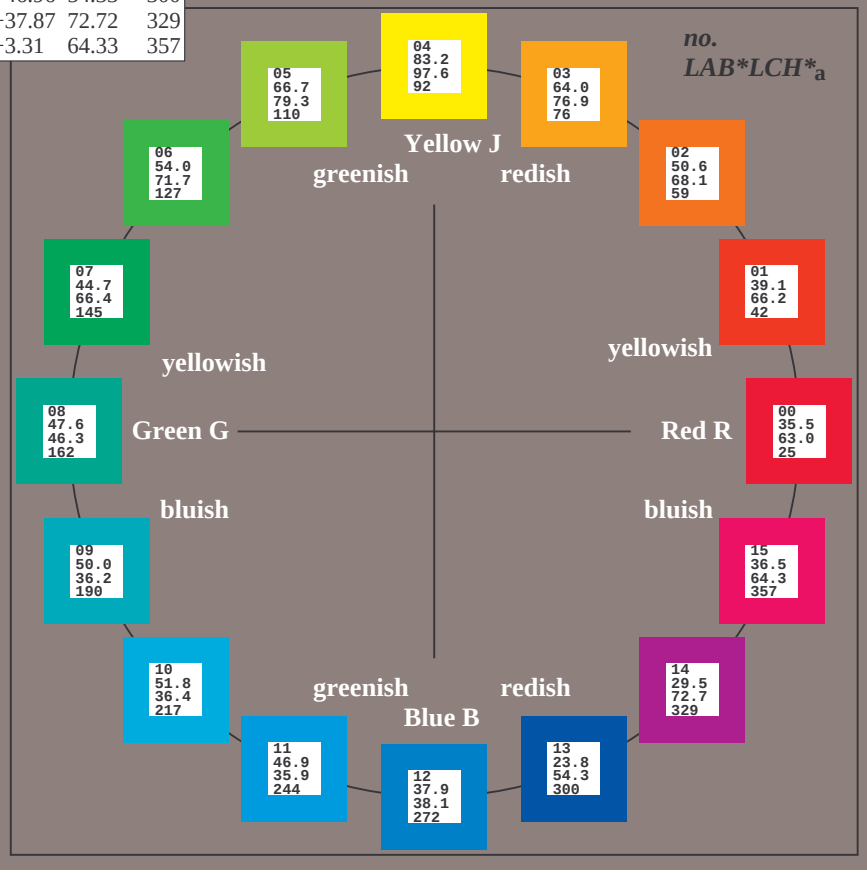


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

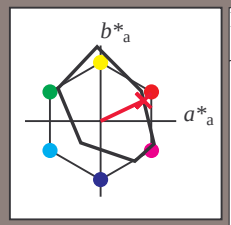
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r00j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

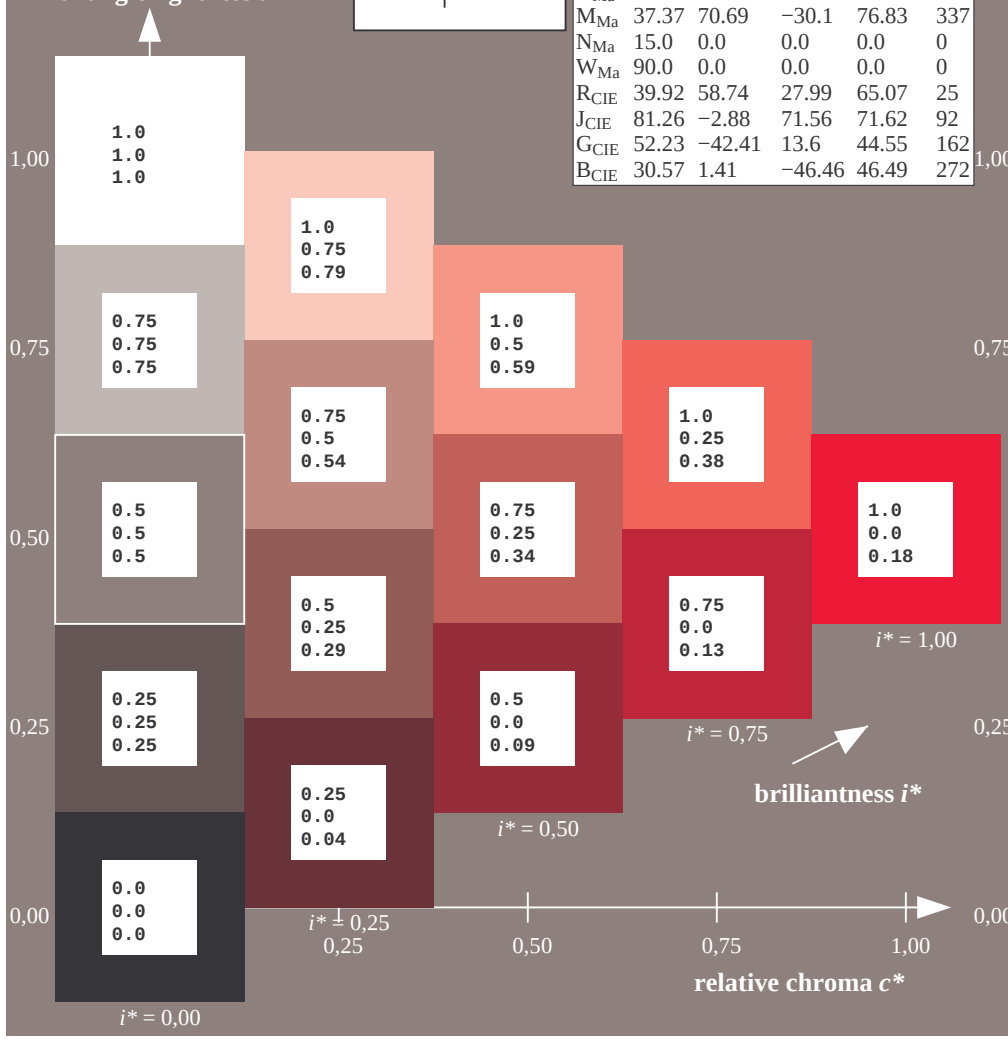
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

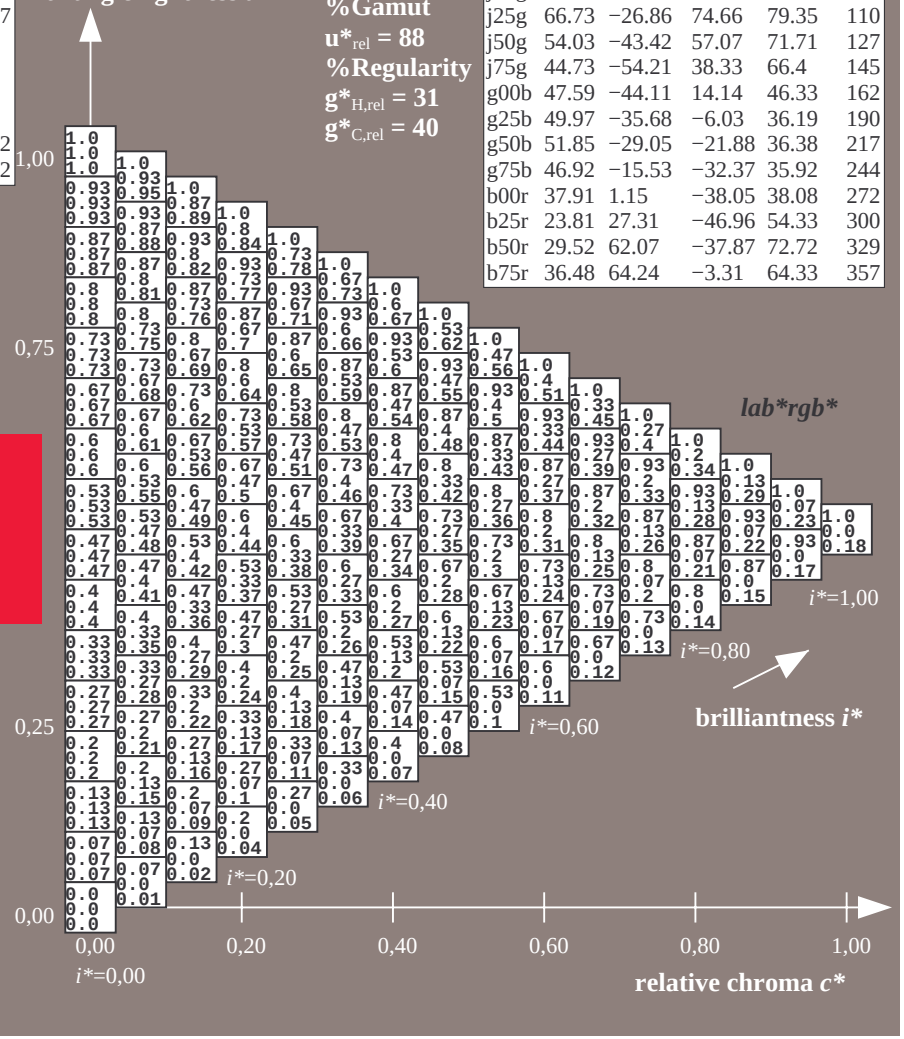
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 35 57 27**
***LAB*LCH*Ma*: 35 63 25**
***lab*rgb*Ma*: 1.0 0.0 0.0**
***lab*olv*Ma*: 1.0 0.0 0.18**

u* = r00j
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

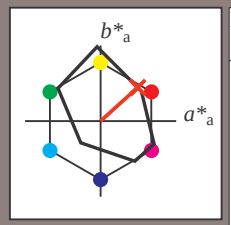
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





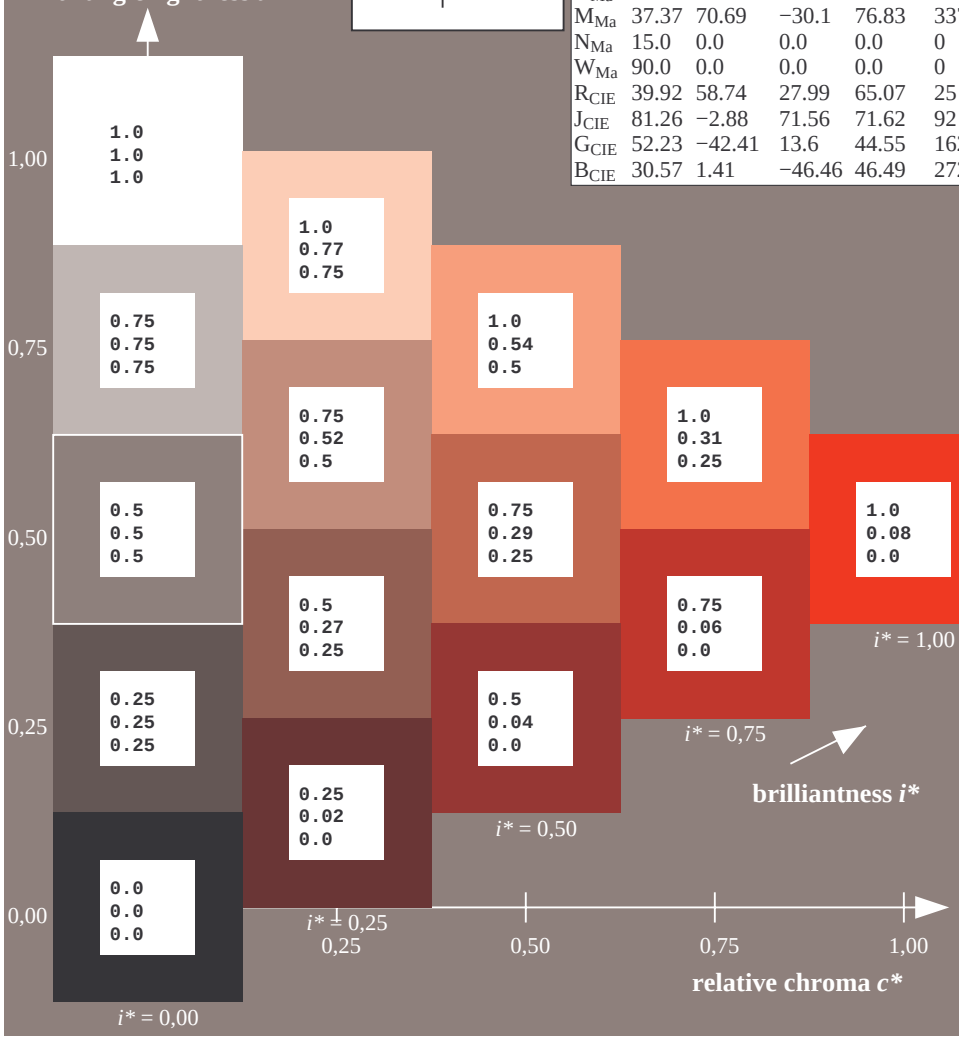
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



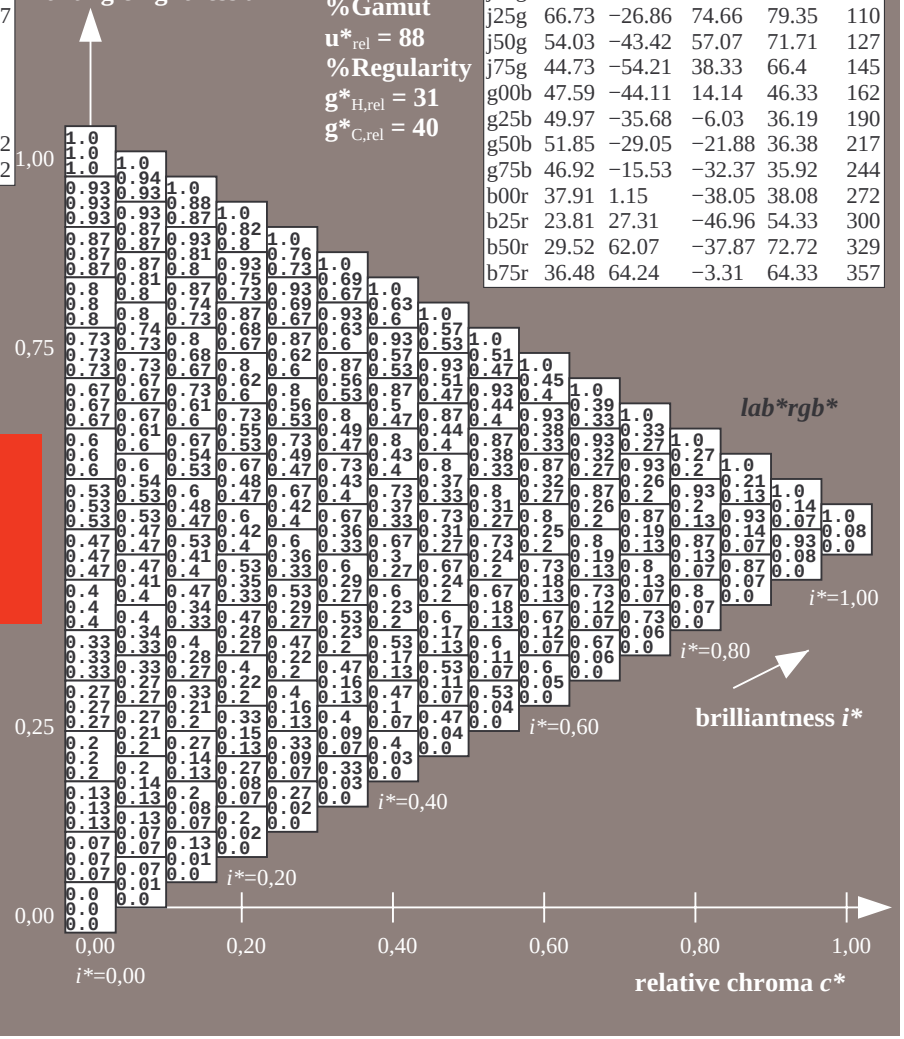
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 39 49 44
$LAB^*LCH^*_{Ma}$: 39 66 42
$lab^*rgb^*_{Ma}$: 1.0 0.25 0.0
$lab^*olv^*_{Ma}$: 1.0 0.08 0.0
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = r25j$
lab^*rgb^*

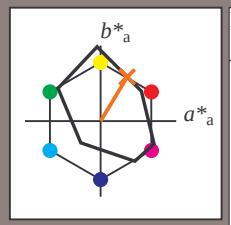
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

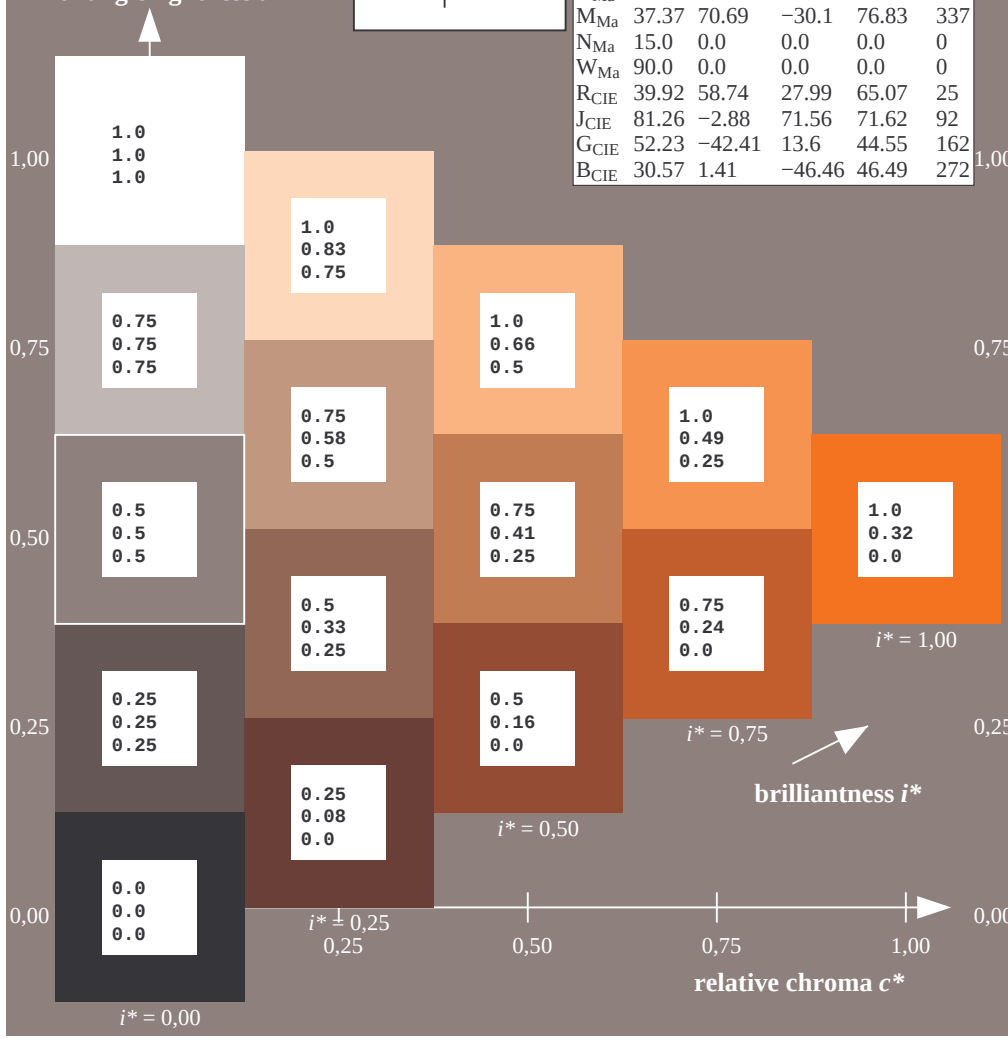
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

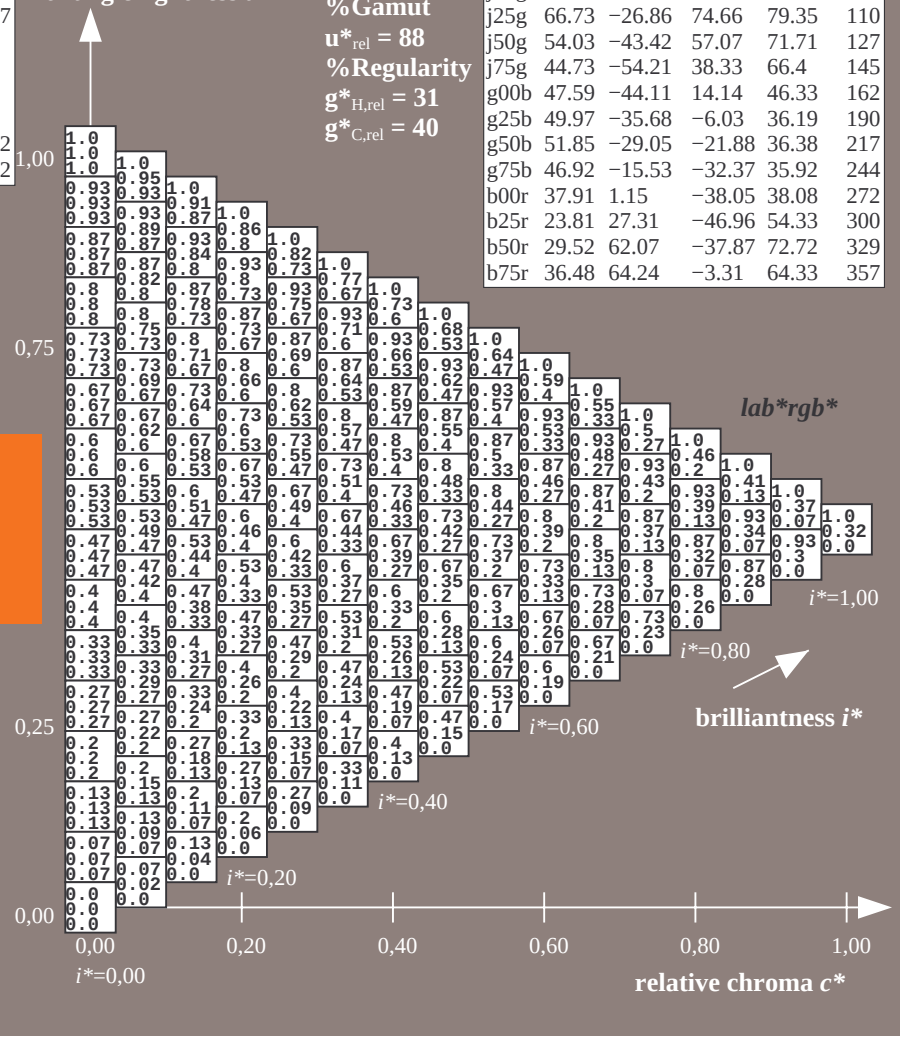
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 51 35 58**
***LAB*LCH*Ma*: 51 68 59**
***lab*rgb*Ma*: 1.0 0.5 0.0**
***lab*olv*Ma*: 1.0 0.32 0.0**

u* = r50j
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

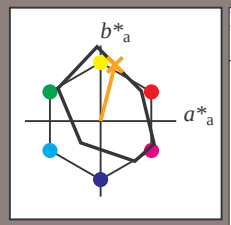
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





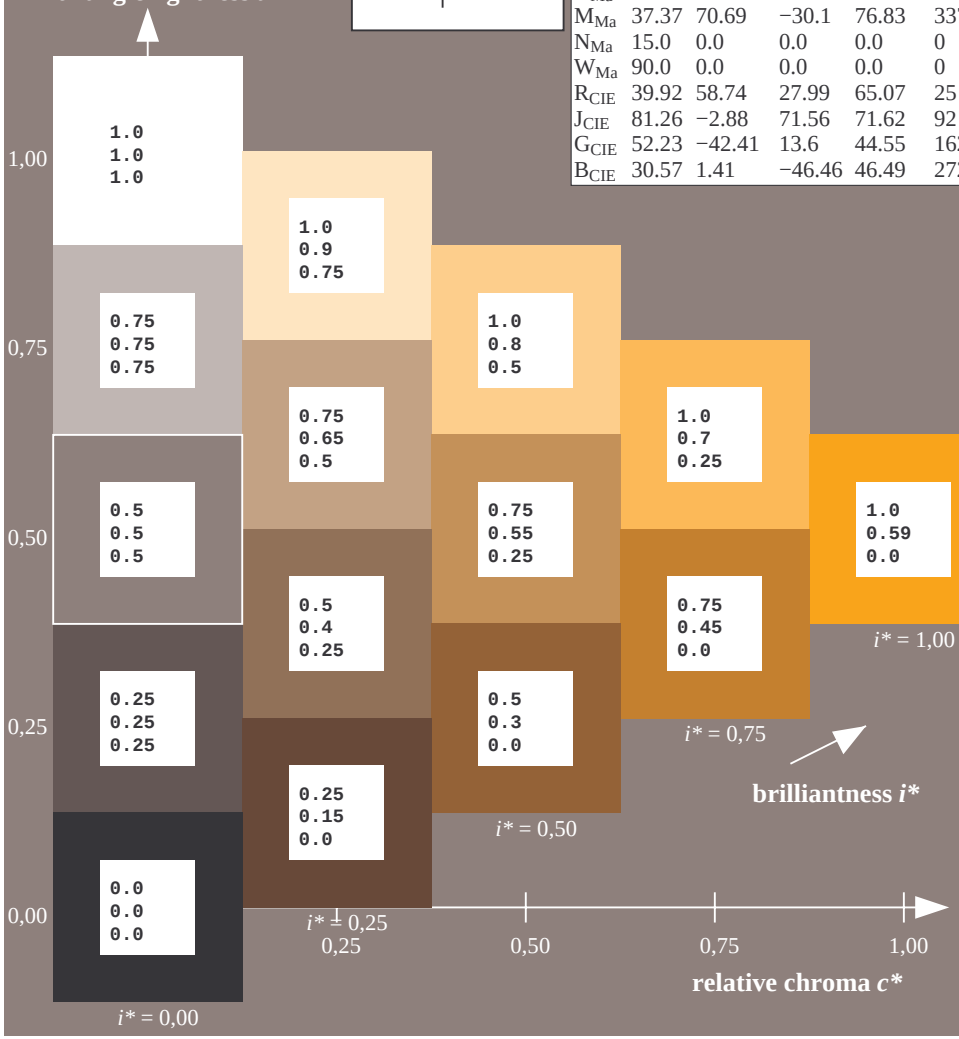
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r75j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



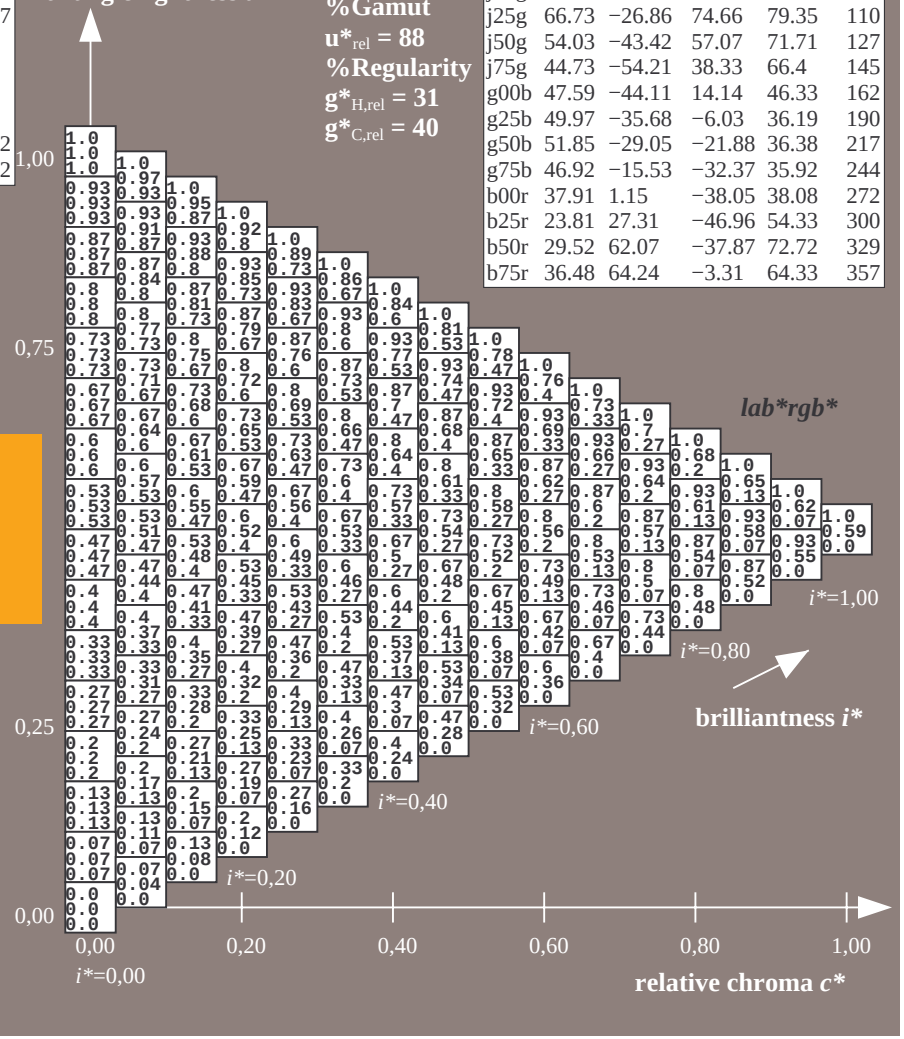
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 64 19 74**
***LAB*LCH*Ma*: 64 77 76**
***lab*rgb*Ma*: 1.0 0.75 0.0**
***lab*olv*Ma*: 1.0 0.59 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = r75j$
*lab*rgb**

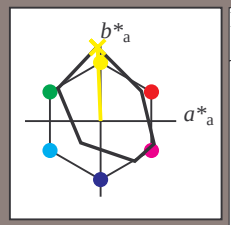
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



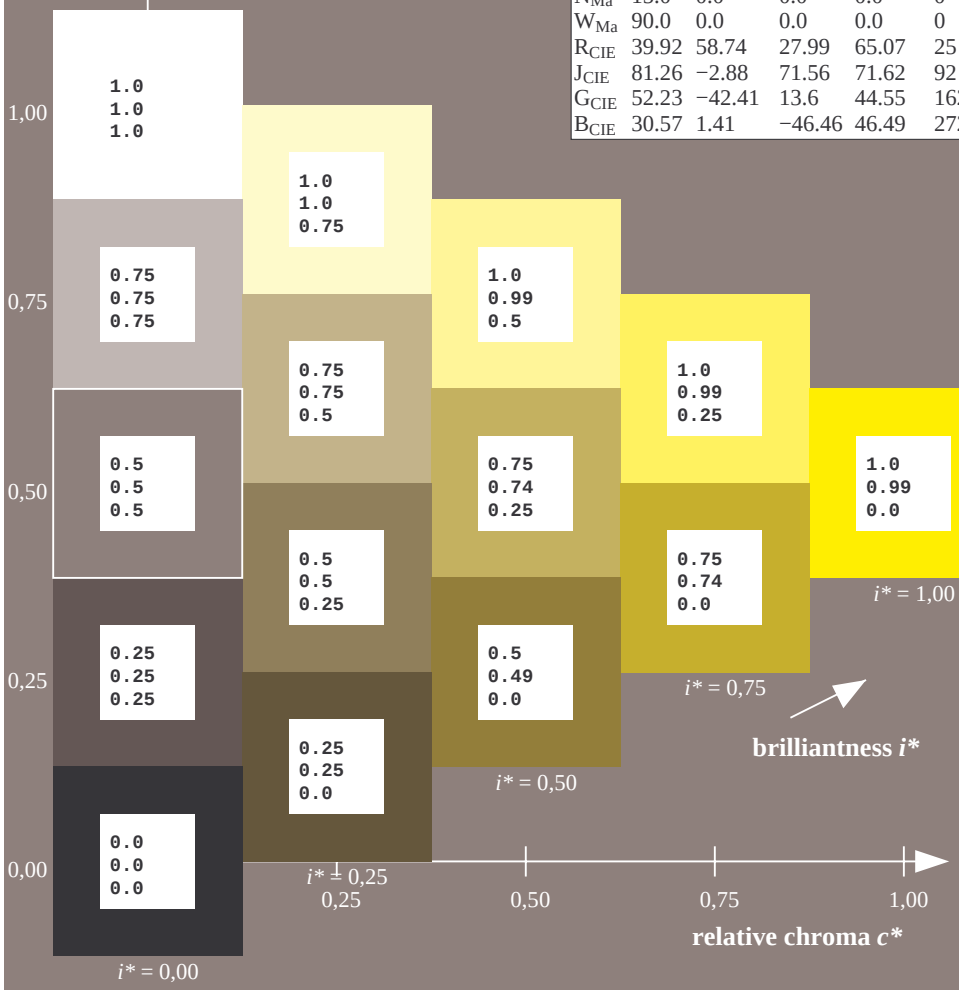
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j00g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



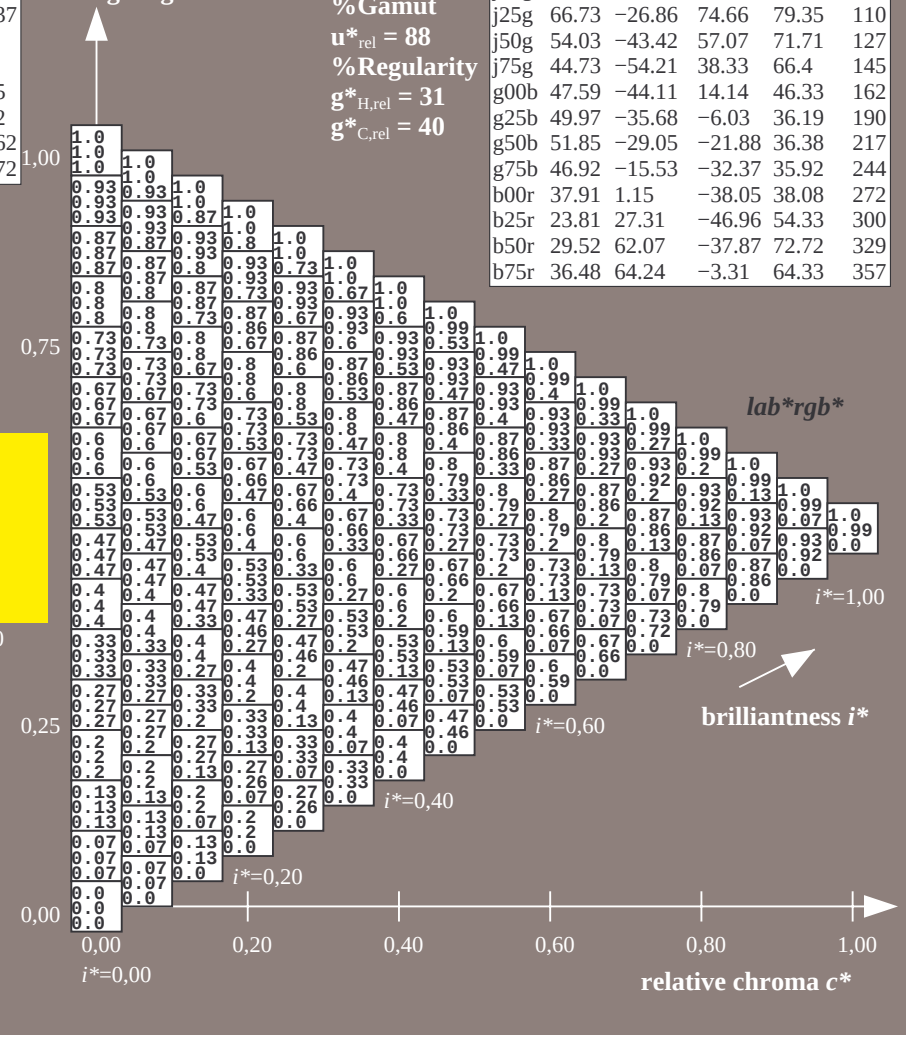
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 83 −3 98
$LAB^*LCH^*_{Ma}$: 83 98 92
$lab^*rgb^*_{Ma}$: 1.0 1.0 0.0
$lab^*olv^*_{Ma}$: 1.0 0.99 0.0
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j00g$
lab^*rgb^*

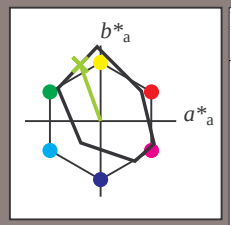
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

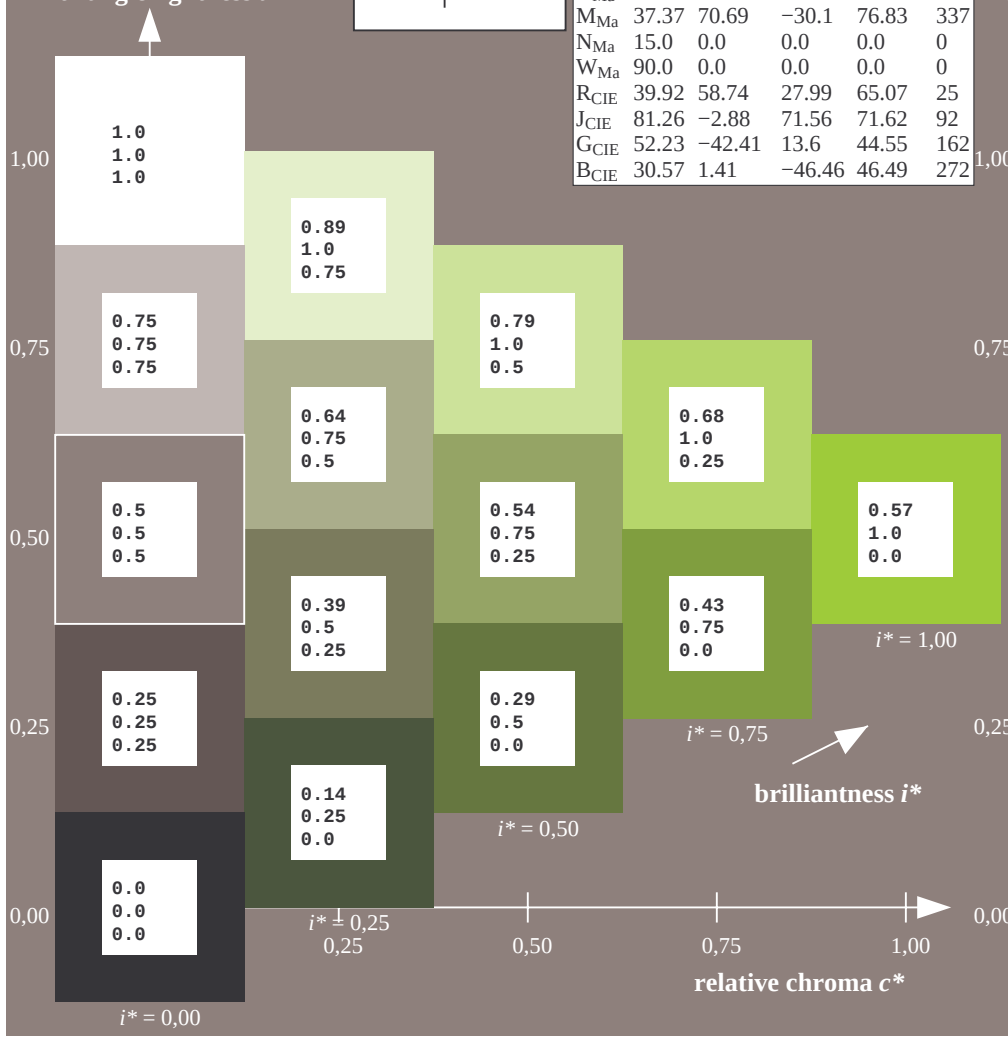
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 67 −26 75
$LAB^*LCH^*_{Ma}$: 67 79 110
$lab^*rgb^*_{Ma}$: 0.75 1.0 0.0
$lab^*olv^*_{Ma}$: 0.57 1.0 0.0
triangle lightness t^*

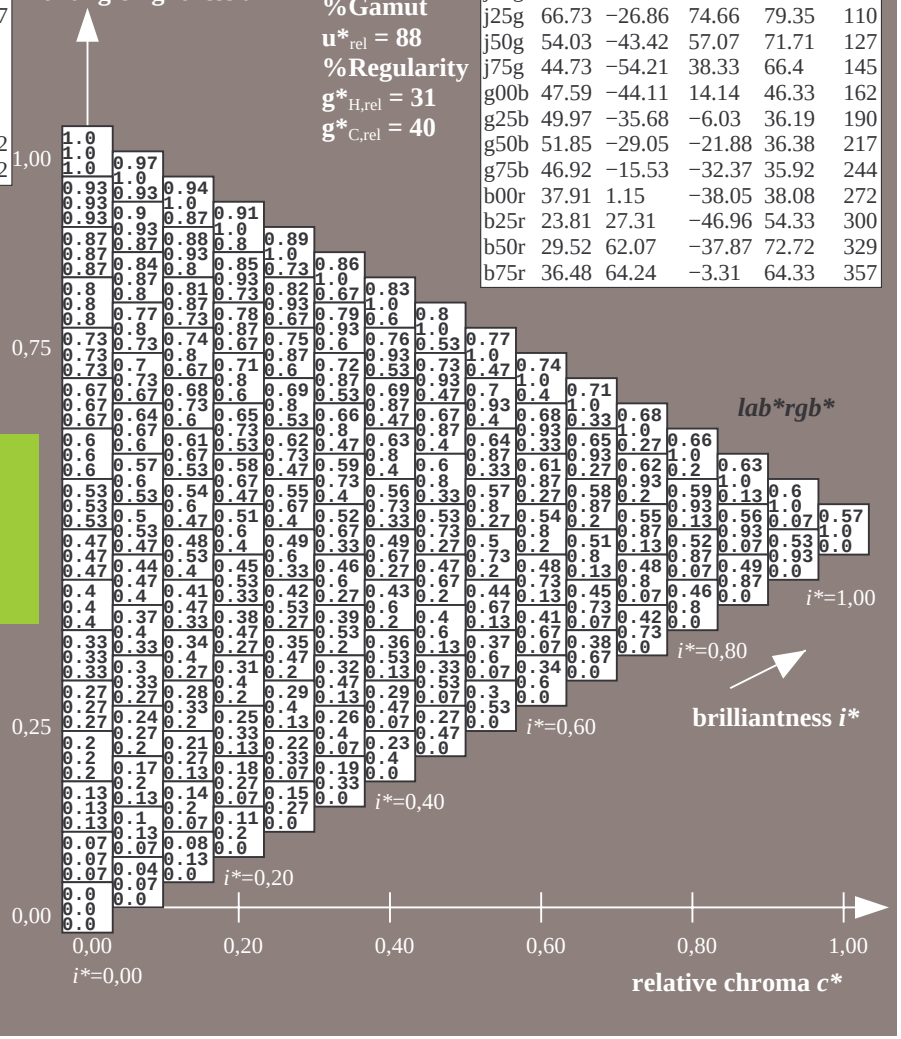
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j25g$
lab^*rgb^*

FRS15_90a; adapted (a) CIELAB data

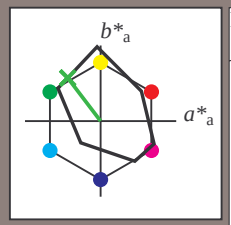
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





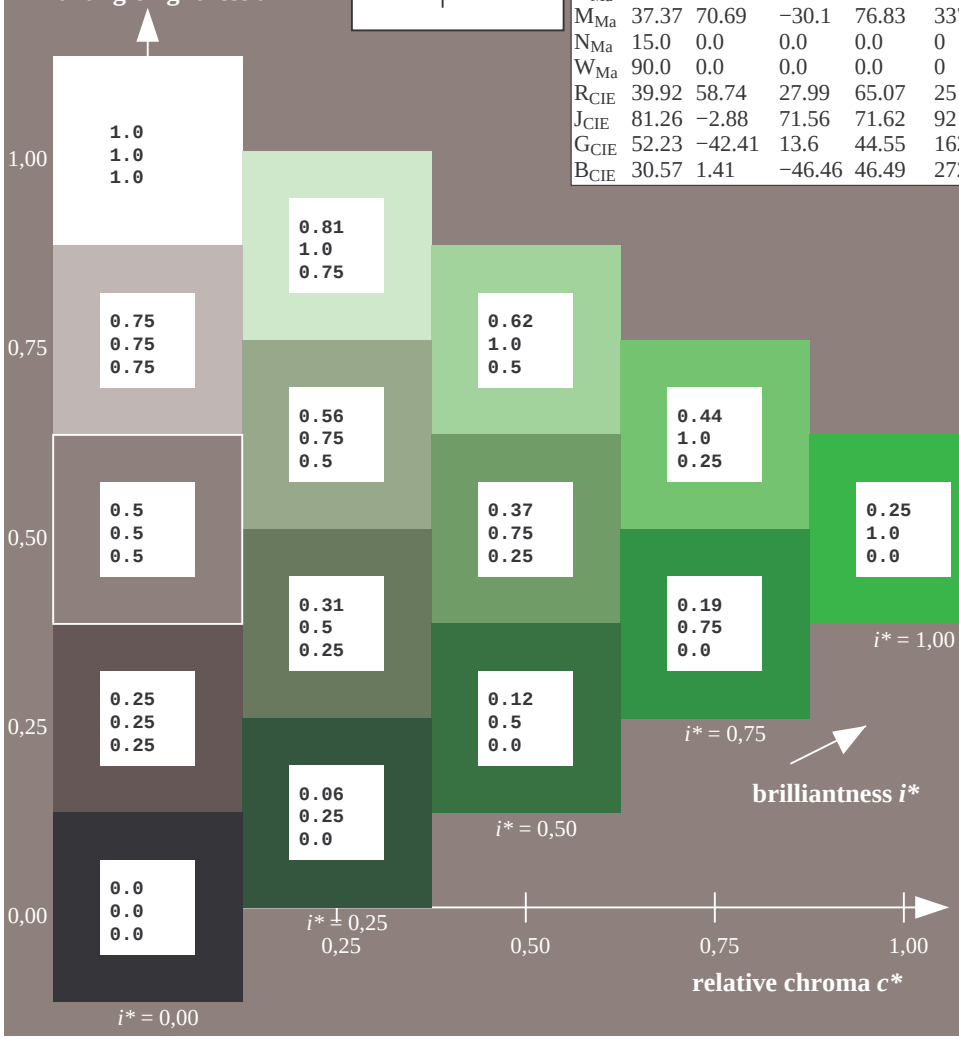
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j50g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



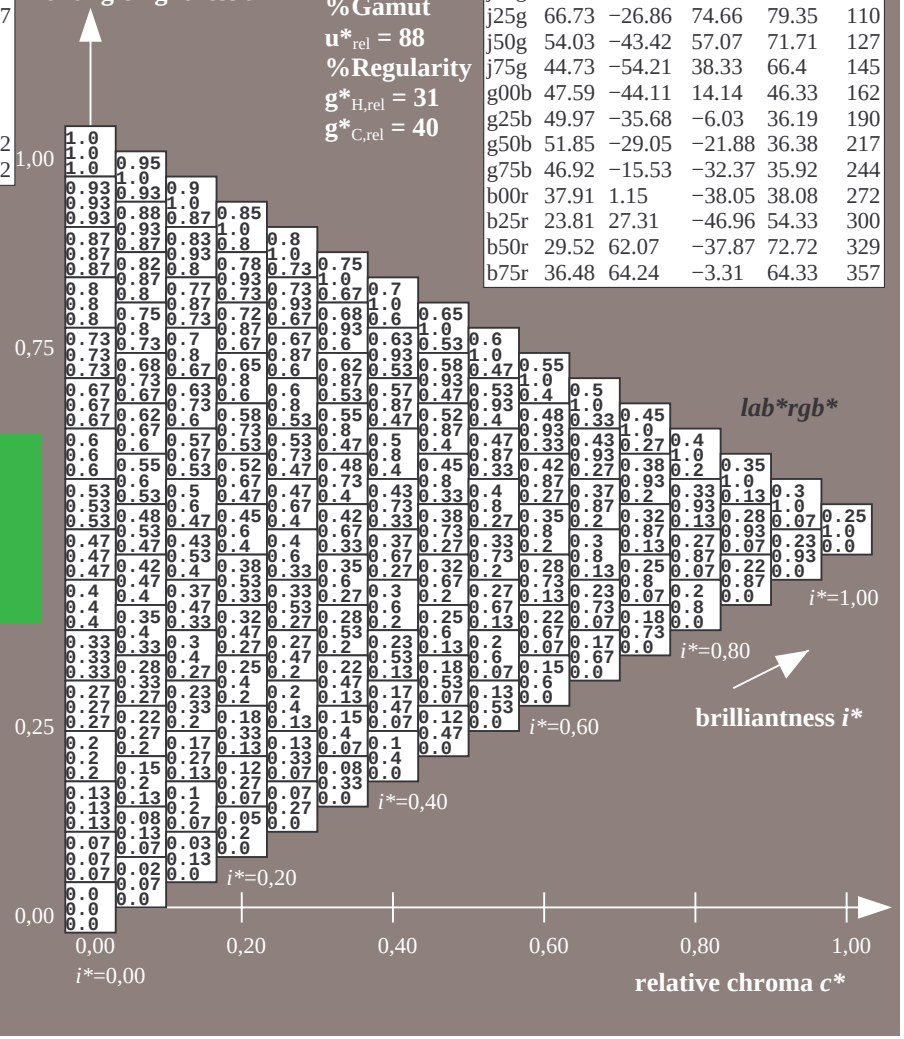
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 54 −42 57
*LAB*LCH**$_{Ma}$: 54 72 127
*lab*rgb**$_{Ma}$: 0.5 1.0 0.0
*lab*olv**$_{Ma}$: 0.25 1.0 0.0
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = j50g
lab*rgb*

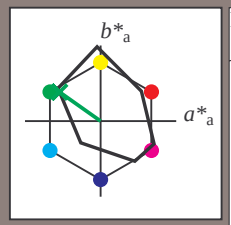
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

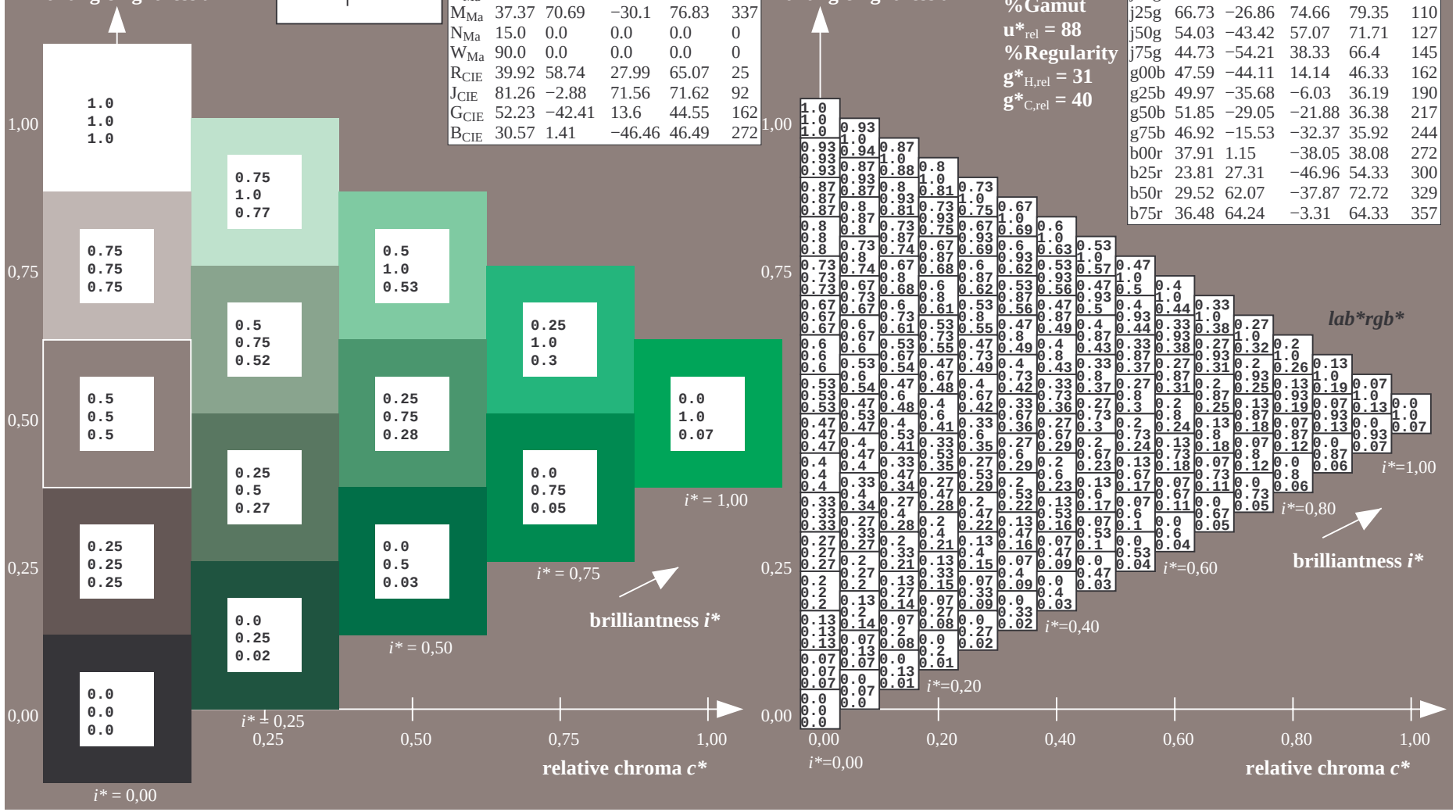
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 45 −53 38**
***LAB*LCH*$_{Ma}$*: 45 66 145**
***lab*rgb*$_{Ma}$*: 0.25 1.0 0.0**
***lab*olv*$_{Ma}$*: 0.0 1.0 0.07**
triangle lightness *t**

u* = j75g
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

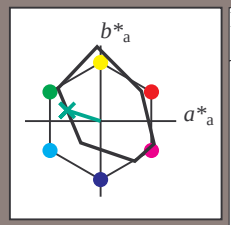
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



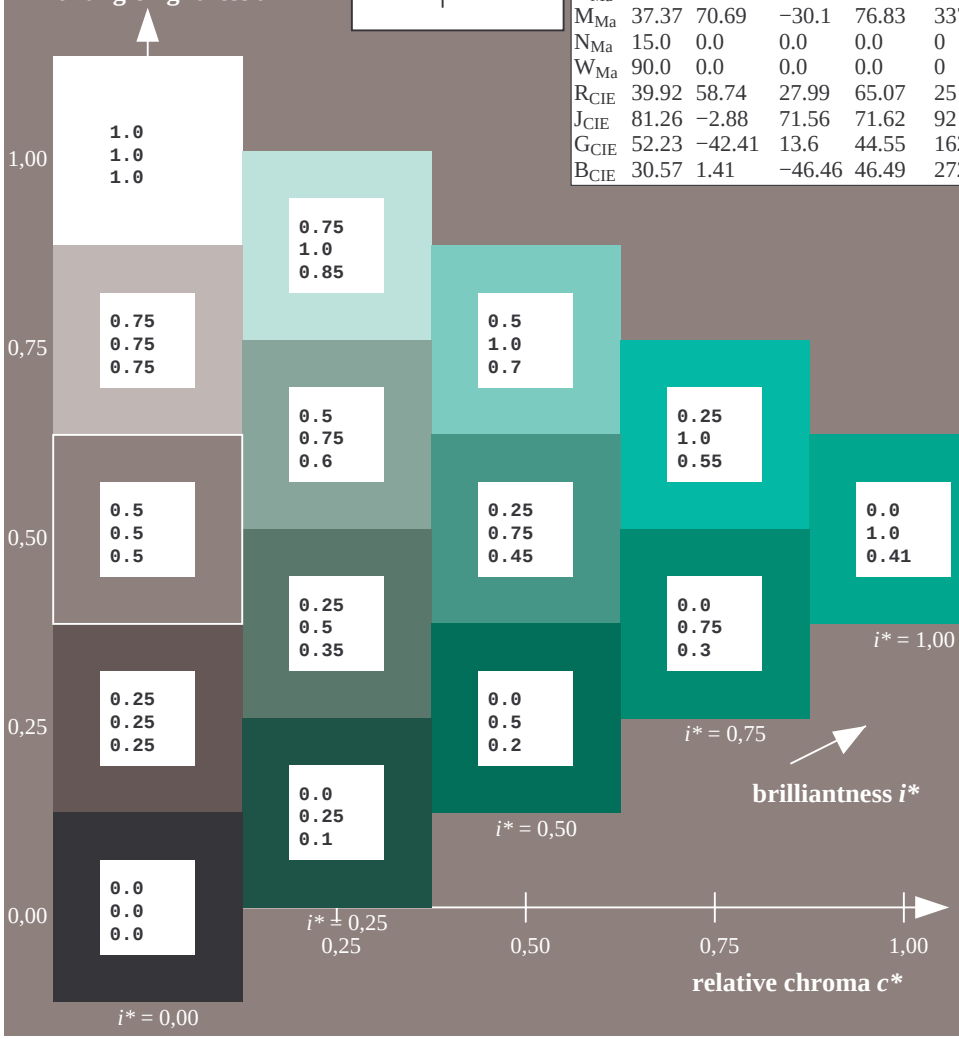
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = g00b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



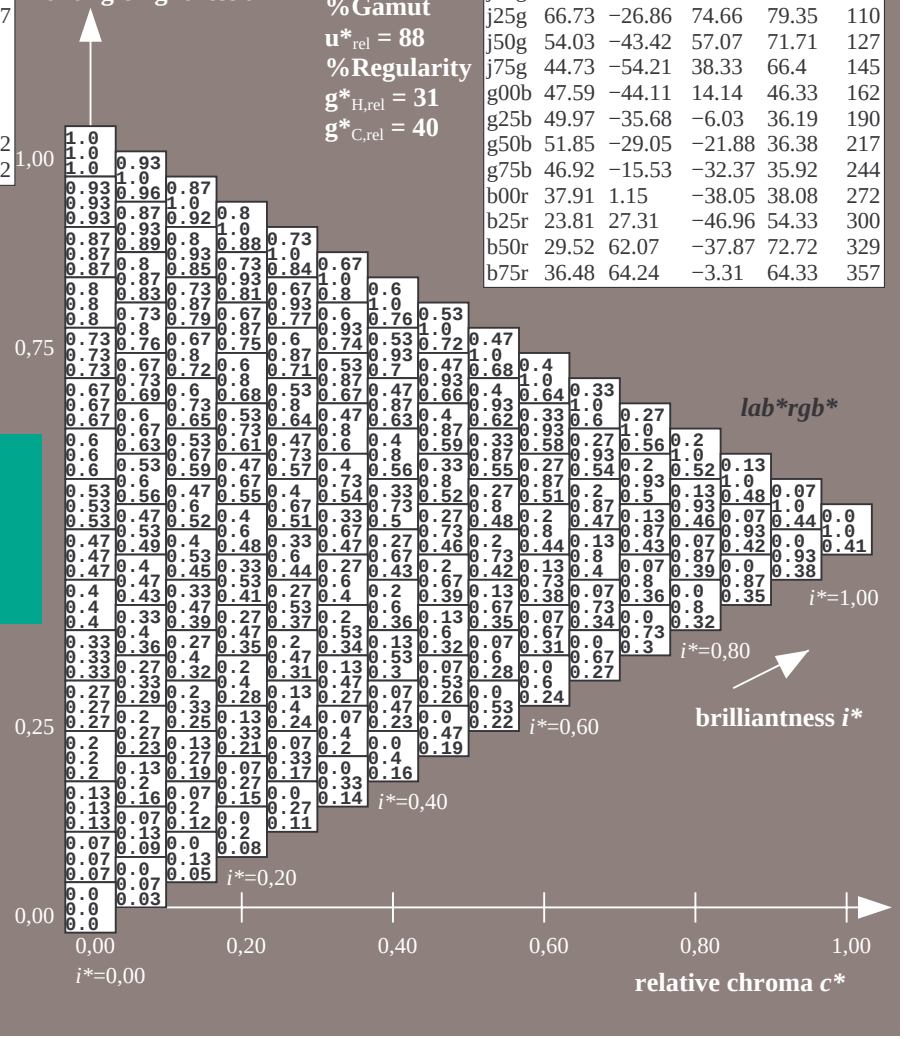
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 48 −43 14
$LAB^*LCH^*_{Ma}$: 48 46 162
$lab^*rgb^*_{Ma}$: 0.0 1.0 0.0
$lab^*olv^*_{Ma}$: 0.0 1.0 0.41
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = g00b$
lab^*rgb^*

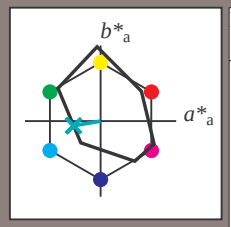
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



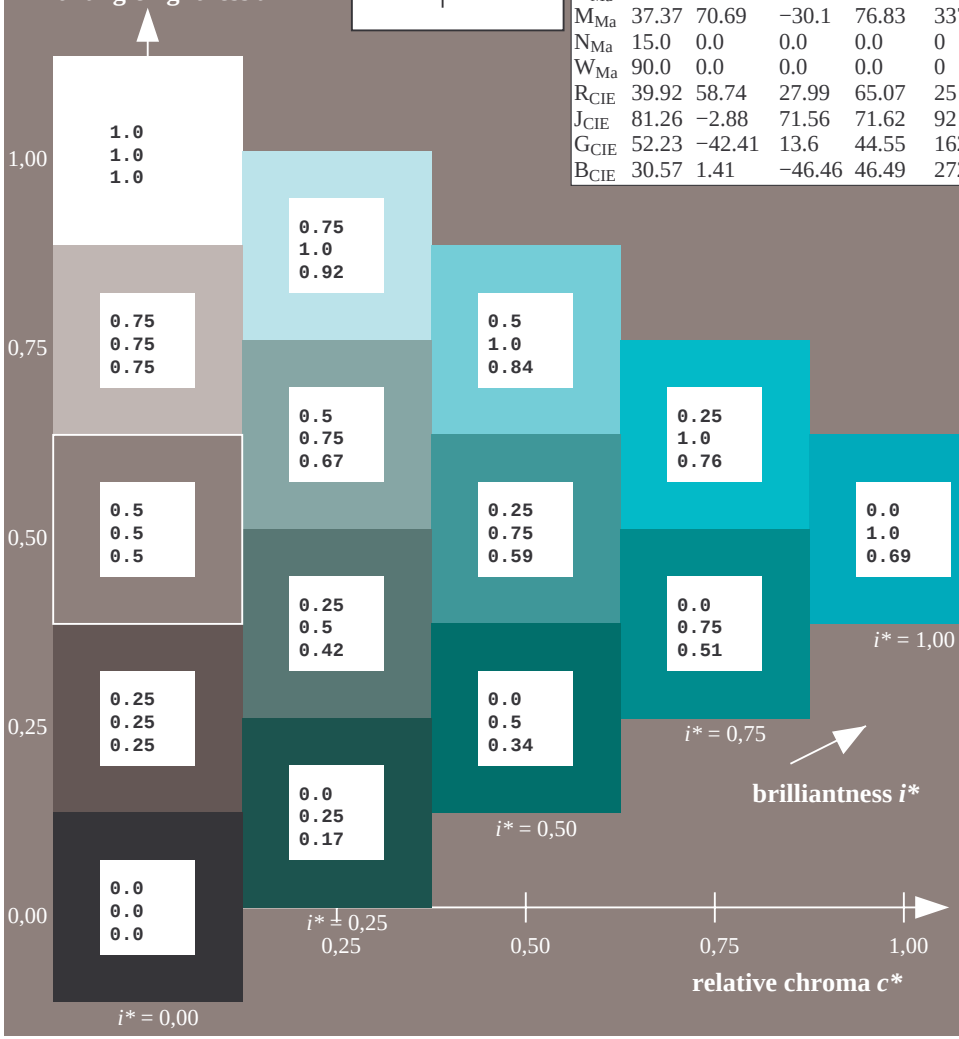
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g25b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



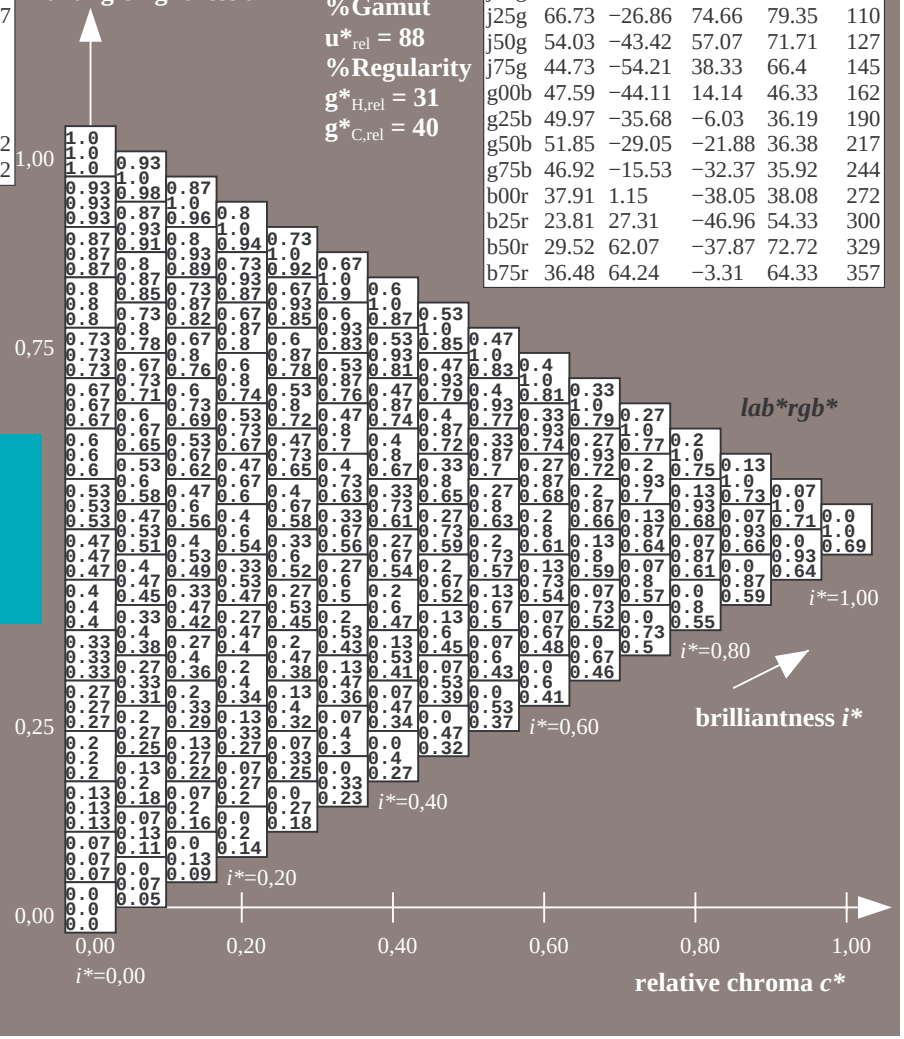
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 50 −35 −5**
***LAB*LCH*$_{Ma}$*: 50 36 190**
***lab*rgb*$_{Ma}$*: 0.0 1.0 0.5**
***lab*olv*$_{Ma}$*: 0.0 1.0 0.69**
triangle lightness *t**

u* = g25b
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

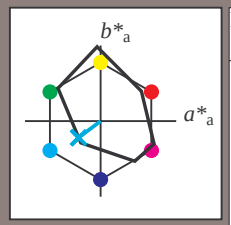
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



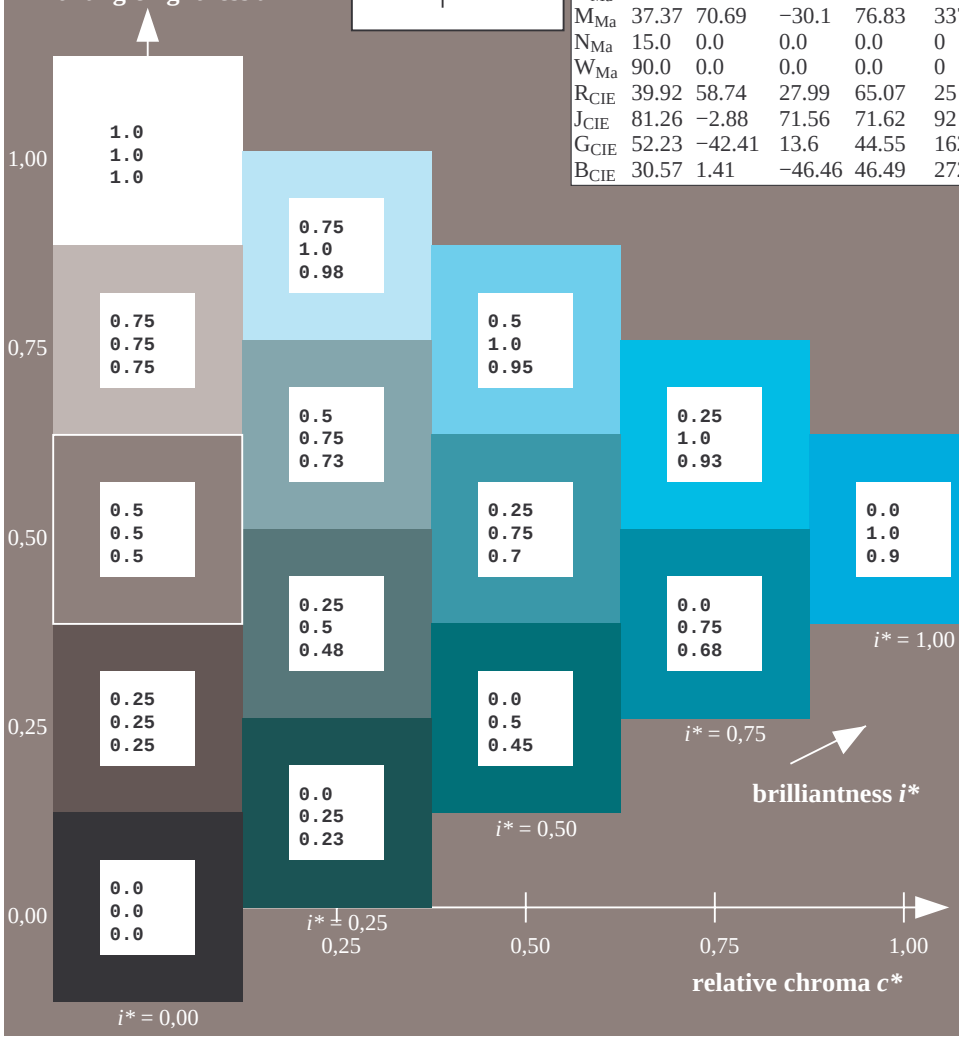
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g50b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



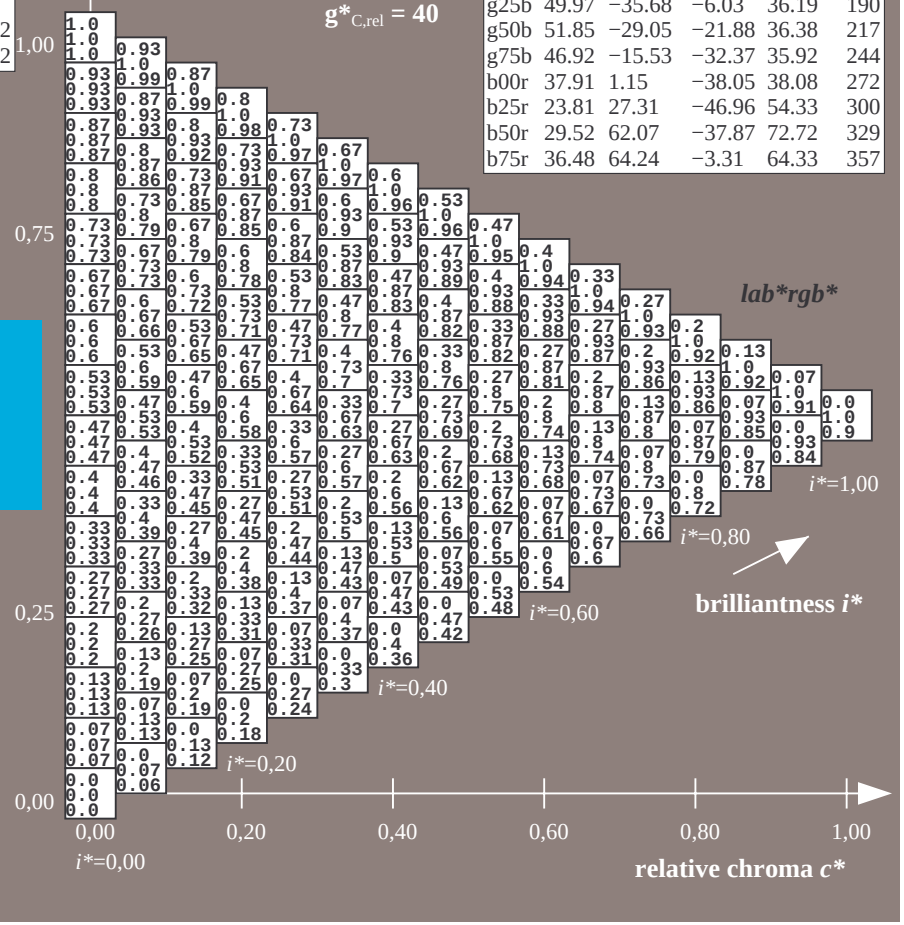
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 52 −28 −21**
***LAB*LCH*Ma*: 52 36 217**
***lab*rgb*Ma*: 0.0 1.0 1.0**
***lab*olv*Ma*: 0.0 1.0 0.9**
triangle lightness *t**

u* = g50b
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

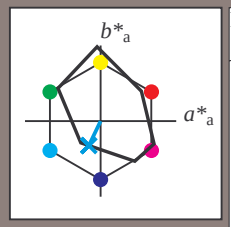
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



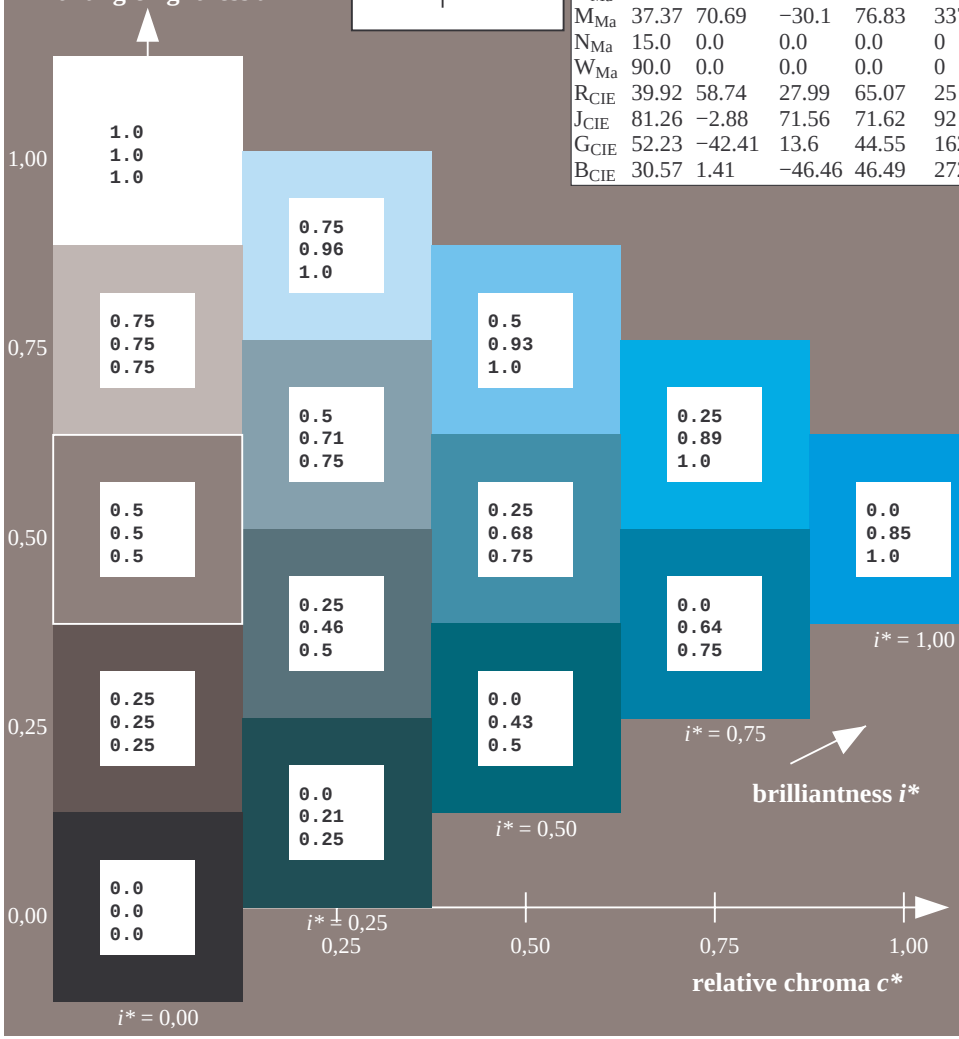
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g75b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



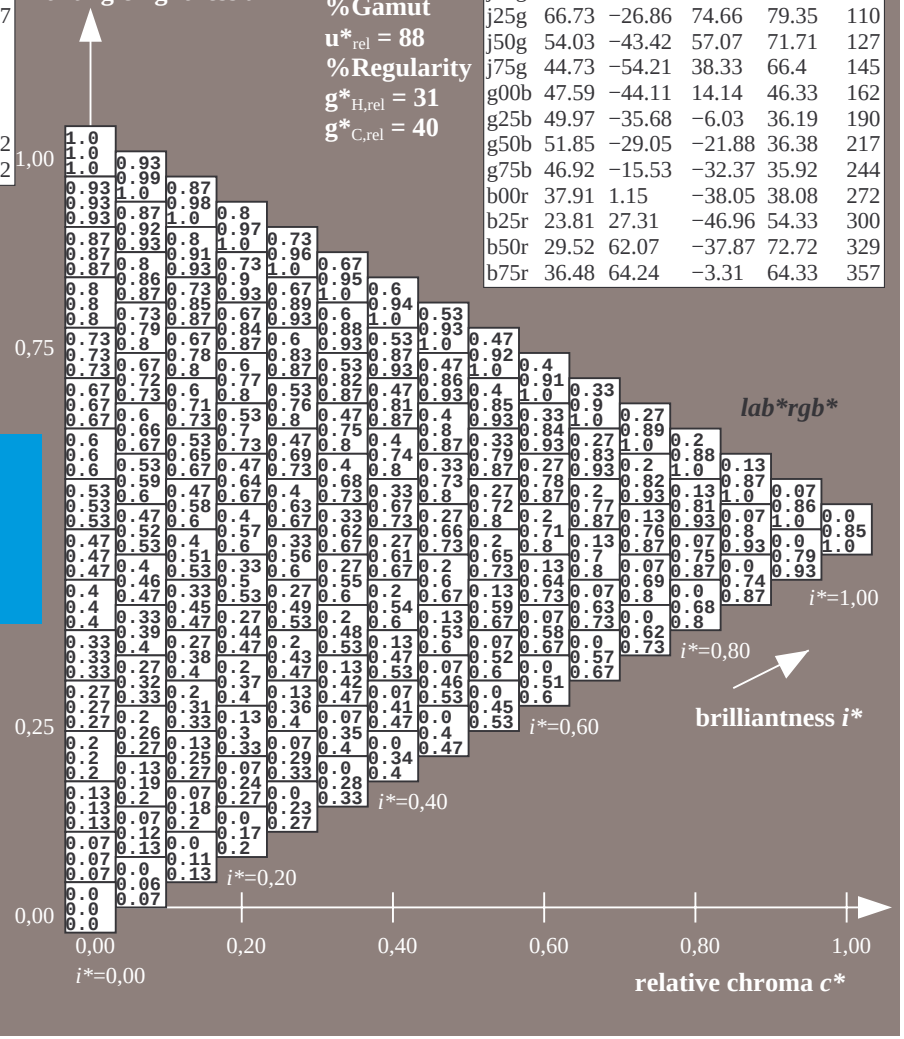
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 47 −15 −31
*LAB*LCH**$_{Ma}$: 47 36 244
*lab*rgb**$_{Ma}$: 0.0 0.5 1.0
*lab*olv**$_{Ma}$: 0.0 0.85 1.0
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = g75b*
*lab*rgb**

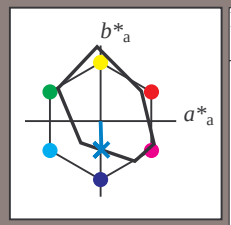
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



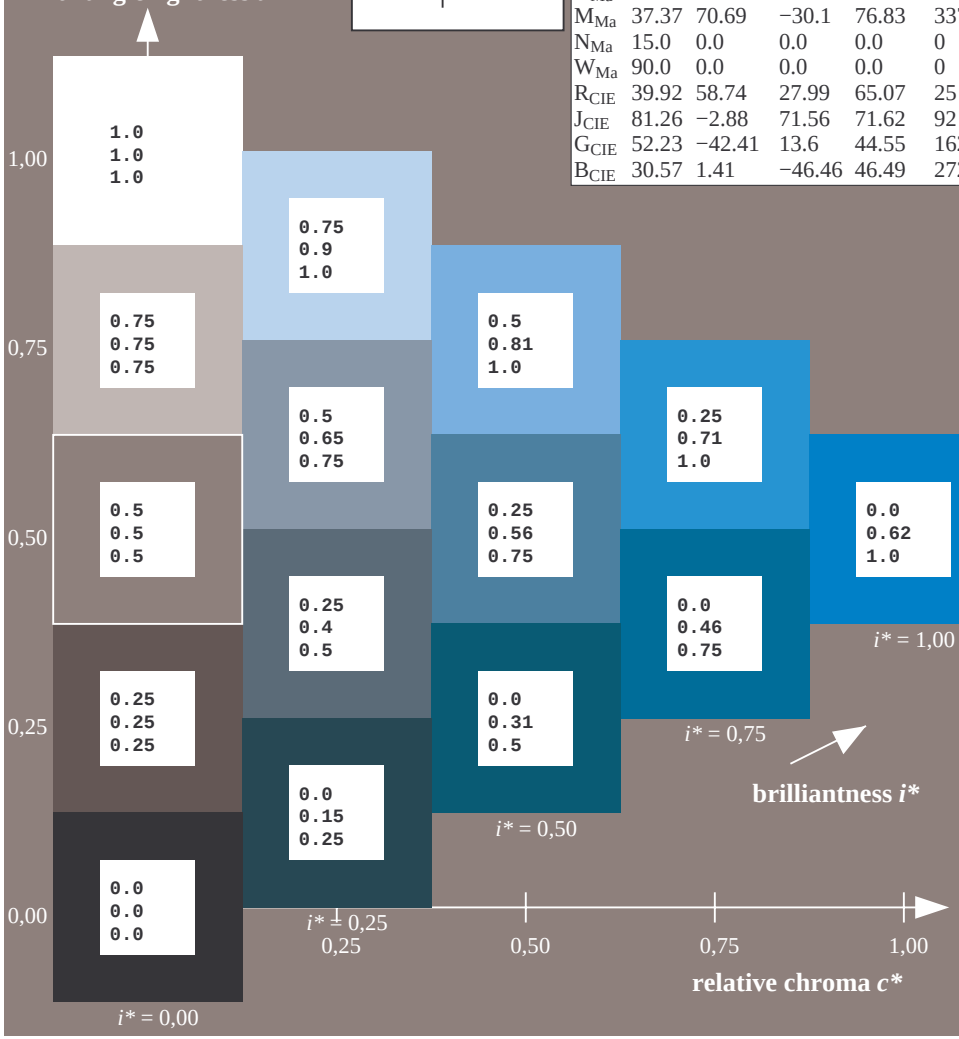
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b00r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



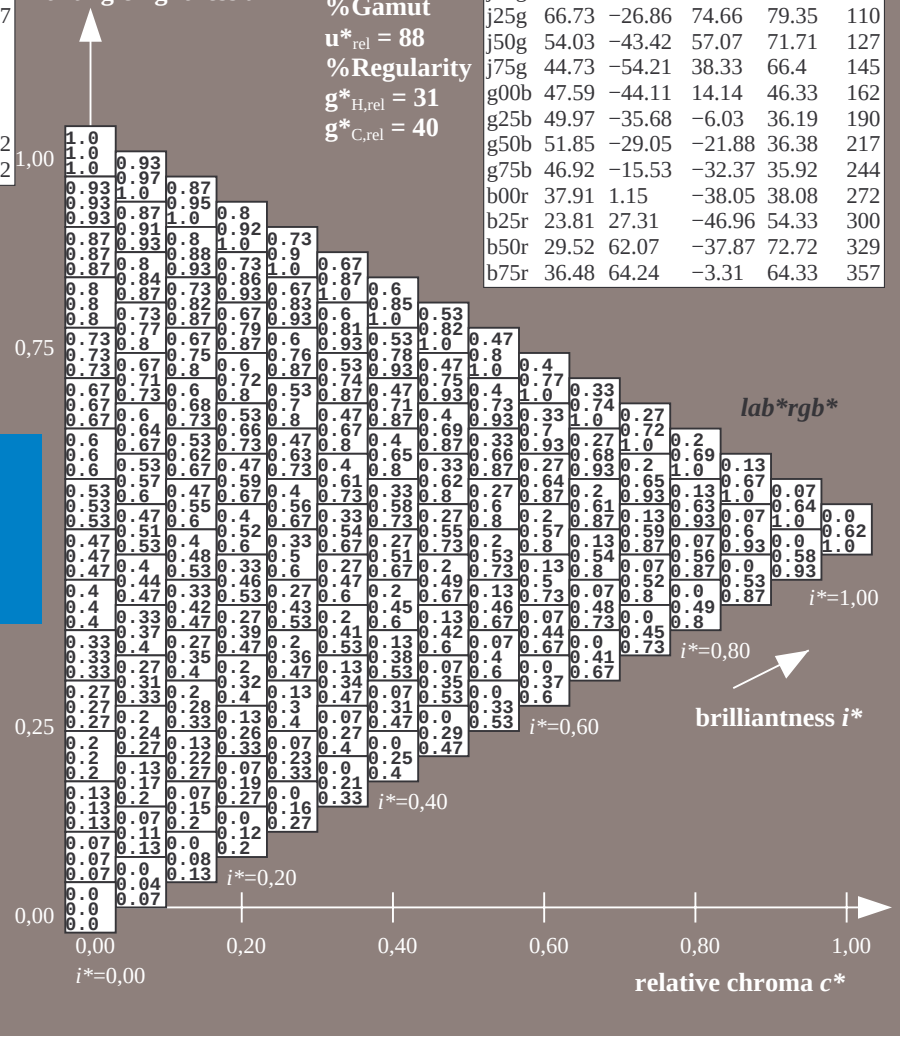
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 38 1 −37
*LAB*LCH**$_{Ma}$: 38 38 272
*lab*rgb**$_{Ma}$: 0.0 0.0 1.0
*lab*olv**$_{Ma}$: 0.0 0.62 1.0
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = b00r*
*lab*rgb**

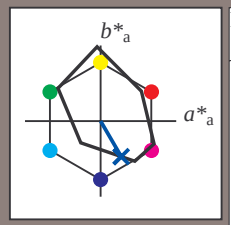
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

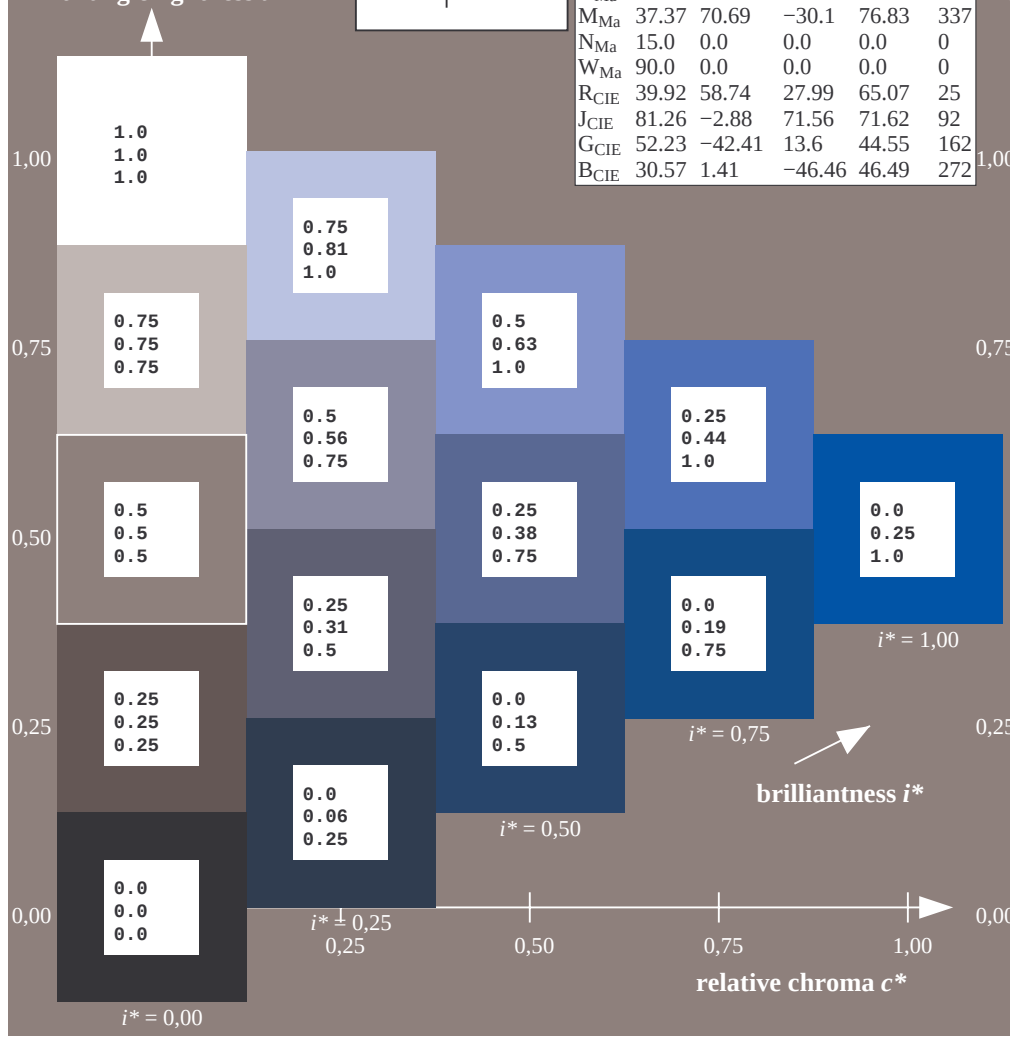
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

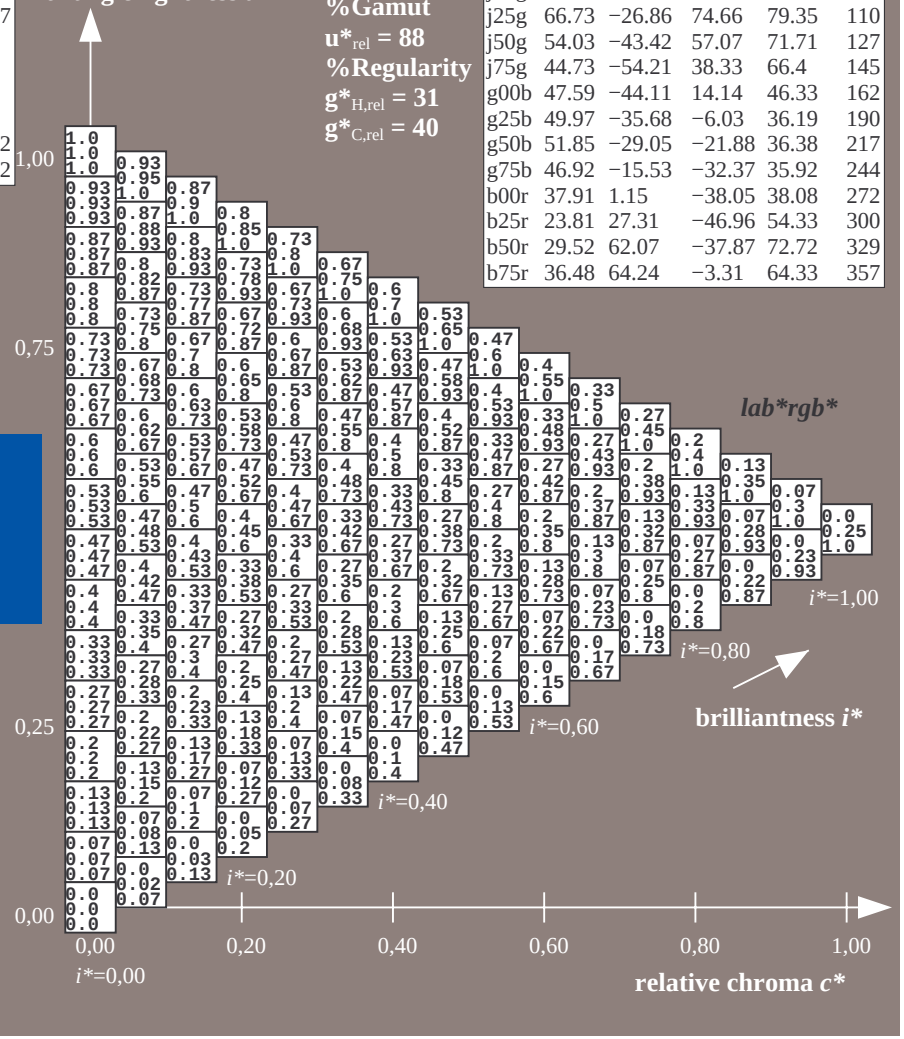
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 24 27 −46**
***LAB*LCH*Ma*: 24 54 300**
***lab*rgb*Ma*: 0.5 0.0 1.0**
***lab*olv*Ma*: 0.0 0.25 1.0**

u* = b25r
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

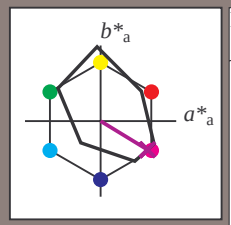
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





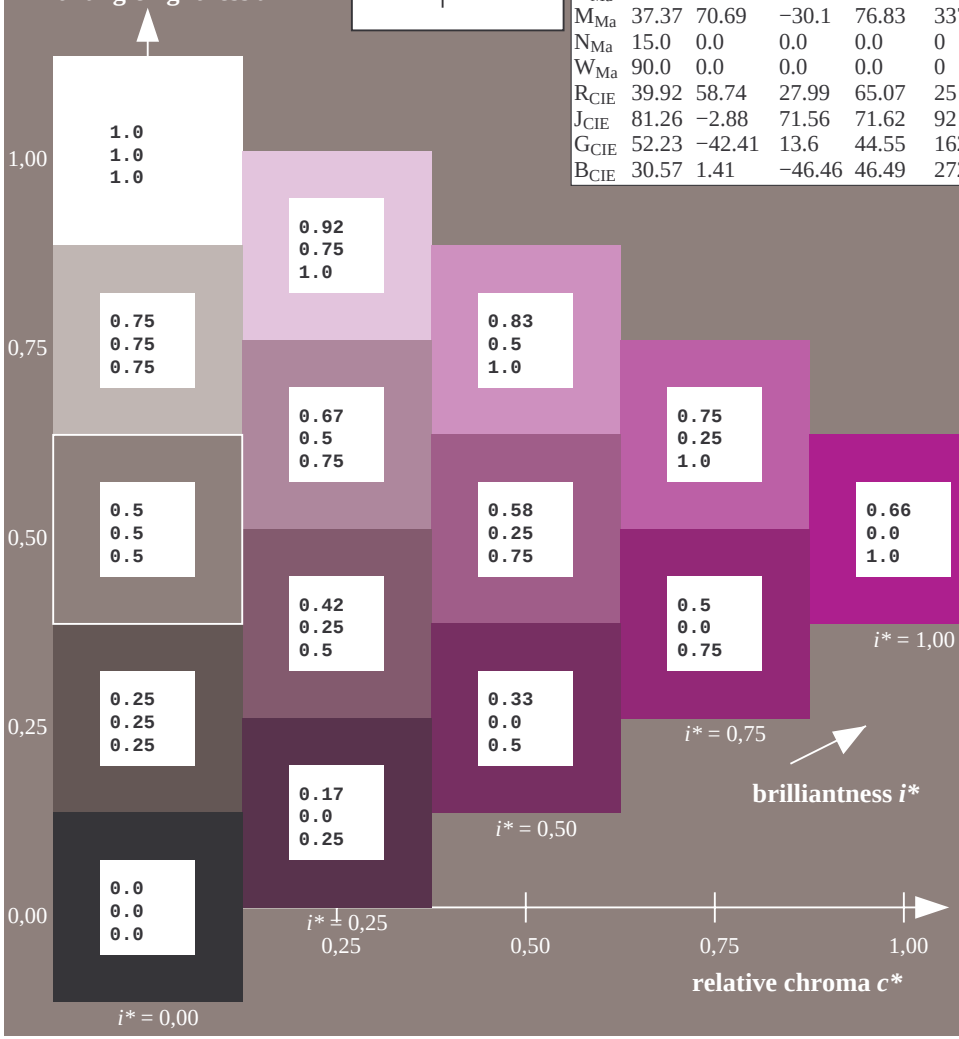
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b50r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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*: 30 62 −37**
***LAB*LCH*Ma*: 30 73 329**
***lab*rgb*Ma*: 1.0 0.0 1.0**
***lab*olv*Ma*: 0.66 0.0 1.0**

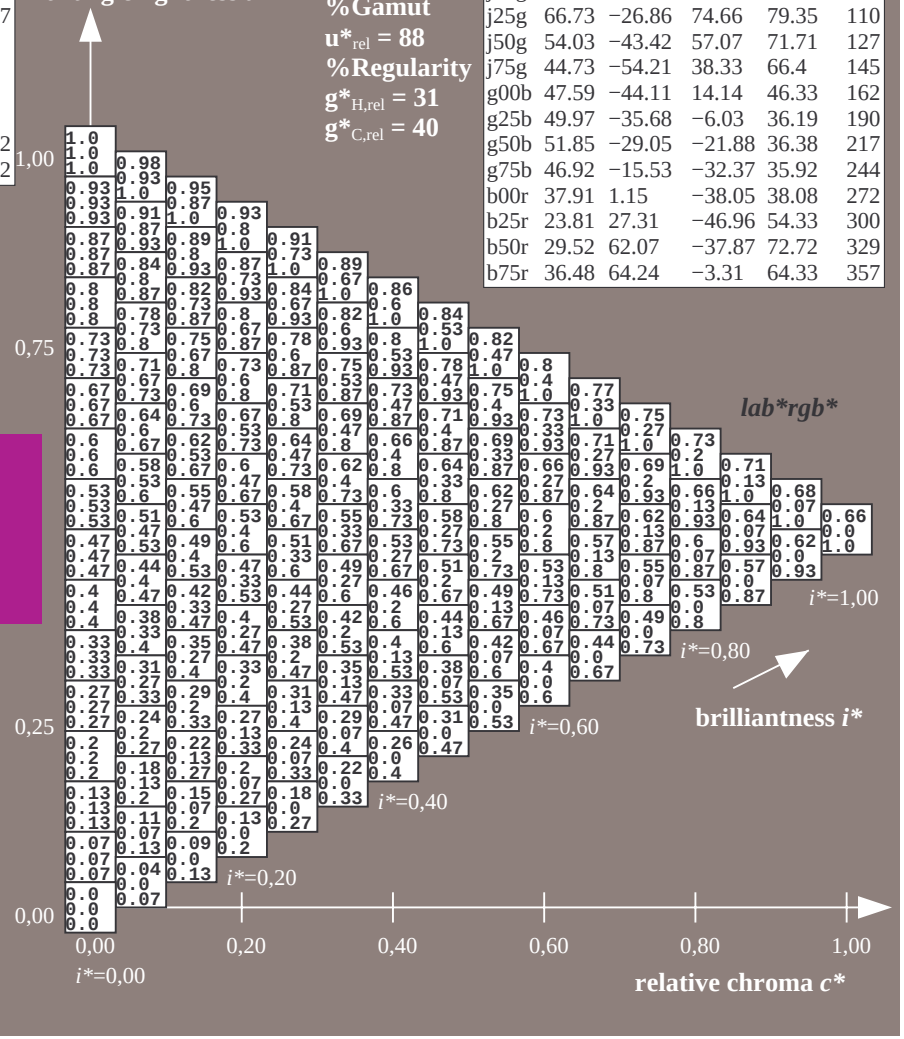
u* = b50r
lab*rgb*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

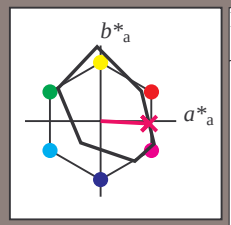
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



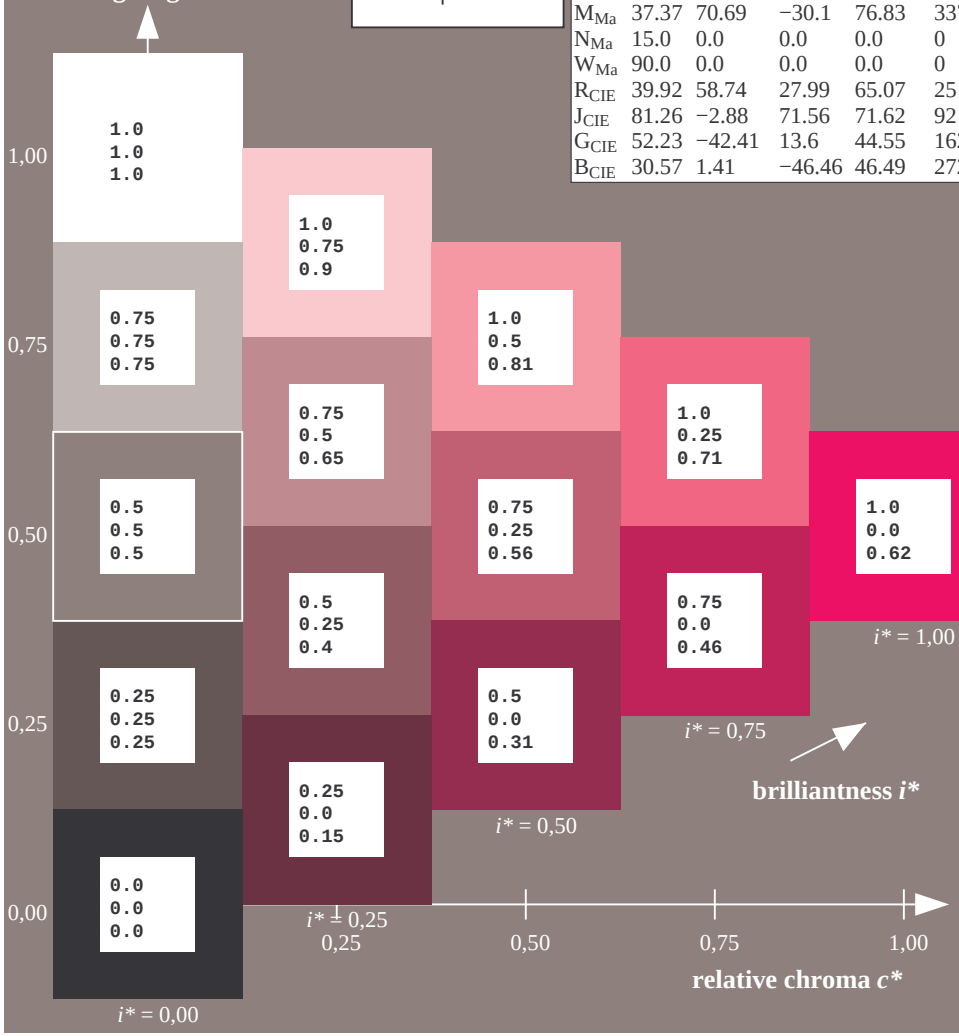
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b75r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



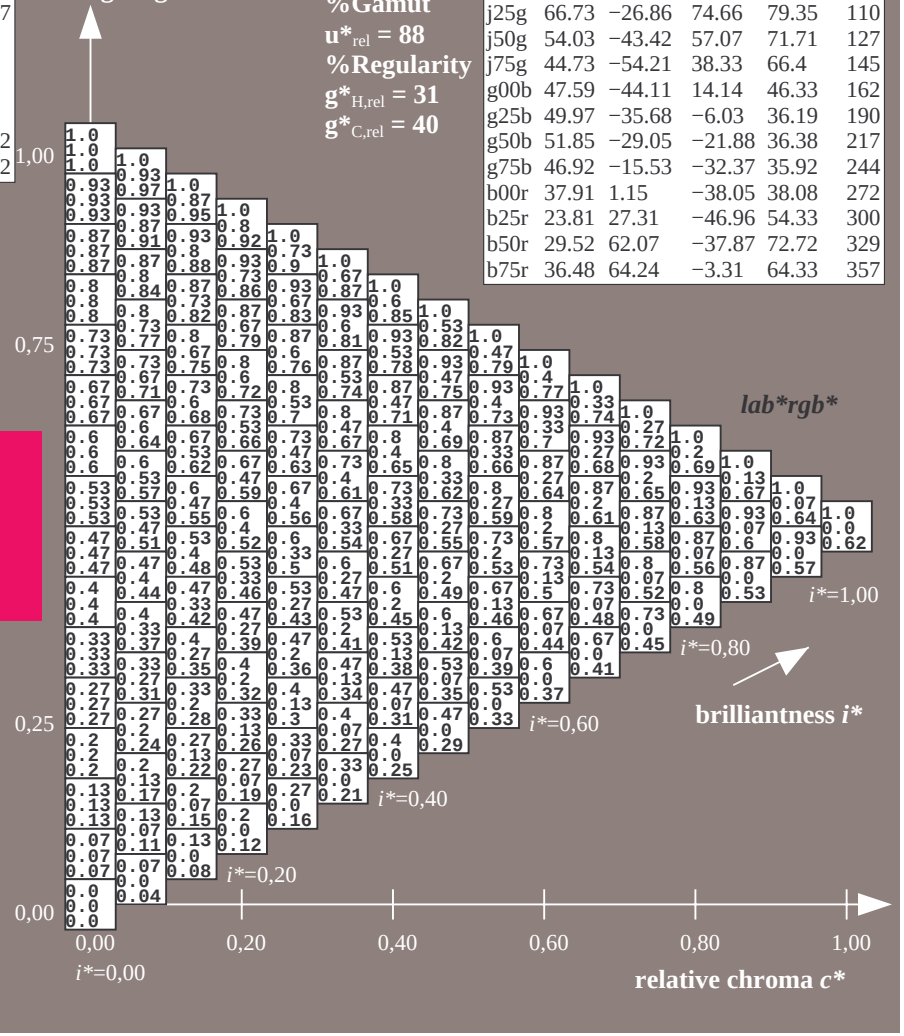
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 36 64 −2
*LAB*LCH**$_{Ma}$: 36 64 357
*lab*rgb**$_{Ma}$: 1.0 0.0 0.5
*lab*olv**$_{Ma}$: 1.0 0.0 0.62

u = b75r*
*lab*rgb**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

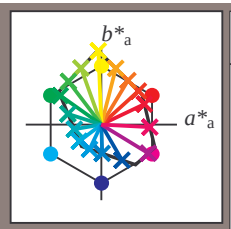


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	*lab*rgb**			
01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.13	0.13	0.13	0.13
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.25	0.25	0.25	0.25
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.25	0.25	0.25	0.25
04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.38	0.38	0.38	0.38
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.38	0.38	0.38	0.38
05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.5	0.5	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.5	0.5	0.5	0.5
06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.63	0.63	0.63	0.63
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.63	0.63	0.63	0.63
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.63	0.63	0.63	0.63
07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.75	0.75	0.75	0.75
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.75	0.75	0.75	0.75
08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.88	0.88	0.88	0.88
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.88	0.88	0.88	0.88
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.88	0.88	0.88	0.88
09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	1.0	1.0	1.0
10	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
11	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.07	0.07	0.07	0.07
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.07	0.07	0.07	0.07
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.07	0.07	0.07	0.07
12	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
13	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.2	0.2	0.2	0.2
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.2	0.2	0.2	0.2
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.2	0.2	0.2	0.2
14	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.27	0.27	0.27	0.27
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.27	0.27	0.27	0.27
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.27	0.27	0.27	0.27
15	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.33	0.33	0.33	0.33
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.33	0.33	0.33	0.33
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.33	0.33	0.33	0.33
16	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.4	0.4	0.4	0.4
17	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.47	0.47	0.47	0.47
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.47	0.47	0.47	0.47
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.47	0.47	0.47	0.47
18	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.53	0.53	0.53
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.53	0.53	0.53
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.53	0.53	0.53	0.53
19	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.6	0.6	0.6	0.6
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.6	0.6	0.6	0.6
20	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.67	0.67	0.67	0.67
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.67	0.67	0.67	0.67
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.67	0.67	0.67	0.67
21	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.73	0.73	0.73	0.73
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.73	0.73	0.73	0.73
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.73	0.73	0.73	0.73
22	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.8	0.8	0.8	0.8
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
c_R **= 0.9**

FRS15_90a; adapted (a) CIELAB data

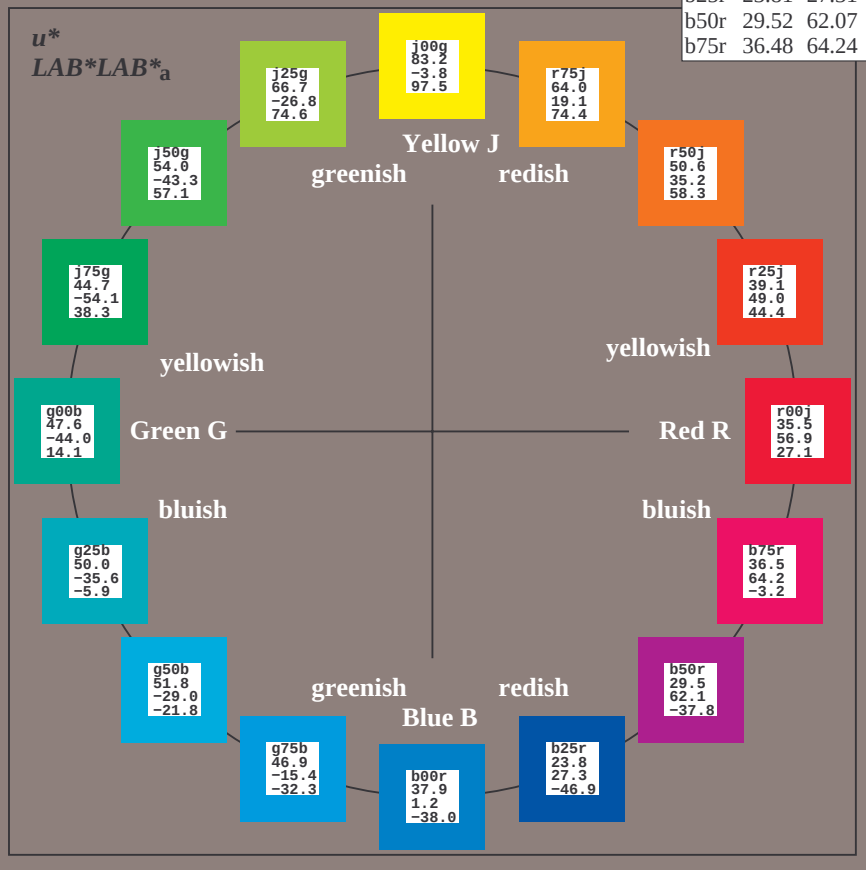
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

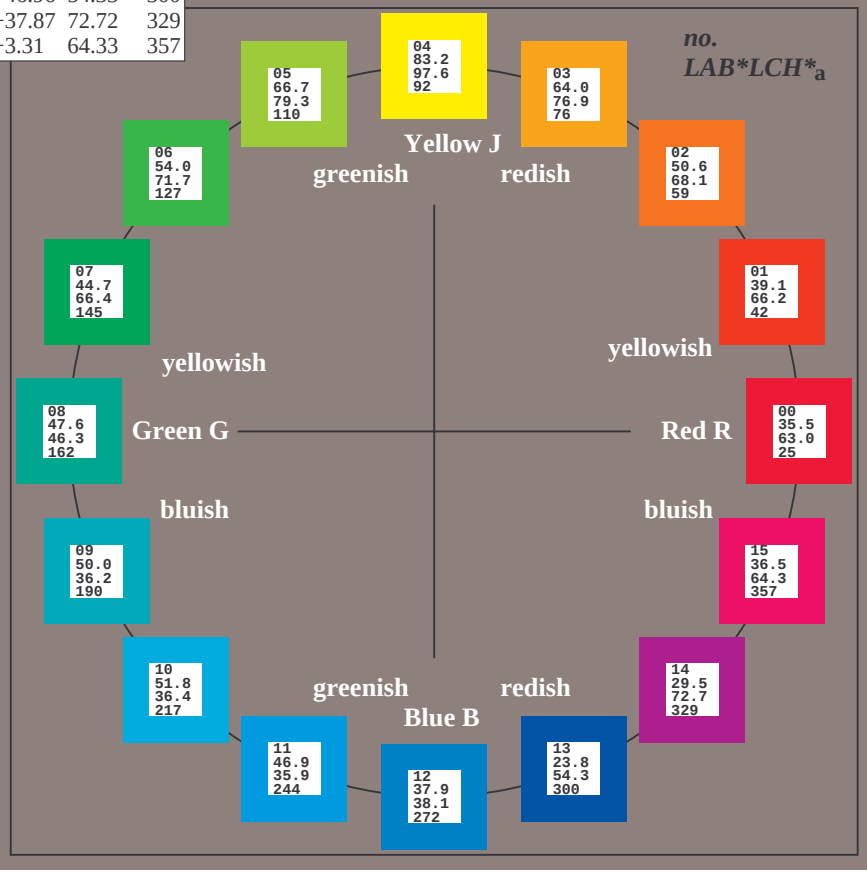


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

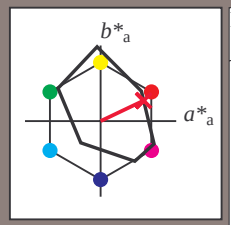




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

$u^* = r00j$
$LAB^*LAB^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = r00j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



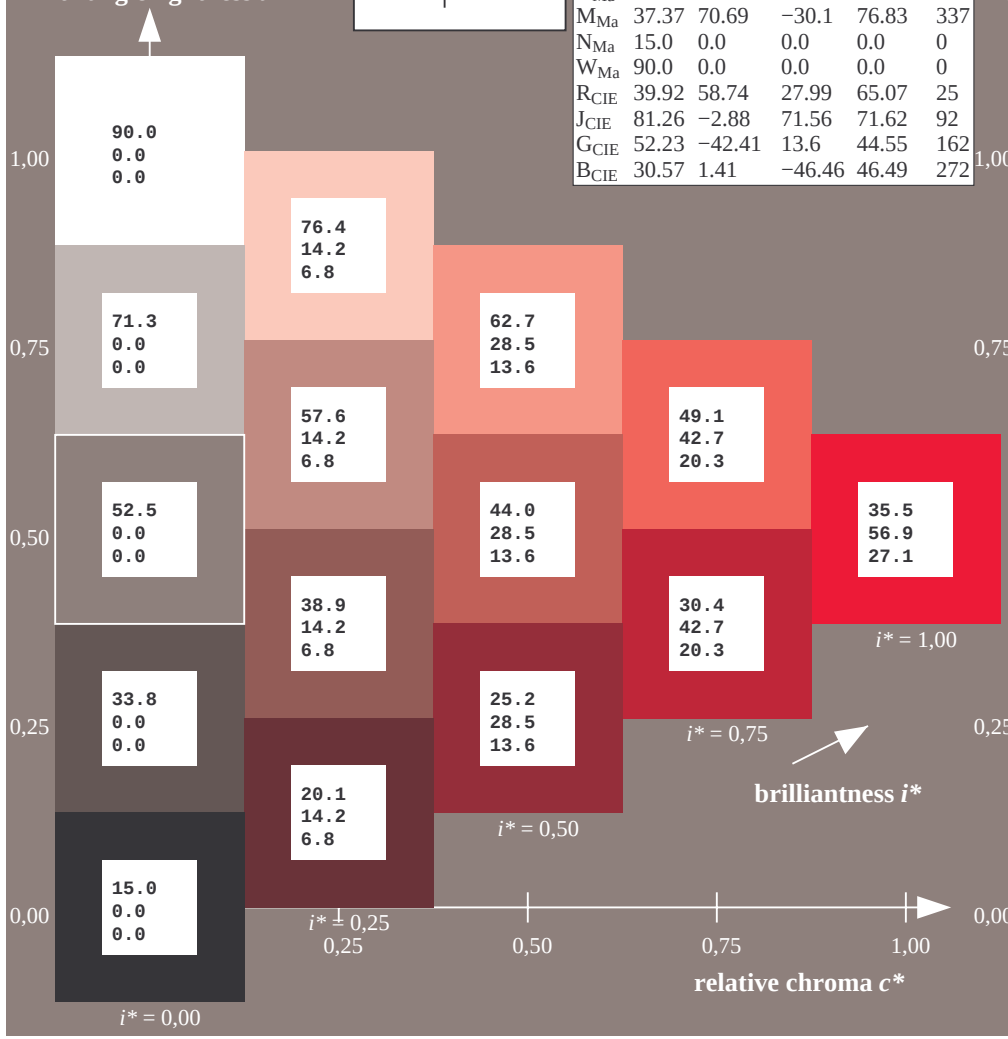
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

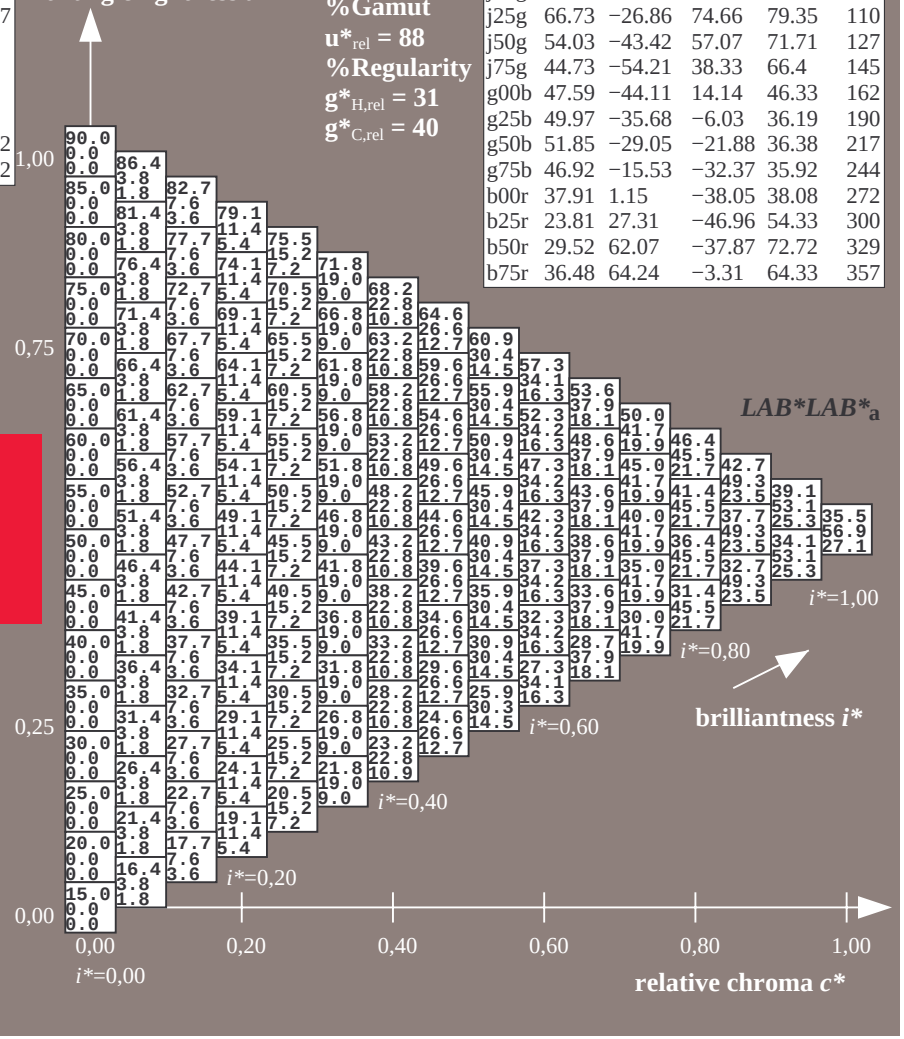
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 35 57 27**
***LAB*LCH**$_{Ma}$: 35 63 25**
***lab*rgb**$_{Ma}$: 1.0 0.0 0.0**
***lab*olv**$_{Ma}$: 1.0 0.0 0.18**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

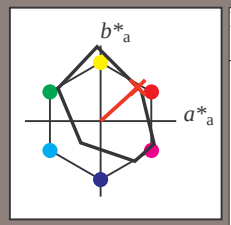


%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

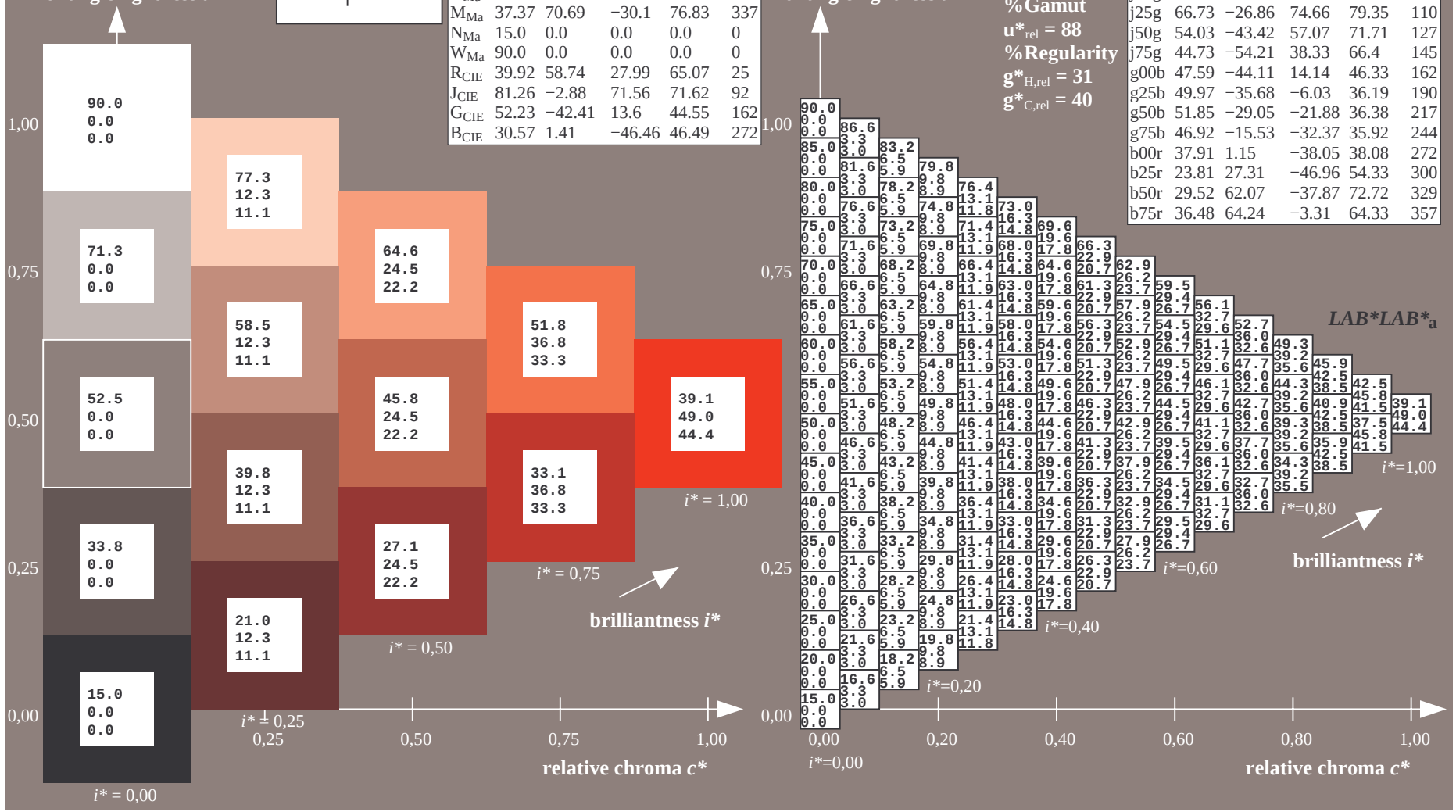
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 39 49 44**
***LAB*LCH*$_{Ma}$*: 39 66 42**
***lab*rgb*$_{Ma}$*: 1.0 0.25 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.08 0.0**

u* = r25j
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

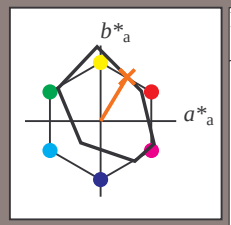
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

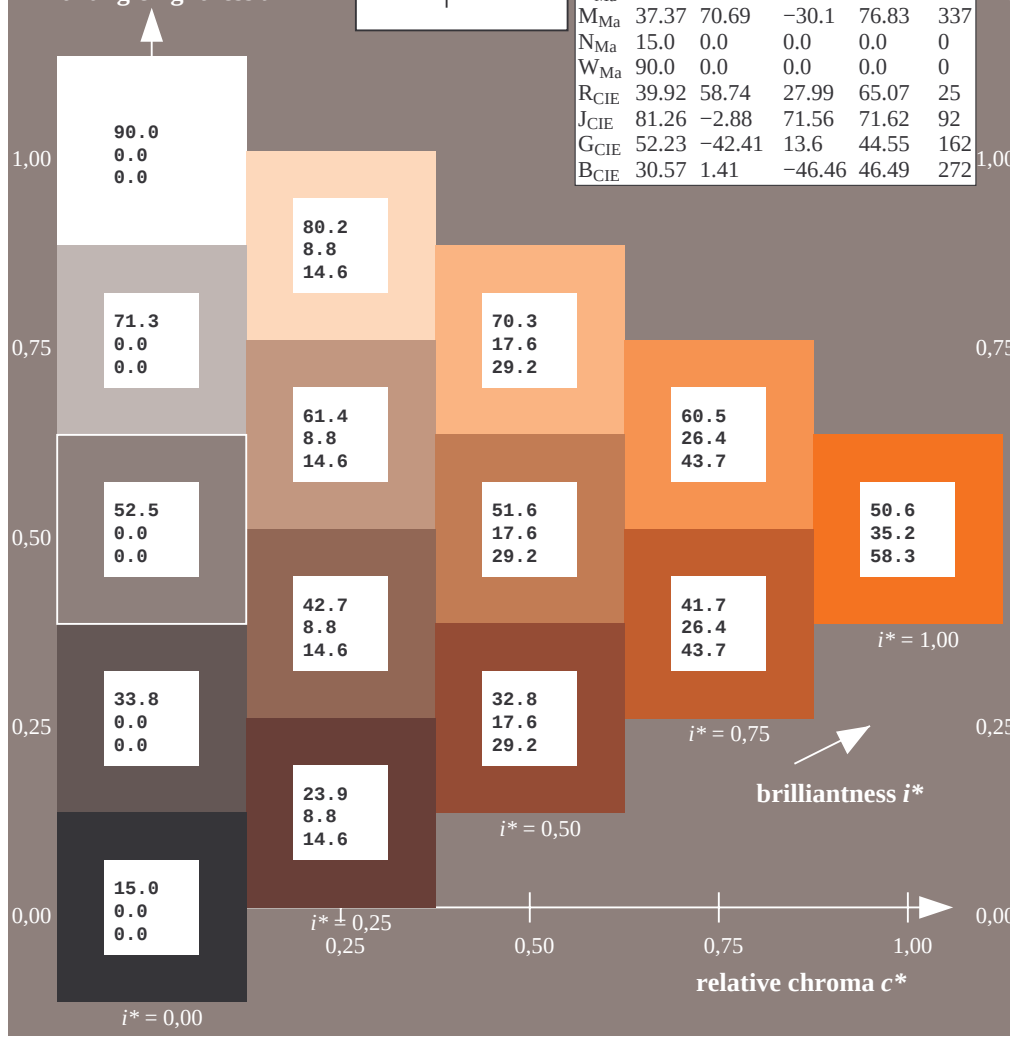
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

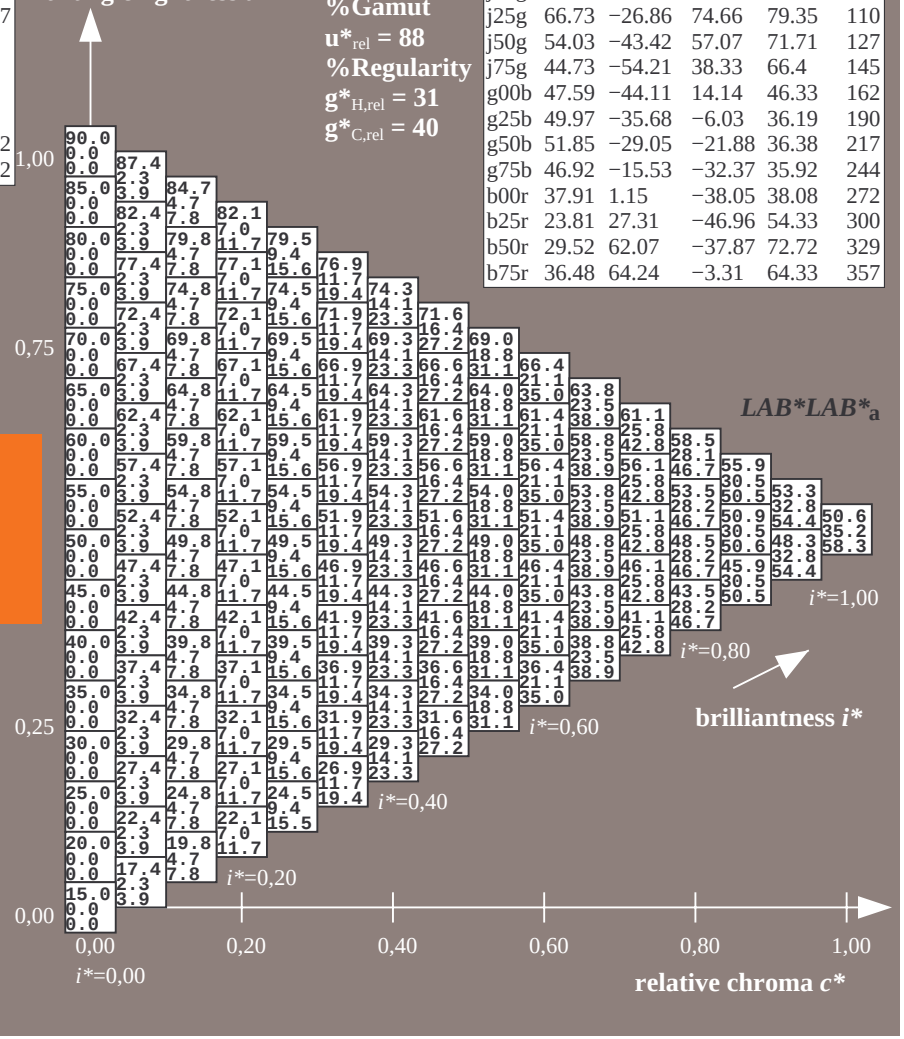
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 51 35 58**
***LAB*LCH*$_{Ma}$*: 51 68 59**
***lab*rgb*$_{Ma}$*: 1.0 0.5 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.32 0.0**
triangle lightness *t**

u* = r50j
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

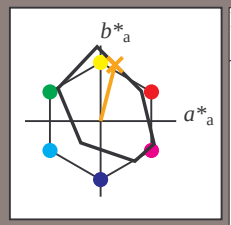
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r75j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

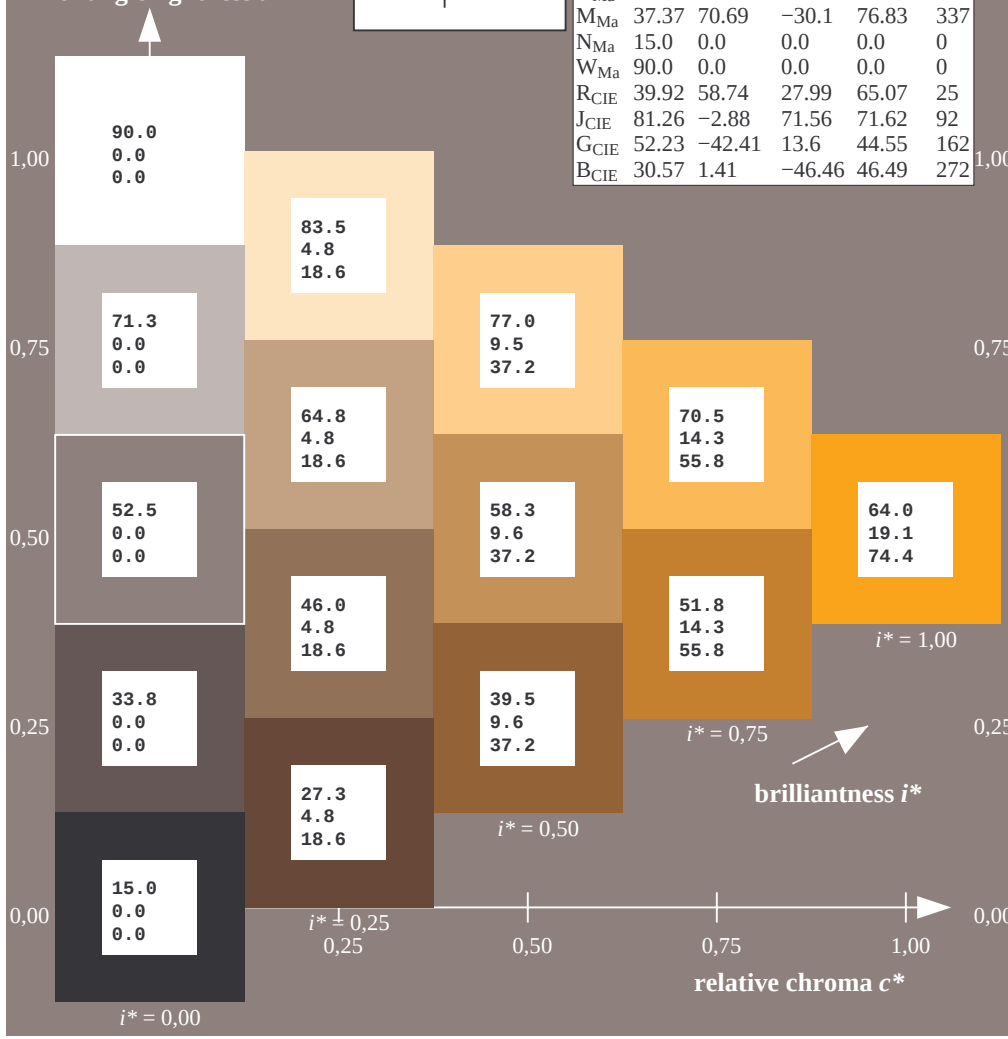
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 64 19 74**
***LAB*LCH*$_{Ma}$*: 64 77 76**
***lab*rgb*$_{Ma}$*: 1.0 0.75 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.59 0.0**
triangle lightness t^*

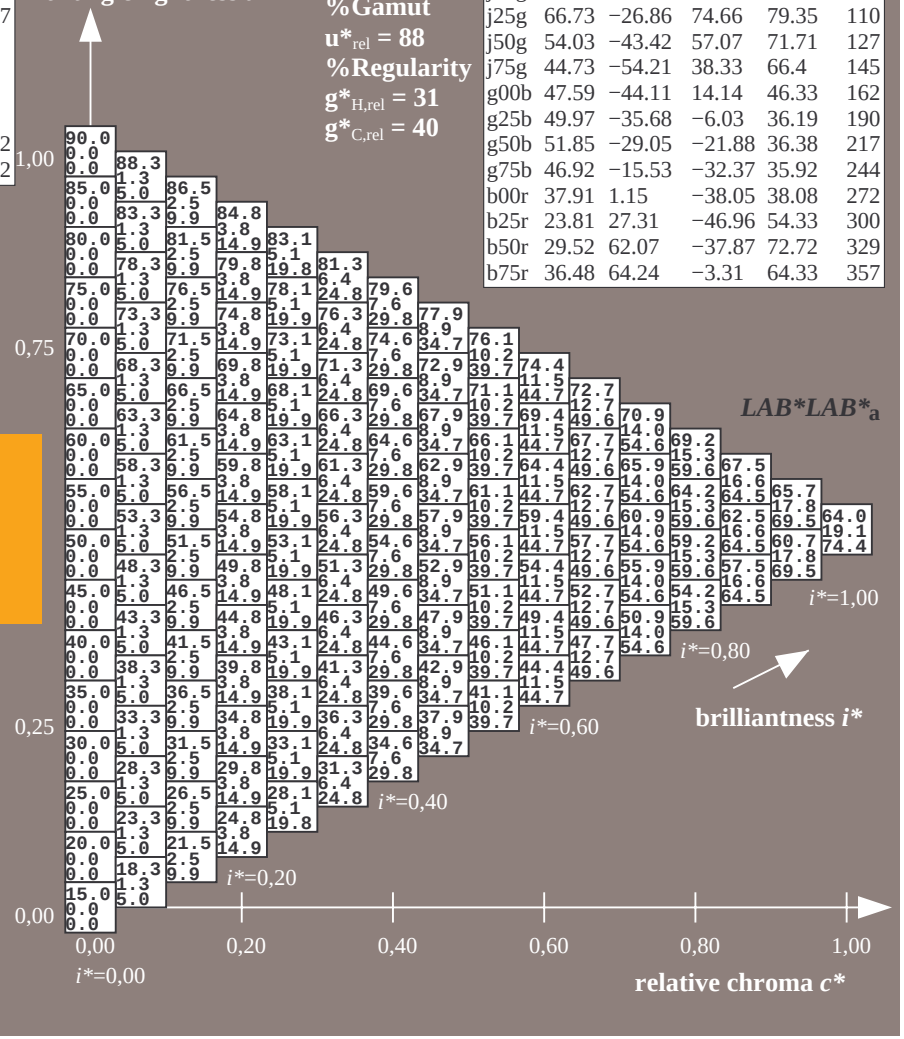
%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

$u^* = r75j$
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

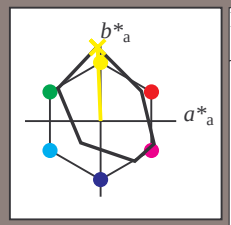
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j00g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

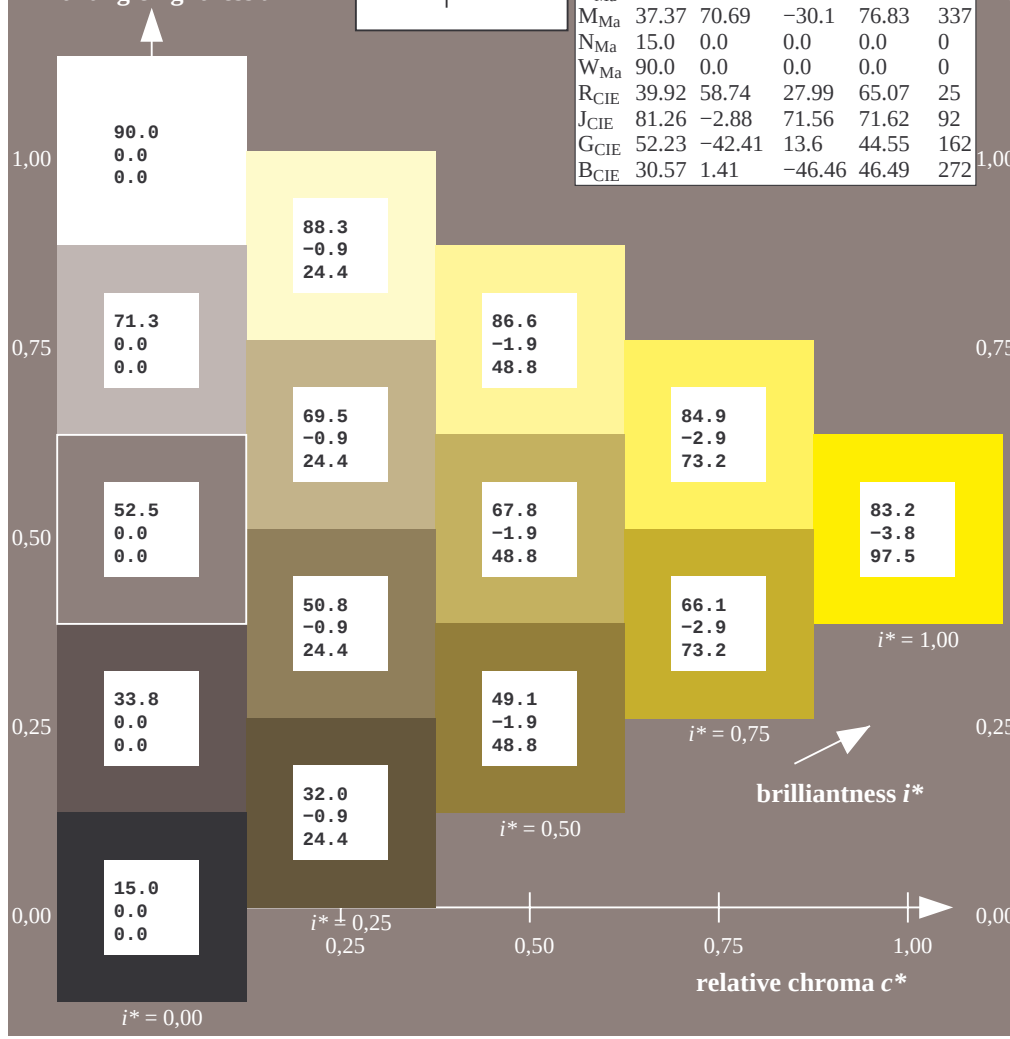
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 83 −3 98**
***LAB*LCH*$_{Ma}$*: 83 98 92**
***lab*rgb*$_{Ma}$*: 1.0 1.0 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.99 0.0**
triangle lightness t^*

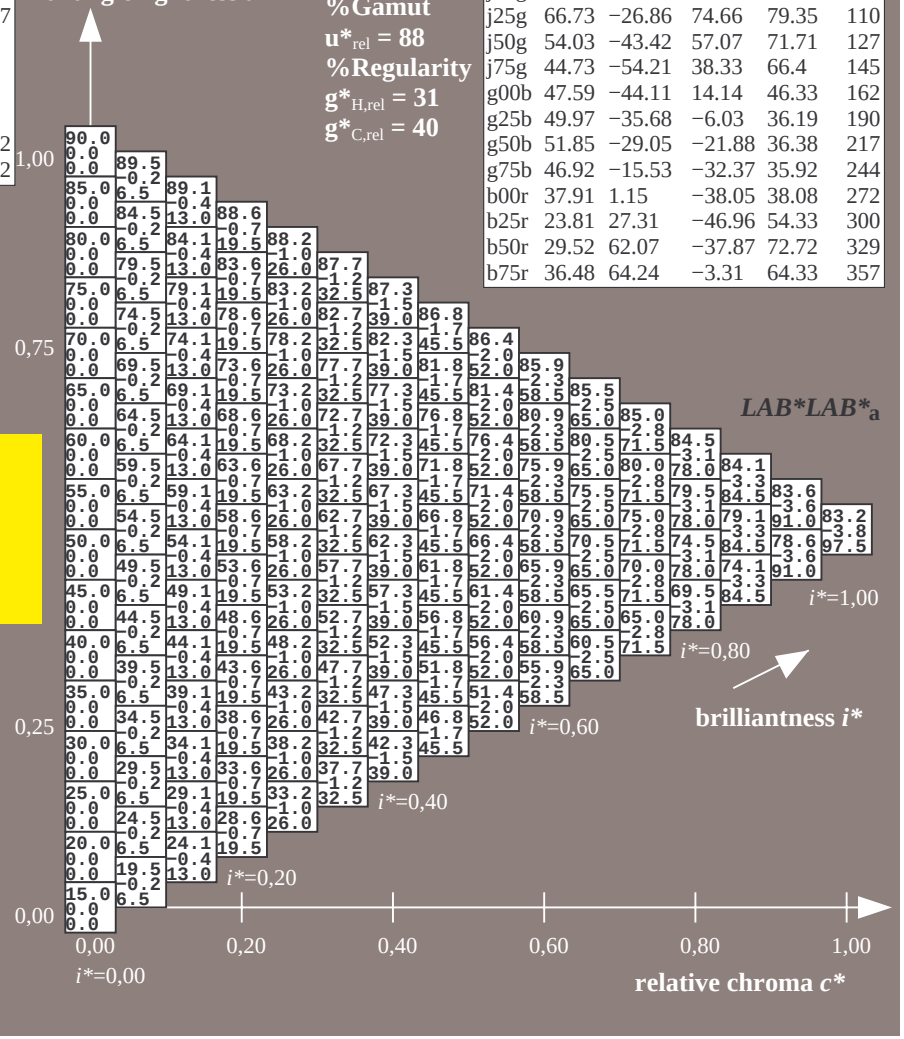
%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

$u^* = j00g$
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

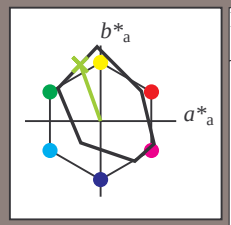
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





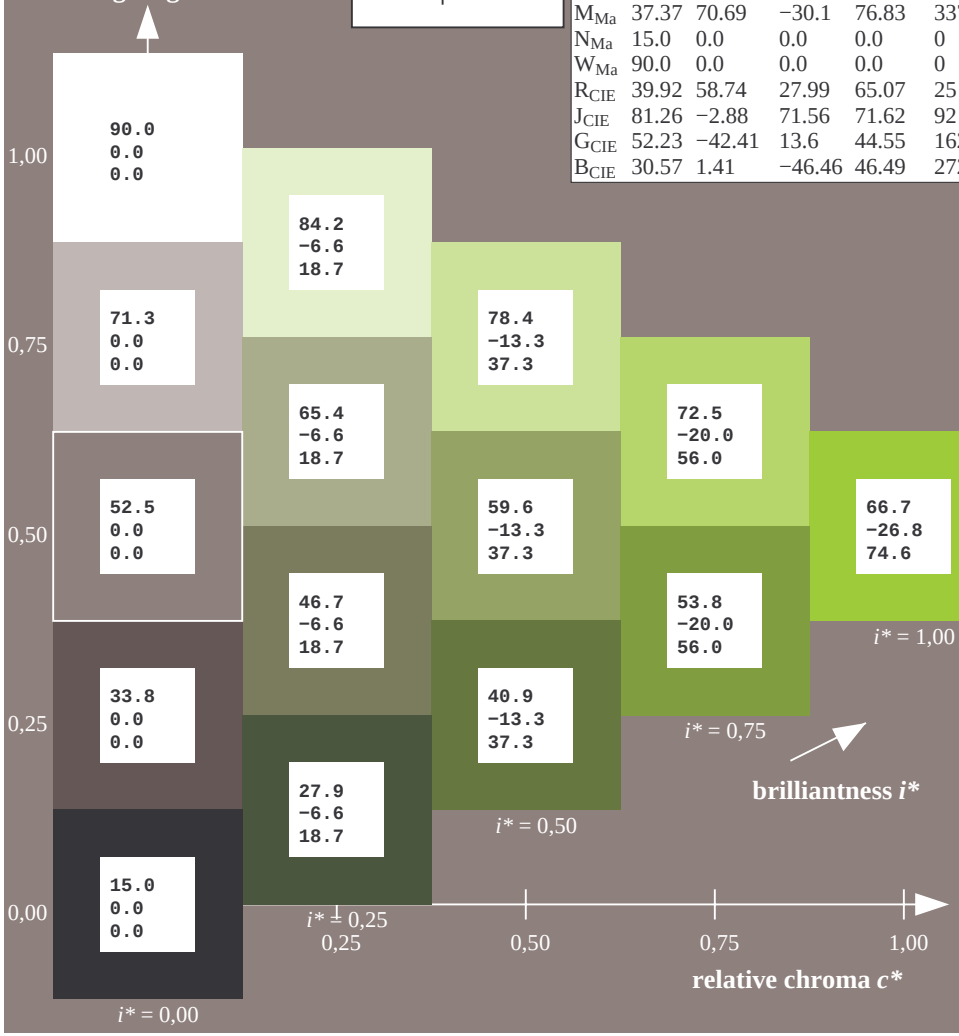
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



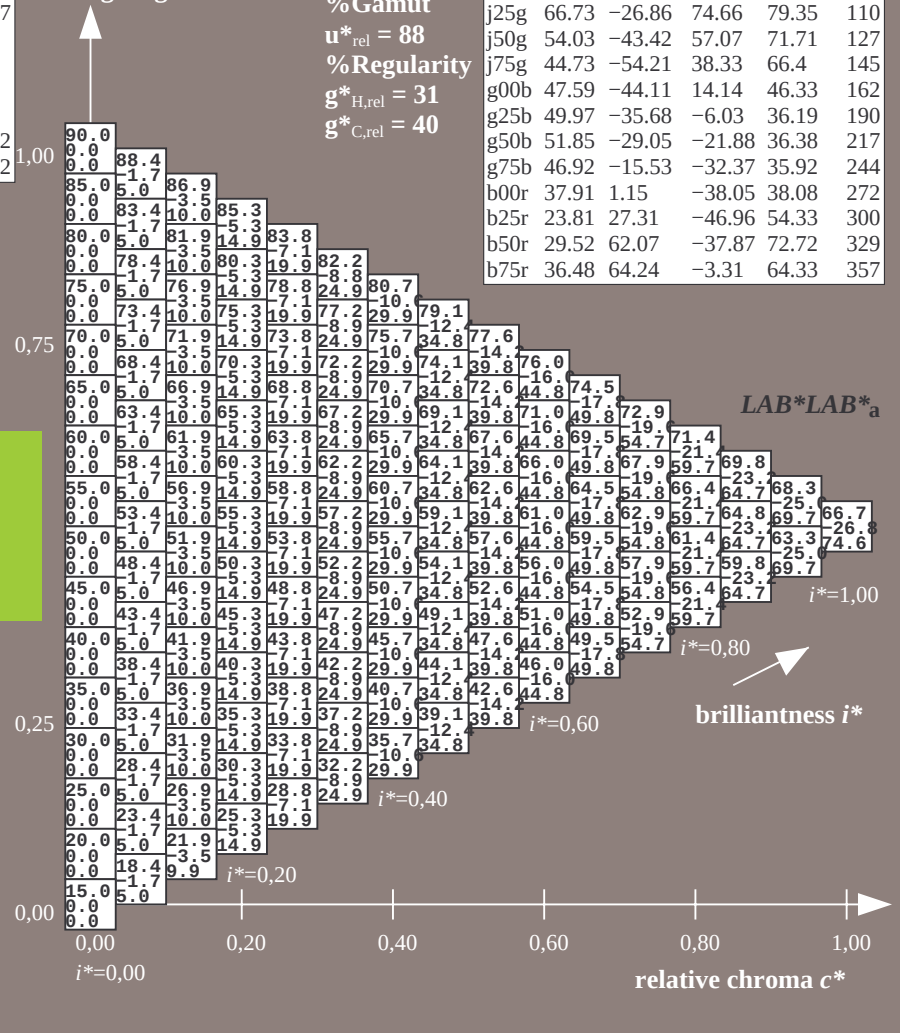
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 67 −26 75**
***LAB*LCH**$_{Ma}$: 67 79 110**
***lab*rgb**$_{Ma}$: 0.75 1.0 0.0**
***lab*olv**$_{Ma}$: 0.57 1.0 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j25g$
$LAB^*LAB^*_a$

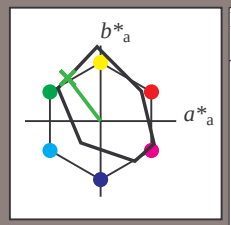
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j50g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

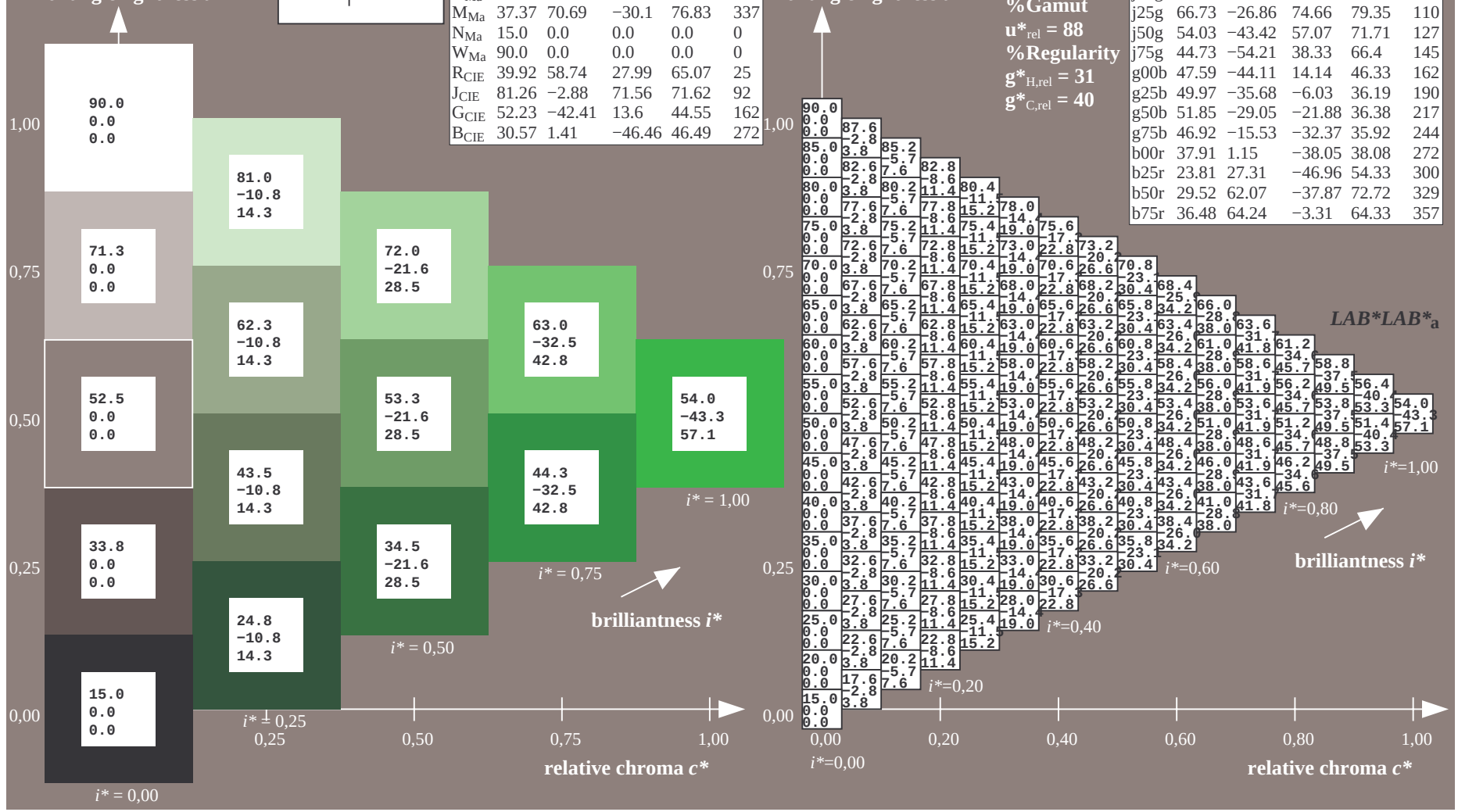
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 54 −42 57**
***LAB*LCH*$_{Ma}$*: 54 72 127**
***lab*rgb*$_{Ma}$*: 0.5 1.0 0.0**
***lab*olv*$_{Ma}$*: 0.25 1.0 0.0**
triangle lightness t^*

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

$u^* = j50g$
$LAB^*LAB^*_a$

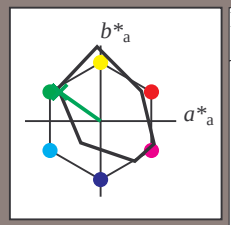
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



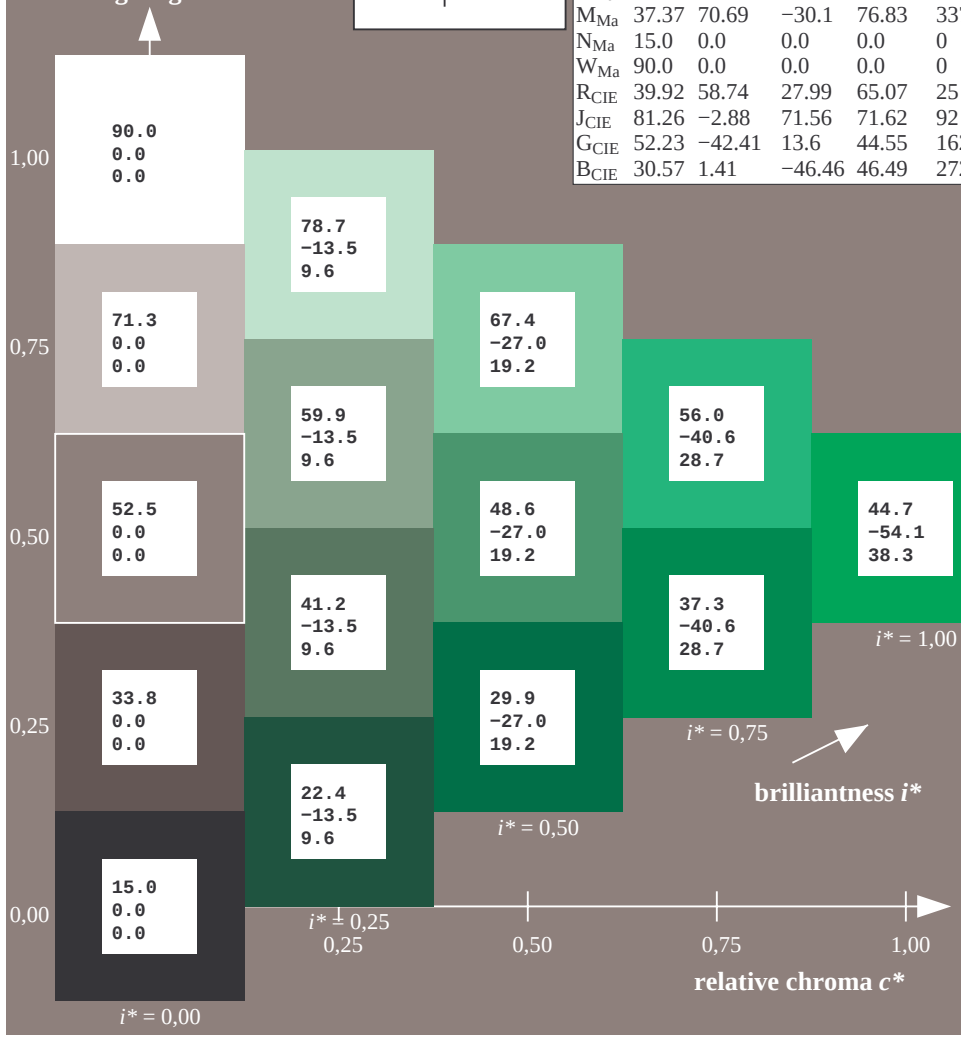
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
$u^* = j75g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



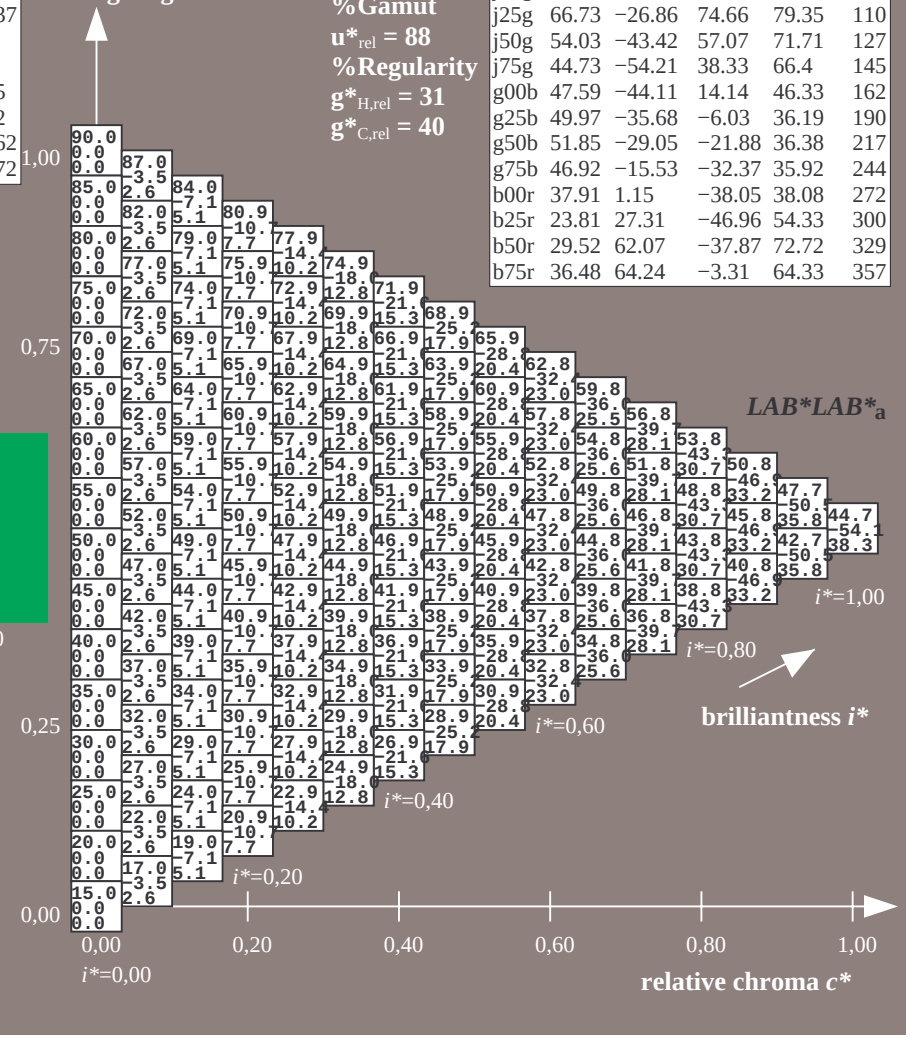
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 45 −53 38**
LAB*LCH*$_{Ma}$**: 45 66 145**
lab*rgb*$_{Ma}$**: 0.25 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.07**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j75g$
LAB*LAB*$_a$**

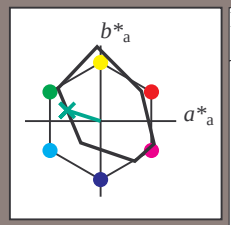
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

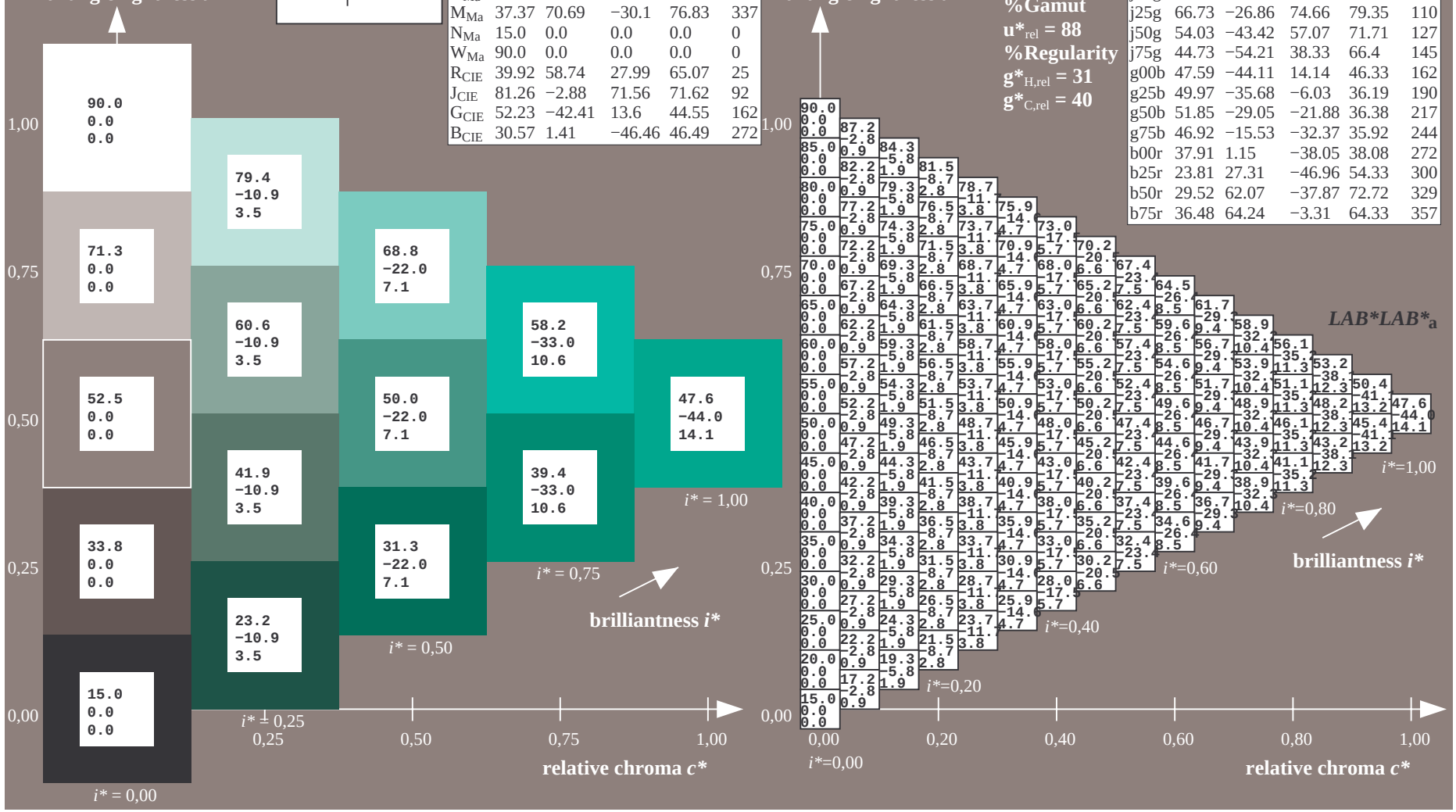
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 48 −43 14**
***LAB*LCH*$_{Ma}$*: 48 46 162**
***lab*rgb*$_{Ma}$*: 0.0 1.0 0.0**
***lab*olv*$_{Ma}$*: 0.0 1.0 0.0.41**
triangle lightness *t**

u* = g00b
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

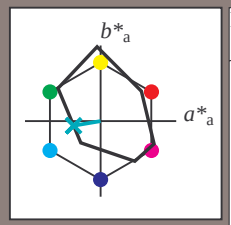
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = g25b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

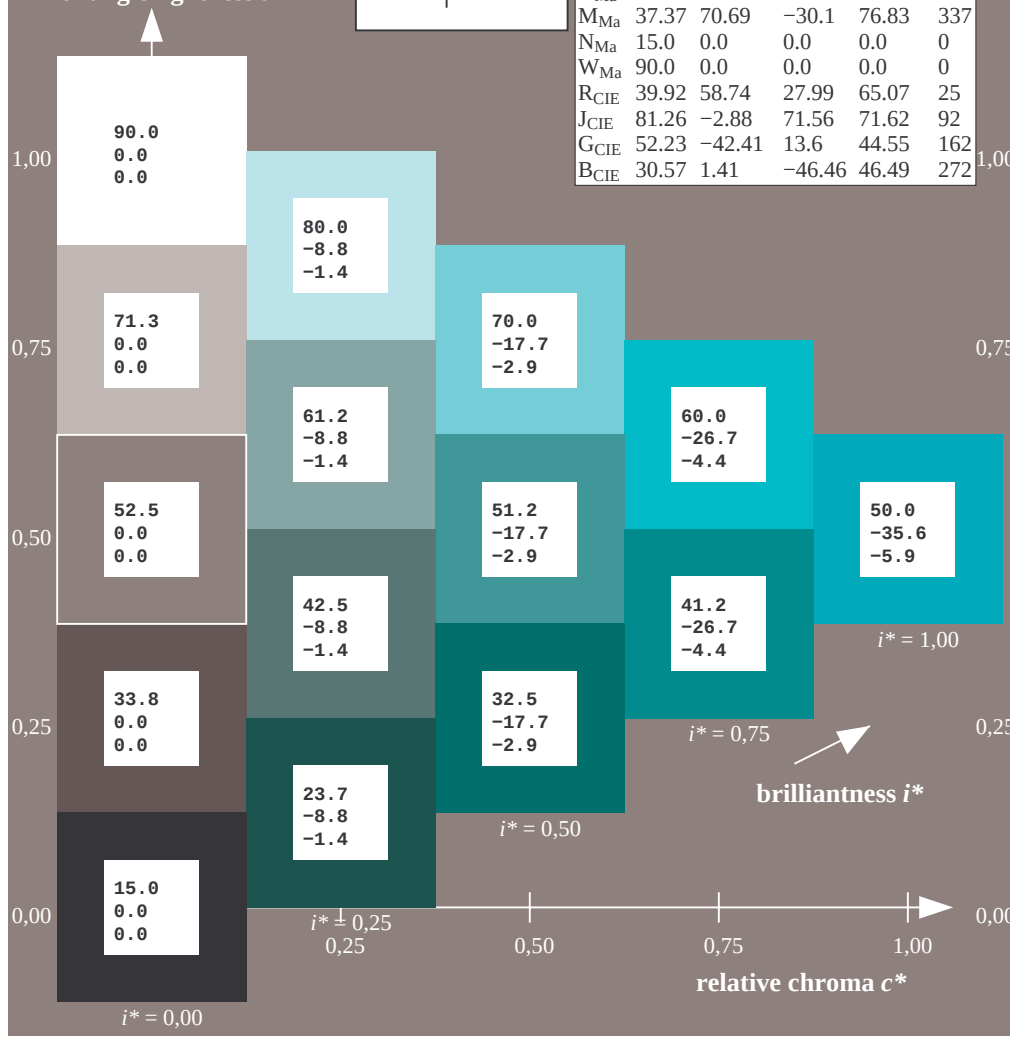
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 50 −35 −5**
***LAB*LCH*$_{Ma}$*: 50 36 190**
***lab*rgb*$_{Ma}$*: 0.0 1.0 0.5**
***lab*olv*$_{Ma}$*: 0.0 1.0 0.69**
triangle lightness t^*

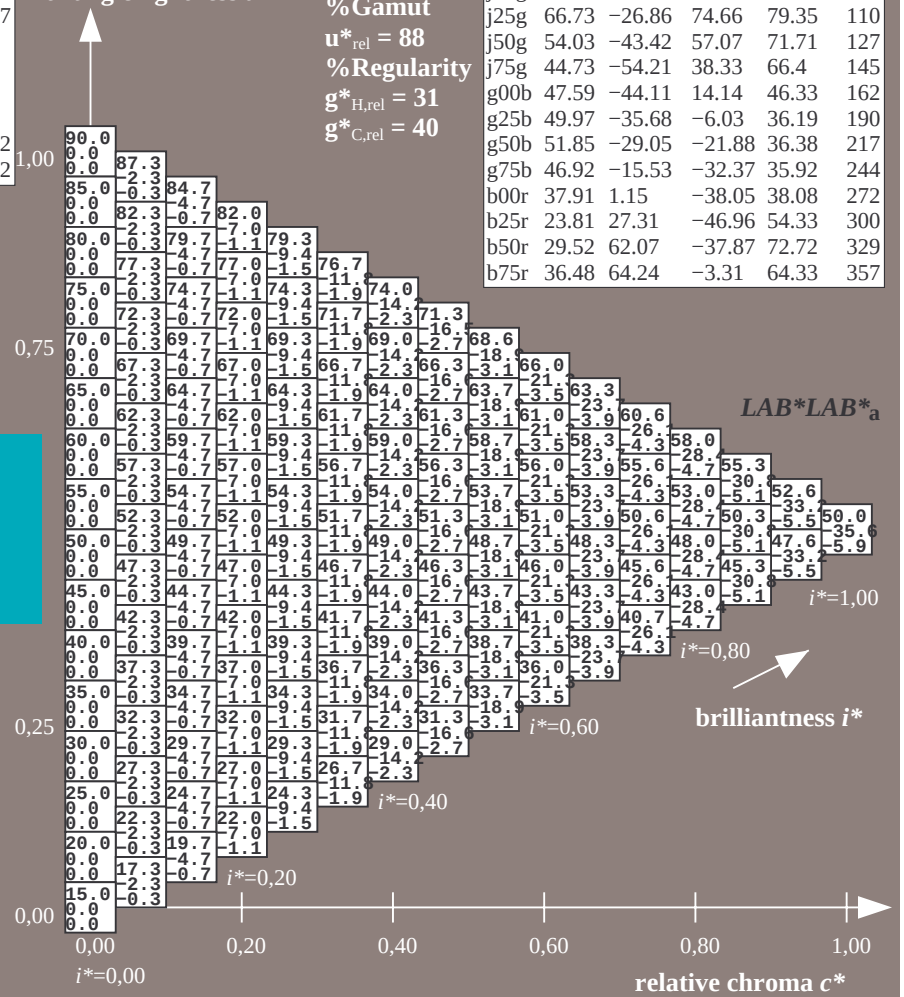
%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

u* = g25b
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

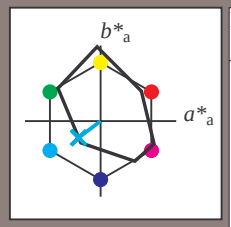
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





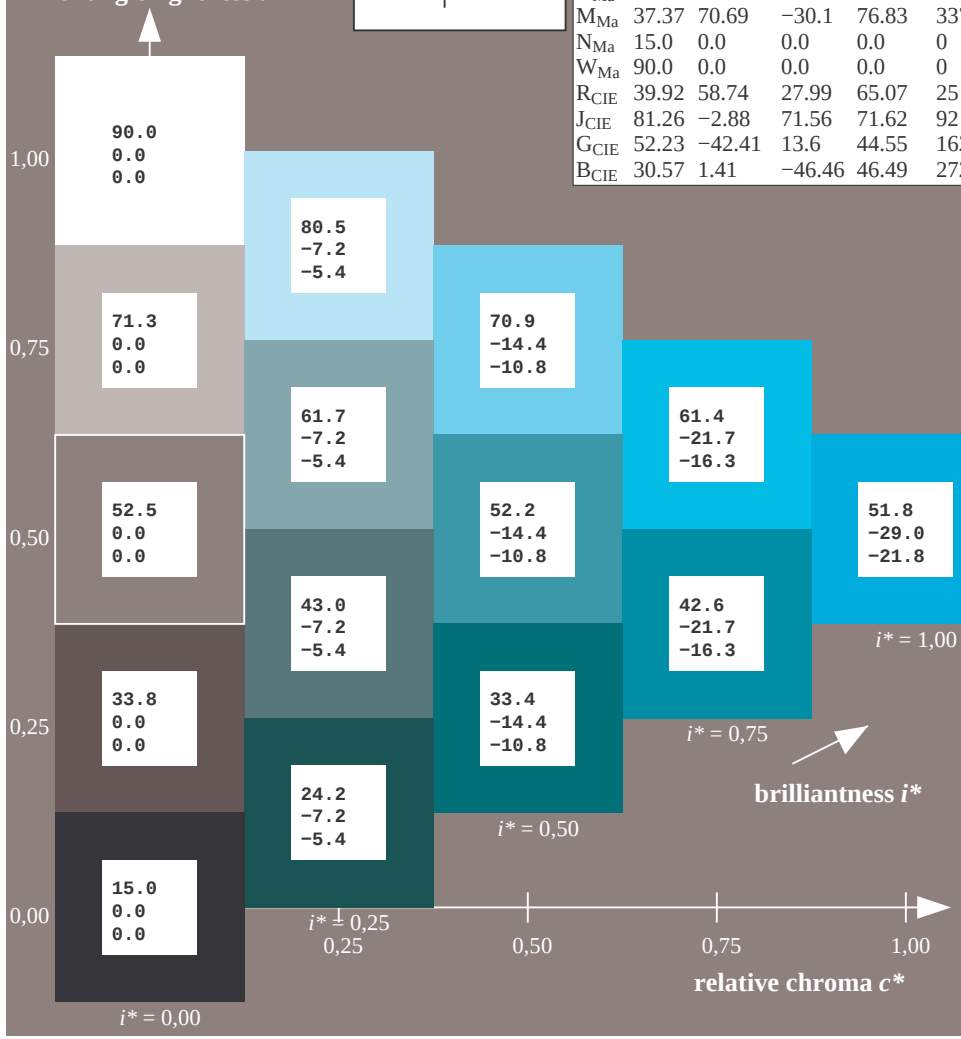
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g50b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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*: 52 −28 −21**
***LAB*LCH*Ma*: 52 36 217**
***lab*rgb*Ma*: 0.0 1.0 1.0**
***lab*olv*Ma*: 0.0 1.0 0.9**

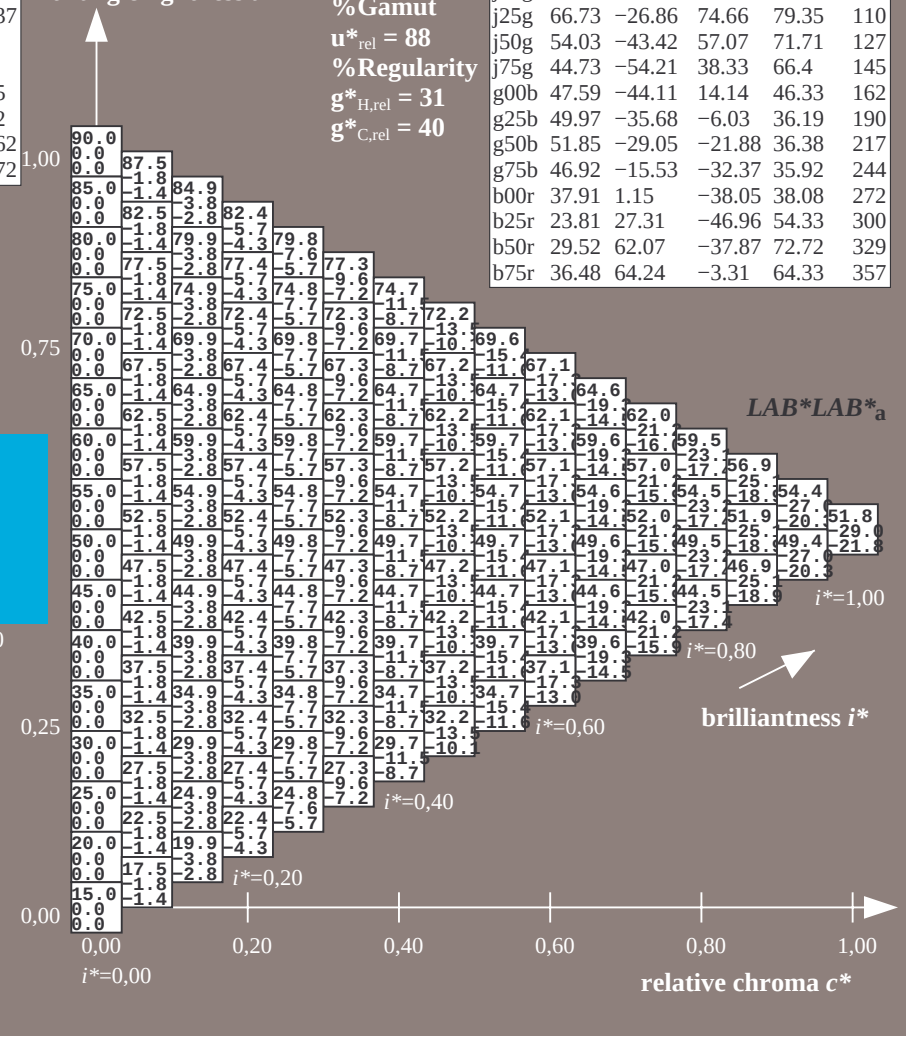
u* = g50b
LAB*LAB*a

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness *t**

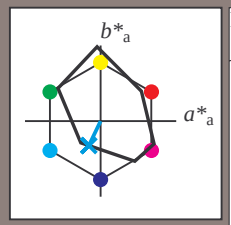
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

$u^* = g75b$
$LAB^*LAB^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = g75b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

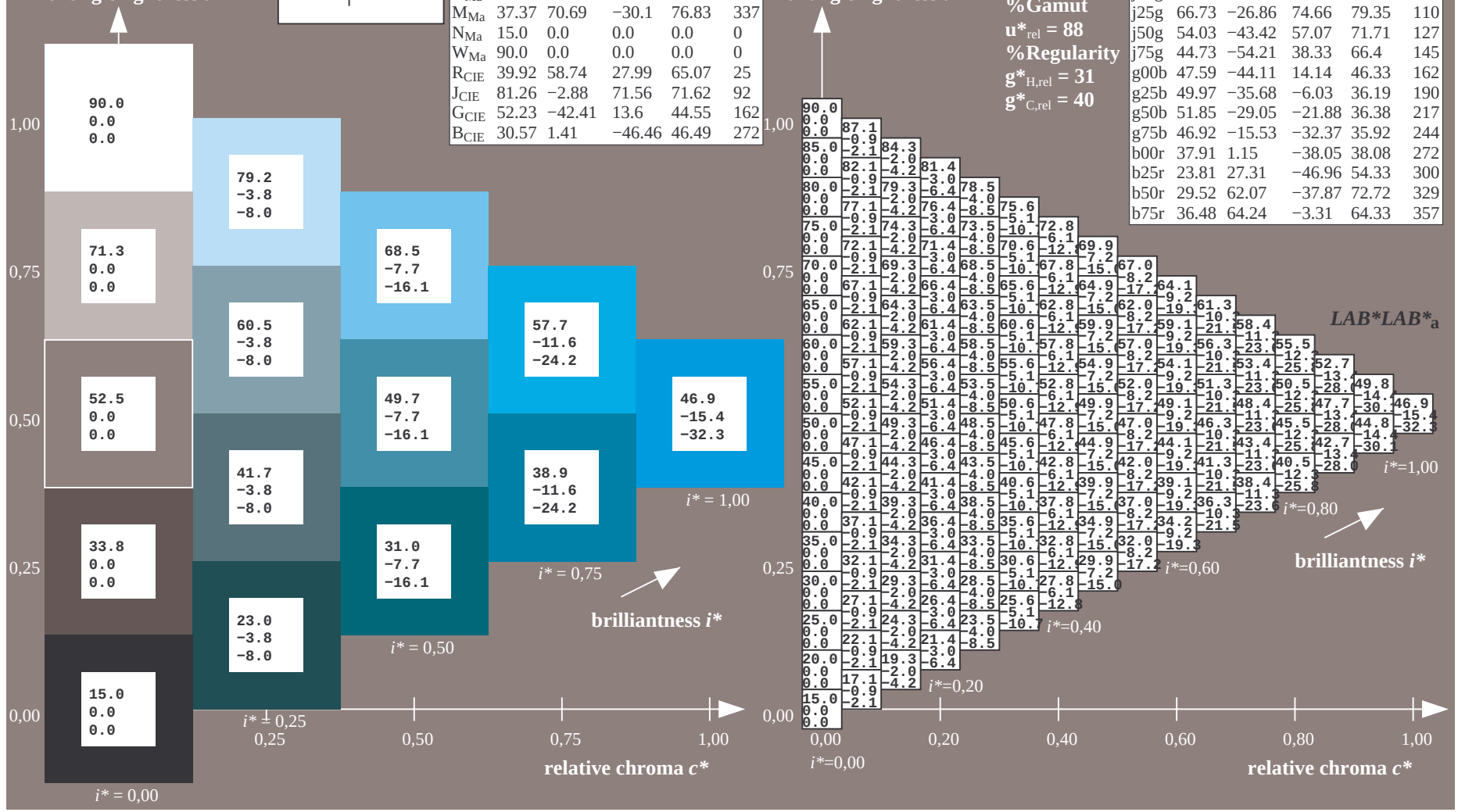
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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**$_{Ma}$: 47 −15 −31**
***LAB*LCH**$_{Ma}$: 47 36 244**
***lab*rgb**$_{Ma}$: 0.0 0.5 1.0**
***lab*olv**$_{Ma}$: 0.0 0.85 1.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

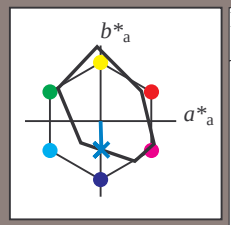
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

$u^* = b00r$
$LAB^*LAB^*_a$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b00r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



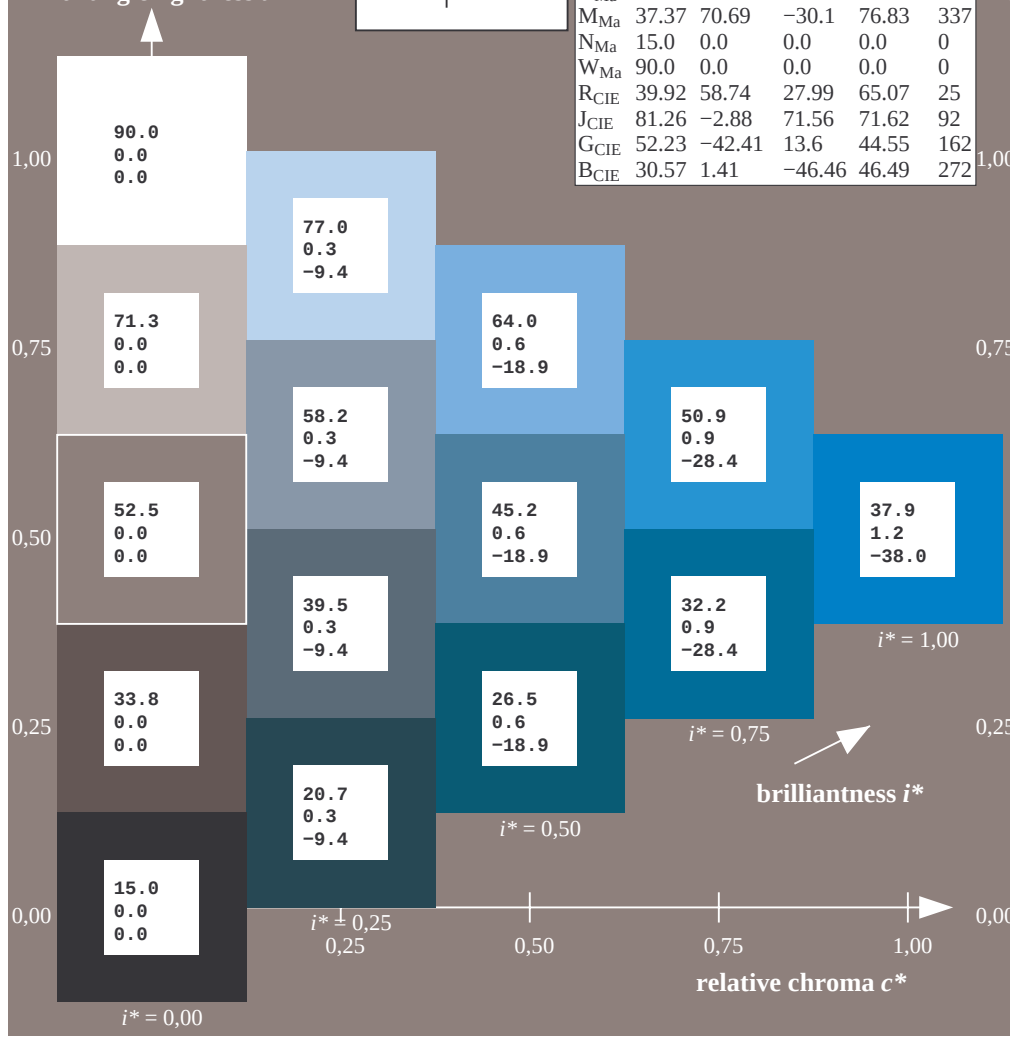
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

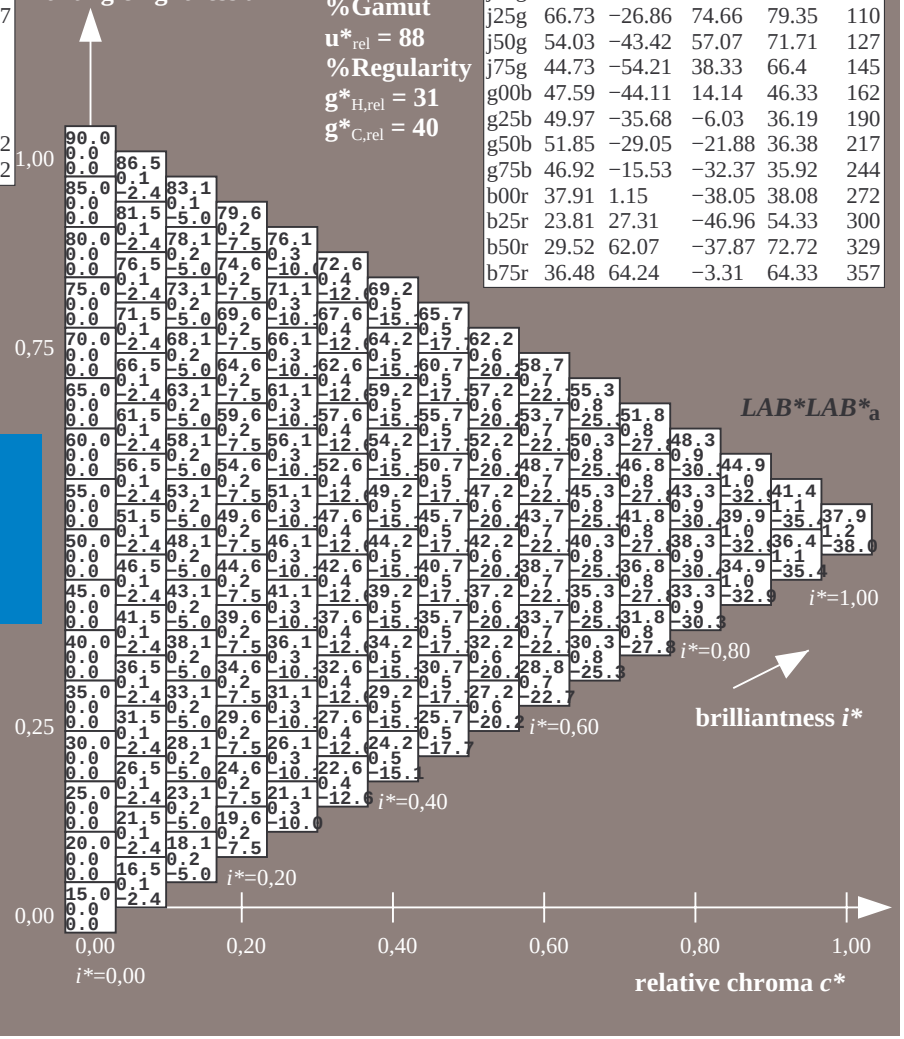
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 38 1 −37**
***LAB*LCH*$_{Ma}$*: 38 38 272**
***lab*rgb*$_{Ma}$*: 0.0 0.0 1.0**
***lab*olv*$_{Ma}$*: 0.0 0.62 1.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

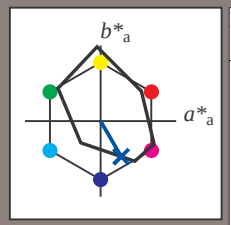


%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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*$_{Ma}$*: 24 27 −46**
***LAB*LCH*$_{Ma}$*: 24 54 300**
***lab*rgb*$_{Ma}$*: 0.5 0.0 1.0**
***lab*olv*$_{Ma}$*: 0.0 0.25 1.0**

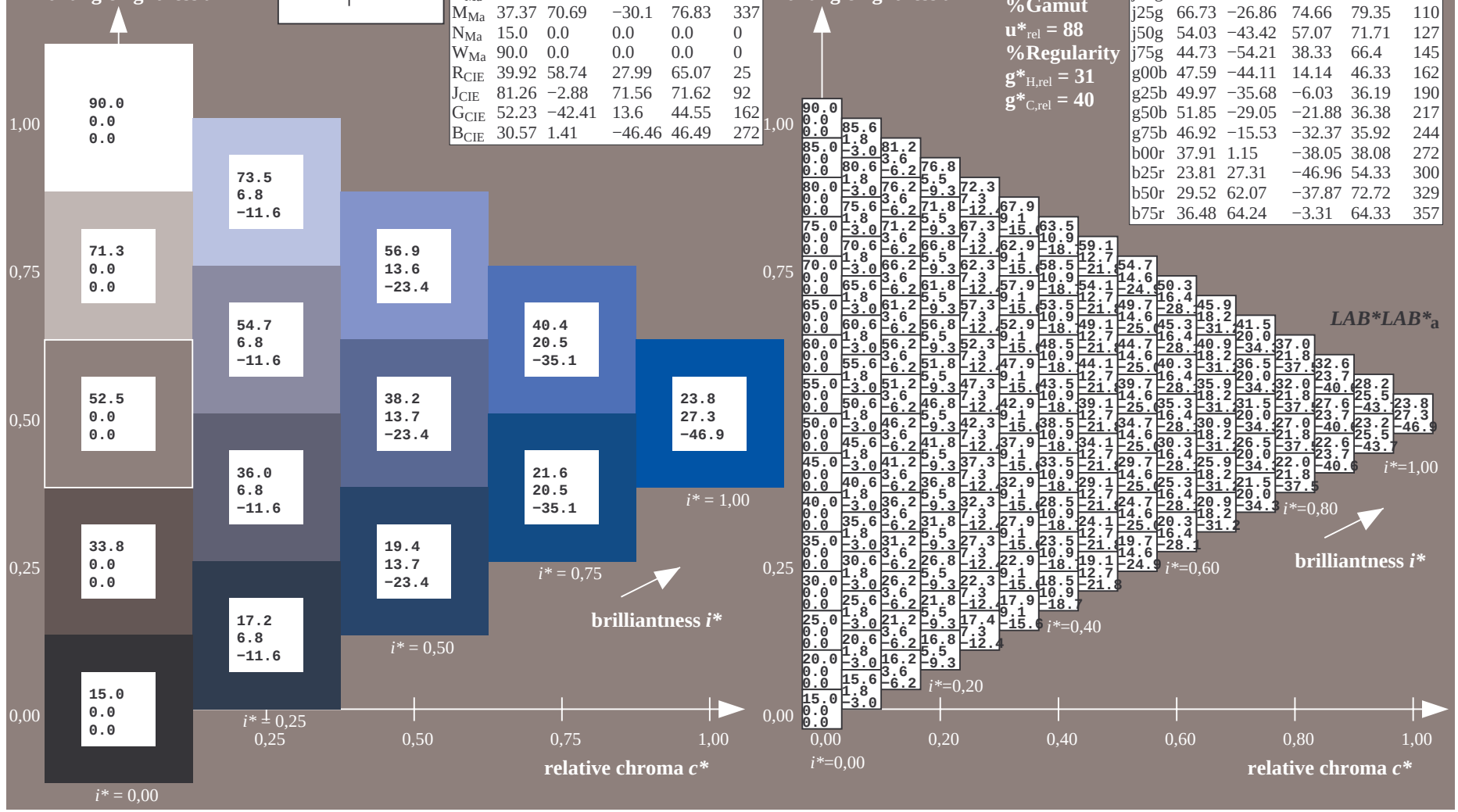
u* = b25r
LAB*LAB*$_a$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness t^*

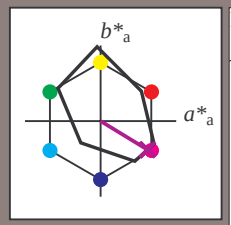
%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

$u^* = b50r$
$LAB^*LAB^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = b50r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

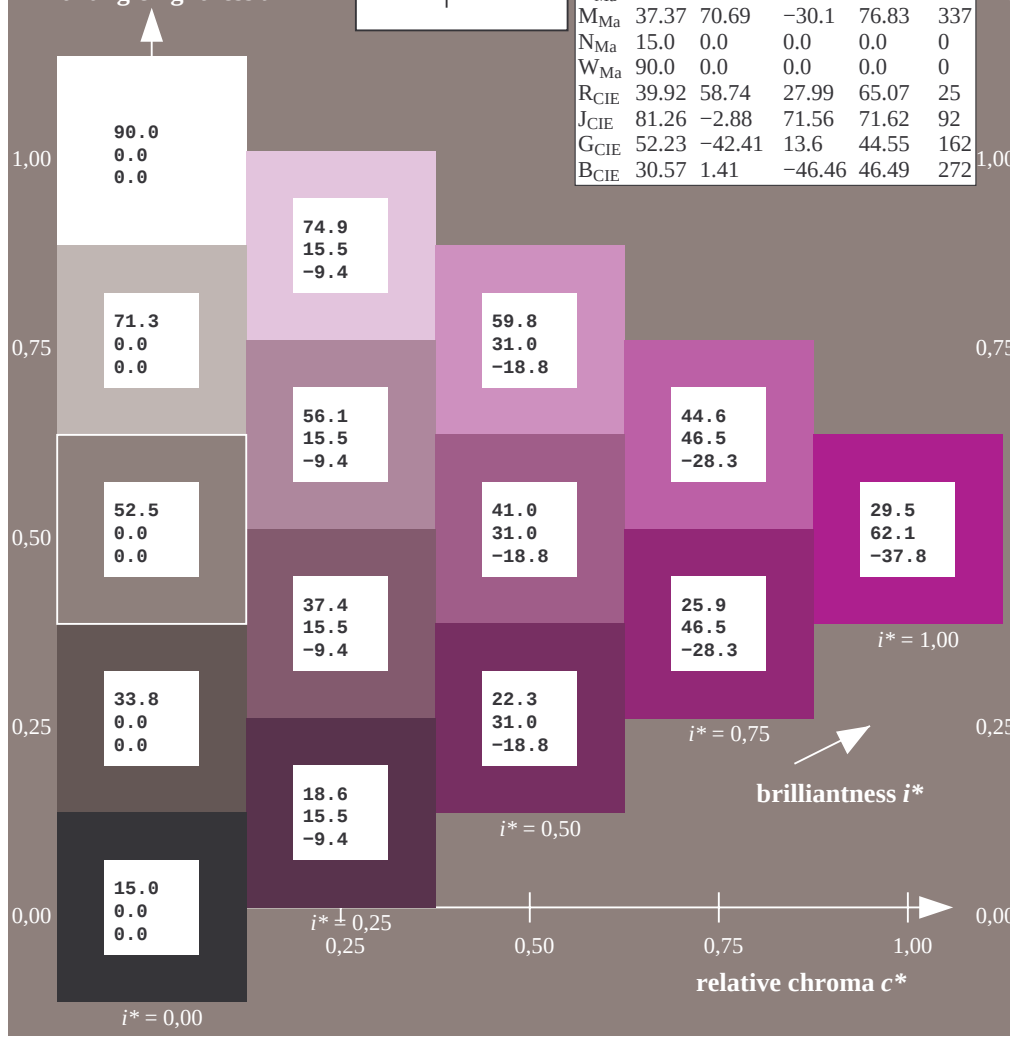
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

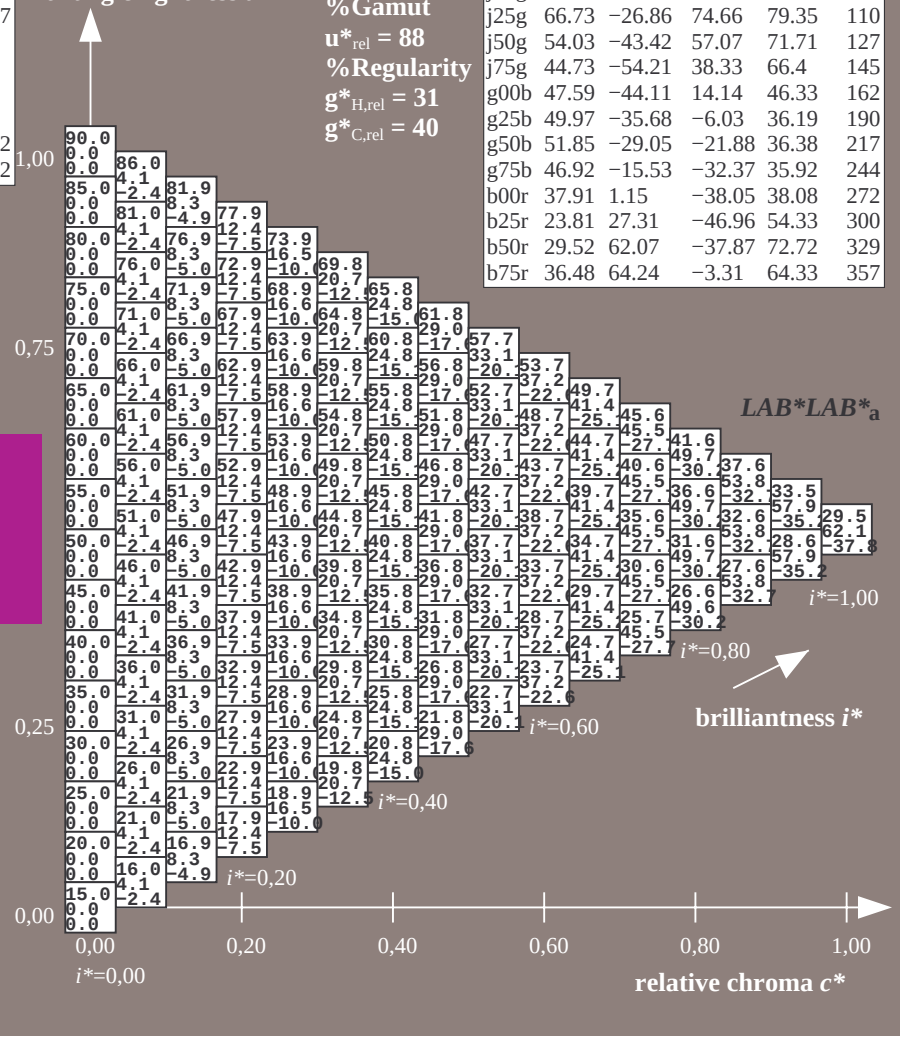
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 30 62 −37**
***LAB*LCH**$_{Ma}$: 30 73 329**
***lab*rgb**$_{Ma}$: 1.0 0.0 1.0**
***lab*olv**$_{Ma}$: 0.66 0.0 1.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

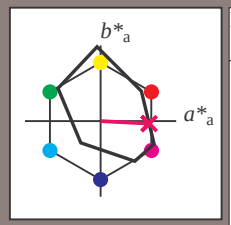




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

$u^* = b75r$
$LAB^*LAB^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = b75r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

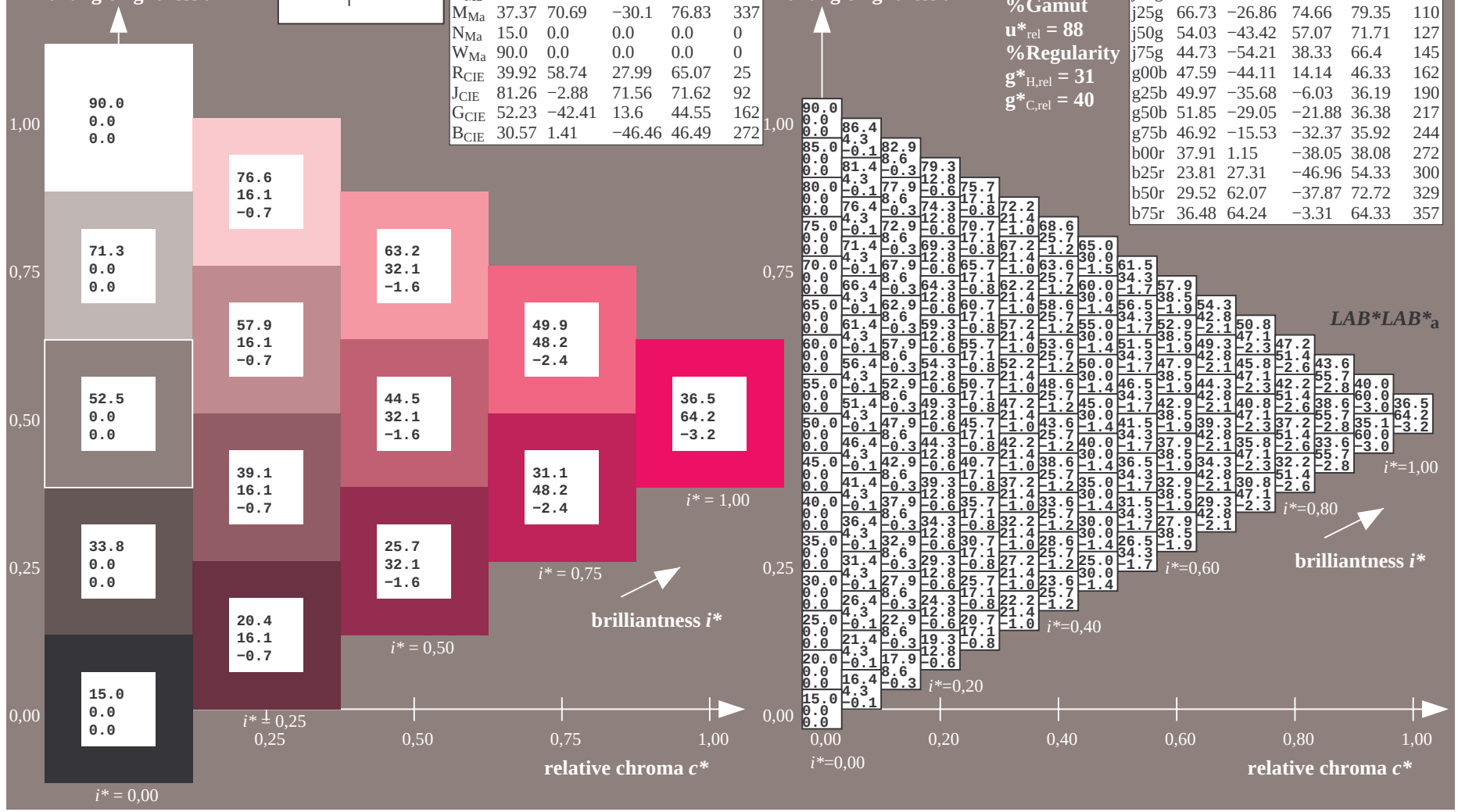
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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**$_{Ma}$: 36 64 −2**
***LAB*LCH**$_{Ma}$: 36 64 357**
***lab*rgb**$_{Ma}$: 1.0 0.0 0.5**
***lab*olv**$_{Ma}$: 1.0 0.0 0.62**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

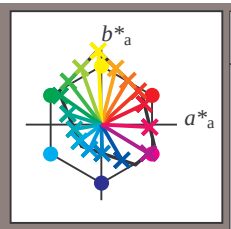


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	LAB*	LAB*	LAB*	a
01	15.0	18.6	22.3	25.9	29.6	33.2	36.9	40.5	44.1	17.5	23.6	27.2	30.9	34.5	38.2	41.8	45.4	49.1	20.0	26.1	32.2	35.8	39.5	43.1	46.8	50.4	54.0	90.0	83.1	76.3	69.4	62.5	55.7	48.8	41.9	35.1	15.0	15.0	15.0	15.0
	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	-49.2	-56.2	6.7	-0.5	-7.5	-14.6	-21.6	-28.6	-35.7	-42.7	-49.8	13.5	6.2	-1.1	-8.1	-15.1	-22.2	-29.2	-36.3	-43.3	0.0	6.7	13.5	20.2	27.0	33.7	40.4	47.2	53.9	0.0	0.0	0.0	0.0
	0.0	5.4	10.8	16.3	21.7	27.1	32.5	37.9	43.4	4.9	12.3	17.7	23.1	28.5	34.0	39.4	44.8	50.2	9.9	17.2	24.6	30.0	35.4	40.8	46.2	51.7	57.1	0.0	4.9	9.9	14.8	19.8	24.7	29.7	34.6	39.5	0.0	0.0	0.0	0.0
02	14.9	19.7	23.4	27.0	30.6	34.3	37.9	41.6	45.2	17.8	24.4	28.0	31.7	35.3	38.9	42.6	46.2	49.9	20.3	26.9	33.0	36.6	40.3	43.9	47.5	51.2	54.8	85.3	80.6	73.8	66.9	60.0	53.2	46.3	39.4	32.6	24.4	24.4	24.4	24.4
	5.6	-3.2	-10.2	-17.3	-24.3	-31.3	-38.4	-45.4	-52.5	8.8	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	-49.2	15.6	6.7	-0.5	-7.5	-14.6	-21.6	-28.6	-35.7	-42.7	-3.2	0.0	6.7	13.5	20.2	27.0	33.7	40.4	47.2	0.0	0.0	0.0	0.0
	-6.5	-3.5	1.8	7.2	12.7	18.1	23.5	28.9	34.3	-3.7	0.0	5.4	10.8	16.3	21.7	27.1	32.5	37.9	1.2	4.9	12.3	17.7	23.1	28.5	34.0	39.4	44.8	-3.5	0.0	4.9	9.9	14.8	19.8	24.7	29.7	34.6	0.0	0.0	0.0	0.0
03	14.8	19.6	24.4	28.1	31.7	35.3	39.0	42.6	46.3	17.7	24.3	29.1	32.7	36.4	40.0	43.6	47.3	50.9	20.6	27.2	33.8	37.4	41.0	44.7	48.3	52.0	55.6	80.7	76.0	71.3	64.4	57.5	50.6	43.8	36.9	30.1	33.8	33.8	33.8	33.8
	11.3	2.4	-6.4	-13.5	-20.5	-27.6	-34.6	-41.7	-48.7	14.5	5.7	-3.2	-10.2	-17.3	-24.3	-31.3	-38.4	-45.4	17.7	8.8	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	-6.4	-3.2	0.0	6.7	13.5	20.2	27.0	33.7	40.4	0.0	0.0	0.0	0.0
	-13.2	-10.1	-7.1	-1.7	3.7	9.1	14.5	19.9	25.3	-10.3	-6.5	-3.5	1.8	7.2	12.7	18.1	23.5	28.9	-7.4	-3.7	0.0	5.4	10.8	16.3	21.7	27.1	32.5	-7.1	-3.5	0.0	4.9	9.9	14.8	19.8	24.7	29.7	0.0	0.0	0.0	0.0
04	14.7	19.5	24.3	29.1	32.8	36.4	40.0	43.7	47.3	17.6	24.2	29.0	33.8	37.4	41.1	44.7	48.4	52.0	20.5	27.1	33.6	38.5	42.1	45.7	49.4	53.0	56.7	76.0	71.3	66.6	61.9	55.0	48.1	41.3	34.4	27.5	43.1	43.1	43.1	43.1
	17.0	8.0	-0.8	-9.7	-16.8	-23.8	-30.8	-37.9	-44.9	20.1	11.3	2.4	-6.4	-13.5	-20.5	-27.6	-34.6	-41.6	23.3	14.5	5.7	-3.2	-10.2	-17.3	-24.3	-31.3	-38.4	-9.7	-6.4	-3.2	0.0	6.7	13.5	20.2	27.0	33.7	0.0	0.0	0.0	0.0
	-19.8	-16.8	-13.7	-10.7	-5.3	0.1	5.5	10.9	16.3	-16.9	-13.2	-10.1	-7.1	-1.7	3.7	9.1	14.5	19.9	-14.1	-10.3	-6.5	-3.5	1.8	7.2	12.7	18.1	23.5	-10.7	-7.1	-3.5	0.0	4.9	9.9	14.8	19.8	24.7	0.0	0.0	0.0	0.0
05	14.6	19.4	24.2	29.0	33.8	37.5	41.1	44.8	48.4	17.5	24.1	28.9	33.7	38.5	42.1	45.8	49.4	53.1	20.4	27.0	33.5	38.4	43.2	46.8	50.4	54.1	57.7	71.3	66.6	61.9	57.2	52.5	45.6	38.8	31.9	25.0	52.5	52.5	52.5	52.5
	22.6	13.7	4.8	-4.1	-13.0	-20.0	-27.1	-34.1	-41.2	25.8	17.0	8.0	-0.8	-9.7	-16.8	-23.8	-30.8	-37.9	29.0	20.1	11.3	2.4	-6.4	-13.5	-20.5	-27.6	-34.6	-13.0	-9.7	-6.4	-3.2	0.0	6.7	13.5	20.2	27.0	0.0	0.0	0.0	0.0
	-26.4	-23.4	-20.4	-17.3	-14.3	-8.9	-3.4	1.9	7.3	-23.6	-19.8	-16.8	-13.7	-10.7	-5.3	0.1	5.5	10.9	-20.7	-16.9	-13.2	-10.1	-7.1	-1.7	3.7	9.1	14.5	-14.3	-10.7	-7.1	-3.5	0.0	4.9	9.9	14.8	19.8	0.0	0.0	0.0	0.0
06	14.5	19.3	24.1	28.9	33.7	38.5	42.2	45.8	49.5	17.4	24.0	28.8	33.6	38.4	43.2	46.8	50.5	54.1	20.3	26.9	33.4	38.2	43.1	47.9	51.5	55.2	58.8	66.7	62.0	57.2	52.5	47.8	43.1	36.3	29.4	22.5	61.9	61.9	61.9	61.9
	28.3	19.3	10.4	1.5	-7.3	-16.3	-23.3	-30.4	-37.4	31.4	22.6	13.7	4.8	-4.1	-13.0	-20.0	-27.1	-34.1	34.6	25.8	17.0	8.0	-0.8	-9.7	-16.8	-23.8	-30.8	-16.3	-13.0	-9.7	-6.4	-3.2	0.0	6.7	13.5	20.2	0.0	0.0	0.0	0.0
	-33.1	-30.0	-27.0	-23.9	-20.9	-17.9	-12.4	-7.0	-1.6	-30.2	-26.4	-23.4	-20.4	-17.3	-14.3	-8.9	-3.4	1.9	-27.3	-23.6	-19.8	-16.8	-13.7	-10.7	-5.3	0.1	5.5	-17.9	-14.3	-10.7	-7.1	-3.5	0.0	4.9	9.9	14.8	0.0	0.0	0.0	0.0
07	14.4	19.2	24.0	28.8	33.6	38.4	43.2	46.9	50.5	17.3	23.8	28.7	33.5	38.3	43.1	47.9	51.6	55.2	20.2	26.7	33.3	38.1	43.0	47.8	52.6	56.2	59.9	62.0	57.3	52.6	47.9	43.2	38.5	33.8	26.9	20.0	71.3	71.3	71.3	71.3
	33.9	25.0	16.1	7.1	-1.7	-10.6	-19.5	-26.6	-33.6	37.1	28.3	19.3	10.4	1.5	-7.3	-16.3	-23.3	-30.3	40.3	31.4	22.6	13.7	4.8	-4.1	-13.0	-20.0	-27.1	-19.5	-16.3	-13.0	-9.7	-6.4	-3.2	0.0	6.7	13.5	0.0	0.0	0.0	0.0
	-39.7	-36.7	-33.6	-30.6	-27.5	-24.5	-21.5	-16.0	-10.6	-36.8	-33.1	-30.0	-27.0	-23.9	-20.9	-17.9	-12.4	-7.0	-34.0	-30.2	-26.4	-23.4	-20.4	-17.3	-14.3	-8.9	-3.4	-21.5	-17.9	-14.3	-10.7	-7.1	-3.5	0.0	4.9	9.9	0.0	0.0	0.0	0.0
08	14.3	19.1	23.9	28.7	33.5	38.3	43.1	48.0	51.6	17.2	23.7	28.6	33.4	38.2	43.0	47.8	52.6	56.3	20.1	26.6	33.2	38.0	42.8	47.7	52.5	57.3	60.9	57.3	52.6	47.9	43.2	38.5	33.8	29.1	24.4	17.5	80.6	80.6	80.6	80.6
	39.6	30.6	21.7	12.8	3.9	-5.0	-13.9	-22.8	-29.9	42.7	33.9	25.0	16.1	7.1	-1.7	-10.6	-19.5	-26.6	45.9	37.1	28.3	19.3	10.4	1.5	-7.3	-16.3	-23.3	-22.8	-19.5	-16.3	-13.0	-9.7	-6.4	-3.2	0.0	6.7	0.0	0.0	0.0	0.0
	-46.3	-43.3	-40.3	-37.2	-34.2	-31.1	-28.1	-25.1	-19.6	-43.5	-39.7	-36.7	-33.6	-30.6	-27.5	-24.5	-21.5	-16.0	-40.6	-36.8	-33.1	-30.0	-27.0	-23.9	-20.9	-17.9	-12.5	-25.1	-21.5	-17.9	-14.3	-10.7	-7.1	-3.5	0.0	4.9	0.0	0.0	0.0	0.0
09	14.2	19.0	23.8	28.6	33.4	38.2	43.0	47.9	52.7	17.1	23.6	28.4	33.3	38.1	42.9	47.7	52.5	57.3	20.0	26.5	33.1	37.9	42.7	47.6	52.4	57.2	62.0	52.7	48.0	43.2	38.5	33.8	29.1	24.4	19.7	15.0	90.0	90.0	90.0	90.0
	45.2	36.3	27.4	18.4	9.5	0.6	-8.2	-17.2	-26.1	48.4	39.6	30.6	21.7	12.8	3.9	-5.0	-13.9	-22.8	51.6	42.7	33.9	25.0	16.1	7.1	-1.7	-10.6	-19.5	-26.1	-22.8	-19.5	-16.3	-13.0	-9.7	-6.4	-3.2	0.0	0.0	0.0	0.0	0.0
	-53.0	-49.9	-46.9	-43.8	-40.8	-37.8	-34.7	-31.7	-28.6	-50.1	-46.3	-43.3	-40.3	-37.2	-34.2	-31.1	-28.1	-25.1	-47.2	-43.5	-39.7	-36.7	-33.6	-30.6	-27.5	-24.5	-21.5	-28.6	-25.1	-21.5	-17.9	-14.3	-10.7	-7.1	-3.5	0.0	0.0	0.0	0.0	0.0
10	22.5	28.6	34.7	40.8	44.4	48.1	51.7	55.4	59.0	25.0	31.1	37.2	43.3	49.4	53.0	56.7	60.3	63.9	27.5	33.6	39.7	45.8	51.9	58.0	61.6	65.3	68.9	90.0	89.2	88.4	87.7	86.9	86.1	85.3	84.5	83.8	15.0	15.0	15.0	15.0
	20.2	12.9	5.6	-1.6	-8.7	-15.7	-22.8	-29.8	-36.8	27.0	19.6	12.3	5.0	-2.2	-9.3	-16.3	-23.3	-30.4	33.7	26.4	19.1	11.7	4.4	-2.8	-9.8	-16.9	-23.9	0.0	-0.5	-1.1	-1.6	-2.2	-2.8	-3.4	-4.0	-4.5	0.0	0.0	0.0	0.0
	14.8	22.2	29.5	36.8	42.3	47.7	53.1	58.5	63.9	19.8	27.1	34.4	41.8	49.1	54.5	60.0	65.4	70.8	24.7	32.0	39.4	46.7	54.1	61.4	66.8	72.2	77.7	0.0	12.3	24.6	36.8	49.1	61.4	73.7	86.0	98.2	0.0	0.0	0.0	0.0
11	22.8	29.4	35.5	41.6	45.2	48.8	52.5	56.1	59.8	25.3	31.9	38.0	44.1	50.2	53.8	57.4	61.1	64.7	27.8	34.4	40.5	46.6	52.7	58.8	62.4	66.0	69.7	80.5	80.6	79.8	79.1	78.3	77.5	76.7	76.0	75.2	20.0	20.0	20.0	20.0
	22.3	13.5	6.2	-1.1	-8.1	-15.1	-22.2	-29.2	-36.3	29.1	20.2	12.9	5.6	-1.6	-8.7	-15.7	-22.8	-29.8	35.8	27.0	19.6	12.3	5.0	-2.2	-9.3	-16.3	-23.3	5.6	0.0	-0.5	-1.1	-1.6	-2.2	-2.8	-3.4	-4.0	0.0	0.0	0.0	0.0
	6.1	9.9	17.2	24.6	30.0	35.4	40.8	46.2	51.7	11.1	14.8	22.2	29.5	36.8	42.3	47.7	53.1	58.5	16.0	19.8	27.1	34.5	41.8	49.1	54.6	60.0	65.4	-6.5	0.0	12.3	24.6	36.8	49.1	61.4	73.7	86.0	0.0	0.0	0.0	0.0
12	23.1	29.7	36.3	42.3	46.0	49.6	53.3	56.9	60.5	25.6	32.2	38.8	44.9	50.9	54.6	58.2	61.9	65.5	28.1	34.7	41.3	47.4	53.4	59.5	63.2	66.8	70.5	71.0	71.1	71.3	70.5	69.7	68.9	68.1	67.4	66.6	25.0	25.0	25.0	25.0
	24.4	15.6	6.7	-0.5	-7.5	-14.6	-21.6	-28.6	-35.7	31.1	22.3	13.5	6.2	-1.1	-8.1	-15.1	-22.2	-29.2	37.9	29.1	20.2	12.9	5.6	-1.6	-8.7	-15.7	-22.8	11.3	5.7	0.0	-0.5	-1.1	-1.6	-2.2	-2.8	-3.4	0.0	0.0	0.0	0.0
	-2.5	1.2	4.9	12.3	17.7	23.1	28.5	34.0	39.4	2.4	6.1	9.9	17.2	24.6	30.0	35.4	40.8	46.2	7.3	11.1	14.8	22.2	29.5	36.8	42.3	47.7	53.1	-13.2	-6.5	0.0	12.3	24.6	36.8	49.1	61.4	73.7	0.0	0.0	0.0	0.0
13	23.4	30.0	36.5	43.1	46.8	50.4	54.0	57.7	61.3	25.9	32.5	39.1	45.6	51.7	55.4	59.0	62.6	66.3	28.4	35.0	41.6	48.1	54.2	60.3	64.0	67.6	71.2	61.6	61.7	61.8	61.9	61.1	60.3	59.5	58.8	58.0	30.0	30.0	30.0	30.0
	26.5	17.7	8.8	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	33.2	24.4	15.6	6.7	-0.5	-7.5	-14.6	-21.6	-28.6	40.0	31.2	22.3	13.5	6.2	-1.1	-8.1	-15.1	-22.2	17.0	11.3	5.7	0.0	-0.5	-1.1	-1.6	-2.2	-2.8	0.0	0.0	0.0	0.0
	-11.2	-7.4	-3.7	0.0	5.4	10.8	16.3	21.7	27.1	-6.2	-2.5	1.2	4.9	12.3	17.7	23.1	28.5	34.0	-1.3	2.4	6.1	9.9	17.2	24.6	30.0	35.4	40.8	-19.8	-13.2	-6.5	0.0	12.3	24.6	36.8	49.1	61.4	0.0	0.0	0.0	0.0
14	23.3	29.9	36.4	43.0	47.8	51.5	55.1	58.8	62.4	26.2	32.8	39.3	45.9	52.5	56.1	59.8	63.4	67.1	28.7	35.3	41.8	48.4	55.0	61.1	64.7	68.4	72.0	52.1	52.2	52.3	52.4	52.5	51.7	50.9	50.2	49.4	35.0	35.0	35.0	35.0
	32.2	23.3	14.5	5.7	-3.2	-10.2	-17.3	-24.3	-31.3	35.3	26.5	17.7	8.8	0.0	-6.9	-14.0	-21.0	-28.1	42.1	33.2	24.4	15.6	6.7	-0.5	-7.5	-14.6	-21.6	22.6	17.0	11.3	5.7	0.0	-0.5	-1.1	-1.6	-2.2	0.0	0.0	0.0	0.0
	-17.8	-14.1	-10.3	-6.5	-3.5	1.8	7.2	12.7	18.1	-15.0	-11.2	-7.4	-3.7	0.0	5.4	10.8	16.3	21.7	-10.0	-6.2	-2.5	1.2	4.9	12.3	17.7	23.1	28.5	-26.4	-19.8	-13.2	-6.5	0.0	12.3	24.6	36.8	49.1	0.0	0.0	0.0	0.0
15	23.2	29.8	36.3	42.9	47.7	52.5	56.2	59.8	63.5	26.1	32.7	39.2	45.8	52.4	57.2	60.8	64.5	68.1	29.0	35.6	42.1	48.7	55.3	61.9	65.5	69.2	72.8	42.6	42.7	42.8	42.9	43.0	43.1	42.3	41.6	40.8	40.0	40.0	40.0	40.0
	37.8	29.0	20.1	11.3	2.4	-6.4	-13.5	-20.5	-27.6	41.0	32.2	23.3	14.5	5.7	-3.2	-10.2	-17.3	-24.3	44.2	35.3	26.5	17.7	8.8	0.0	-6.9	-14.0	-21.0	28.3	22.6	17.0	11.3	5.7	0.0	-0.5	-1.1	-1.6	0.0	0.0	0.0	0.0
	-24.5	-20.7	-16.9	-13.2	-10.1	-7.1	-1.7	3.7	9.1	-21.6	-17.8	-14.1	-10.3	-6.5	-3.5	1.8	7.2	12.7	-18.7	-15.0	-11.2	-7.4	-3.7	0.0	5.4	10.8	16.3	-33.1	-26.4	-19.8	-13.2	-6.5	0.0	12.3	24.6	36.8	0.0	0.0	0.0	0.0
16	23.1	29.6	36.2	42.8	47.6	52.4	57.2	60.9	64.5	26.0	32.6	39.1	45.7	52.3	57.1	61.9	65.6	69.2	28.9	35.5	42.0	48.6	55.2	61.8	66.6	70.2	73.9	33.1	33.2	33.3	33.4	33.5	33.6	33.8	33.0	32.2	45.0	45.0	45.0	45.0
	43.5	34.6	25.8	17.0	8.0	-0.8	-9.7	-16.8	-23.8	46.6	37.8	29.0	20.1	11.3	2.4	-6.4	-13.5	-20.5	49.8	41.0	32.2	23.3	14.5	5.7	-3.2	-10.2	-17.3	33.9	28.3	22.6	17.0	11.3	5.7	0.0	-0.5	-1.1	0.0	0.0	0.0	0.0
	-31.1	-27.3	-23.6	-19.8	-16.8	-13.7	-10.7	-5.3	0.1	-28.2	-24.5	-20.7	-16.9	-13.2	-10.1	-7.1	-1.7	3.6	-25.4	-21.6	-17.8	-14.1	-10.3	-6.5	-3.5	1.8	7.2	-39.7	-33.1	-26.4	-19.8	-13.2	-6.5	0.0	12.3	24.6	0.0	0.0	0.0	0.0
17	23.0	29.5	36.1	42.7	47.5	52.3	57.1	62.0	65.6	25.9	32.4	39.0	45.6	52.2	57.0	61.8	66.6	70.3	28.8	35.3	41.9	48.5	55.1	61.7	66.5	71.3	74.9	23.6	23.7	23.8	24.0	24.1	24.2	24.3	24.4	23.6	50.0	50.0	50.0	50.0
	49.1	40.3	31.4	22.6	13.7	4.8	-4.1	-13.0	-20.0	52.3	43.5	34.6	25.8	17.0	8.0	-0.8	-9.7	-16.8	55.5	46.6	37.8	29.0	20.1	11.3	2.4	-6.4	-13.5	39.6	33.9	28.3	22.6	17.0	11.3	5.7	0.0	-0.5	0.0	0.0	0.0	0.0
	-37.7	-34.0	-30.2	-26.4	-23.4	-20.4	-17.3	-14.3	-8.9	-34.9	-31.1	-27.3	-23.6	-19.8	-16.8	-13.7	-10.7	-5.3	-32.0	-28.2	-24.5	-20.7	-16.9	-13.2	-10.1	-7.1	-1.7	-46.3	-39.7	-33.1	-26.4	-19.8	-13.2	-6.5	0.0	12.3	0.0	0.0	0.0	0.0
18	22.9	29.4	36.0	42.6	47.4	52.2	57.0	61.8	66.7	25.8	32.3	38.9	45.5	52.1	56.9	61.7	66.5	71.3	28.7	35.2	41.8	48.4	55.0	61.6	66.4	71.2	76.0	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	55.0	55.0	55.0	55.0
	54.8	45.9	37.1	28.3	19.3	10.4	1.5	-7.3	-16.3	57.9	49.1	40.3	31.4	22.6	13.7	4.8	-4.1	-13.0	61.1	52.3	43.5	34.6	25.8	17.0	8.0	-0.8	-9.7	45.2	39.6	33.9	28.3	22.6	17.0	11.3	5.6	0.0	0.0	0.0	0.0	0.0
	-44.4	-40.6	-36.8	-33.1	-30.0	-27.0	-23.9	-20.9	-17.9	-41.5	-37.7	-34.0	-30.2	-26.4	-23.4	-20.3	-17.3	-14.3	-38.6	-34.9	-31.1	-27.3	-23.6	-19.8	-16.8	-13.7	-10.7	-53.0	-46.3	-39.7	-33.1	-26.4	-19.8	-13.2	-6.5	0.0	0.0	0.0	0.0	0.0
19	30.1	36.1	42.2	48.3	54.4	60.5	66.6	70.2	73.9	32.6	38.6	44.7	50.8	56.9	63.0	69.1	75.2	78.8	35.1	41.1	47.2	53.3	59.4	65.5	71.6	77.7	83.8	90.0	84.3	78.5	72.8	67.1	61.3	55.6	49.9	44.1	60.0	60.0	60.0	60.0
	40.4	33.1	25.8	18.5	11.2	3.8	-3.4	-10.4	-17.5	47.2	39.9	32.5	25.2	17.9	10.6	3.3	-4.0	-11.0	53.9	46.6	39.3	32.0	24.6	17.3	10.0	2.7	-4.5	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	-49.2	-56.2	0.0	0.0	0.0	0.0
	29.7	37.0	44.3	51.7	59.0	66.3	73.7	79.1	84.5	34.6	41.9	49.3	56.6	64.0	71.3	78.6	86.0	91.4	39.5	46.9	54.2	61.6	68.9	76.2	83.6	90.9	98.2	0.0	5.4	10.8	16.3	21.7	27.1	32.5	37.9	43.4	0.0	0.0	0.0	0.0
20	30.3	36.9	43.0	49.1	55.2	61.3	67.4	71.0	74.6	32.8	39.4	45.5	51.6	57.7	63.8	69.9	76.0	79.6	35.4	41.9	48.0	54.1	60.2	66.3	72.4	78.5	84.5	83.4	80.6	74.9	69.2	63.4	57.7	52.0	46.2	40.5	65.0	65.0	65.0	65.0
	42.5	33.7	26.4	19.1	11.7	4.4	-2.8	-9.8	-16.9	49.3	40.4	33.1	25.8	18.5	11.2	3.8	-3.4	-10.4	56.0	47.2	39.9	32.5	25.2	17.9	10.6	3.3	-4.0	8.8	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	-49.2	0.0	0.0	0.0	0.0
	21.0	24.7	32.1	39.4	46.7	54.1	61.4	66.8	72.3	25.9	29.7	37.0	44.3	51.7	59.0	66.4	73.7	79.1	30.8	34.6	41.9	49.3	56.6	64.0	71.3	78.6	86.0	-3.7	0.0	5.4	10.8	16.3	21.7	27.1	32.5	37.9	0.0	0.0	0.0	0.0
21	30.6	37.2	43.8	49.9	56.0	62.0	68.1	71.8	75.4	33.1	39.7	46.3	52.4	58.5	64.6	70.6	76.7	80.4	35.6	42.2	48.8	54.9	61.0	67.1	73.1	79.2	85.3	76.8	74.0	71.3	65.5	59.8	54.0	48.3	42.6	36.9	70.0	70.0	70.0	70.0
	44.6	35.8	27.0	19.6	12.3	5.0	-2.2	-9.3	-16.3	51.4	42.5	33.7	26.4	19.1	11.7	4.4	-2.8	-9.8	58.1	49.3	40.4	33.1	25.8	18.5	11.2	3.8	-3.4	17.7	8.8	0.0	-6.9	-14.0	-21.0	-28.1	-35.1	-42.1	0.0	0.0	0.0	0.0
	12.3	16.0	19.8	27.1	34.5	41.8	49.1	54.6	60.0	17.2	21.0	24.7	32.1	39.4	46.7	54.1	61.4	66.8	22.1	25.9	29.7	37.0	44.3	51.7	59.0	66.4	73.7	-7.4	-3.7	0.0	5.4	10.8	16.3	21.7	27.1	32.5	0.0	0.0	0.0	0.0
22	30.9	37.5	44.1	50.6	56.7	62.8	68.9	72.6	76.2	33.4	40.0	46.6	53.2	59.2	65.3	71.4	77.5	81.1	35.9	42.5	49.1	55.7	61.7	67.8	73.9	80.0	86.1	70.3	67.5	64.7	61.9	56.1	50.4	44.7	38.9	33.2	75.0	75.0	75.0	75.0
	46.7	37.9	29.1	20.2	12.9	5.6	-1.6	-8.7	-15.7	53.5	44.6	35.8	27.0	19.6	12.3	5.0	-2.2	-9.3	60.2	51.4	42.5	33.7	26.4	19.1	11.7	4.4	-2.8	26.5	17.7	8.8	0.0

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

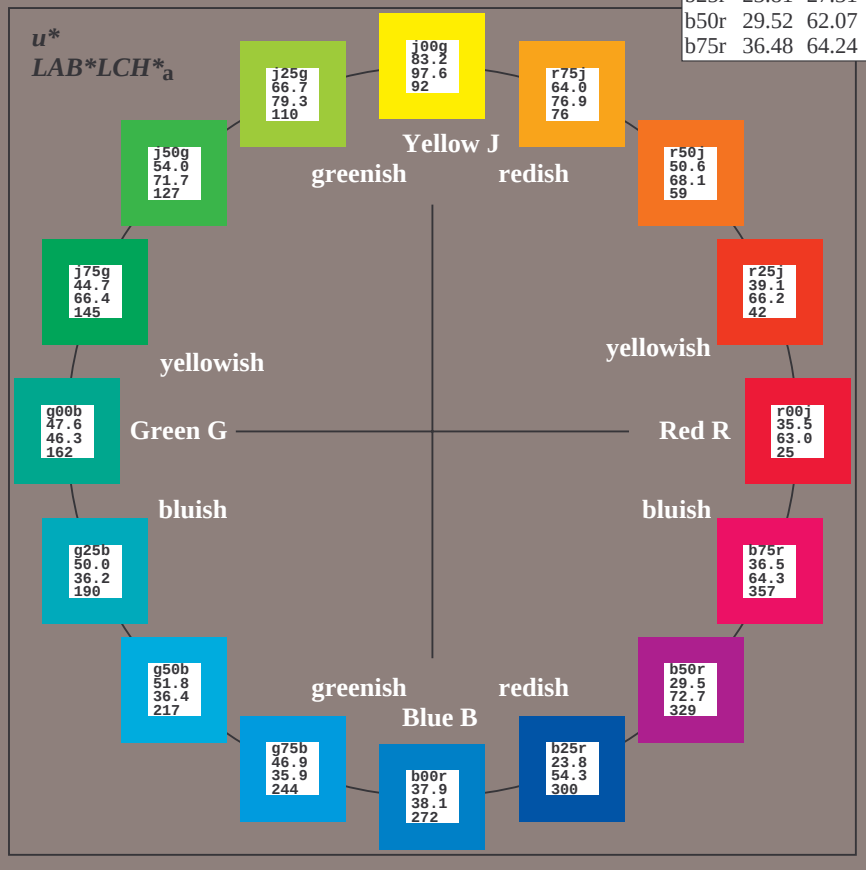
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

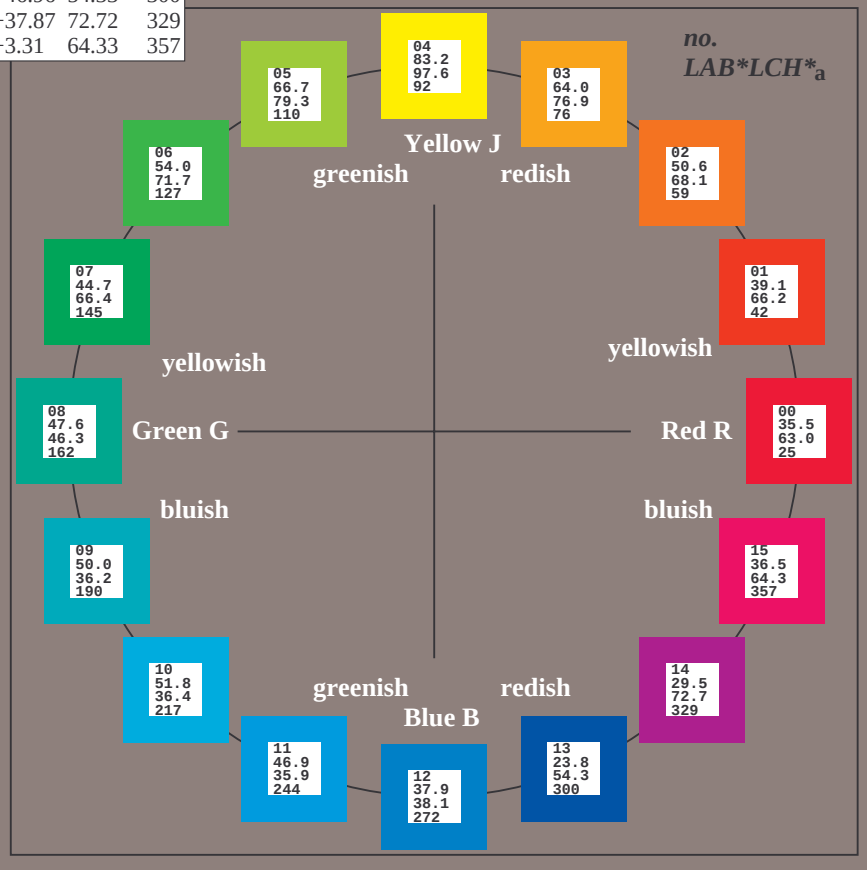


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

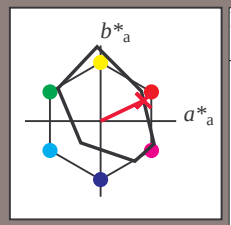
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = r00j
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

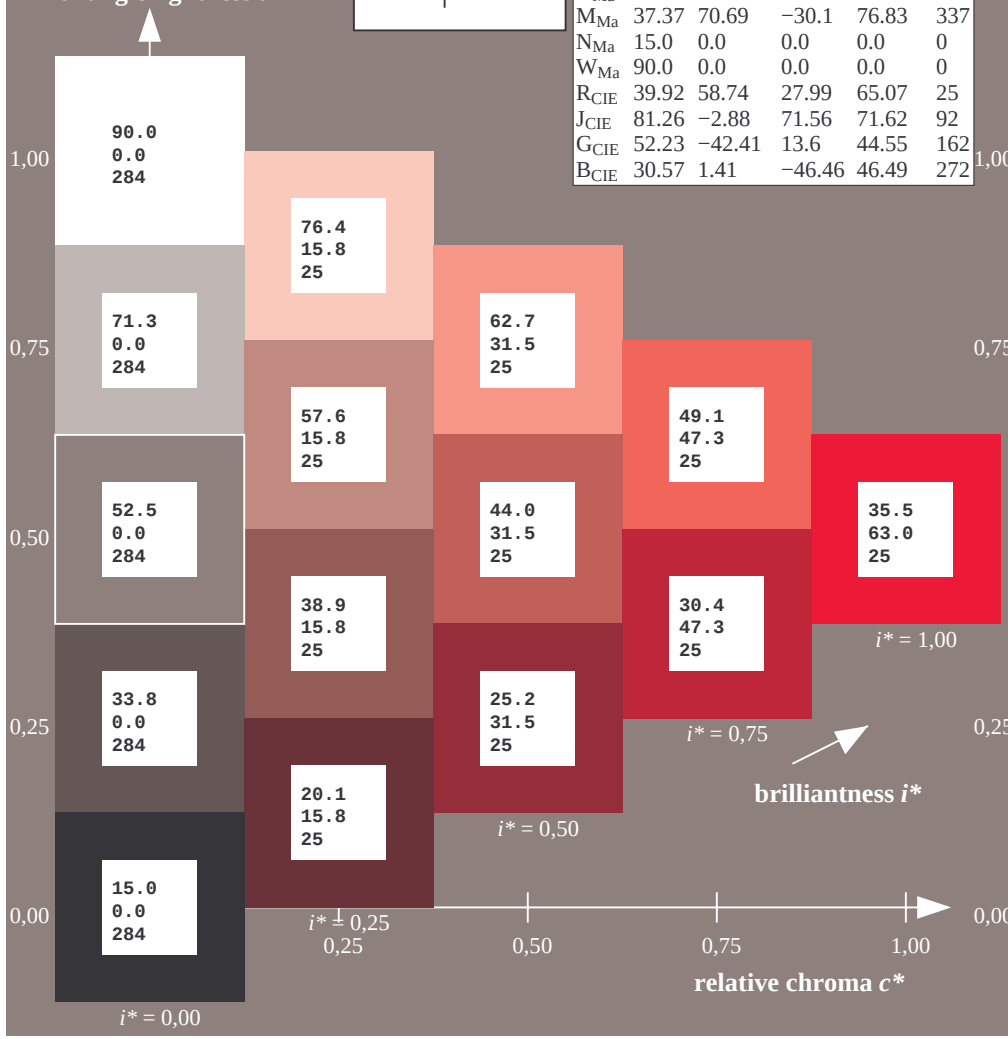
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

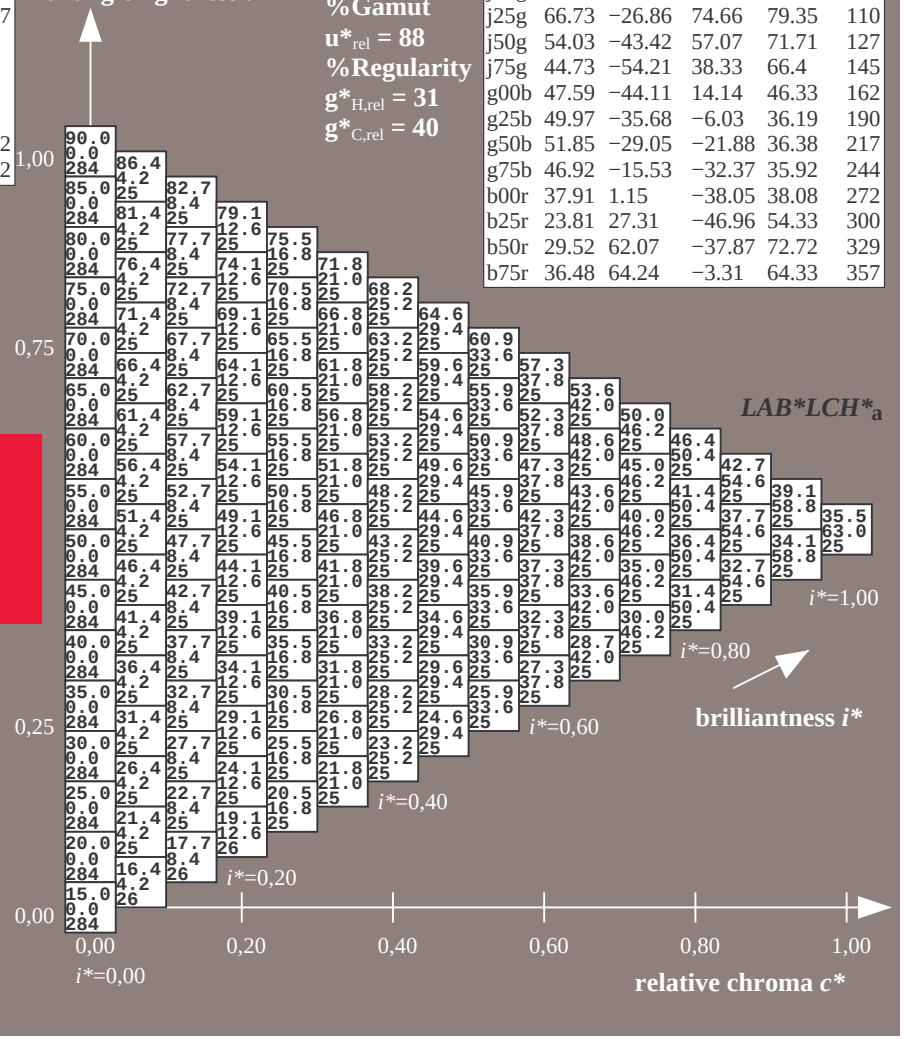
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 35 57 27**
LAB*LCH*$_{Ma}$**: 35 63 25**
lab*rgb*$_{Ma}$**: 1.0 0.0 0.0**
lab*olv*$_{Ma}$**: 1.0 0.0 0.18**

u* = r00j
LAB*LCH*$_a$**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

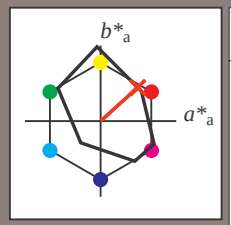




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

$u^* = r25j$
$LAB^*LCH^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

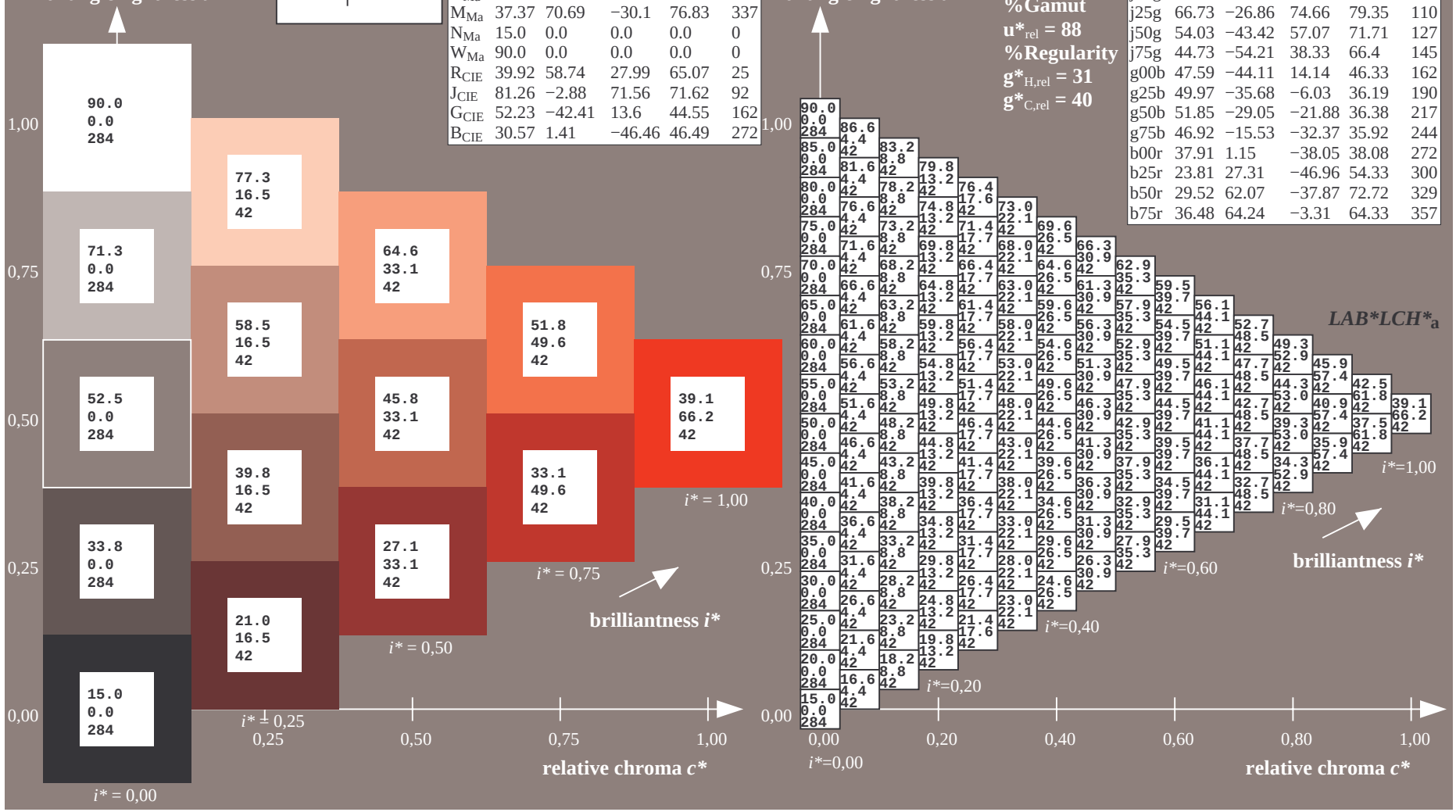
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 39 49 44**
***LAB*LCH**$_{Ma}$: 39 66 42**
***lab*rgb**$_{Ma}$: 1.0 0.25 0.0**
***lab*olv**$_{Ma}$: 1.0 0.08 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

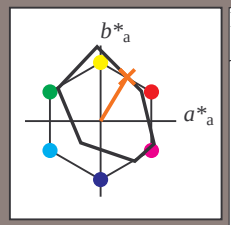
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

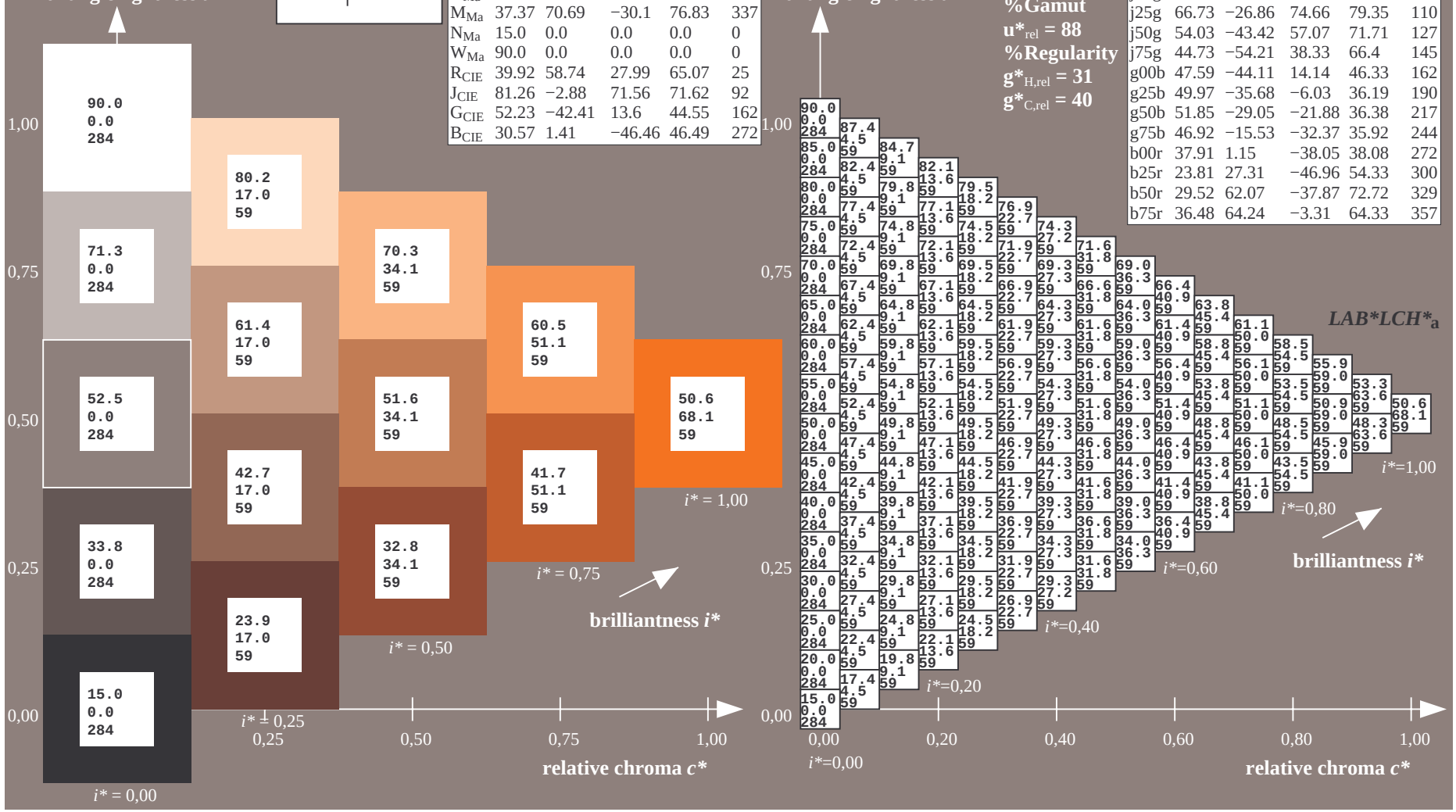
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 51 35 58**
***LAB*LCH*Ma*: 51 68 59**
***lab*rgb*Ma*: 1.0 0.5 0.0**
***lab*olv*Ma*: 1.0 0.32 0.0**
triangle lightness *t**

u* = r50j
LAB*LCH*a

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

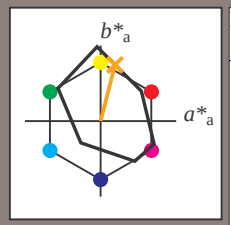
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

$u^* = r75j$
$LAB^*LCH^*_a$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = r75j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

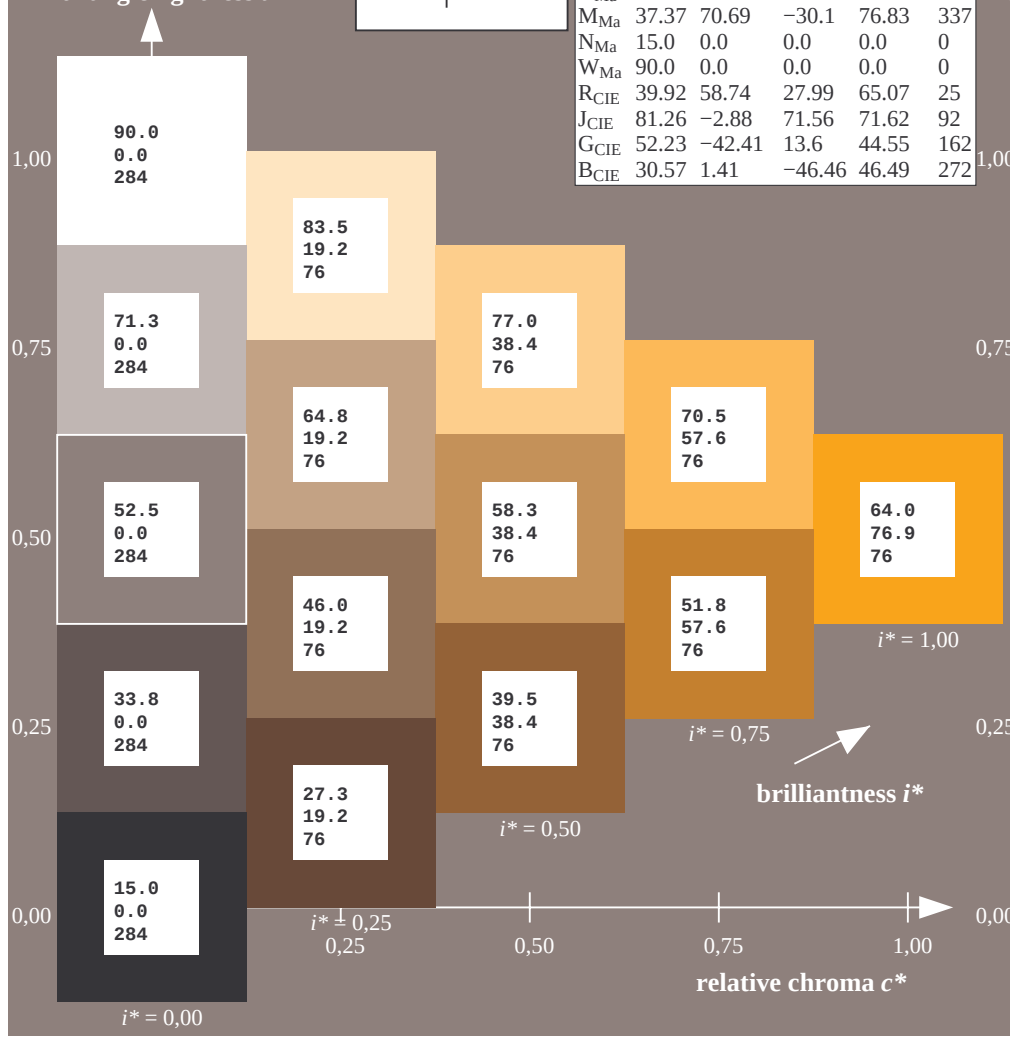
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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 19 74**
***LAB*LCH**$_{Ma}$: 64 77 76**
***lab*rgb**$_{Ma}$: 1.0 0.75 0.0**
***lab*olv**$_{Ma}$: 1.0 0.59 0.0**

FRS15_90a; adapted (a) CIELAB data

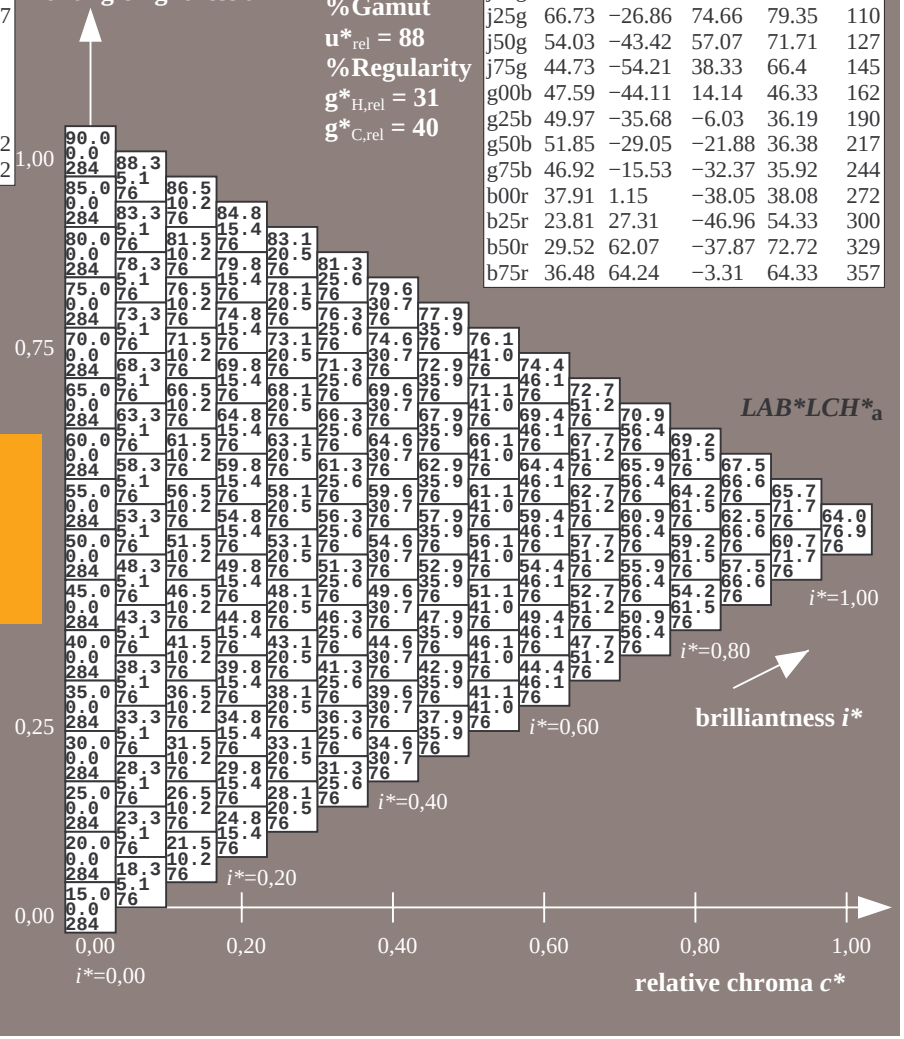
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness t^*



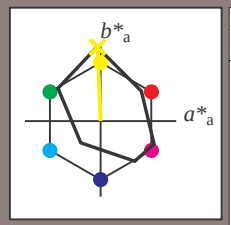
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

***LAB*LCH**$_a$**



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j00g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

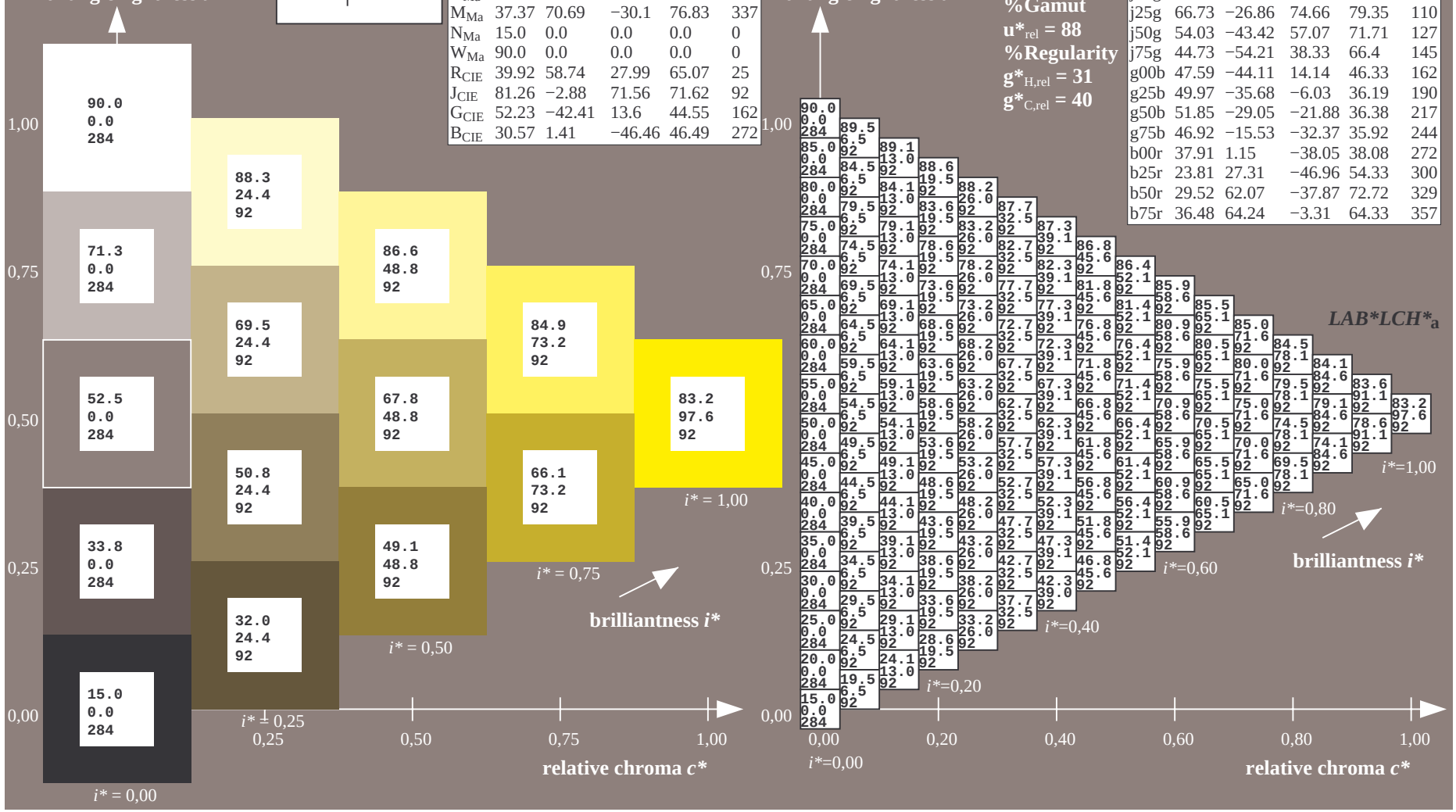
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 83 −3 98**
***LAB*LCH*Ma*: 83 98 92**
***lab*rgb*Ma*: 1.0 1.0 0.0**
***lab*olv*Ma*: 1.0 0.99 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = j00g
LAB*LCH*a

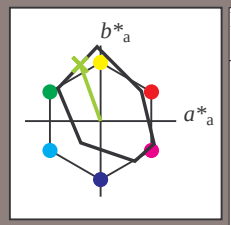
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

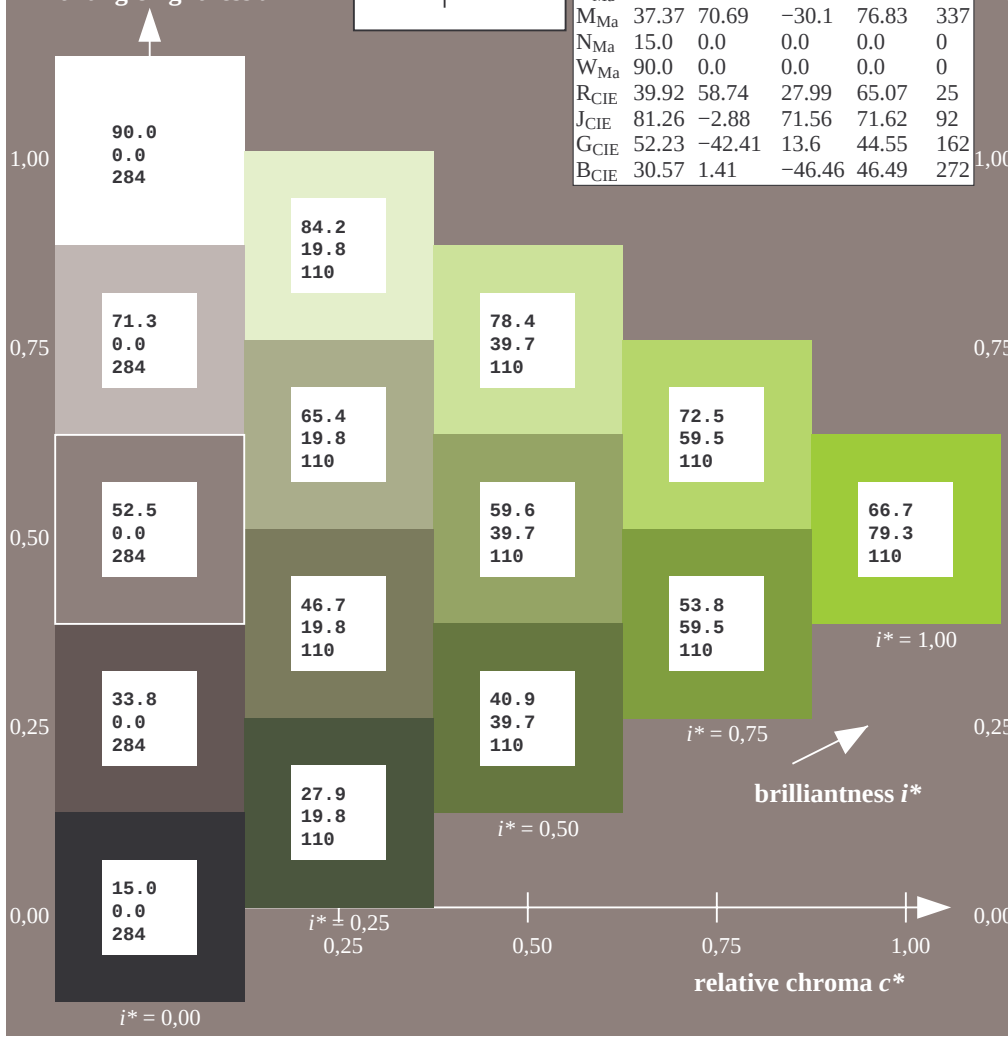
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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*: 67 −26 75**
***LAB*LCH*Ma*: 67 79 110**
***lab*rgb*Ma*: 0.75 1.0 0.0**
***lab*olv*Ma*: 0.57 1.0 0.0**

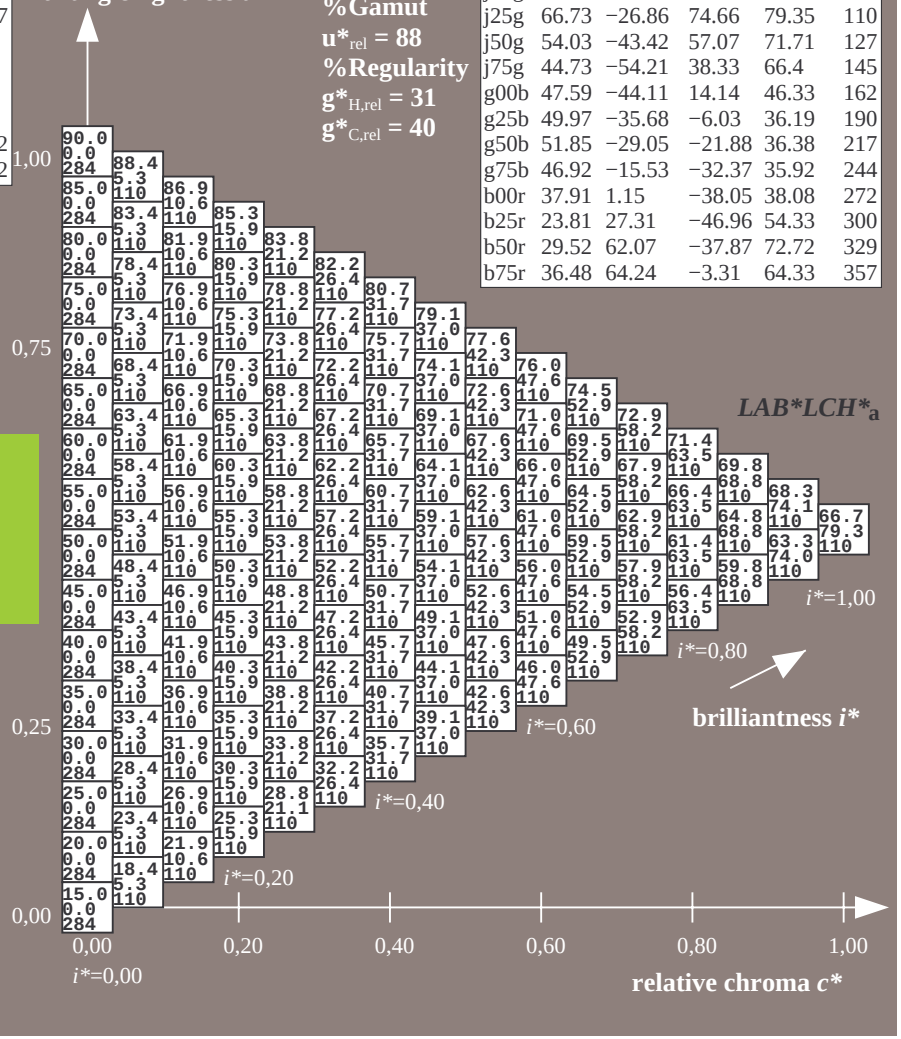
u* = j25g
LAB*LCH*a

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

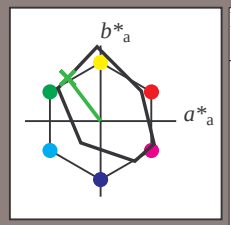


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



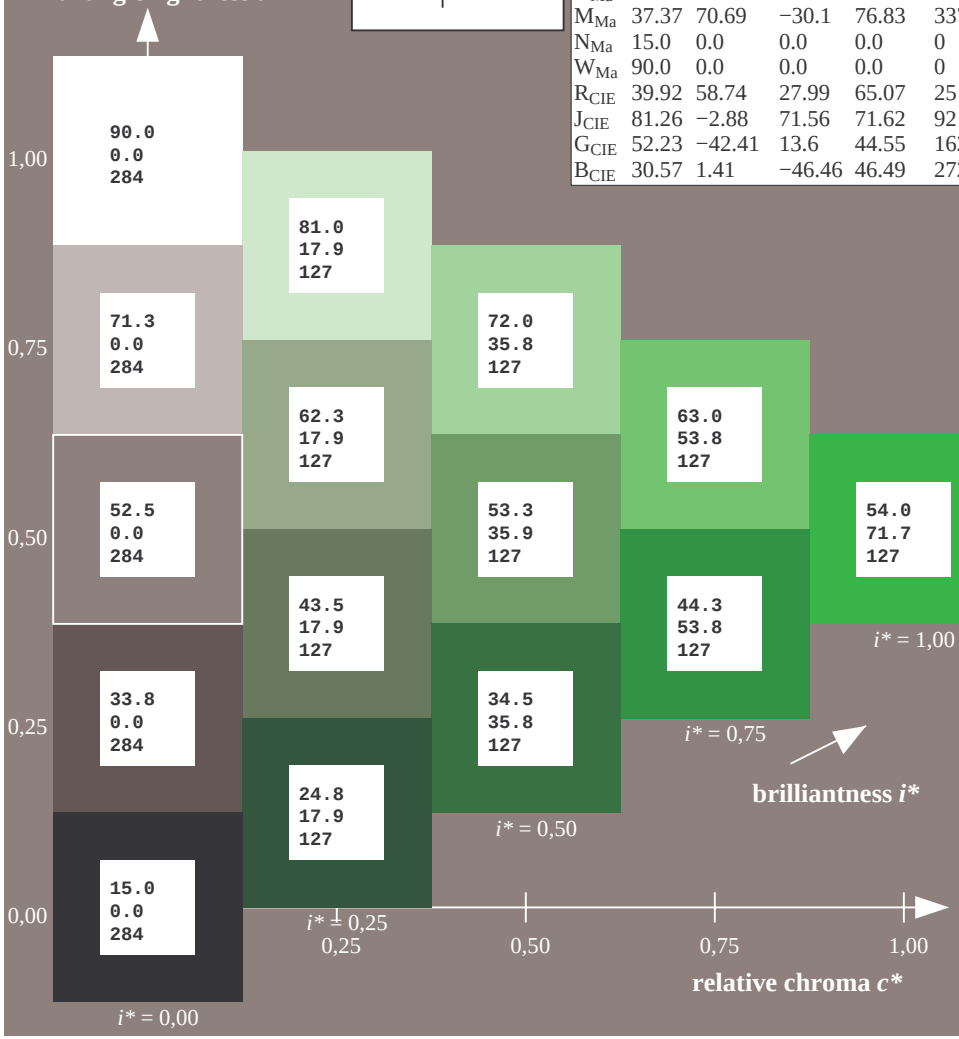
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j50g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



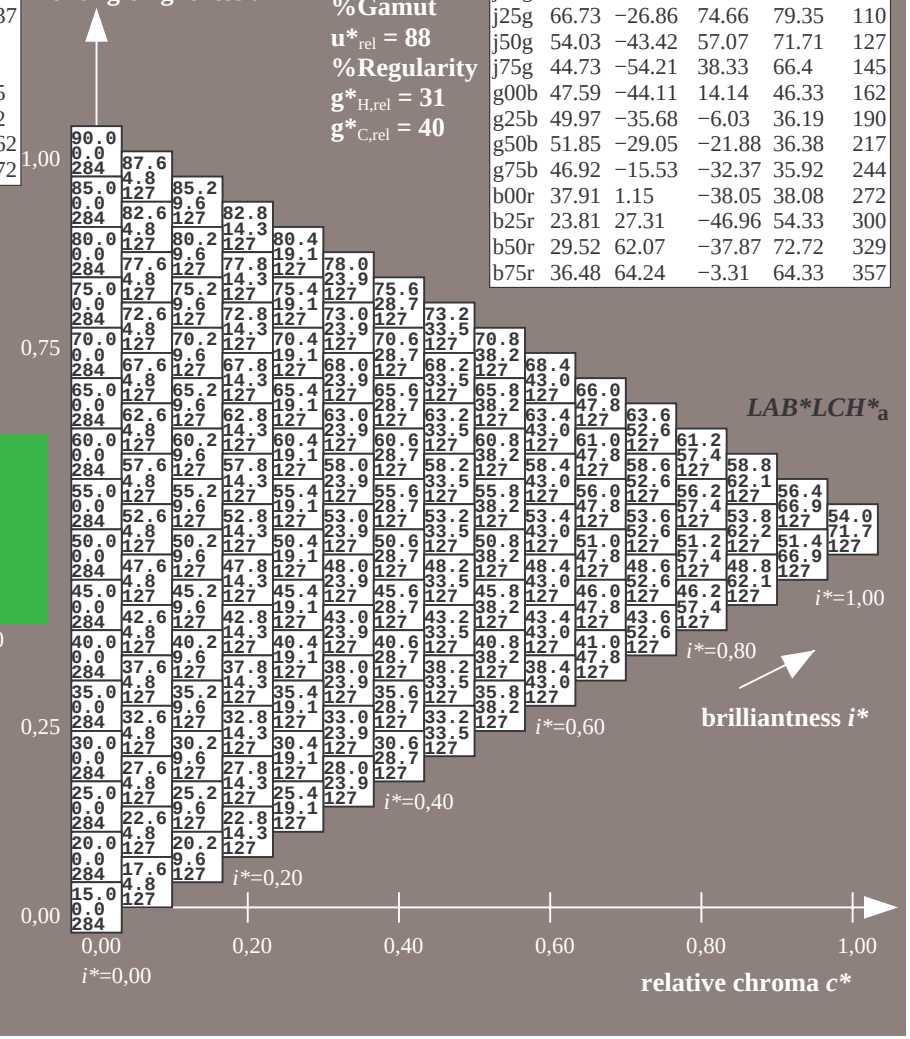
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 54 −42 57
$LAB^*LCH^*_{Ma}$: 54 72 127
$lab^*rgb^*_{Ma}$: 0.5 1.0 0.0
$lab^*olv^*_{Ma}$: 0.25 1.0 0.0
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j50g$
$LAB^*LCH^*_a$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

$u^* = j75g$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

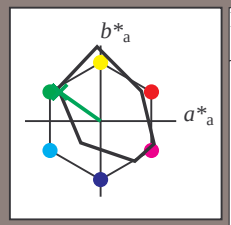
elementary hue text:

$u^* = j75g$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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 −53 38**

***LAB*LCH**$_{Ma}$: 45 66 145**

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

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

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

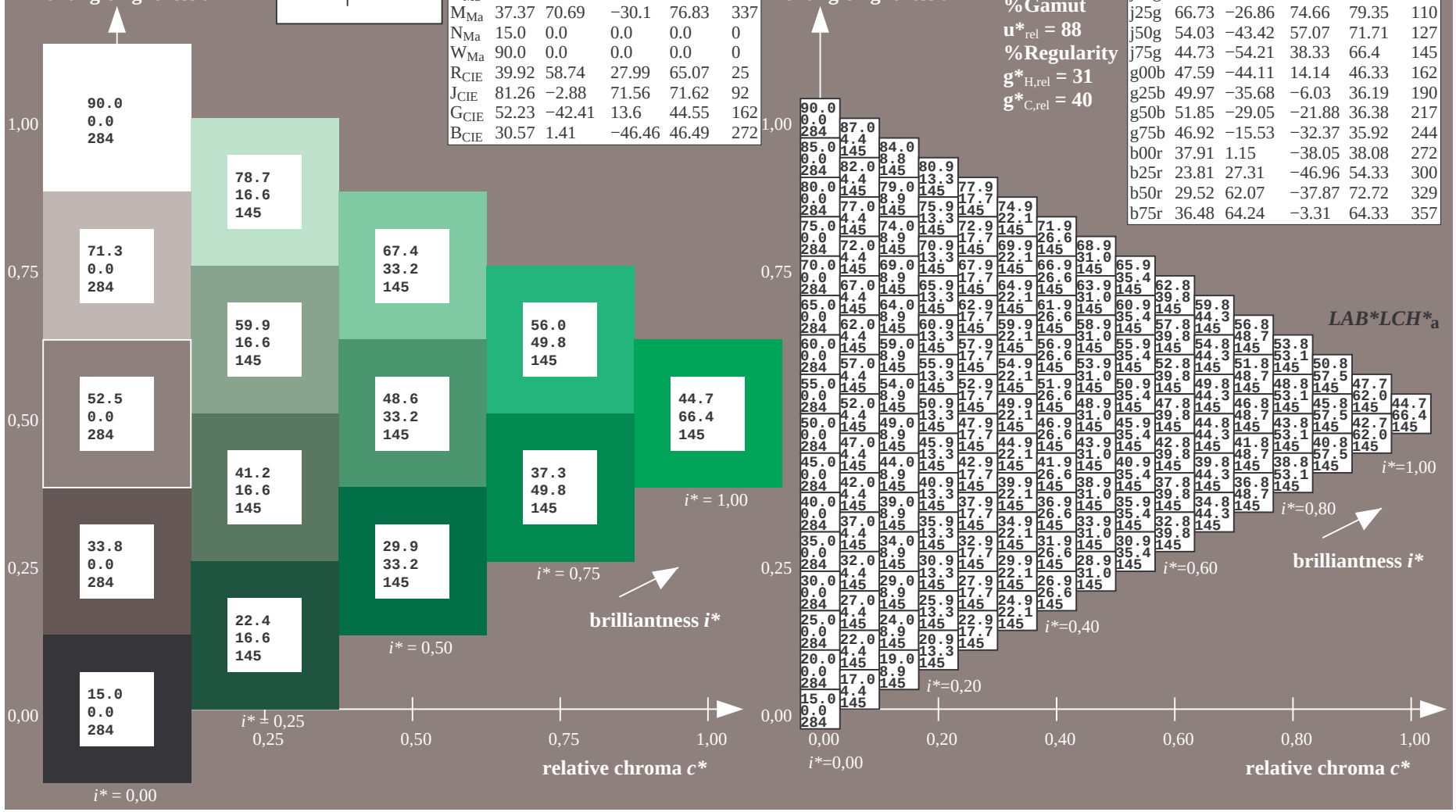
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

$u^* = g00b$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

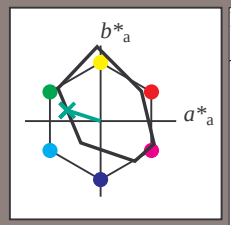
elementary hue text:

$u^* = g00b$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 48 −43 14**

***LAB*LCH**$_{Ma}$: 48 46 162**

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

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

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

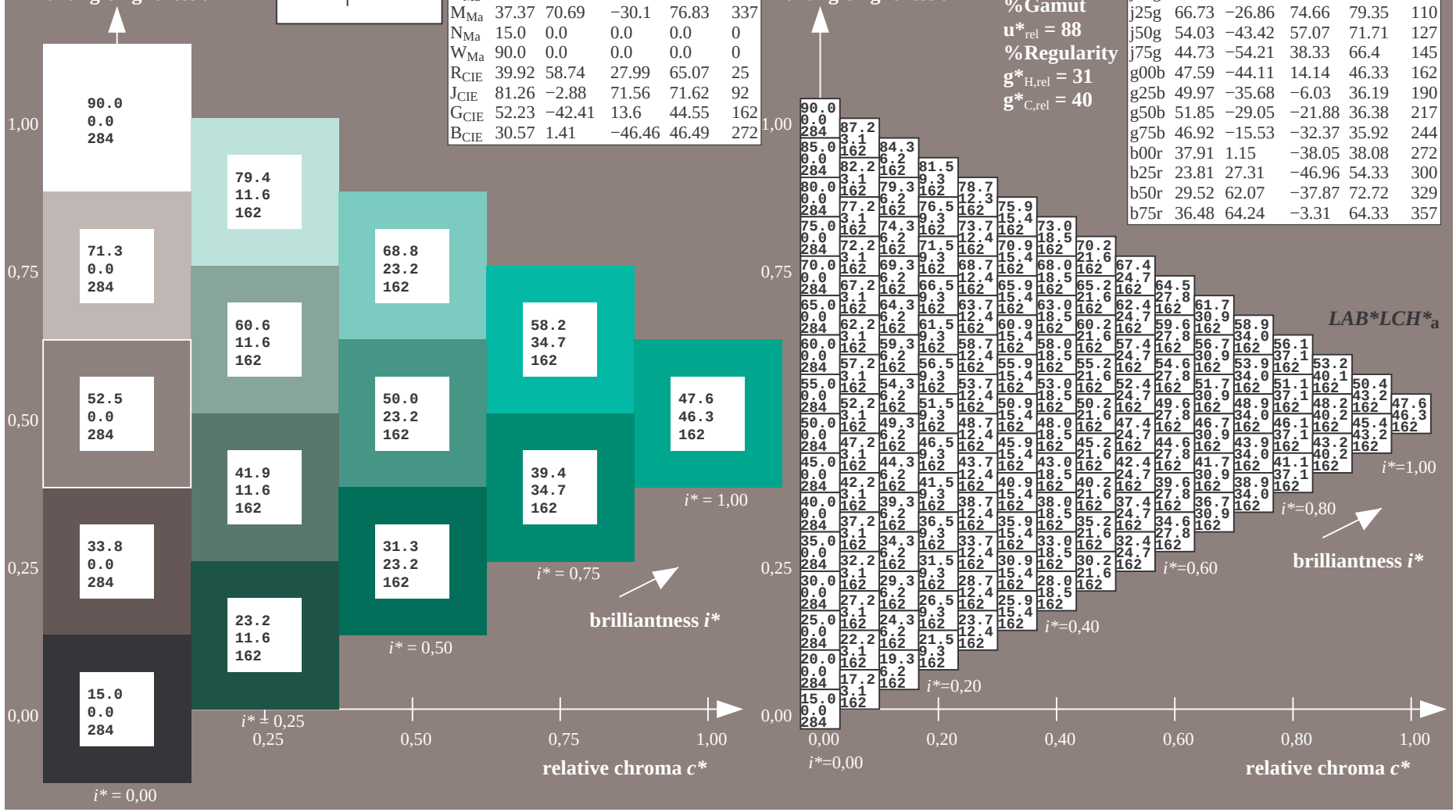
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

$u^* = g25b$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

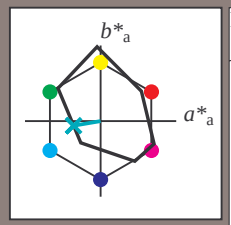
elementary hue text:

$u^* = g25b$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 50 −35 −5**

***LAB*LCH**$_{Ma}$: 50 36 190**

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

***lab*olv**$_{Ma}$: 0.0 1.0 0.69**

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

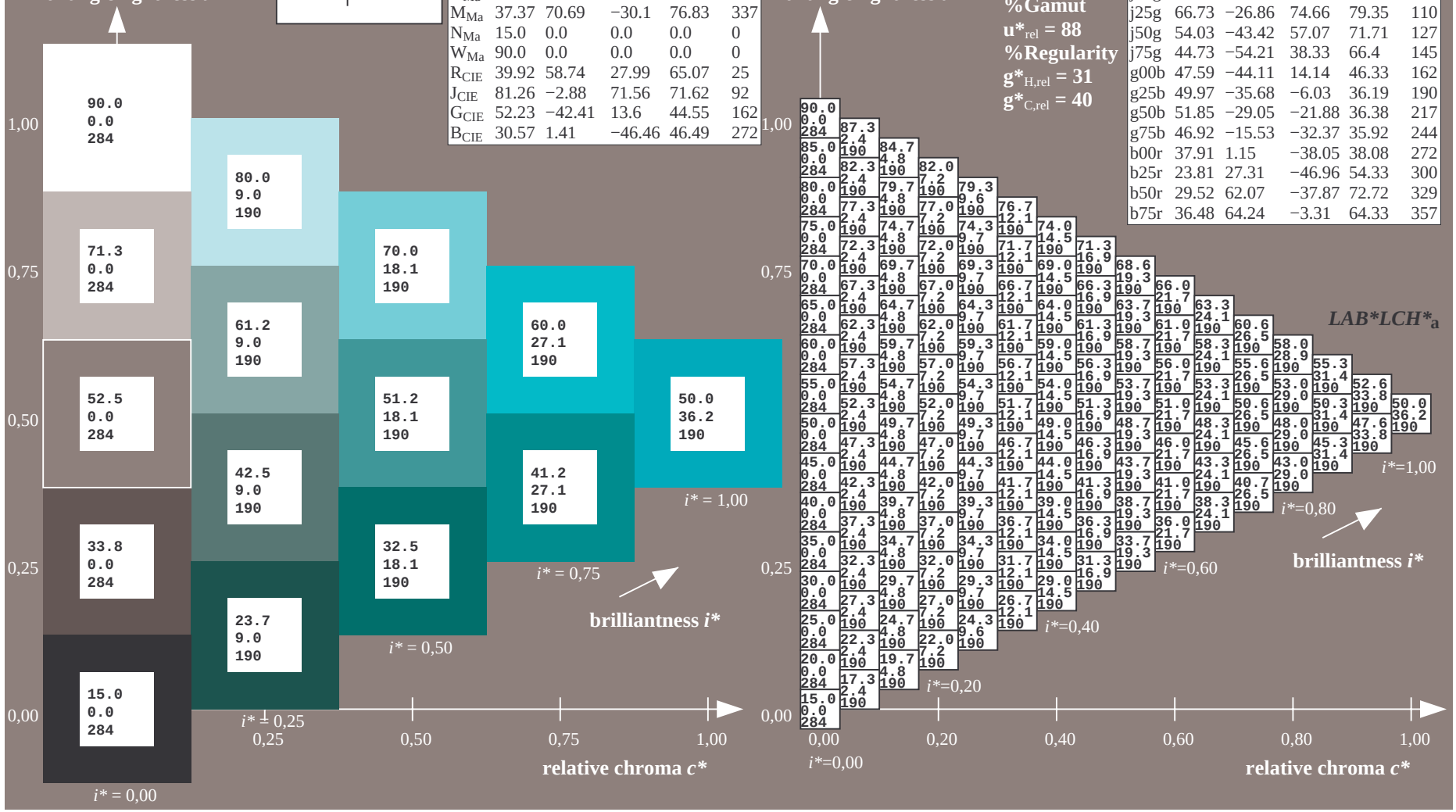
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

$u^* = g50b$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

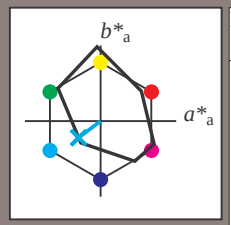
elementary hue text:

$u^* = g50b$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 52 −28 −21**

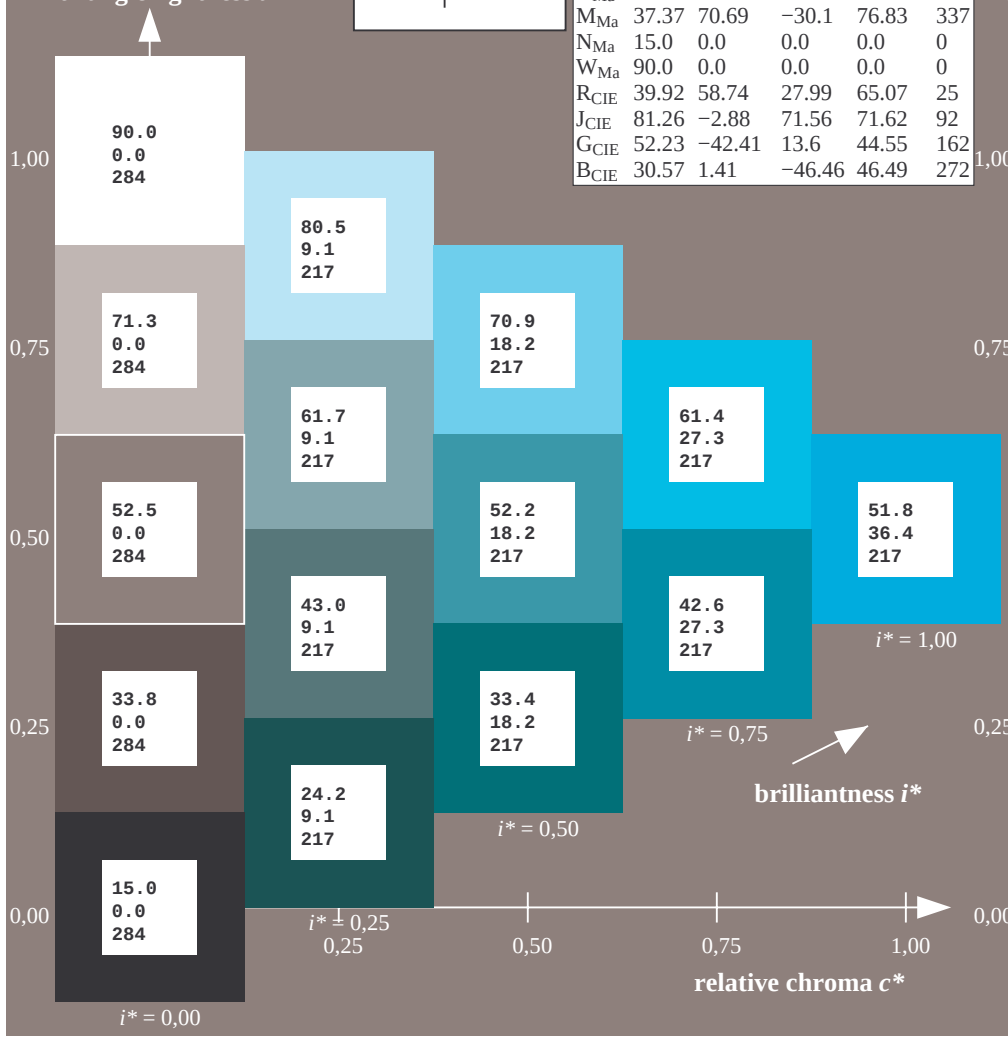
***LAB*LCH**$_{Ma}$: 52 36 217**

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

***lab*olv**$_{Ma}$: 0.0 1.0 0.9**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



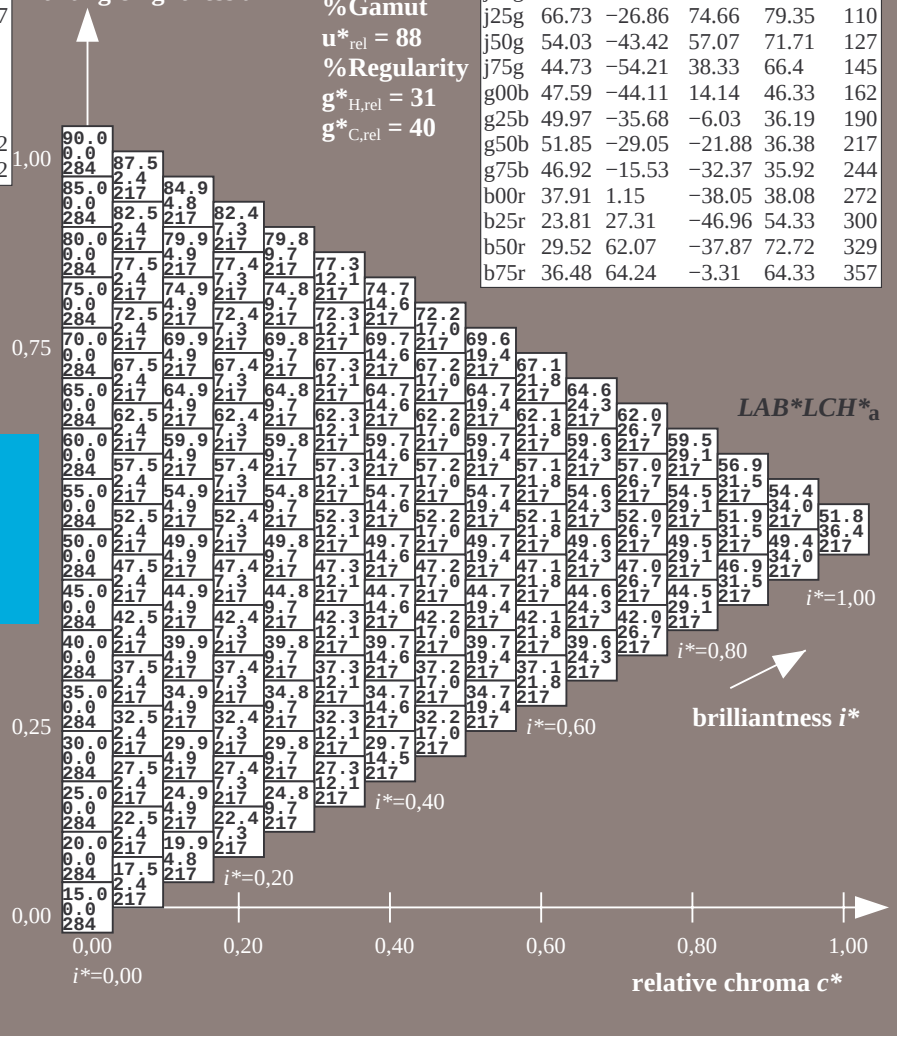
%Gamut

$u^*_{rel} = 88$

%Regularity

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

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



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

$u^* = g75b$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

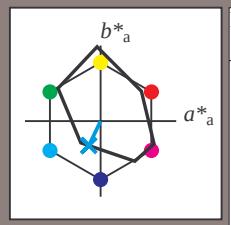
elementary hue text:

$u^* = g75b$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 47 −15 −31**

***LAB*LCH**$_{Ma}$: 47 36 244**

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

***lab*olv**$_{Ma}$: 0.0 0.85 1.0**

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

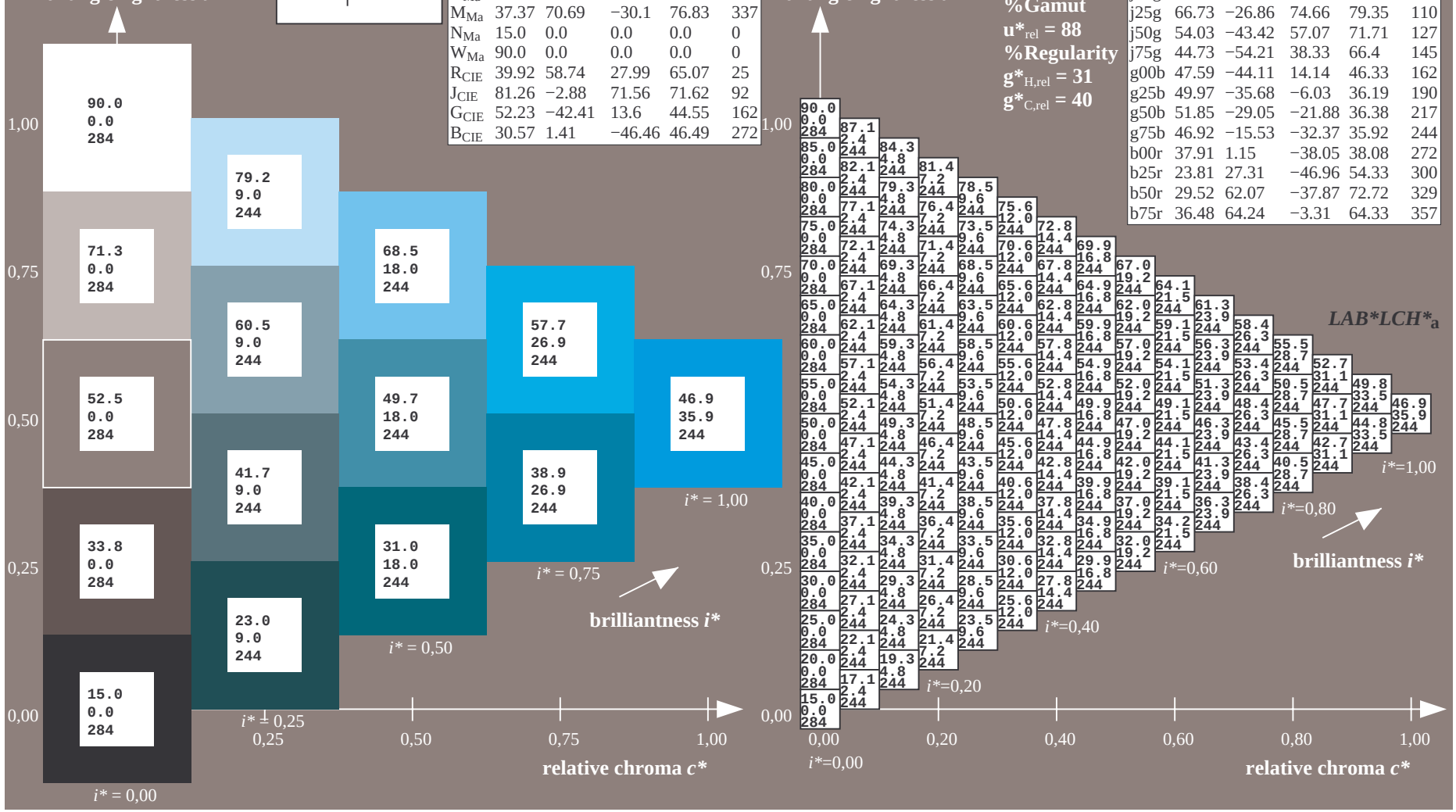
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

$u^* = b00r$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

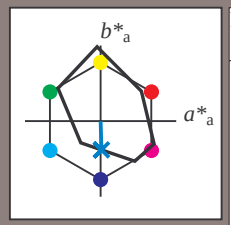
elementary hue text:

$u^* = b00r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 38 1 −37**

***LAB*LCH**$_{Ma}$: 38 38 272**

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

***lab*olv**$_{Ma}$: 0.0 0.62 1.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

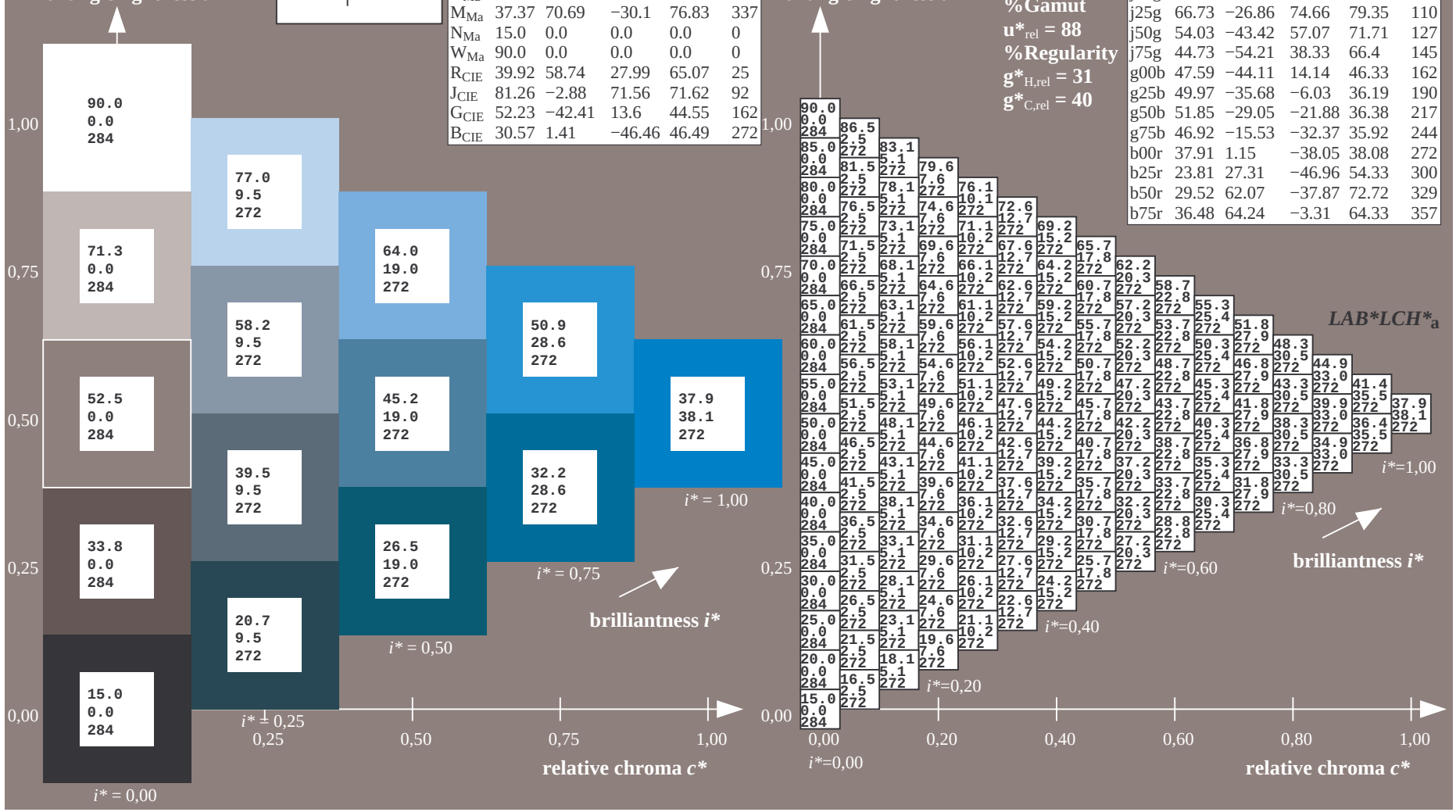
%Gamut

$u^*_{rel} = 88$

%Regularity

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

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



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

$u^* = b25r$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

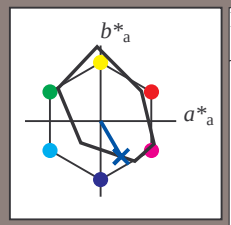
elementary hue text:

$u^* = b25r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 24 27 −46**

***LAB*LCH**$_{Ma}$: 24 54 300**

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

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

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

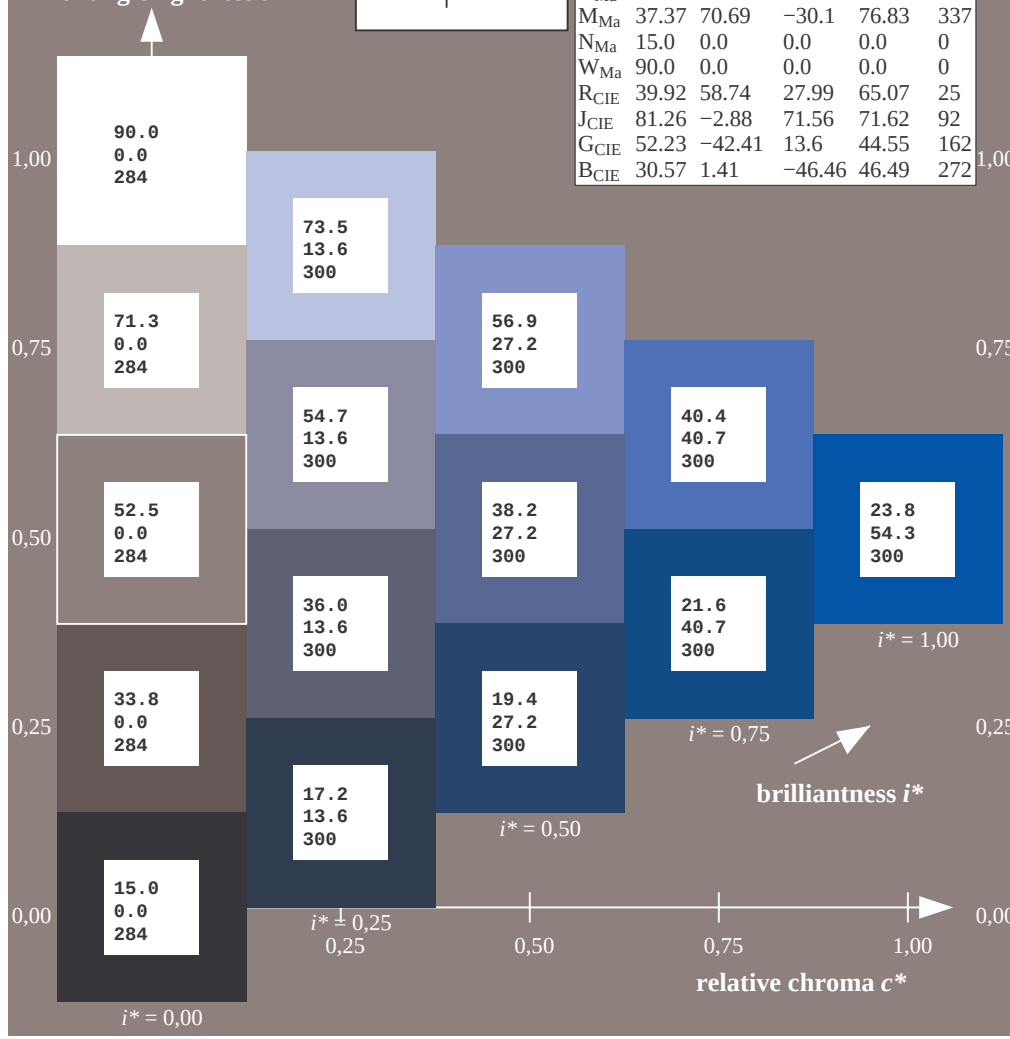
%Regularity

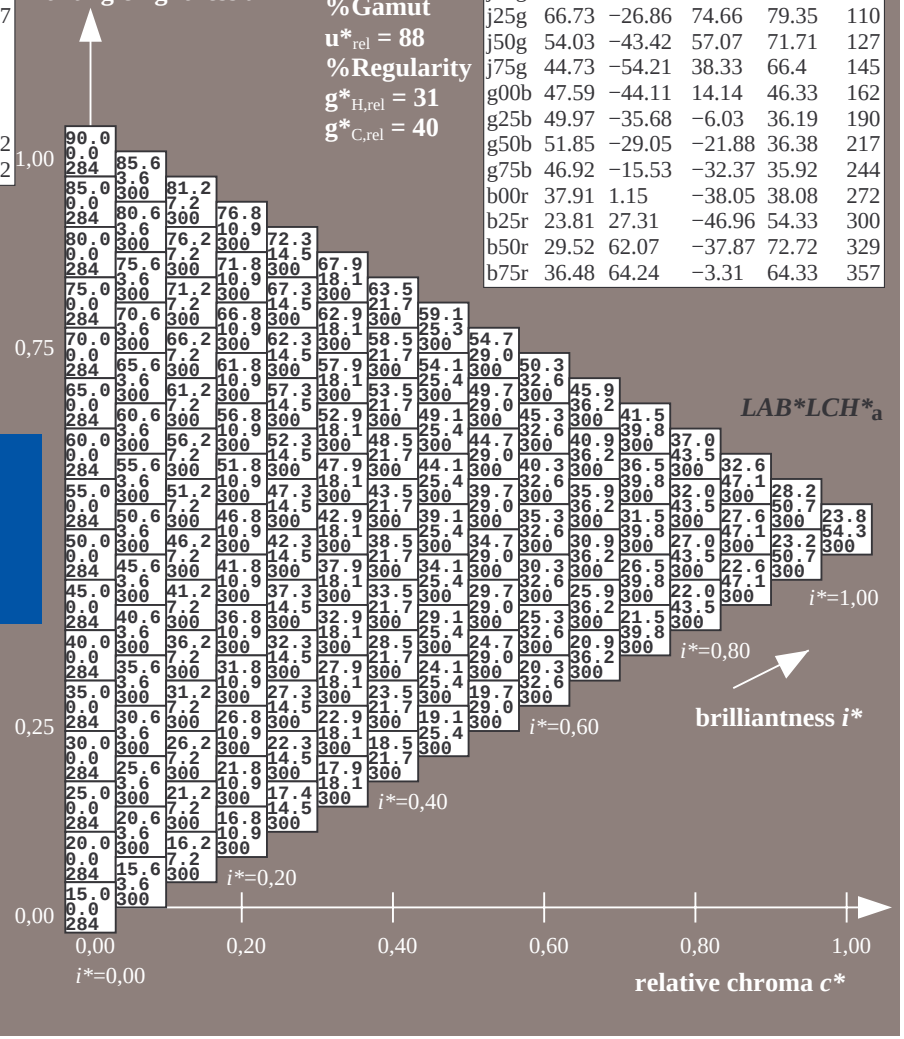
$g^*_{H,rel} = 31$

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

$u^* = b50r$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

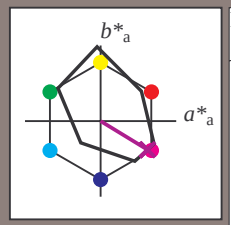
elementary hue text:

$u^* = b50r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 30 62 −37**

***LAB*LCH**$_{Ma}$: 30 73 329**

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

***lab*olv**$_{Ma}$: 0.66 0.0 1.0**

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

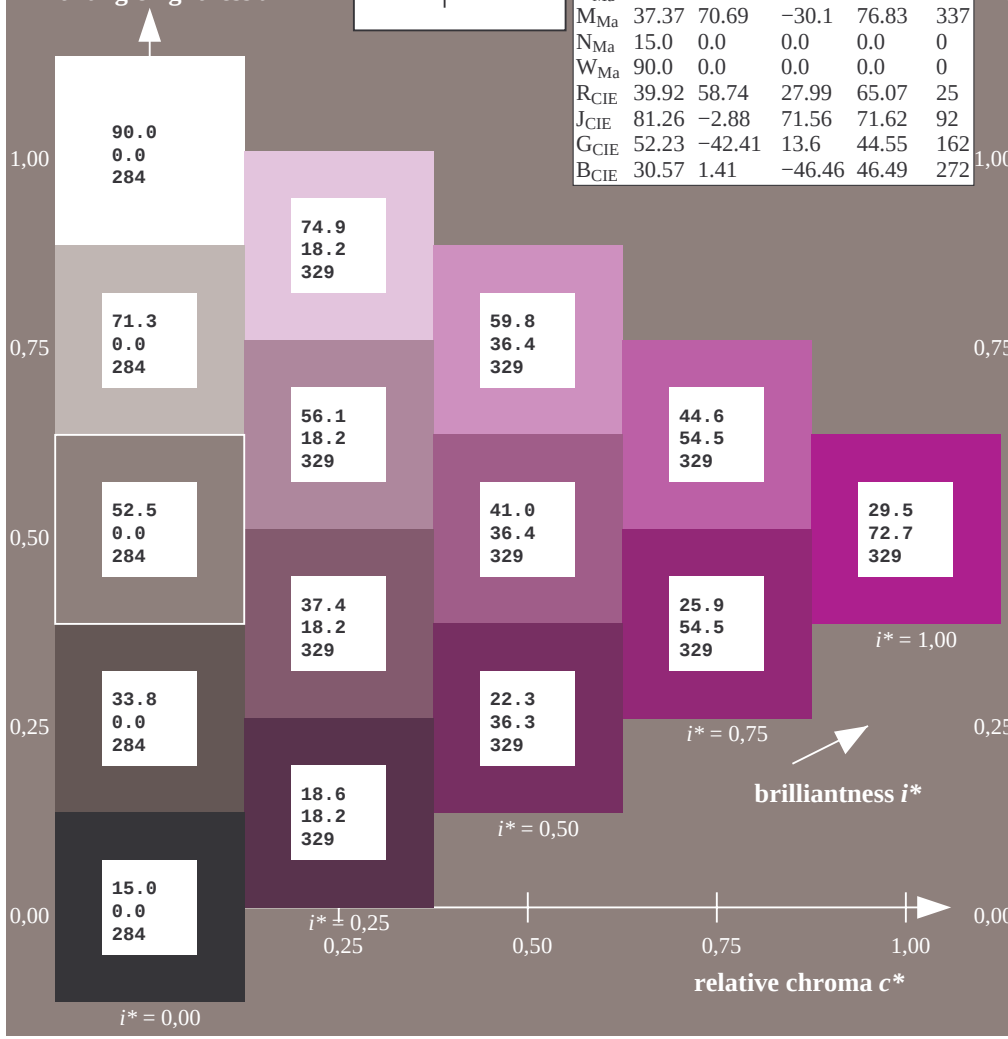
%Regularity

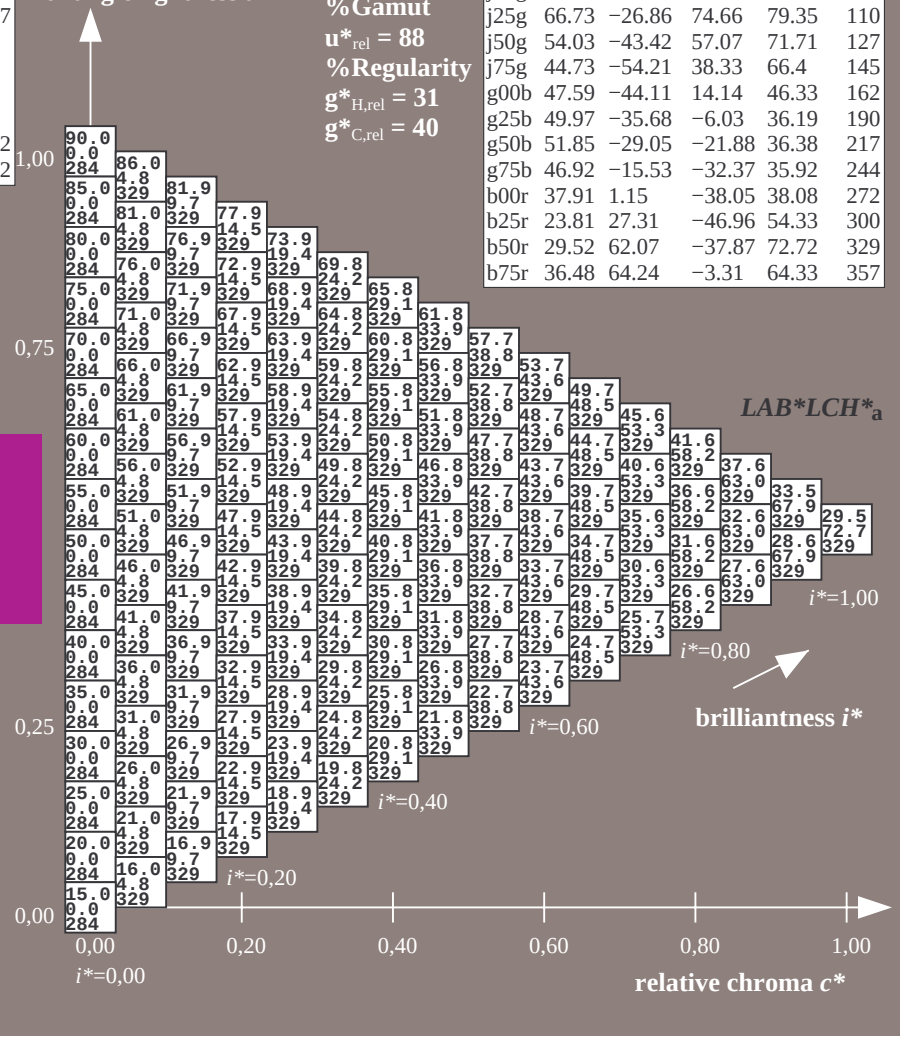
$g^*_{H,rel} = 31$

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

$u^* = b75r$

$LAB^*LCH^*_a$

data for any colour:

lab*tch** and *lab*icu*

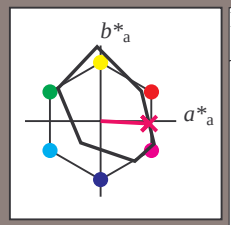
elementary hue text:

$u^* = b75r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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**$_{Ma}$: 36 64 −2**

***LAB*LCH**$_{Ma}$: 36 64 357**

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

***lab*olv**$_{Ma}$: 1.0 0.0 0.62**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness t^*

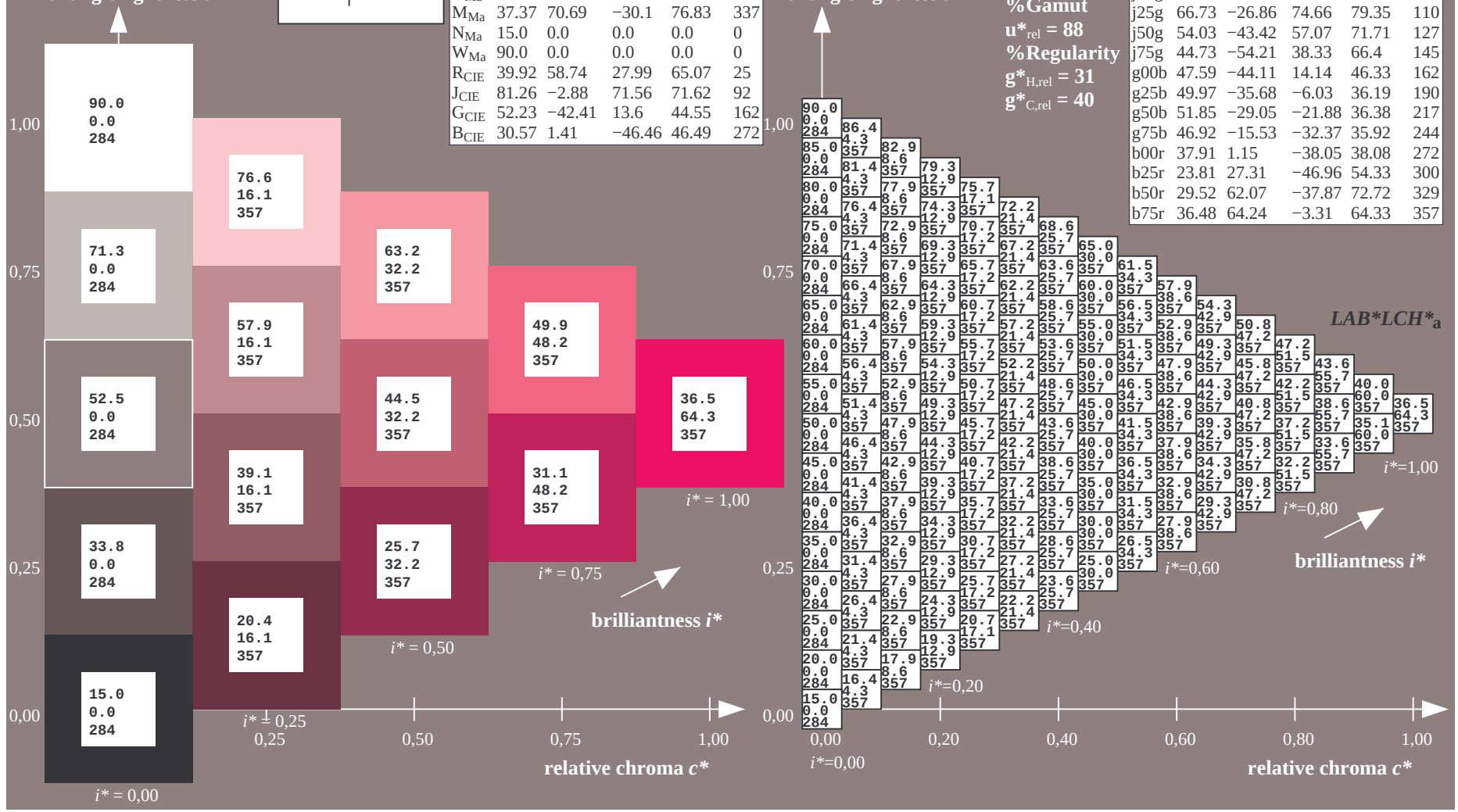
%Gamut

$u^*_{rel} = 88$

%Regularity

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

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

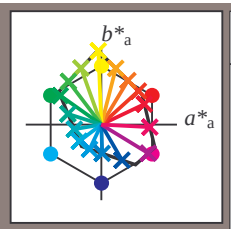


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	LAB*LCH*a			
01	15.0	18.6	22.3	25.9	29.6	33.2	36.9	40.5	44.1	17.5	23.6	27.2	30.9	34.5	38.2	41.8	45.4	49.1	20.0	26.1	32.2	35.8	39.5	43.1	46.8	50.4	54.0	90.0	83.1	76.3	69.4	62.5	55.7	48.8	41.9	35.1	15.0	15.0	15.0	15.0
	0.0	8.9	17.8	26.7	35.5	44.4	53.3	62.2	71.1	8.4	12.3	19.3	27.4	35.9	44.5	53.2	62.0	70.8	16.7	18.3	24.6	31.1	38.5	46.5	54.8	63.2	71.7	0.0	8.4	16.7	25.1	33.4	41.8	50.2	58.5	66.9	0.0	0.0	0.0	0.0
	284	142	142	142	142	142	142	142	142	36	93	113	122	127	130	132	134	135	36	70	93	105	113	119	122	125	127	284	36	36	36	36	36	36	36	36	284	284	284	284
02	14.9	19.7	23.4	27.0	30.6	34.3	37.9	41.6	45.2	17.8	24.4	28.0	31.7	35.3	38.9	42.6	46.2	49.9	20.3	26.9	33.0	36.6	40.3	43.9	47.5	51.2	54.8	85.3	80.6	73.8	66.9	60.0	53.2	46.3	39.4	32.6	24.4	24.4	24.4	24.4
	8.7	4.9	10.5	18.8	27.5	36.3	45.1	53.9	62.8	9.6	0.0	8.9	17.8	26.7	35.5	44.4	53.3	62.2	15.6	8.4	12.3	19.3	27.4	35.9	44.5	53.2	62.0	4.9	0.0	8.4	16.7	25.1	33.4	41.8	50.2	58.5	0.0	0.0	0.0	0.0
	310	228	170	157	153	150	149	148	147	337	284	142	142	142	142	142	142	142	4	36	93	113	122	127	130	132	134	228	284	36	36	36	36	36	36	36	284	284	284	284
03	14.8	19.6	24.4	28.1	31.7	35.3	39.0	42.6	46.3	17.7	24.3	29.1	32.7	36.4	40.0	43.6	47.3	50.9	20.6	27.2	33.8	37.4	41.0	44.7	48.3	52.0	55.6	80.7	76.0	71.3	64.4	57.5	50.6	43.8	36.9	30.1	33.8	33.8	33.8	33.8
	17.4	10.5	9.7	13.7	20.9	29.1	37.6	46.3	55.0	17.8	8.7	4.9	10.5	18.8	27.5	36.3	45.1	53.9	19.2	9.6	0.0	8.9	17.8	26.7	35.5	44.4	53.3	9.7	4.9	0.0	8.4	16.7	25.1	33.4	41.8	50.2	0.0	0.0	0.0	0.0
	310	283	228	187	170	162	157	154	153	324	310	228	170	157	153	150	149	148	337	337	284	142	142	142	142	142	142	228	228	284	36	36	36	36	36	36	284	284	284	284
04	14.7	19.5	24.3	29.1	32.8	36.4	40.0	43.7	47.3	17.6	24.2	29.0	33.8	37.4	41.1	44.7	48.4	52.0	20.5	27.1	33.6	38.5	42.1	45.7	49.4	53.0	56.7	76.0	71.3	66.6	61.9	55.0	48.1	41.3	34.4	27.5	43.1	43.1	43.1	43.1
	26.1	18.7	13.8	14.6	17.7	23.9	31.4	39.5	47.9	26.4	17.4	10.5	9.7	13.7	21.0	29.1	37.6	46.3	27.3	17.8	8.7	4.9	10.5	18.8	27.5	36.3	45.1	14.6	9.7	4.9	0.0	8.4	16.7	25.1	33.4	41.8	0.0	0.0	0.0	0.0
	310	295	266	228	198	180	170	164	160	320	310	283	228	187	170	162	157	155	329	324	310	228	170	157	153	150	149	228	228	228	284	36	36	36	36	36	284	284	284	284
05	14.6	19.4	24.2	29.0	33.8	37.5	41.1	44.8	48.4	17.5	24.1	28.9	33.7	38.5	42.1	45.8	49.4	53.1	20.4	27.0	33.5	38.4	43.2	46.8	50.4	54.1	57.7	71.3	66.6	61.9	57.2	52.5	45.6	38.8	31.9	25.0	52.5	52.5	52.5	52.5
	34.9	27.2	21.0	17.9	19.4	22.0	27.4	34.3	41.9	35.0	26.1	18.7	13.9	14.6	17.7	23.9	31.4	39.5	35.7	26.4	17.4	10.5	9.7	13.7	21.0	29.1	37.6	19.4	14.6	9.7	4.9	0.0	8.4	16.7	25.1	33.4	0.0	0.0	0.0	0.0
	310	300	283	257	228	204	187	177	170	317	310	295	266	228	198	180	170	164	324	320	310	283	228	187	170	162	157	228	228	228	228	284	36	36	36	36	284	284	284	284
06	14.5	19.3	24.1	28.9	33.7	38.5	42.2	45.8	49.5	17.4	24.0	28.8	33.6	38.4	43.2	46.8	50.5	54.1	20.3	26.9	33.4	38.2	43.1	47.9	51.5	55.2	58.8	66.7	62.0	57.2	52.5	47.8	43.1	36.3	29.4	22.5	61.9	61.9	61.9	61.9
	43.6	35.8	29.0	24.1	22.3	24.3	26.6	31.3	37.5	43.7	34.9	27.2	21.0	17.9	19.4	22.0	27.4	34.3	44.2	35.0	26.1	18.7	13.9	14.6	17.7	23.9	31.4	24.3	19.4	14.6	9.7	4.9	0.0	8.4	16.7	25.1	0.0	0.0	0.0	0.0
	310	303	291	274	250	228	208	193	183	316	310	300	283	257	228	204	187	177	322	317	310	295	266	228	198	180	170	228	228	228	228	228	284	36	36	36	284	284	284	284
07	14.4	19.2	24.0	28.8	33.6	38.4	43.2	46.9	50.5	17.3	23.8	28.7	33.5	38.3	43.1	47.9	51.6	55.2	20.2	26.7	33.3	38.1	43.0	47.8	52.6	56.2	59.9	62.0	57.3	52.6	47.9	43.2	38.5	33.8	26.9	20.0	71.3	71.3	71.3	71.3
	52.3	44.4	37.3	31.5	27.7	26.8	29.2	31.2	35.4	52.3	43.6	35.8	29.0	24.1	22.3	24.3	26.6	31.3	52.7	43.7	34.9	27.2	21.0	17.9	19.4	22.0	27.4	29.2	24.3	19.4	14.6	9.7	4.9	0.0	8.4	16.7	0.0	0.0	0.0	0.0
	310	304	295	283	266	246	228	211	198	315	310	303	291	274	250	228	208	193	320	316	310	300	283	257	228	204	187	228	228	228	228	228	284	36	36	36	284	284	284	284
08	14.3	19.1	23.9	28.7	33.5	38.3	43.1	48.0	51.6	17.2	23.7	28.6	33.4	38.2	43.0	47.8	52.6	56.3	20.1	26.6	33.2	38.0	42.8	47.7	52.5	57.3	60.9	57.3	52.6	47.9	43.2	38.5	33.8	29.1	24.4	17.5	80.6	80.6	80.6	80.6
	61.0	53.1	45.8	39.4	34.5	31.6	31.5	34.0	35.9	61.0	52.3	44.4	37.4	31.5	27.7	26.8	29.2	31.2	61.4	52.3	43.6	35.8	29.0	24.1	22.3	24.3	26.6	34.0	29.2	24.3	19.4	14.6	9.7	4.9	0.0	8.4	0.0	0.0	0.0	0.0
	310	305	298	289	276	261	244	228	213	314	310	304	295	283	266	246	228	211	318	315	310	303	291	274	250	228	208	228	228	228	228	228	228	228	284	36	284	284	284	284
09	14.2	19.0	23.8	28.6	33.4	38.2	43.0	47.9	52.7	17.1	23.6	28.4	33.3	38.1	42.9	47.7	52.5	57.3	20.0	26.5	33.1	37.9	42.7	47.6	52.4	57.2	62.0	52.7	48.0	43.2	38.5	33.8	29.1	24.4	19.7	15.0	90.0	90.0	90.0	90.0
	69.7	61.8	54.4	47.7	42.0	37.9	35.8	36.2	38.9	69.7	61.0	53.1	45.8	39.4	34.5	31.6	31.5	34.0	70.0	61.0	52.3	44.4	37.3	31.5	27.7	26.8	29.2	38.9	34.0	29.2	24.3	19.4	14.6	9.7	4.9	0.0	0.0	0.0	0.0	0.0
	310	306	300	293	283	271	257	241	228	314	310	305	298	289	276	261	244	228	317	314	310	304	295	283	266	246	228	228	228	228	228	228	228	228	284	284	284	284	284	284
10	22.5	28.6	34.7	40.8	44.4	48.1	51.7	55.4	59.0	25.0	31.1	37.2	43.3	49.4	53.0	56.7	60.3	63.9	27.5	33.6	39.7	45.8	51.9	58.0	61.6	65.3	68.9	90.0	89.2	88.4	87.7	86.9	86.1	85.3	84.5	83.8	15.0	15.0	15.0	15.0
	25.1	25.6	30.0	36.9	43.2	50.2	57.8	65.7	73.8	33.4	33.5	36.6	42.1	49.2	55.3	62.2	69.5	77.1	41.8	41.5	43.8	48.2	54.2	61.5	67.6	74.2	81.3	0.0	12.3	24.6	36.9	49.2	61.5	73.8	86.1	98.4	0.0	0.0	0.0	0.0
	36	60	79	93	102	108	113	117	120	36	54	70	83	93	100	105	110	113	36	51	64	76	85	93	98	103	107	284	93	93	93	93	93	93	93	93	284	284	284	284
11	22.8	29.4	35.5	41.6	45.2	48.8	52.5	56.1	59.8	25.3	31.9	38.0	44.1	50.2	53.8	57.4	61.1	64.7	27.8	34.4	40.5	46.6	52.7	58.8	62.4	66.0	69.7	80.5	80.6	79.8	79.1	78.3	77.5	76.7	76.0	75.2	20.0	20.0	20.0	20.0
	23.1	16.7	18.3	24.6	31.1	38.5	46.5	54.8	63.2	31.1	25.1	25.7	30.0	36.9	43.2	50.2	57.8	65.7	39.2	33.4	33.5	36.6	42.1	49.2	55.3	62.2	69.5	8.7	0.0	12.3	24.6	36.9	49.2	61.5	73.8	86.1	0.0	0.0	0.0	0.0
	15	36	70	93	105	113	119	122	125	21	36	60	79	93	102	108	113	117	24	36	54	70	83	93	100	105	110	310	284	93	93	93	93	93	93	93	284	284	284	284
12	23.1	29.7	36.3	42.3	46.0	49.6	53.3	56.9	60.5	25.6	32.2	38.8	44.9	50.9	54.6	58.2	61.9	65.5	28.1	34.7	41.3	47.4	53.4	59.5	63.2	66.8	70.5	71.0	71.1	71.3	70.5	69.7	68.9	68.1	67.4	66.6	25.0	25.0	25.0	25.0
	24.5	15.6	8.4	12.3	19.3	27.4	35.9	44.5	53.2	31.2	23.1	16.7	18.3	24.6	31.1	38.5	46.5	54.8	38.6	31.1	25.1	25.7	30.0	36.9	43.2	50.2	57.8	17.4	8.7	0.0	12.3	24.6	36.9	49.2	61.5	73.8	0.0	0.0	0.0	0.0
	354	4	36	93	113	122	127	130	132	4	15	36	70	93	105	113	119	122	11	21	36	60	79	93	102	108	113	310	310	284	93	93	93	93	93	93	284	284	284	284
13	23.4	30.0	36.5	43.1	46.8	50.4	54.0	57.7	61.3	25.9	32.5	39.1	45.6	51.7	55.4	59.0	62.6	66.3	28.4	35.0	41.6	48.1	54.2	60.3	64.0	67.6	71.2	61.6	61.7	61.8	61.9	61.1	60.3	59.5	58.8	58.0	30.0	30.0	30.0	30.0
	28.8	19.2	9.6	0.0	8.9	17.8	26.7	35.5	44.4	33.8	24.5	15.6	8.4	12.3	19.3	27.4	35.9	44.5	40.0	31.2	23.1	16.7	18.3	24.6	31.1	38.5	46.5	26.1	17.4	8.7	0.0	12.3	24.6	36.9	49.2	61.5	0.0	0.0	0.0	0.0
	337	337	337	284	142	142	142	142	142	349	354	4	36	93	113	122	127	130	358	4	15	36	70	93	105	113	119	310	310	310	284	93	93	93	93	93	284	284	284	284
14	23.3	29.9	36.4	43.0	47.8	51.5	55.1	58.8	62.4	26.2	32.8	39.3	45.9	52.5	56.1	59.8	63.4	67.1	28.7	35.3	41.8	48.4	55.0	61.1	64.7	68.4	72.0	52.1	52.2	52.3	52.4	52.5	51.7	50.9	50.2	49.4	35.0	35.0	35.0	35.0
	36.8	27.3	17.8	8.7	4.9	10.5	18.8	27.5	36.3	38.4	28.8	19.2	9.6	0.0	8.9	17.8	26.7	35.5	43.3	33.8	24.5	15.6	8.4	12.3	19.3	27.4	35.9	34.9	26.1	17.4	8.7	0.0	12.3	24.6	36.9	49.2	0.0	0.0	0.0	0.0
	331	329	324	310	228	170	157	153	150	337	337	337	337	284	142	142	142	142	346	349	354	4	36	93	113	122	127	310	310	310	310	284	93	93	93	93	284	284	284	284
15	23.2	29.8	36.3	42.9	47.7	52.5	56.2	59.8	63.5	26.1	32.7	39.2	45.8	52.4	57.2	60.8	64.5	68.1	29.0	35.6	42.1	48.7	55.3	61.9	65.5	69.2	72.8	42.6	42.7	42.8	42.9	43.0	43.1	42.3	41.6	40.8	40.0	40.0	40.0	40.0
	45.1	35.7	26.4	17.4	10.5	9.7	13.7	21.0	29.1	46.4	36.8	27.3	17.8	8.7	4.9	10.5	18.8	27.5	48.0	38.4	28.8	19.2	9.6	0.0	8.9	17.8	26.7	43.6	34.9	26.1	17.4	8.7	0.0	12.3	24.6	36.9	0.0	0.0	0.0	0.0
	327	324	320	310	283	228	187	170	162	332	331	329	324	310	228	170	157	153	337	337	337	337	337	284	142	142	142	310	310	310	310	310	284	93	93	93	284	284	284	284
16	23.1	29.6	36.2	42.8	47.6	52.4	57.2	60.9	64.5	26.0	32.6	39.1	45.7	52.3	57.1	61.9	65.6	69.2	28.9	35.5	42.0	48.6	55.2	61.8	66.6	70.2	73.9	33.1	33.2	33.3	33.4	33.5	33.6	33.8	33.0	32.2	45.0	45.0	45.0	45.0
	53.5	44.2	35.0	26.1	18.7	13.9	14.6	17.7	23.9	54.6	45.1	35.7	26.4	17.4	10.5	9.7	13.7	20.9	55.9	46.4	36.8	27.3	17.8	8.7	4.9	10.5	18.8	52.3	43.6	34.9	26.1	17.4	8.7	0.0	12.3	24.6	0.0	0.0	0.0	0.0
	324	322	317	310	295	266	228	198	180	329	327	324	320	310	283	228	187	170	333	332	331	329	324	310	228	170	157	310	310	310	310	310	310	284	93	93	284	284	284	284
17	23.0	29.5	36.1	42.7	47.5	52.3	57.1	62.0	65.6	25.9	32.4	39.0	45.6	52.2	57.0	61.8	66.6	70.3	28.8	35.3	41.9	48.5	55.1	61.7	66.5	71.3	74.9	23.6	23.7	23.8	24.0	24.1	24.2	24.3	24.4	23.6	50.0	50.0	50.0	50.0
	62.0	52.8	43.7	34.9	27.2	21.0	17.9	19.4	22.0	62.9	53.5	44.2	35.0	26.1	18.7	13.9	14.6	17.7	64.1	54.6	45.1	35.7	26.4	17.4	10.5	9.7	13.7	61.0	52.3	43.6	34.9	26.1	17.4	8.7	0.0	12.3	0.0	0.0	0.0	0.0
	322	320	316	310	300	283	257	228	204	326	324	322	317	310	295	266	228	198	330	329	327	324	320	310	283	228	187	310	310	310	310	310	310	310	284	93	284	284	284	284
18	22.9	29.4	36.0	42.6	47.4	52.2	57.0	61.8	66.7	25.8	32.3	38.9	45.5	52.1	56.9	61.7	66.5	71.3	28.7	35.2	41.8	48.4	55.0	61.6	66.4	71.2	76.0	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	55.0	55.0	55.0	55.0
	70.5	61.4	52.3	43.6	35.8	29.0	24.1	22.3	24.3	71.3	62.0	52.7	43.7	34.9	27.2	21.0	17.9	19.4	72.4	62.9	53.5	44.2	35.0	26.1	18.7	13.8	14.6	69.7	61.0	52.3	43.6	34.9	26.1	17.4	8.7	0.0	0.0	0.0	0.0	0.0
	321	318	315	310	303	291	274	250	228	324	322	320	316	310	300	283	257	228	328	326	324	322	317	310	295	266	228	310	310	310	310	310	310	310	310	284	284	284	284	284
19	30.1	36.1	42.2	48.3	54.4	60.5	66.6	70.2	73.9	32.6	38.6	44.7	50.8	56.9	63.0	69.1	75.2	78.8	35.1	41.1	47.2	53.3	59.4	65.5	71.6	77.7	83.8	90.0	84.3	78.5	72.8	67.1	61.3	55.6	49.9	44.1	60.0	60.0	60.0	60.0
	50.2	49.7	51.3	54.9	60.1	66.5	73.8	79.8	86.3	58.5	57.9	59.1	62.0	66.4	72.1	78.7	86.1	92.1	66.9	66.1	67.0	69.4	73.2	78.2	84.2	90.9	98.4	0.0	8.9	17.8	26.7	35.5	44.4	53.3	62.2	71.1	0.0	0.0	0.0	0.0
	36	48	60	70	79	87	93	98	102	36	46	57	66	74	82	88	93	97	36	45	54	63	70	77	83	88	93	284	142	142	142	142	142	142	142	142	284	284	284	284
20	30.3	36.9	43.0	49.1	55.2	61.3	67.4	71.0	74.6	32.8	39.4	45.5	51.6	57.7	63.8	69.9	76.0	79.6	35.4	41.9	48.0	54.1	60.2	66.3	72.4	78.5	84.5	83.4	80.6	74.9	69.2	63.4	57.7	52.0	46.2	40.5	65.0	65.0	65.0	65.0
	47.4	41.8	41.5	43.8	48.2	54.3	61.5	67.6	74.2	55.7	50.2	49.7	51.3	54.9	60.1	66.5	73.8	79.8	63.9	58.5	57.9	59.1	62.0	66.4	72.1	78.7	86.1	9.6	0.0	8.9	17.8	26.7	35.5	44.4	53.3	62.2	0.0	0.0	0.0	0.0
	26	36	51	64	76	85	93	98	103	28	36	48	60	70	79	87	93	98	29	36	46	57	66	74	82	88	93	337	284	142	142	142	142	142	142	142	284	284	284	284
21	30.6	37.2	43.8	49.9	56.0	62.0	68.1	71.8	75.4	33.1	39.7	46.3	52.4	58.5	64.6	70.6	76.7	80.4	35.6	42.2	48.8	54.9	61.0	67.1	73.1	79.2	85.3	76.8	74.0	71.3	65.5	59.8	54.0	48.3	42.6	36.9	70.0	70.0	70.0	70.0
	46.3	39.2	33.4	33.5	36.6	42.1	49.2	55.3	62.2	54.2	47.4	41.8	41.5	43.8	48.2	54.3	61.5	67.6	62.2	55.7	50.2	49.7	51.3	54.9	60.1	66.5	73.8	19.2	9.6	0.0	8.9	17.8	26.7	35.5	44.4	53.3	0.0	0.0	0.0	0.0
	15	24	36	54	70	83	93	100	105	19	26	36	51	64	76	85	93	98	21	28	36	48	60	70	79	87	93	337	337	284	142	142	142	142	142	142	284	284	284	284
22	30.9	37.5	44.1	50.6	56.7	62.8	68.9	72.6	76.2	33.4	40.0	46.6	53.2	59.2	65.3	71.4	77.5	81.1	35.9	42.5	49.1	55.7	61.7	67.8	73.9	80.0	86.1	70.3	67.5	64.7	61.9	56.1	50.4	44.7	38.9	33.2	75.0	75.0	75.0	75.0
	46.9	38.6	31.1	25.1	25.7	30.0	36.9	43.2	50.2	54.1	46.3	39.2	33.4	33.5	36.6	42.1	49.2	55.3	61.7	54.2	47.4	41.8	41.5	43.8	48.2	54.3	61.5	28.8	19.2	9.6	0.0	8.9	17.8	26.7	35.5	44.4	0.0	0.0	0.0	0.0
	4	11	21	36	60	79	93	102	108	9	15	24	36	54	70	83	93	100	13	18	26	36	51	64	76	85	93	337	337	337	284	142	142	142	142	142	284	284	284	284
23	31.2	37.8	44.4	50.9	57.5	63.6	69.7	73.3	77.0	33.7	40.3	46.9	53.4	60.0	66.1	72.2	78.3	81.9	36.2	42.8	49.4	55.9	62.5	68.6	74.7	80.8	86.9	63.7	60.9	58.1	55.3	52.5	46.8	41.0	35.3	29.6	80.0	80.0	80.0	80.0
	49.1	40.0	31.2	23.1	16.7	18.3	24.6	31.1	38.5	55.6	46.9	38.6	31.1	25.1	25.7	30.0	36.9	43.2	62.5	54.1	46.3	39.2	33.4	33.5	36.6	42.1	49.2	38.4	28.8	19.2	9.6	0.0	8.9	17.8	26.7	35.5	0.0	0.0	0.0	0.0
	354	358	4	15	36	70	93	105	113	360	4	11	21	36	60	79	93	102	4	9	15	24	36	54	70	83	93	337	337	337	337	284	142	142	142	142	284	284	284	284
24	31.5	38.1	44.6	51.2	57.8	64.4	70.5	74.1	77.8	34.0	40.6	47.2	53.7	60.3	66.9	73.0	79.1	82.7	36.5	43.1	49.7	56.2	62.8	69.4	75.5	81.6	87.7	57.1	54.3	51.5	48.7	45.9	43.1	37.4	31.7	25.9	85.0	85.0	85.0	85.0
	52.8	43.3	33.8	24.5	15.6	8.4	12.3	19.3	27.4	58.3	49.1	40.0	31.2	23.1	16.7	18.3	24.6	31.1	64.5	55.6	46.9	38.6	31.1	25.1	25.6	30.0	36.9	48.0	38.4	28.8	19.2	9.6	0.0	8.9	17.8	26.7	0.0	0.0	0.0	0.0
	345	346	349	354	4	36	93	113	122	351	354	358	4	15	36	70	93	105	356	360	4	11	21	36	60	79	93	337	337	337	337	284	142	142	142	142	284	284	284	284
25	31.8	38.4	44.9	51.5	58.1	64.7	71.3	74.9	78.5	34.3	40.9	47.4	54.0	60.6	67.2	73.8	79.8	83.5	36.8	43.4	49.9	56.5	63.1	69.7	76.3	82.4

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

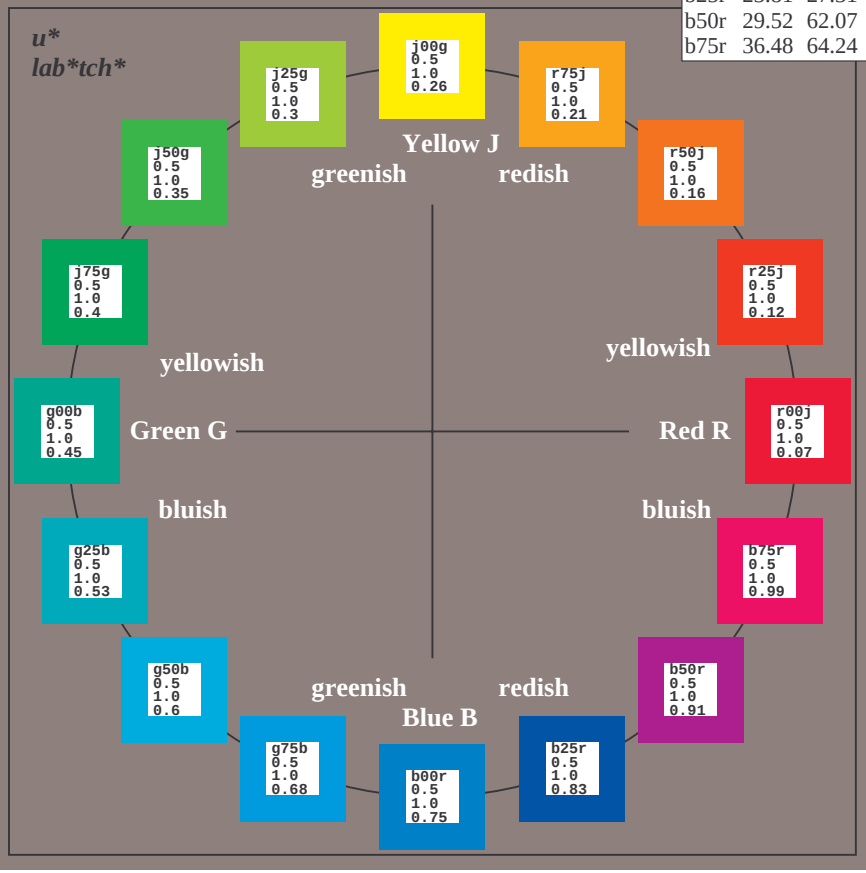
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

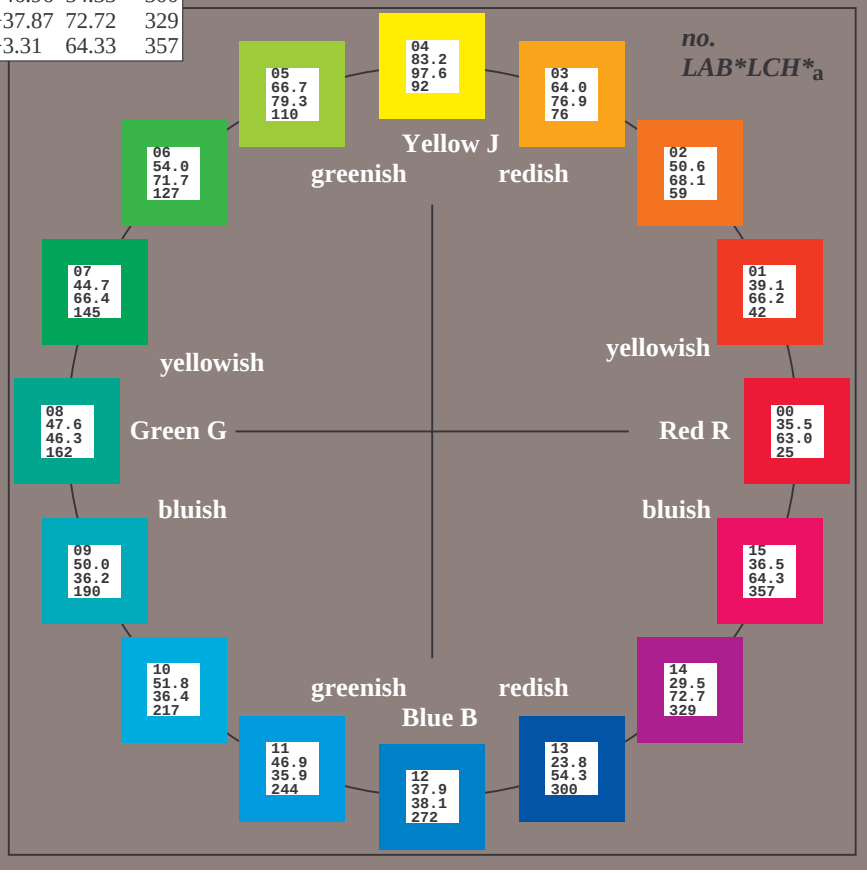


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

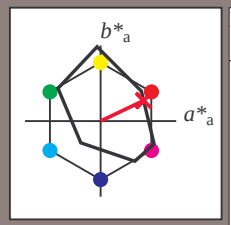
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





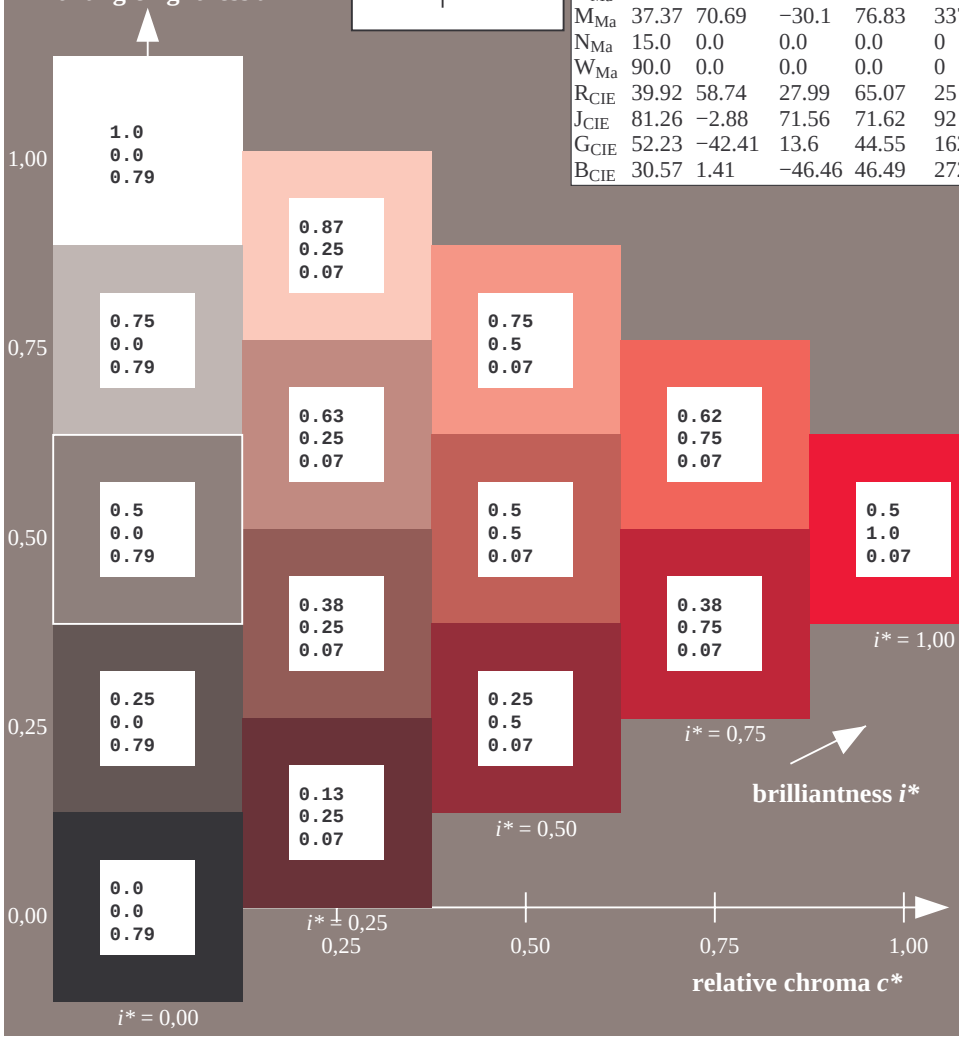
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = r00j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



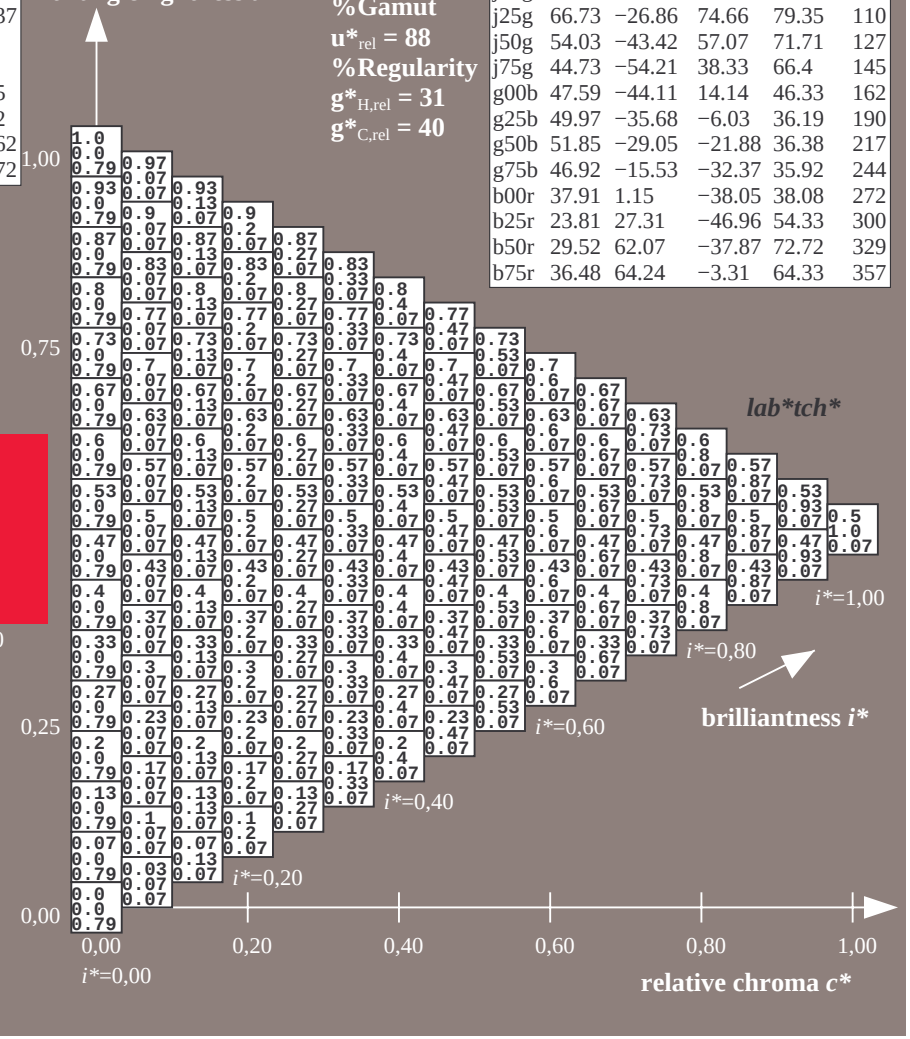
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 35 57 27
$LAB^*LCH^*_{Ma}$: 35 63 25
$lab^*rgb^*_{Ma}$: 1.0 0.0 0.0
$lab^*olv^*_{Ma}$: 1.0 0.0 0.18
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = r00j*
*lab*tch**

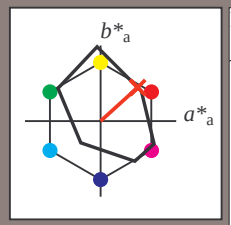
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

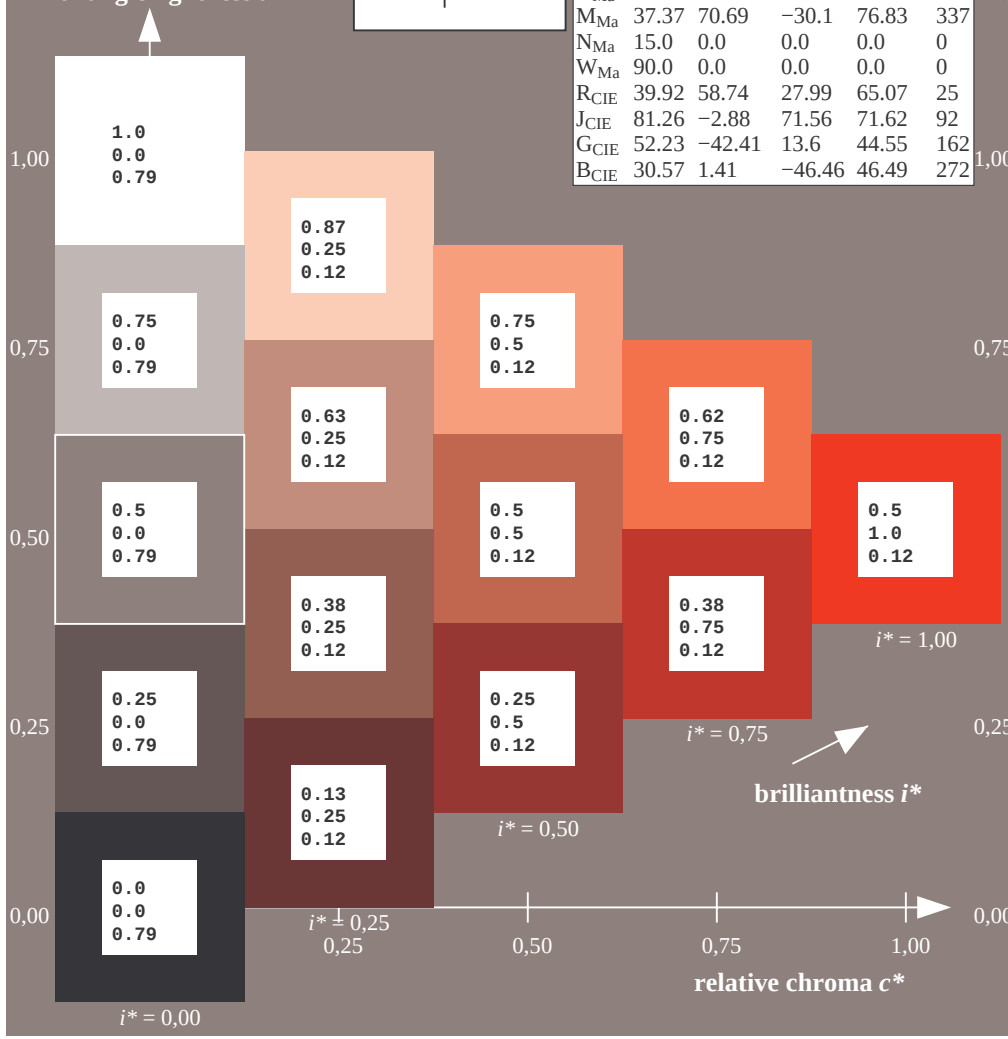
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 39 49 44**
***LAB*LCH*Ma*: 39 66 42**
***lab*rgb*Ma*: 1.0 0.25 0.0**
***lab*olv*Ma*: 1.0 0.08 0.0**
triangle lightness t^*

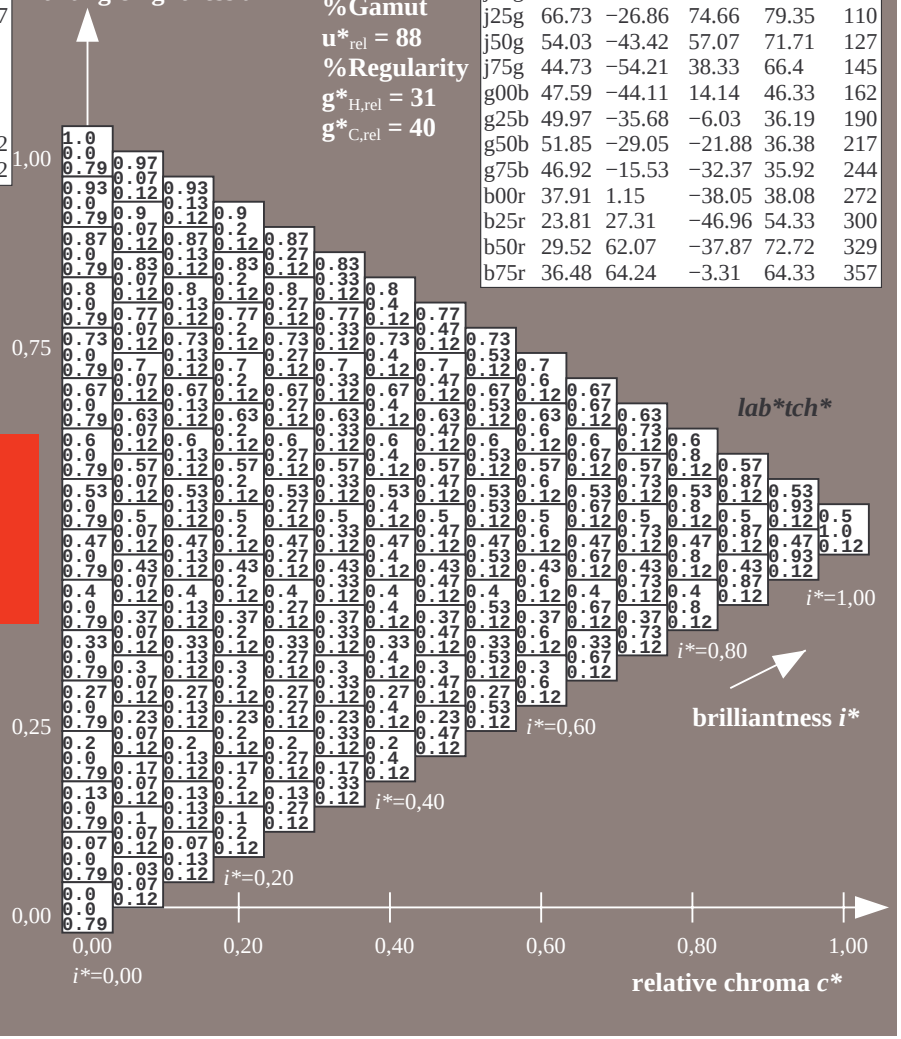
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = r25j
lab*tch*

FRS15_90a; adapted (a) CIELAB data

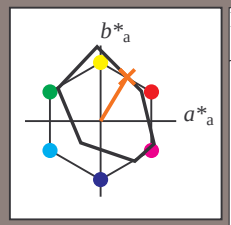
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

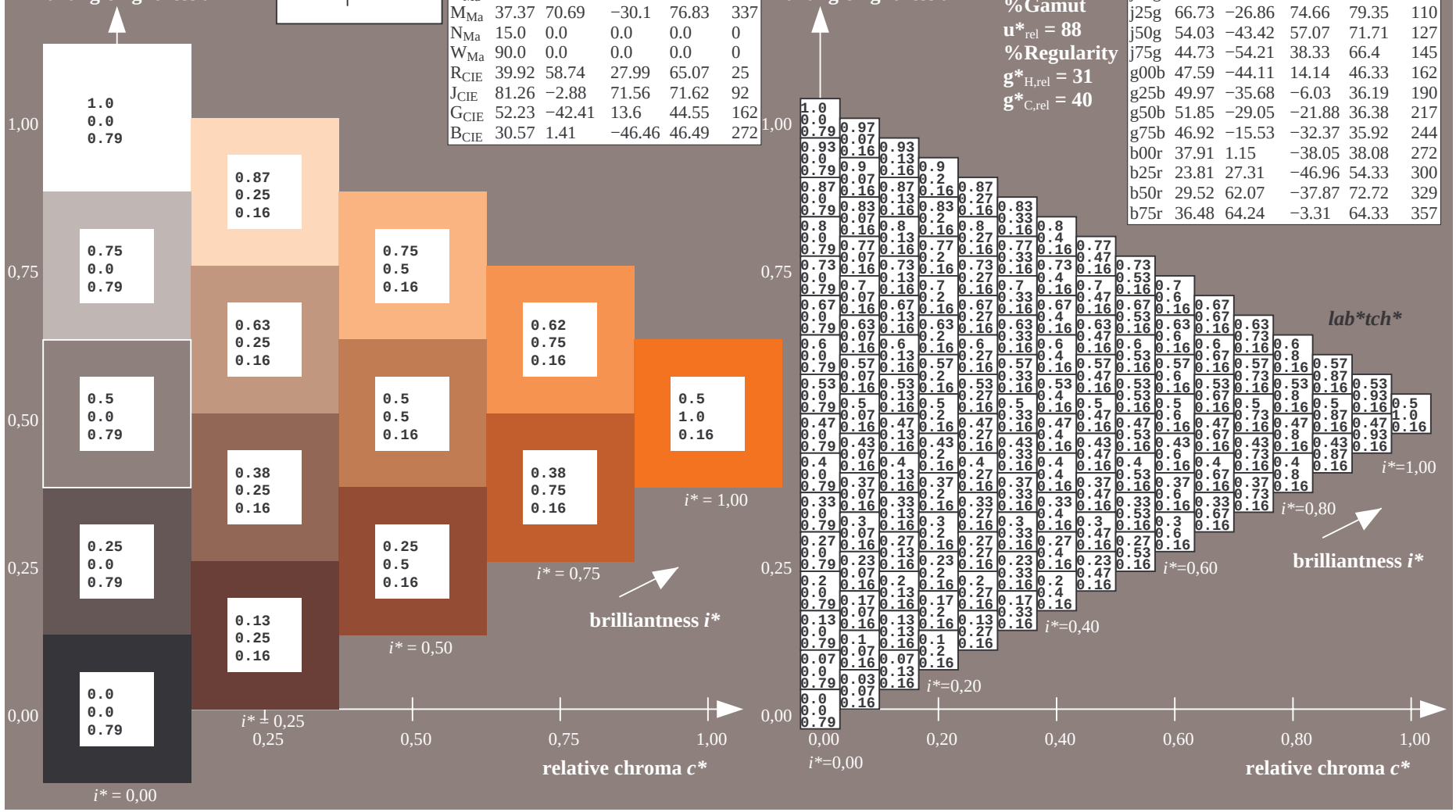
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 51 35 58**
***LAB*LCH*Ma*: 51 68 59**
***lab*rgb*Ma*: 1.0 0.5 0.0**
***lab*olv*Ma*: 1.0 0.32 0.0**
triangle lightness *t**

u* = r50j
lab*tch*

FRS15_90a; adapted (a) CIELAB data

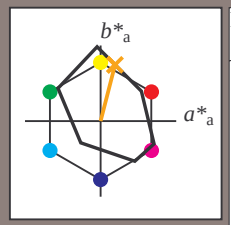
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r75j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

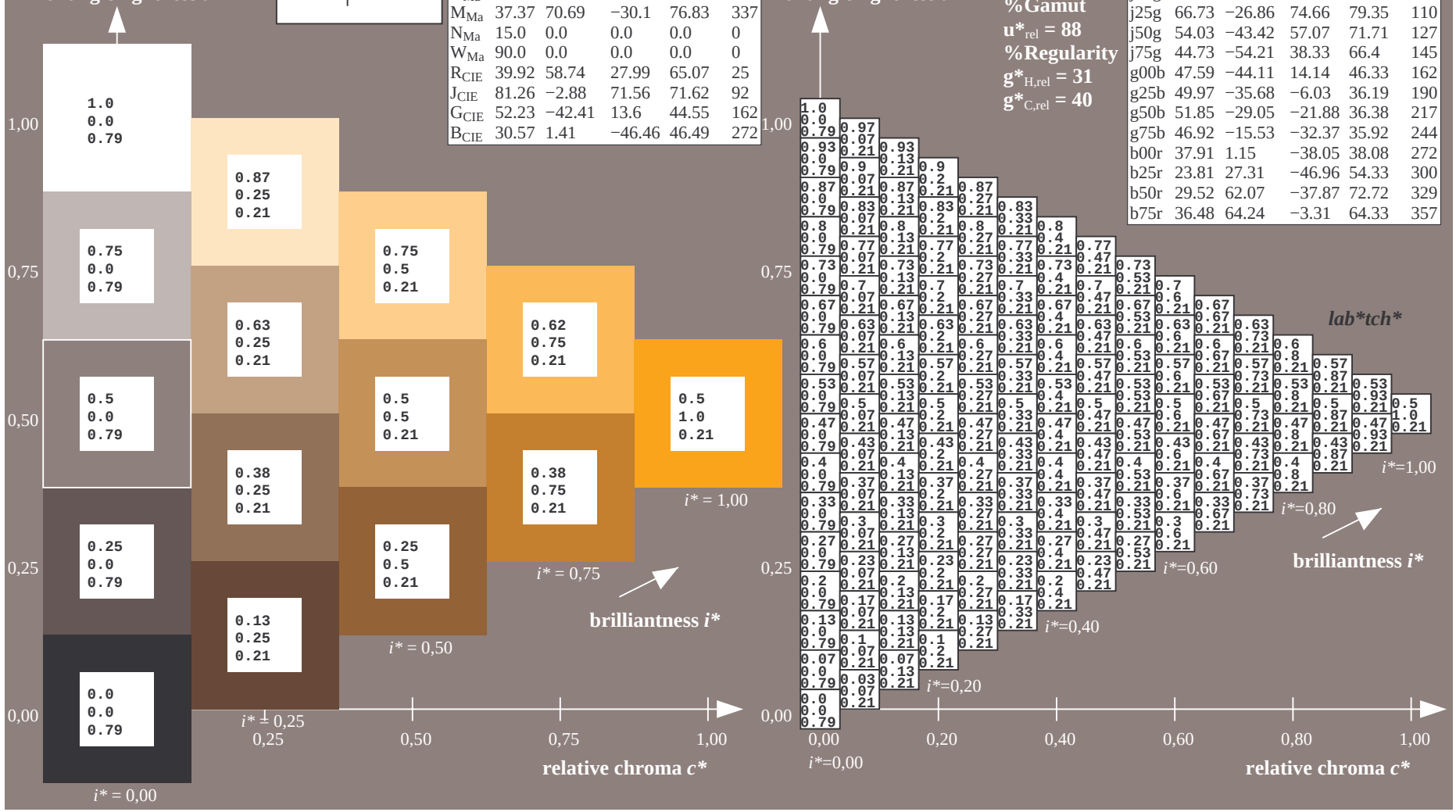
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 64 19 74**
***LAB*LCH*$_{Ma}$*: 64 77 76**
***lab*rgb*$_{Ma}$*: 1.0 0.75 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.59 0.0**
triangle lightness *t**

u* = r75j
lab*tch*

FRS15_90a; adapted (a) CIELAB data

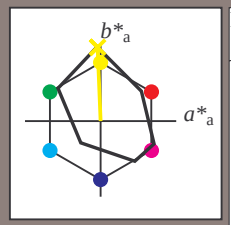
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = j00g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

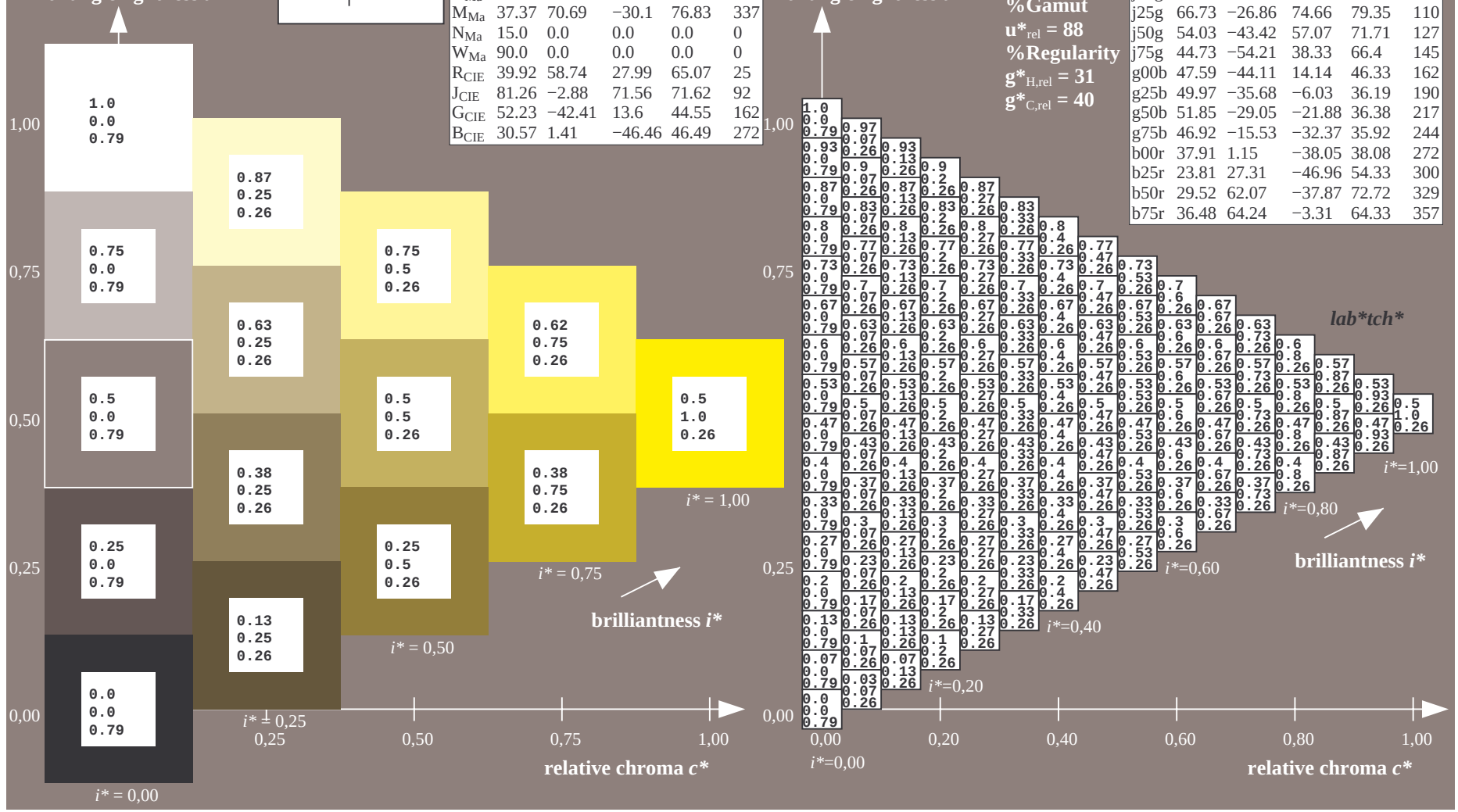
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 83 −3 98
$LAB^*LCH^*_{Ma}$: 83 98 92
$lab^*rgb^*_{Ma}$: 1.0 1.0 0.0
$lab^*olv^*_{Ma}$: 1.0 0.99 0.0

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j00g$
lab^*tch^*

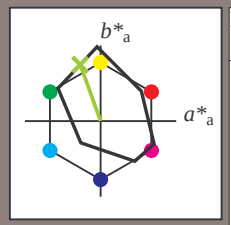
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

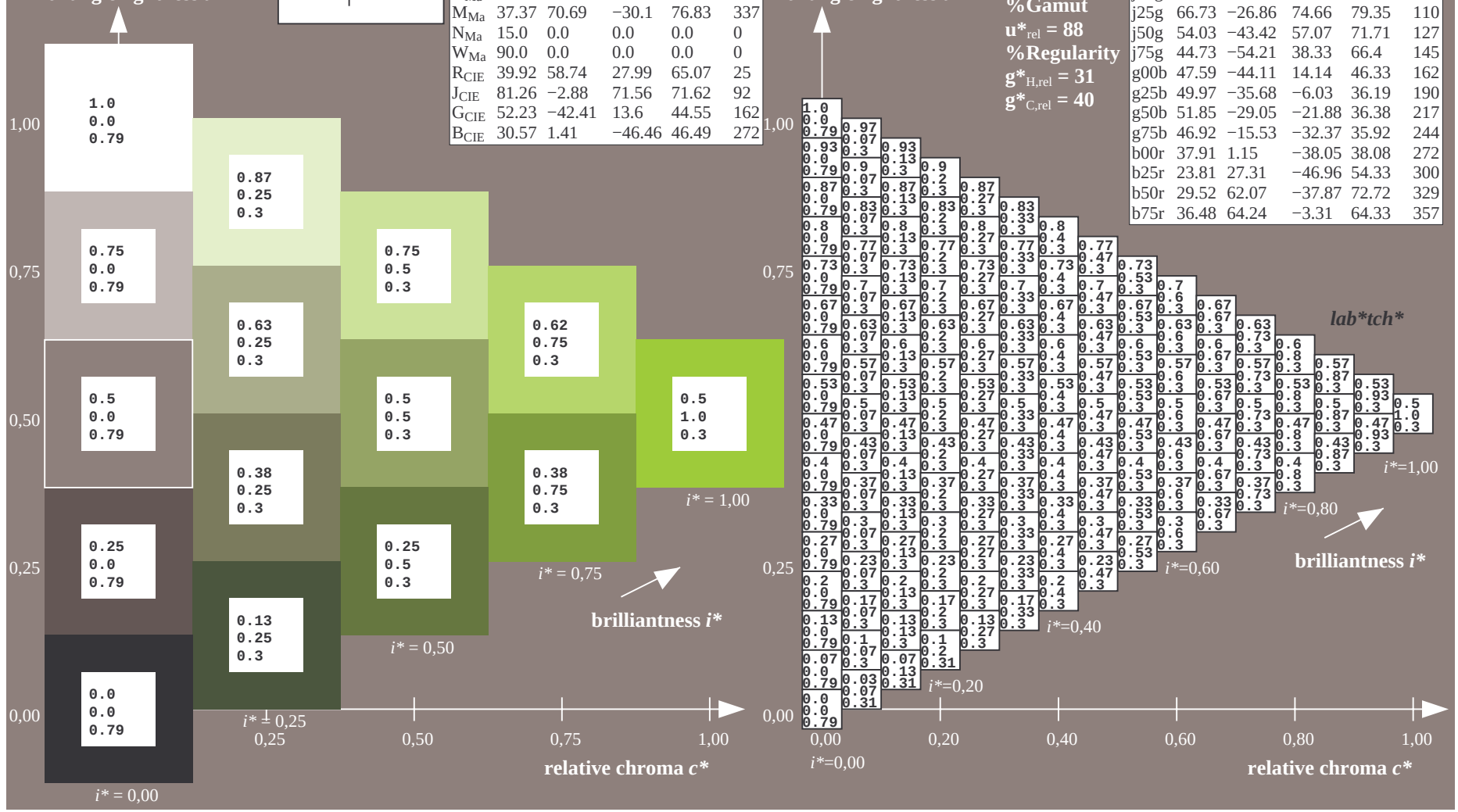
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 67 −26 75
$LAB^*LCH^*_{Ma}$: 67 79 110
$lab^*rgb^*_{Ma}$: 0.75 1.0 0.0
$lab^*olv^*_{Ma}$: 0.57 1.0 0.0

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = j25g*
*lab*tch**

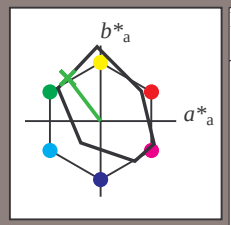
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



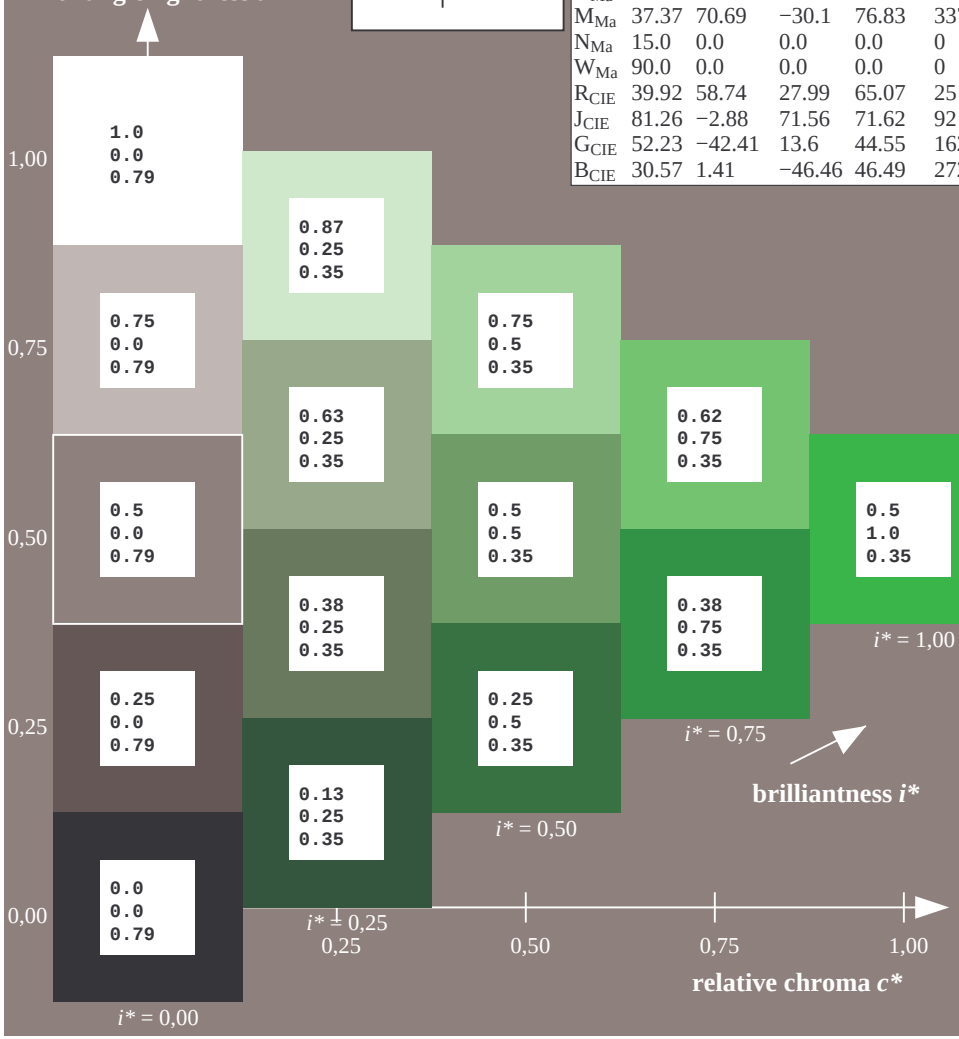
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
$u^* = j50g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



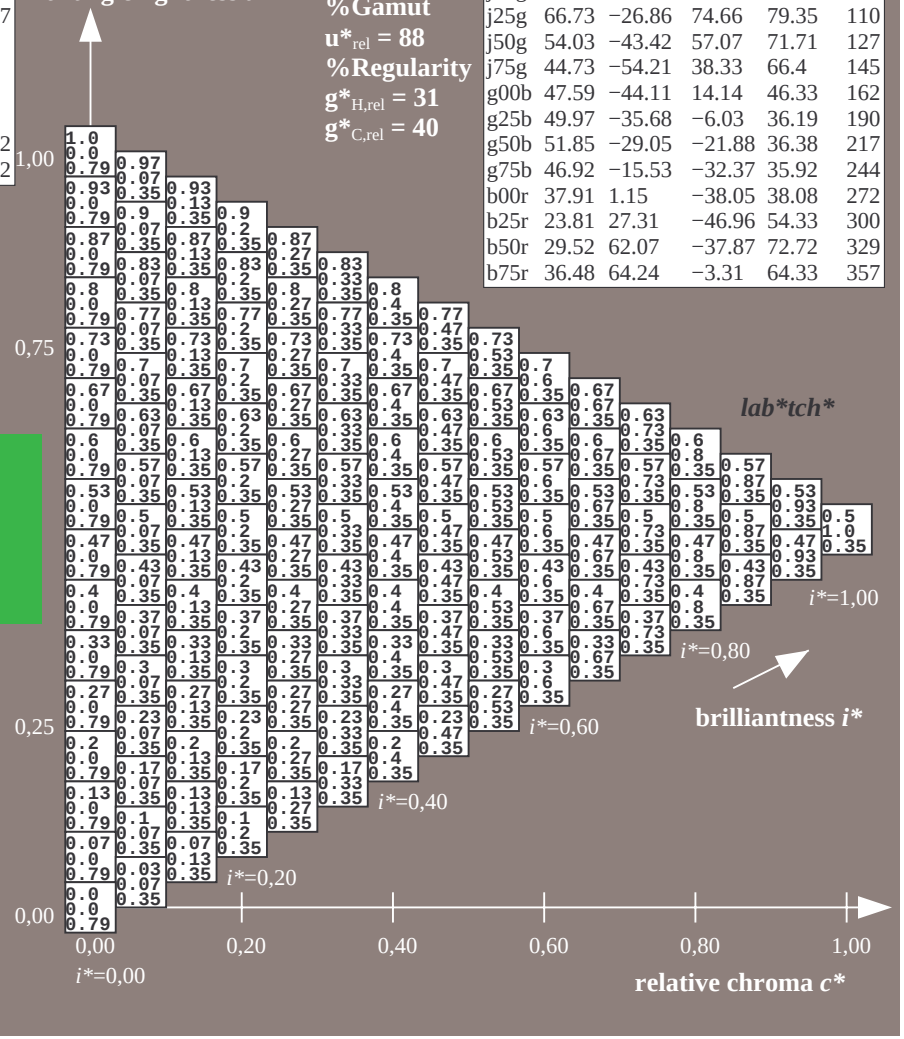
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 54 −42 57**
LAB*LCH*$_{Ma}$**: 54 72 127**
lab*rgb*$_{Ma}$**: 0.5 1.0 0.0**
lab*olv*$_{Ma}$**: 0.25 1.0 0.0**
triangle lightness t^*

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

u* = j50g
lab*tch*

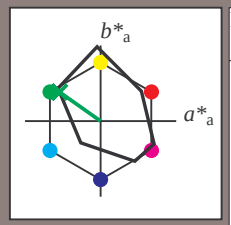
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



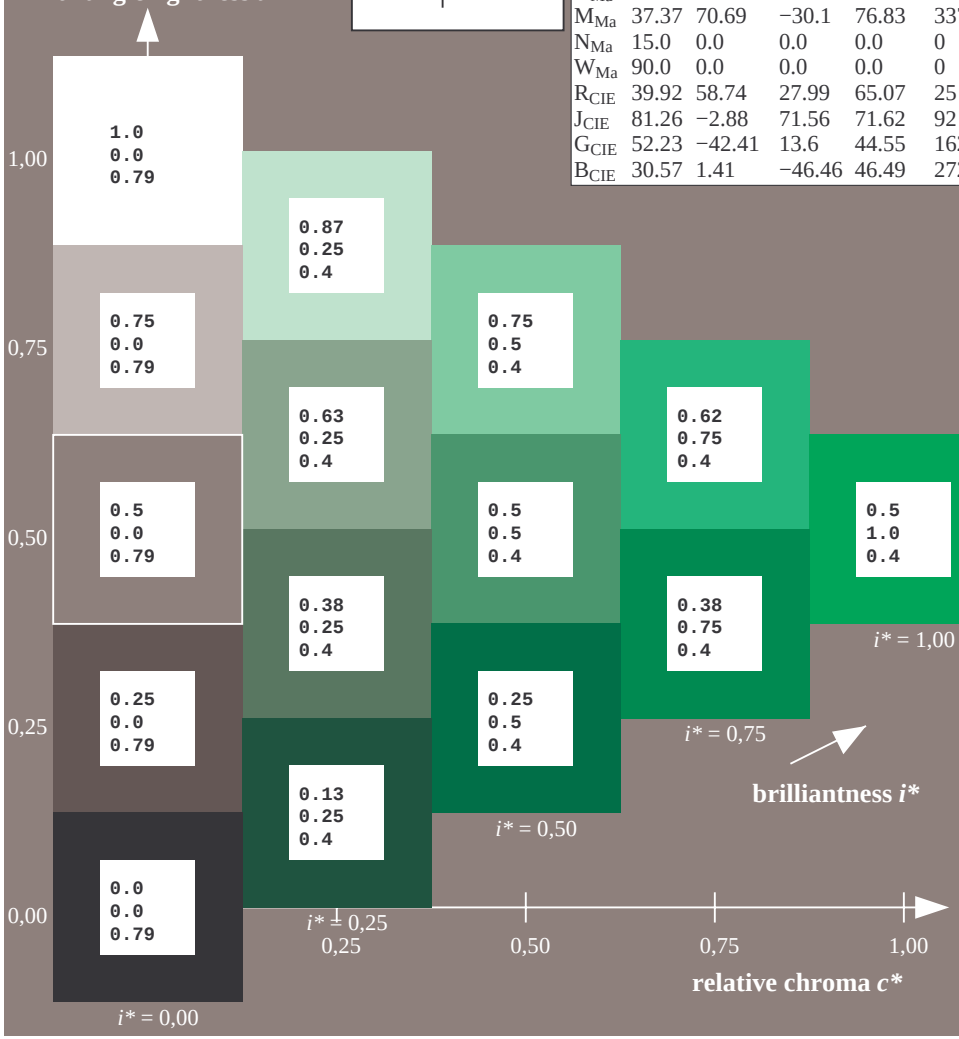
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = j75g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



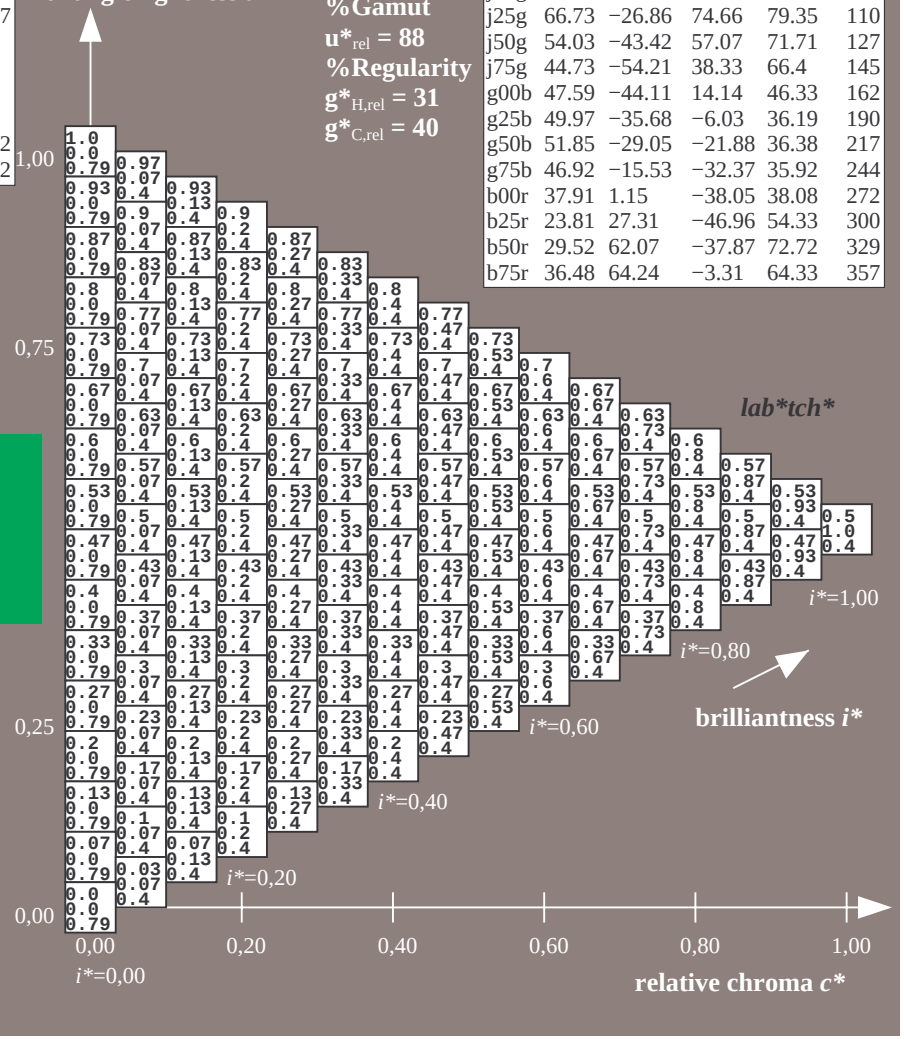
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 45 −53 38
$LAB^*LCH^*_{Ma}$: 45 66 145
$lab^*rgb^*_{Ma}$: 0.25 1.0 0.0
$lab^*olv^*_{Ma}$: 0.0 1.0 0.07
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j75g$
*lab*tch**

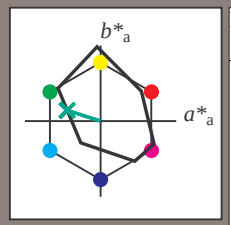
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



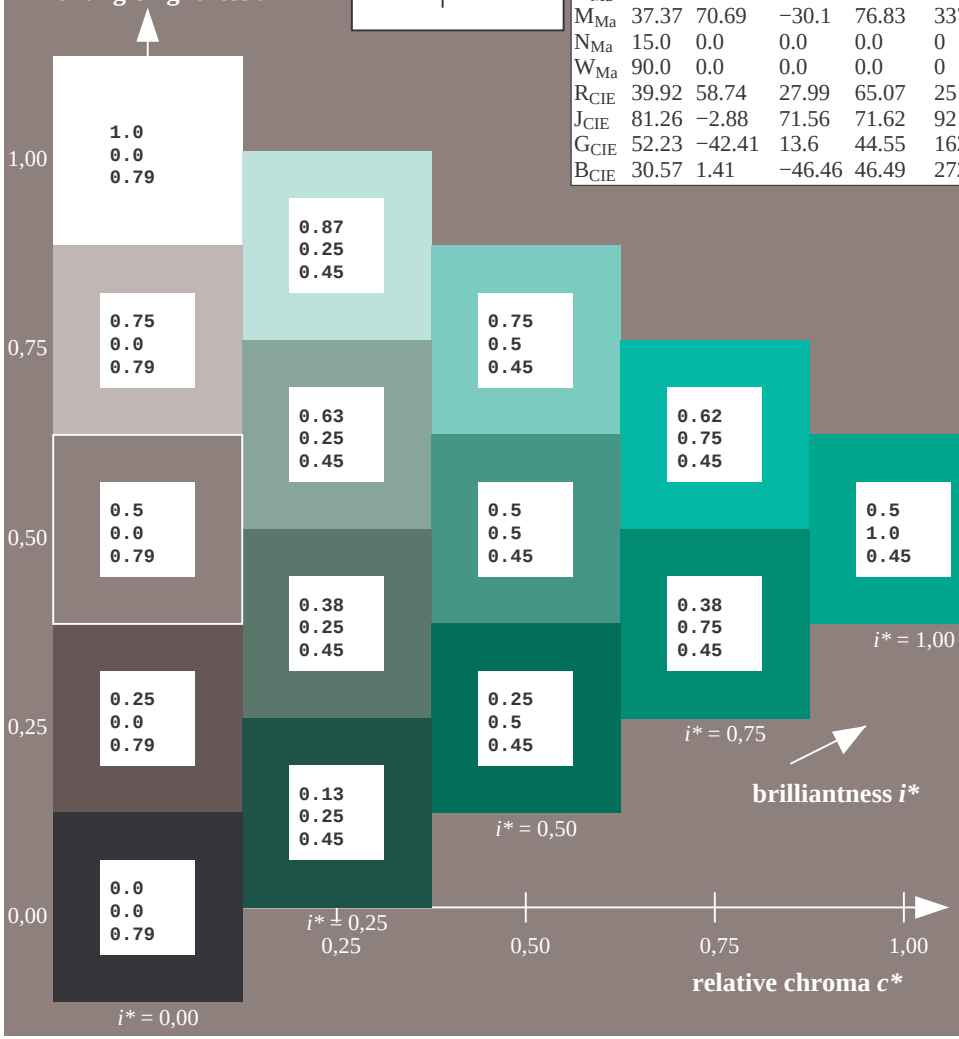
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



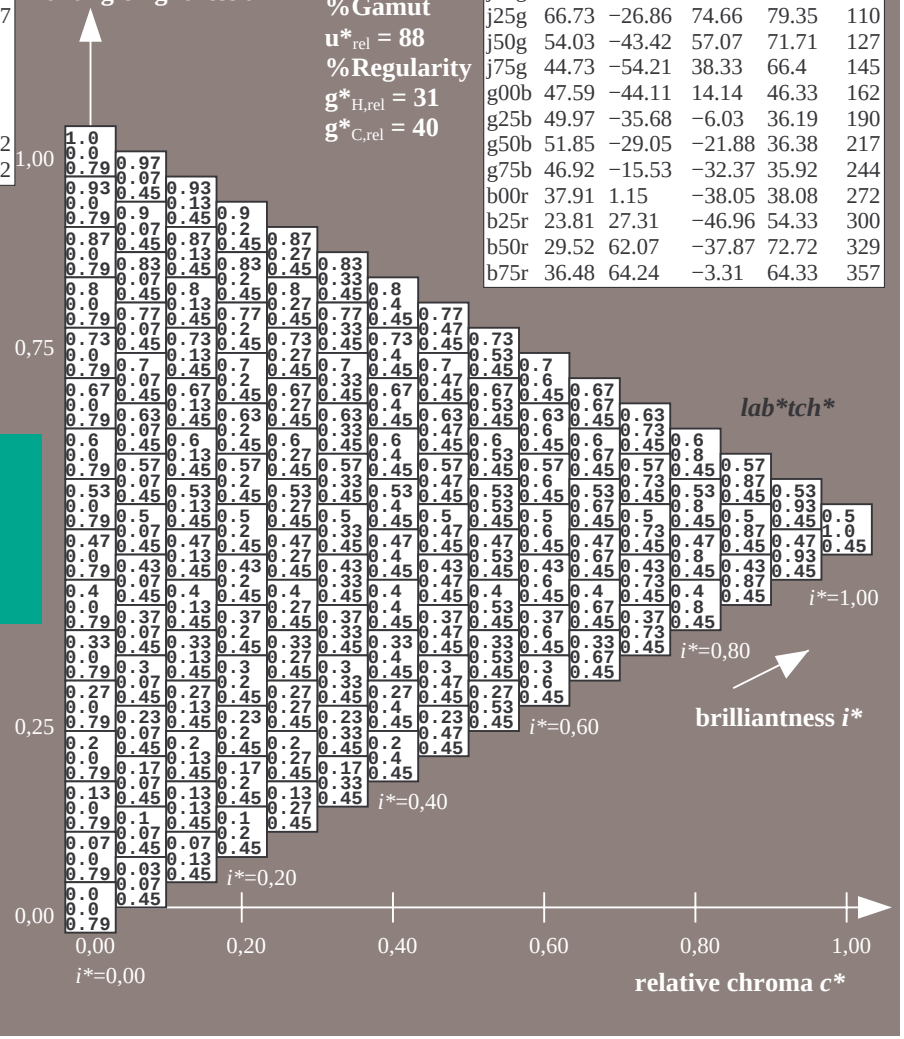
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 48 −43 14
*LAB*LCH**$_{Ma}$: 48 46 162
*lab*rgb**$_{Ma}$: 0.0 1.0 0.0
*lab*olv**$_{Ma}$: 0.0 1.0 0.41

u = g00b*
*lab*tch**

FRS15_90a; adapted (a) CIELAB data

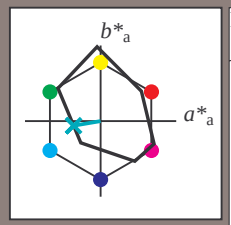
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = g25b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

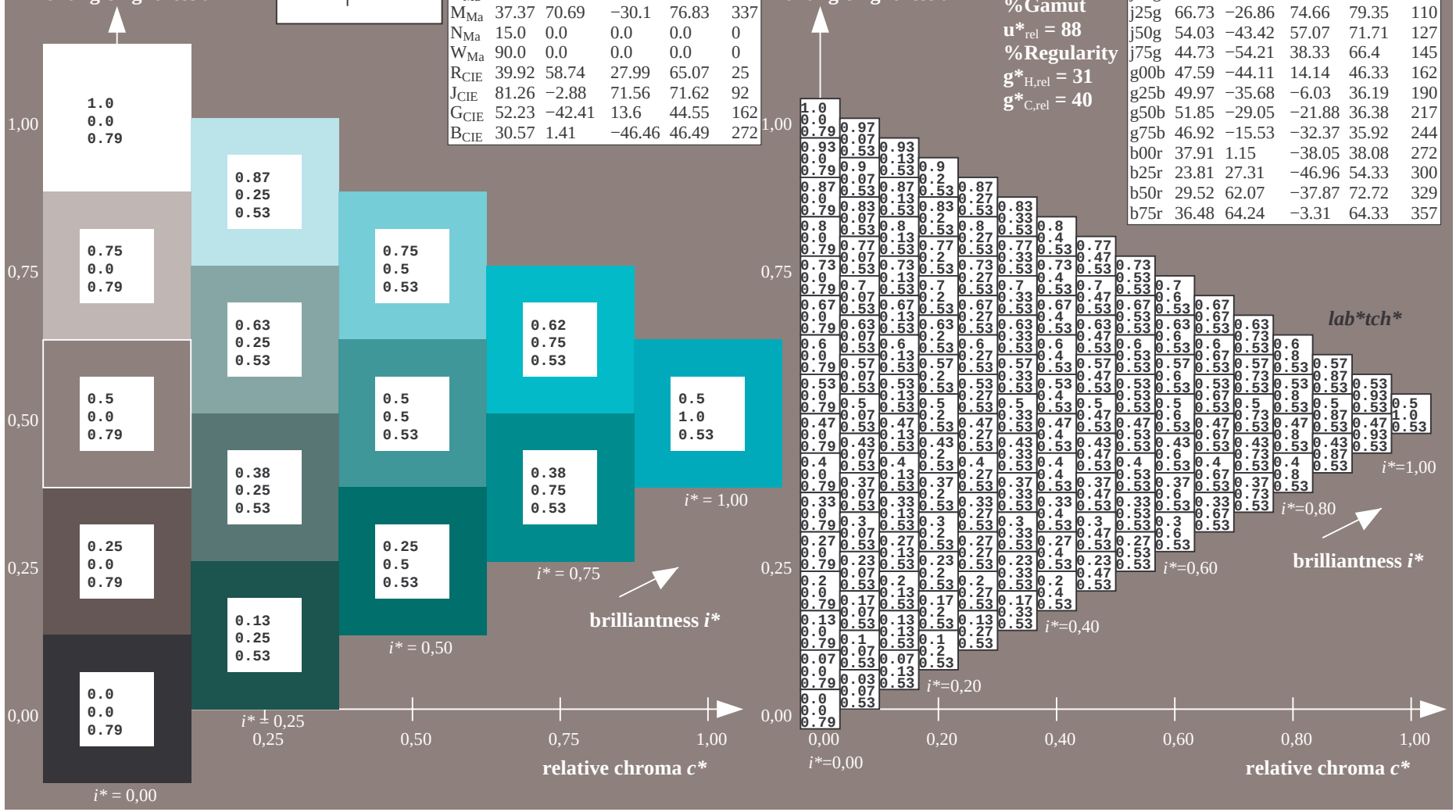
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 50 −35 −5
$LAB^*LCH^*_{Ma}$: 50 36 190
$lab^*rgb^*_{Ma}$: 0.0 1.0 0.5
$lab^*olv^*_{Ma}$: 0.0 1.0 0.69
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = g25b*
*lab*tch**

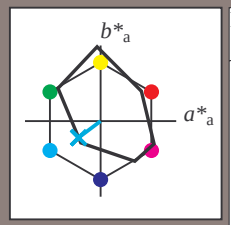
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



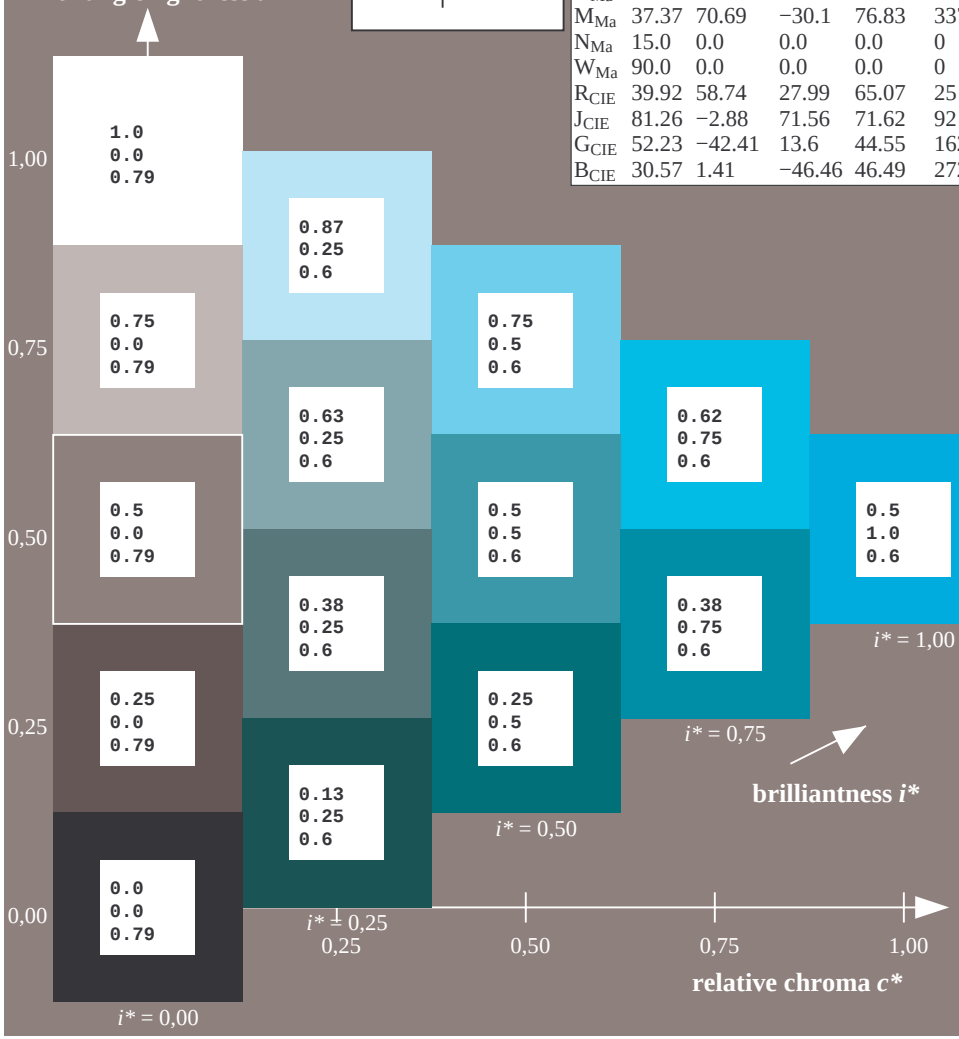
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = g50b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

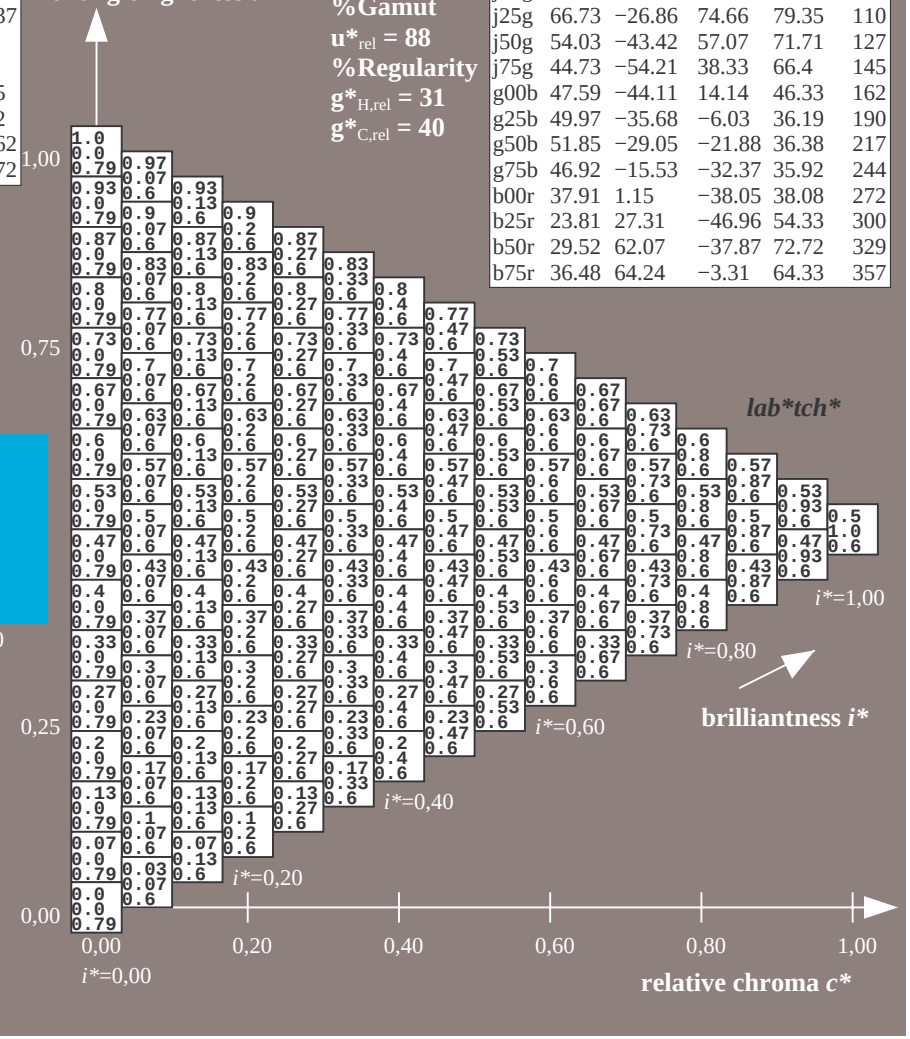


Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 52 −28 −21
$LAB^*LCH^*_{Ma}$: 52 36 217
$lab^*rgb^*_{Ma}$: 0.0 1.0 1.0
$lab^*olv^*_{Ma}$: 0.0 1.0 0.9

$u^* = g50b$
lab^*tch^*

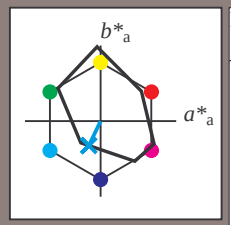
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = g75b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

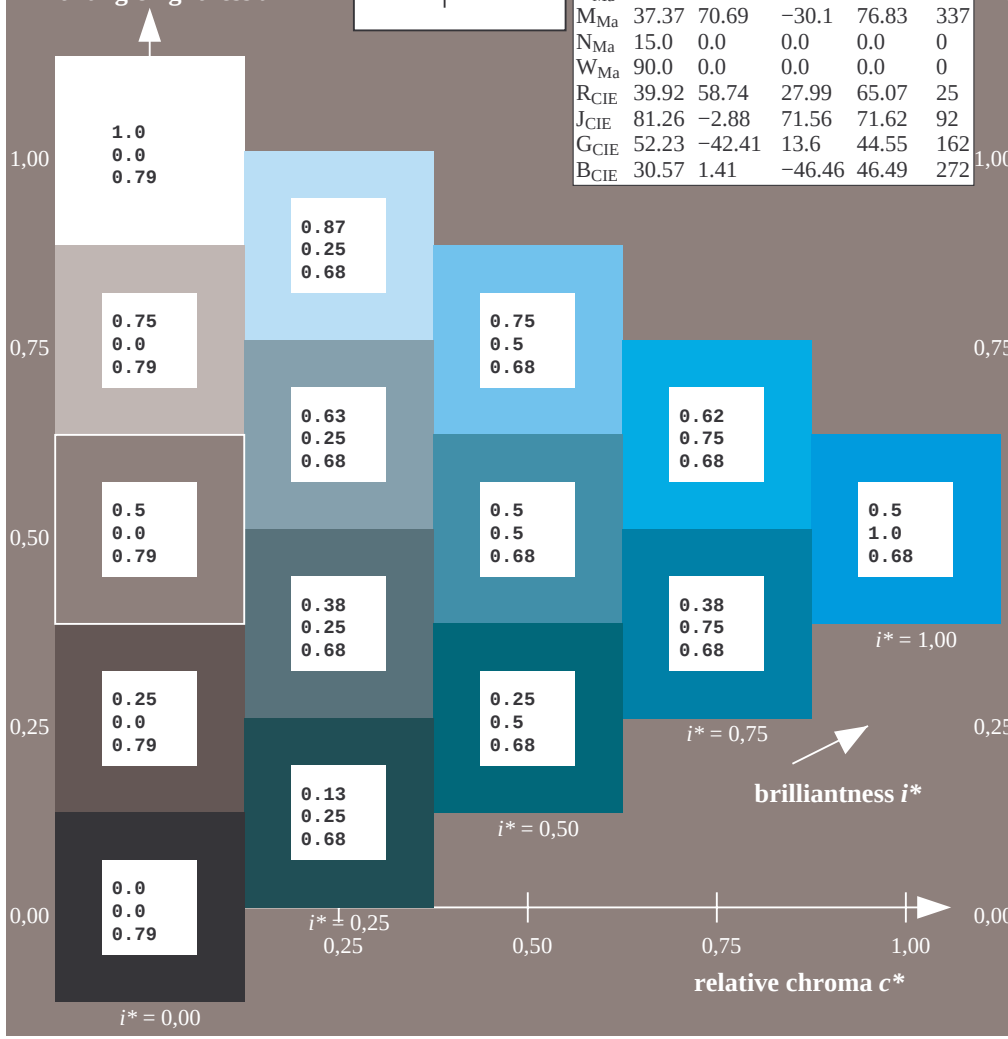
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 47 −15 −31
$LAB^*LCH^*_{Ma}$: 47 36 244
$lab^*rgb^*_{Ma}$: 0.0 0.5 1.0
$lab^*olv^*_{Ma}$: 0.0 0.85 1.0
triangle lightness t^*

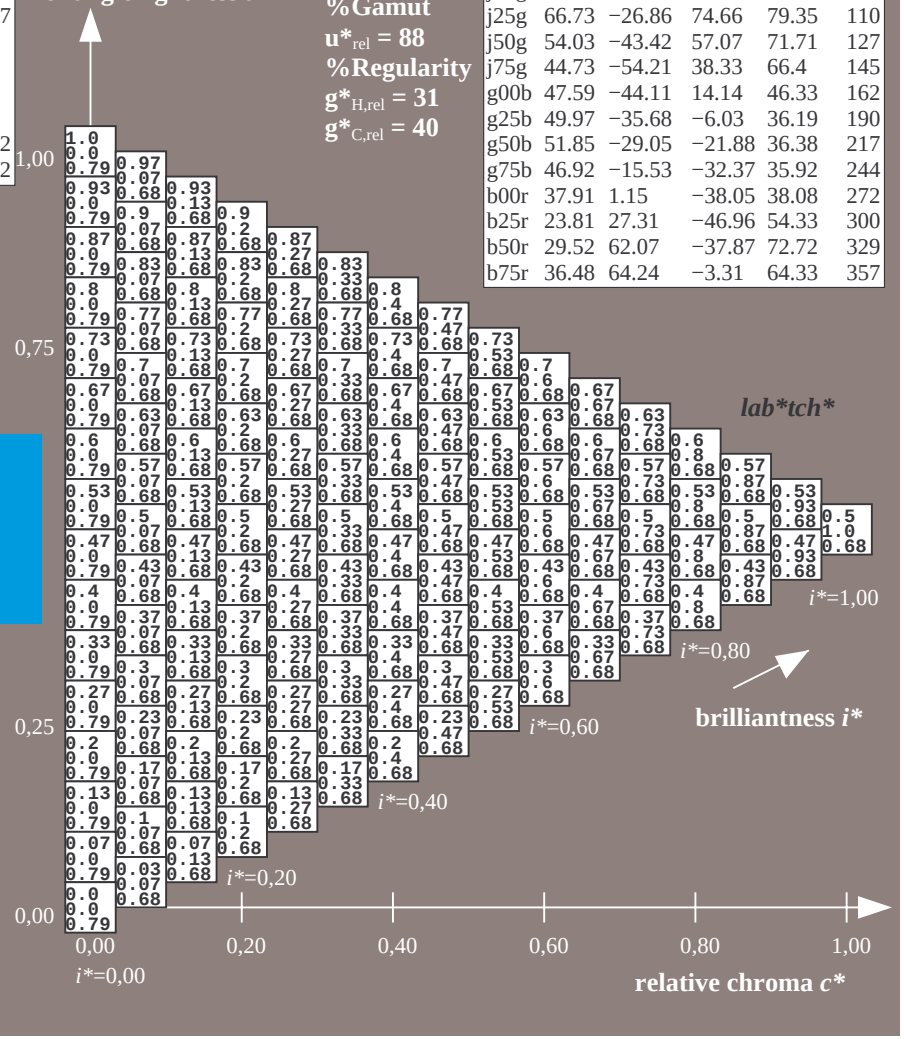
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = g75b$
lab^*tch^*

FRS15_90a; adapted (a) CIELAB data

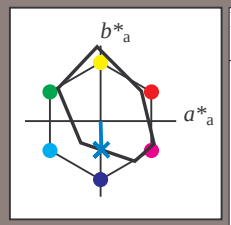
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





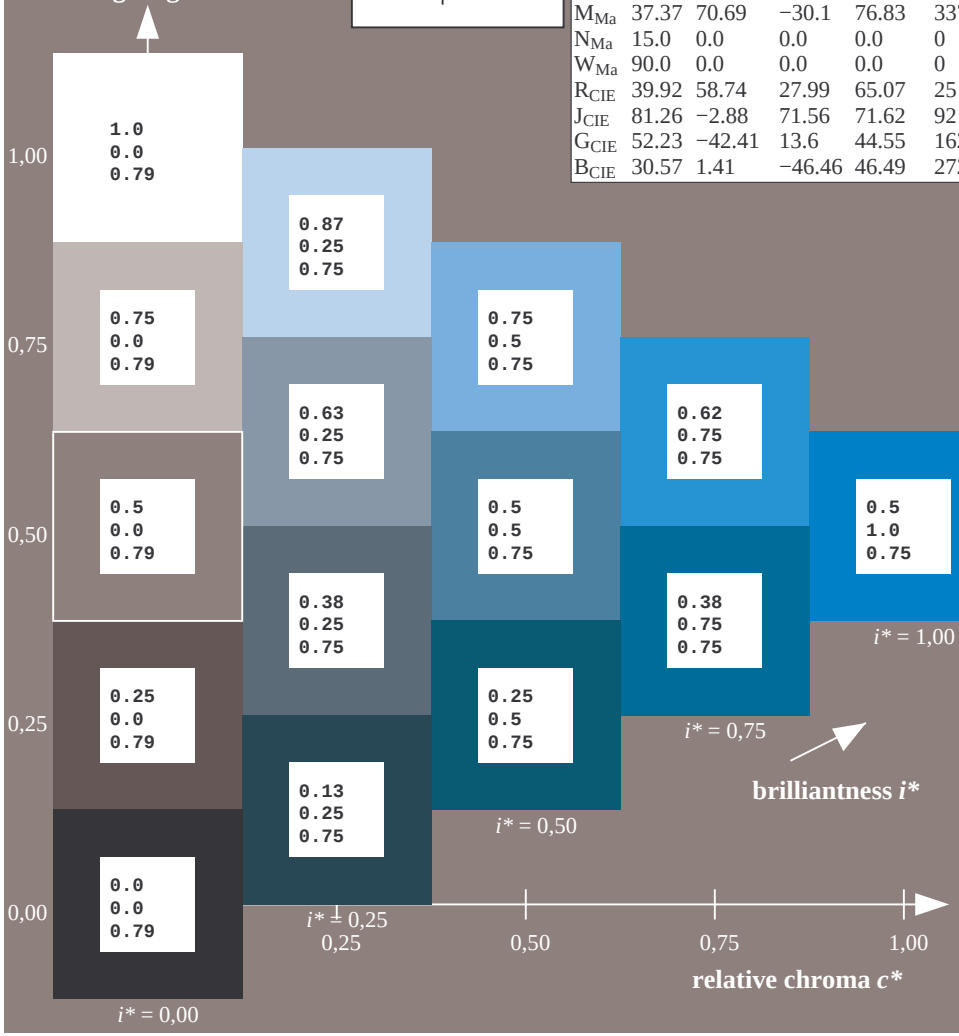
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b00r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



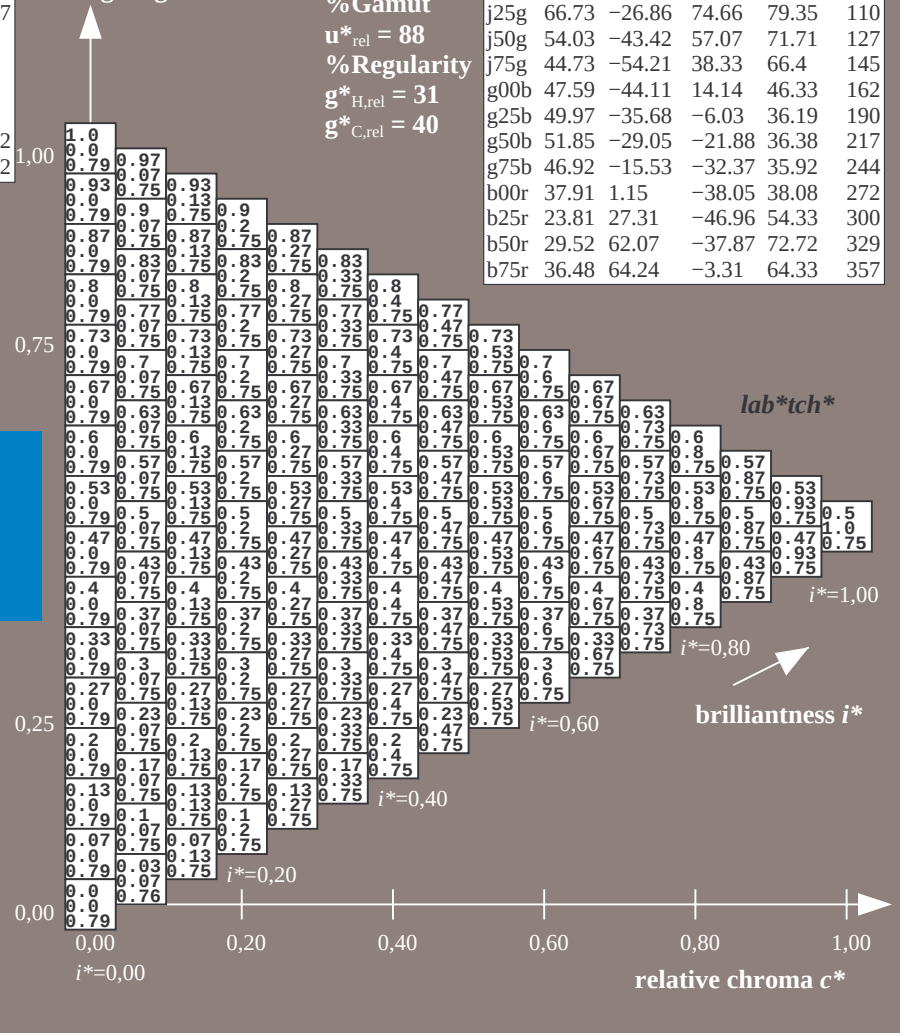
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 38 1 −37
*LAB*LCH**$_{Ma}$: 38 38 272
*lab*rgb**$_{Ma}$: 0.0 0.0 1.0
*lab*olv**$_{Ma}$: 0.0 0.62 1.0
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u = b00r*
*lab*tch**

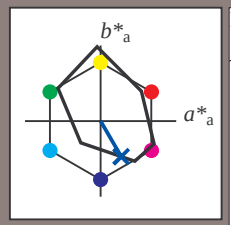
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



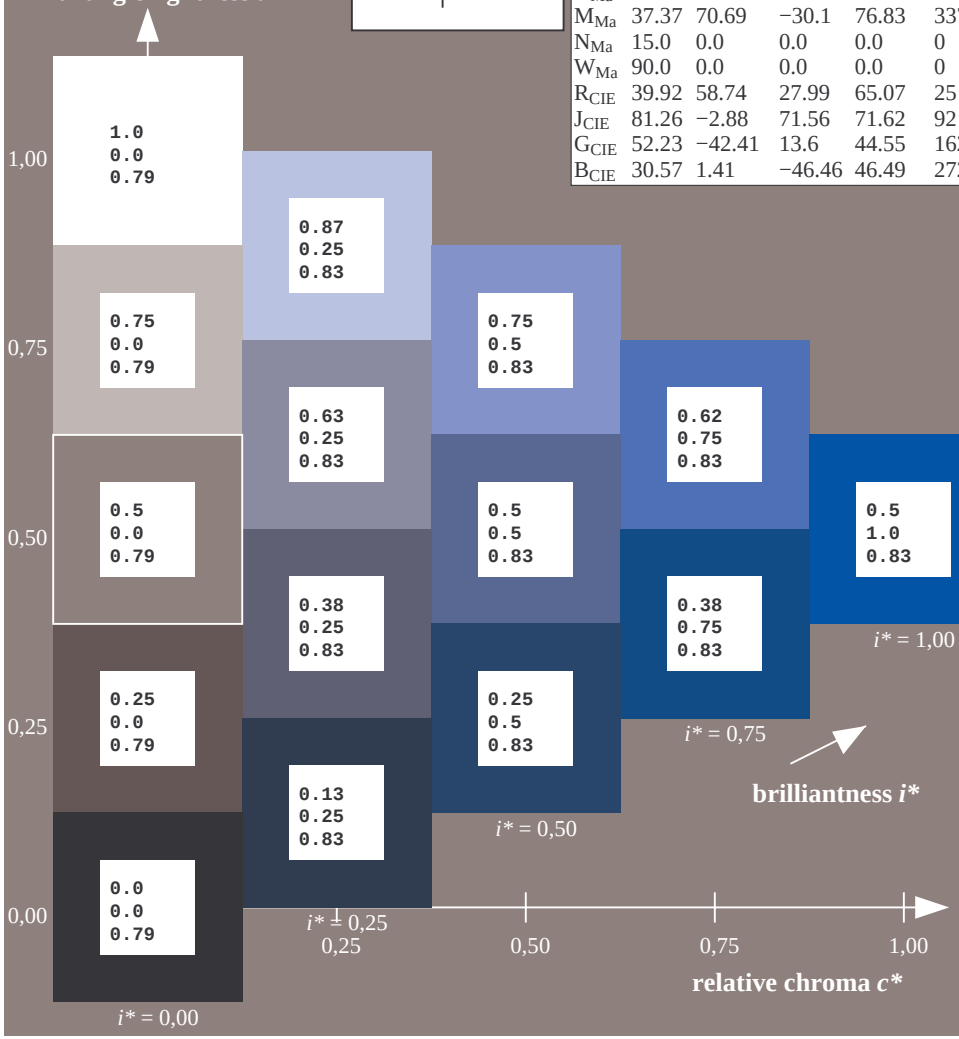
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



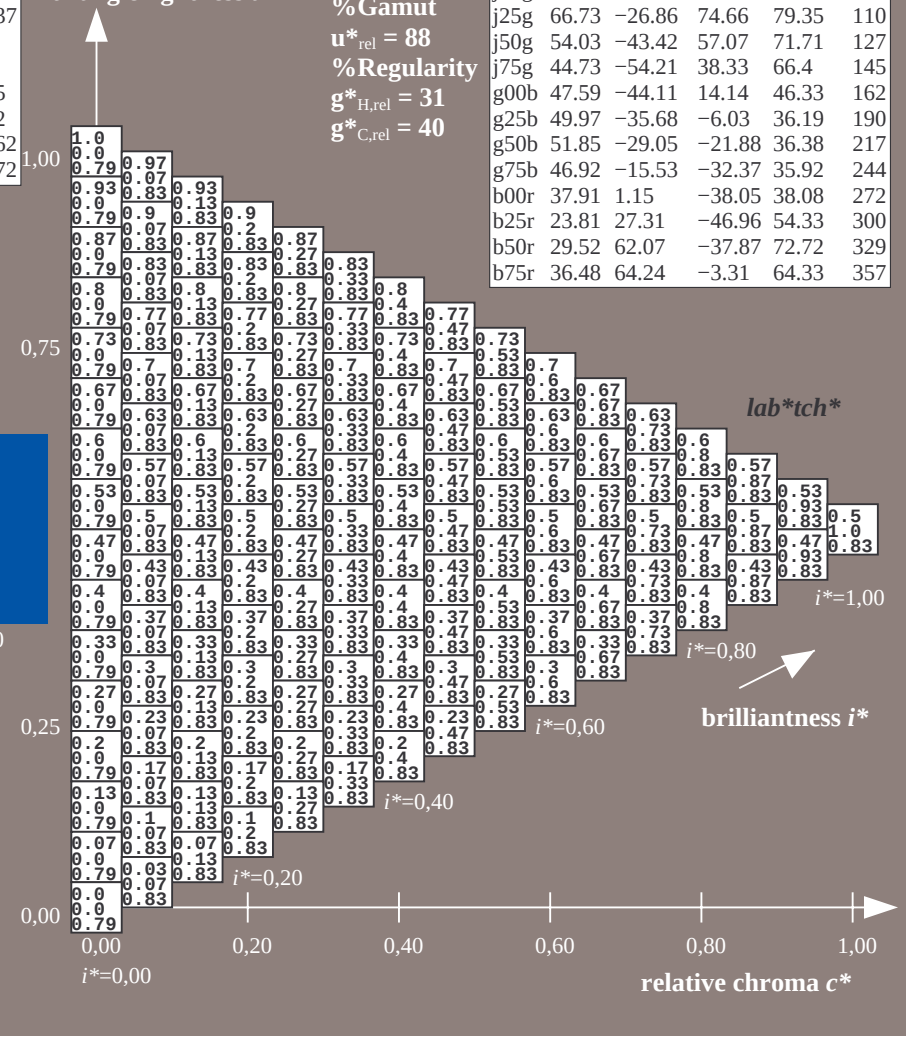
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 24 27 −46
$LAB^*LCH^*_{Ma}$: 24 54 300
$lab^*rgb^*_{Ma}$: 0.5 0.0 1.0
$lab^*olv^*_{Ma}$: 0.0 0.25 1.0
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = b25r$
*lab*tch**

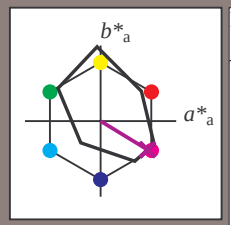
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b50r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

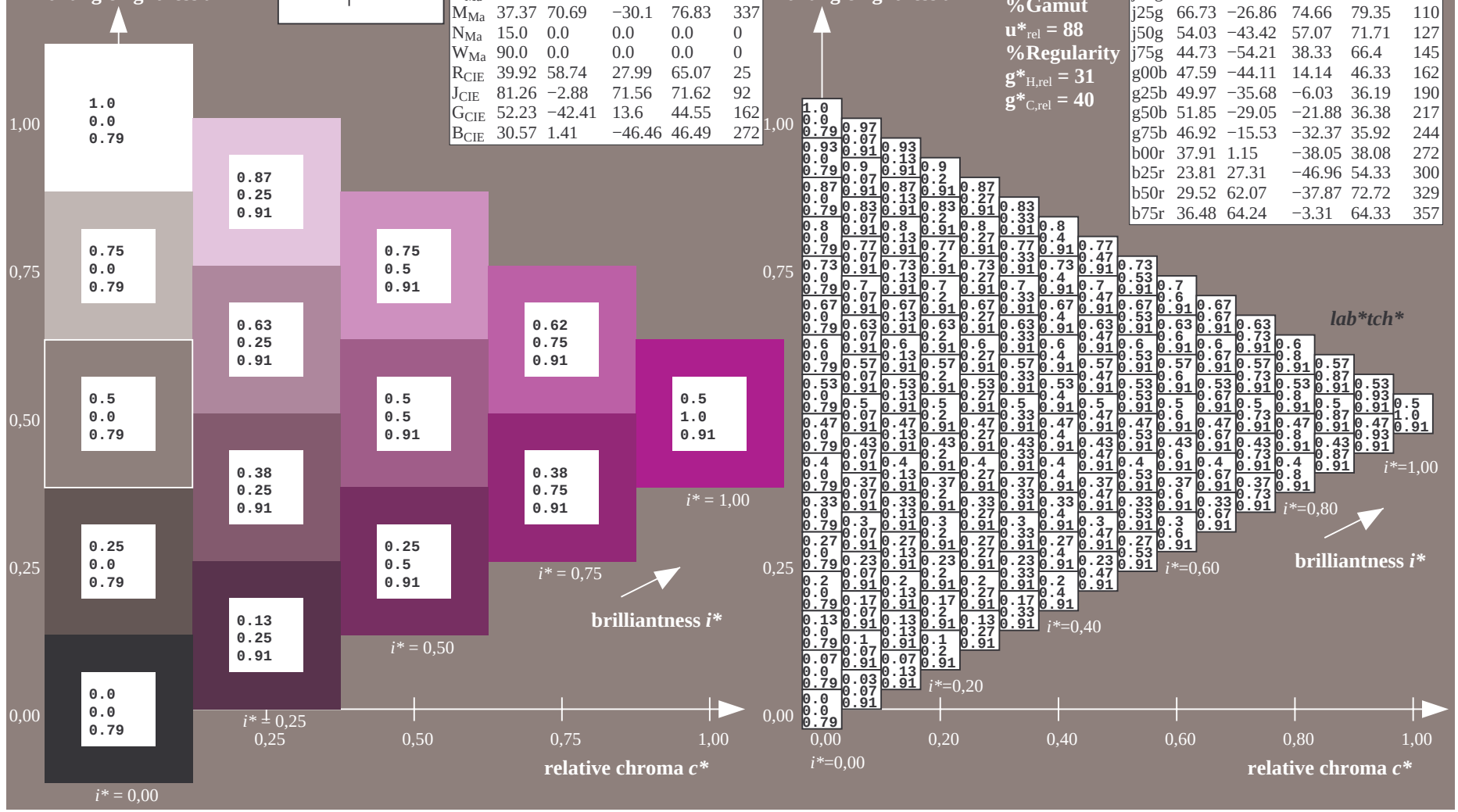
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 30 62 −37**
***LAB*LCH*Ma*: 30 73 329**
***lab*rgb*Ma*: 1.0 0.0 1.0**
***lab*olv*Ma*: 0.66 0.0 1.0**
triangle lightness *t**

u* = b50r
lab*tch*

FRS15_90a; adapted (a) CIELAB data

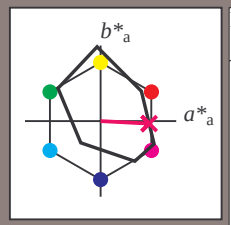
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



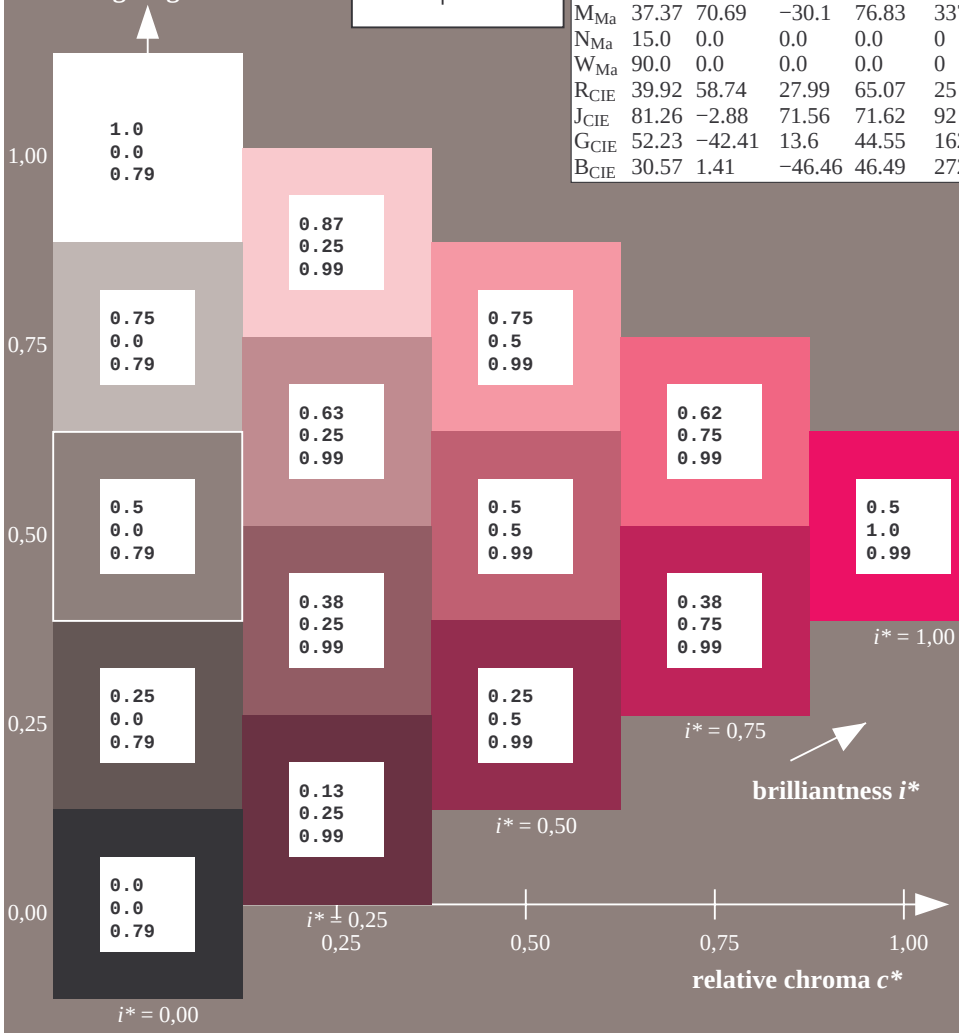
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b75r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



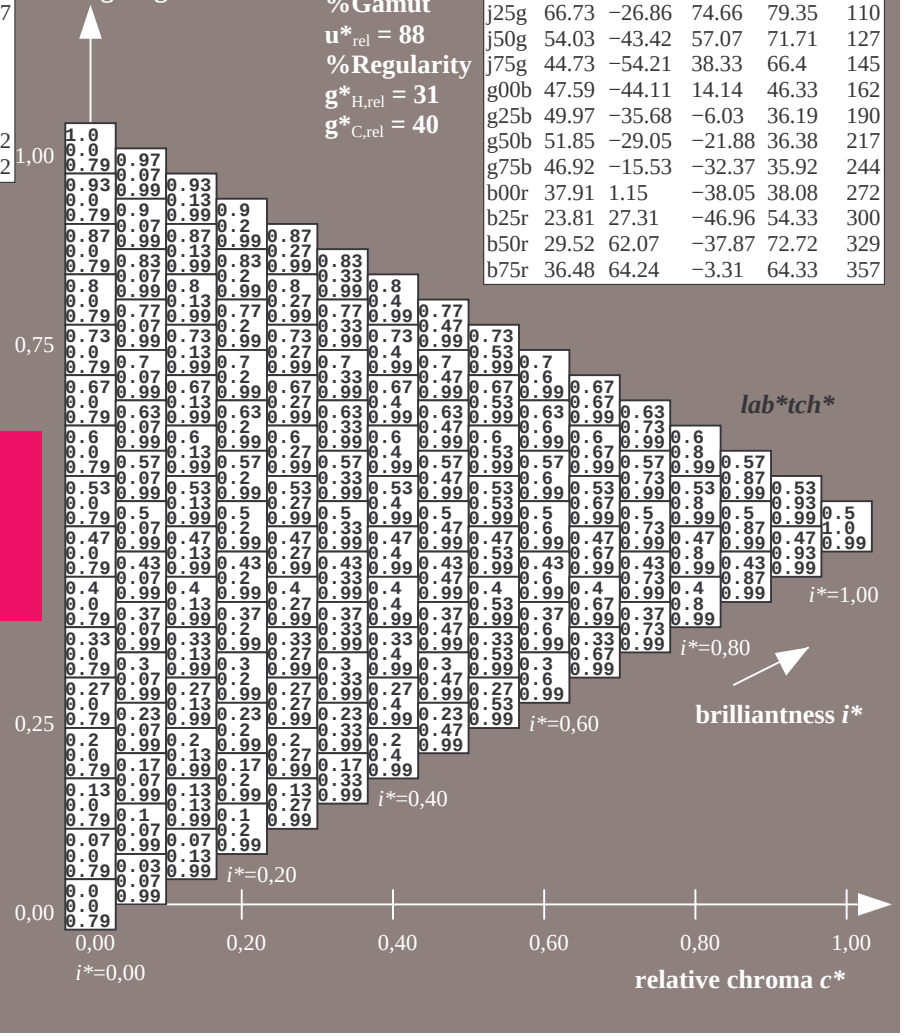
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 36 64 −2
$LAB^*LCH^*_{Ma}$: 36 64 357
$lab^*rgb^*_{Ma}$: 1.0 0.0 0.5
$lab^*olv^*_{Ma}$: 1.0 0.0 0.62
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = b75r
lab*tch*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

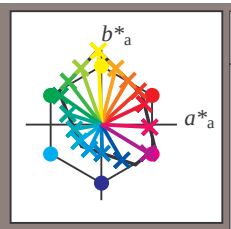


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	*lab*tch**			
01	0.0	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.06	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.13	0.13	0.13	0.19	0.25	0.31	0.38	0.44	0.5	1.0	0.94	0.87	0.81	0.75	0.69	0.62	0.56	0.5	0.0	0.0	0.0	0.0
	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.12	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.25	0.25	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1	0.26	0.31	0.34	0.35	0.36	0.37	0.37	0.37	0.1	0.2	0.26	0.29	0.31	0.33	0.34	0.35	0.35	0.79	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.79	0.79	0.79	0.79
02	0.06	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.56	0.13	0.19	0.19	0.25	0.31	0.38	0.44	0.5	0.56	0.94	0.88	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.13	0.13	0.13	0.13
	0.12	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.0	0.0	0.0	0.0
	0.86	0.63	0.47	0.44	0.42	0.42	0.41	0.41	0.41	0.94	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.01	0.1	0.26	0.31	0.34	0.35	0.36	0.37	0.37	0.63	0.79	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.79	0.79	0.79	0.79
03	0.13	0.13	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.13	0.19	0.19	0.25	0.31	0.38	0.44	0.5	0.56	0.13	0.19	0.25	0.31	0.38	0.44	0.5	0.56	0.62	0.87	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.25	0.25	0.25	0.25
	0.25	0.25	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	0.86	0.79	0.63	0.52	0.47	0.45	0.44	0.43	0.42	0.9	0.86	0.63	0.47	0.44	0.42	0.42	0.41	0.41	0.94	0.94	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.63	0.63	0.79	0.1	0.1	0.1	0.1	0.1	0.1	0.79	0.79	0.79	0.79
04	0.19	0.19	0.19	0.19	0.25	0.31	0.38	0.44	0.5	0.19	0.25	0.25	0.25	0.31	0.38	0.44	0.5	0.56	0.19	0.25	0.31	0.31	0.38	0.44	0.5	0.56	0.62	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.38	0.38	0.38	0.38
	0.37	0.37	0.37	0.37	0.5	0.62	0.75	0.87	1.0	0.37	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.87	0.37	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.0	0.0	0.0	0.0
	0.86	0.82	0.74	0.63	0.55	0.5	0.47	0.46	0.44	0.89	0.86	0.79	0.63	0.52	0.47	0.45	0.44	0.43	0.91	0.9	0.86	0.63	0.47	0.44	0.42	0.42	0.41	0.63	0.63	0.63	0.79	0.1	0.1	0.1	0.1	0.1	0.79	0.79	0.79	0.79
05	0.25	0.25	0.25	0.25	0.25	0.31	0.38	0.44	0.5	0.25	0.31	0.31	0.31	0.31	0.38	0.44	0.5	0.56	0.25	0.31	0.38	0.38	0.38	0.44	0.5	0.56	0.62	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.25	0.5	0.5	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.62	0.75	0.87	1.0	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.87	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.0	0.0	0.0	0.0
	0.86	0.83	0.79	0.71	0.63	0.57	0.52	0.49	0.47	0.88	0.86	0.82	0.74	0.63	0.55	0.5	0.47	0.46	0.9	0.89	0.86	0.79	0.63	0.52	0.47	0.45	0.44	0.63	0.63	0.63	0.63	0.79	0.1	0.1	0.1	0.1	0.79	0.79	0.79	0.79
06	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.44	0.5	0.31	0.38	0.38	0.38	0.38	0.38	0.44	0.5	0.56	0.31	0.38	0.44	0.44	0.44	0.44	0.5	0.56	0.62	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.63	0.63	0.63	0.63
	0.62	0.62	0.62	0.62	0.62	0.62	0.75	0.87	1.0	0.62	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.62	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.0	0.0	0.0	0.0
	0.86	0.84	0.81	0.76	0.7	0.63	0.58	0.54	0.51	0.88	0.86	0.83	0.79	0.71	0.63	0.57	0.52	0.49	0.89	0.88	0.86	0.82	0.74	0.63	0.55	0.5	0.47	0.63	0.63	0.63	0.63	0.63	0.79	0.1	0.1	0.1	0.79	0.79	0.79	0.79
07	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.44	0.5	0.38	0.44	0.44	0.44	0.44	0.44	0.44	0.5	0.56	0.38	0.44	0.5	0.5	0.5	0.5	0.5	0.56	0.62	0.62	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.75	0.75	0.75	0.75
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.0	0.0	0.0	0.0
	0.86	0.85	0.82	0.79	0.74	0.68	0.63	0.59	0.55	0.88	0.86	0.84	0.81	0.76	0.7	0.63	0.58	0.54	0.89	0.88	0.86	0.83	0.79	0.71	0.63	0.57	0.52	0.63	0.63	0.63	0.63	0.63	0.63	0.79	0.1	0.1	0.79	0.79	0.79	0.79
08	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.5	0.44	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.56	0.44	0.5	0.56	0.56	0.56	0.56	0.56	0.56	0.62	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.06	0.88	0.88	0.88	0.88
	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	0.87	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.12	0.0	0.0	0.0	0.0
	0.86	0.85	0.83	0.8	0.77	0.72	0.68	0.63	0.59	0.87	0.86	0.85	0.82	0.79	0.74	0.68	0.63	0.59	0.88	0.88	0.86	0.84	0.81	0.76	0.7	0.63	0.58	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.79	0.1	0.79	0.79	0.79	0.79
09	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.5	0.56	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.06	0.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.87	0.75	0.62	0.5	0.37	0.25	0.12	0.0	0.0	0.0	0.0	0.0
	0.86	0.85	0.83	0.81	0.79	0.75	0.71	0.67	0.63	0.87	0.86	0.85	0.83	0.8	0.77	0.72	0.68	0.63	0.88	0.87	0.86	0.85	0.82	0.79	0.74	0.68	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.79	0.79	0.79	0.79	0.79	0.79
10	0.19	0.19	0.19	0.19	0.25	0.31	0.38	0.44	0.5	0.25	0.25	0.25	0.25	0.25	0.31	0.38	0.44	0.5	0.31	0.31	0.31	0.31	0.31	0.31	0.38	0.44	0.5	1.0	0.94	0.87	0.81	0.75	0.69	0.62	0.56	0.5	0.0	0.0	0.0	0.0
	0.37	0.37	0.37	0.37	0.5	0.62	0.75	0.87	1.0	0.5	0.5	0.5	0.5	0.5	0.62	0.75	0.87	1.0	0.62	0.62	0.62	0.62	0.62	0.62	0.75	0.87	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	0.1	0.17	0.22	0.26	0.28	0.3	0.31	0.33	0.33	0.1	0.15	0.2	0.23	0.26	0.28	0.29	0.3	0.31	0.1	0.14	0.18	0.21	0.24	0.26	0.27	0.29	0.3	0.79	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.79	0.79	0.79	0.79
11	0.19	0.25	0.25	0.25	0.31	0.38	0.44	0.5	0.56	0.25	0.31	0.31	0.31	0.31	0.38	0.44	0.5	0.56	0.31	0.38	0.38	0.38	0.38	0.38	0.44	0.5	0.56	0.94	0.88	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.07	0.07	0.07	0.07
	0.37	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.87	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.87	0.62	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.0	0.0	0.0	0.0
	0.04	0.1	0.2	0.26	0.29	0.31	0.33	0.34	0.35	0.06	0.1	0.17	0.22	0.26	0.28	0.3	0.31	0.33	0.07	0.1	0.15	0.2	0.23	0.26	0.28	0.29	0.3	0.86	0.79	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.79	0.79	0.79	0.79
12	0.19	0.25	0.31	0.31	0.38	0.44	0.5	0.56	0.62	0.25	0.31	0.38	0.38	0.38	0.44	0.5	0.56	0.62	0.31	0.38	0.44	0.44	0.44	0.44	0.5	0.56	0.62	0.87	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.13	0.13	0.13	0.13
	0.37	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.62	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	0.98	0.01	0.1	0.26	0.31	0.34	0.35	0.36	0.37	0.01	0.04	0.1	0.2	0.26	0.29	0.31	0.33	0.34	0.03	0.06	0.1	0.17	0.22	0.26	0.28	0.3	0.31	0.86	0.86	0.79	0.26	0.26	0.26	0.26	0.26	0.26	0.79	0.79	0.79	0.79
13	0.19	0.25	0.31	0.38	0.44	0.5	0.56	0.63	0.69	0.25	0.31	0.38	0.44	0.44	0.5	0.56	0.63	0.69	0.31	0.38	0.44	0.5	0.5	0.5	0.56	0.63	0.69	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.2	0.2	0.2	0.2
	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.62	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.62	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.0	0.0	0.0	0.0
	0.94	0.94	0.94	0.79	0.4	0.4	0.4	0.4	0.4	0.97	0.98	0.01	0.1	0.26	0.31	0.34	0.35	0.36	0.99	0.01	0.04	0.1	0.2	0.26	0.29	0.31	0.33	0.86	0.86	0.86	0.79	0.26	0.26	0.26	0.26	0.26	0.79	0.79	0.79	0.79
14	0.25	0.31	0.38	0.44	0.44	0.5	0.56	0.63	0.69	0.25	0.31	0.38	0.44	0.5	0.56	0.63	0.69	0.75	0.31	0.38	0.44	0.5	0.56	0.56	0.63	0.69	0.75	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.25	0.27	0.27	0.27	0.27
	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.0	0.0	0.0	0.0
	0.92	0.91	0.9	0.86	0.63	0.47	0.44	0.42	0.42	0.94	0.94	0.94	0.94	0.79	0.4	0.4	0.4	0.4	0.96	0.97	0.98	0.01	0.1	0.26	0.31	0.34	0.35	0.86	0.86	0.86	0.86	0.79	0.26	0.26	0.26	0.26	0.79	0.79	0.79	0.79
15	0.31	0.38	0.44	0.5	0.5	0.5	0.56	0.63	0.69	0.31	0.38	0.44	0.5	0.56	0.56	0.63	0.69	0.75	0.31	0.38	0.44	0.5	0.56	0.63	0.69	0.75	0.81	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.33	0.33	0.33	0.33
	0.62	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.62	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.0	0.0	0.0	0.0
	0.91	0.9	0.89	0.86	0.79	0.63	0.52	0.47	0.45	0.92	0.92	0.91	0.9	0.86	0.63	0.47	0.44	0.42	0.94	0.94	0.94	0.94	0.94	0.79	0.4	0.4	0.4	0.86	0.86	0.86	0.86	0.86	0.79	0.26	0.26	0.26	0.79	0.79	0.79	0.79
16	0.38	0.44	0.5	0.56	0.56	0.56	0.56	0.63	0.69	0.38	0.44	0.5	0.56	0.63	0.63	0.63	0.69	0.75	0.38	0.44	0.5	0.56	0.63	0.69	0.69	0.75	0.81	0.62	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.4	0.4	0.4	0.4
	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.62	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.75	0.63	0.5	0.38	0.25	0.13	0.13	0.25	0.37	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.0	0.0	0.0	0.0
	0.9	0.89	0.88	0.86	0.82	0.74	0.63	0.55	0.5	0.91	0.91	0.9	0.89	0.86	0.79	0.63	0.52	0.47	0.92	0.92	0.92	0.91	0.9	0.86	0.63	0.47	0.44	0.86	0.86	0.86	0.86	0.86	0.79	0.26	0.26	0.26	0.79	0.79	0.79	0.79
17	0.44	0.5	0.56	0.63	0.63	0.63	0.63	0.63	0.69	0.44	0.5	0.56	0.63	0.69	0.69	0.69	0.69	0.75	0.44	0.5	0.56	0.63	0.69	0.75	0.75	0.75	0.81	0.56	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.06	0.47	0.47	0.47	0.47
	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.62	0.87	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.87	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.37	0.87	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.12	0.0	0.0	0.0	0.0
	0.9	0.89	0.88	0.86	0.83	0.79	0.71	0.63	0.57	0.91	0.9	0.89	0.88	0.86	0.82	0.74	0.63	0.55	0.92	0.91	0.91	0.9	0.89	0.86	0.79	0.63	0.52	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.79	0.26	0.79	0.79	0.79	0.79
18	0.5	0.56	0.62	0.69	0.69	0.69	0.69	0.69	0.69	0.5	0.56	0.62	0.69	0.75	0.75	0.75	0.75	0.75	0.5	0.56	0.62	0.69	0.75	0.81	0.81	0.81	0.81	0.5	0.44	0.38	0.31	0.25	0.19	0.13	0.06	0.0	0.53	0.53	0.53	0.53
	1.0	0.87	0.75	0.62	0.62	0.62	0.62	0.62	0.62	1.0	0.87	0.75	0.62	0.5	0.5	0.5	0.5	0.5	1.0	0.87	0.75	0.62	0.5	0.37	0.37	0.37	0.37	1.0	0.87	0.75	0.62	0.5	0.37	0.25	0.12	0.0	0.0	0.0	0.0	0.0
	0.89	0.88	0.88	0.86	0.84	0.81	0.76	0.7	0.63	0.9	0.9	0.89	0.88	0.86	0.83	0.79	0.71	0.63	0.91	0.91	0.9	0.89	0.88	0.86	0.82	0.74	0.63	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.79	0.79	0.79	0.79	0.79
19	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.44	0.5	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.94	0.87	0.81	0.75	0.69	0.62	0.56	0.5	0.6	0.6	0.6	0.6
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	0.1	0.13	0.17	0.2	0.22	0.24	0.26	0.27	0.28	0.1	0.13	0.16	0.18	0.21	0.23	0.24	0.26	0.27	0.1	0.13	0.15	0.17	0.2	0.21	0.23	0.25	0.26	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.79	0.79	0.79	0.79
20	0.38	0.44	0.44	0.44	0.44	0.44	0.44	0.5	0.56	0.44	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.56	0.5	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.94	0.88	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.67	0.67	0.67	0.67
	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	0.87	0.75	0.63	0.5	0.37	0.25	0.12	0.0	0.0	0.0	0.0	0.0
	0.07	0.1	0.14	0.18	0.21	0.24	0.26	0.27	0.29	0.08	0.1	0.13	0.17	0.2	0.22	0.24	0.26	0.27	0.08	0.1	0.13	0.16	0.18	0.21	0.23	0.24	0.26	0.94	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.79	0.79	0.79	0.79
21	0.38	0.44	0.5	0.5	0.5	0.5	0.5	0.56	0.62	0.44	0.5	0.56	0.56	0.56	0.56	0.56	0.56	0.62	0.5	0.56	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.87	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.73	0.73	0.73	0.73
	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	0.04	0.07	0.1	0.15	0.2	0.23	0.26	0.28	0.29	0.05	0.07	0.1	0.14	0.18	0.21	0.24	0.26	0.27	0.06	0.08	0.1	0.13	0.17	0.2	0.22	0.24	0.26	0.94	0.94	0.79	0.4	0.4	0.4	0.4	0.4	0.4	0.79	0.79	0.79	0.79
22	0.38	0.44	0.5	0.56	0.56	0.56	0.56	0.63	0.69	0.44	0.5	0.56	0.63	0.63	0.63	0.63	0.63	0.69	0.5	0.56	0.62	0.69	0.69	0.69	0.69	0.69	0.69	0.81	0.75	0.69	0.63	0.56	0.5	0.44	0.38	0.31	0.8	0.8	0.8	0.8
	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.62	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.62	1.0	0.87	0.75	0.62	0.62	0.62	0.62	0.62	0.62	0.37	0.25	0.13	0.0	0.

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

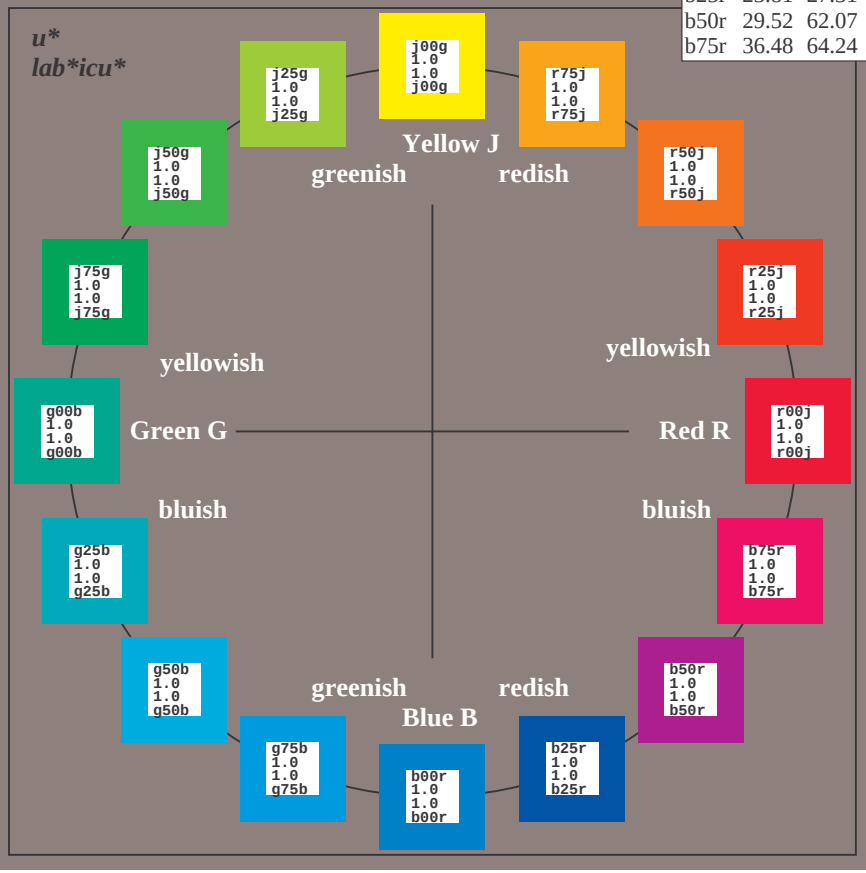
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

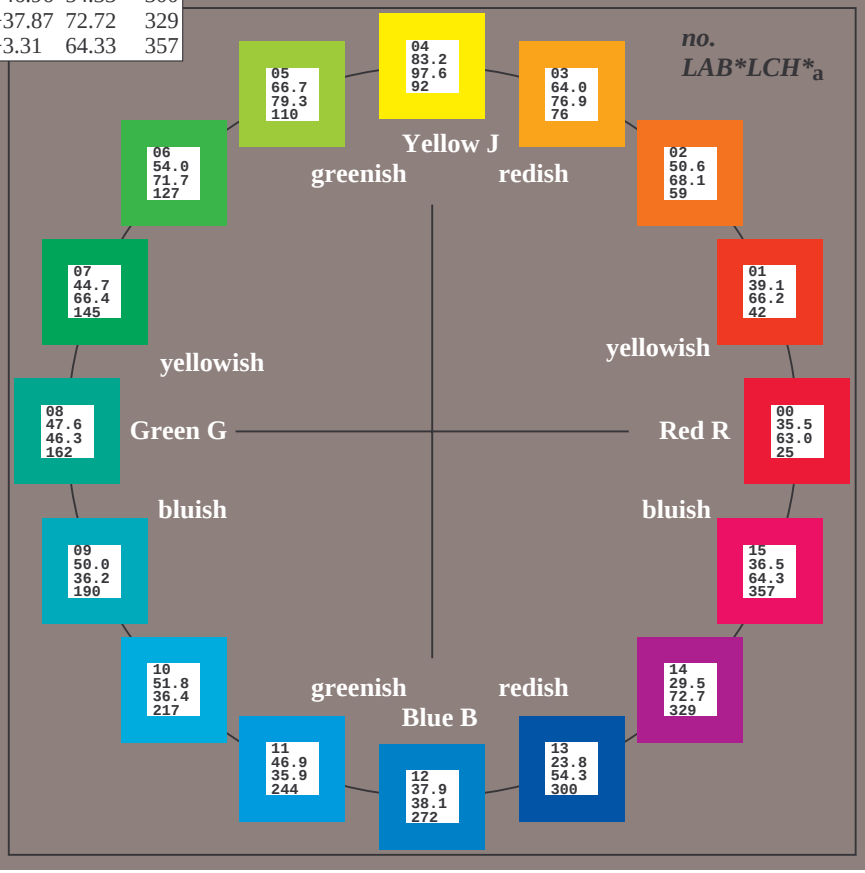


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; adapted (a) CIELAB data

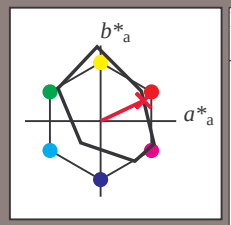
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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





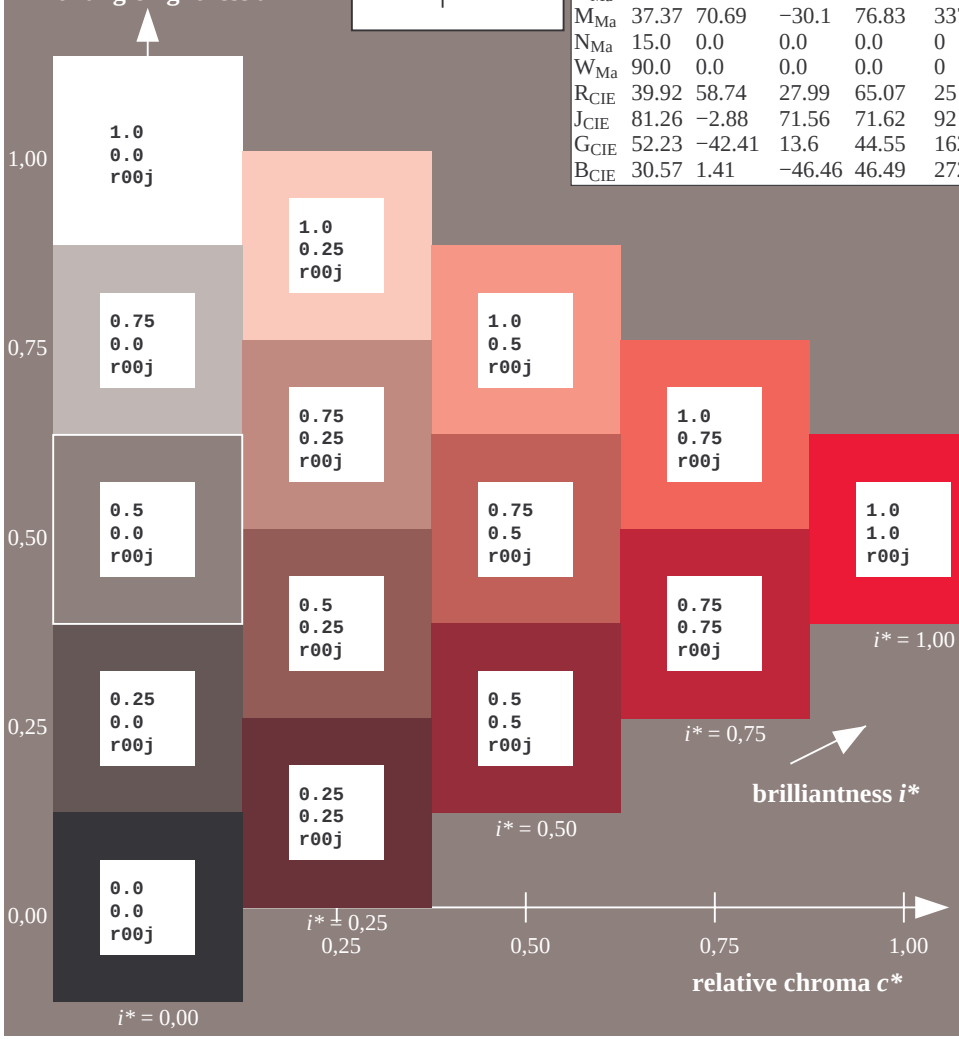
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = r00j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

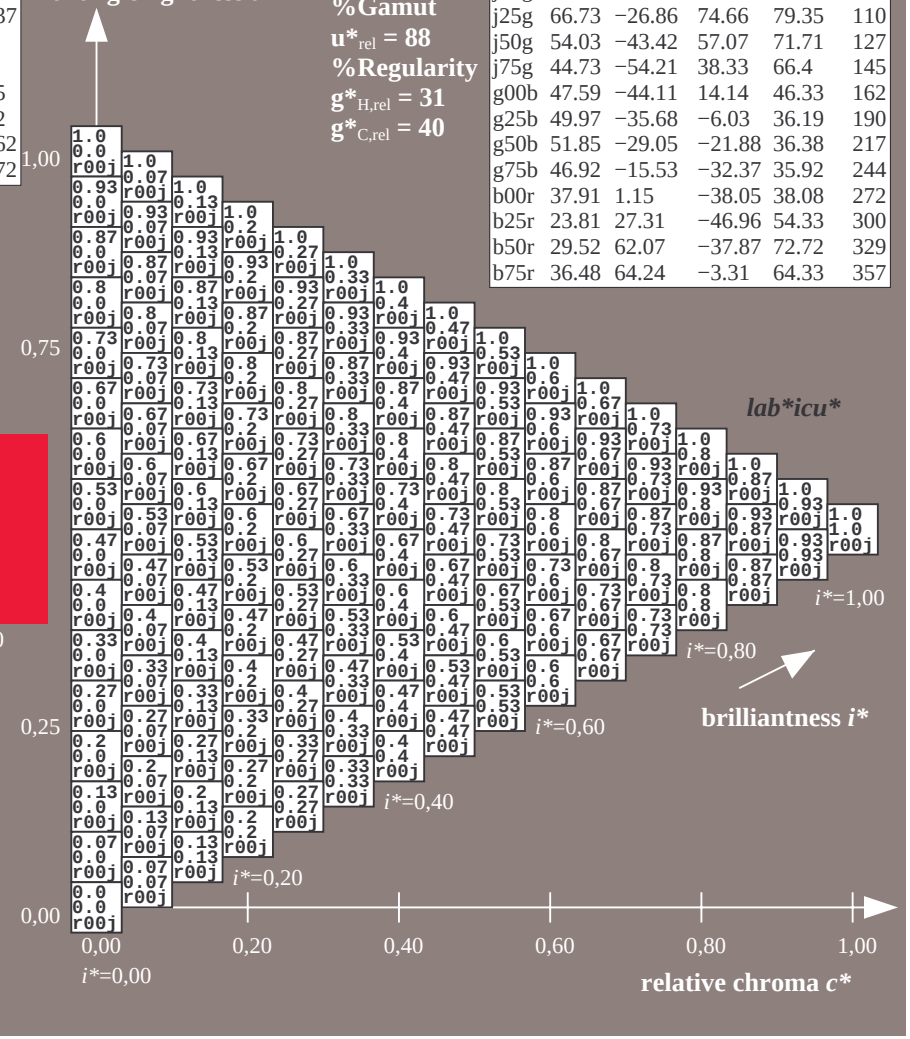


Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 35 57 27
*LAB*LCH**$_{Ma}$: 35 63 25
*lab*rgb**$_{Ma}$: 1.0 0.0 0.0
*lab*olv**$_{Ma}$: 1.0 0.0 0.18

$u^* = r00j$
*lab*icu**

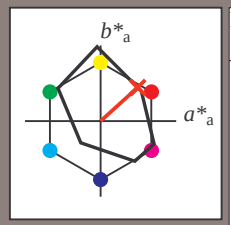
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

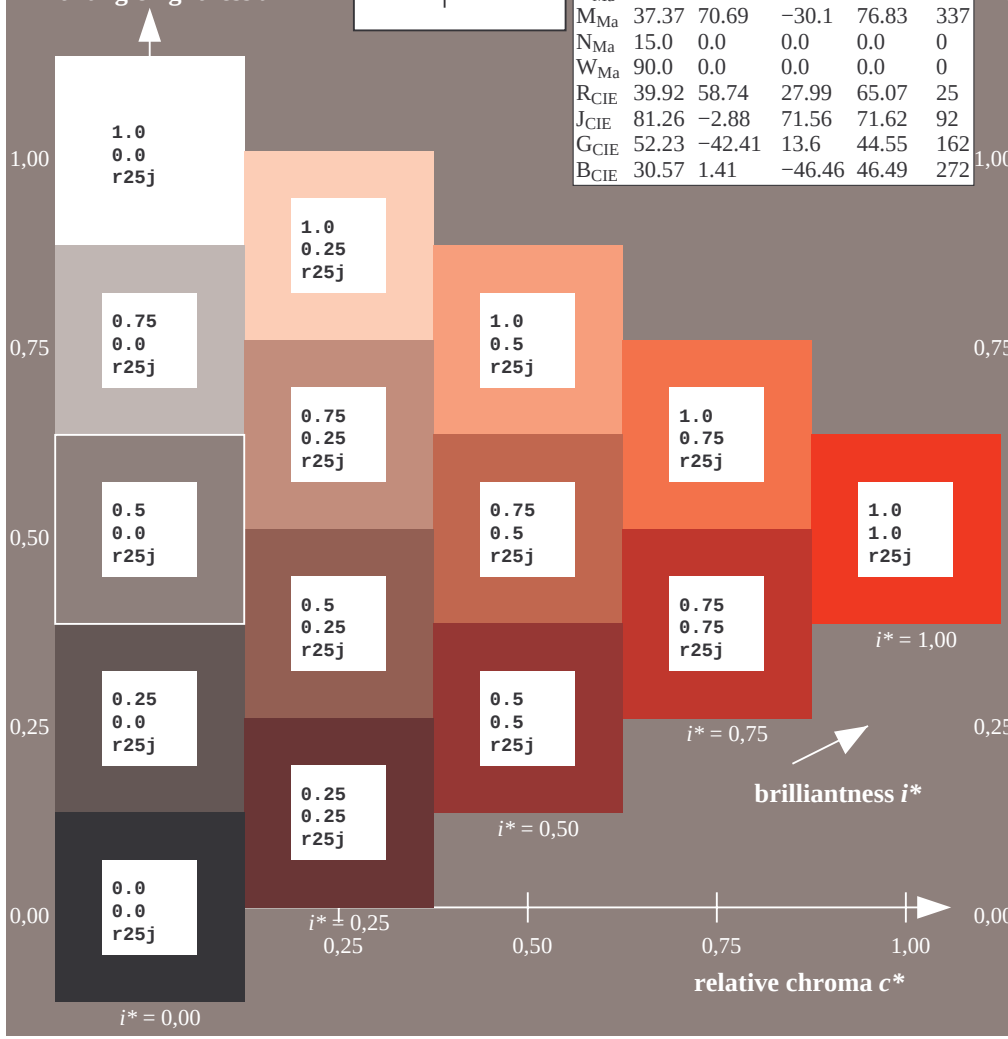
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 39 49 44**
***LAB*LCH*$_{Ma}$*: 39 66 42**
***lab*rgb*$_{Ma}$*: 1.0 0.25 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.08 0.0**
triangle lightness t^*

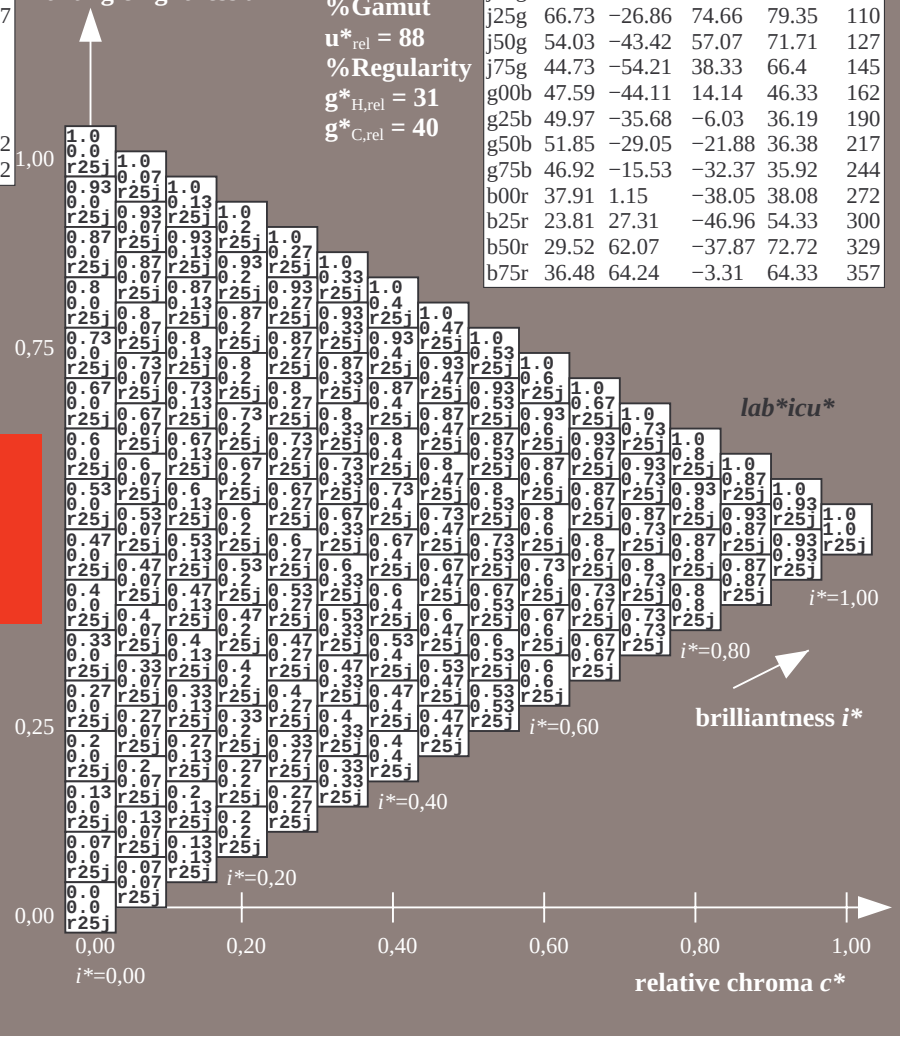
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = r25j
lab*icu*

FRS15_90a; adapted (a) CIELAB data

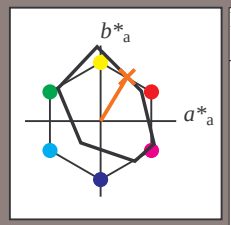
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

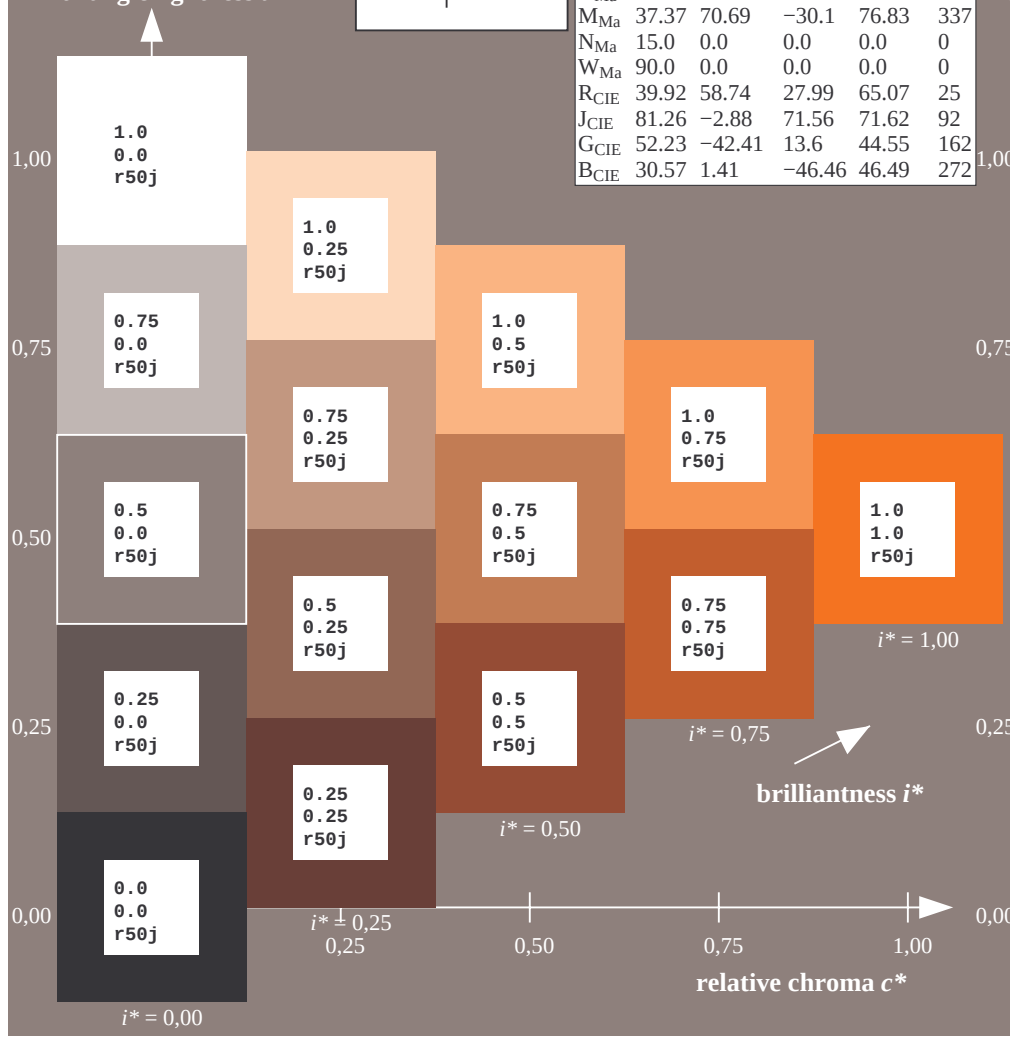
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

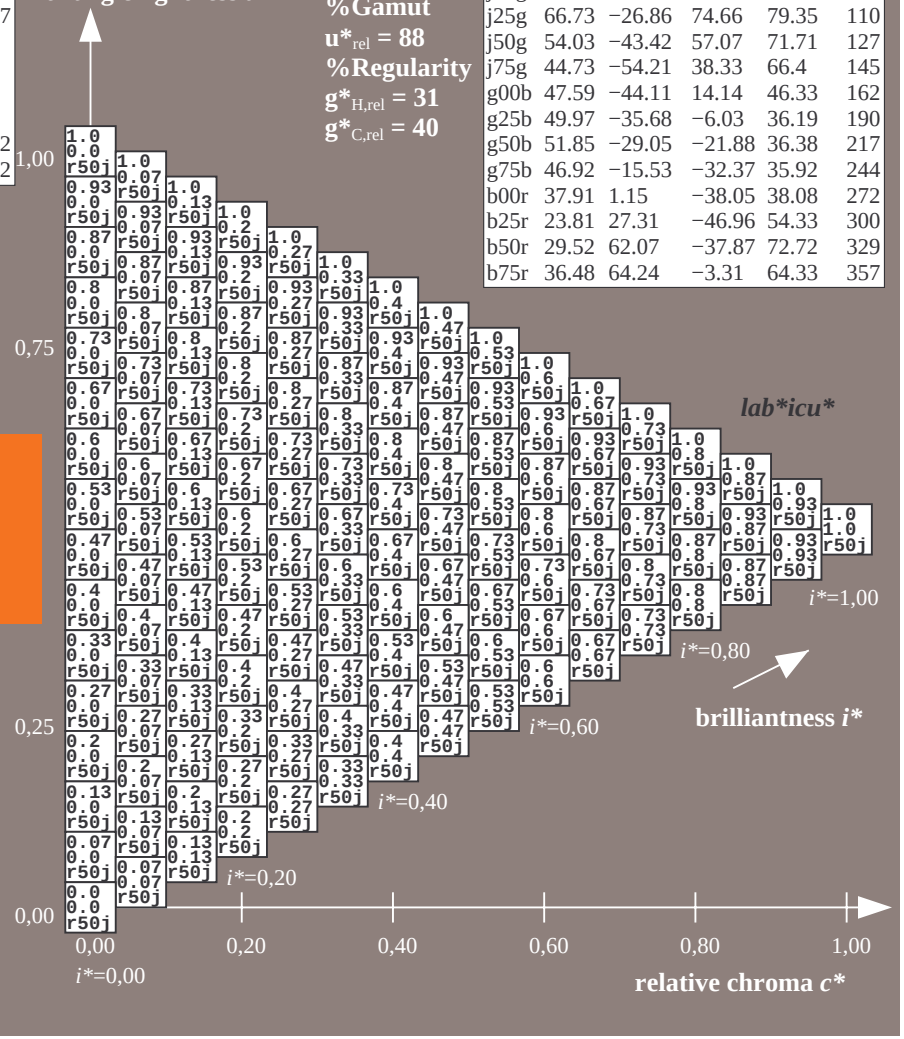
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 51 35 58**
***LAB*LCH*Ma*: 51 68 59**
***lab*rgb*Ma*: 1.0 0.5 0.0**
***lab*olv*Ma*: 1.0 0.32 0.0**

u* = r50j
lab*icu*

FRS15_90a; adapted (a) CIELAB data

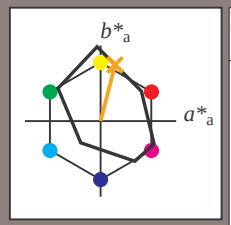
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





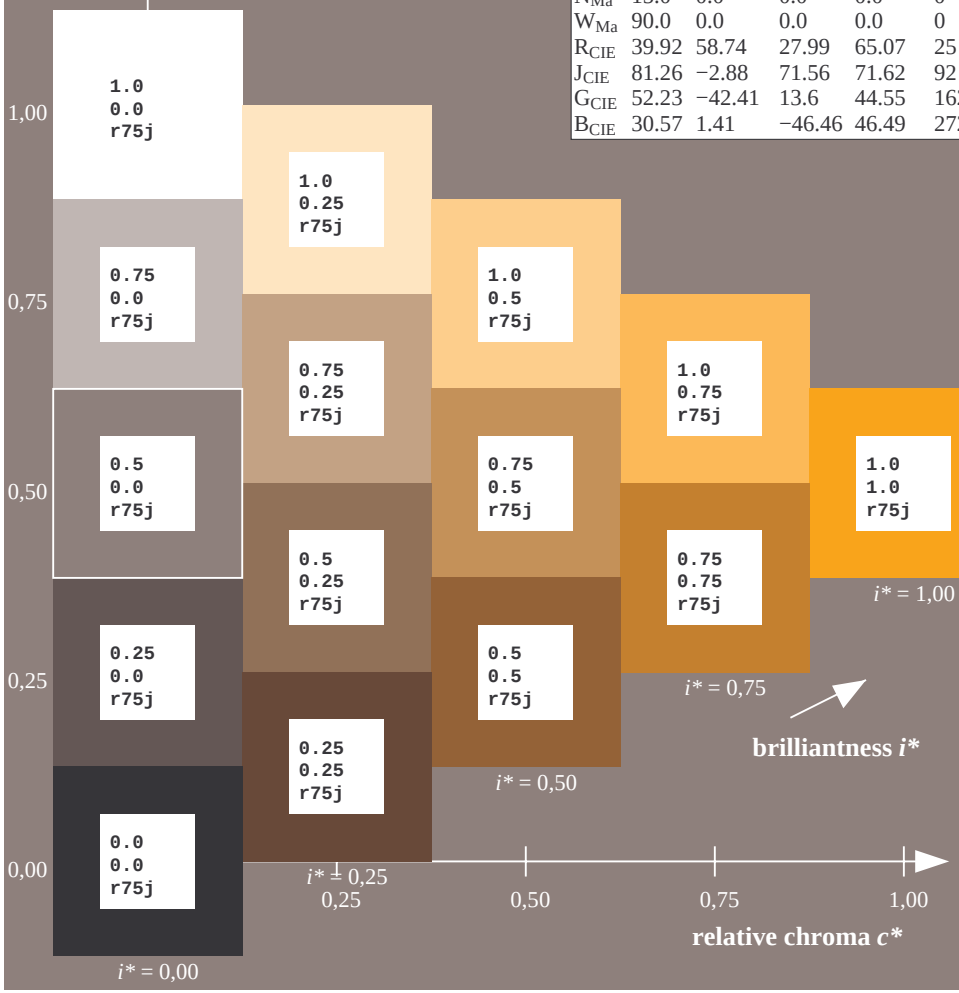
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = r75j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



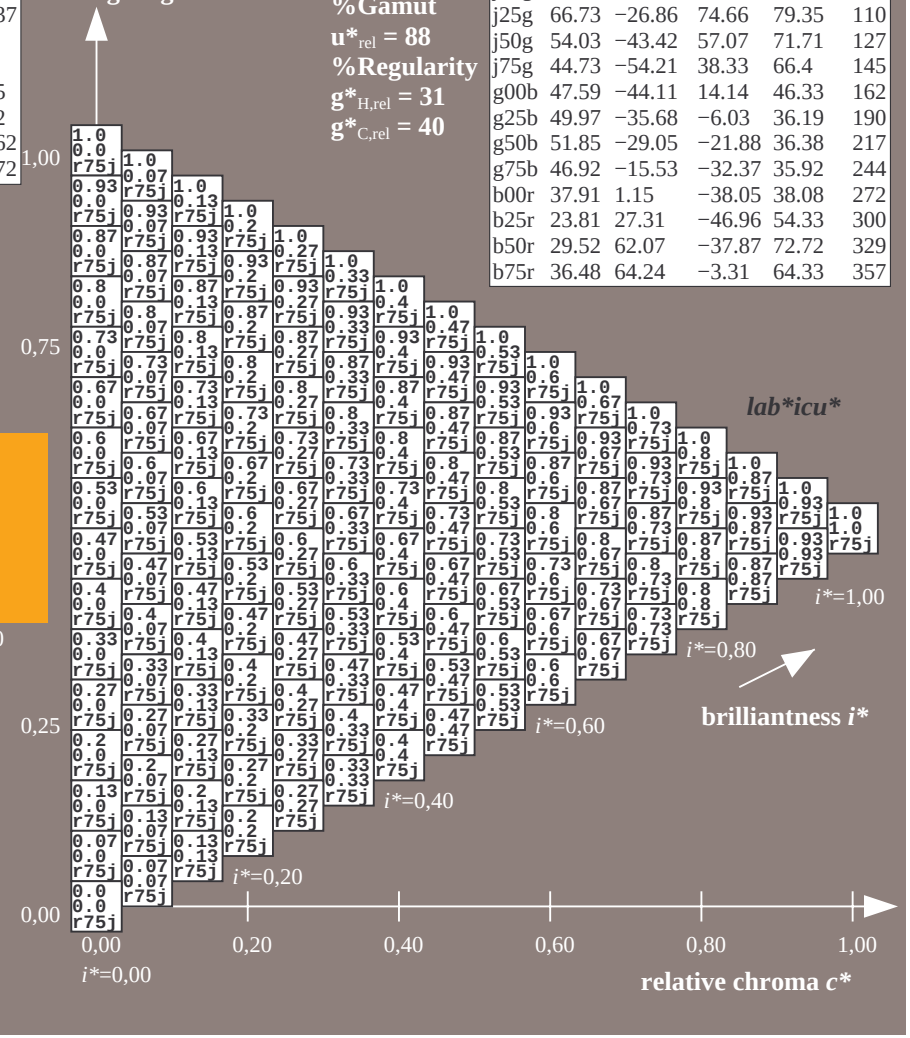
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 64 19 74**
***LAB*LCH*Ma*: 64 77 76**
***lab*rgb*Ma*: 1.0 0.75 0.0**
***lab*olv*Ma*: 1.0 0.59 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = r75j
lab*icu*

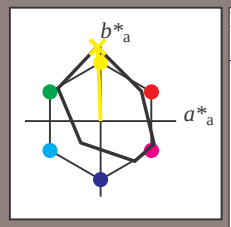
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



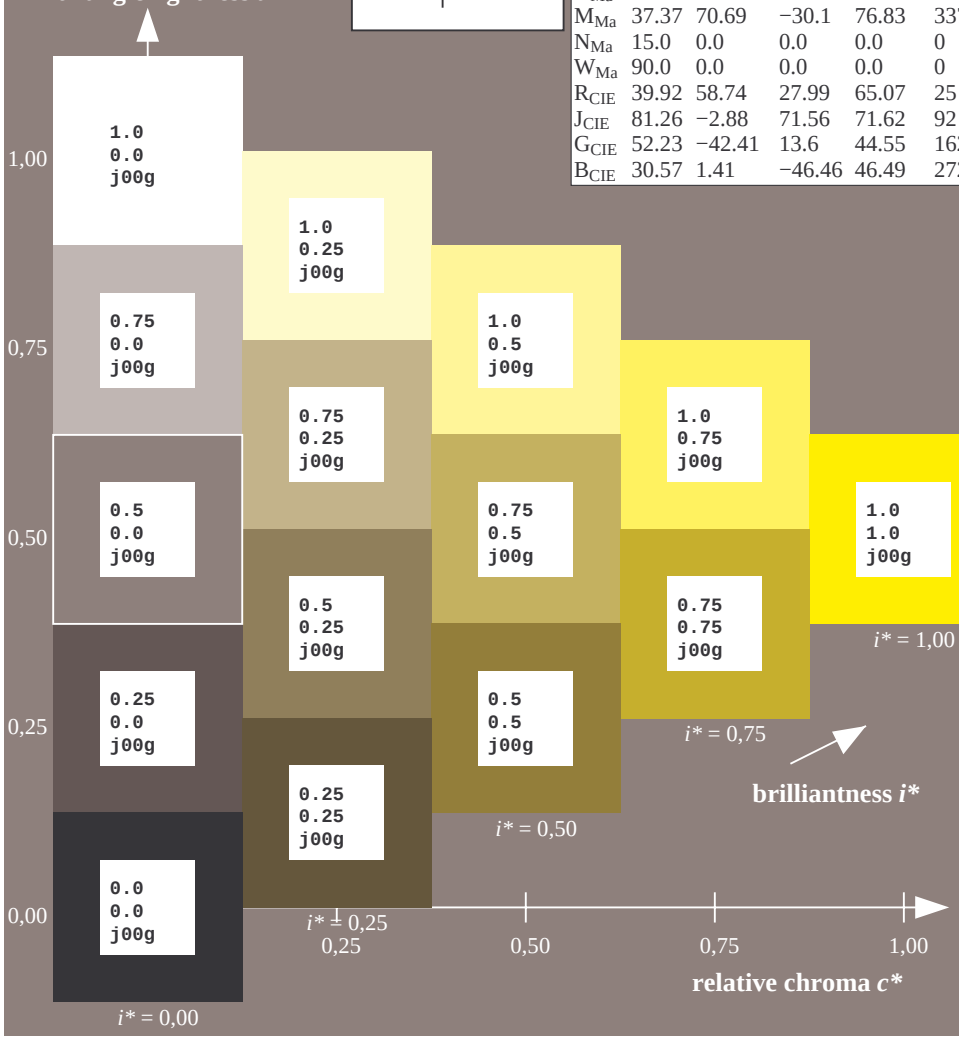
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j00g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



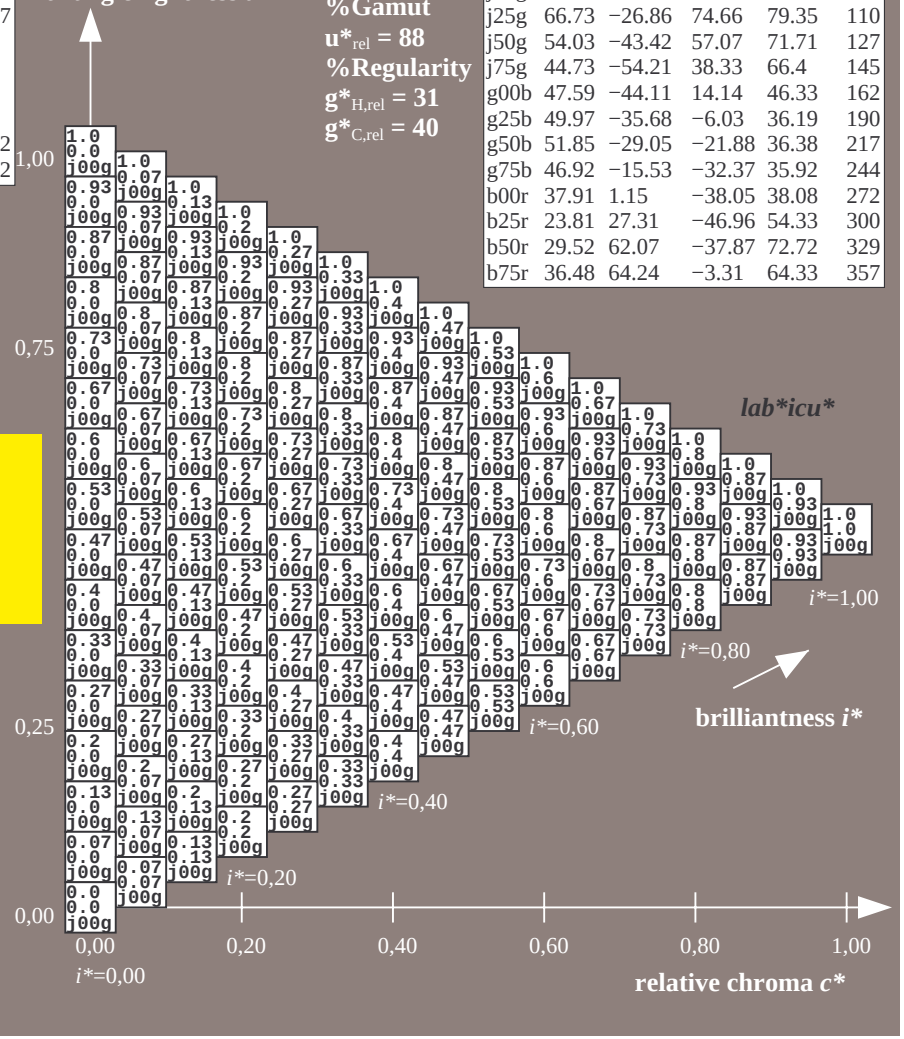
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 83 −3 98**
***LAB*LCH**$_{Ma}$: 83 98 92**
***lab*rgb**$_{Ma}$: 1.0 1.0 0.0**
***lab*olv**$_{Ma}$: 1.0 0.99 0.0**
triangle lightness *t**

u* = j00g
lab*icu*

FRS15_90a; adapted (a) CIELAB data

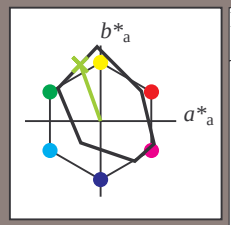
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



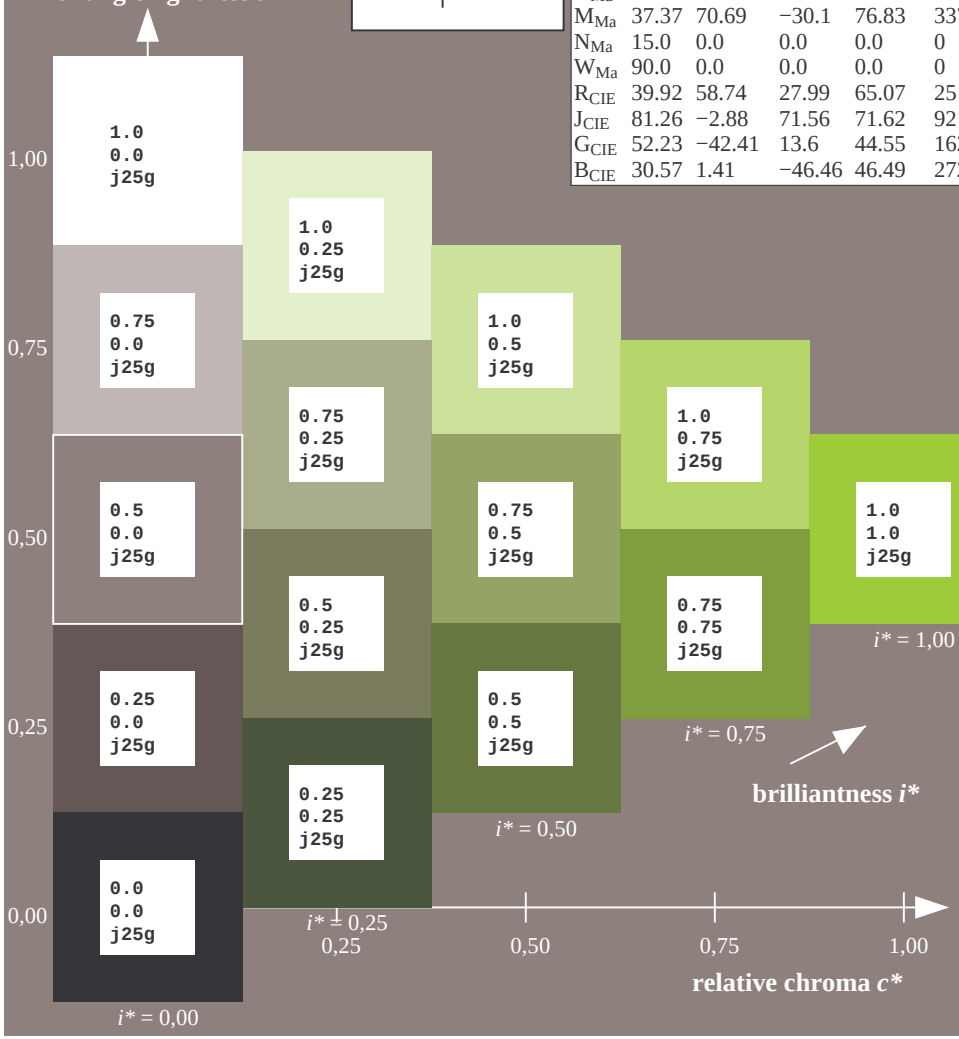
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



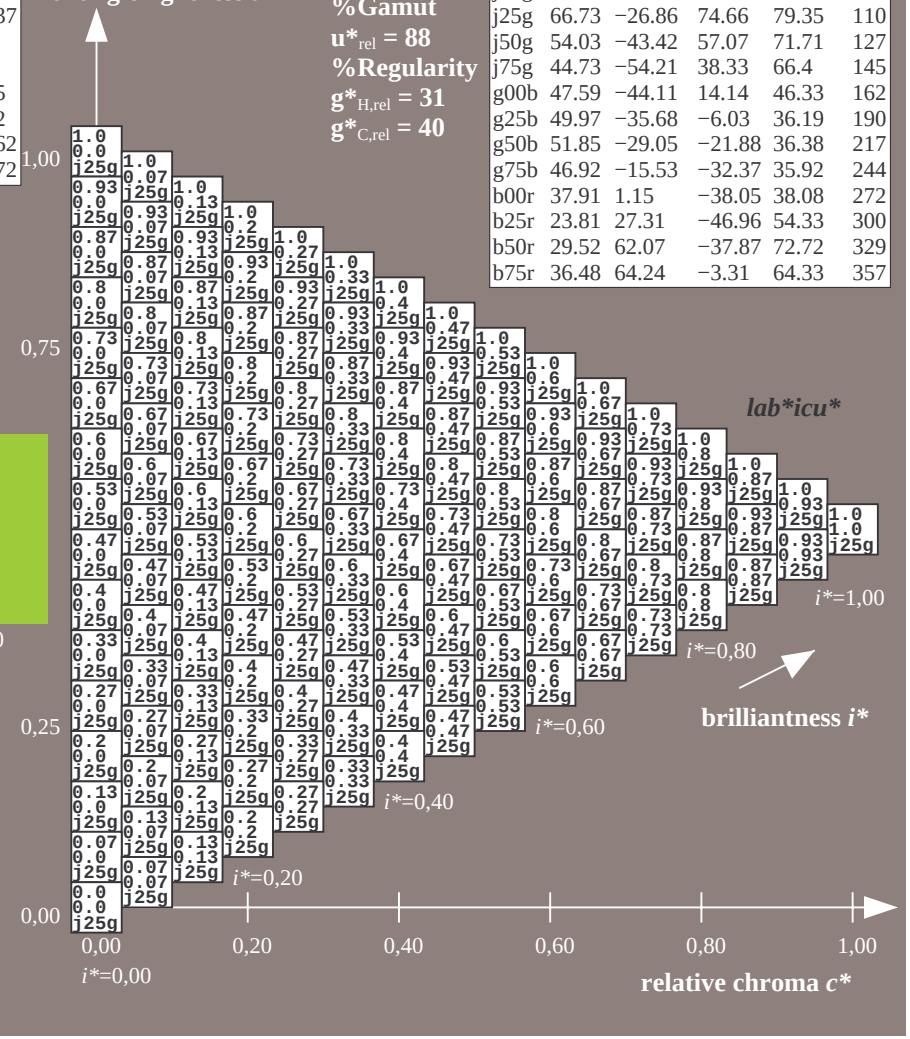
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 67 −26 75**
***LAB*LCH*Ma*: 67 79 110**
***lab*rgb*Ma*: 0.75 1.0 0.0**
***lab*olv*Ma*: 0.57 1.0 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = j25g
lab*icu*

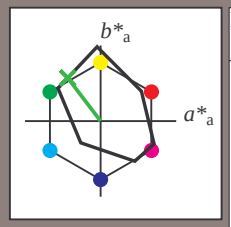
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j50g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

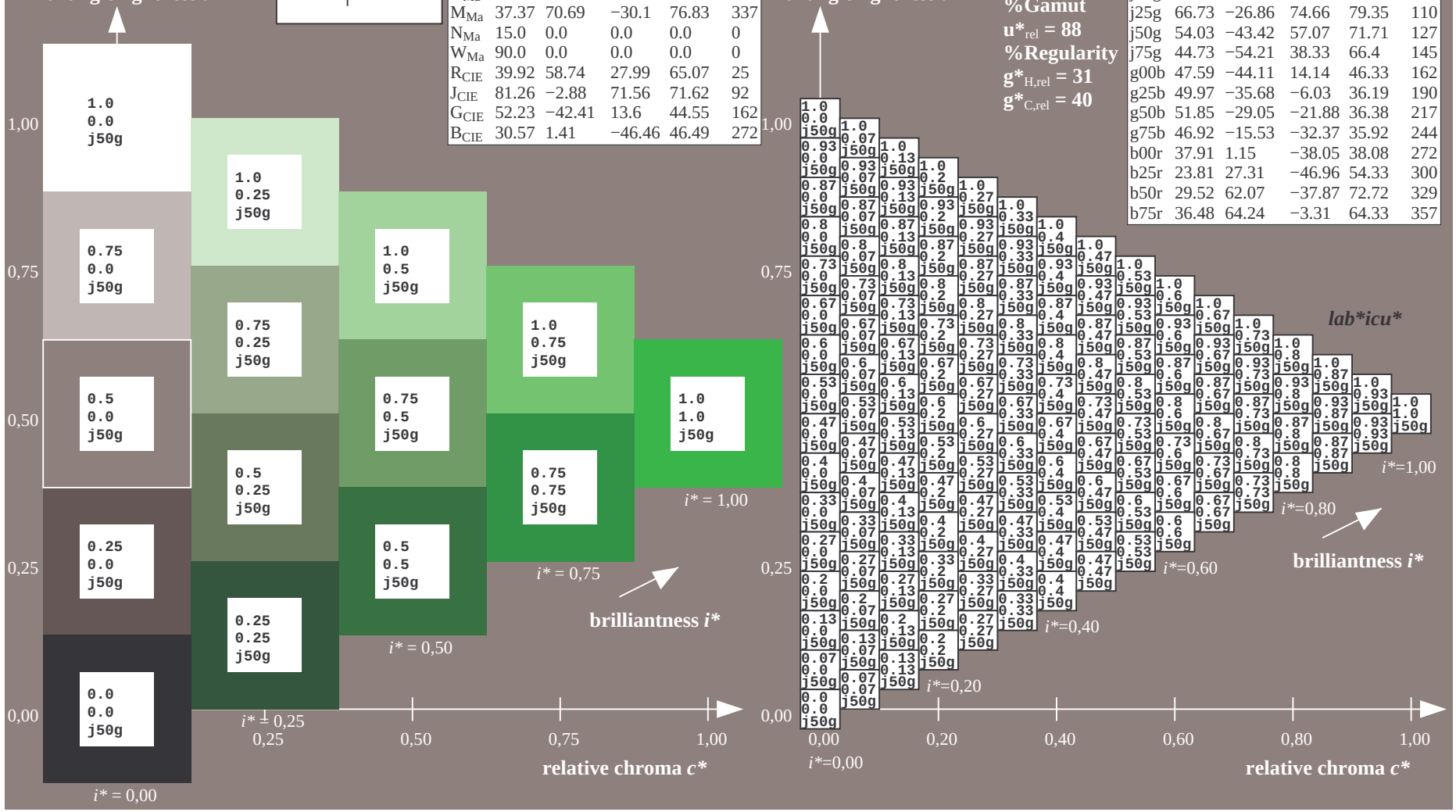
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 54 −42 57**
***LAB*LCH*Ma*: 54 72 127**
***lab*rgb*Ma*: 0.5 1.0 0.0**
***lab*olv*Ma*: 0.25 1.0 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = j50g
lab*icu*

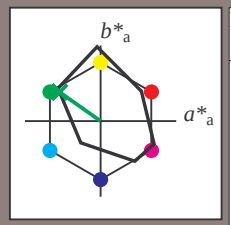
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



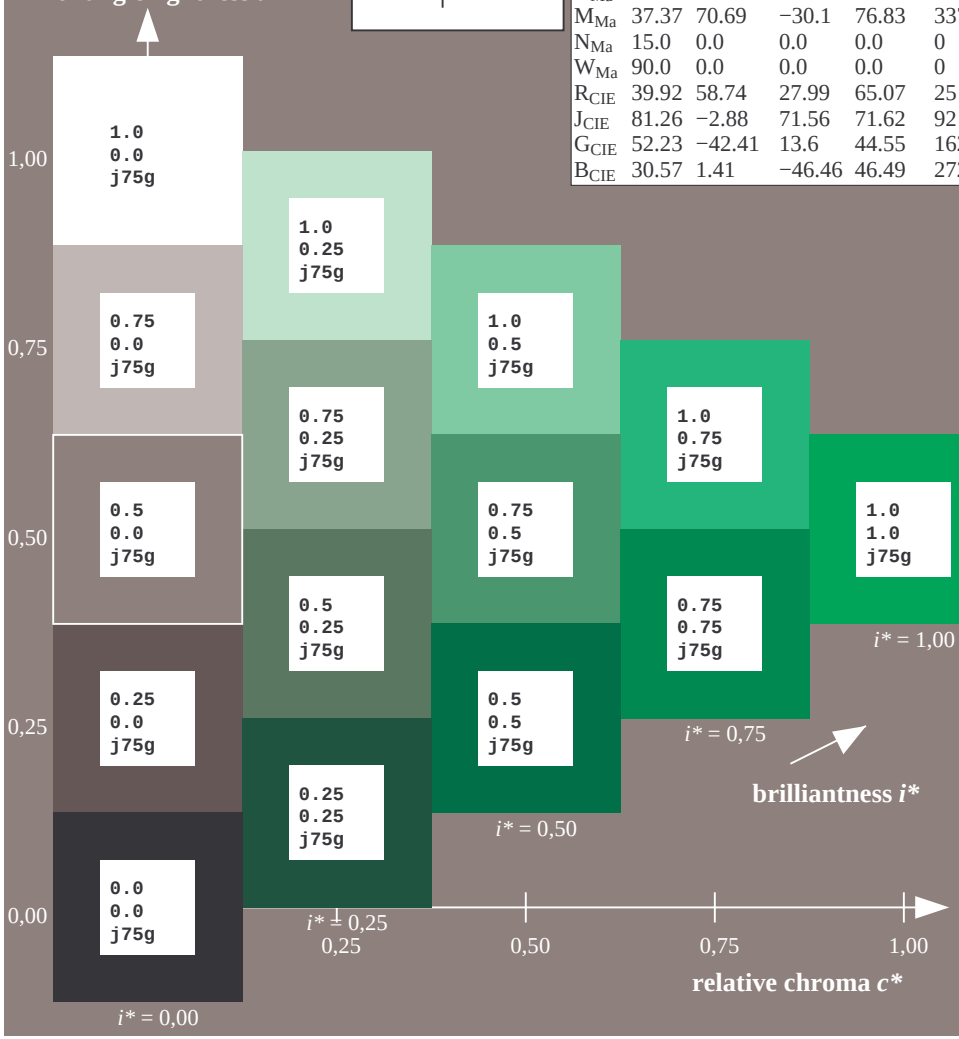
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
$u^* = j75g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



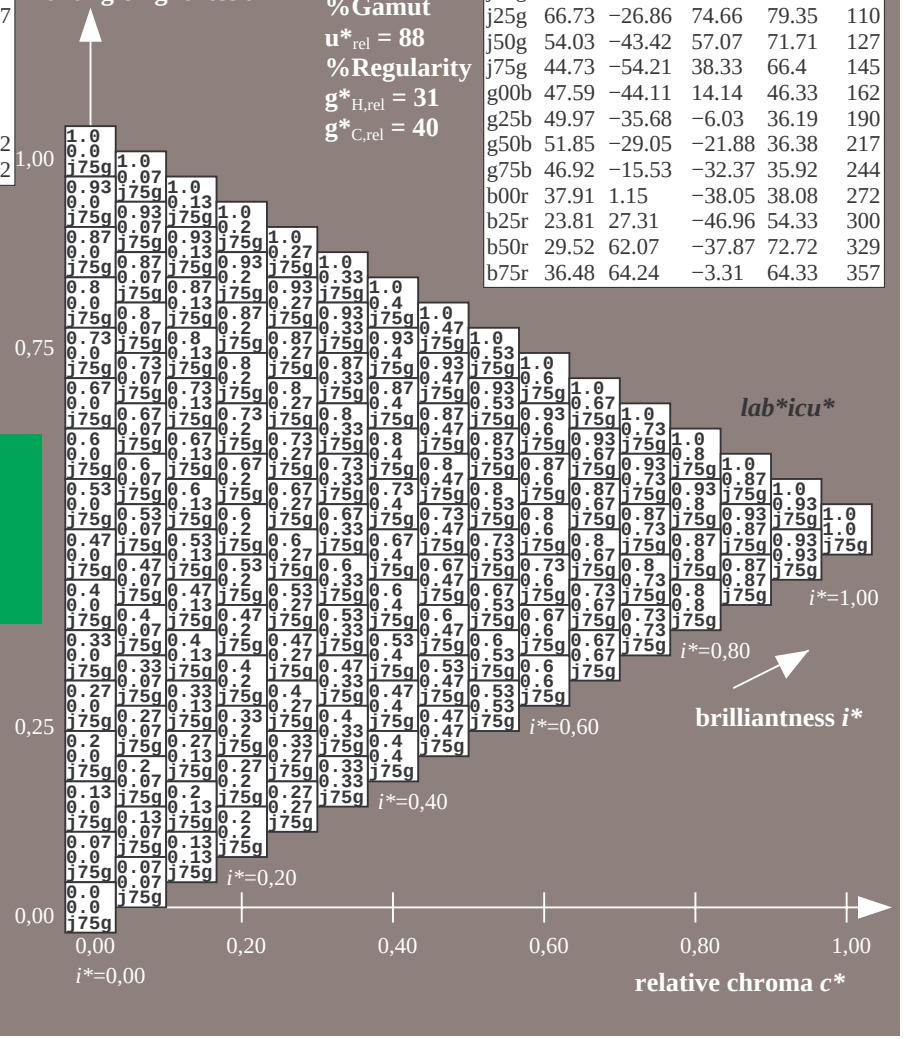
Data for maximum colour (Ma):
LAB*LAB*$_{Ma}$**: 45 −53 38**
LAB*LCH*$_{Ma}$**: 45 66 145**
lab*rgb*$_{Ma}$**: 0.25 1.0 0.0**
lab*olv*$_{Ma}$**: 0.0 1.0 0.07**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = j75g$
lab*icu*

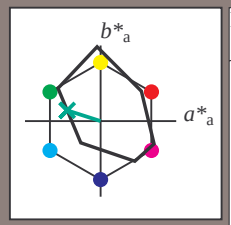
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

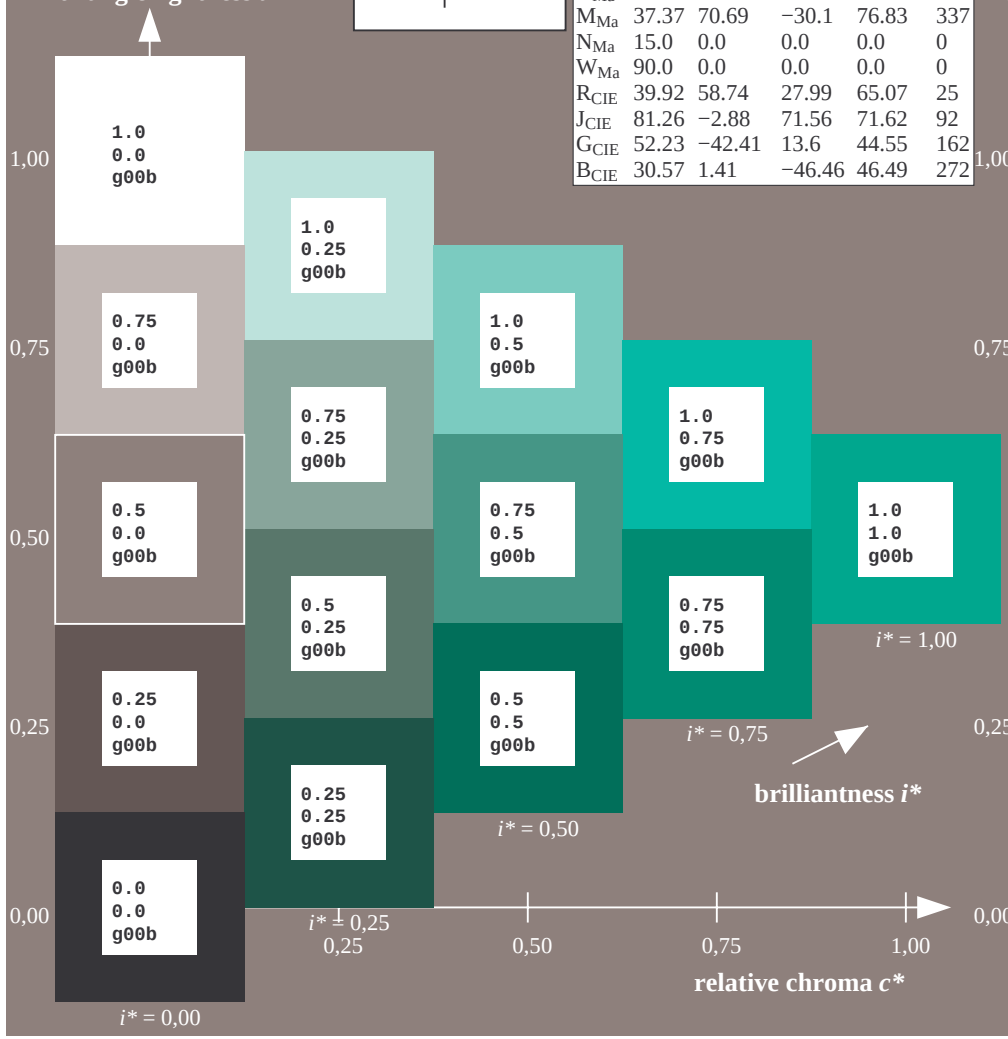
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

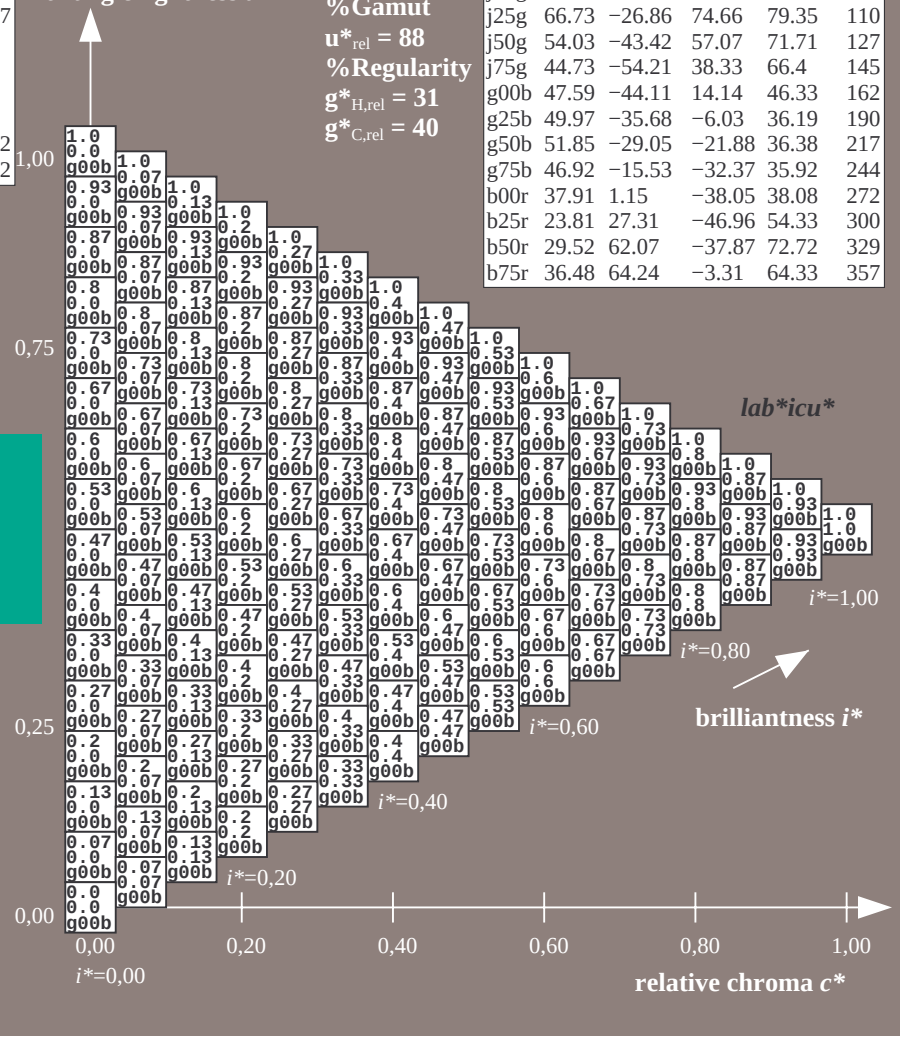
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 48 −43 14
*LAB*LCH**$_{Ma}$: 48 46 162
*lab*rgb**$_{Ma}$: 0.0 1.0 0.0
*lab*olv**$_{Ma}$: 0.0 1.0 0.41

u = g00b*
*lab*icu**

FRS15_90a; adapted (a) CIELAB data

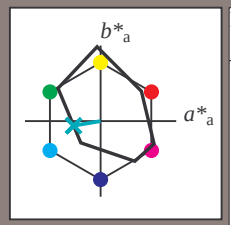
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g25b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

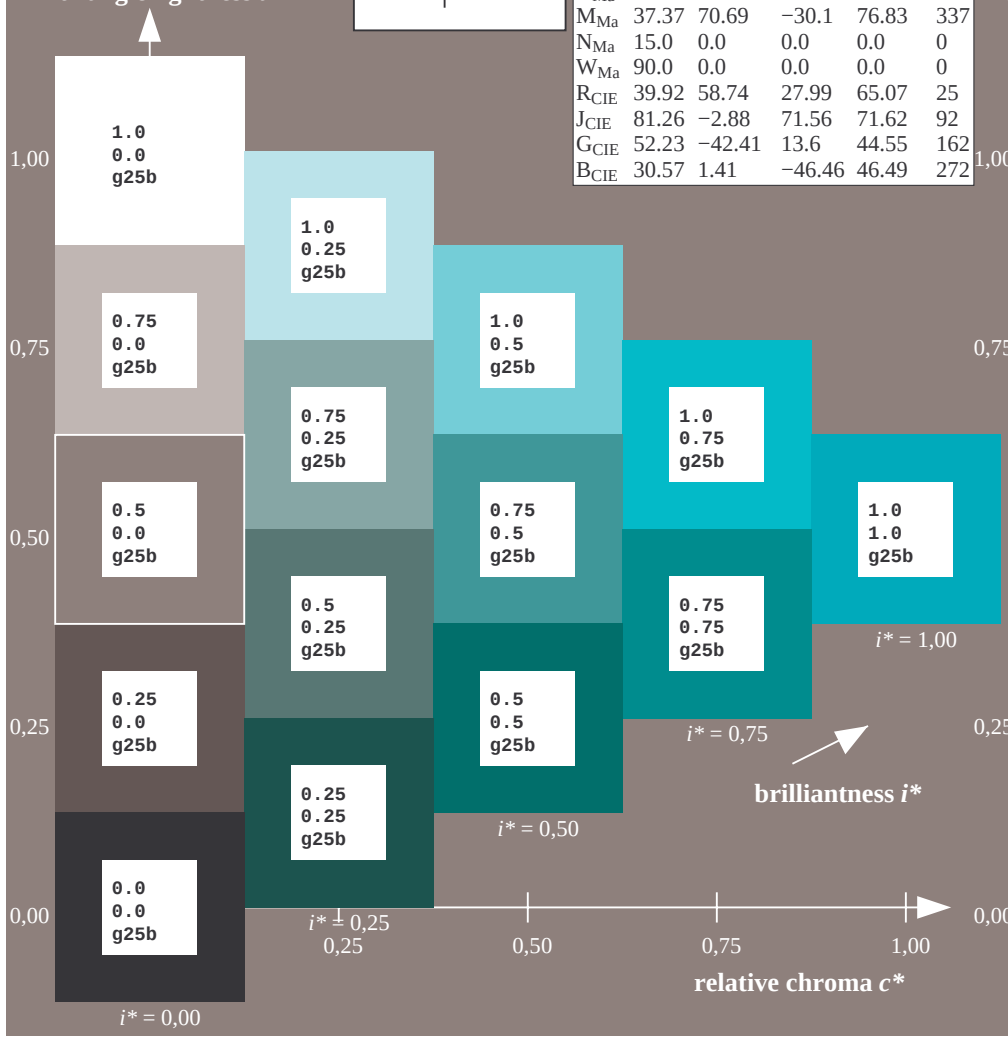
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 50 −35 −5**
***LAB*LCH*Ma*: 50 36 190**
***lab*rgb*Ma*: 0.0 1.0 0.5**
***lab*olv*Ma*: 0.0 1.0 0.69**
triangle lightness *t**

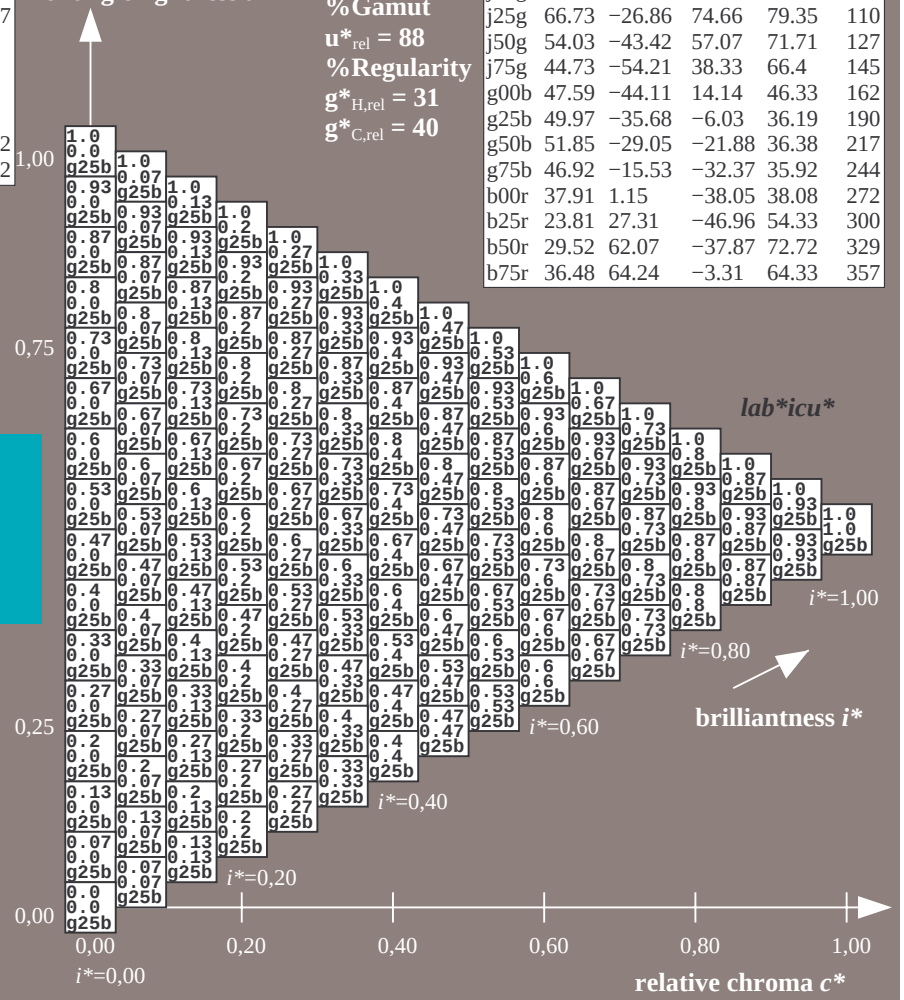
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = g25b
lab*icu*

FRS15_90a; adapted (a) CIELAB data

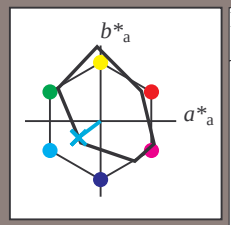
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





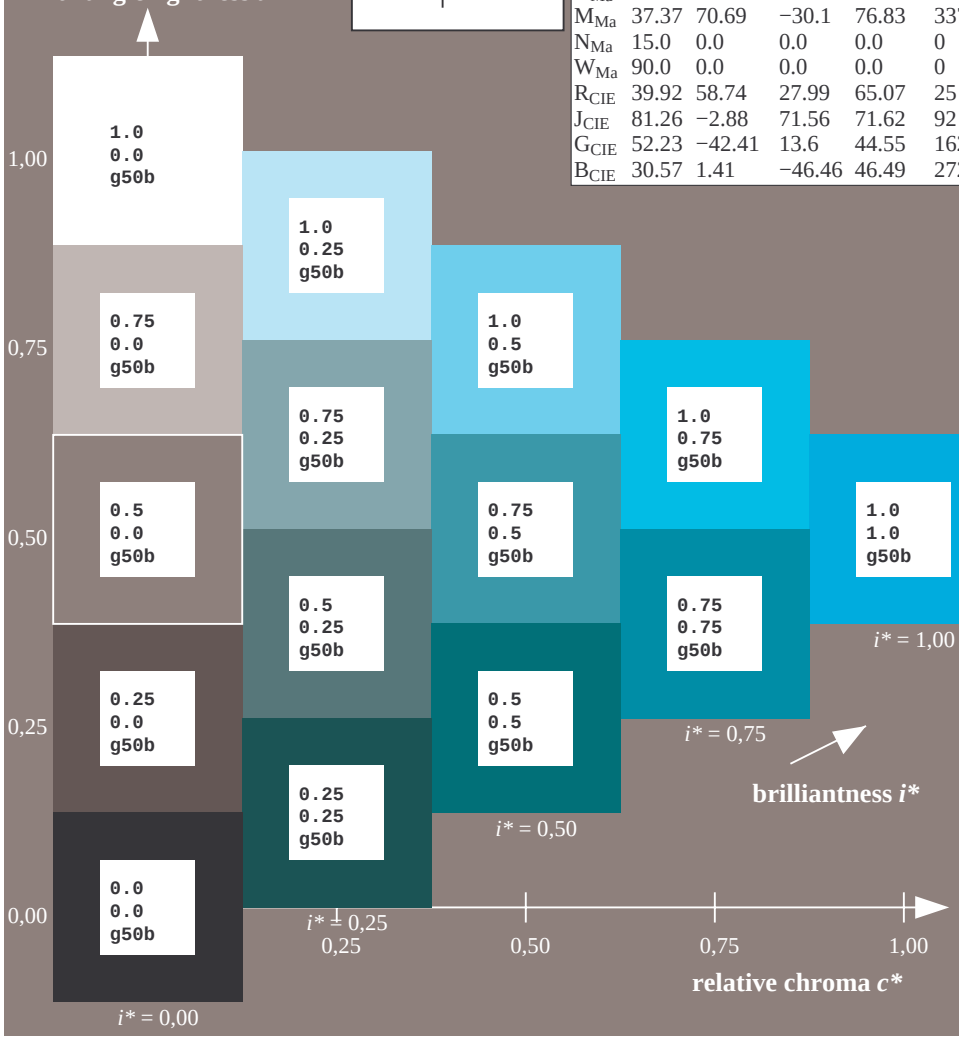
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g50b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



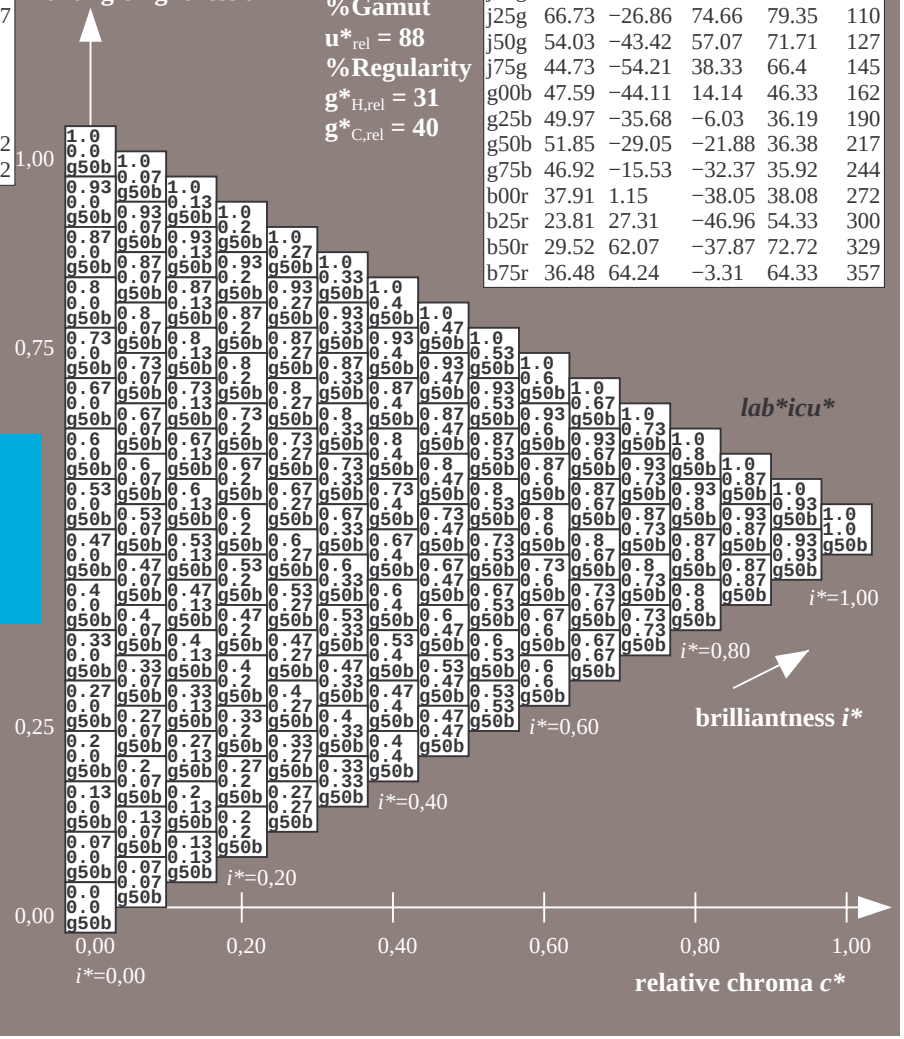
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 52 −28 −21**
***LAB*LCH**$_{Ma}$: 52 36 217**
***lab*rgb**$_{Ma}$: 0.0 1.0 1.0**
***lab*olv**$_{Ma}$: 0.0 1.0 0.9**
triangle lightness *t**

u* = g50b
lab*icu*

FRS15_90a; adapted (a) CIELAB data

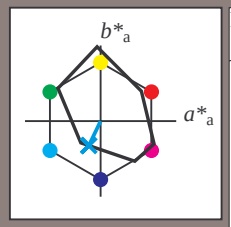
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g75b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

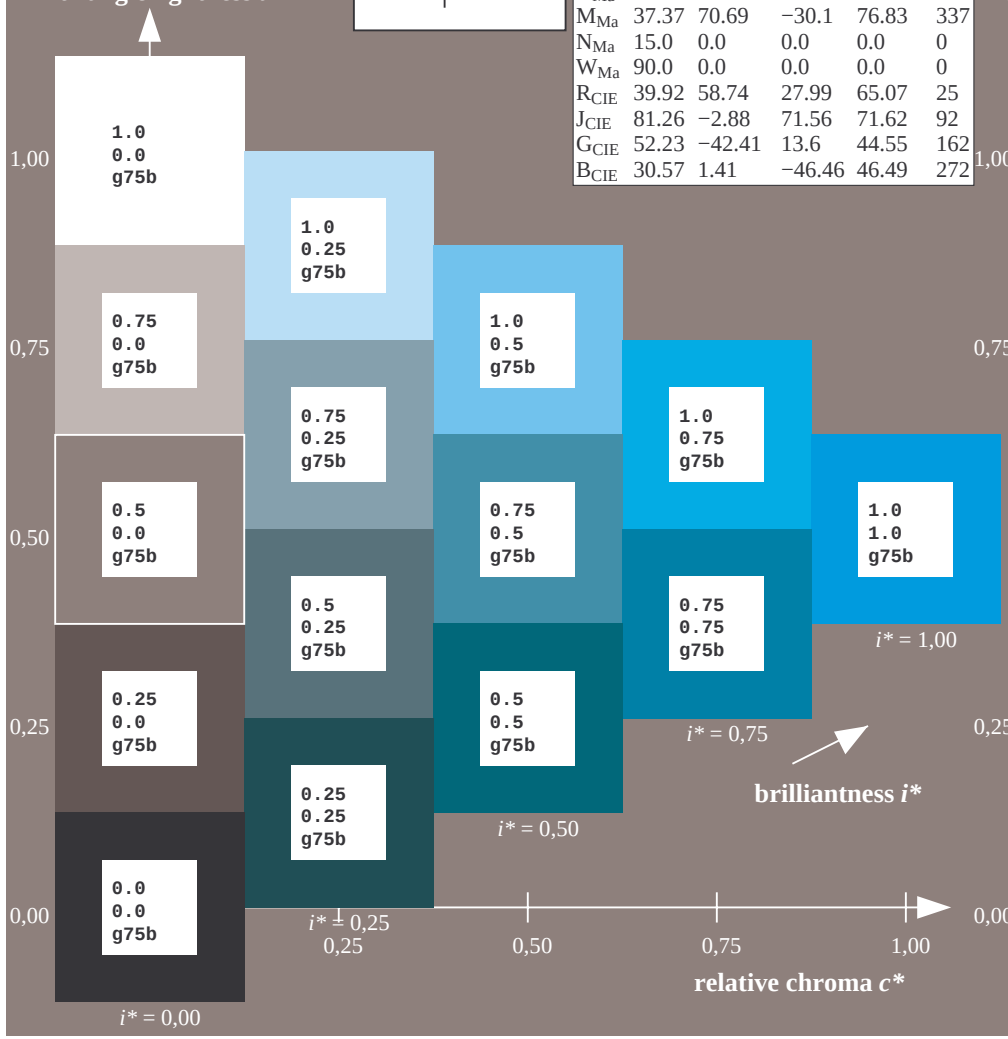
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	0.0	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

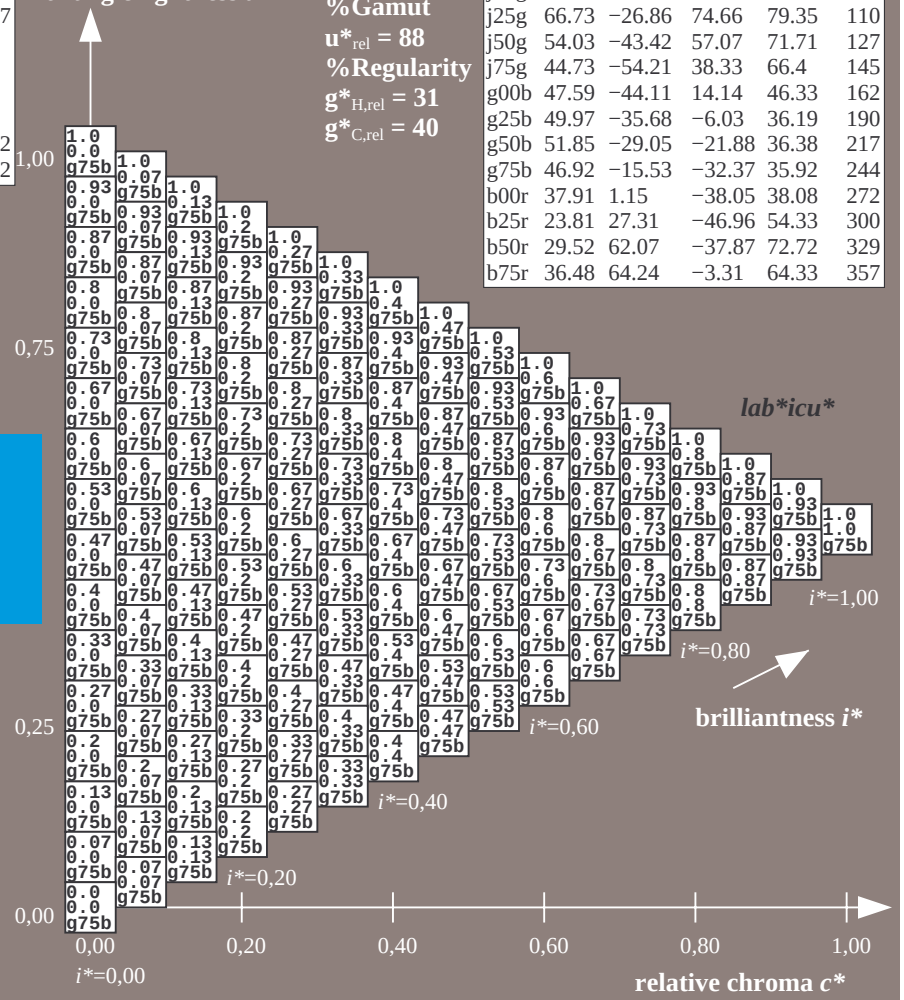
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 47 −15 −31**
***LAB*LCH*Ma*: 47 36 244**
***lab*rgb*Ma*: 0.0 0.5 1.0**
***lab*olv*Ma*: 0.0 0.85 1.0**
triangle lightness *t**

u* = g75b
lab*icu*

FRS15_90a; adapted (a) CIELAB data

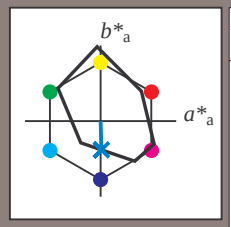
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





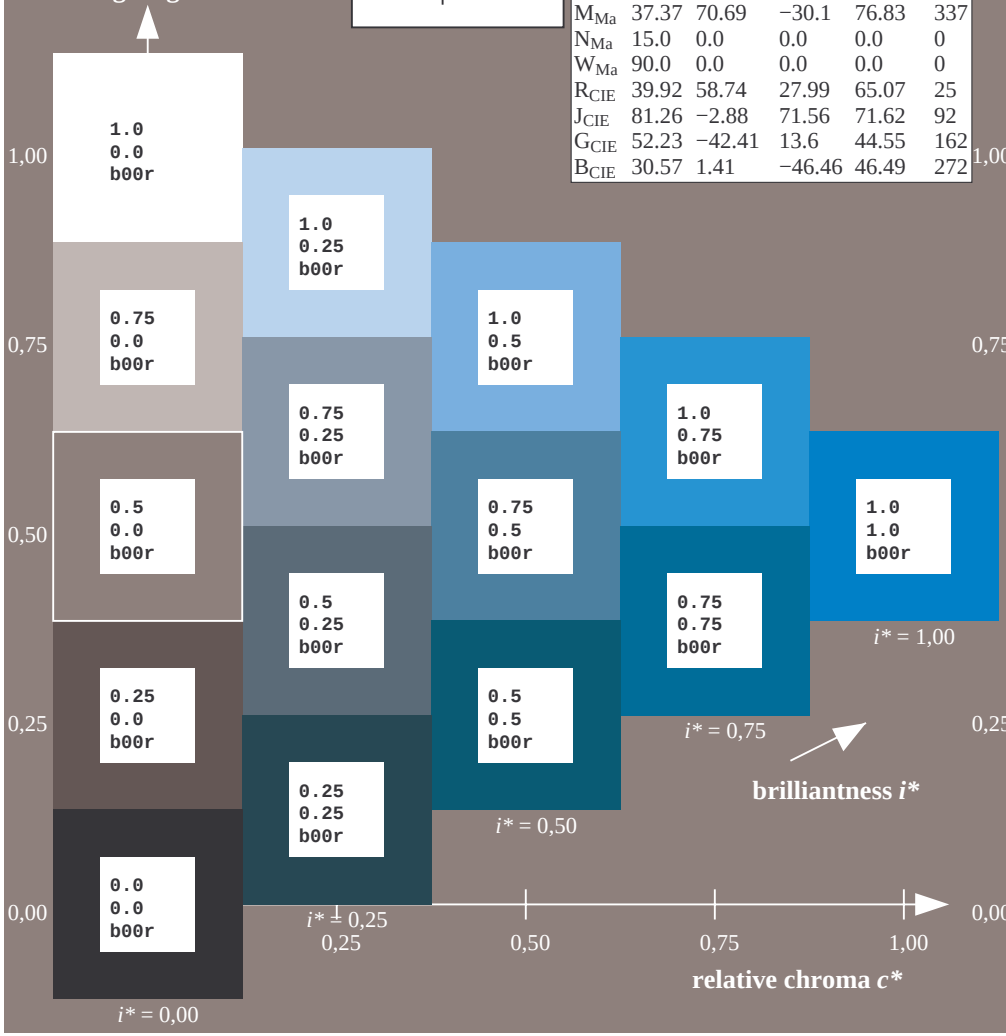
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b00r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



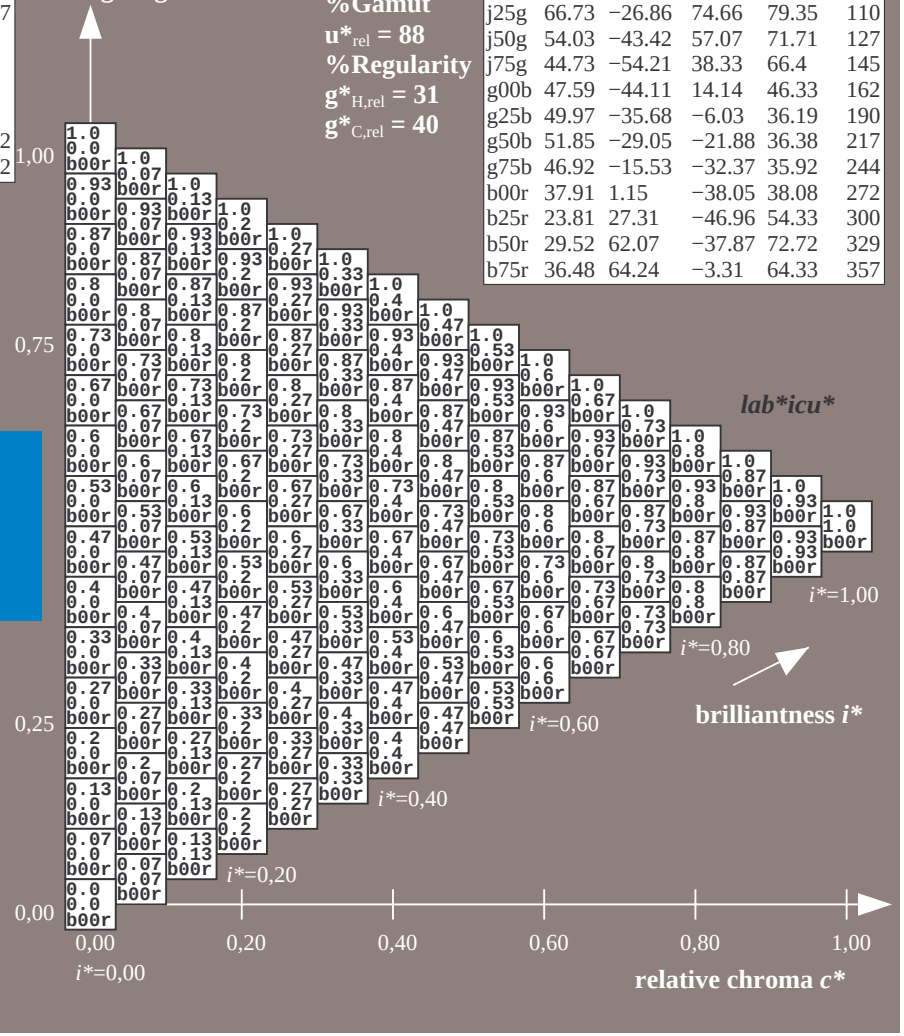
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 38 1 −37**
***LAB*LCH*Ma*: 38 38 272**
***lab*rgb*Ma*: 0.0 0.0 1.0**
***lab*olv*Ma*: 0.0 0.62 1.0**
triangle lightness *t**

u* = b00r
lab*icu*

FRS15_90a; adapted (a) CIELAB data

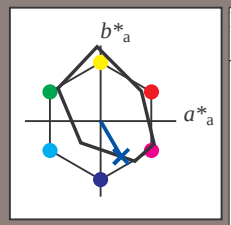
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

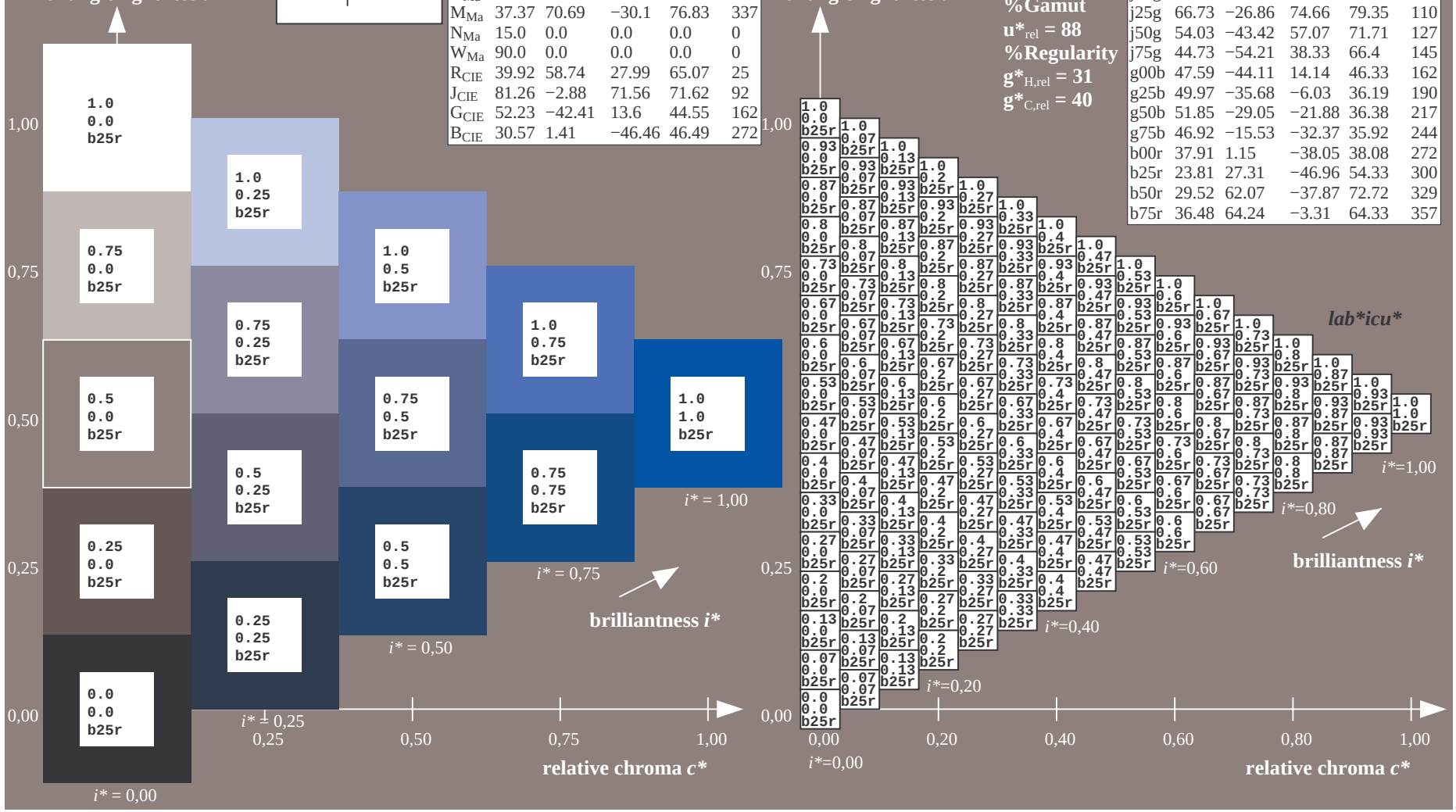
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 24 27 −46**
***LAB*LCH*Ma*: 24 54 300**
***lab*rgb*Ma*: 0.5 0.0 1.0**
***lab*olv*Ma*: 0.0 0.25 1.0**

$u^* = b25r$
*lab*icu**

FRS15_90a; adapted (a) CIELAB data

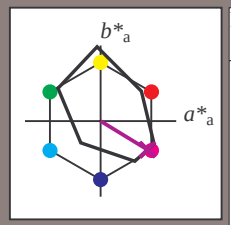
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b50r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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

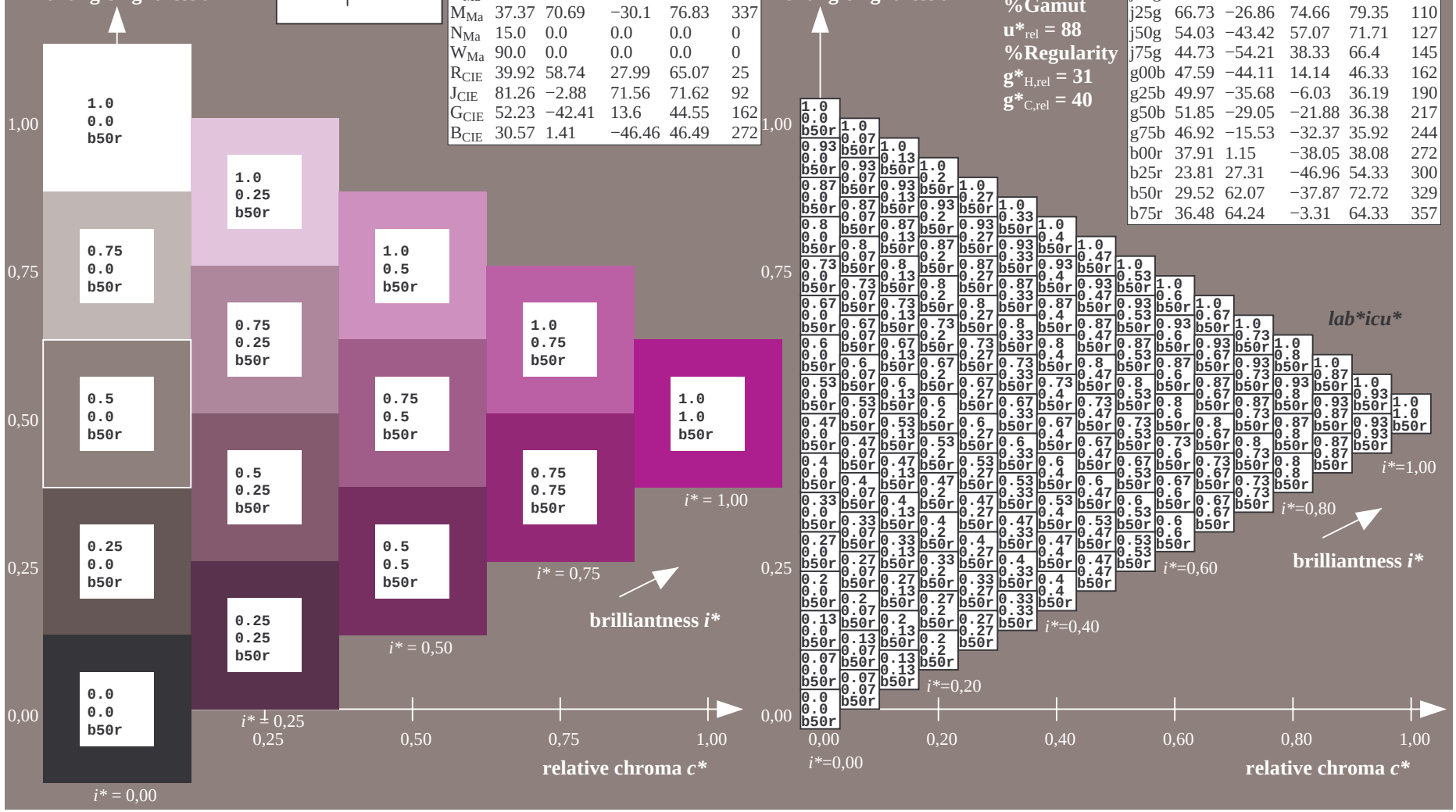
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 30 62 −37**
***LAB*LCH*$_{Ma}$*: 30 73 329**
***lab*rgb*$_{Ma}$*: 1.0 0.0 1.0**
***lab*olv*$_{Ma}$*: 0.66 0.0 1.0**
triangle lightness t^*

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

u* = b50r
lab*icu*

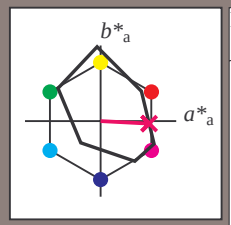
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



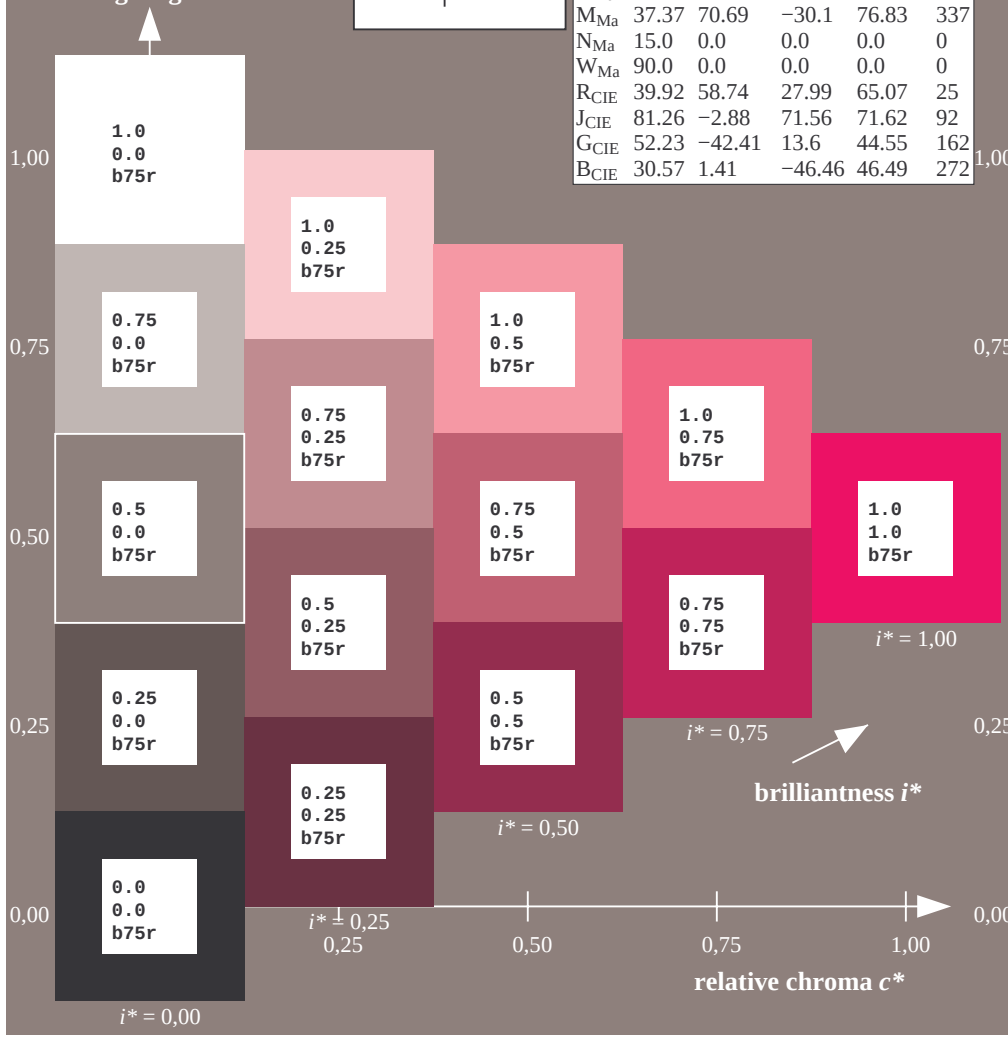
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b75r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	35.06	53.93	39.55	66.88	36
Y_{Ma}	83.77	−4.63	98.26	98.37	93
L_{Ma}	44.13	−56.32	43.36	71.09	142
C_{Ma}	52.66	−26.18	−28.74	38.89	228
V_{Ma}	14.15	45.22	−53.06	69.72	310
M_{Ma}	37.37	70.69	−30.1	76.83	337
N_{Ma}	15.0	0.0	0.0	0.0	0
W_{Ma}	90.0	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



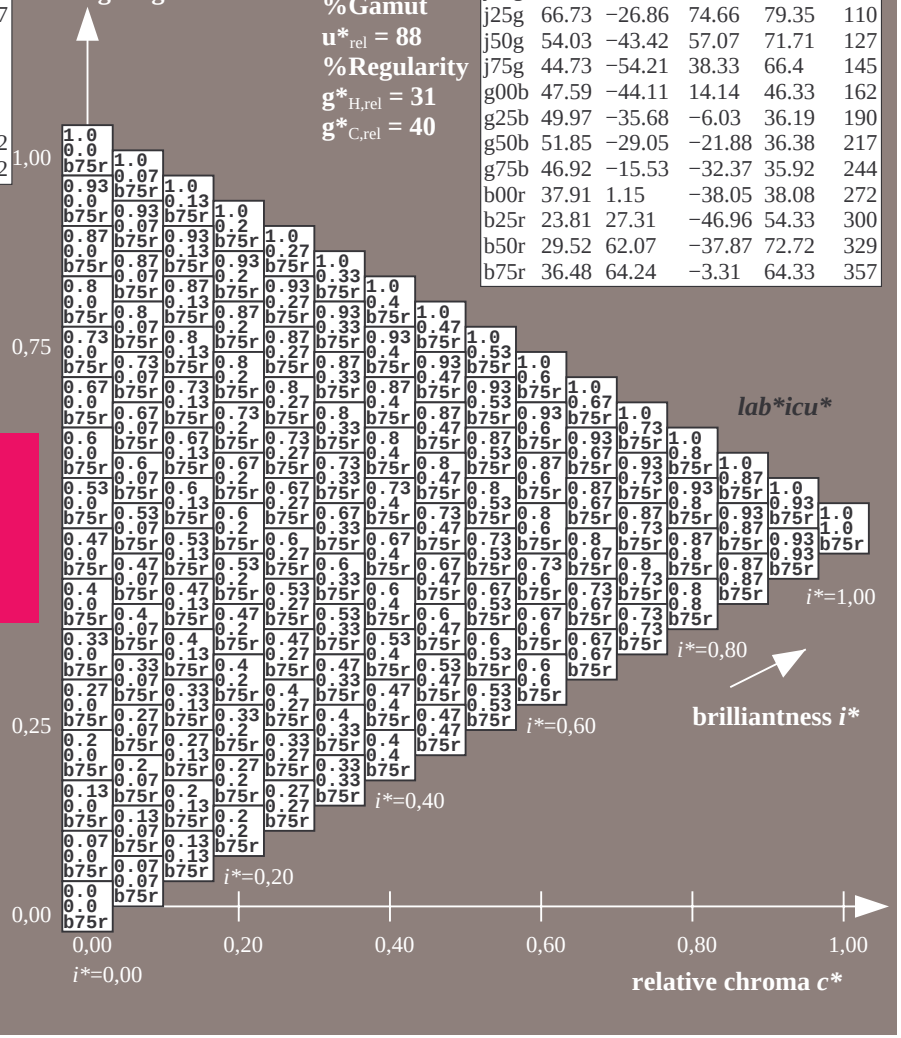
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 36 64 −2**
***LAB*LCH*Ma*: 36 64 357**
***lab*rgb*Ma*: 1.0 0.0 0.5**
***lab*olv*Ma*: 1.0 0.0 0.62**
triangle lightness *t**

u* = b75r
lab*icu*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

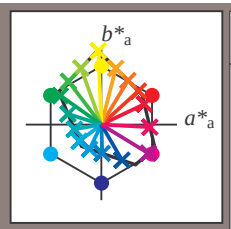


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	*lab*icu**			
01	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.12	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.25	0.25	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	b10r	j70g	j70g	j70g	j70g	j70g	j70g	j70g	j70g	r15j	j00g	j29g	j42g	j49g	j53g	j56g	j58g	j60g	r15j	r66j	j00g	j18g	j29g	j37g	j42g	j46g	j49g	b10r	r15j	r15j	r15j	r15j	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
02	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.13	0.13	0.13	0.13
	0.12	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.0	0.0	0.0	0.0
	b33r	g59b	g06b	j92g	j85g	j81g	j79g	j78g	j77g	b56r	b10r	j70g	j70g	j70g	j70g	j70g	j70g	j70g	b80r	r15j	j00g	j29g	j42g	j49g	j53g	j56g	j58g	g59b	b10r	r15j	r15j	r15j	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
03	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25
	0.25	0.25	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	b33r	b09r	g59b	g22b	g06b	j98g	j92g	j88g	j85g	b45r	b33r	g59b	g06b	j92g	j85g	j81g	j79g	j78g	b56r	b56r	b10r	j70g	j70g	j70g	j70g	j70g	j70g	g59b	g59b	g59b	b10r	r15j	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
04	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38
	0.37	0.37	0.37	0.37	0.5	0.62	0.75	0.87	1.0	0.37	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.87	0.37	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.0	0.0	0.0	0.0
	b33r	b20r	g94b	g59b	g32b	g15b	g06b	g01b	j95g	b41r	b33r	b09r	g59b	g22b	g06b	j98g	j92g	j88g	b49r	b45r	b33r	g59b	g06b	j92g	j85g	j81g	j79g	g59b	g59b	g59b	g59b	b10r	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
05	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.62	0.75	0.87	1.0	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.87	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.0	0.0	0.0	0.0
	b33r	b24r	b09r	g85b	g59b	g37b	g22b	g13b	g06b	b39r	b33r	b20r	g94b	g59b	g32b	g15b	g06b	g01b	b45r	b41r	b33r	b09r	g59b	g22b	g06b	j98g	j92g	g59b	g59b	g59b	g59b	b10r	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
06	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.63	0.63	0.63	0.63
	0.62	0.62	0.62	0.62	0.62	0.62	0.75	0.87	1.0	0.62	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.62	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.0	0.0	0.0	0.0
	b33r	b26r	b16r	b01r	g79b	g59b	g41b	g27b	g18b	b38r	b33r	b24r	b09r	g85b	g59b	g37b	g22b	g13b	b43r	b39r	b33r	b20r	g94b	g59b	g32b	g15b	g06b	g59b	g59b	g59b	g59b	b10r	r15j	r15j	r15j	r15j	b10r	b10r	b10r	b10r
07	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.75	0.75	0.75	0.75
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.0	0.0	0.0	0.0
	b33r	b28r	b20r	b09r	g94b	g76b	g59b	g44b	g32b	b37r	b33r	b26r	b16r	b01r	g79b	g59b	g41b	g27b	b41r	b38r	b33r	b24r	b09r	g85b	g59b	g37b	g22b	g59b	g59b	g59b	g59b	g59b	g59b	b10r	r15j	r15j	b10r	b10r	b10r	b10r
08	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.13	0.88	0.88	0.88	0.88
	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	0.87	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.12	0.0	0.0	0.0	0.0
	b33r	b29r	b23r	b14r	b04r	g89b	g73b	g59b	g46b	b37r	b33r	b28r	b20r	b09r	g94b	g76b	g59b	g44b	b40r	b37r	b33r	b26r	b16r	b01r	g79b	g59b	g41b	g59b	g59b	g59b	g59b	g59b	g59b	g59b	b10r	r15j	b10r	b10r	b10r	b10r
09	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.87	0.75	0.62	0.5	0.37	0.25	0.12	0.0	0.0	0.0	0.0	0.0
	b33r	b29r	b24r	b18r	b09r	g98b	g85b	g71b	g59b	b36r	b33r	b29r	b23r	b14r	b04r	g89b	g73b	g59b	b39r	b37r	b33r	b28r	b20r	b09r	g94b	g76b	g59b	g59b	g59b	g59b	g59b	g59b	g59b	g59b	g59b	g59b	b10r	b10r	b10r	b10r
10	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.37	0.37	0.37	0.37	0.5	0.62	0.75	0.87	1.0	0.5	0.5	0.5	0.5	0.5	0.62	0.75	0.87	1.0	0.62	0.62	0.62	0.62	0.62	0.62	0.75	0.87	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	r15j	r50j	r79j	j00g	j13g	j22g	j29g	j35g	j39g	r15j	r42j	r66j	r85j	j00g	j10g	j18g	j24g	j29g	r15j	r37j	r57j	r74j	r88j	j00g	j08g	j15g	j21g	b10r	j00g	j00g	j00g	j00g	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
11	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.07	0.07	0.07	0.07
	0.37	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.87	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.87	0.62	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.0	0.0	0.0	0.0
	b90r	r15j	r66j	j00g	j18g	j29g	j37g	j42g	j46g	b94r	r15j	r50j	r79j	j00g	j13g	j22g	j29g	j35g	b97r	r15j	r42j	r66j	r85j	j00g	j10g	j18g	j24g	b33r	b10r	j00g	j00g	j00g	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
12	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
	0.37	0.25	0.13	0.13	0.25	0.38	0.5	0.63	0.75	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.63	0.75	0.62	0.5	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	b71r	b80r	r15j	j00g	j29g	j42g	j49g	j53g	j56g	b80r	b90r	r15j	r66j	j00g	j18g	j29g	j37g	j42g	b86r	b94r	r15j	r50j	r79j	j00g	j13g	j22g	j29g	b33r	b33r	b10r	j00g	j00g	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
13	0.38	0.38	0.38	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.2	0.2	0.2	0.2
	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.62	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.62	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.0	0.0	0.0	0.0
	b56r	b56r	b56r	b10r	j70g	j70g	j70g	j70g	j70g	b67r	b71r	b80r	r15j	j00g	j29g	j42g	j49g	j53g	b75r	b80r	b90r	r15j	r66j	j00g	j18g	j29g	j37g	b33r	b33r	b33r	b10r	j00g	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
14	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.27	0.27	0.27	0.27
	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.0	0.0	0.0	0.0
	b51r	b49r	b45r	b33r	g59b	g06b	j92g	j85g	j81g	b56r	b56r	b56r	b56r	b10r	j70g	j70g	j70g	j70g	b65r	b67r	b71r	b80r	r15j	j00g	j29g	j42g	j49g	b33r	b33r	b33r	b33r	b10r	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
15	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.33	0.33	0.33	0.33
	0.62	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.62	0.62	0.5	0.38	0.25	0.13	0.13	0.25	0.38	0.5	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.0	0.0	0.0	0.0
	b48r	b45r	b41r	b33r	b09r	g59b	g22b	g06b	j98g	b52r	b51r	b49r	b45r	b33r	g59b	g06b	j92g	j85g	b56r	b56r	b56r	b56r	b56r	b10r	j70g	j70g	j70g	b33r	b33r	b33r	b33r	b10r	j00g	j00g	j00g	j00g	b10r	b10r	b10r	b10r
16	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.4	0.4	0.4	0.4
	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.62	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.75	0.63	0.5	0.38	0.25	0.13	0.13	0.25	0.37	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.0	0.0	0.0	0.0
	b45r	b43r	b39r	b33r	b20r	g94b	g59b	g32b	g15b	b49r	b48r	b45r	b41r	b33r	b09r	g59b	g22b	g07b	b53r	b52r	b51r	b49r	b45r	b33r	g59b	g06b	j92g	b33r	b33r	b33r	b33r	b33r	b33r	b10r	j00g	j00g	b10r	b10r	b10r	b10r
17	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.13	0.47	0.47	0.47	0.47
	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.62	0.87	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.87	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.37	0.87	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.12	0.0	0.0	0.0	0.0
	b44r	b41r	b38r	b33r	b24r	b09r	g85b	g59b	g37b	b47r	b45r	b43r	b39r	b33r	b20r	g94b	g59b	g32b	b50r	b49r	b48r	b45r	b41r	b33r	b09r	g59b	g22b	b33r	b33r	b33r	b33r	b33r	b33r	b33r	b10r	j00g	b10r	b10r	b10r	b10r
18	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.53	0.53	0.53	0.53
	1.0	0.87	0.75	0.62	0.62	0.62	0.62	0.62	0.62	1.0	0.87	0.75	0.62	0.5	0.5	0.5	0.5	0.5	1.0	0.87	0.75	0.62	0.5	0.37	0.37	0.37	0.37	1.0	0.87	0.75	0.62	0.5	0.37	0.25	0.12	0.0	0.0	0.0	0.0	0.0
	b42r	b40r	b37r	b33r	b26r	b16r	b01r	g79b	g59b	b45r	b44r	b41r	b38r	b33r	b24r	b09r	g85b	g59b	b48r	b47r	b45r	b43r	b39r	b33r	b20r	g94b	g59b	b33r	b33r	b33r	b33r	b33r	b33r	b33r	b33r	b10r	b10r	b10r	b10r	b10r
19	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.6
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.12	0.25	0.37	0.5	0.62	0.75	0.87	1.0	0.0	0.0	0.0	0.0
	r15j	r33j	r50j	r66j	r79j	r90j	j00g	j07g	j13g	r15j	r31j	r46j	r60j	r72j	r83j	r92j	j00g	j06g	r15j	r29j	r42j	r54j	r66j	r76j	r85j	r93j	j00g	b10r	j70g	j70g	j70g	j70g	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
20	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.67	0.67	0.67	0.67
	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.87	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.87	1.0	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.12	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.87	0.0	0.0	0.0	0.0
	r01j	r15j	r37j	r57j	r74j	r88j	j00g	j08g	j15g	r03j	r15j	r33j	r50j	r66j	r79j	r90j	j00g	j07g	r04j	r15j	r31j	r46j	r60j	r72j	r83j	r92j	j00g	b56r	b10r	j70g	j70g	j70g	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
21	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.73	0.73	0.73	0.73
	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.63	0.75	0.87	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.75	1.0	0.87	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.0	0.0	0.0	0.0
	b90r	b97r	r15j	r42j	r66j	r85j	j00g	j10g	j18g	b92r	r01j	r15j	r37j	r57j	r74j	r88j	j00g	j08g	b94r	r03j	r15j	r33j	r50j	r66j	r79j	r90j	j00g	b56r	b56r	b10r	j70g	j70g	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
22	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.8	0.8	0.8	0.8
	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	0.62	0.87	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.62	1.0	0.87	0.75	0.62	0.62	0.62	0.62	0.62	0.62	0.37	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.62	0.0	0.0	0.0	0.0
	b80r	b86r	b94r	r15j	r50j	r79j	j00g	j13g	j22g	b84r	b90r	b97r	r15j	r42j	r66j	r85j	j00g	j10g	b87r	b92r	r01j	r15j	r37j	r57j	r74j	r88j	j00g	b56r	b56r	b56r	b10r	j70g	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
23	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.5	0.5	0.5	0.5	0.87	0.87	0.87	0.87
	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.38	0.5	0.87	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.5	1.0	0.87	0.75	0.62	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.38	0.5	0.0	0.0	0.0	0.0
	b71r	b75r	b80r	b90r	r15j	r66j	j00g	j18g	j29g	b76r	b80r	b86r	b94r	r15j	r50j	r79j	j00g	j13g	b80r	b84r	b90r	b97r	r15j	r42j	r66j	r85j	j00g	b56r	b56r	b56r	b56r	b10r	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
24	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.38	0.38	0.38	0.93	0.93	0.93	0.93
	0.75	0.63	0.5	0.38	0.25	0.13	0.13	0.25	0.37	0.87	0.75	0.63	0.5	0.38	0.25	0.25	0.25	0.37	1.0	0.87	0.75	0.62	0.5	0.37	0.37	0.37	0.37	0.62	0.5	0.38	0.25	0.13	0.0	0.13	0.25	0.37	0.0	0.0	0.0	0.0
	b63r	b65r	b67r	b71r	b80r	r15j	j00g	j29g	j42g	b69r	b71r	b75r	b80r	b90r	r15j	r66j	j00g	j18g	b73r	b76r	b80r	b86r	b94r	r15j	r50j	r79j	j00g	b56r	b56r	b56r	b56r	b10r	j70g	j70g	j70g	j70g	b10r	b10r	b10r	b10r
25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

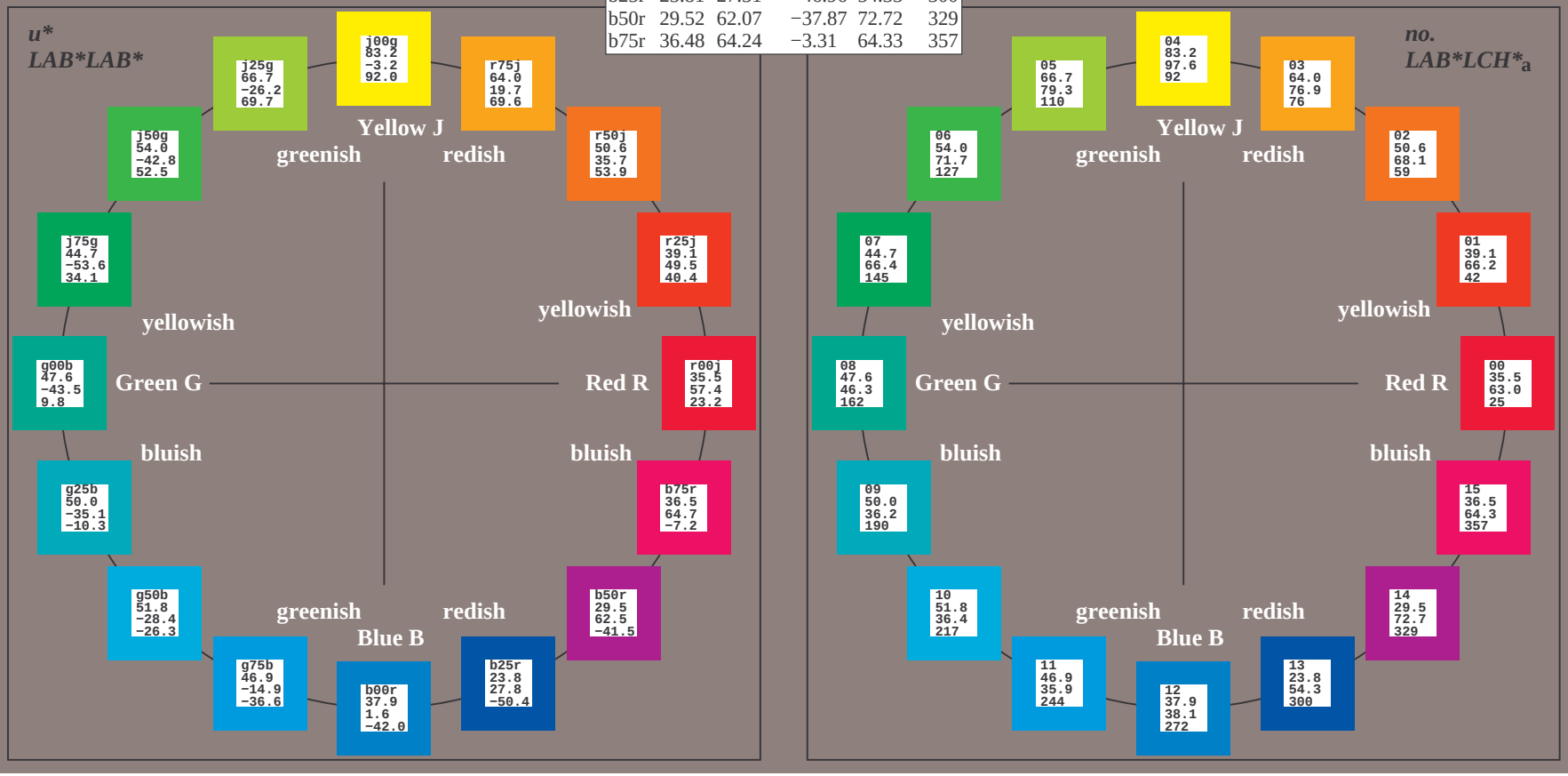
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

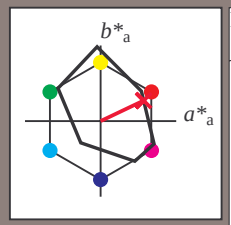
FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r00j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

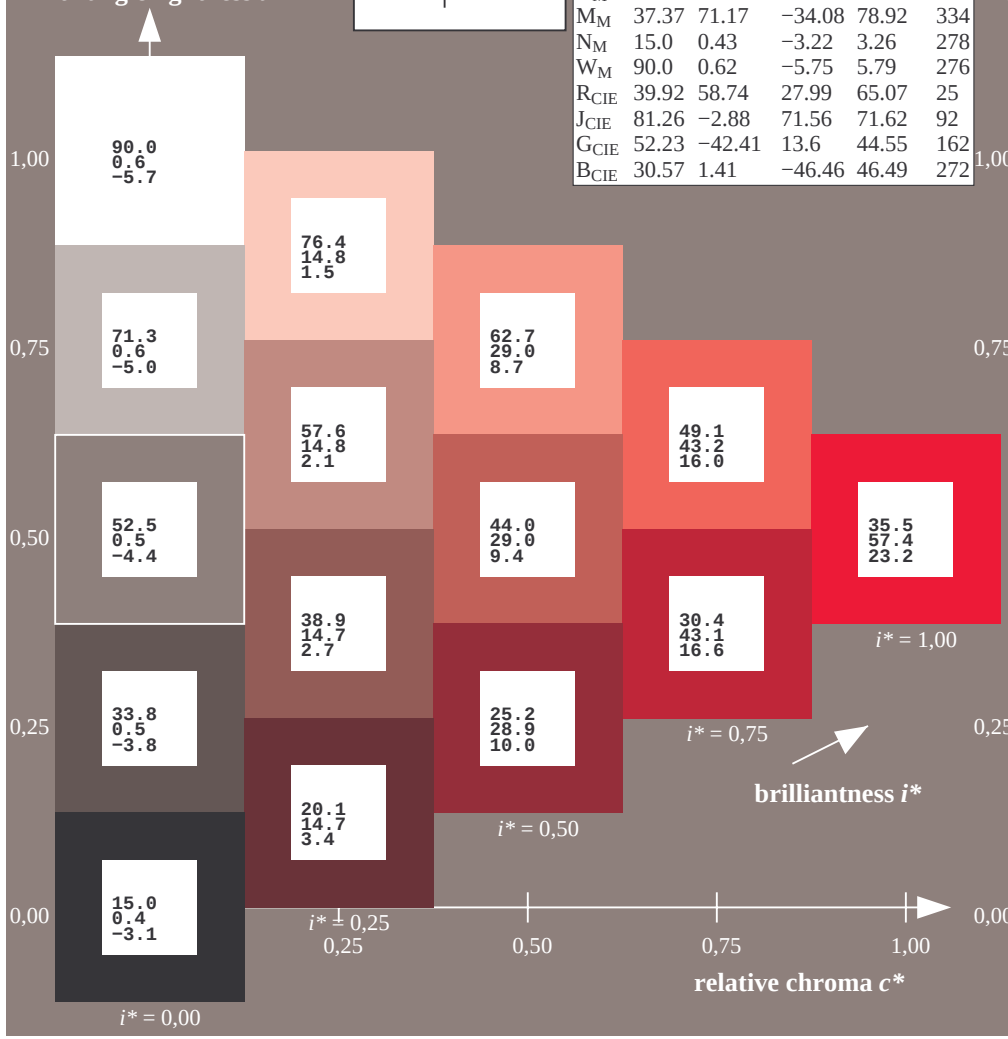
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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*$_{Ma}$*: 35 57 27**
***LAB*LCH*$_{Ma}$*: 35 63 25**
***lab*rgb*$_{Ma}$*: 1.0 0.0 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.0 0.18**

u* = r00j
LAB*LAB*

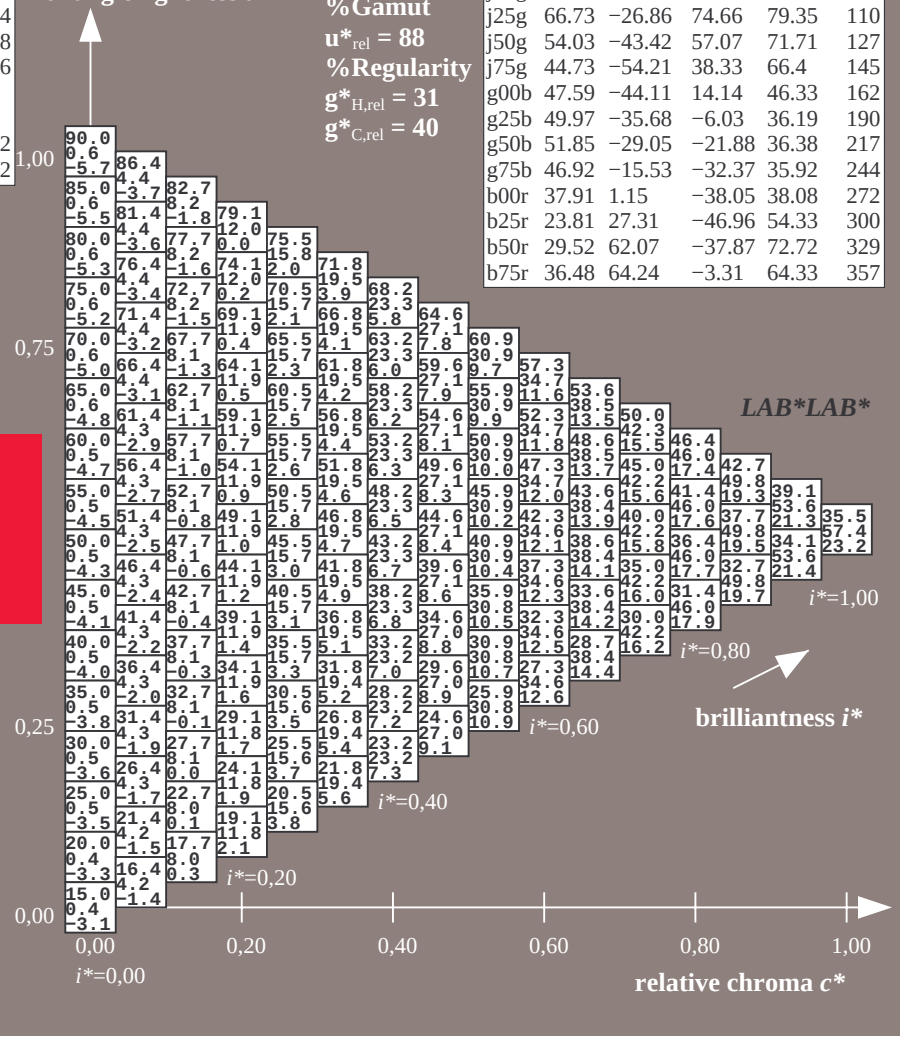
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



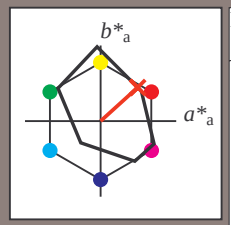
triangle lightness *t**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r25j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

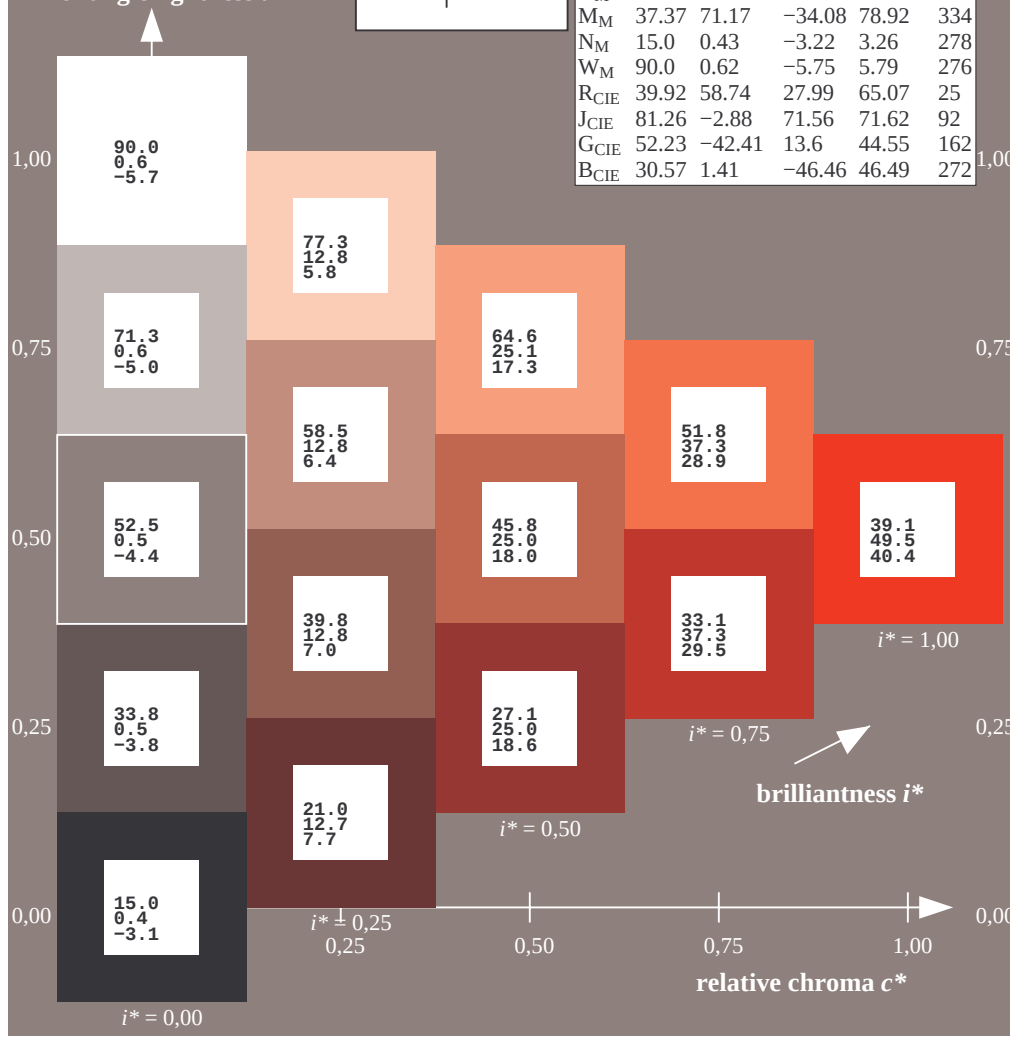
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

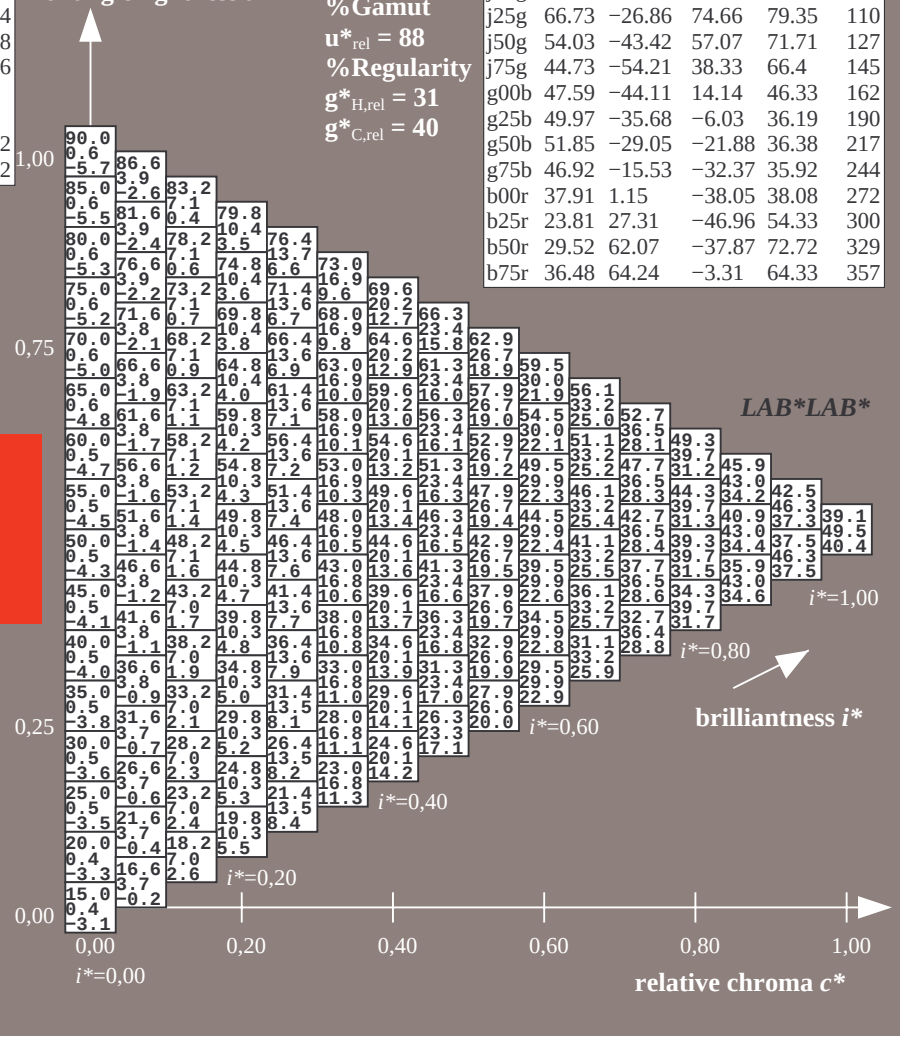
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 39 49 44**
***LAB*LCH**$_{Ma}$: 39 66 42**
***lab*rgb**$_{Ma}$: 1.0 0.25 0.0**
***lab*olv**$_{Ma}$: 1.0 0.08 0.0**

u* = r25j
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

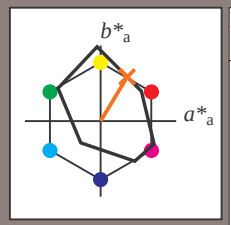




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

$u^* = r50j$
LAB^*LAB^*

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = r50j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90; CIELAB data

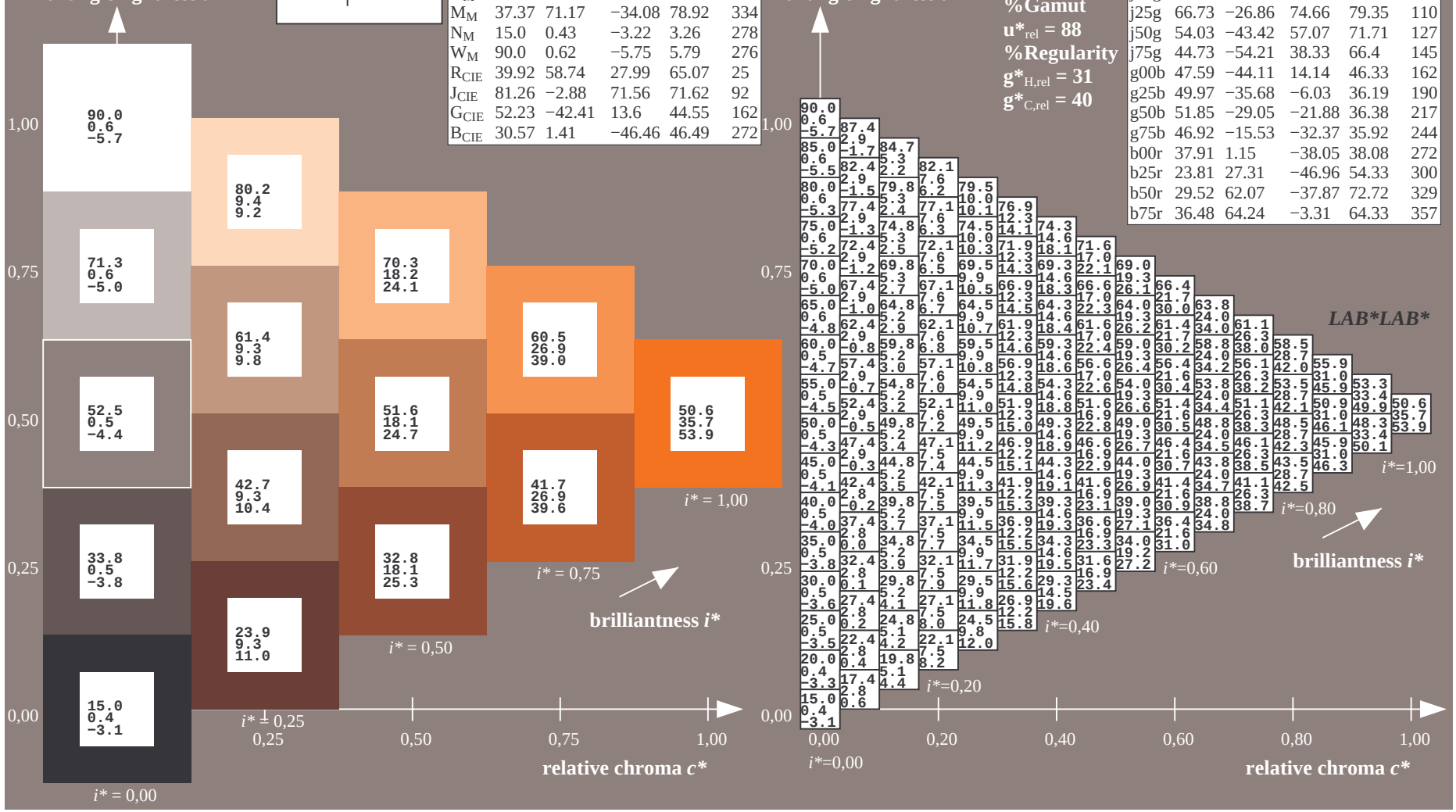
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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 35 58**
***$LAB^*LCH^*_{Ma}$*: 51 68 59**
***$lab^*rgb^*_{Ma}$*: 1.0 0.5 0.0**
***$lab^*olv^*_{Ma}$*: 1.0 0.32 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

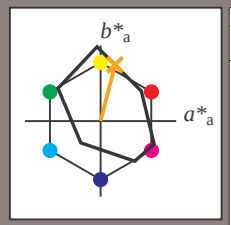
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r75j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



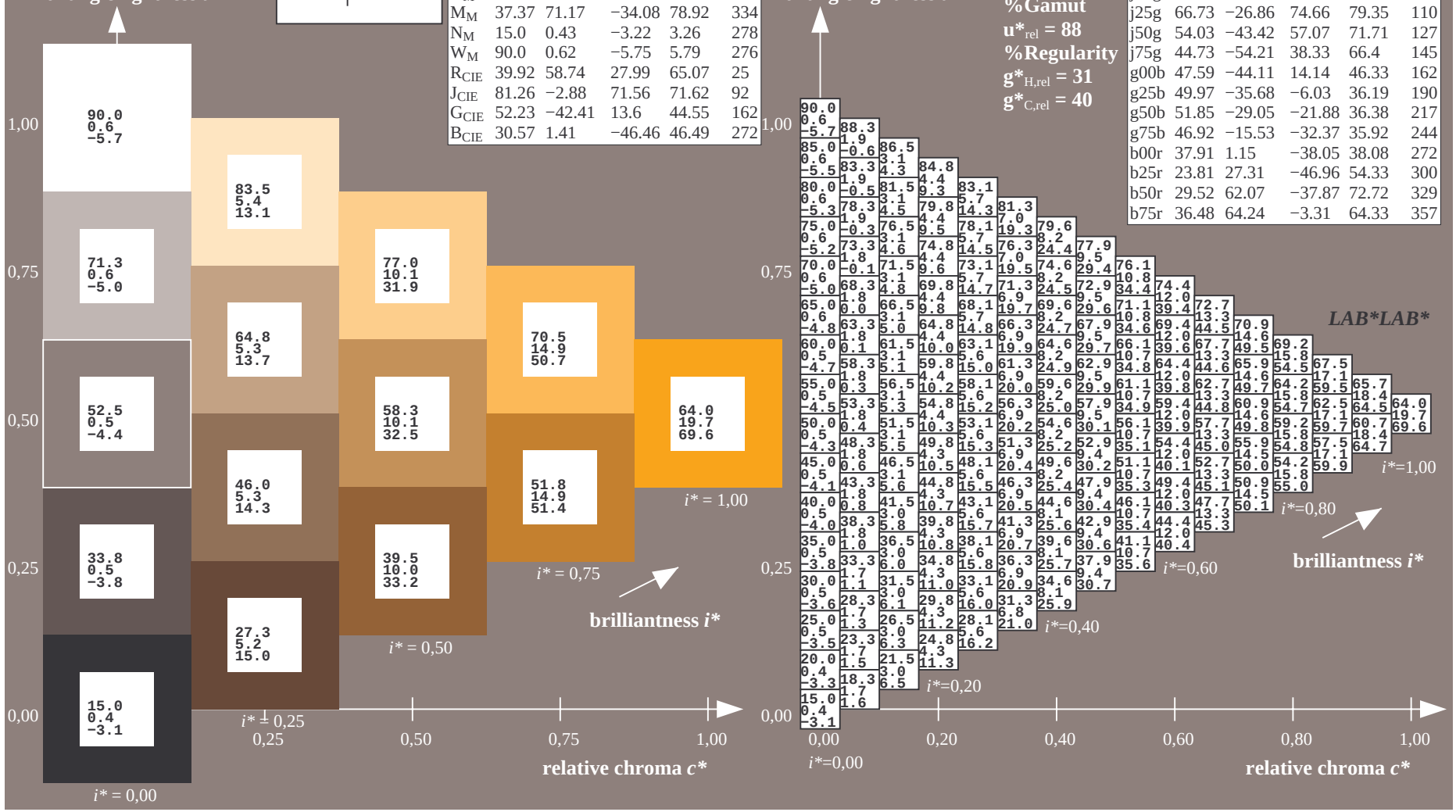
FRS15_90; CIELAB data	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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 19 74**
***LAB*LCH*$_{Ma}$*: 64 77 76**
***lab*rgb*$_{Ma}$*: 1.0 0.75 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.59 0.0**

u* = r75j
LAB*LAB*

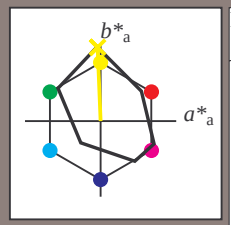
FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j00g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

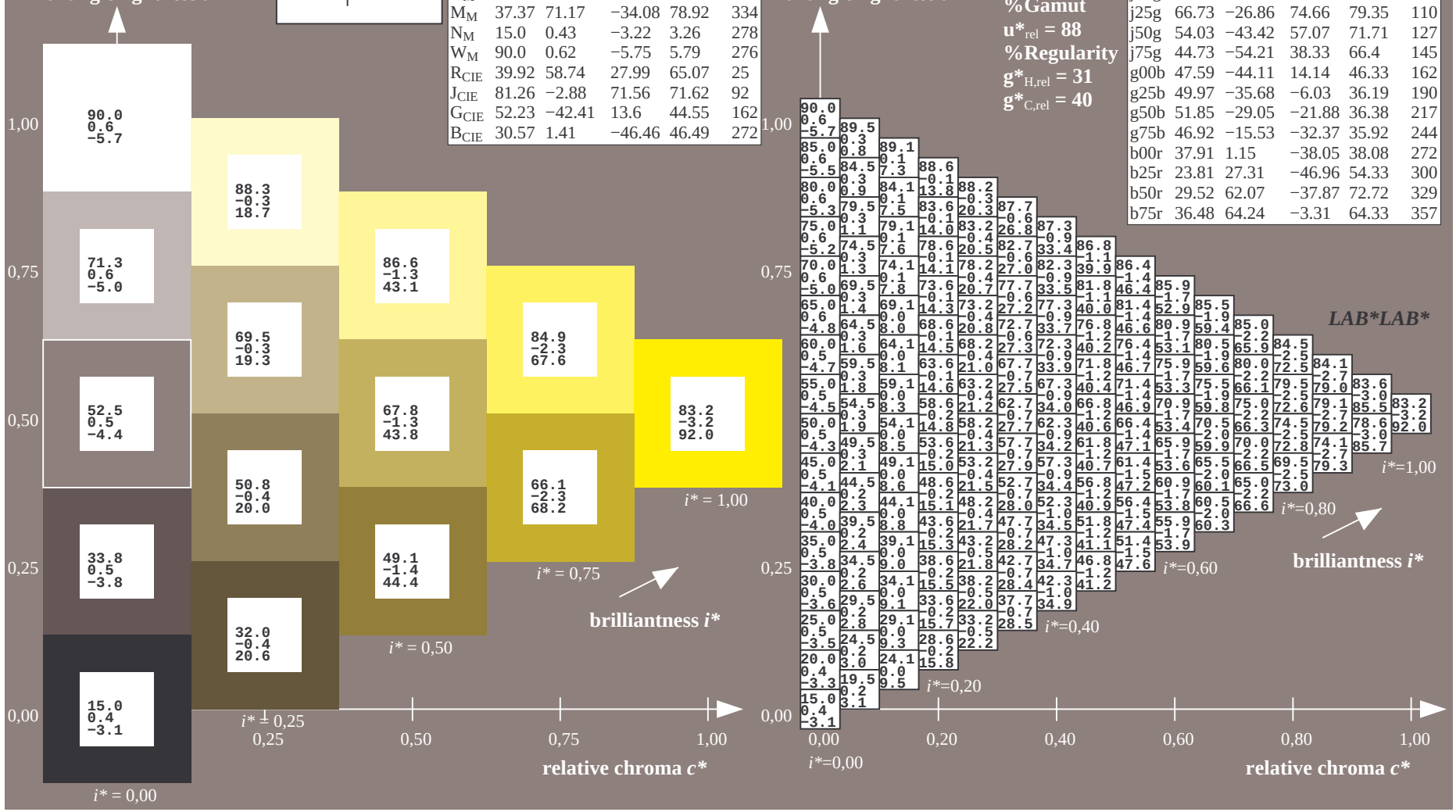
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 83 −3 98**
***LAB*LCH*Ma*: 83 98 92**
***lab*rgb*Ma*: 1.0 1.0 0.0**
***lab*olv*Ma*: 1.0 0.99 0.0**
triangle lightness *t**

u* = j00g
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

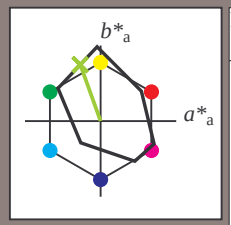
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



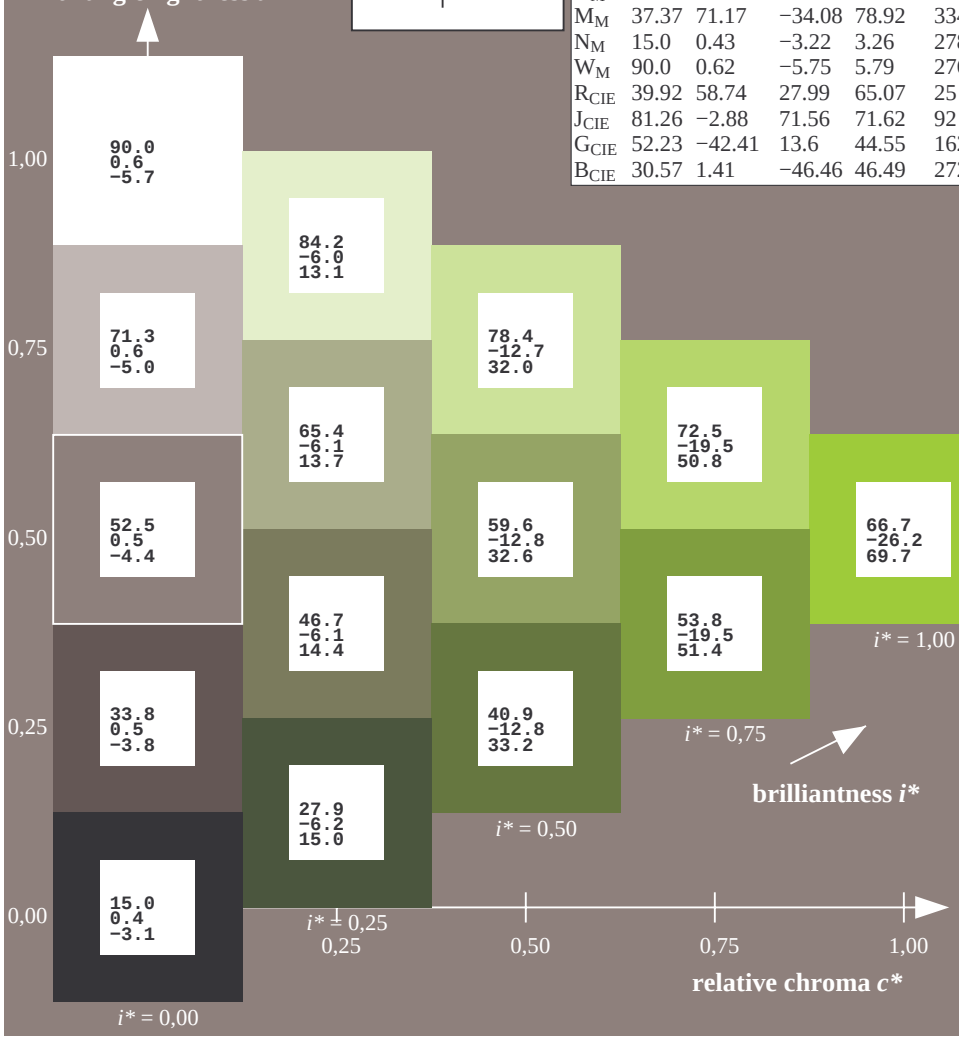
Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
u* = j25g
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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):

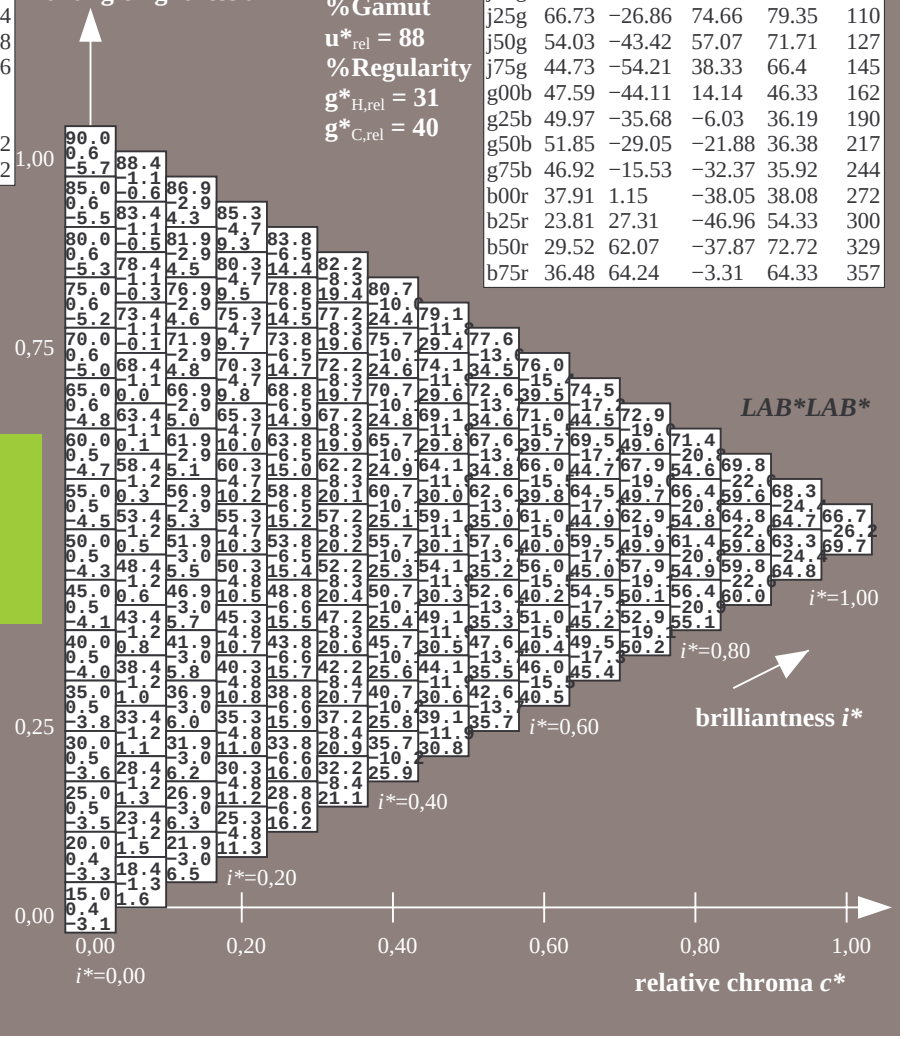
***LAB*LAB*Ma*: 67 −26 75**
***LAB*LCH*Ma*: 67 79 110**
***lab*rgb*Ma*: 0.75 1.0 0.0**
***lab*olv*Ma*: 0.57 1.0 0.0**

u* = j25g
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

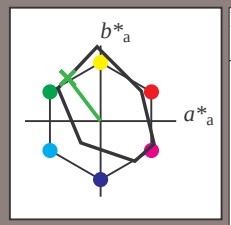
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j50g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

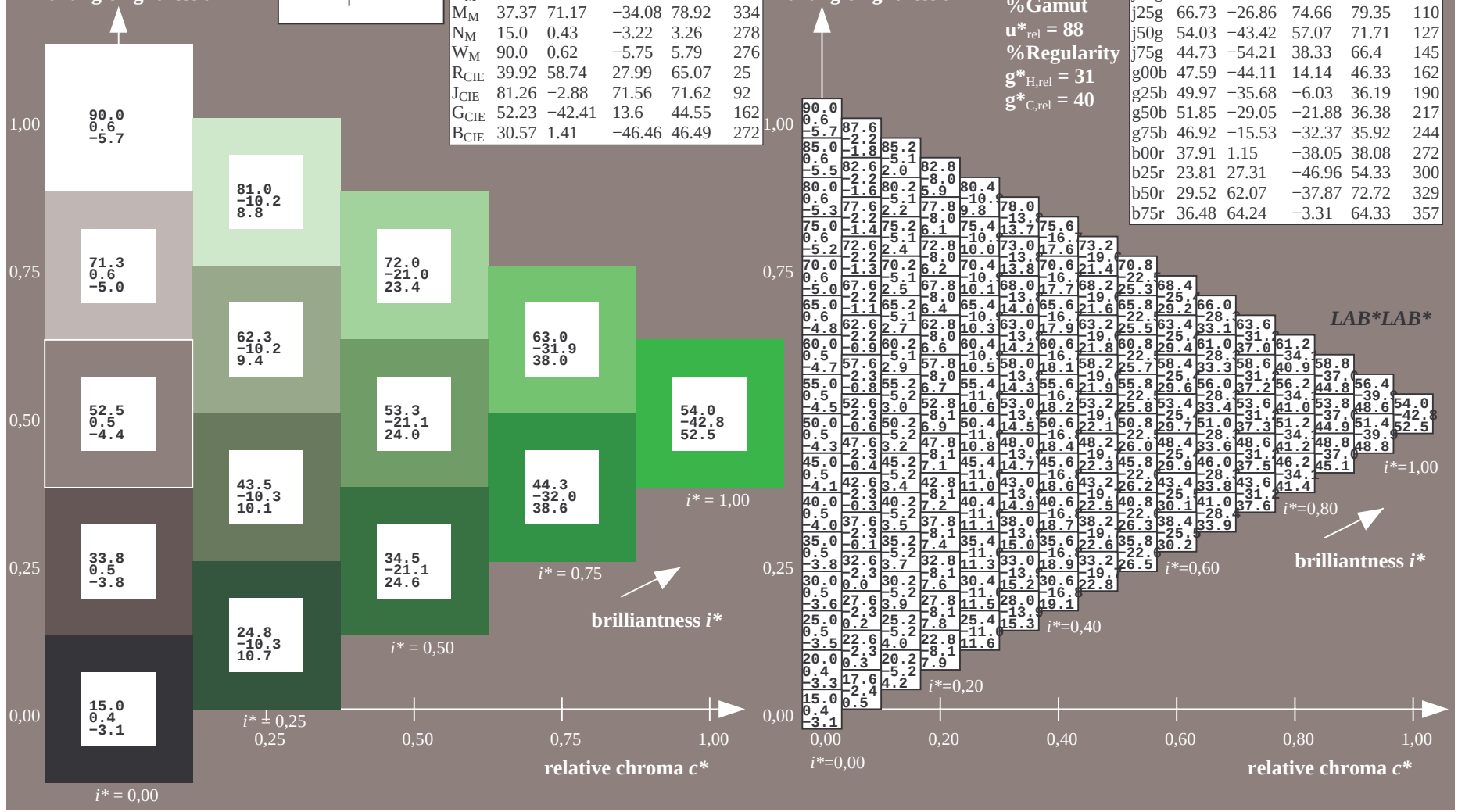
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 54 −42 57**
***LAB*LCH*Ma*: 54 72 127**
***lab*rgb*Ma*: 0.5 1.0 0.0**
***lab*olv*Ma*: 0.25 1.0 0.0**
triangle lightness *t**

u* = j50g
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

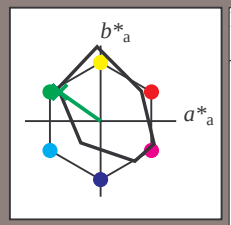
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 145/360 = 0.402$

$u^* = j75g$
LAB^*LAB^*

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = j75g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90; CIELAB data

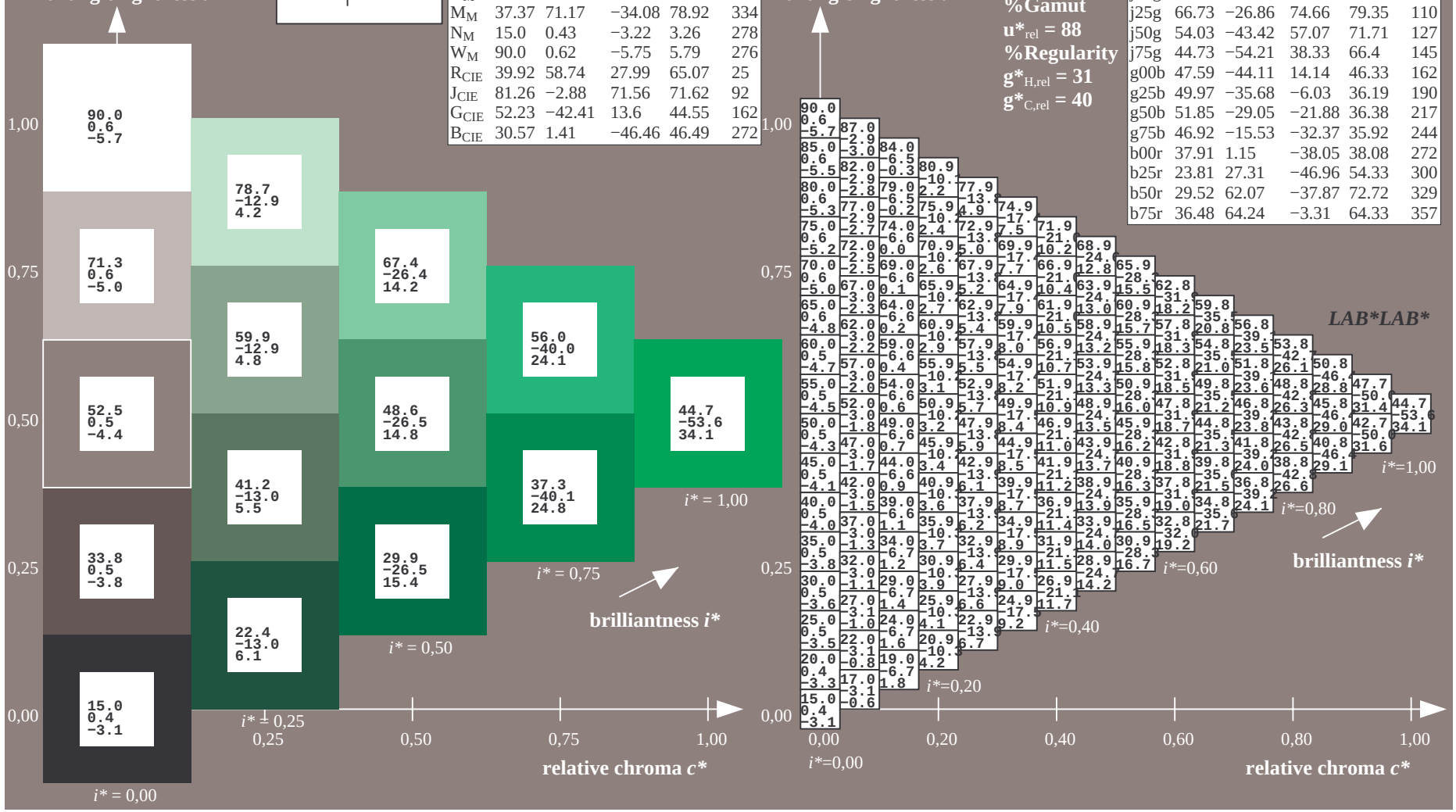
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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 −53 38**
***$LAB^*LCH^*_{Ma}$*: 45 66 145**
***$lab^*rgb^*_{Ma}$*: 0.25 1.0 0.0**
***$lab^*olv^*_{Ma}$*: 0.0 1.0 0.07**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

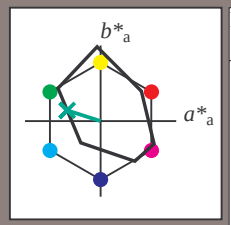
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

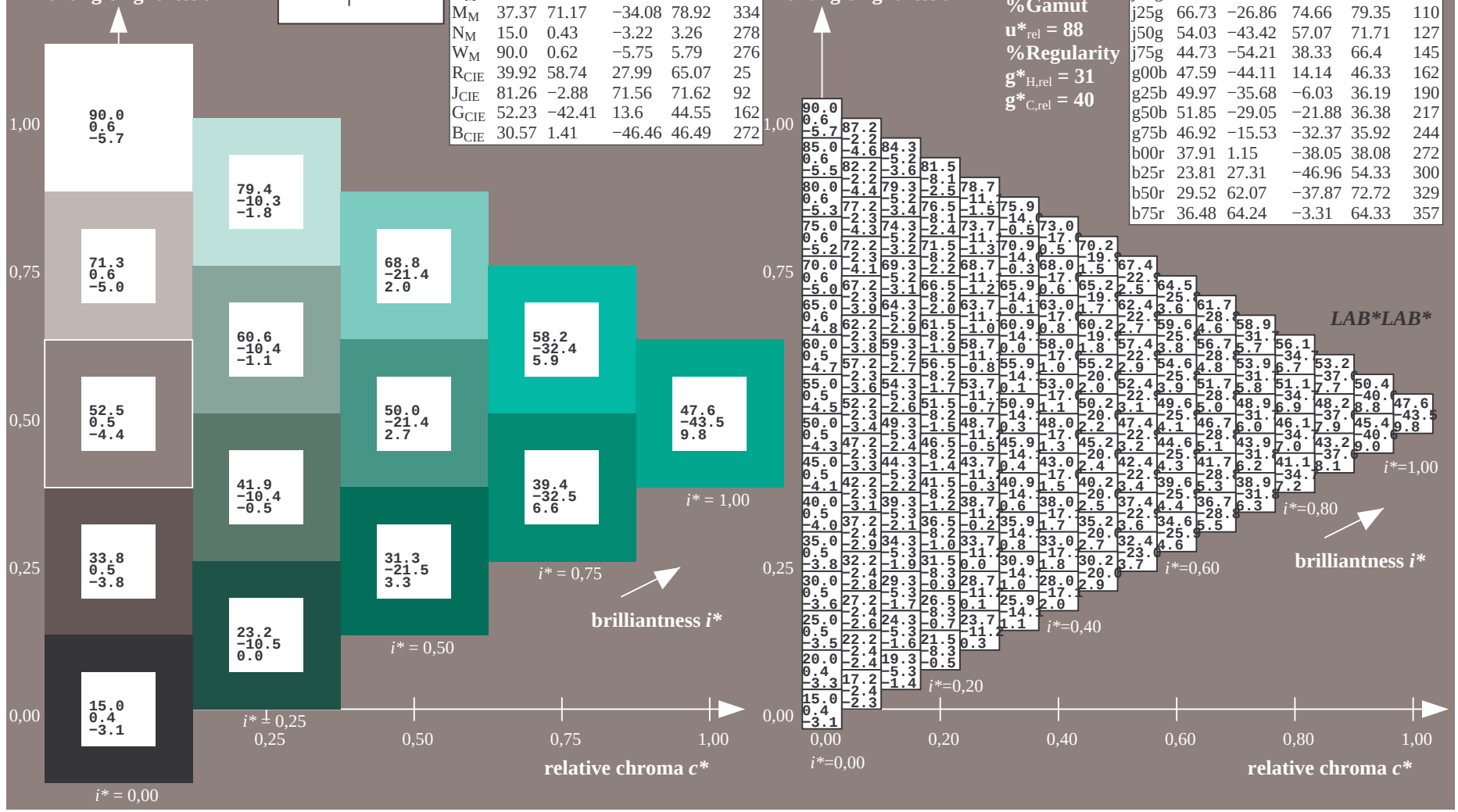
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 48 −43 14**
***LAB*LCH*Ma*: 48 46 162**
***lab*rgb*Ma*: 0.0 1.0 0.0**
***lab*olv*Ma*: 0.0 1.0 0.41**
triangle lightness *t**

u* = g00b
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

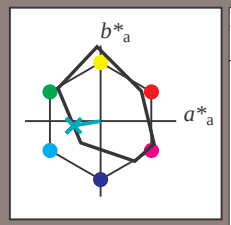
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

$u^* = g25b$
LAB^*LAB^*

data for any colour:
lab*tch* and lab*icu*
elementary hue text:
u* = g25b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

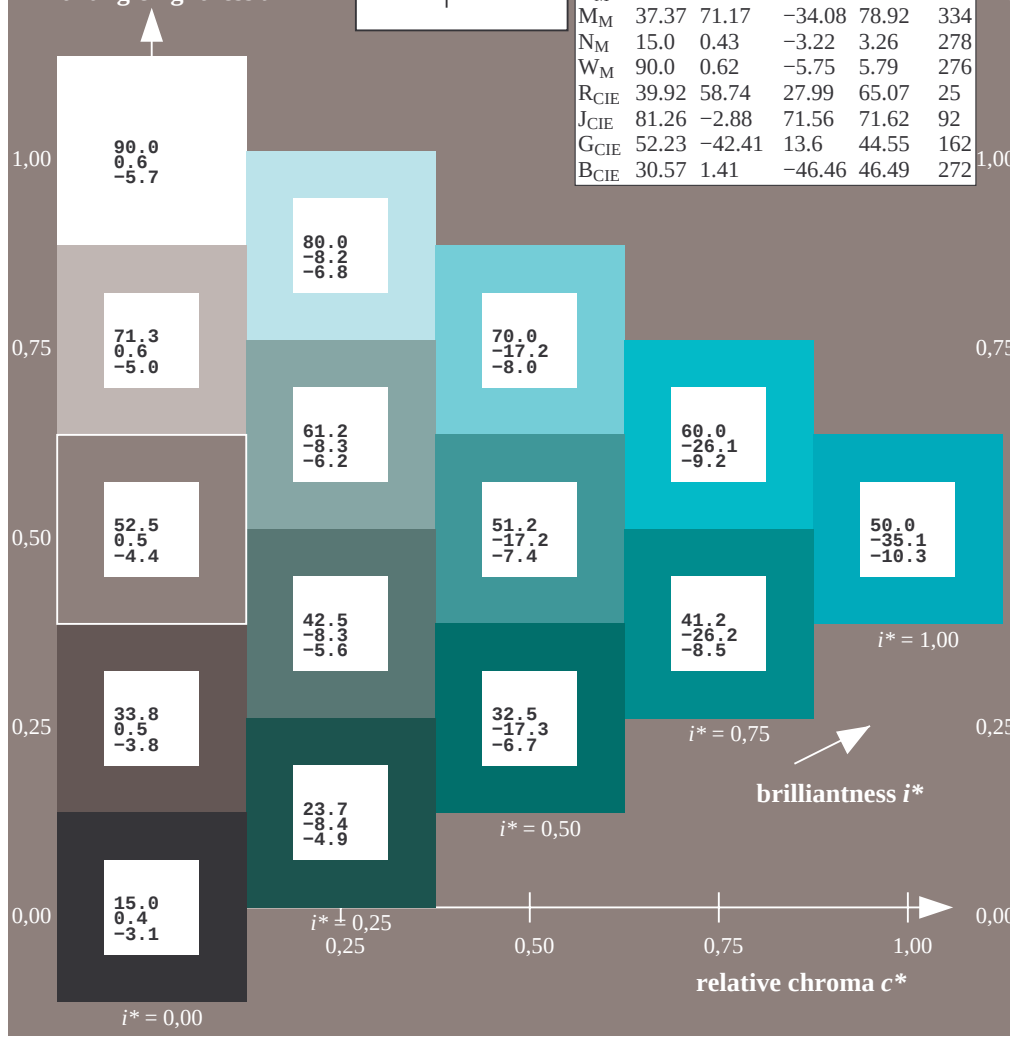
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

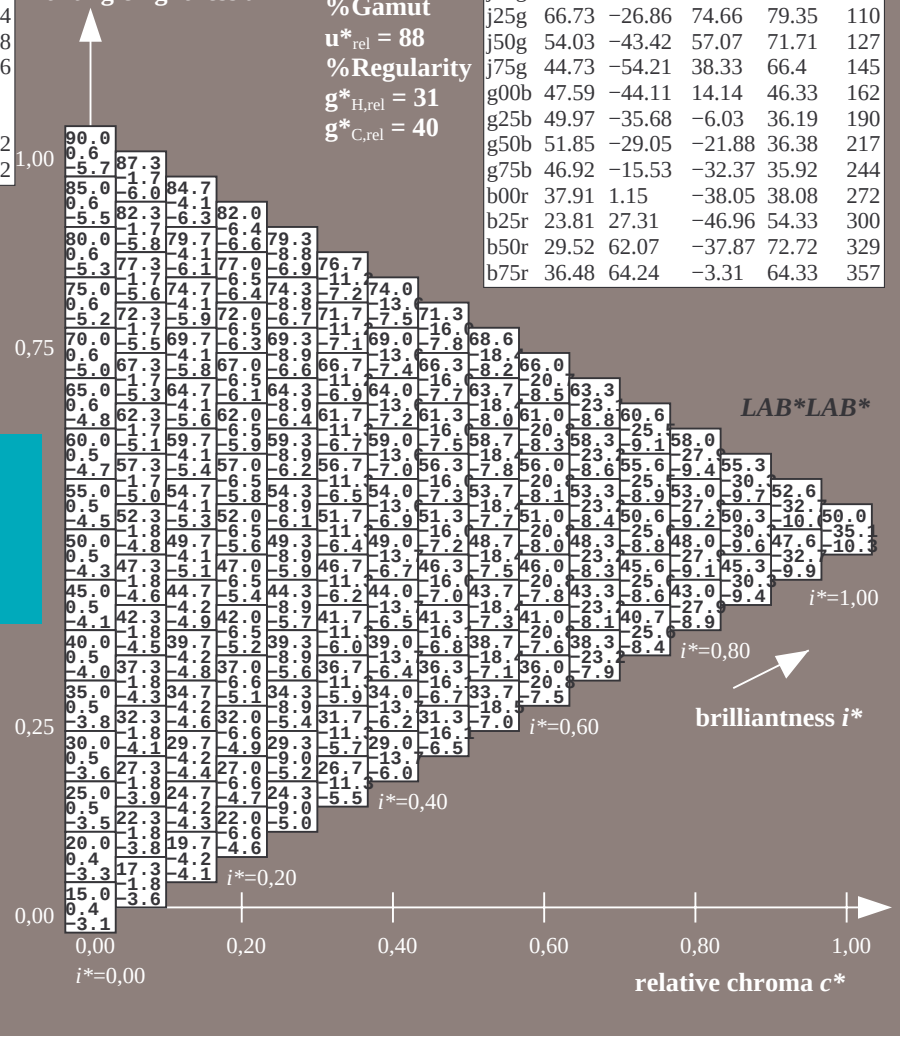
Data for maximum colour (Ma):
***$LAB^*LAB^*_{Ma}$*: 50 −35 −5**
***$LAB^*LCH^*_{Ma}$*: 50 36 190**
***$lab^*rgb^*_{Ma}$*: 0.0 1.0 0.5**
***$lab^*olv^*_{Ma}$*: 0.0 1.0 0.69**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

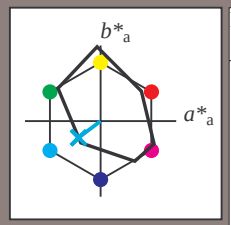




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

$u^* = g50b$
LAB^*LAB^*

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
u* = g50b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

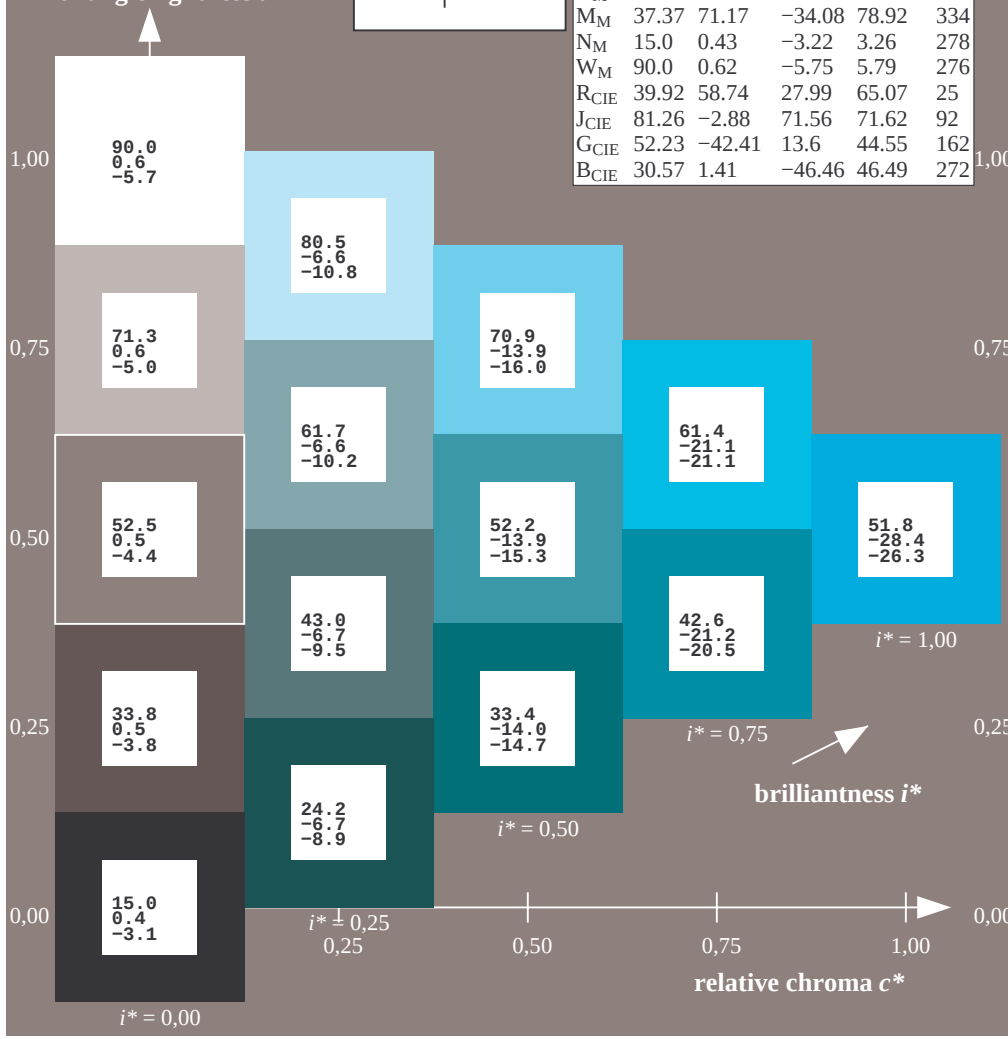
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

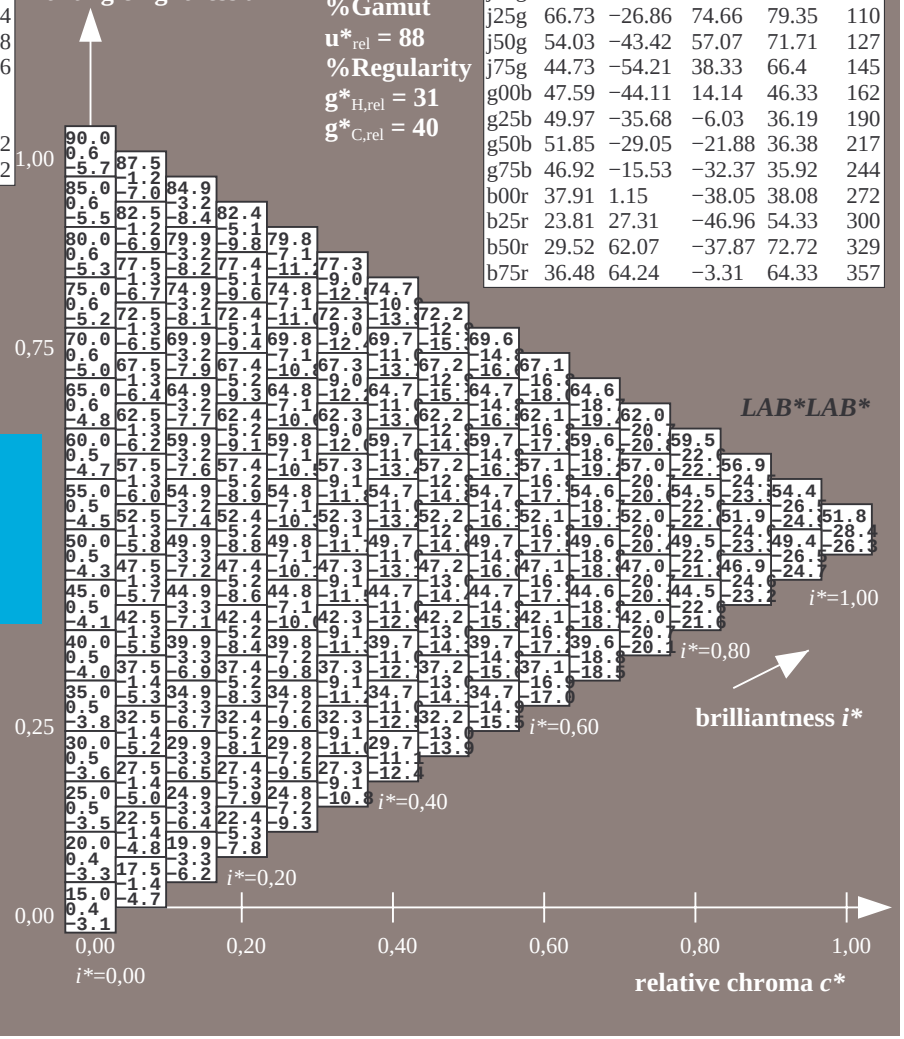
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 52 −28 −21
$LAB^*LCH^*_{Ma}$: 52 36 217
$lab^*rgb^*_{Ma}$: 0.0 1.0 1.0
$lab^*olv^*_{Ma}$: 0.0 1.0 0.9

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

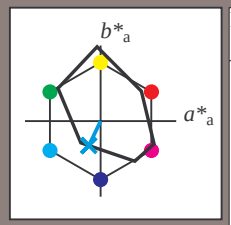




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

$u^* = g75b$
LAB^*LAB^*

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = g75b$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90; CIELAB data

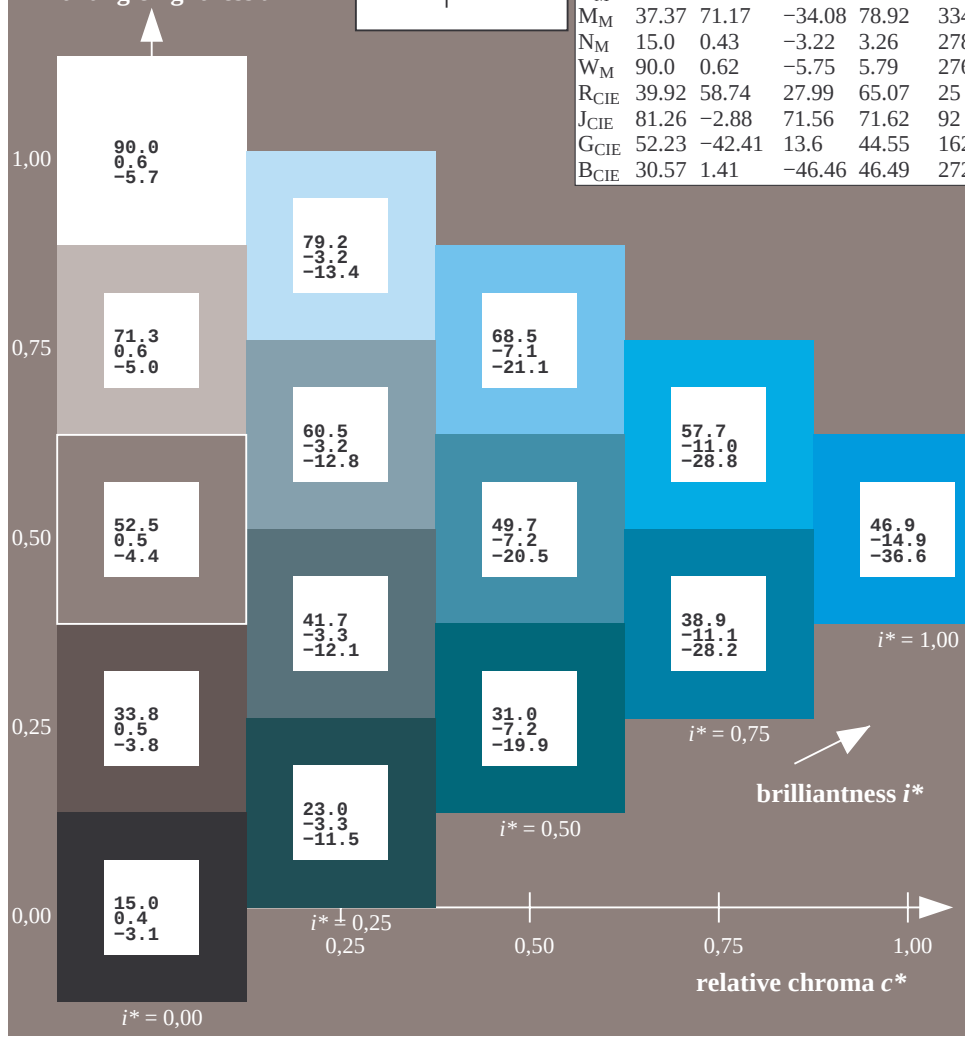
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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):
***$LAB^*LAB^*_{Ma}$*: 47 −15 −31**
***$LAB^*LCH^*_{Ma}$*: 47 36 244**
***$lab^*rgb^*_{Ma}$*: 0.0 0.5 1.0**
***$lab^*olv^*_{Ma}$*: 0.0 0.85 1.0**

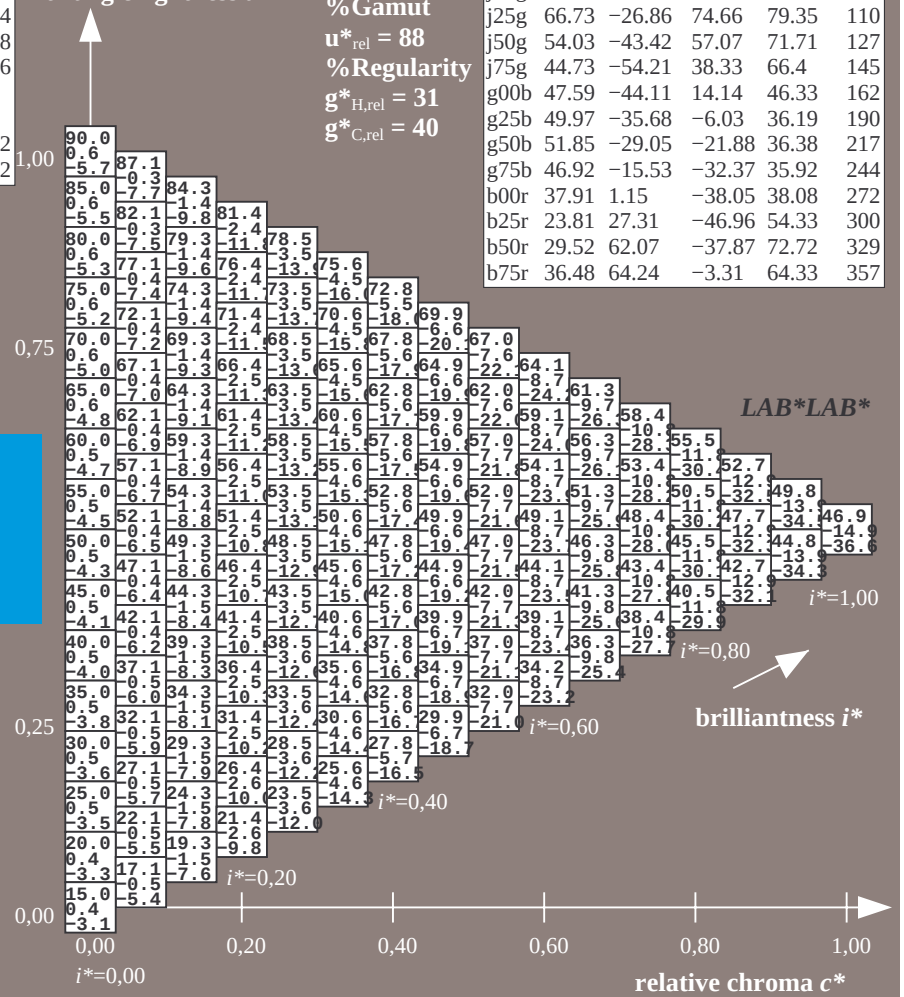
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

triangle lightness t^*

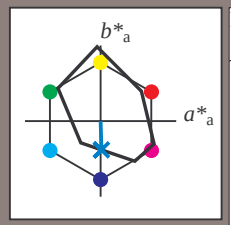


%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b00r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

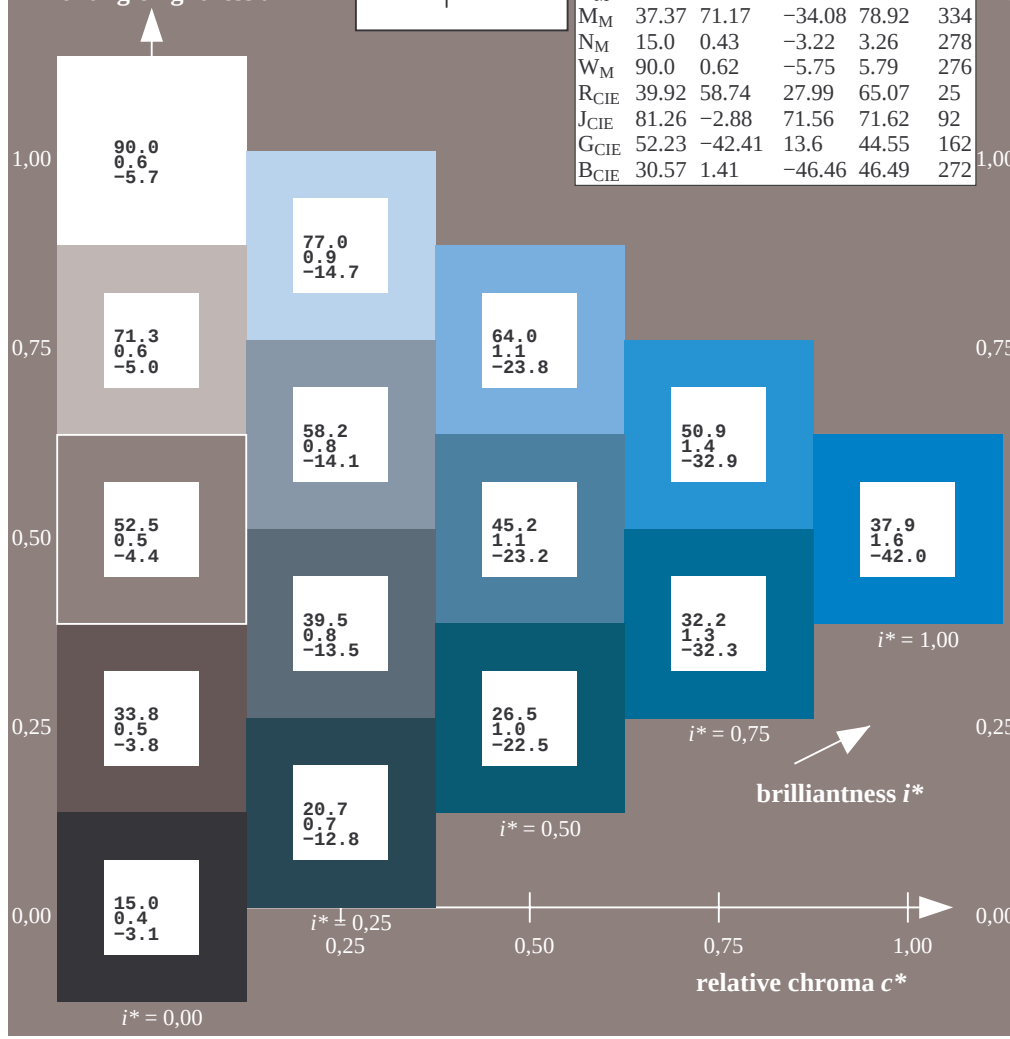
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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*: 38 1 −37**
***LAB*LCH*Ma*: 38 38 272**
***lab*rgb*Ma*: 0.0 0.0 1.0**
***lab*olv*Ma*: 0.0 0.62 1.0**
triangle lightness *t**

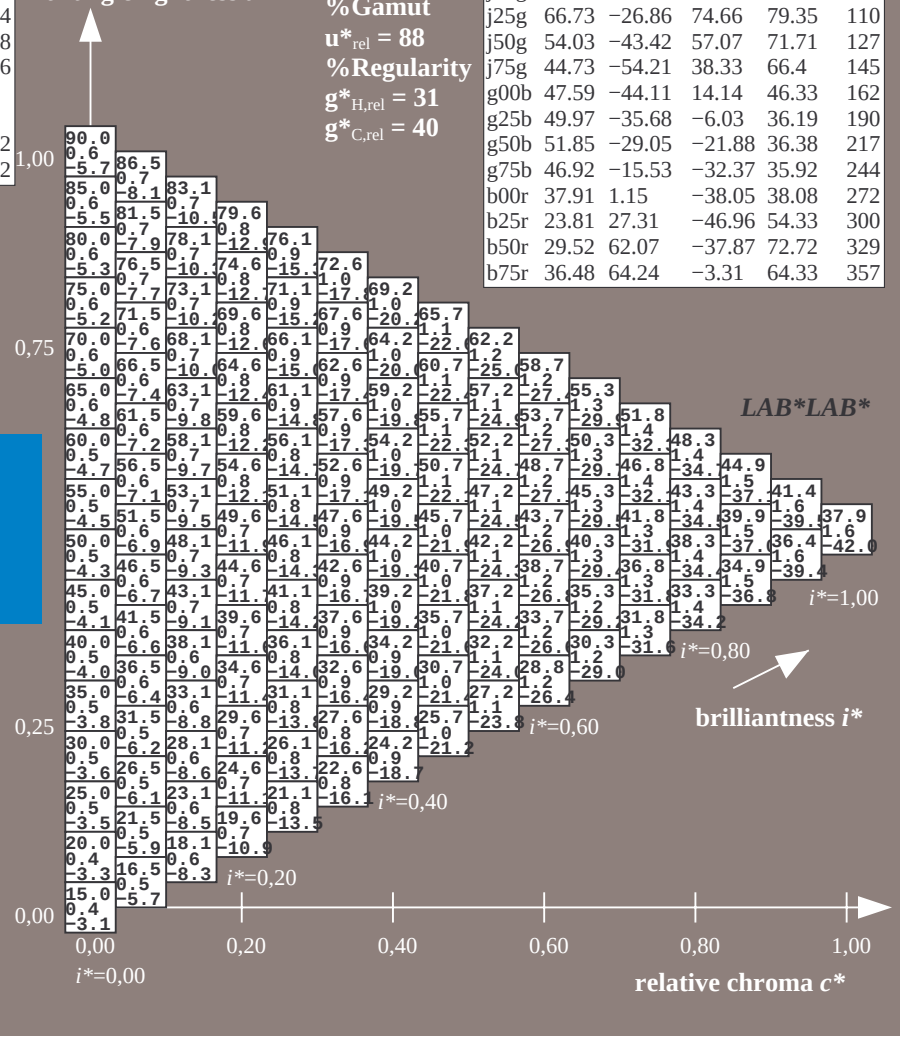
u* = b00r
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

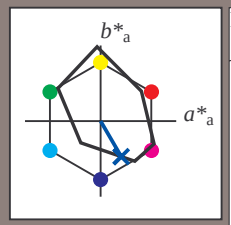


%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b25r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



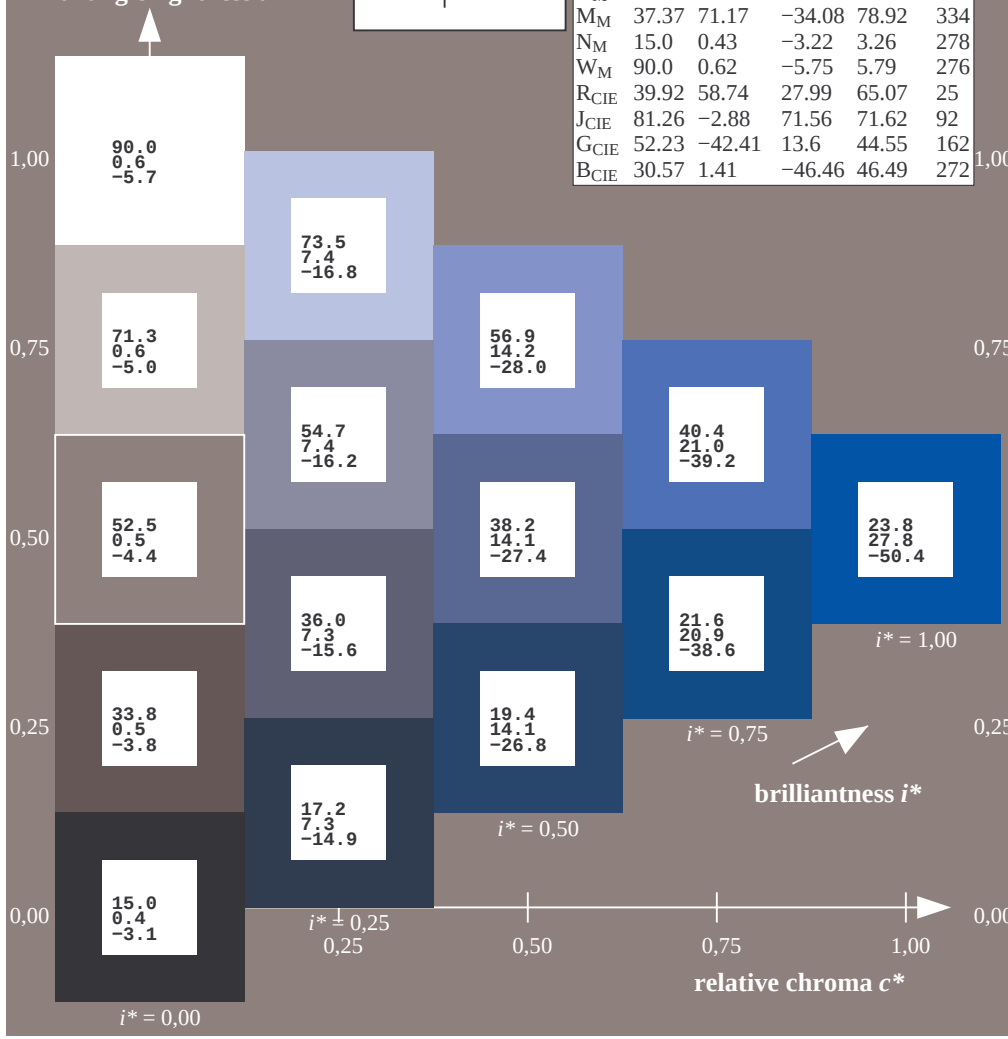
FRS15_90; CIELAB data	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

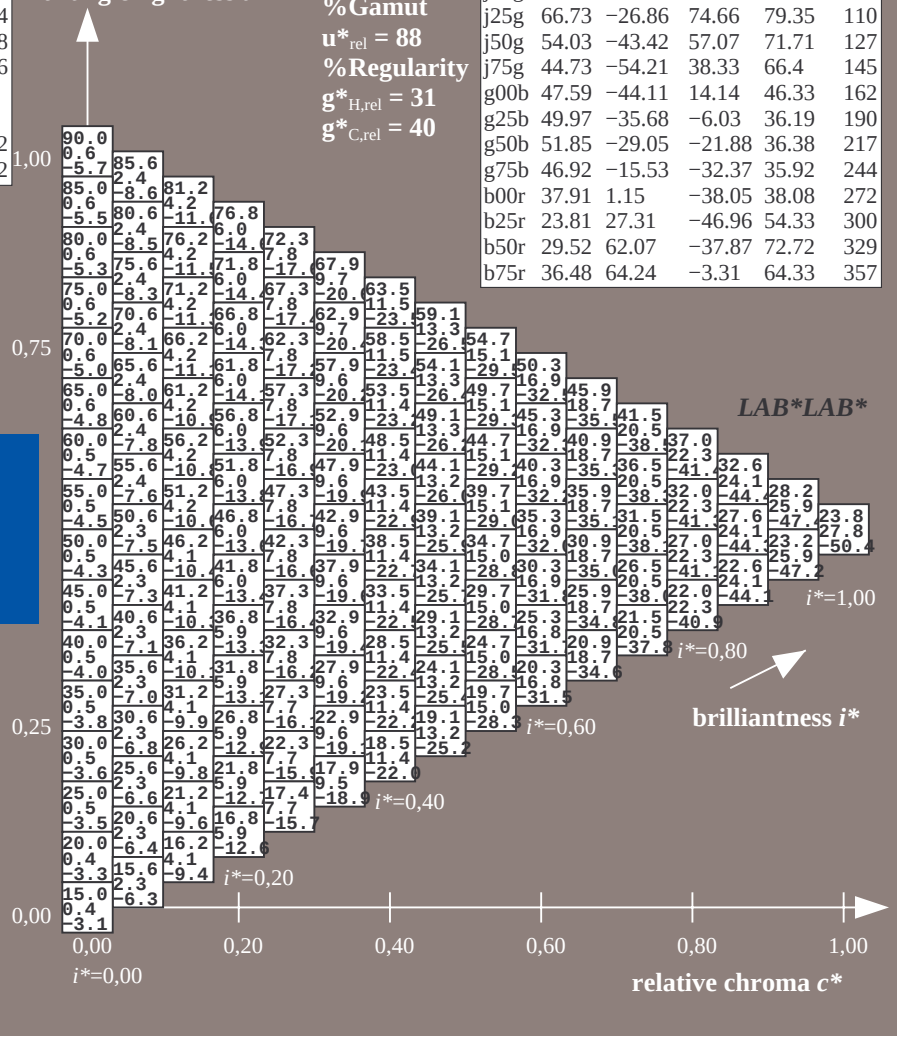
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 24 27 −46**
***LAB*LCH*$_{Ma}$*: 24 54 300**
***lab*rgb*$_{Ma}$*: 0.5 0.0 1.0**
***lab*olv*$_{Ma}$*: 0.0 0.25 1.0**
triangle lightness *t**

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

u* = b25r
LAB*LAB*

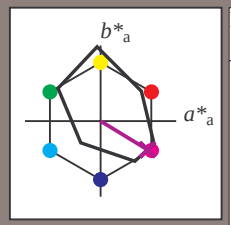
FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = b50r
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



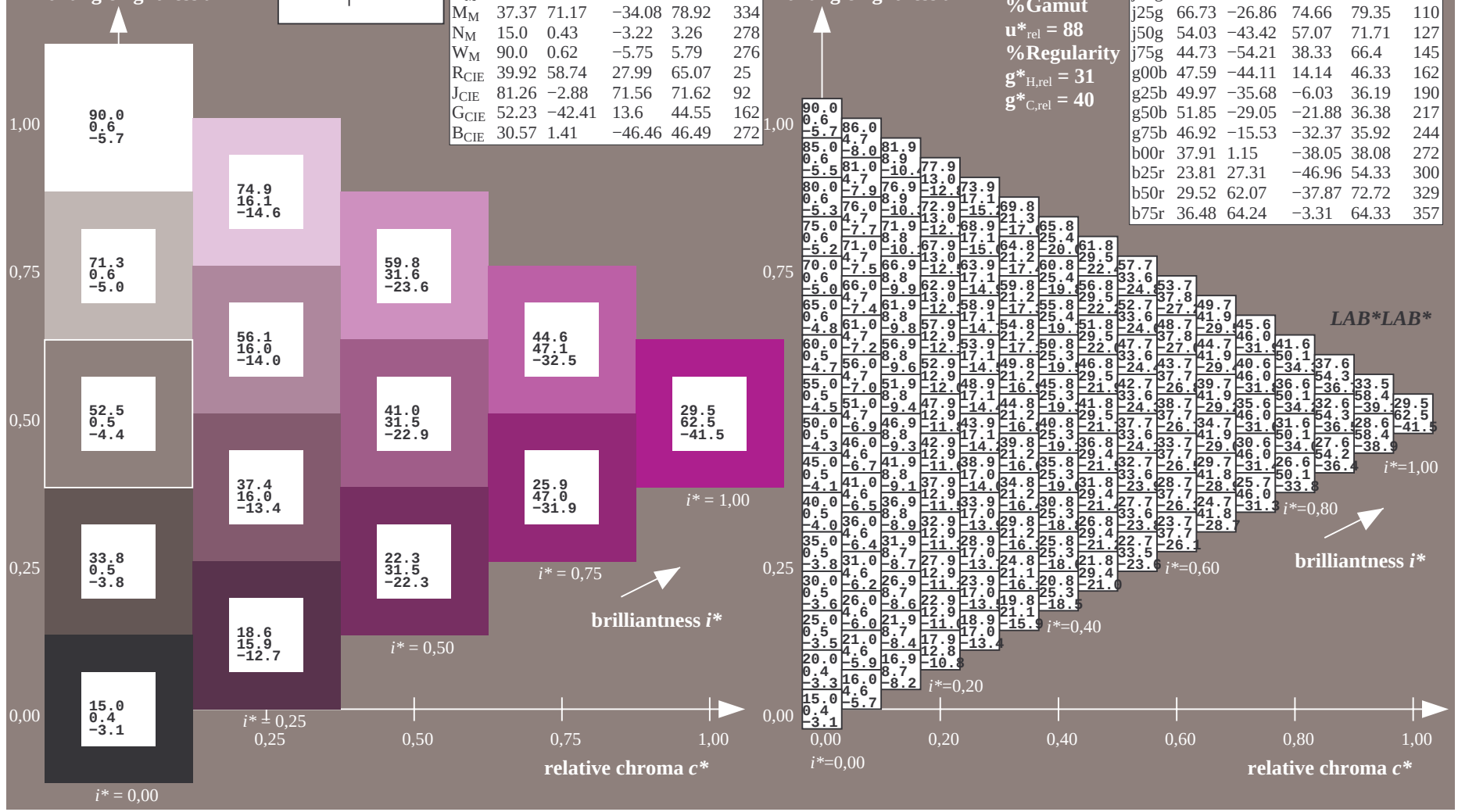
FRS15_90; CIELAB data	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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*$_{Ma}$**: 30 62 −37**
LAB*LCH*$_{Ma}$**: 30 73 329**
lab*rgb*$_{Ma}$**: 1.0 0.0 1.0**
lab*olv*$_{Ma}$**: 0.66 0.0 1.0**
triangle lightness *t**

u* = b50r
LAB*LAB*

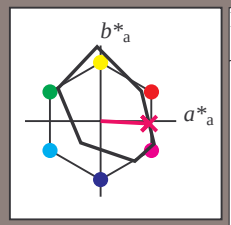
FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b75r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

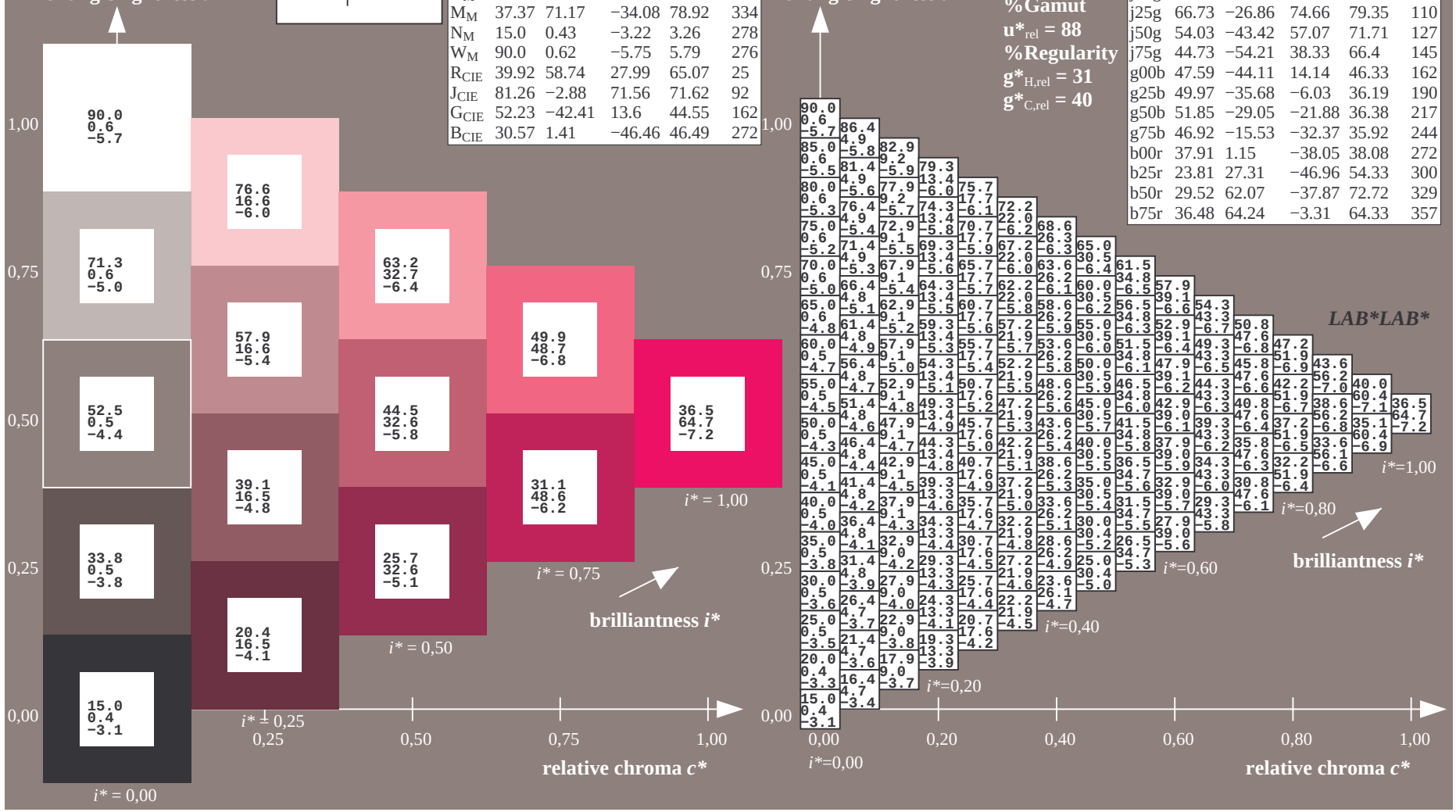
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 36 64 −2**
***LAB*LCH**$_{Ma}$: 36 64 357**
***lab*rgb**$_{Ma}$: 1.0 0.0 0.5**
***lab*olv**$_{Ma}$: 1.0 0.0 0.62**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = b75r
LAB*LAB*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

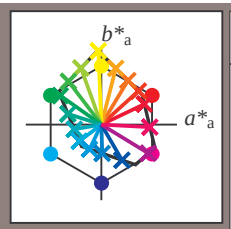


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	LAB*	LAB*		
01	15.0	18.6	22.3	25.9	29.6	33.2	36.9	40.5	44.1	17.5	23.6	27.2	30.9	34.5	38.2	41.8	45.4	49.1	20.0	26.1	32.2	35.8	39.5	43.1	46.8	50.4	54.0	90.0	83.1	76.3	69.4	62.5	55.7	48.8	41.9	35.1	15.0	15.0	15.0	15.0
	0.4	-6.5	-13.5	-20.6	-27.6	-34.6	-41.7	-48.7	-55.7	7.2	0.0	-7.1	-14.1	-21.1	-28.2	-35.2	-42.2	-49.2	13.9	6.6	-0.6	-7.6	-14.7	-21.7	-28.7	-35.7	-42.8	0.6	7.3	14.1	20.8	27.5	34.2	41.0	47.7	54.4	0.4	0.4	0.4	0.4
	-3.1	2.1	7.4	12.7	18.0	23.3	28.6	33.9	39.1	1.6	8.8	14.1	19.4	24.6	29.9	35.2	40.5	45.8	6.5	13.6	20.7	26.0	31.3	36.6	41.9	47.2	52.5	-5.7	-0.5	4.6	9.8	14.9	20.1	25.3	30.5	35.6	-3.1	-3.1	-3.1	-3.1
02	14.9	19.7	23.4	27.0	30.6	34.3	37.9	41.6	45.2	17.8	24.4	28.0	31.7	35.3	38.9	42.6	46.2	49.9	20.3	26.9	33.0	36.6	40.3	43.9	47.5	51.2	54.8	85.3	80.6	73.8	66.9	60.0	53.2	46.3	39.4	32.6	24.4	24.4	24.4	24.4
	6.1	-2.7	-9.8	-16.8	-23.8	-30.9	-37.9	-44.9	-51.9	9.3	0.5	-6.5	-13.5	-20.5	-27.6	-34.6	-41.6	-48.7	16.0	7.2	0.0	-7.0	-14.1	-21.1	-28.1	-35.2	-42.2	-2.6	0.6	7.3	14.0	20.8	27.5	34.2	40.9	47.7	0.5	0.5	0.5	0.5
	-9.8	-6.9	-1.6	3.6	8.9	14.2	19.5	24.8	30.1	-7.0	-3.5	1.8	7.1	12.3	17.6	22.9	28.2	33.5	-2.1	1.3	8.4	13.7	19.0	24.3	29.6	34.9	40.2	-9.1	-5.3	-0.2	4.9	10.1	15.3	20.4	25.6	30.8	-3.5	-3.5	-3.5	-3.5
03	14.8	19.6	24.4	28.1	31.7	35.3	39.0	42.6	46.3	17.7	24.3	29.1	32.7	36.4	40.0	43.6	47.3	50.9	20.6	27.2	33.8	37.4	41.0	44.7	48.3	52.0	55.6	80.7	76.0	71.3	64.4	57.5	50.6	43.8	36.9	30.1	33.8	33.8	33.8	33.8
	11.7	2.8	-6.0	-13.0	-20.1	-27.1	-34.1	-41.2	-48.2	14.9	6.1	-2.7	-9.7	-16.8	-23.8	-30.8	-37.9	-44.9	18.1	9.3	0.5	-6.5	-13.5	-20.5	-27.6	-34.6	-41.6	-5.9	-2.6	0.6	7.3	14.0	20.7	27.5	34.2	40.9	0.5	0.5	0.5	0.5
	-16.4	-13.5	-10.6	-5.3	0.0	5.2	10.5	15.8	21.1	-13.6	-10.1	-7.2	-1.9	3.3	8.6	13.9	19.2	24.5	-10.8	-7.3	-3.8	1.4	6.7	12.0	17.3	22.6	27.9	-12.5	-8.8	-5.0	0.1	5.2	10.4	15.6	20.8	25.9	-3.8	-3.8	-3.8	-3.8
04	14.7	19.5	24.3	29.1	32.8	36.4	40.0	43.7	47.3	17.6	24.2	29.0	33.8	37.4	41.1	44.7	48.4	52.0	20.5	27.1	33.6	38.5	42.1	45.7	49.4	53.0	56.7	76.0	71.3	66.6	61.9	55.0	48.1	41.3	34.4	27.5	43.1	43.1	43.1	43.1
	17.4	8.5	-0.3	-9.3	-16.3	-23.3	-30.4	-37.4	-44.4	20.6	11.8	2.8	-6.0	-13.0	-20.0	-27.1	-34.1	-41.1	23.8	14.9	6.1	-2.7	-9.7	-16.8	-23.8	-30.8	-37.8	-9.1	-5.9	-2.6	0.5	7.3	14.0	20.7	27.4	34.2	0.5	0.5	0.5	0.5
	-23.0	-20.1	-17.3	-14.4	-9.1	-3.8	1.4	6.7	12.0	-20.2	-16.7	-13.8	-10.9	-5.7	-0.4	4.8	10.1	15.4	-17.5	-13.9	-10.4	-7.5	-2.2	3.0	8.3	13.6	18.9	-16.0	-12.2	-8.5	-4.7	0.4	5.5	10.7	15.9	21.1	-4.1	-4.1	-4.1	-4.1
05	14.6	19.4	24.2	29.0	33.8	37.5	41.1	44.8	48.4	17.5	24.1	28.9	33.7	38.5	42.1	45.8	49.4	53.1	20.4	27.0	33.5	38.4	43.2	46.8	50.4	54.1	57.7	71.3	66.6	61.9	57.2	52.5	45.6	38.8	31.9	25.0	52.5	52.5	52.5	52.5
	23.0	14.1	5.2	-3.6	-12.5	-19.6	-26.6	-33.6	-40.6	26.2	17.4	8.5	-0.3	-9.2	-16.3	-23.3	-30.3	-37.4	29.4	20.6	11.8	2.9	-5.9	-13.0	-20.0	-27.0	-34.1	-12.4	-9.2	-5.9	-2.6	0.5	7.2	14.0	20.7	27.4	0.5	0.5	0.5	0.5
	-29.6	-26.8	-23.9	-21.0	-18.1	-12.8	-7.5	-2.2	3.0	-26.9	-23.3	-20.5	-17.6	-14.7	-9.4	-4.1	1.1	6.4	-24.1	-20.6	-17.0	-14.1	-11.3	-6.0	-0.7	4.5	9.8	-19.4	-15.6	-11.9	-8.1	-4.4	0.7	5.9	11.0	16.2	-4.4	-4.4	-4.4	-4.4
06	14.5	19.3	24.1	28.9	33.7	38.5	42.2	45.8	49.5	17.4	24.0	28.8	33.6	38.4	43.2	46.8	50.5	54.1	20.3	26.9	33.4	38.2	43.1	47.9	51.5	55.2	58.8	66.7	62.0	57.2	52.5	47.8	43.1	36.3	29.4	22.5	61.9	61.9	61.9	61.9
	28.7	19.8	10.9	1.9	-6.9	-15.8	-22.8	-29.8	-36.9	31.9	23.1	14.1	5.2	-3.6	-12.5	-19.5	-26.6	-33.6	35.1	26.3	17.4	8.5	-0.3	-9.2	-16.2	-23.3	-30.3	-15.7	-12.5	-9.2	-5.9	-2.7	0.5	7.2	13.9	20.7	0.5	0.5	0.5	0.5
	-36.3	-33.4	-30.5	-27.6	-24.8	-21.9	-16.6	-11.3	-6.0	-33.5	-30.0	-27.1	-24.2	-21.3	-18.5	-13.2	-7.9	-2.6	-30.7	-27.2	-23.6	-20.8	-17.9	-15.0	-9.7	-4.4	0.8	-22.8	-19.1	-15.3	-11.6	-7.8	-4.1	1.0	6.2	11.3	-4.7	-4.7	-4.7	-4.7
07	14.4	19.2	24.0	28.8	33.6	38.4	43.2	46.9	50.5	17.3	23.8	28.7	33.5	38.3	43.1	47.9	51.6	55.2	20.2	26.7	33.3	38.1	43.0	47.8	52.6	56.2	59.9	62.0	57.3	52.6	47.9	43.2	38.5	33.8	26.9	20.0	71.3	71.3	71.3	71.3
	34.3	25.4	16.5	7.6	-1.2	-10.1	-19.0	-26.1	-33.1	37.5	28.7	19.8	10.9	2.0	-6.8	-15.8	-22.8	-29.8	40.7	31.9	23.1	14.2	5.3	-3.6	-12.5	-19.5	-26.5	-19.0	-15.7	-12.5	-9.2	-5.9	-2.7	0.5	7.2	13.9	0.6	0.6	0.6	0.6
	-42.9	-40.0	-37.2	-34.3	-31.4	-28.5	-25.6	-20.3	-15.0	-40.1	-36.6	-33.7	-30.8	-28.0	-25.1	-22.2	-16.9	-11.6	-37.4	-33.8	-30.3	-27.4	-24.5	-21.6	-18.8	-13.5	-8.2	-26.3	-22.5	-18.8	-15.0	-11.3	-7.5	-3.8	1.3	6.5	-5.0	-5.0	-5.0	-5.0
08	14.3	19.1	23.9	28.7	33.5	38.3	43.1	48.0	51.6	17.2	23.7	28.6	33.4	38.2	43.0	47.8	52.6	56.3	20.1	26.6	33.2	38.0	42.8	47.7	52.5	57.3	60.9	57.3	52.6	47.9	43.2	38.5	33.8	29.1	24.4	17.5	80.6	80.6	80.6	80.6
	40.0	31.1	22.2	13.3	4.3	-4.5	-13.4	-22.3	-29.3	43.2	34.4	25.4	16.5	7.6	-1.2	-10.1	-19.0	-26.0	46.4	37.6	28.7	19.8	10.9	2.0	-6.8	-15.7	-22.8	-22.3	-19.0	-15.8	-12.5	-9.2	-6.0	-2.7	0.5	7.2	0.6	0.6	0.6	0.6
	-49.5	-46.7	-43.8	-40.9	-38.0	-35.1	-32.3	-29.4	-24.1	-46.8	-43.2	-40.3	-37.5	-34.6	-31.7	-28.8	-26.0	-20.7	-44.0	-40.5	-36.9	-34.0	-31.2	-28.3	-25.4	-22.5	-17.2	-29.7	-26.0	-22.2	-18.5	-14.7	-10.9	-7.2	-3.5	1.6	-5.3	-5.3	-5.3	-5.3
09	14.2	19.0	23.8	28.6	33.4	38.2	43.0	47.9	52.7	17.1	23.6	28.4	33.3	38.1	42.9	47.7	52.5	57.3	20.0	26.5	33.1	37.9	42.7	47.6	52.4	57.2	62.0	52.7	48.0	43.2	38.5	33.8	29.1	24.4	19.7	15.0	90.0	90.0	90.0	90.0
	45.6	36.7	27.8	18.9	10.0	1.1	-7.7	-16.7	-25.6	48.8	40.0	31.1	22.2	13.3	4.4	-4.5	-13.4	-22.3	52.0	43.2	34.4	25.5	16.6	7.6	-1.2	-10.1	-19.0	-25.6	-22.3	-19.0	-15.8	-12.5	-9.3	-6.0	-2.7	0.4	0.6	0.6	0.6	0.6
	-56.2	-53.3	-50.4	-47.5	-44.7	-41.8	-38.9	-36.0	-33.1	-53.4	-49.8	-47.0	-44.1	-41.2	-38.3	-35.5	-32.6	-29.7	-50.6	-47.1	-43.5	-40.7	-37.8	-34.9	-32.0	-29.1	-26.3	-33.1	-29.4	-25.6	-21.9	-18.1	-14.4	-10.6	-6.9	-3.1	-5.7	-5.7	-5.7	-5.7
10	22.5	28.6	34.7	40.8	44.4	48.1	51.7	55.4	59.0	25.0	31.1	37.2	43.3	49.4	53.0	56.7	60.3	63.9	27.5	33.6	39.7	45.8	51.9	58.0	61.6	65.3	68.9	90.0	89.2	88.4	87.7	86.9	86.1	85.3	84.5	83.8	15.0	15.0	15.0	15.0
	20.7	13.4	6.1	-1.1	-8.2	-15.2	-22.2	-29.3	-36.3	27.4	20.1	12.8	5.5	-1.7	-8.7	-15.8	-22.8	-29.8	34.2	26.9	19.6	12.2	4.9	-2.3	-9.3	-16.3	-23.4	0.6	0.0	-0.4	-1.0	-1.6	-2.2	-2.8	-3.4	-3.9	0.4	0.4	0.4	0.4
	11.3	18.5	25.6	32.7	38.0	43.3	48.6	53.9	59.2	16.2	23.3	30.5	37.6	44.7	50.0	55.3	60.6	65.9	21.1	28.2	35.3	42.5	49.6	56.7	62.0	67.3	72.6	-5.7	6.5	18.9	31.2	43.5	55.8	68.1	80.4	92.7	-3.1	-3.1	-3.1	-3.1
11	22.8	29.4	35.5	41.6	45.2	48.8	52.5	56.1	59.8	25.3	31.9	38.0	44.1	50.2	53.8	57.4	61.1	64.7	27.8	34.4	40.5	46.6	52.7	58.8	62.4	66.0	69.7	80.5	80.6	79.8	79.1	78.3	77.5	76.7	76.0	75.2	20.0	20.0	20.0	20.0
	22.8	13.9	6.6	-0.6	-7.6	-14.6	-21.7	-28.7	-35.7	29.5	20.7	13.4	6.1	-1.1	-8.2	-15.2	-22.2	-29.2	36.3	27.4	20.1	12.8	5.5	-1.7	-8.7	-15.7	-22.8	6.2	0.6	0.0	-0.5	-1.1	-1.6	-2.2	-2.8	-3.4	0.4	0.4	0.4	0.4
	2.6	6.2	13.3	20.4	25.7	31.0	36.3	41.6	46.9	7.5	11.0	18.2	25.3	32.4	37.7	43.0	48.3	53.6	12.4	15.9	23.0	30.2	37.3	44.4	49.7	55.0	60.3	-12.0	-5.3	6.9	19.2	31.5	43.8	56.1	68.4	80.7	-3.3	-3.3	-3.3	-3.3
12	23.1	29.7	36.3	42.3	46.0	49.6	53.3	56.9	60.5	25.6	32.2	38.8	44.9	50.9	54.6	58.2	61.9	65.5	28.1	34.7	41.3	47.4	53.4	59.5	63.2	66.8	70.5	71.0	71.1	71.3	70.5	69.7	68.9	68.1	67.4	66.6	25.0	25.0	25.0	25.0
	24.9	16.0	7.2	0.0	-7.0	-14.0	-21.1	-28.1	-35.1	31.6	22.8	14.0	6.7	-0.5	-7.6	-14.6	-21.6	-28.7	38.3	29.5	20.7	13.4	6.1	-1.1	-8.1	-15.2	-22.2	11.9	6.2	0.6	0.0	-0.5	-1.1	-1.7	-2.2	-2.8	0.5	0.5	0.5	0.5
	-6.0	-2.4	1.0	8.1	13.4	18.7	24.0	29.3	34.6	-1.1	2.3	5.9	13.0	20.1	25.4	30.7	36.0	41.3	3.6	7.2	10.7	17.9	25.0	32.1	37.4	42.7	48.0	-18.3	-11.7	-5.0	7.2	19.5	31.8	44.1	56.4	68.7	-3.5	-3.5	-3.5	-3.5
13	23.4	30.0	36.5	43.1	46.8	50.4	54.0	57.7	61.3	25.9	32.5	39.1	45.6	51.7	55.4	59.0	62.6	66.3	28.4	35.0	41.6	48.1	54.2	60.3	64.0	67.6	71.2	61.6	61.7	61.8	61.9	61.1	60.3	59.5	58.8	58.0	30.0	30.0	30.0	30.0
	27.0	18.1	9.3	0.5	-6.4	-13.5	-20.5	-27.5	-34.6	33.7	24.9	16.1	7.2	0.0	-7.0	-14.0	-21.1	-28.1	40.4	31.6	22.8	14.0	6.7	-0.5	-7.6	-14.6	-21.6	17.5	11.8	6.2	0.5	0.0	-0.5	-1.1	-1.7	-2.3	0.5	0.5	0.5	0.5
	-14.7	-11.2	-7.6	-4.1	1.1	6.4	11.7	17.0	22.3	-9.8	-6.3	-2.8	0.7	7.8	13.1	18.4	23.7	29.0	-5.0	-1.4	2.0	5.5	12.7	19.8	25.1	30.4	35.7	-24.6	-18.0	-11.3	-4.7	7.5	19.8	32.1	44.4	56.7	-3.6	-3.6	-3.6	-3.6
14	23.3	29.9	36.4	43.0	47.8	51.5	55.1	58.8	62.4	26.2	32.8	39.3	45.9	52.5	56.1	59.8	63.4	67.1	28.7	35.3	41.8	48.4	55.0	61.1	64.7	68.4	72.0	52.1	52.2	52.3	52.4	52.5	51.7	50.9	50.2	49.4	35.0	35.0	35.0	35.0
	32.6	23.8	15.0	6.2	-2.7	-9.7	-16.7	-23.8	-30.8	35.8	27.0	18.2	9.3	0.5	-6.4	-13.4	-20.5	-27.5	42.5	33.7	24.9	16.1	7.3	0.0	-7.0	-14.0	-21.0	23.1	17.5	11.8	6.2	0.5	0.0	-0.5	-1.1	-1.7	0.5	0.5	0.5	0.5
	-21.3	-17.8	-14.2	-10.7	-7.8	-2.5	2.7	8.0	13.3	-18.6	-15.0	-11.5	-7.9	-4.4	0.8	6.1	11.4	16.7	-13.7	-10.2	-6.6	-3.1	0.4	7.5	12.8	18.1	23.4	-30.9	-24.3	-17.7	-11.0	-4.4	7.8	20.1	32.4	44.7	-3.8	-3.8	-3.8	-3.8
15	23.2	29.8	36.3	42.9	47.7	52.5	56.2	59.8	63.5	26.1	32.7	39.2	45.8	52.4	57.2	60.8	64.5	68.1	29.0	35.6	42.1	48.7	55.3	61.9	65.5	69.2	72.8	42.6	42.7	42.8	42.9	43.0	43.1	42.3	41.6	40.8	40.0	40.0	40.0	40.0
	38.3	29.4	20.6	11.8	2.9	-5.9	-13.0	-20.0	-27.0	41.4	32.6	23.8	15.0	6.2	-2.6	-9.7	-16.7	-23.7	44.6	35.8	27.0	18.2	9.4	0.5	-6.4	-13.4	-20.4	28.8	23.1	17.5	11.8	6.2	0.5	0.0	-0.6	-1.1	0.5	0.5	0.5	0.5
	-28.0	-24.4	-20.9	-17.3	-14.5	-11.6	-6.3	-1.0	4.2	-25.2	-21.6	-18.1	-14.6	-11.0	-8.1	-2.8	2.4	7.6	-22.4	-18.9	-15.3	-11.8	-8.3	-4.7	0.5	5.8	11.1	-37.2	-30.6	-24.0	-17.3	-10.7	-4.1	8.1	20.4	32.7	-4.0	-4.0	-4.0	-4.0
16	23.1	29.6	36.2	42.8	47.6	52.4	57.2	60.9	64.5	26.0	32.6	39.1	45.7	52.3	57.1	61.9	65.6	69.2	28.9	35.5	42.0	48.6	55.2	61.8	66.6	70.2	73.9	33.1	33.2	33.3	33.4	33.5	33.6	33.8	33.0	32.2	45.0	45.0	45.0	45.0
	43.9	35.1	26.3	17.5	8.5	-0.3	-9.2	-16.2	-23.2	47.1	38.3	29.5	20.6	11.8	2.9	-5.9	-12.9	-20.0	50.3	41.5	32.7	23.8	15.0	6.2	-2.6	-9.6	-16.7	34.4	28.7	23.1	17.4	11.8	6.1	0.5	0.0	-0.6	0.5	0.5	0.5	0.5
	-34.6	-31.1	-27.5	-24.0	-21.1	-18.2	-15.3	-10.0	-4.7	-31.8	-28.3	-24.7	-21.2	-17.7	-14.8	-11.9	-6.6	-1.3	-29.0	-25.5	-22.0	-18.4	-14.9	-11.3	-8.5	-3.2	2.0	-43.5	-36.9	-30.3	-23.6	-17.0	-10.4	-3.8	8.4	20.7	-4.1	-4.1	-4.1	-4.1
17	23.0	29.5	36.1	42.7	47.5	52.3	57.1	62.0	65.6	25.9	32.4	39.0	45.6	52.2	57.0	61.8	66.6	70.3	28.8	35.3	41.9	48.5	55.1	61.7	66.5	71.3	74.9	23.6	23.7	23.8	24.0	24.1	24.2	24.3	24.4	23.6	50.0	50.0	50.0	50.0
	49.6	40.7	31.9	23.1	14.2	5.3	-3.5	-12.5	-19.5	52.7	43.9	35.1	26.3	17.5	8.6	-0.3	-9.2	-16.2	55.9	47.1	38.3	29.5	20.7	11.8	2.9	-5.9	-12.9	40.0	34.4	28.7	23.1	17.4	11.8	6.1	0.5	0.0	0.5	0.5	0.5	0.5
	-41.2	-37.7	-34.1	-30.6	-27.7	-24.8	-22.0	-19.1	-13.8	-38.4	-34.9	-31.4	-27.8	-24.3	-21.4	-18.5	-15.6	-10.4	-35.7	-32.1	-28.6	-25.1	-21.5	-18.0	-15.1	-12.2	-6.9	-49.8	-43.2	-36.6	-30.0	-23.3	-16.7	-10.1	-3.5	8.8	-4.3	-4.3	-4.3	-4.3
18	22.9	29.4	36.0	42.6	47.4	52.2	57.0	61.8	66.7	25.8	32.3	38.9	45.5	52.1	56.9	61.7	66.5	71.3	28.7	35.2	41.8	48.4	55.0	61.6	66.4	71.2	76.0	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	15.0	55.0	55.0	55.0	55.0
	55.2	46.4	37.6	28.8	19.8	10.9	2.0	-6.8	-15.7	58.4	49.6	40.8	31.9	23.1	14.2	5.3	-3.5	-12.4	61.6	52.8	44.0	35.1	26.3	17.5	8.6	-0.2	-9.1	45.6	40.0	34.3	28.7	23.0	17.4	11.7	6.1	0.4	0.5	0.5	0.5	0.5
	-47.8	-44.3	-40.8	-37.2	-34.3	-31.5	-28.6	-25.7	-22.8	-45.1	-41.5	-38.0	-34.4	-30.9	-28.0	-25.2	-22.3	-19.4	-42.3	-38.8	-35.2	-31.7	-28.1	-24.6	-21.7	-18.8	-16.0	-56.2	-49.5	-42.9	-36.3	-29.6	-23.0	-16.4	-9.8	-3.1	-4.5	-4.5	-4.5	-4.5
19	30.1	36.1	42.2	48.3	54.4	60.5	66.6	70.2	73.9	32.6	38.6	44.7	50.8	56.9	63.0	69.1	75.2	78.8	35.1	41.1	47.2	53.3	59.4	65.5	71.6	77.7	83.8	90.0	84.3	78.5	72.8	67.1	61.3	55.6	49.9	44.1	60.0	60.0	60.0	60.0
	40.9	33.6	26.3	19.0	11.7	4.4	-2.8	-9.9	-16.9	47.7	40.4	33.0	25.7	18.4	11.1	3.8	-3.4	-10.4	54.4	47.1	39.8	32.5	25.2	17.9	10.6	3.3	-3.9	0.6	-6.3	-13.4	-20.4	-27.5	-34.6	-41.6	-48.7	-55.7	0.5	0.5	0.5	0.5
	25.9	33.1	40.2	47.3	54.5	61.6	68.7	74.0	79.3	30.8	37.9	45.0	52.2	59.3	66.4	73.6	80.7	86.0	35.6	42.8	49.9	57.0	64.2	71.3	78.4	85.6	92.7	-5.7	0.0	5.5	11.1	16.7	22.3	27.9	33.5	39.1	-4.7	-4.7	-4.7	-4.7
20	30.3	36.9	43.0	49.1	55.2	61.3	67.4	71.0	74.6	32.8	39.4	45.5	51.6	57.7	63.8	69.9	76.0	79.6	35.4	41.9	48.0	54.1	60.2	66.3	72.4	78.5	84.5	83.4	80.6	74.9	69.2	63.4	57.7	52.0	46.2	40.5	65.0	65.0	65.0	65.0
	43.0	34.2	26.9	19.6	12.3	5.0	-2.2	-9.3	-16.3	49.7	40.9	33.6	26.3	19.0	11.7	4.4	-2.8	-9.8	56.5	47.7	40.4	33.1	25.8	18.5	11.1	3.8	-3.4	9.4	0.6	-6.4	-13.4	-20.5	-27.5	-34.6	-41.6	-48.7	0.6	0.6	0.6	0.6
	17.2	20.8	27.9	35.0	42.2	49.3	56.4	61.7	67.0	22.1	25.6	32.7	39.9	47.0	54.1	61.3	68.4	73.7	26.9	30.5	37.6	44.7	51.9	59.0	66.1	73.3	80.4	-9.2	-5.3	0.2	5.8	11.4	17.0	22.6	28.2	33.9	-4.8	-4.8	-4.8	-4.8
21	30.6	37.2	43.8	49.9	56.0	62.0	68.1	71.8	75.4	33.1	39.7	46.3	52.4	58.5	64.6	70.6	76.7	80.4	35.6	42.2	48.8	54.9	61.0	67.1	73.1	79.2	85.3	76.8	74.0	71.3	65.5	59.8	54.0	48.3	42.6	36.9	70.0	70.0	70.0	70.0
	45.1	36.3	27.5	20.2	12.9	5.5	-1.7	-8.7	-15.7	51.8	43.0	34.2	26.9	19.6	12.3	5.0	-2.2	-9.2	58.6	49.8	41.0	33.6	26.3	19.0	11.7	4.4	-2.8	18.2	9.4	0.6	-6.4	-13.4	-20.5	-27.6	-34.6	-41.7	0.6	0.6	0.6	0.6
	8.5	12.0	15.6	22.7	29.8	37.0	44.1	49.4	54.7	13.4	16.9	20.4	27.6	34.7	41.8	49.0	56.1	61.4	18.2	21.8	25.3	32.4	39.6	46.7	53.8	61.0	68.1	-12.7	-8.9	-5.0	0.5	6.1	11.7	17.3	22.9	28.6	-5.0	-5.0	-5.0	-5.0
22	30.9	37.5	44.1	50.6	56.7	62.8	68.9	72.6	76.2	33.4	40.0	46.6	53.2	59.2	65.3	71.4	77.5	81.1	35.9	42.5	49.1	55.7	61.7	67.8	73.9	80.0	86.1	70.3	67.5	64.7	61.9	56.1	50.4	44.7	38.9	33.2	75.0	75.0	75.0	75.0
	47.2	38.4	29.6	20.7	13.4	6.1	-1.1	-8.1	-15.1	53.9	45.1	36.3	27.5	20.2	12.9	5.6	-1.6	-8.7	60.7	51.9	43.0	34.2	26.9	19.6	12.3	5.0	-2.2	27.1	18.2	9.4	0.5	-6.4

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

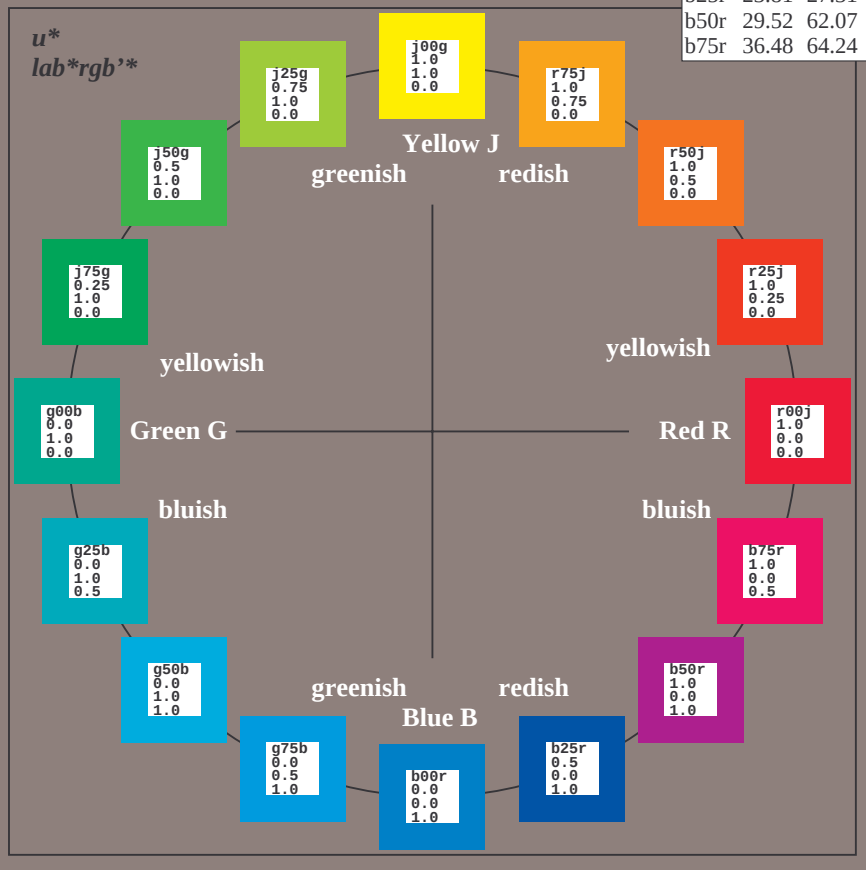
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

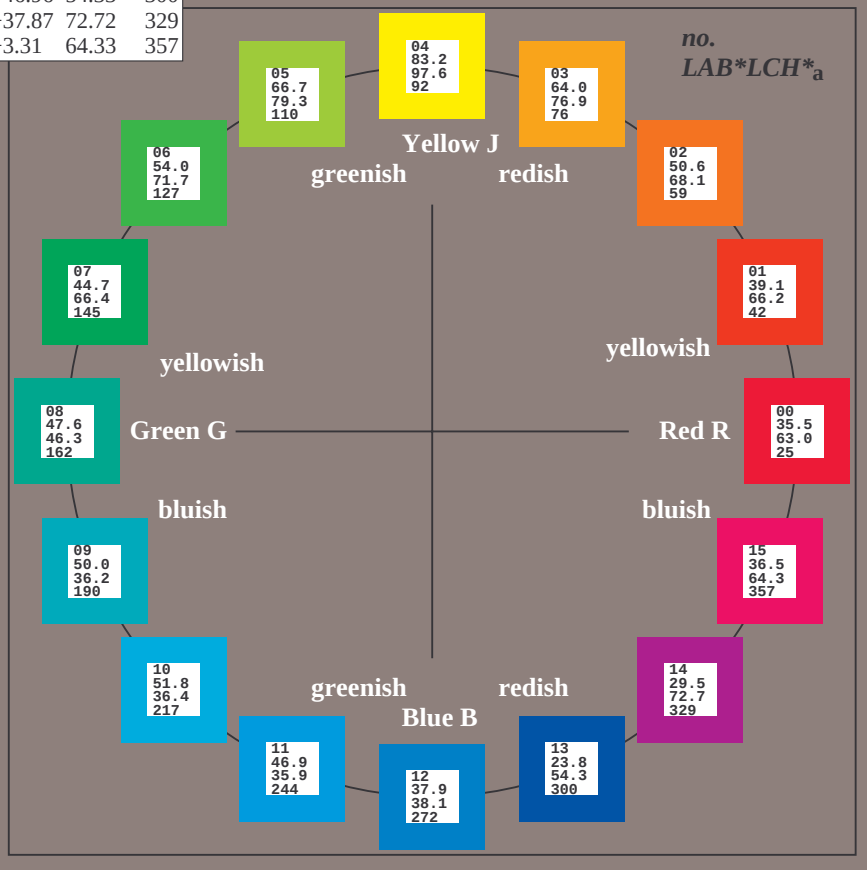


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

FRS15_90a; CIELAB data

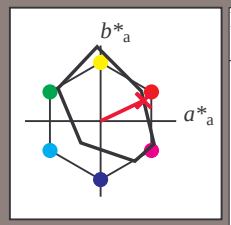
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r00j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

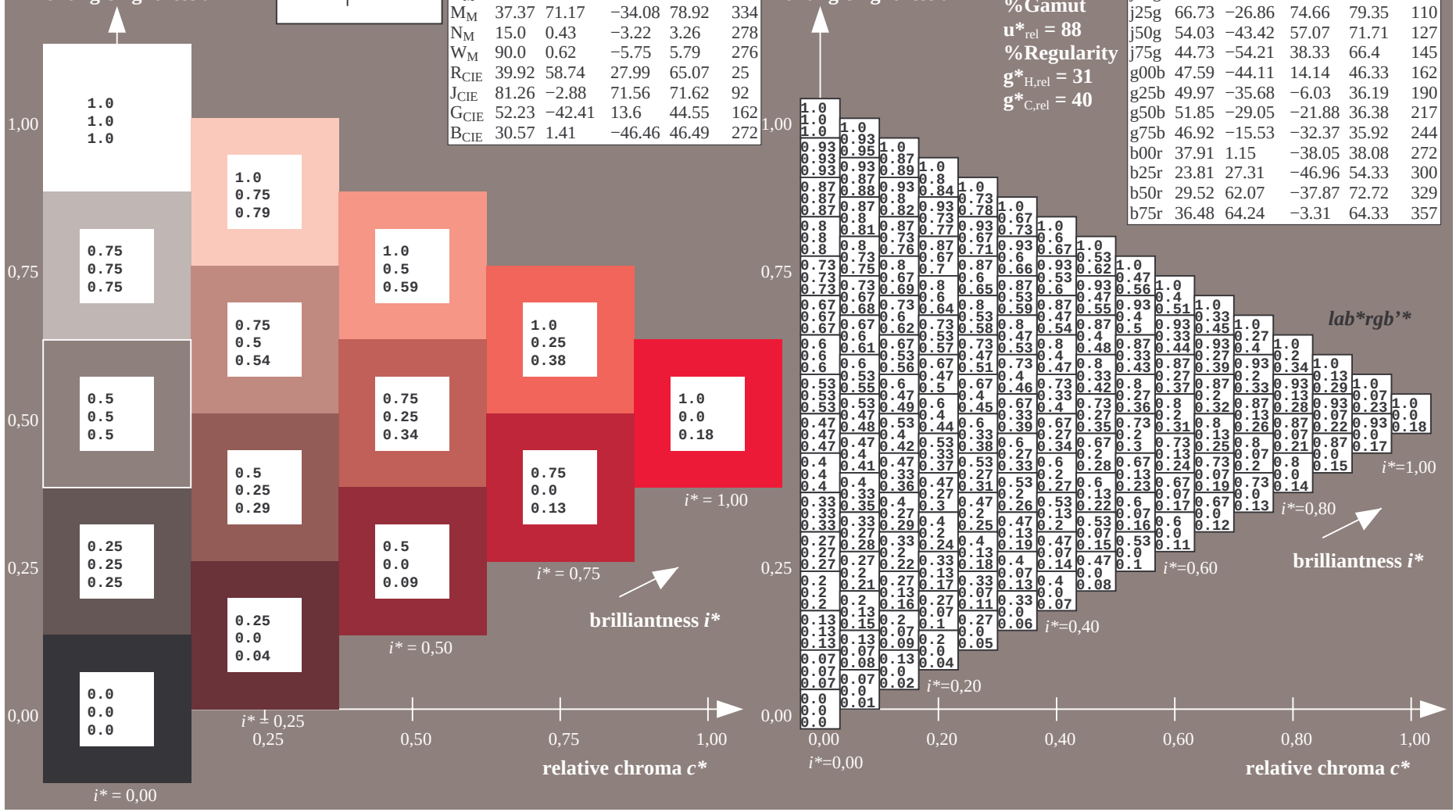
Data for maximum colour (Ma):
*LAB*LAB**$_{Ma}$: 35 57 27
*LAB*LCH**$_{Ma}$: 35 63 25
*lab*rgb**$_{Ma}$: 1.0 0.0 0.0
*lab*olv**$_{Ma}$: 1.0 0.0 0.18

u = r00j*
*lab*rgb'**

FRS15_90a; adapted (a) CIELAB data

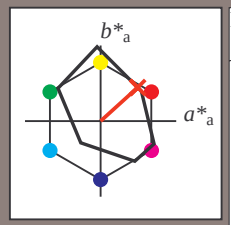
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = r25j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

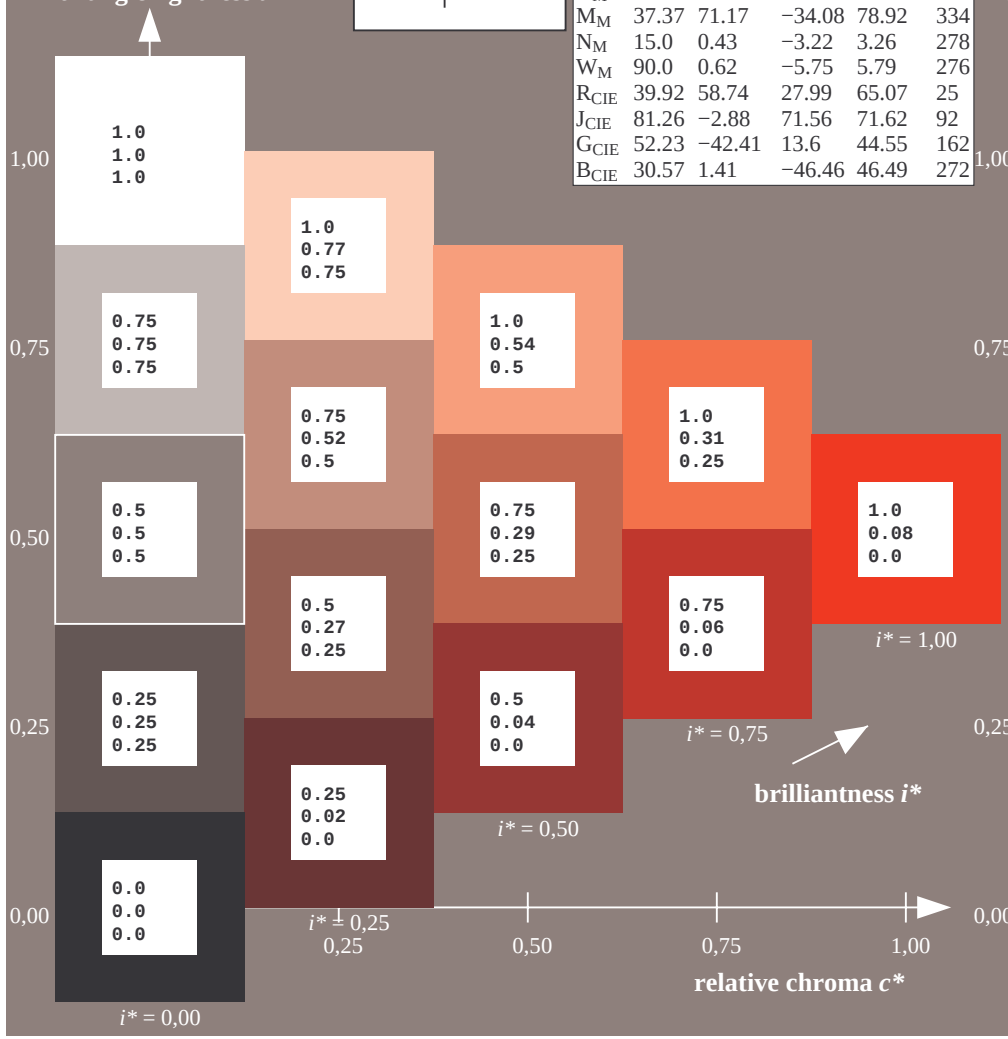
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 39 49 44
$LAB^*LCH^*_{Ma}$: 39 66 42
$lab^*rgb^*_{Ma}$: 1.0 0.25 0.0
$lab^*olv^*_{Ma}$: 1.0 0.08 0.0
triangle lightness t^*

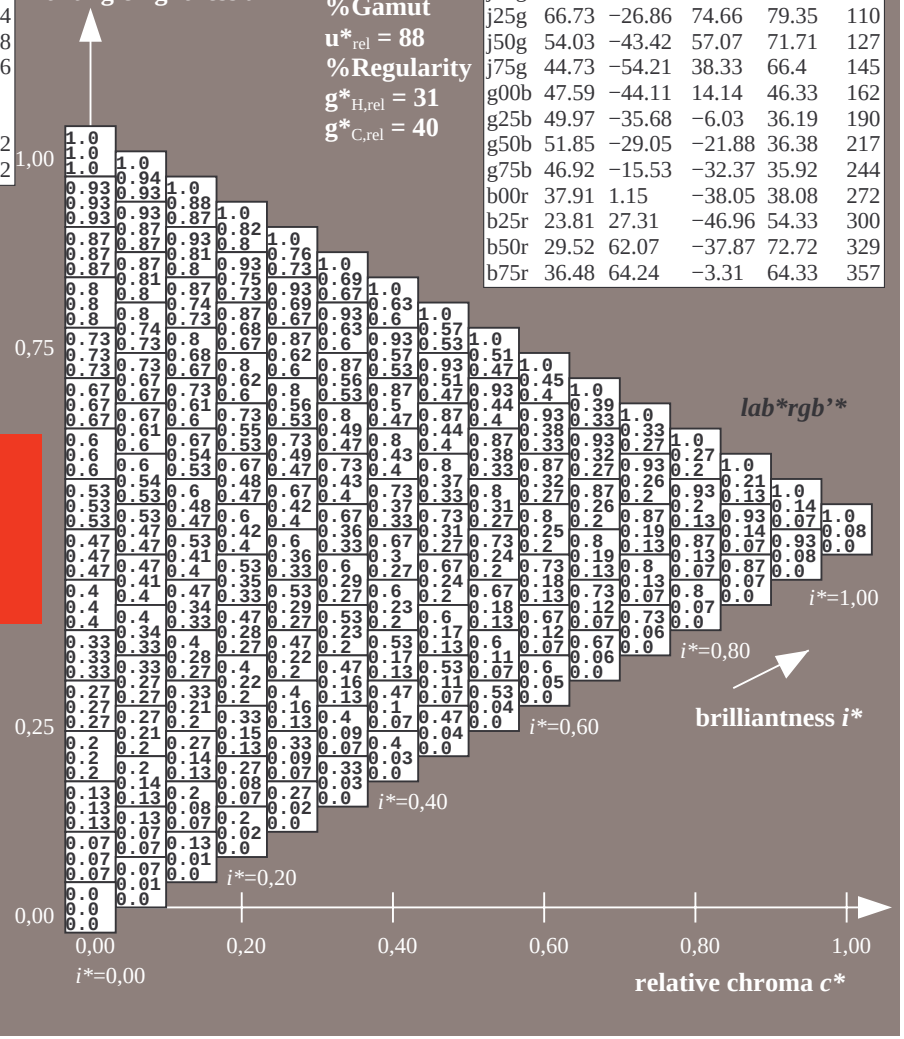
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

$u^* = r25j$
$lab^*rgb'^*$

FRS15_90a; adapted (a) CIELAB data

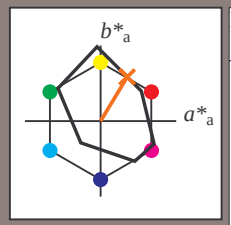
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r50j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

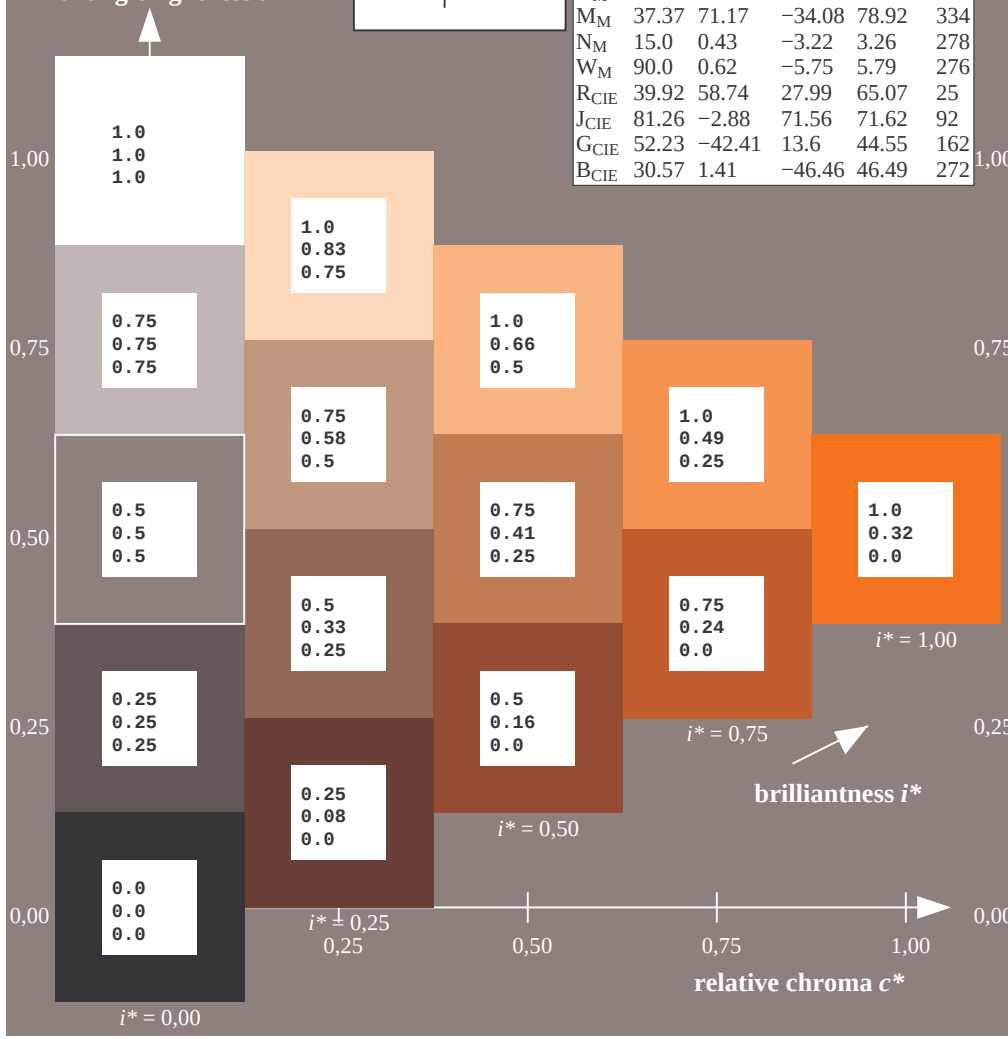
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

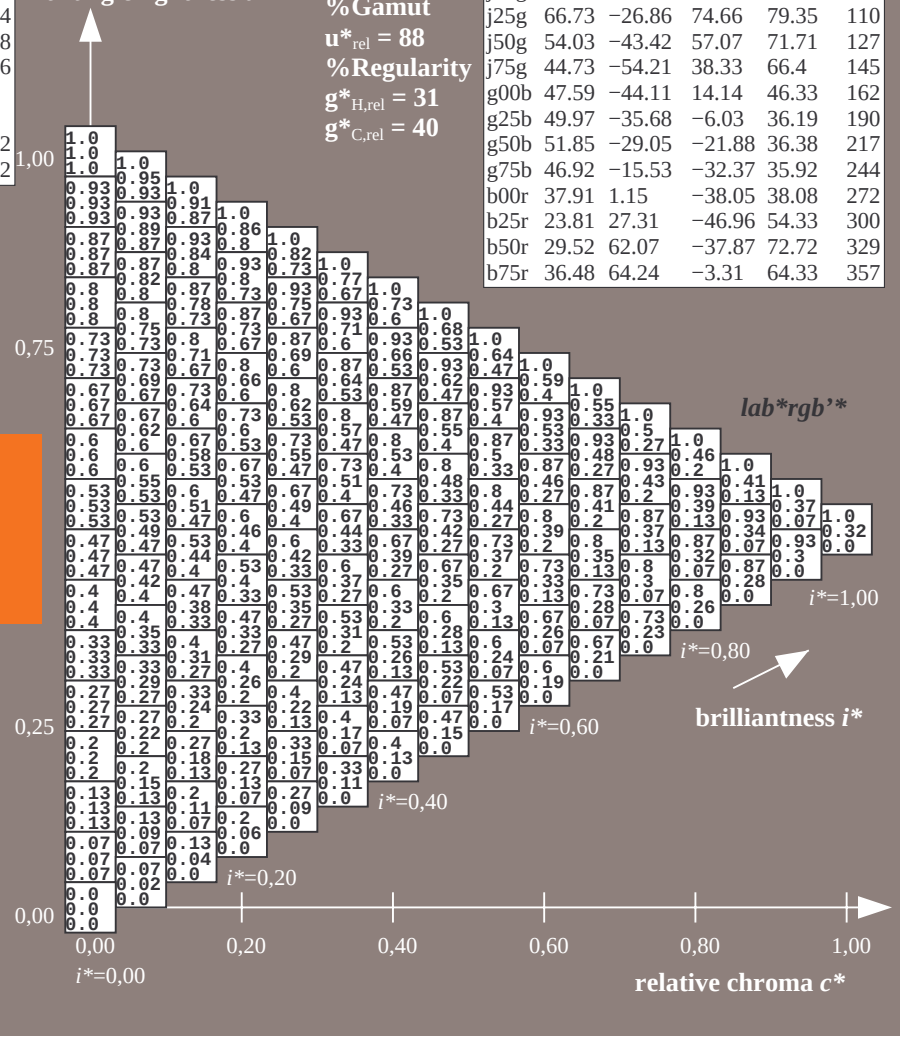
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 51 35 58**
***LAB*LCH*Ma*: 51 68 59**
***lab*rgb*Ma*: 1.0 0.5 0.0**
***lab*olv*Ma*: 1.0 0.32 0.0**

u* = r50j
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

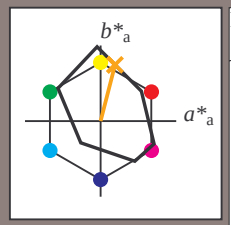




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

$u^* = r75j$
$lab^*rgb'^*$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = r75j$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

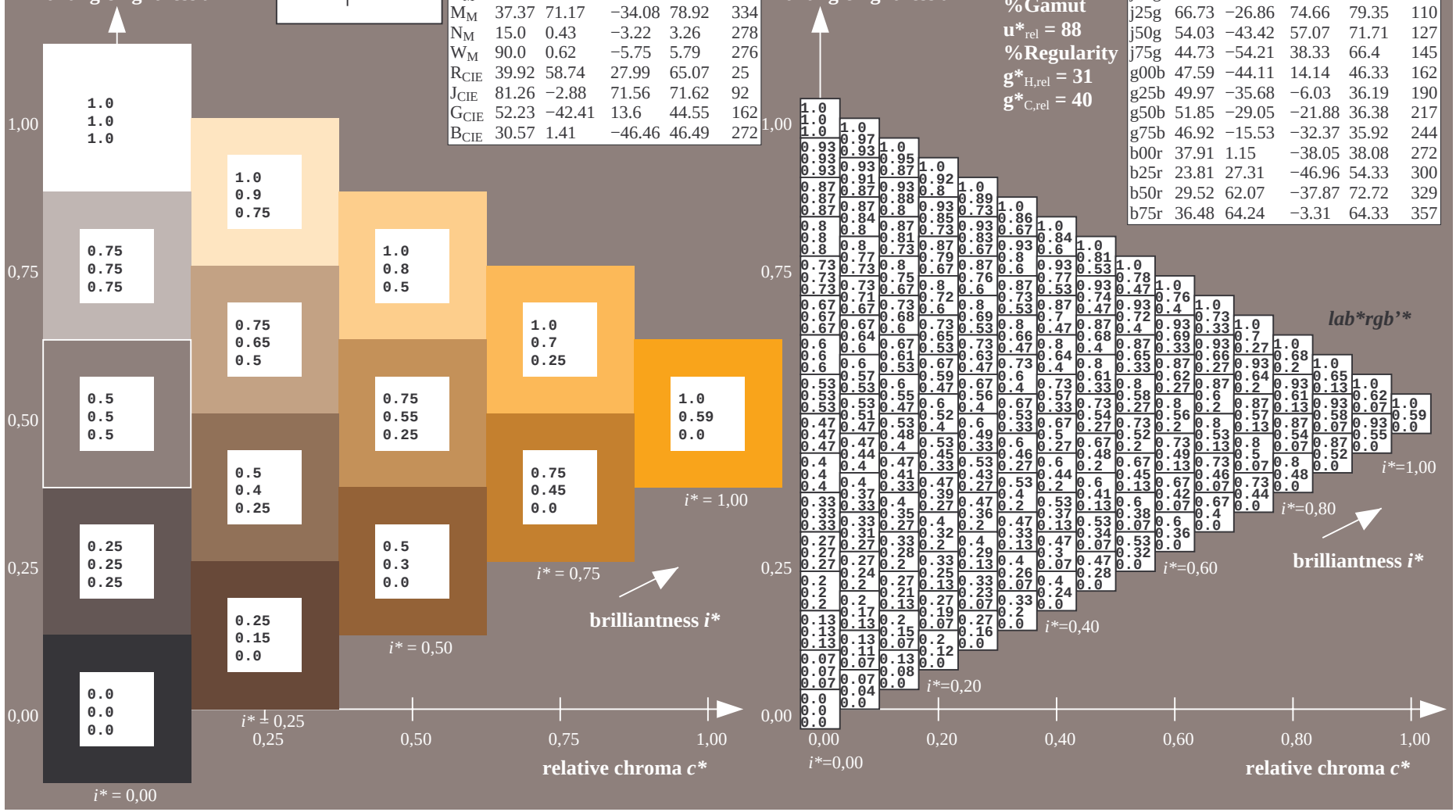
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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 19 74**
***LAB*LCH**$_{Ma}$: 64 77 76**
***lab*rgb**$_{Ma}$: 1.0 0.75 0.0**
***lab*olv**$_{Ma}$: 1.0 0.59 0.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

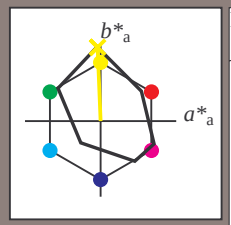
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j00g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

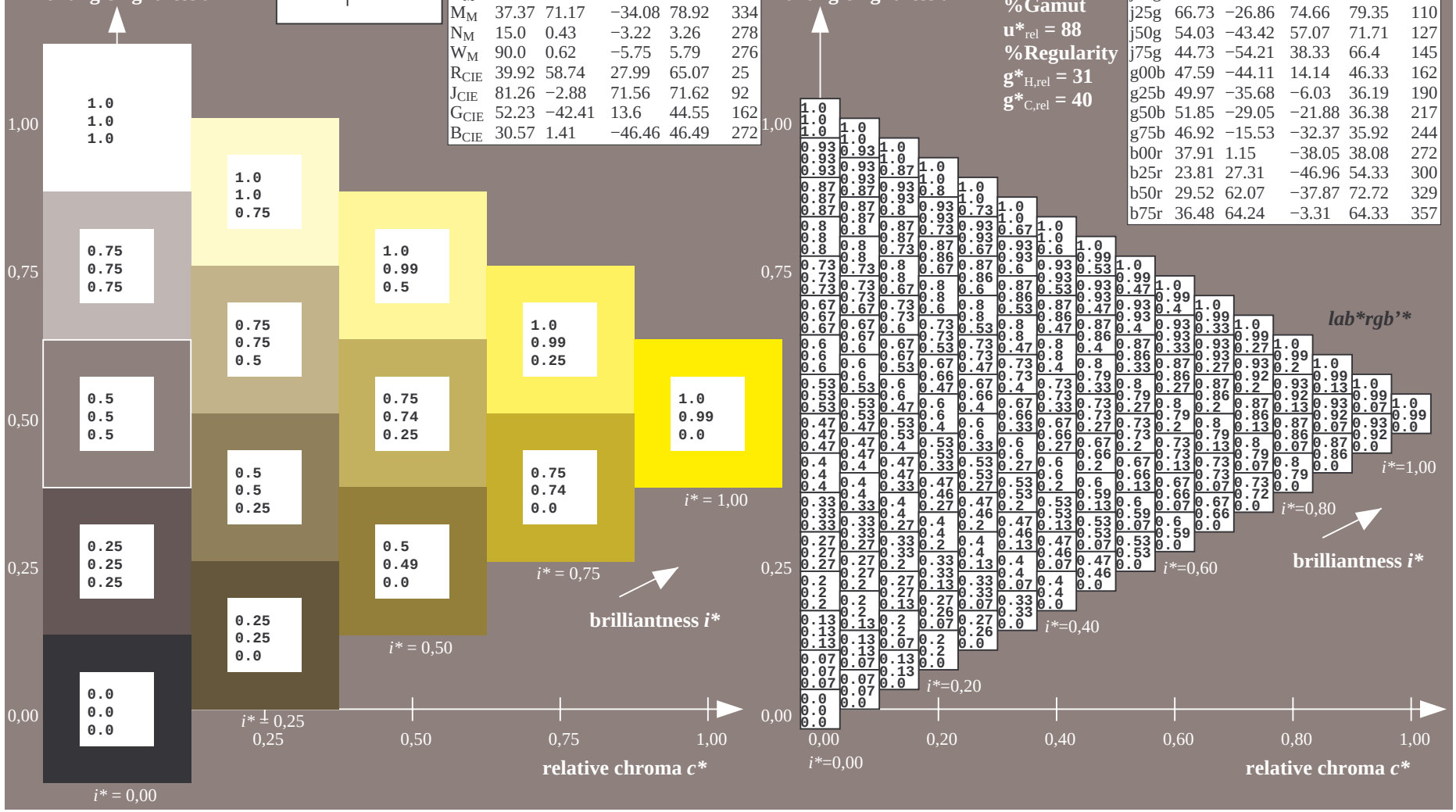
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 83 −3 98**
***LAB*LCH*$_{Ma}$*: 83 98 92**
***lab*rgb*$_{Ma}$*: 1.0 1.0 0.0**
***lab*olv*$_{Ma}$*: 1.0 0.99 0.0**
triangle lightness *t**

u* = j00g
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

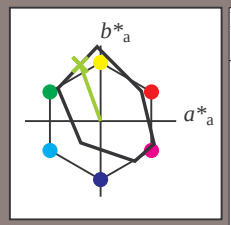
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = j25g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

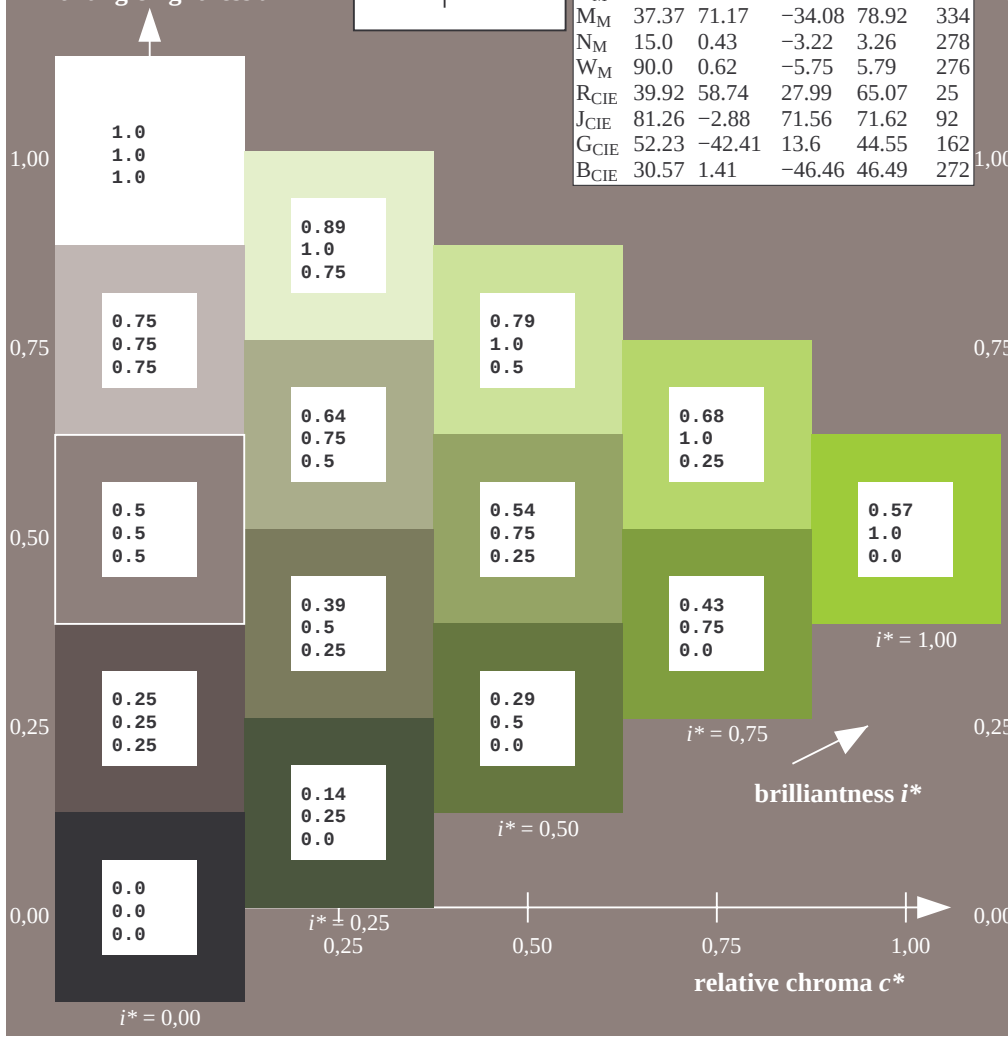
Data for maximum colour (Ma):
***LAB*LAB*$_{Ma}$*: 67 −26 75**
***LAB*LCH*$_{Ma}$*: 67 79 110**
***lab*rgb*$_{Ma}$*: 0.75 1.0 0.0**
***lab*olv*$_{Ma}$*: 0.57 1.0 0.0**

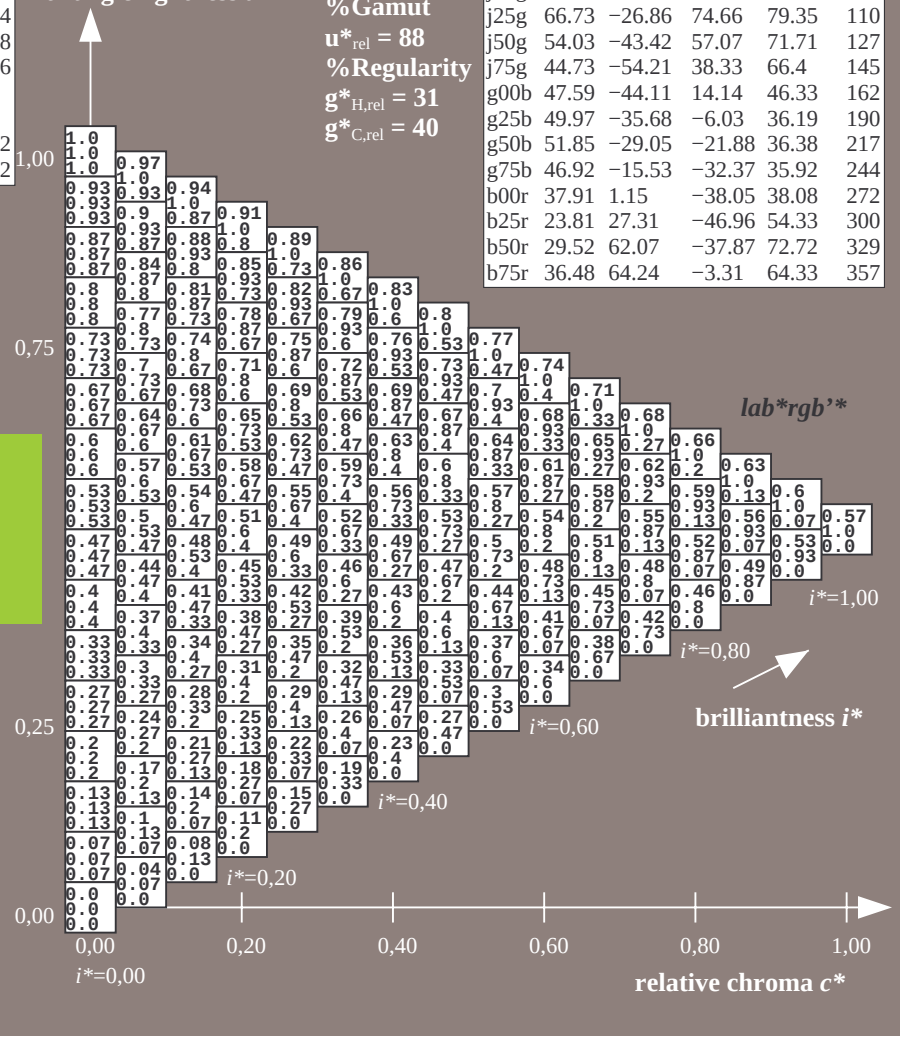
%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

u* = j25g
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

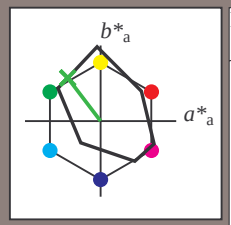
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = j50g*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

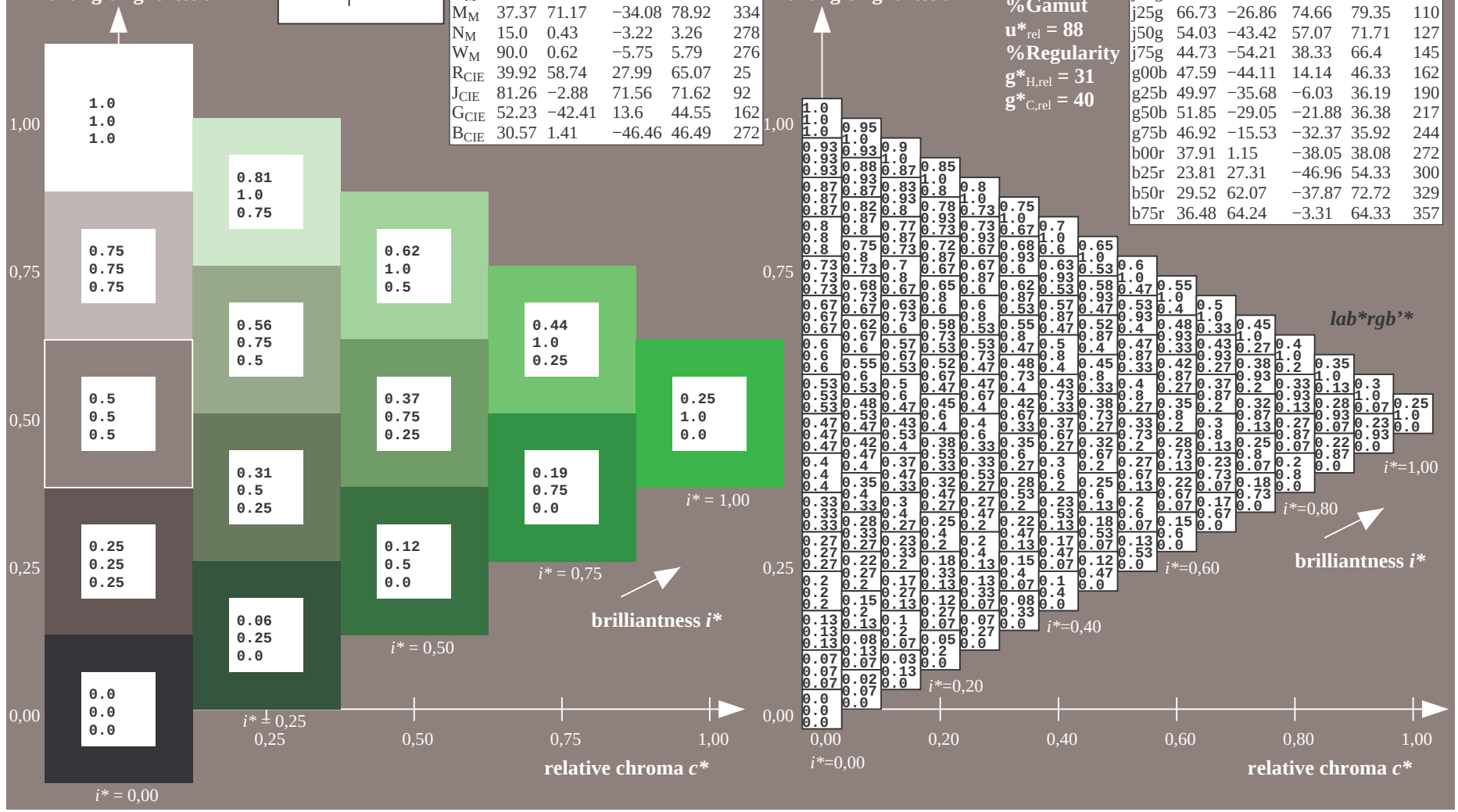
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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*: 54 −42 57**
***LAB*LCH*Ma*: 54 72 127**
***lab*rgb*Ma*: 0.5 1.0 0.0**
***lab*olv*Ma*: 0.25 1.0 0.0**

u* = j50g
lab*rgb'*

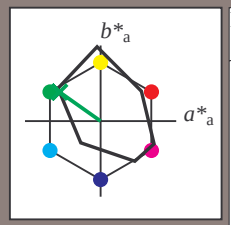
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

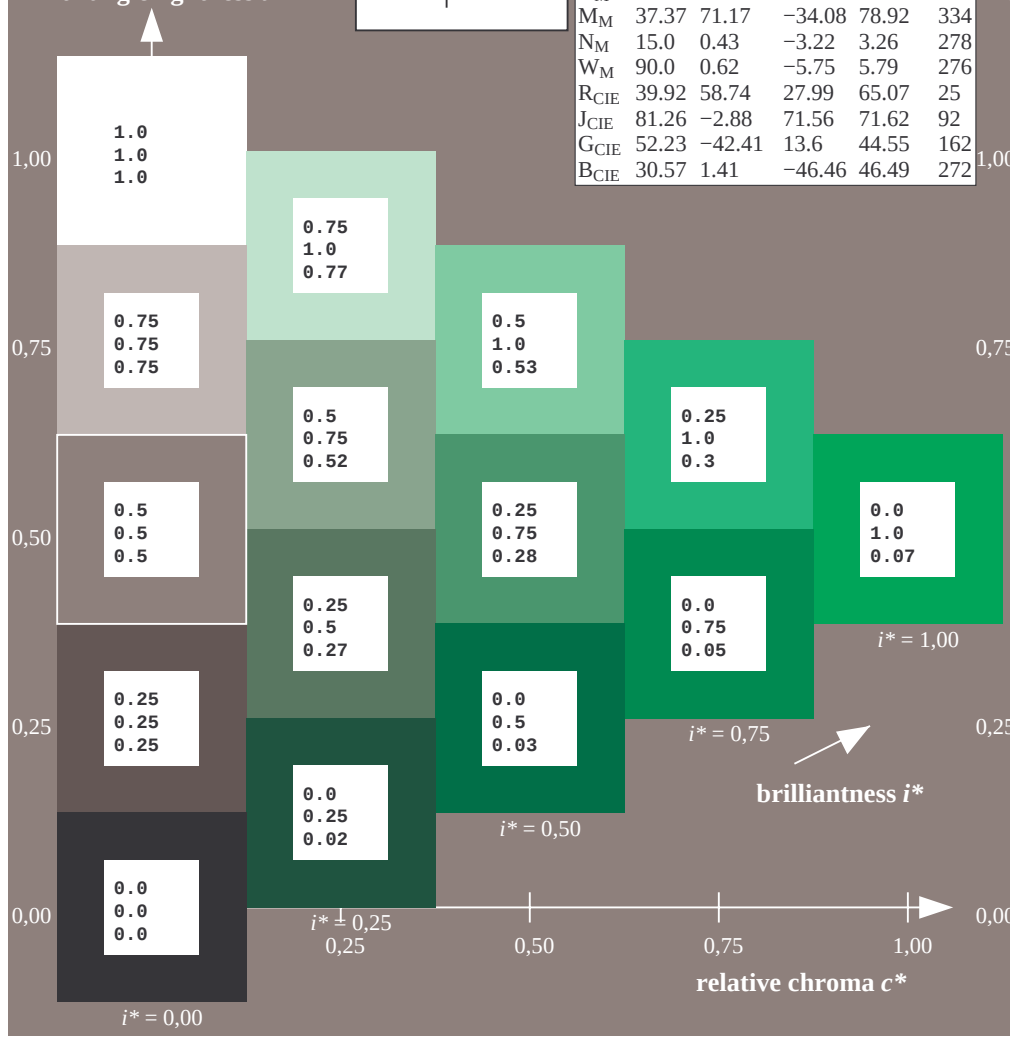
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

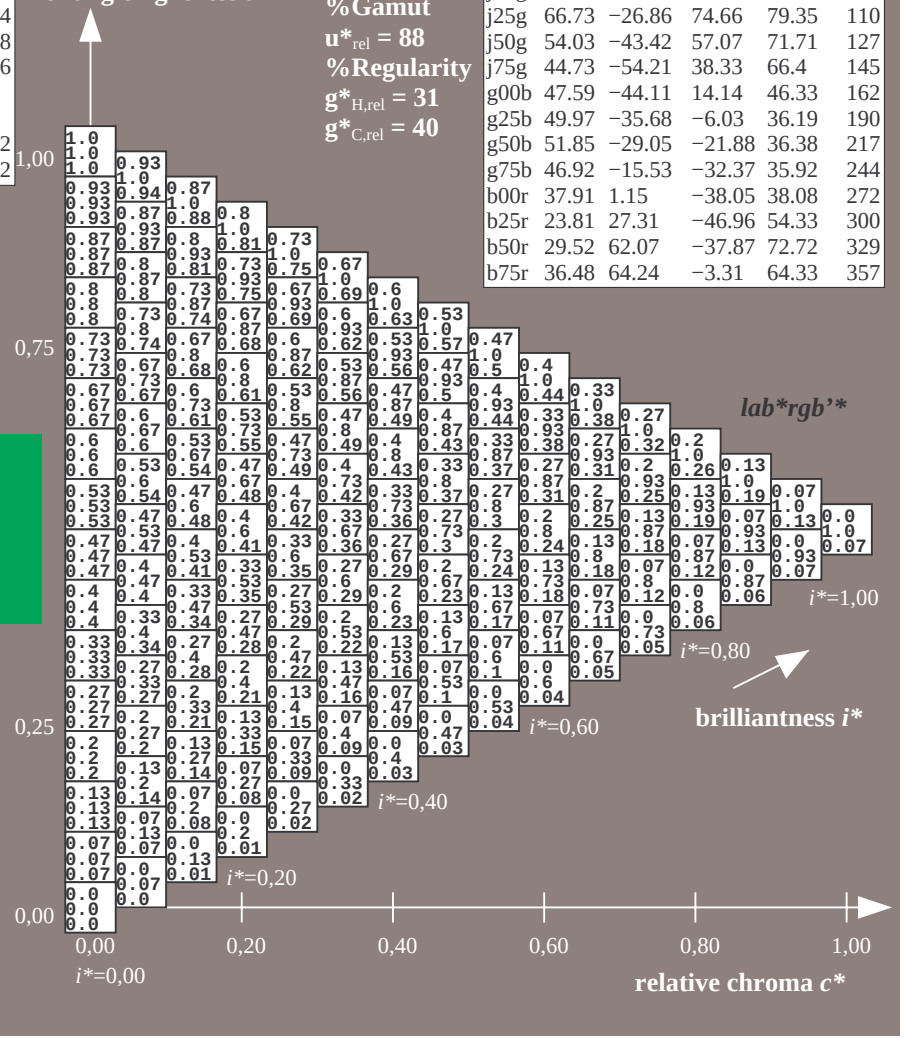
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 45 −53 38**
***LAB*LCH*Ma*: 45 66 145**
***lab*rgb*Ma*: 0.25 1.0 0.0**
***lab*olv*Ma*: 0.0 1.0 0.07**

u* = j75g
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

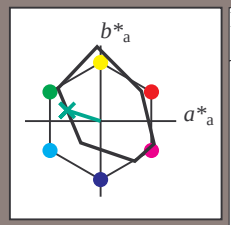
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

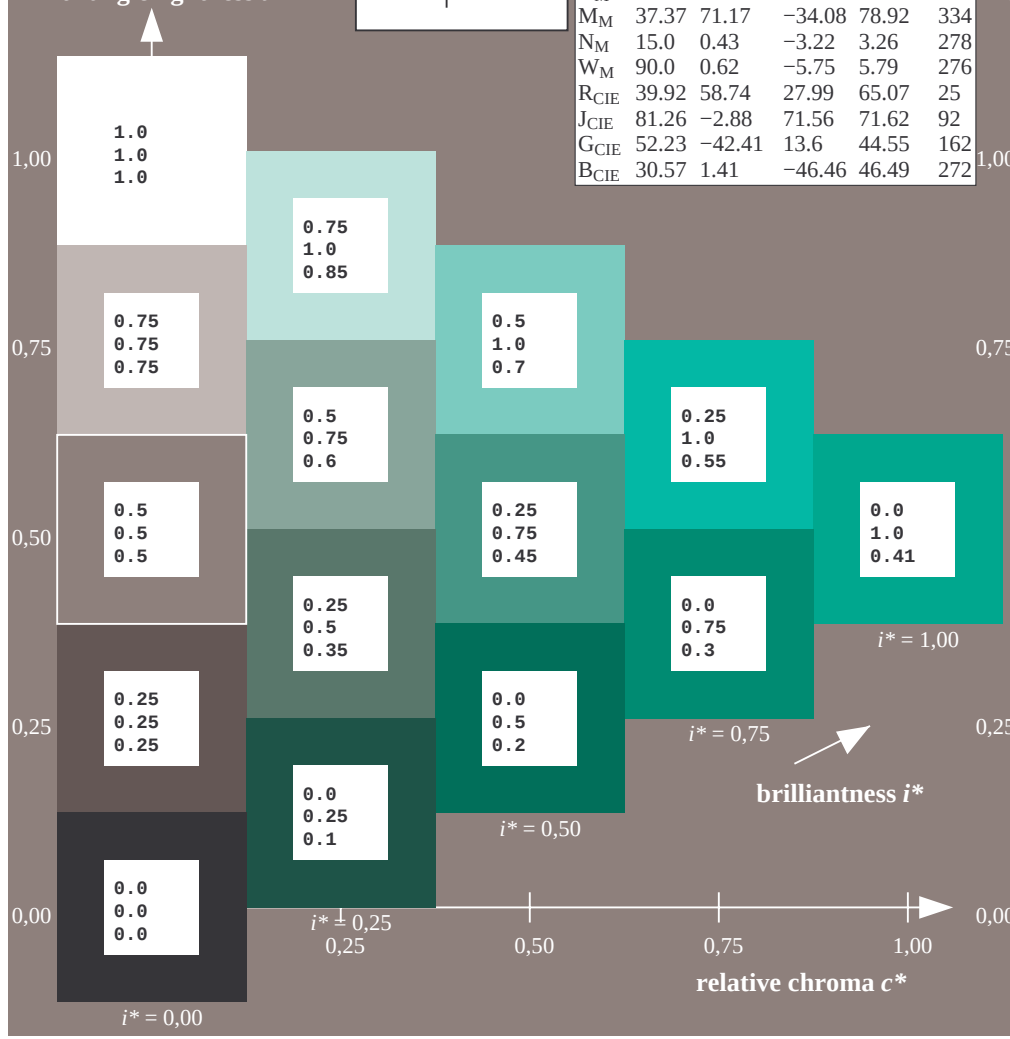
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

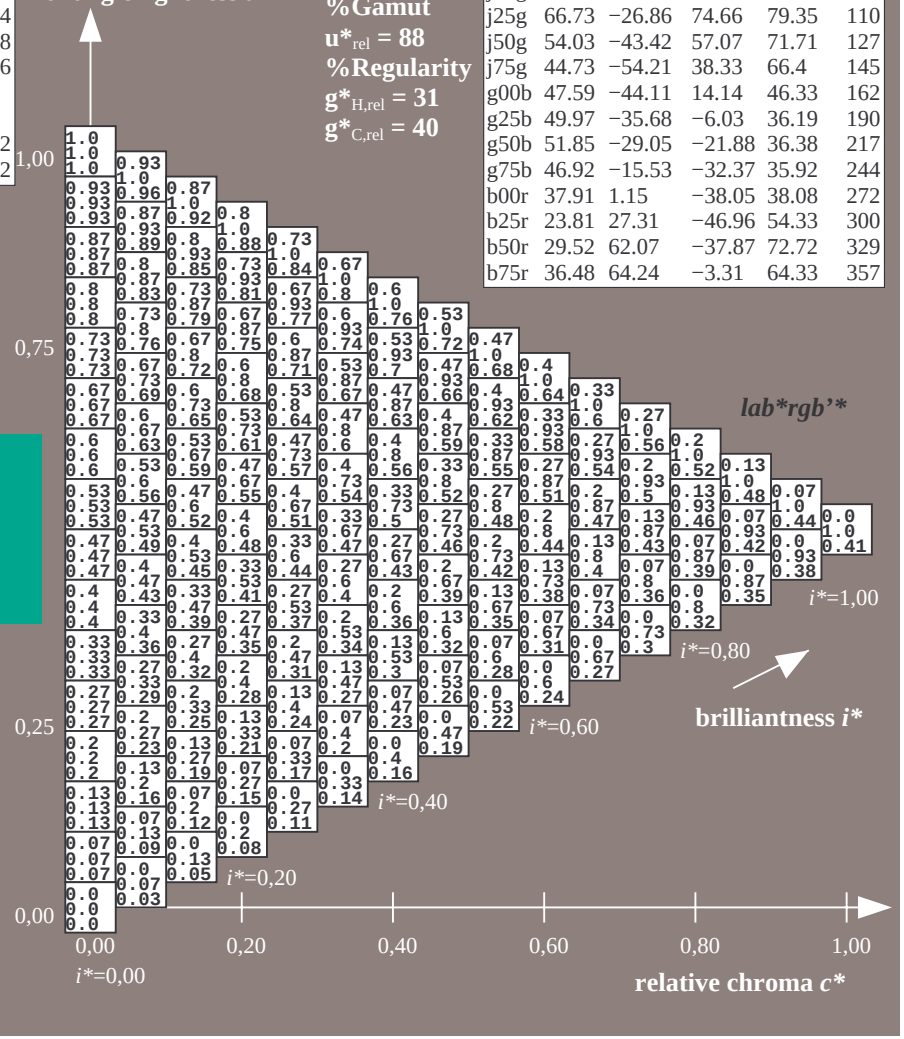
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 48 −43 14**
***LAB*LCH*Ma*: 48 46 162**
***lab*rgb*Ma*: 0.0 1.0 0.0**
***lab*olv*Ma*: 0.0 1.0 0.41**

u* = g00b
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

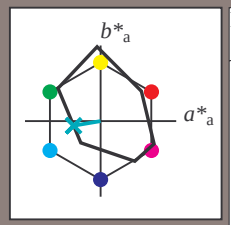
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
u* = g25b
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

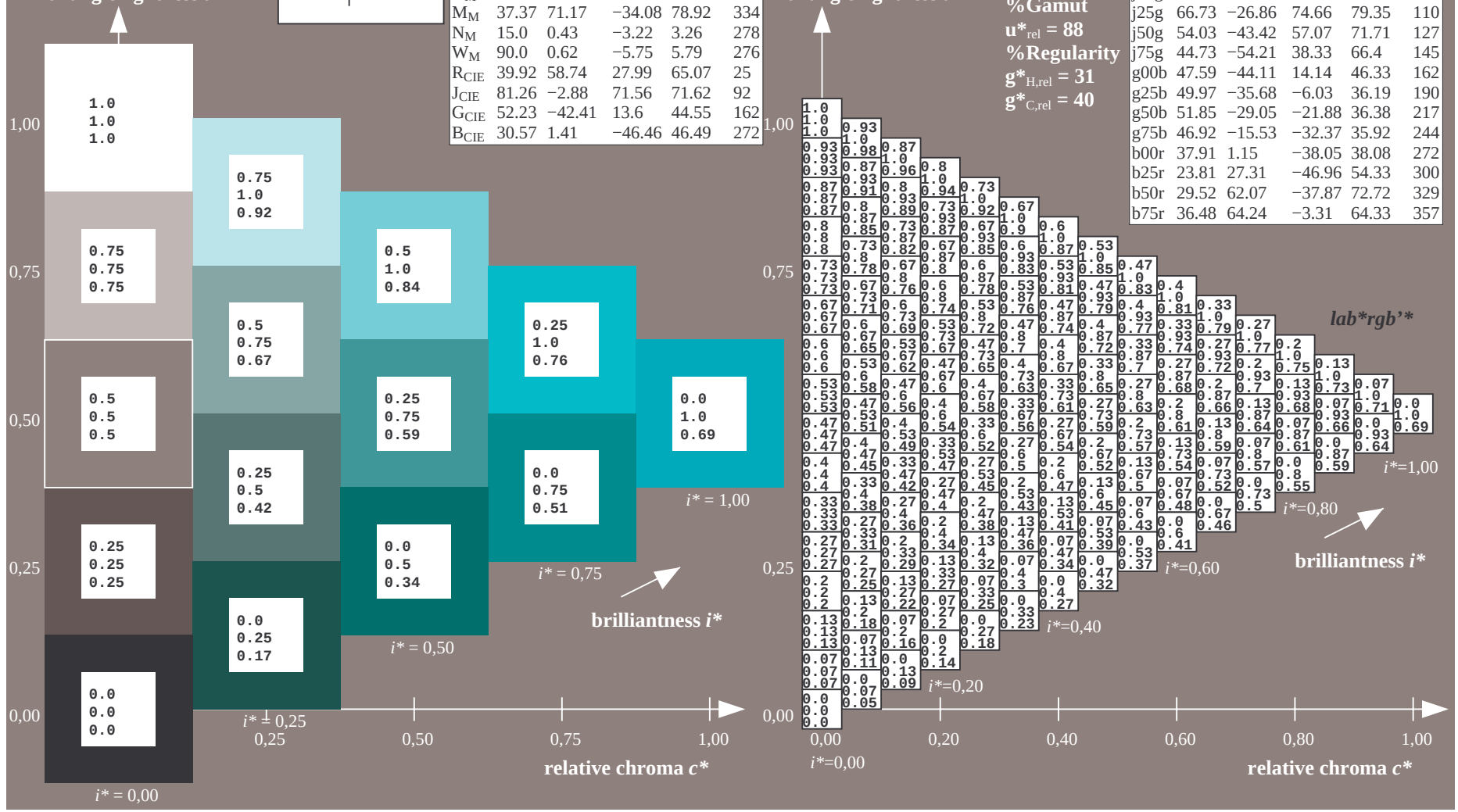
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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**$_{Ma}$: 50 −35 −5**
***LAB*LCH**$_{Ma}$: 50 36 190**
***lab*rgb**$_{Ma}$: 0.0 1.0 0.5**
***lab*olv**$_{Ma}$: 0.0 1.0 0.69**
triangle lightness *t**

u* = g25b
lab*rgb'*

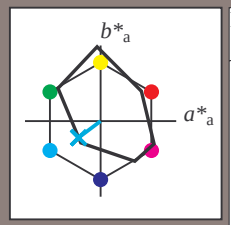
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g50b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

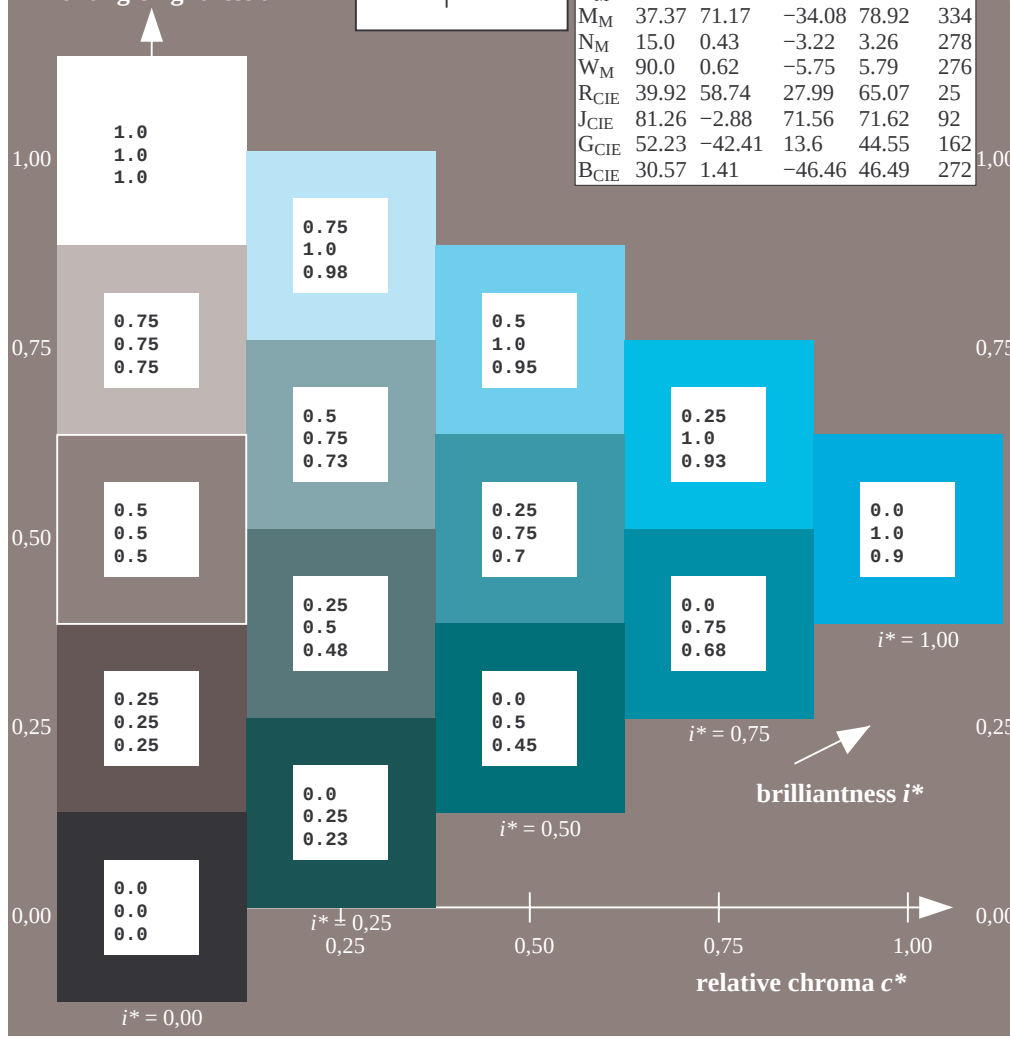
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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*: 52 −28 −21**
***LAB*LCH*Ma*: 52 36 217**
***lab*rgb*Ma*: 0.0 1.0 1.0**
***lab*olv*Ma*: 0.0 1.0 0.9**
triangle lightness *t**

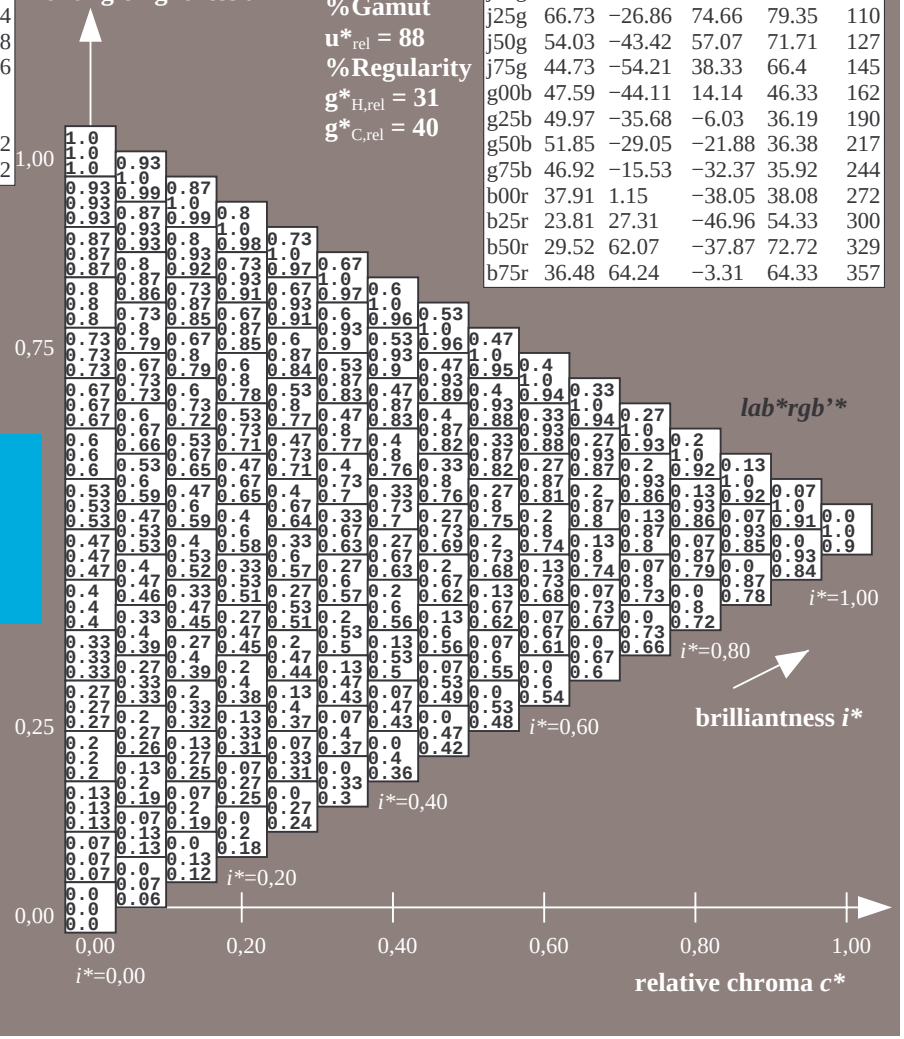
u* = g50b
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

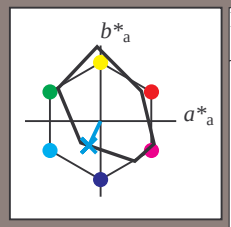


%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g75b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

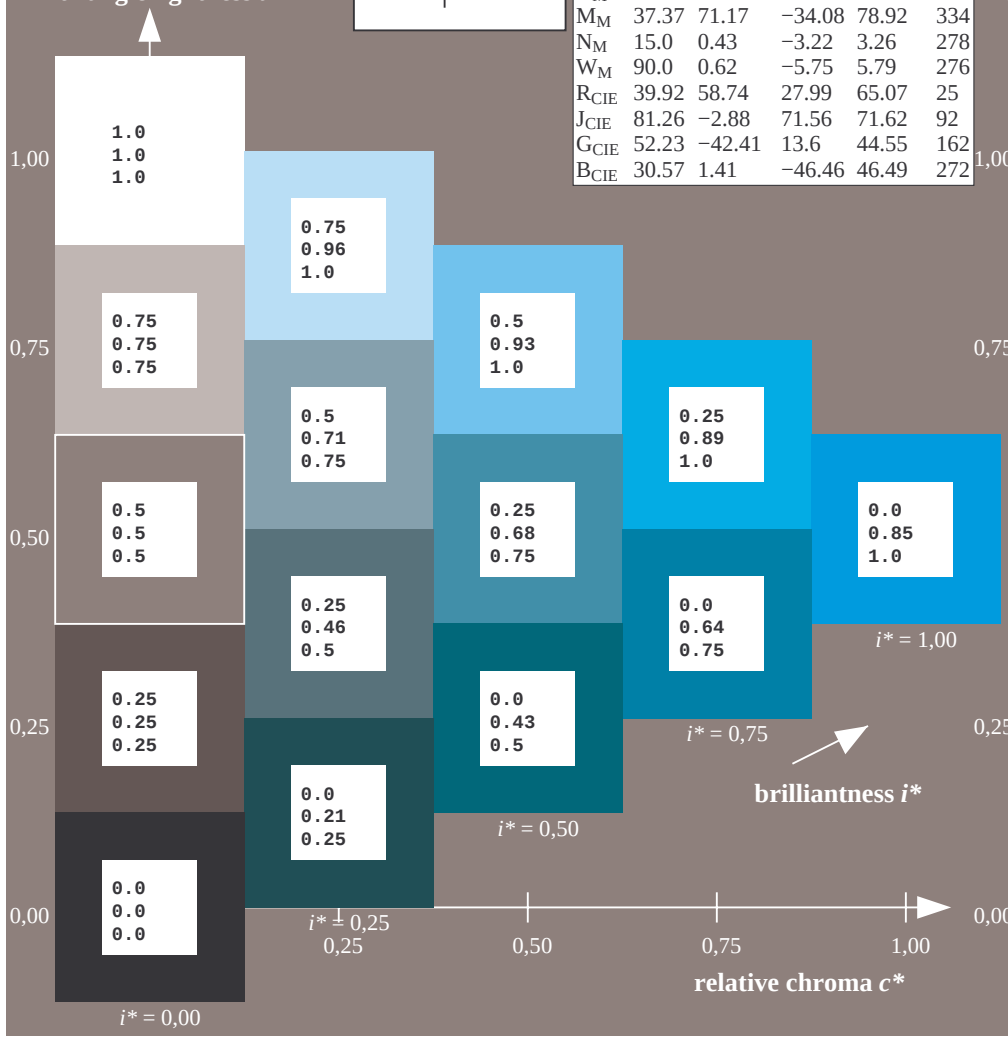
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

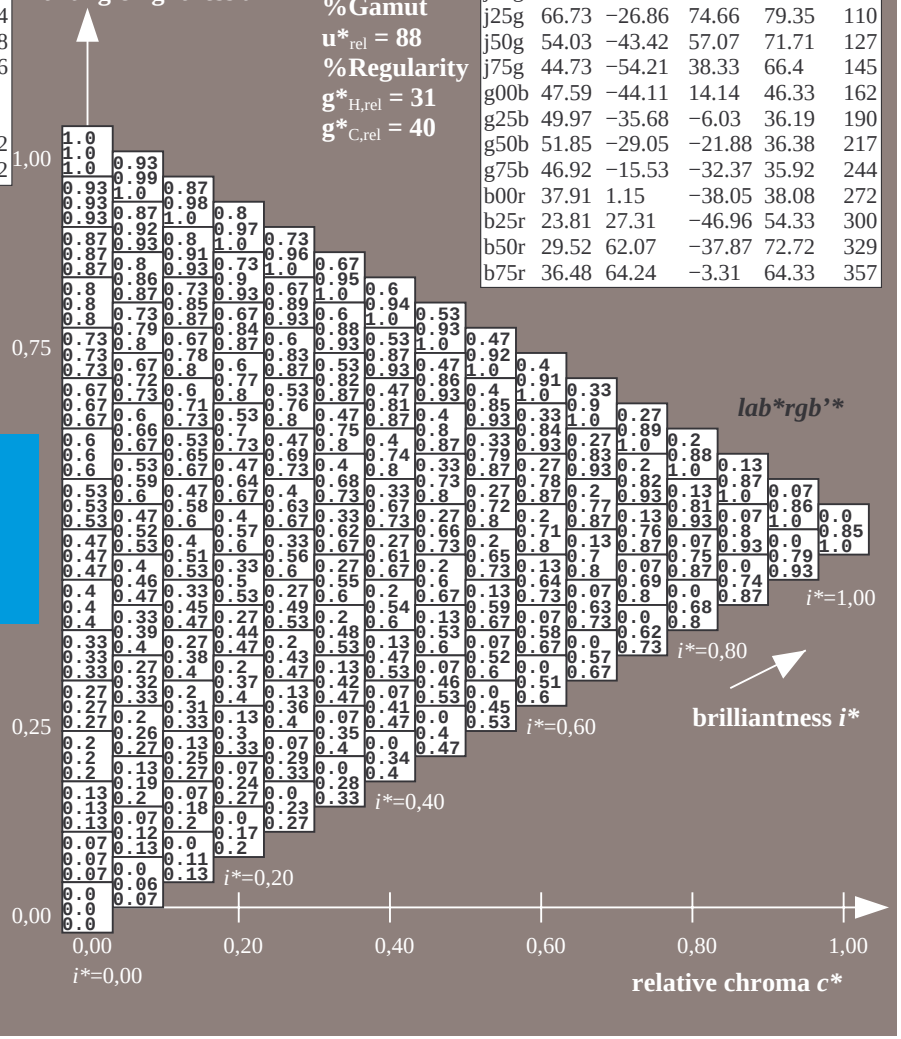
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 47 −15 −31**
***LAB*LCH*Ma*: 47 36 244**
***lab*rgb*Ma*: 0.0 0.5 1.0**
***lab*olv*Ma*: 0.0 0.85 1.0**

u* = g75b
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

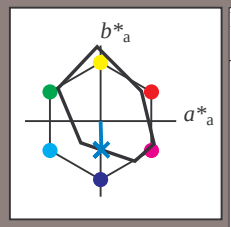
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = b00r*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

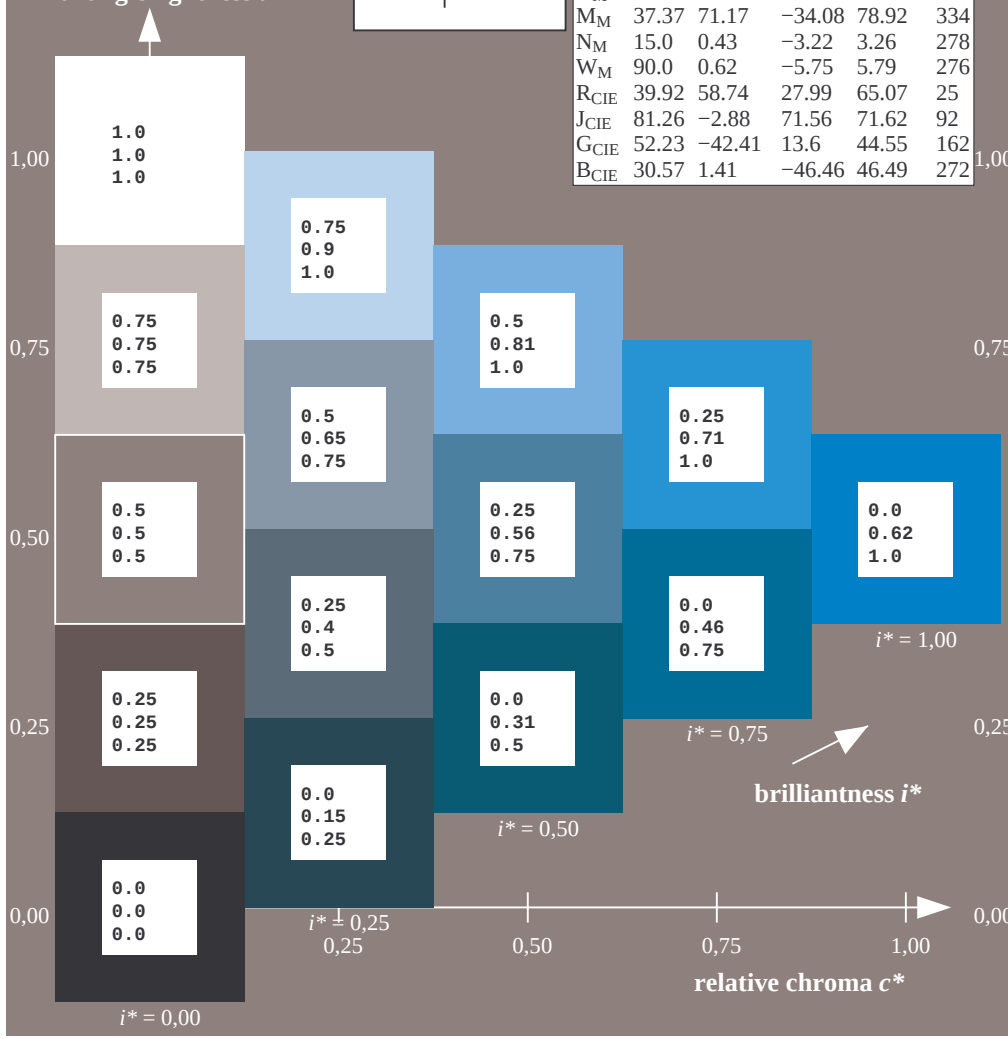
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

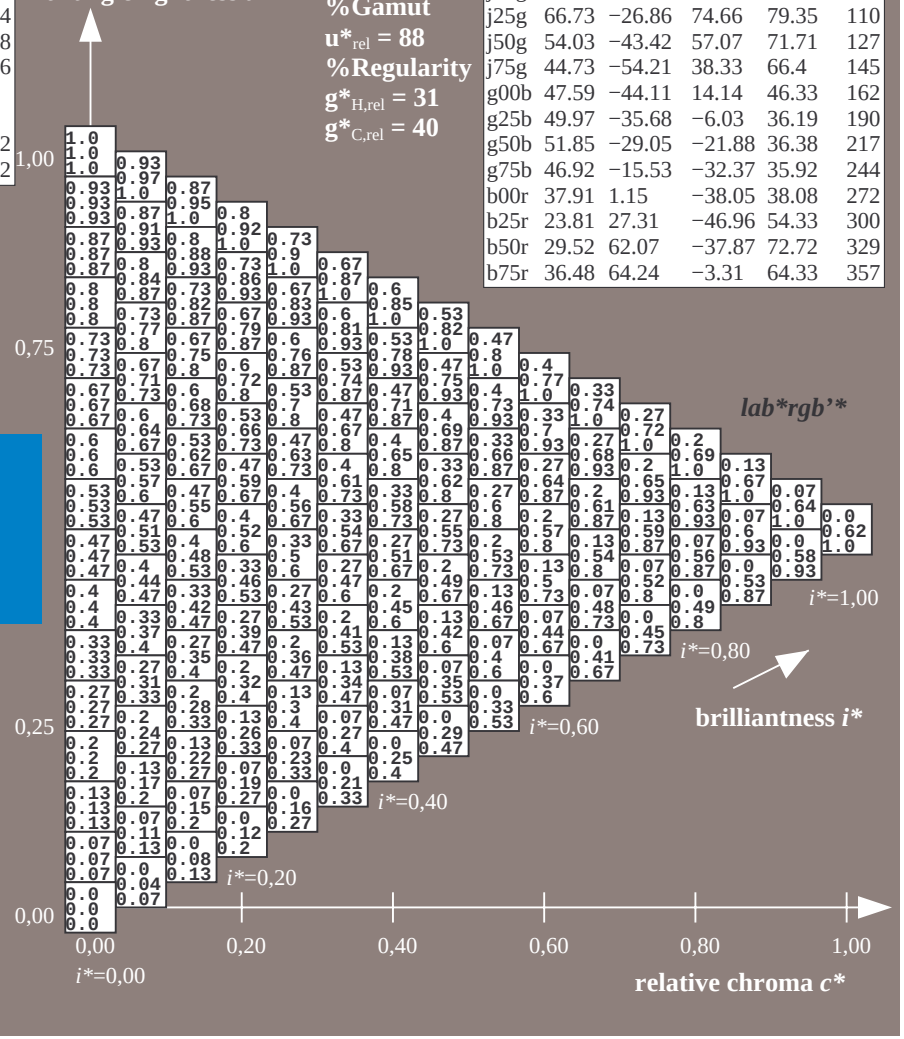
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 38 1 −37**
***LAB*LCH*Ma*: 38 38 272**
***lab*rgb*Ma*: 0.0 0.0 1.0**
***lab*olv*Ma*: 0.0 0.62 1.0**

u* = b00r
lab*rgb'*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

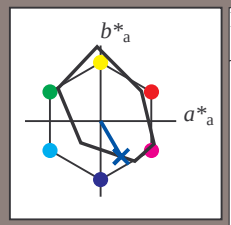




Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

$u^* = b25r$
$lab^*rgb'^*$

data for any colour:
lab^*tch^* and lab^*icu^*
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

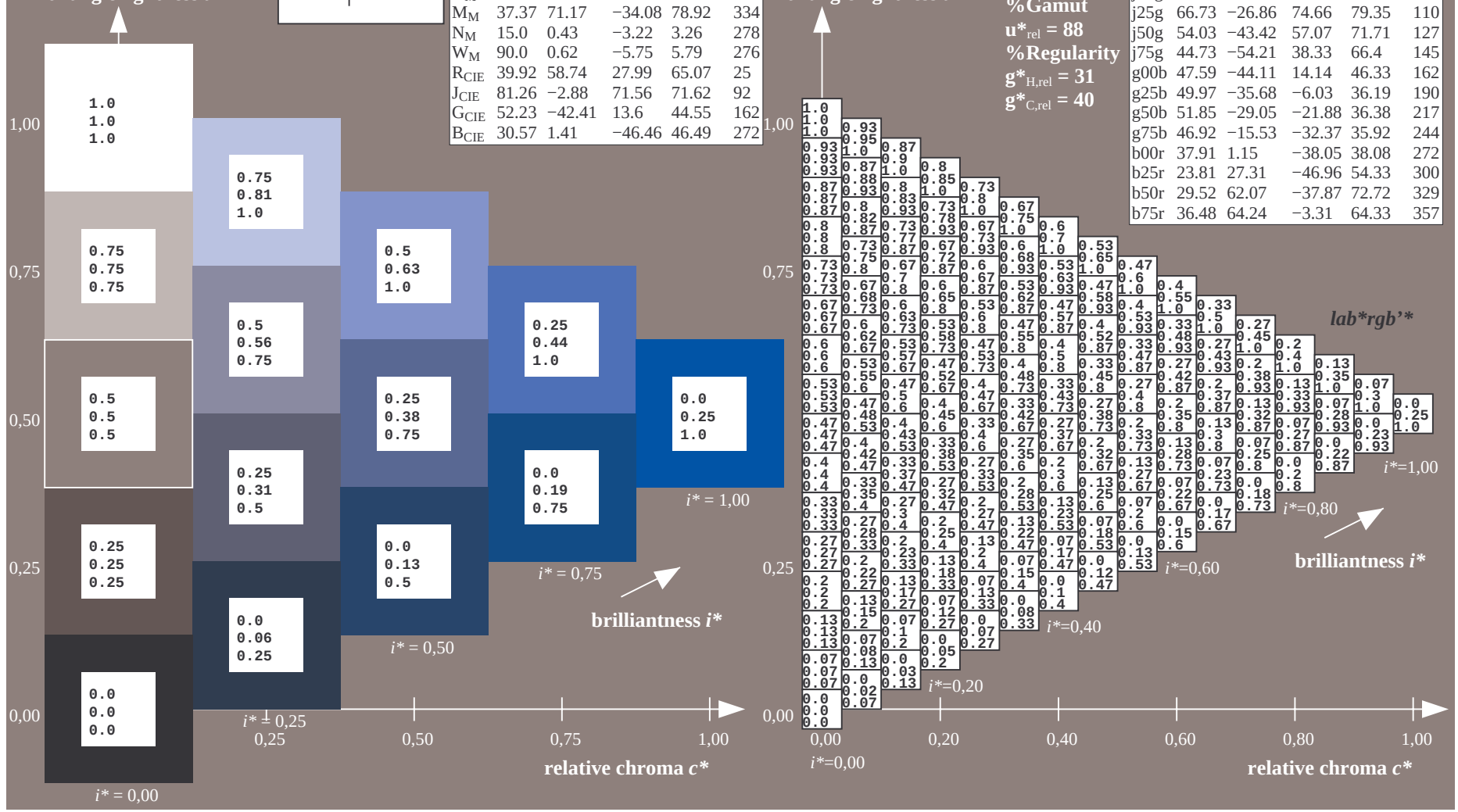
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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):
***$LAB^*LAB^*_{Ma}$*: 24 27 −46**
***$LAB^*LCH^*_{Ma}$*: 24 54 300**
***$lab^*rgb^*_{Ma}$*: 0.5 0.0 1.0**
***$lab^*olv^*_{Ma}$*: 0.0 0.25 1.0**
triangle lightness t^*

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

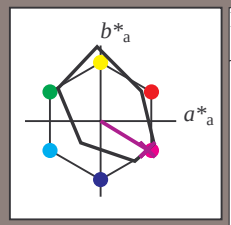
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

data for any colour:
*lab*tch** **and** *lab*icu**
elementary hue text:
$u^* = b50r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

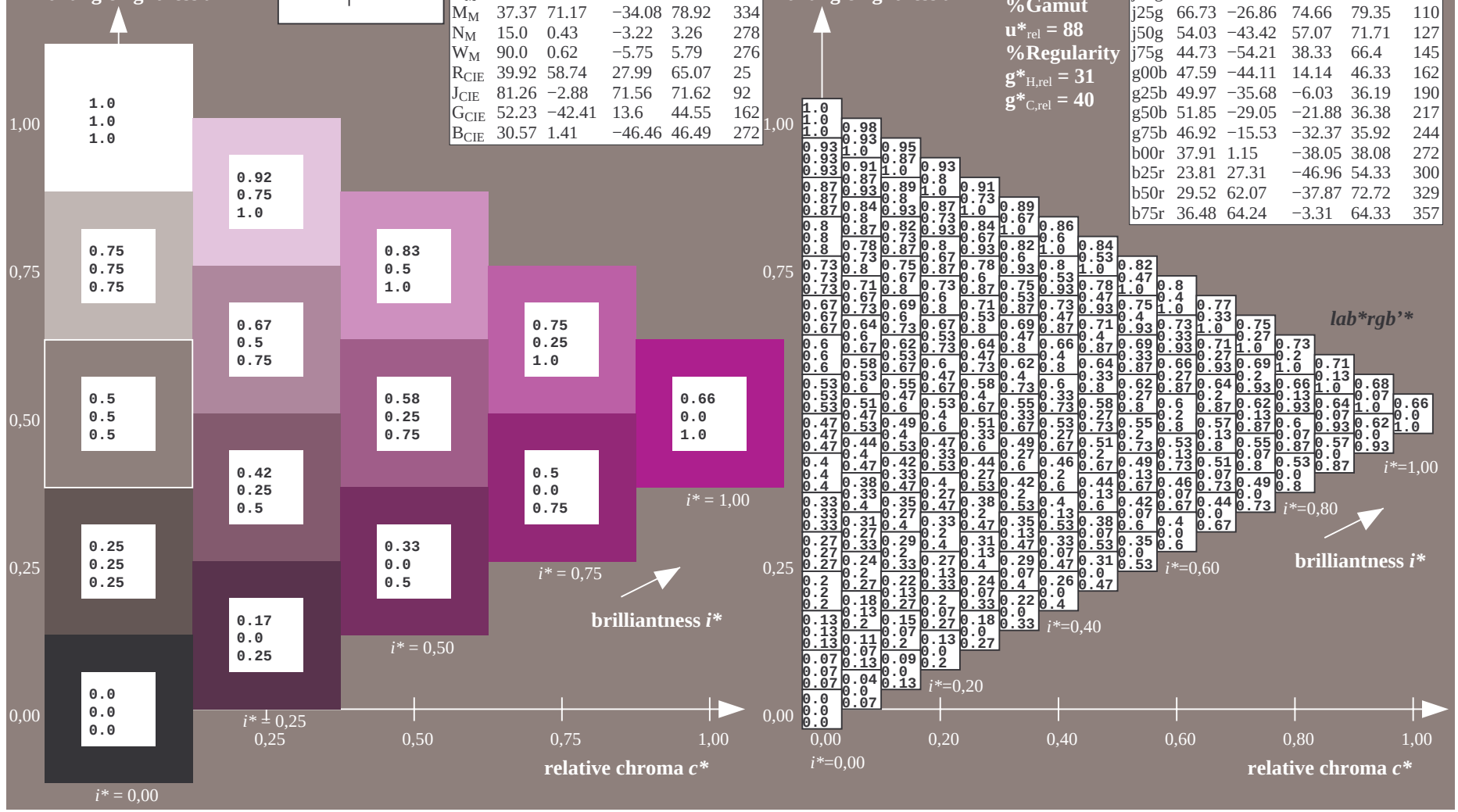
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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):
$LAB^*LAB^*_{Ma}$: 30 62 −37
$LAB^*LCH^*_{Ma}$: 30 73 329
$lab^*rgb^*_{Ma}$: 1.0 0.0 1.0
$lab^*olv^*_{Ma}$: 0.66 0.0 1.0

$u^* = b50r$
$lab^*rgb'^*$

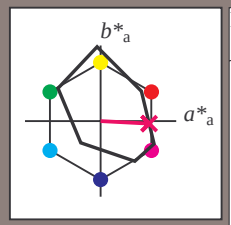
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
$u^* = b75r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

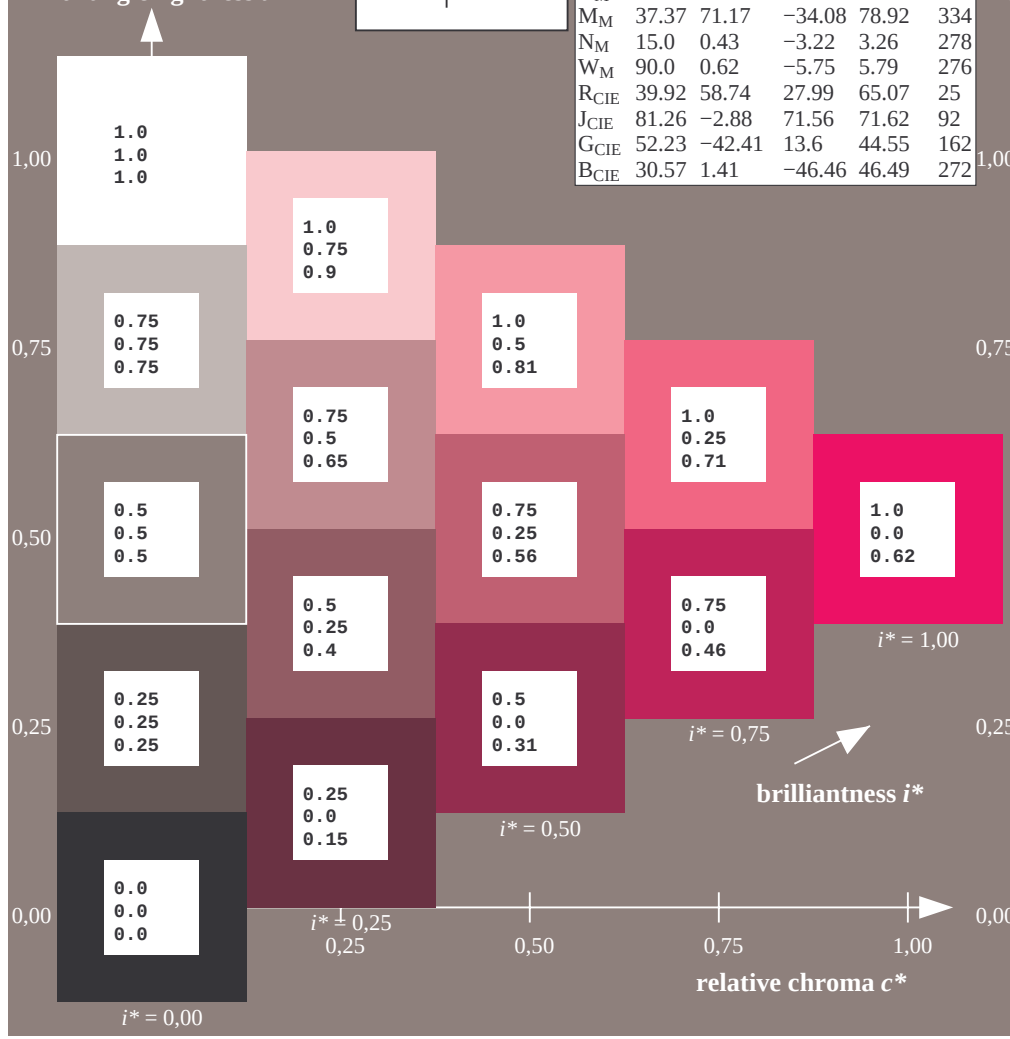
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

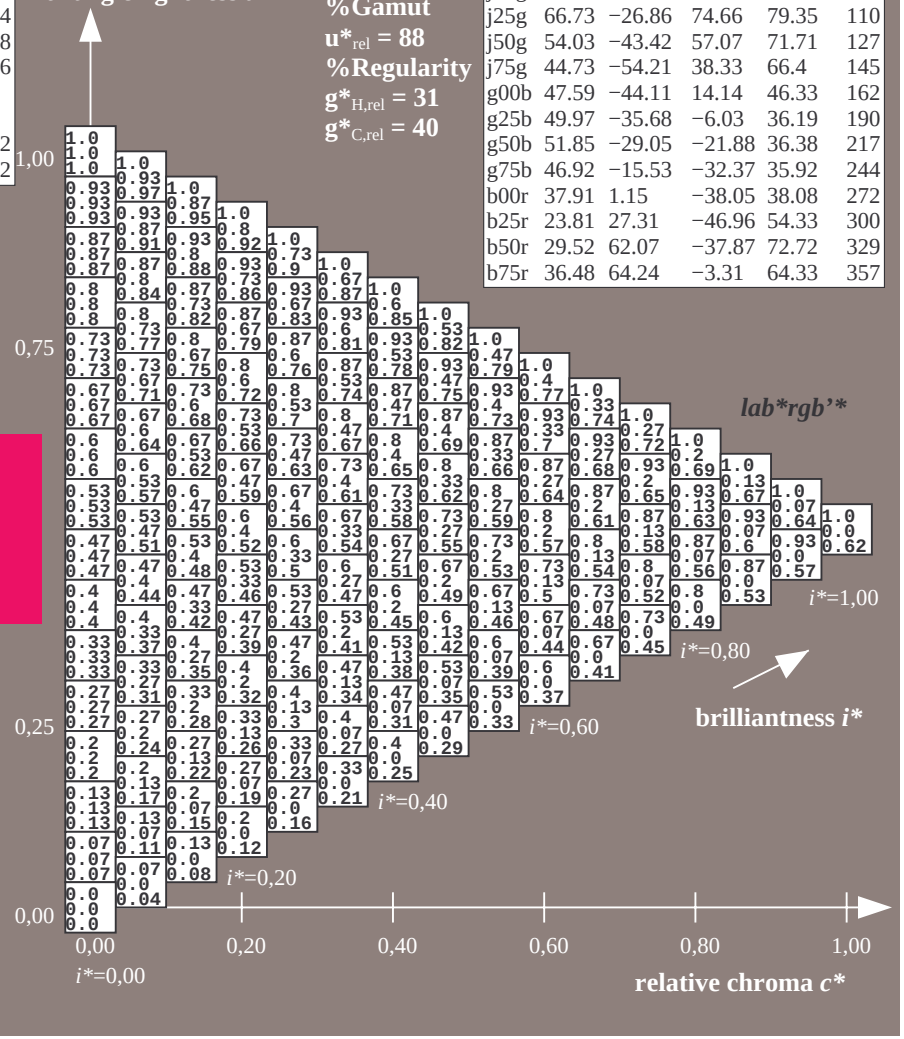
Data for maximum colour (Ma):
$LAB^*LAB^*_{Ma}$: 36 64 −2
$LAB^*LCH^*_{Ma}$: 36 64 357
$lab^*rgb^*_{Ma}$: 1.0 0.0 0.5
$lab^*olv^*_{Ma}$: 1.0 0.0 0.62

$u^* = b75r$
$lab^*rgb'^*$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



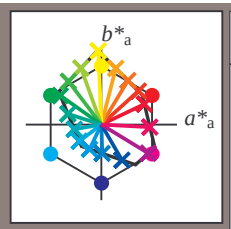


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	*lab*rgb'**			
01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.13	0.13	0.13	0.13
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.25	0.25	0.25	0.25
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.25	0.25	0.25	0.25
04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.38	0.38	0.38	0.38
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.38	0.38	0.38	0.38
05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.5	0.5	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.5	0.5	0.5	0.5
06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.63	0.63	0.63	0.63
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.63	0.63	0.63	0.63
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.63	0.63	0.63	0.63
07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.75	0.75	0.75	0.75
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.75	0.75	0.75	0.75
08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.88	0.88	0.88	0.88
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.88	0.88	0.88	0.88
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.88	0.88	0.88	0.88
09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	1.0	1.0	1.0
10	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0
11	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.07	0.07	0.07	0.07
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.07	0.07	0.07	0.07
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.07	0.07	0.07	0.07
12	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13
13	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.2	0.2	0.2	0.2
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.2	0.2	0.2	0.2
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.2	0.2	0.2	0.2
14	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.27	0.27	0.27	0.27
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.27	0.27	0.27	0.27
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.27	0.27	0.27	0.27
15	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.33	0.33	0.33	0.33
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.33	0.33	0.33	0.33
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.33	0.33	0.33	0.33
16	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.4	0.4	0.4	0.4
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.4	0.4	0.4	0.4
17	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.47	0.47	0.47	0.47
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.47	0.47	0.47	0.47
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.47	0.47	0.47	0.47
18	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.53	0.53	0.53
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.53	0.53	0.53	0.53
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.53	0.53	0.53	0.53
19	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.6	0.6	0.6	0.6
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.6	0.6	0.6	0.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.6	0.6	0.6	0.6
20	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.67	0.67	0.67	0.67
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.67	0.67	0.67	0.67
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.67	0.67	0.67	0.67
21	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.73	0.73	0.73	0.73
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.73	0.73	0.73	0.73
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.73	0.73	0.73	0.73
22	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.8	0.8	0.8	0.8
	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63

Input and output:
Colorimetric Printer Reflective System FRS15_90a
data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* **= 16 hues** ***r00j, r25j, ..., b75r***
contrast reduction factor:
$c_R = 0.9$

FRS15_90a; adapted (a) CIELAB data

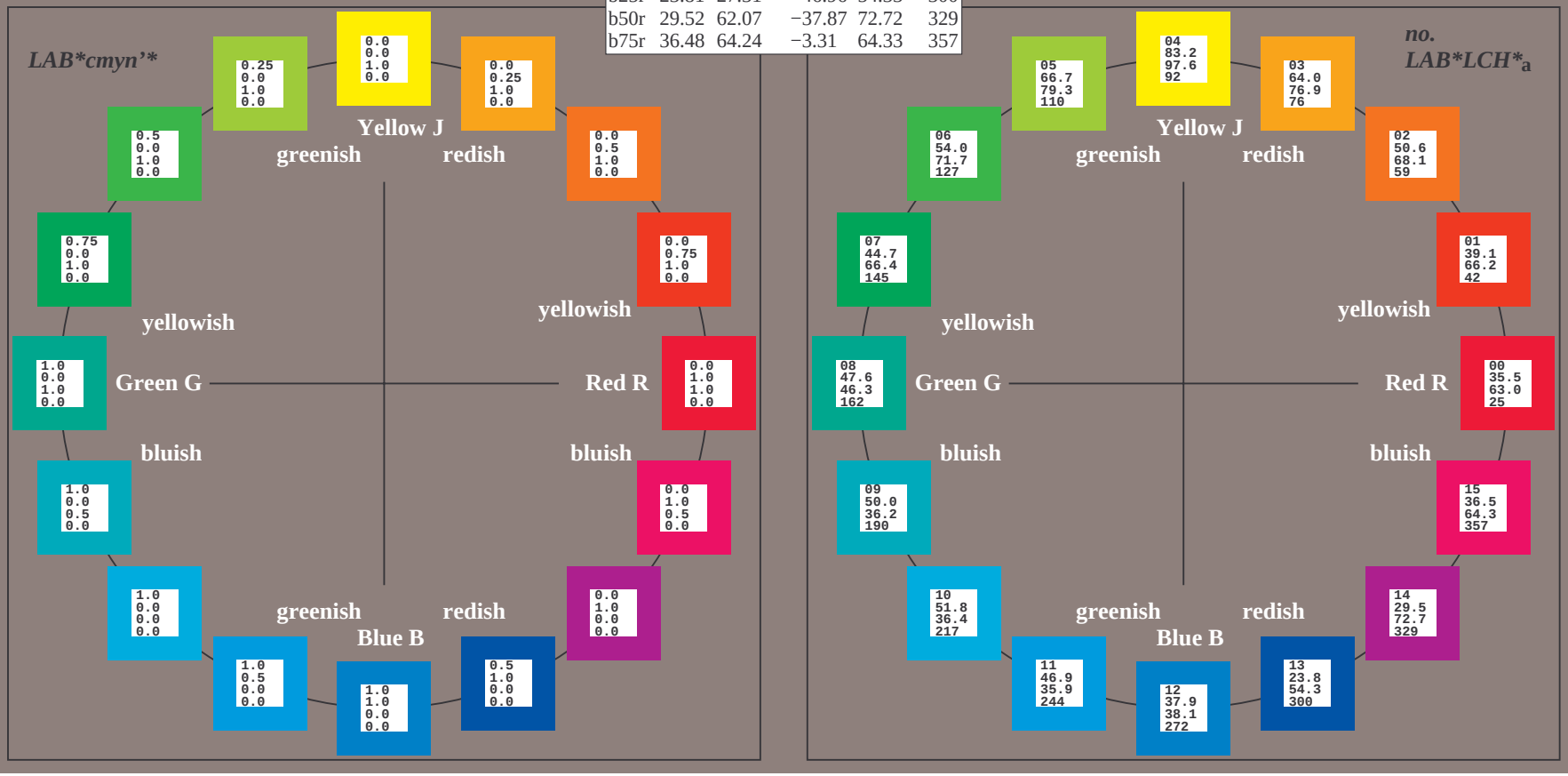
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



%Gamut
u^*_{rel} = 88
%Regularity
$g^*_{H,rel}$ = 31
$g^*_{C,rel}$ = 40

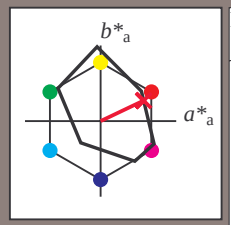
FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 25/360 = 0.071$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r00j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

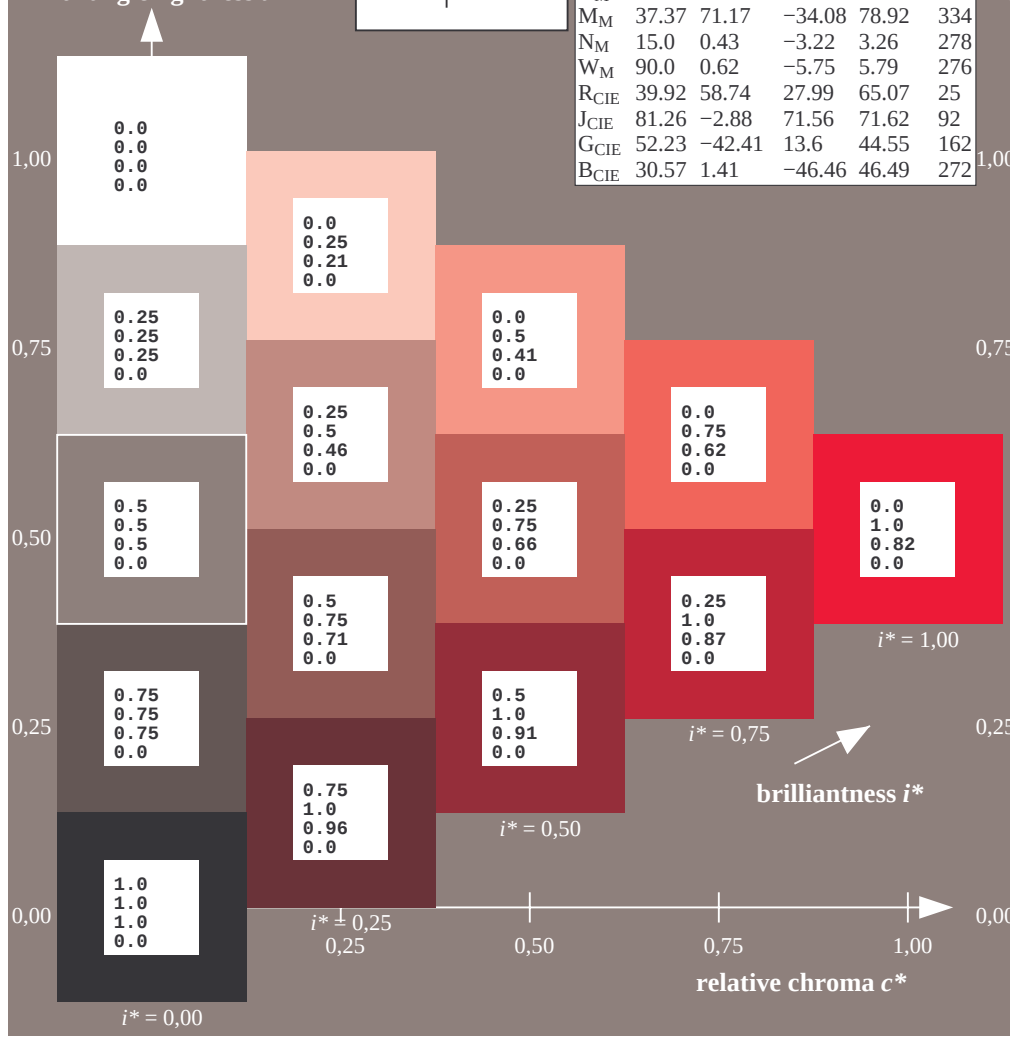
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

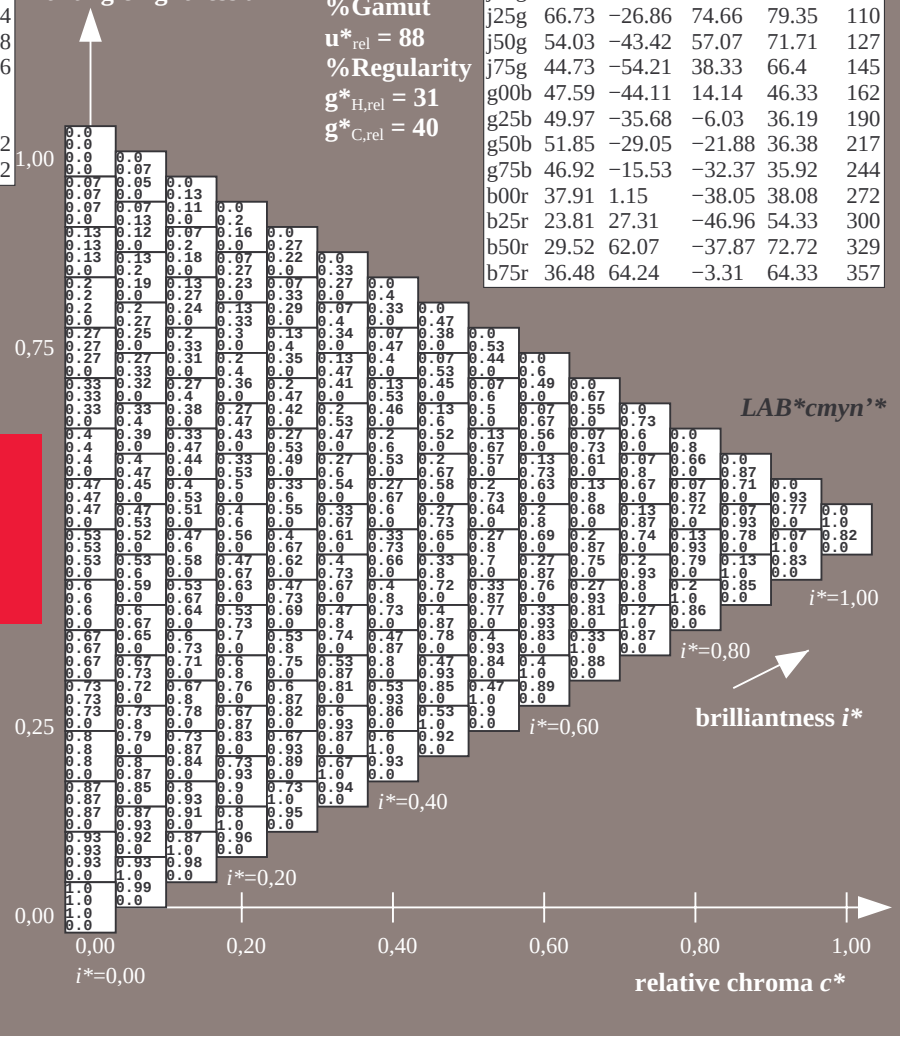
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 35 57 27**
***LAB*LCH*Ma*: 35 63 25**
***lab*rgb*Ma*: 1.0 0.0 0.0**
***lab*olv*Ma*: 1.0 0.0 0.18**

u* = r00j
LAB*cmyn'*

FRS15_90a; adapted (a) CIELAB data

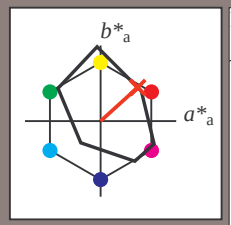
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 42/360 = 0.117$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = r25j*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



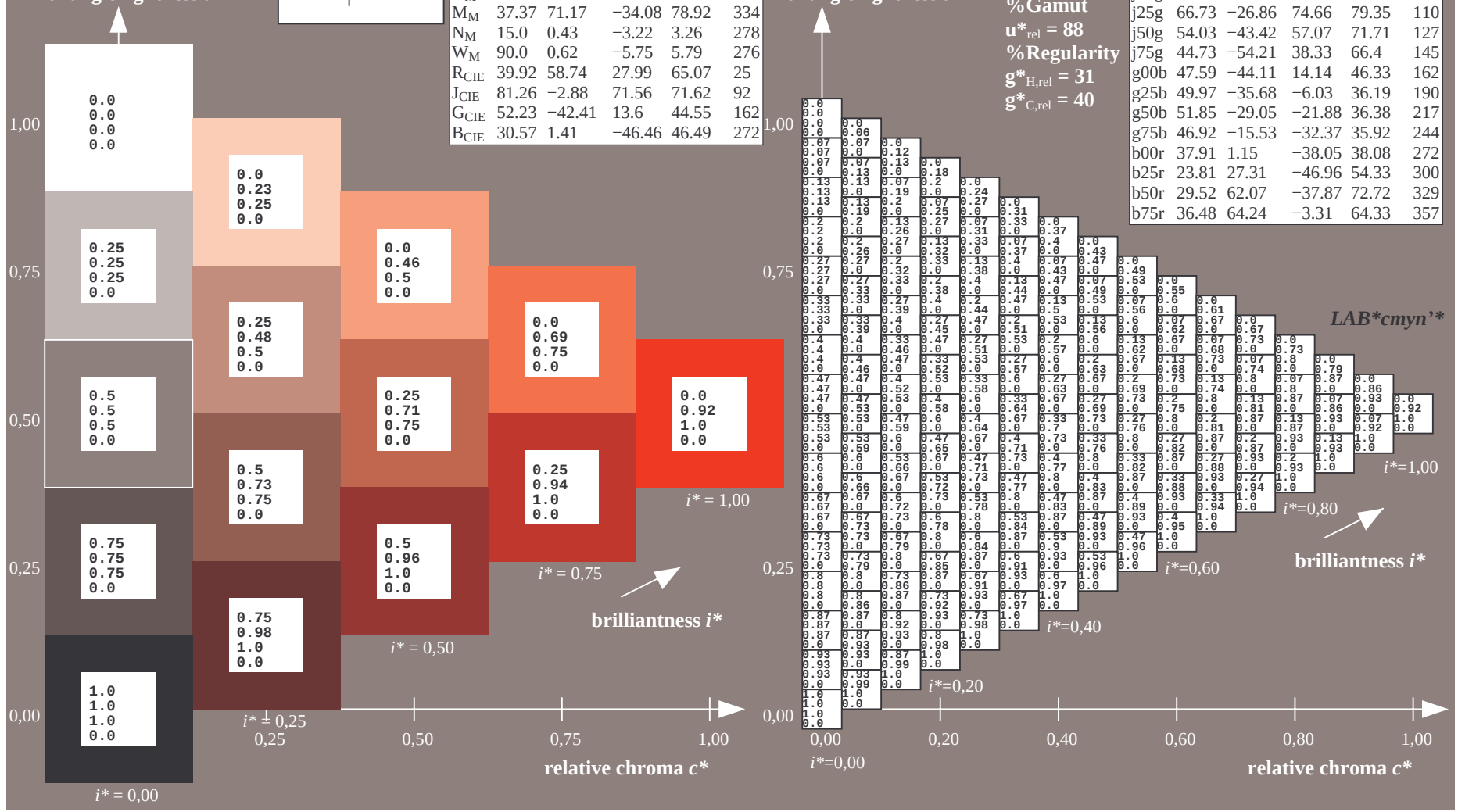
FRS15_90a; CIELAB data	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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 49 44**
***LAB*LCH*Ma*: 39 66 42**
***lab*rgb*Ma*: 1.0 0.25 0.0**
***lab*olv*Ma*: 1.0 0.08 0.0**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = r25j
LAB*cmyn'*

FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 59/360 = 0.164$

$u^* = r50j$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

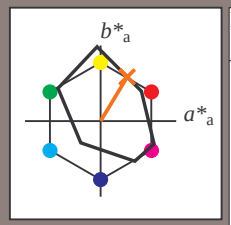
elementary hue text:

$u^* = r50j$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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 35 58**

***LAB*LCH**$_{Ma}$: 51 68 59**

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

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

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

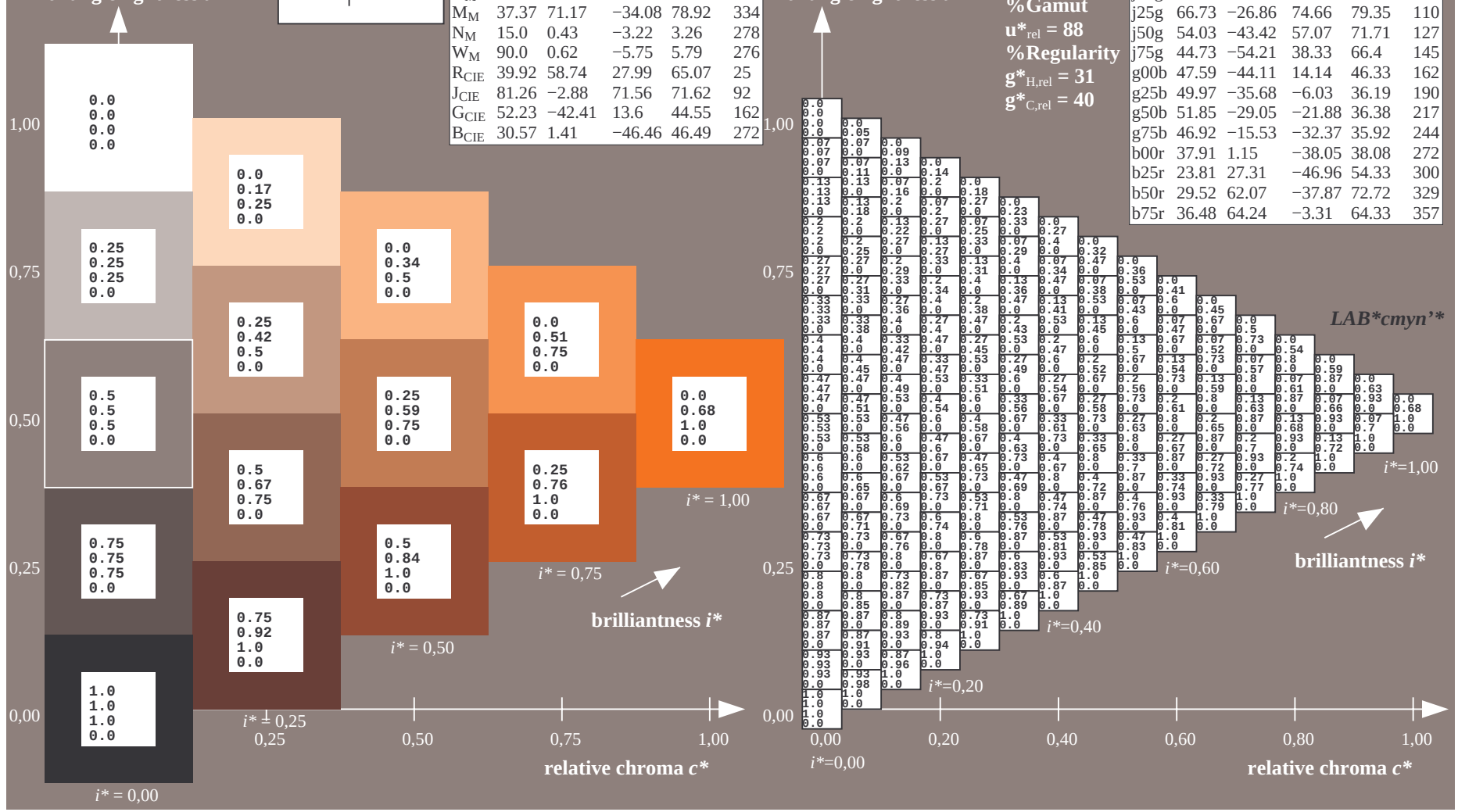
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

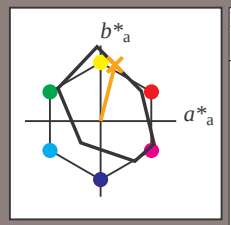
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 76/360 = 0.21$

$u^* = r75j$
LAB*cmyn'*

data for any colour:
lab*tch* **and** ***lab*icu****
elementary hue text:
u* = r75j
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

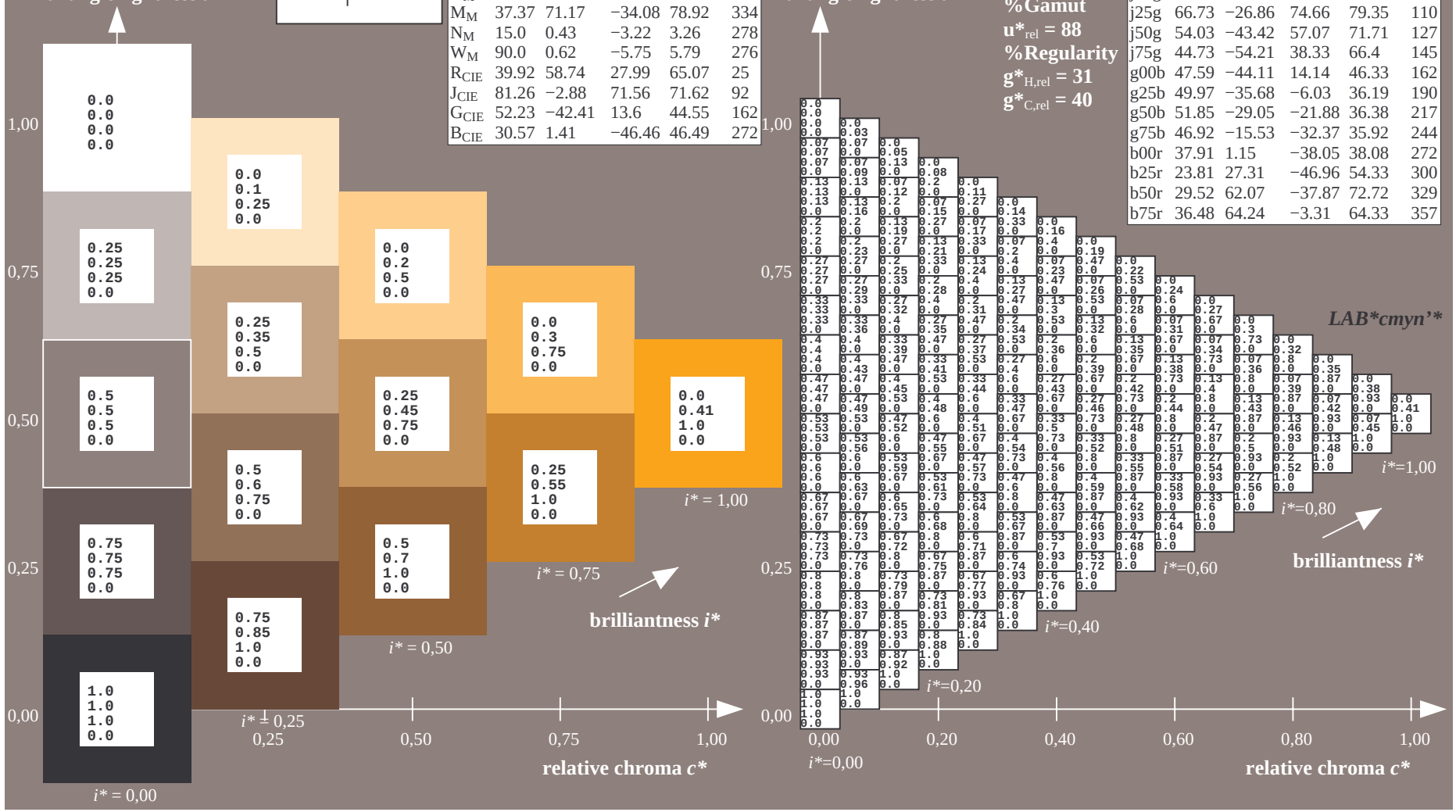
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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 19 74**
LAB*LCH*$_{Ma}$**: 64 77 76**
lab*rgb*$_{Ma}$**: 1.0 0.75 0.0**
lab*olv*$_{Ma}$**: 1.0 0.59 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

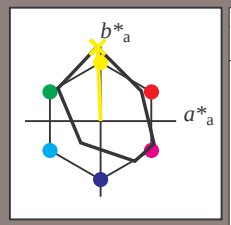
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 92/360 = 0.256$

$u^* = j00g$
$LAB^*cmyn'^*$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = j00g$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

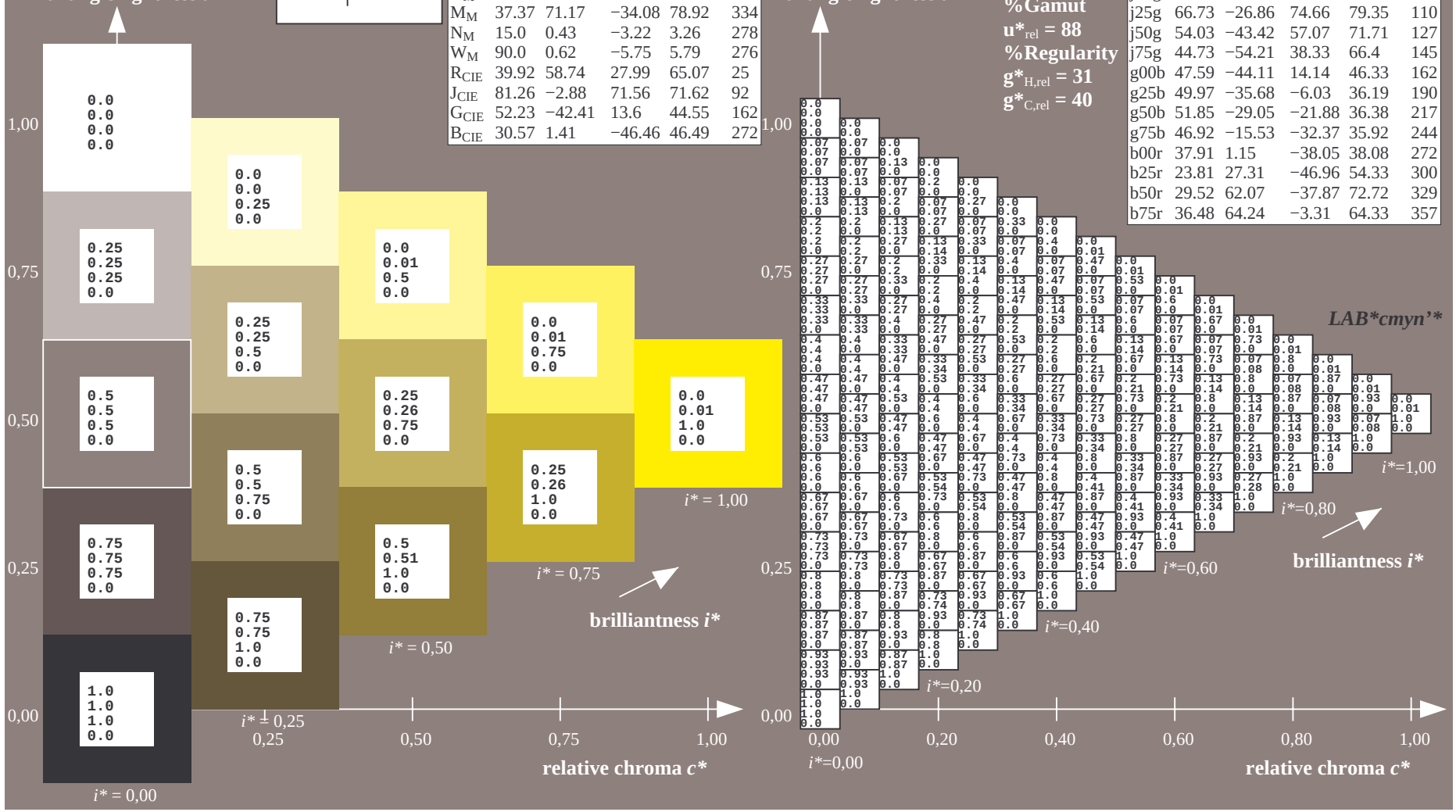
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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*: 83 −3 98**
***LAB*LCH*Ma*: 83 98 92**
***lab*rgb*Ma*: 1.0 1.0 0.0**
***lab*olv*Ma*: 1.0 0.99 0.0**

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 110/360 = 0.305$

$u^* = j25g$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

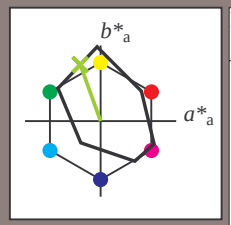
elementary hue text:

$u^* = j25g$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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**$_{Ma}$: 67 −26 75**

***LAB*LCH**$_{Ma}$: 67 79 110**

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

***lab*olv**$_{Ma}$: 0.57 1.0 0.0**

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

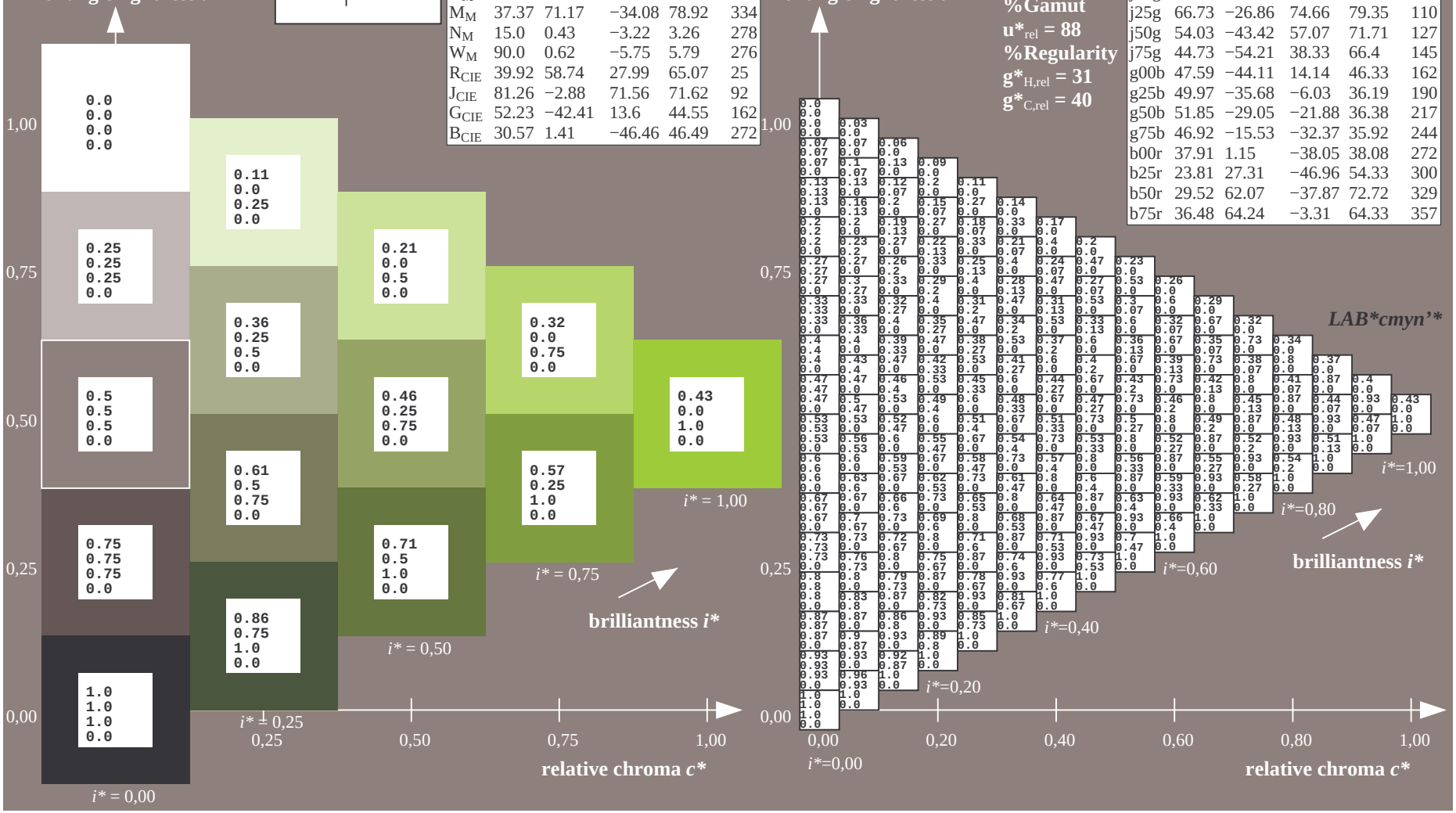
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 127/360 = 0.354$

$u^* = j50g$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

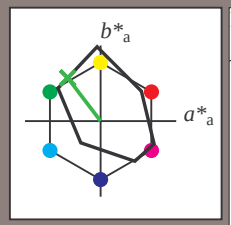
elementary hue text:

$u^* = j50g$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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**$_{Ma}$: 54 −42 57**

***LAB*LCH**$_{Ma}$: 54 72 127**

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

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

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

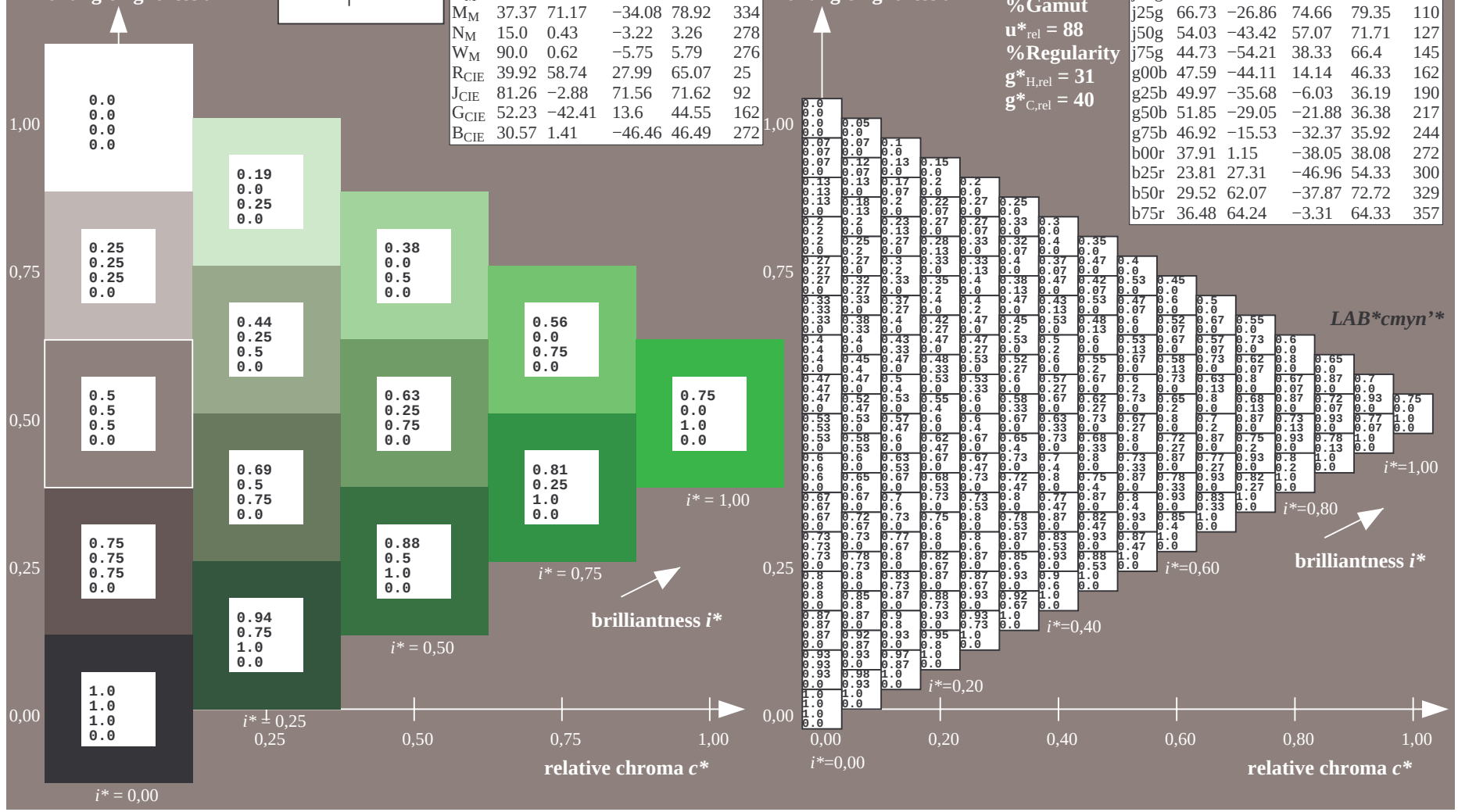
%Regularity

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

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

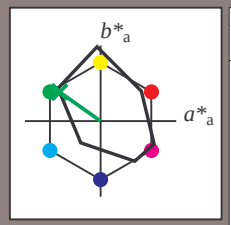
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a 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:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

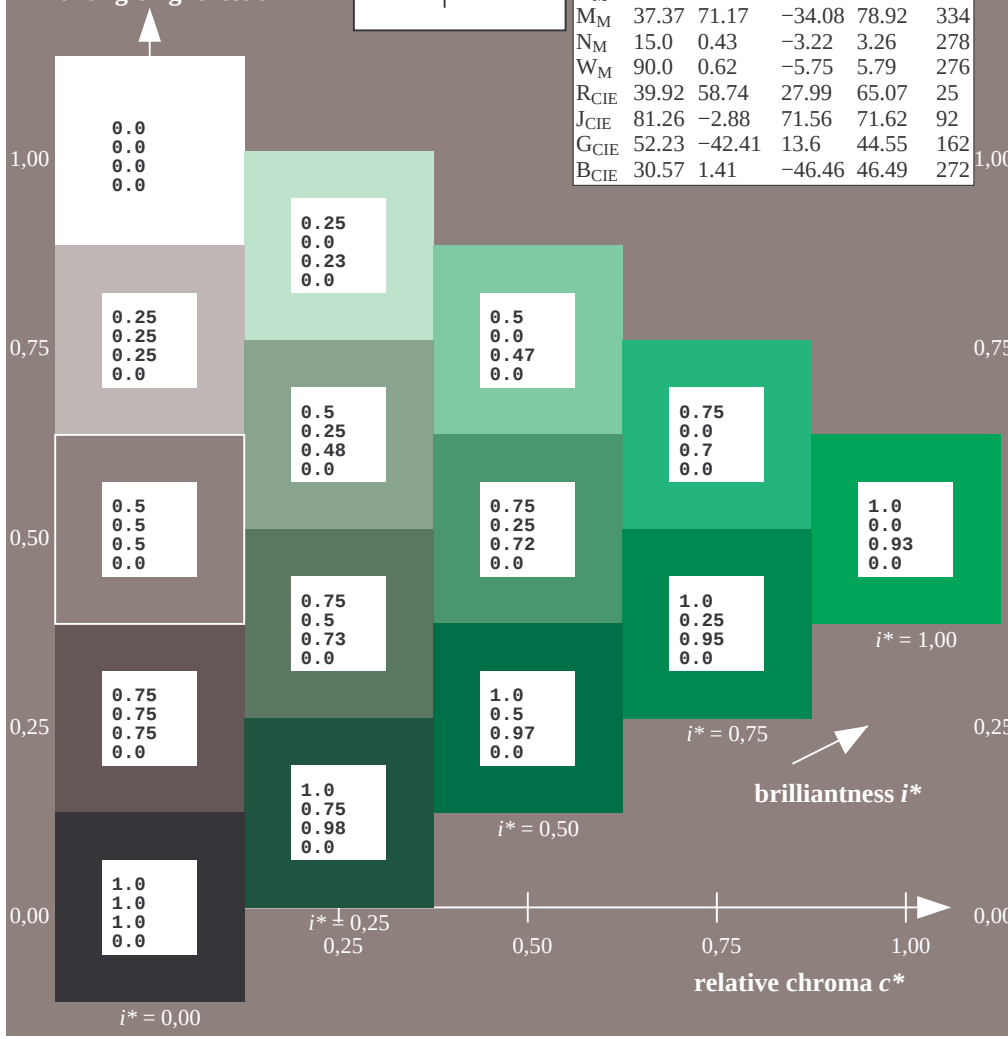
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 45 −53 38**
***LAB*LCH*Ma*: 45 66 145**
***lab*rgb*Ma*: 0.25 1.0 0.0**
***lab*olv*Ma*: 0.0 1.0 0.07**
triangle lightness t^*

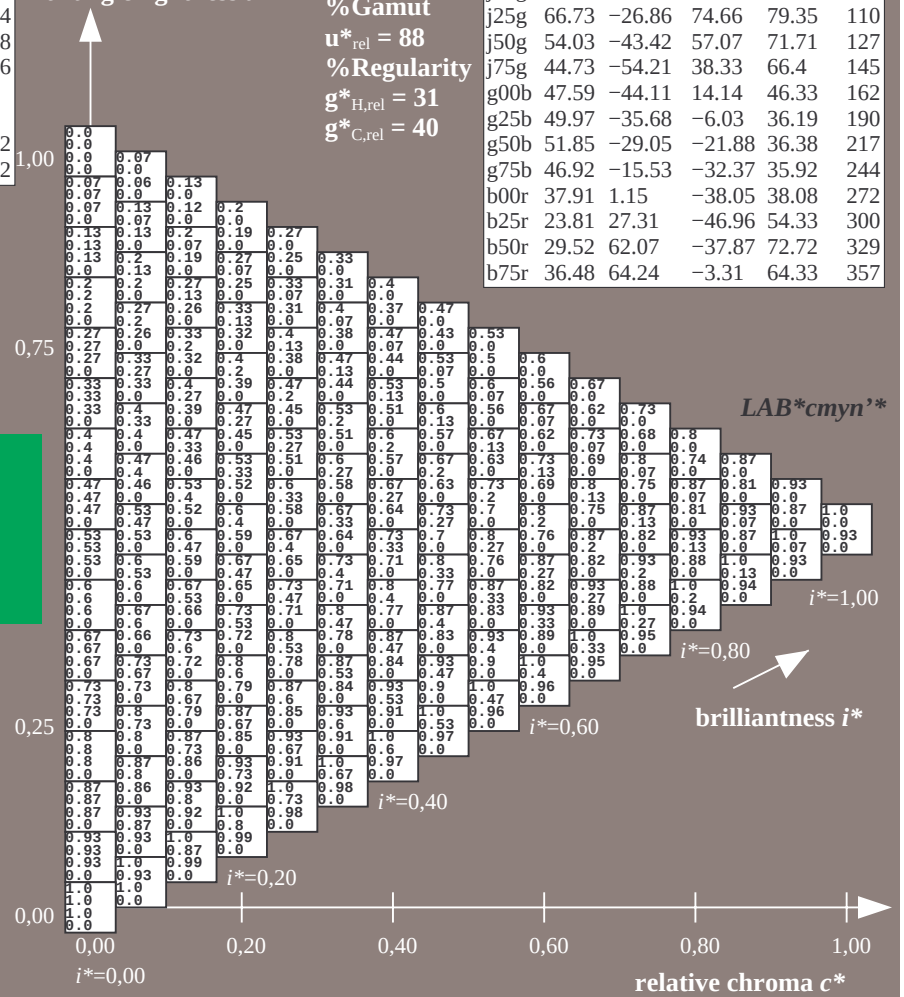
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = j75g
LAB*cmyn'*

FRS15_90a; adapted (a) CIELAB data

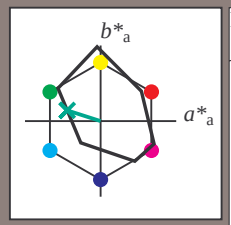
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 162/360 = 0.451$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g00b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

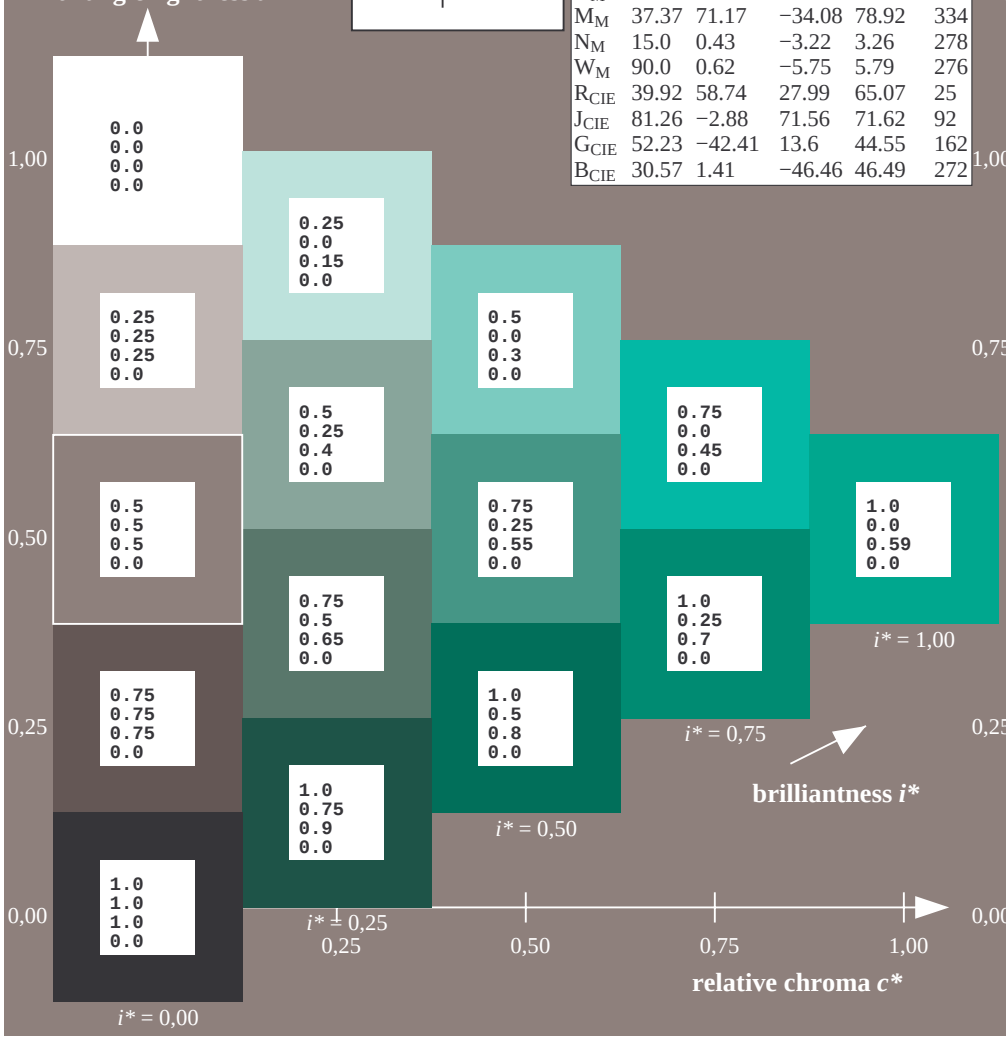
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 48 −43 14**
***LAB*LCH*Ma*: 48 46 162**
***lab*rgb*Ma*: 0.0 1.0 0.0**
***lab*olv*Ma*: 0.0 1.0 0.41**
triangle lightness *t**

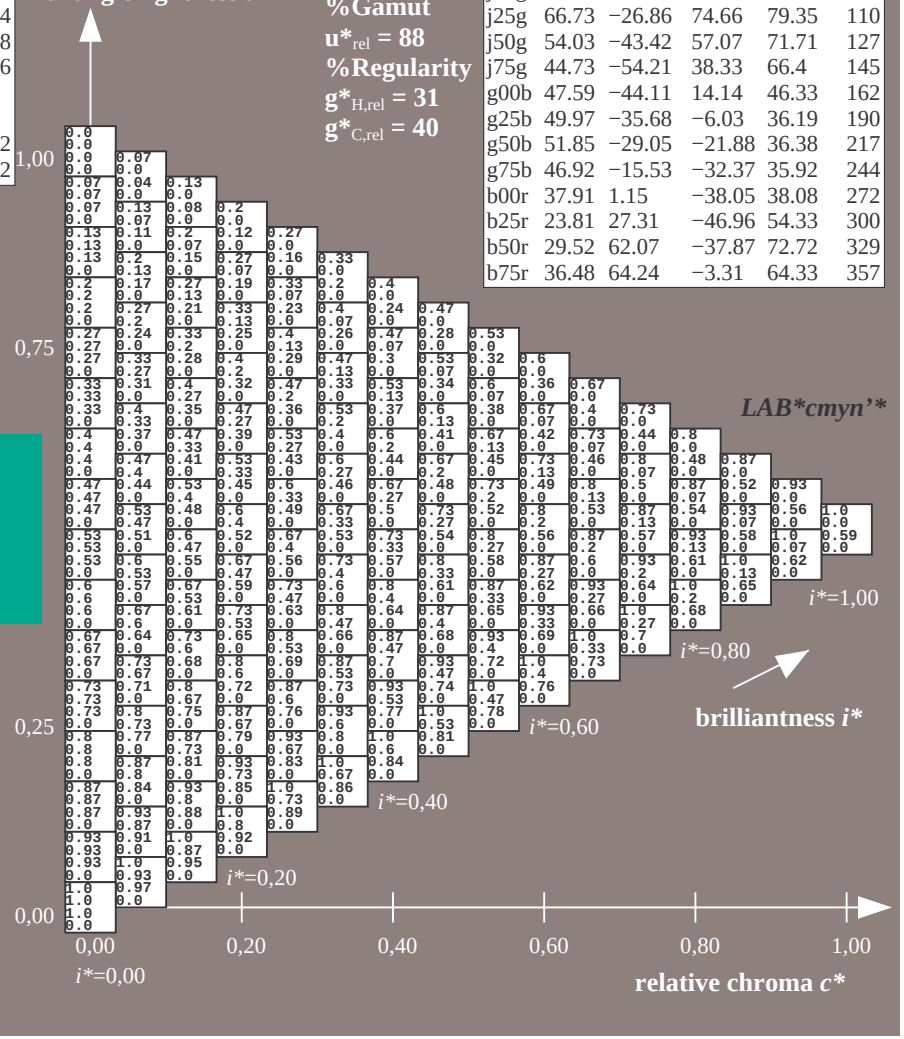
%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = g00b
LAB*cmyn'*

FRS15_90a; adapted (a) CIELAB data

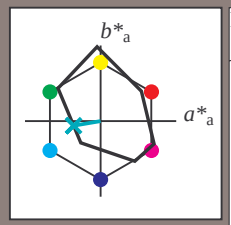
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 190/360 = 0.527$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g25b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

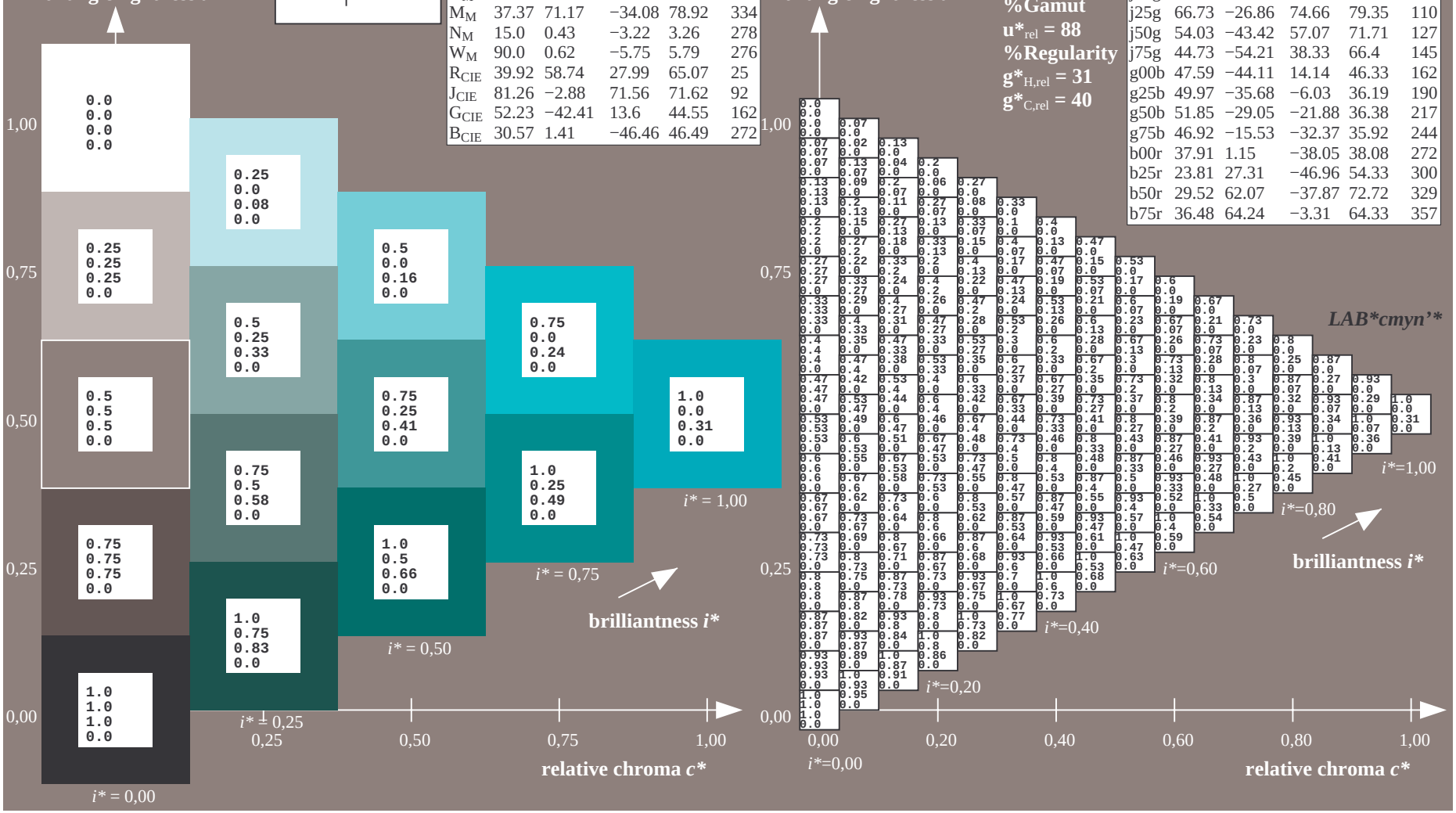
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 50 −35 −5**
***LAB*LCH*Ma*: 50 36 190**
***lab*rgb*Ma*: 0.0 1.0 0.5**
***lab*olv*Ma*: 0.0 1.0 0.69**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = g25b
LAB*cmyn'*

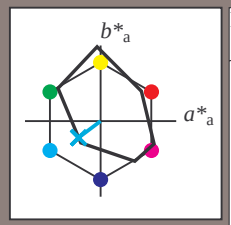
FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 217/360 = 0.603$

data for any colour:
*lab*tch** and *lab*icu**
elementary hue text:
u = g50b*
contrast reduction factor:
$c_R = 0.9$
triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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

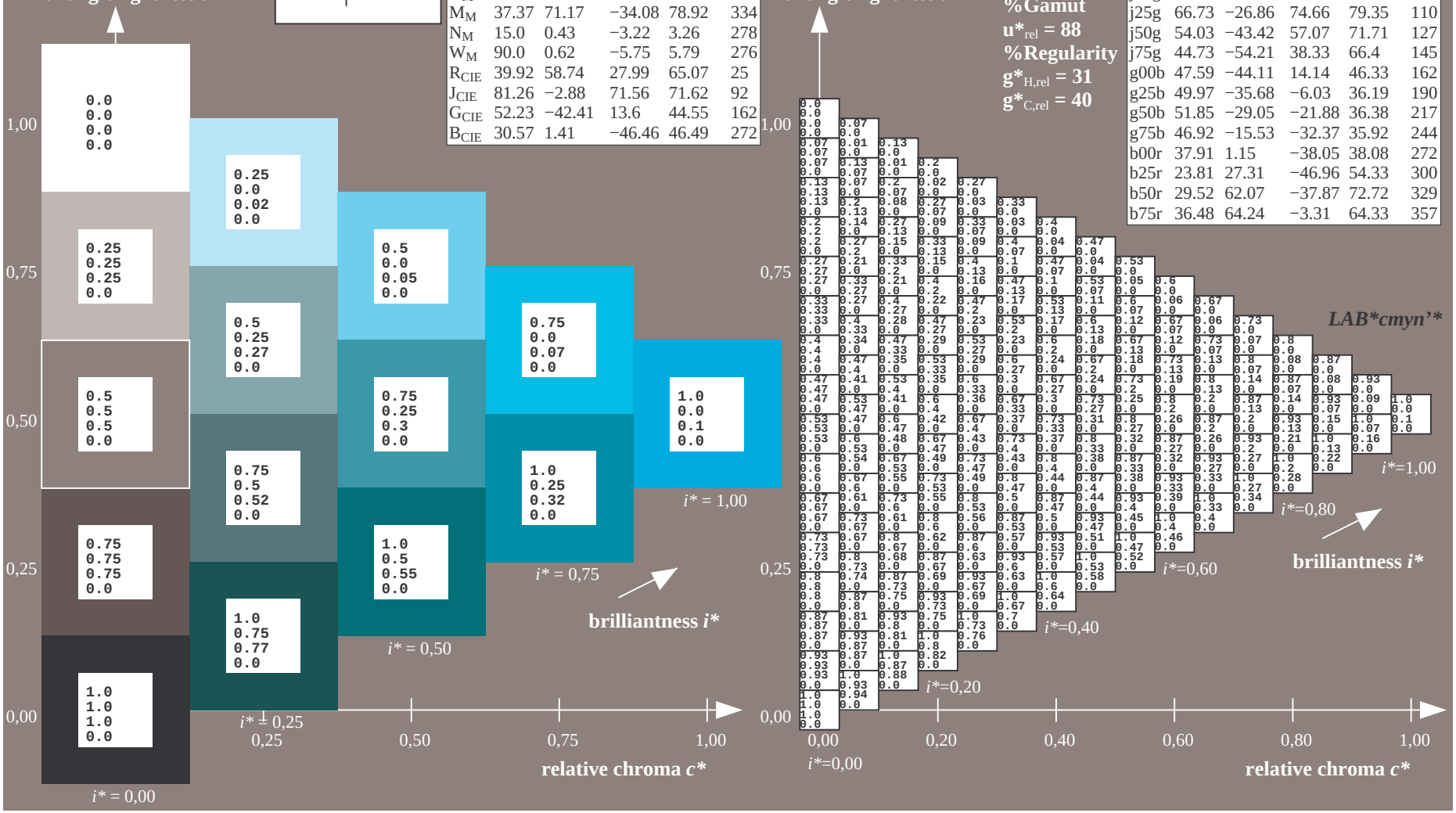
Data for maximum colour (Ma):
***LAB*LAB*Ma*: 52 −28 −21**
***LAB*LCH*Ma*: 52 36 217**
***lab*rgb*Ma*: 0.0 1.0 1.0**
***lab*olv*Ma*: 0.0 1.0 0.9**
triangle lightness *t**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

u* = g50b
LAB*cmyn'*

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 244/360 = 0.679$

u* = g75b

LAB*cmyn'*

data for any colour:

lab*tch* **and** ***lab*icu****

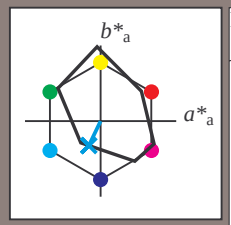
elementary hue text:

u* = g75b

contrast reduction factor:

$c_R = 0.9$

triangle lightness *t**



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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*$_{Ma}$**: 47 −15 −31**

LAB*LCH*$_{Ma}$**: 47 36 244**

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

lab*olv*$_{Ma}$**: 0.0 0.85 1.0**

%Gamut

u^*_{rel} = 88

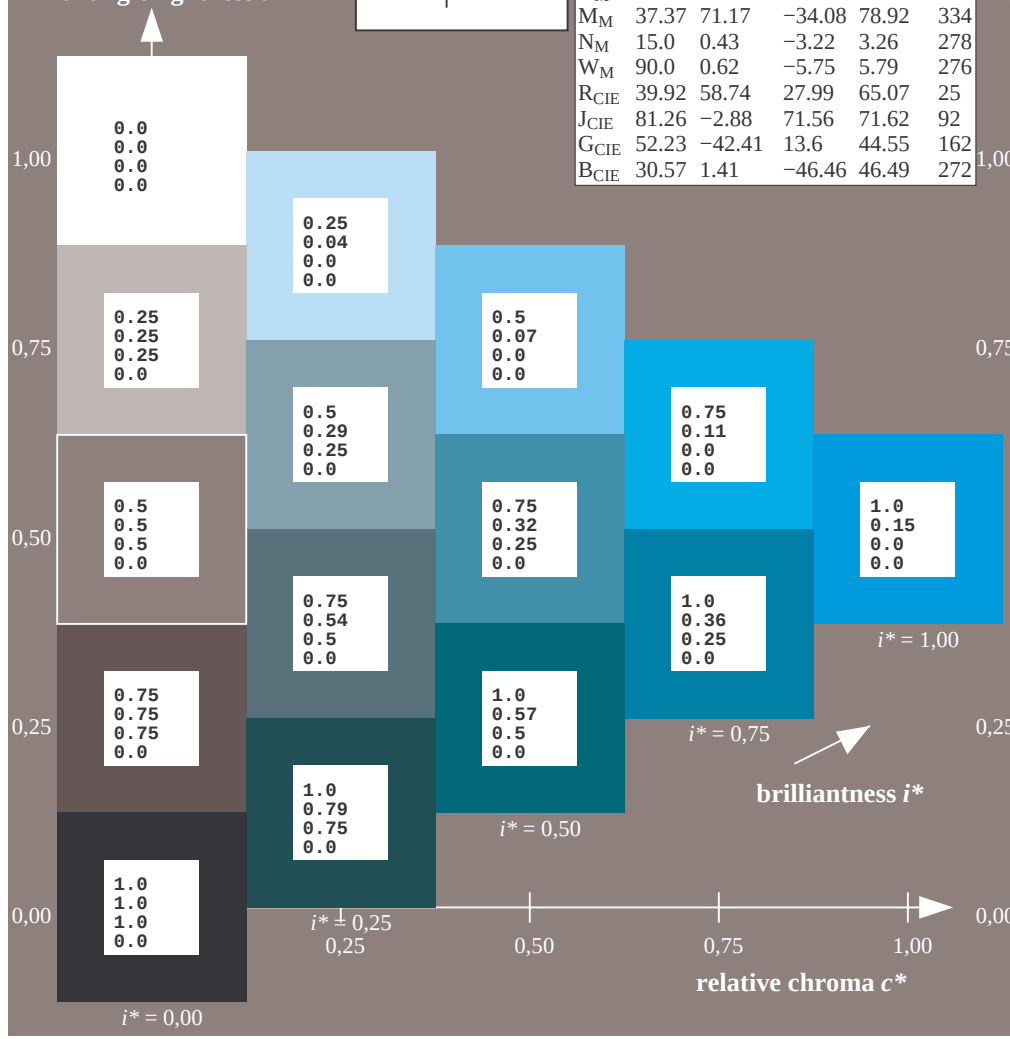
%Regularity

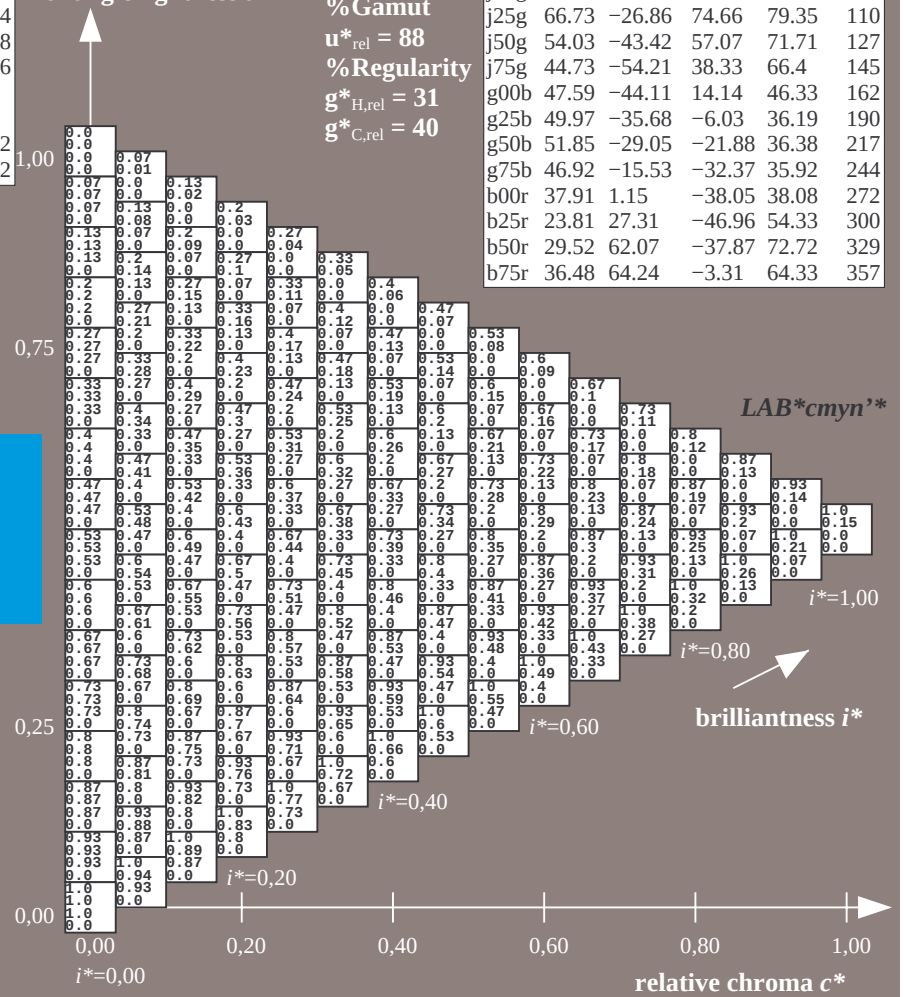
$g^*_{H,rel}$ = 31

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 272/360 = 0.755$

$u^* = b00r$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

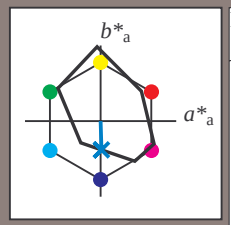
elementary hue text:

$u^* = b00r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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**$_{Ma}$: 38 1 −37**

***LAB*LCH**$_{Ma}$: 38 38 272**

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

***lab*olv**$_{Ma}$: 0.0 0.62 1.0**

triangle lightness t^*

%Gamut

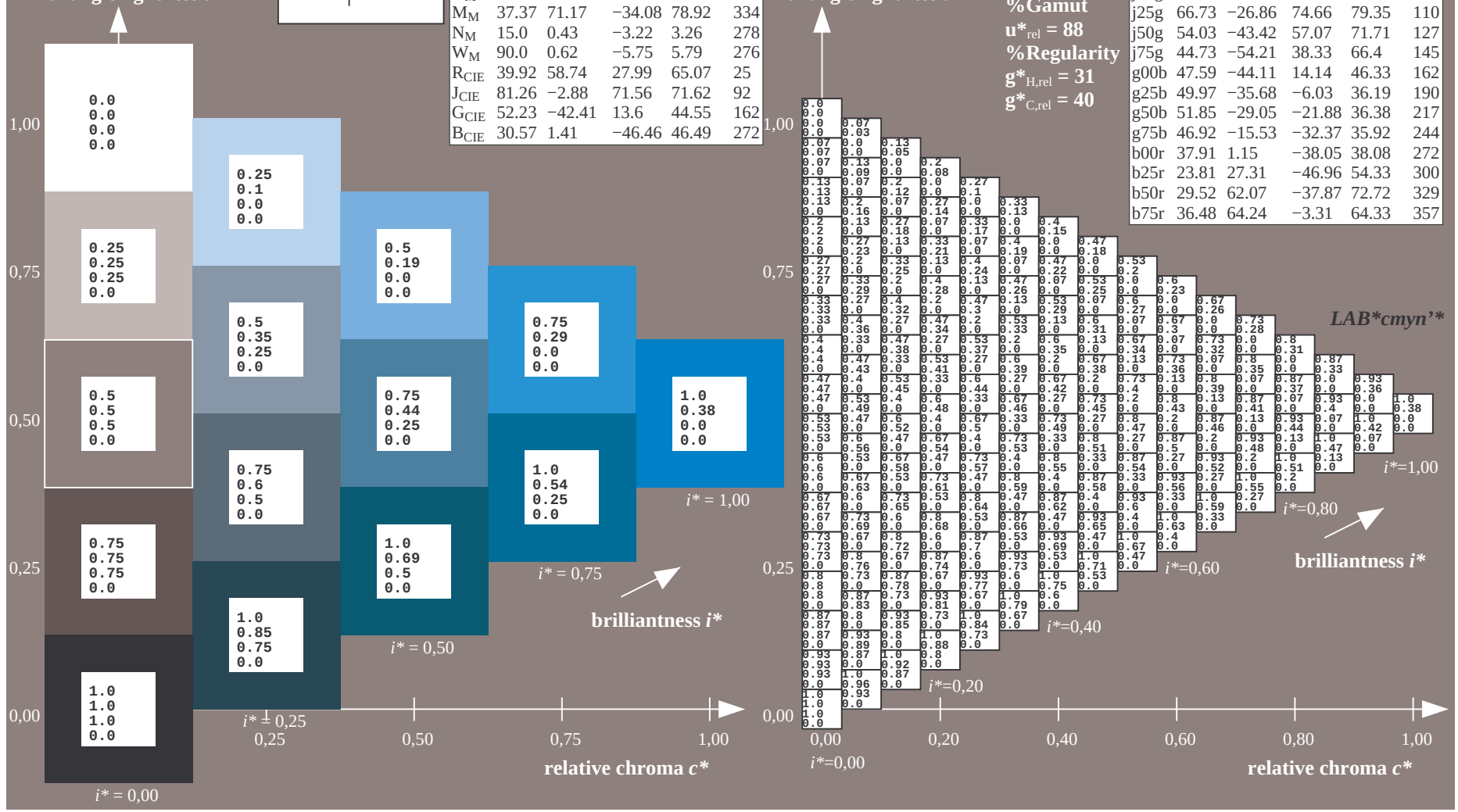
$u^*_{rel} = 88$

%Regularity

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

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

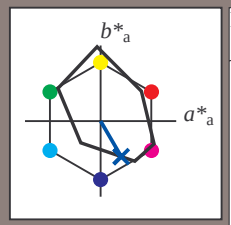
FRS15_90a; adapted (a) CIELAB data	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 300/360 = 0.834$

$u^* = b25r$
$LAB^*cmyn'^*$

data for any colour:
lab*tch** and *lab*icu*
elementary hue text:
$u^* = b25r$
contrast reduction factor:
$c_R = 0.9$
triangle lightness t^*



FRS15_90a; CIELAB data

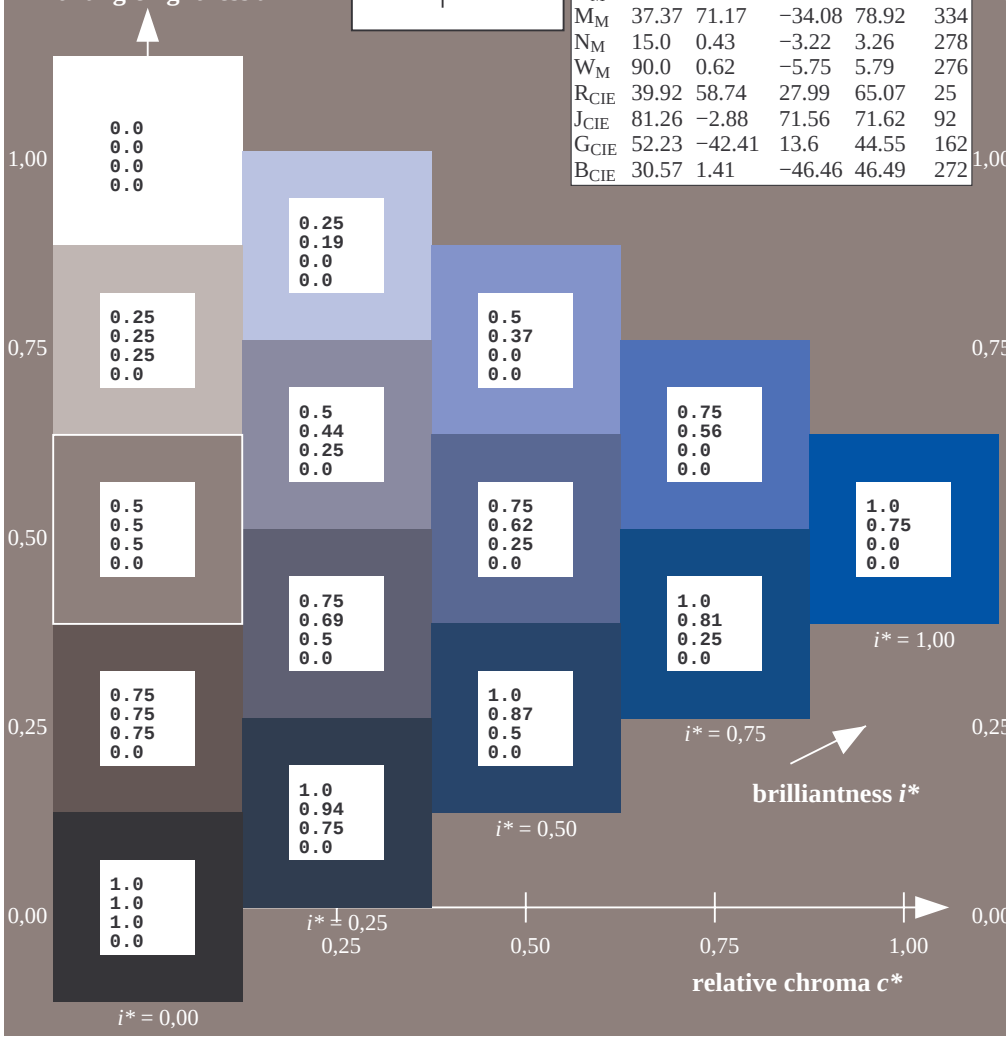
	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
R_{CIE}	39.92	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

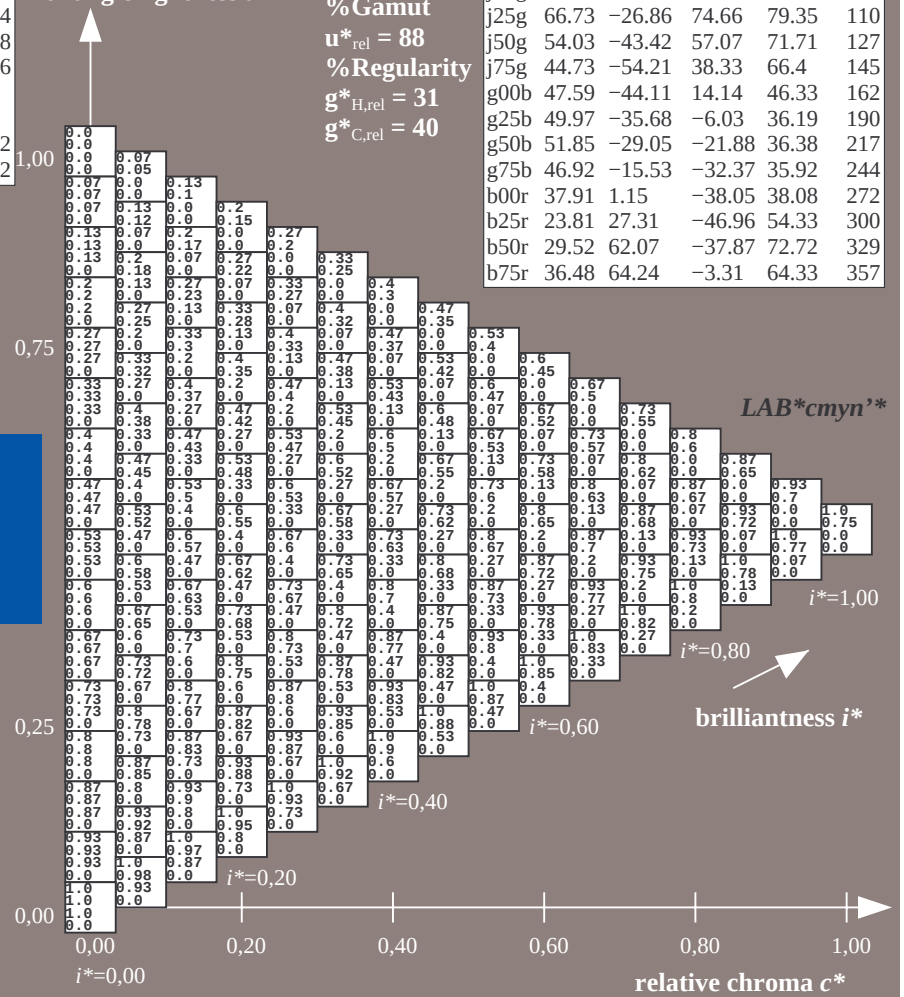
Data for maximum colour (Ma):
***LAB*LAB**$_{Ma}$: 24 27 −46**
***LAB*LCH**$_{Ma}$: 24 54 300**
***lab*rgb**$_{Ma}$: 0.5 0.0 1.0**
***lab*olv**$_{Ma}$: 0.0 0.25 1.0**

%Gamut
$u^*_{rel} = 88$
%Regularity
$g^*_{H,rel} = 31$
$g^*_{C,rel} = 40$

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 329/360 = 0.913$

$u^* = b50r$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

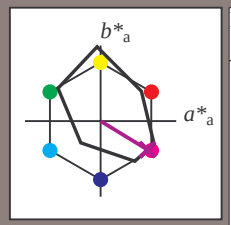
elementary hue text:

$u^* = b50r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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):

$LAB^*LAB^*_{Ma}$: 30 62 −37

$LAB^*LCH^*_{Ma}$: 30 73 329

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

$lab^*olv^*_{Ma}$: 0.66 0.0 1.0

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

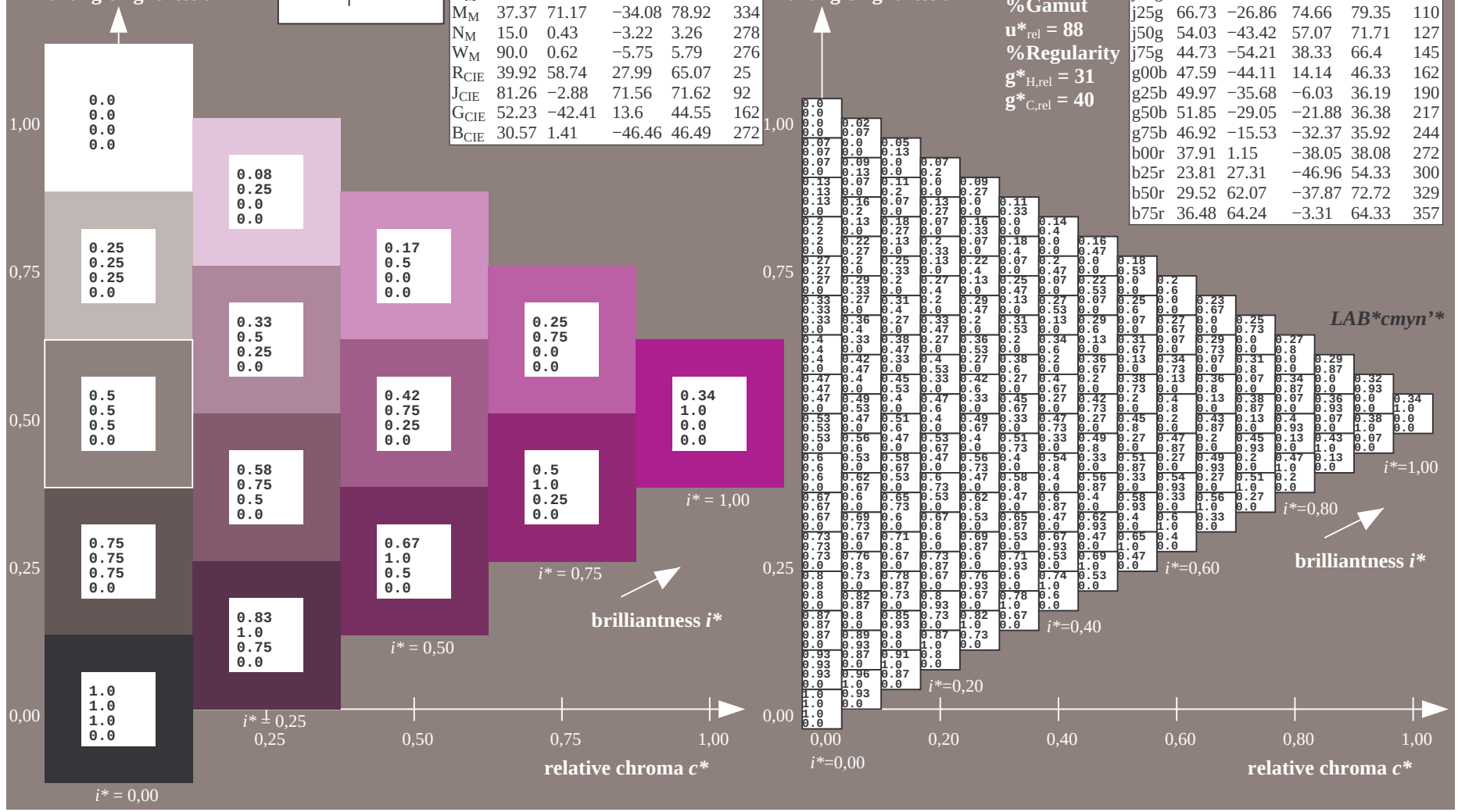
%Regularity

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

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357



Input and output: Colorimetric Printer Reflective System FRS15_90a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 357/360 = 0.992$

$u^* = b75r$

$LAB^*cmyn'^*$

data for any colour:

lab*tch** and *lab*icu*

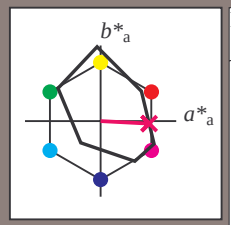
elementary hue text:

$u^* = b75r$

contrast reduction factor:

$c_R = 0.9$

triangle lightness t^*



FRS15_90a; CIELAB data

	$L^*=L^*$	a^*	b^*	C^*_{ab}	h^*_{ab}
O_M	35.06	54.41	35.65	65.05	33
Y_M	83.77	−4.03	92.72	92.8	92
L_M	44.13	−55.82	39.15	68.19	145
C_M	52.66	−25.66	−33.24	42.01	232
V_M	14.15	45.64	−56.26	72.45	309
M_M	37.37	71.17	−34.08	78.92	334
N_M	15.0	0.43	−3.22	3.26	278
W_M	90.0	0.62	−5.75	5.79	276
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**$_{Ma}$: 36 64 −2**

***LAB*LCH**$_{Ma}$: 36 64 357**

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

***lab*olv**$_{Ma}$: 1.0 0.0 0.62**

triangle lightness t^*

%Gamut

$u^*_{rel} = 88$

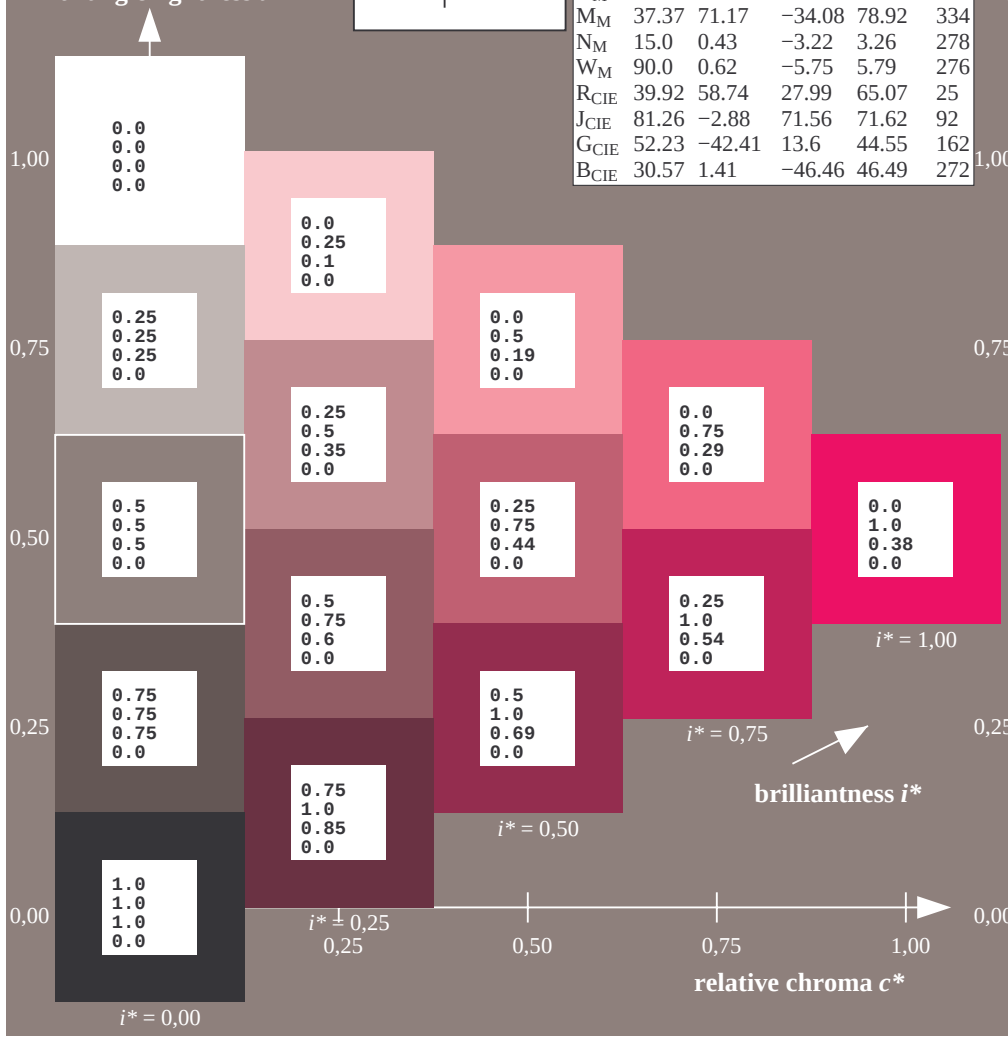
%Regularity

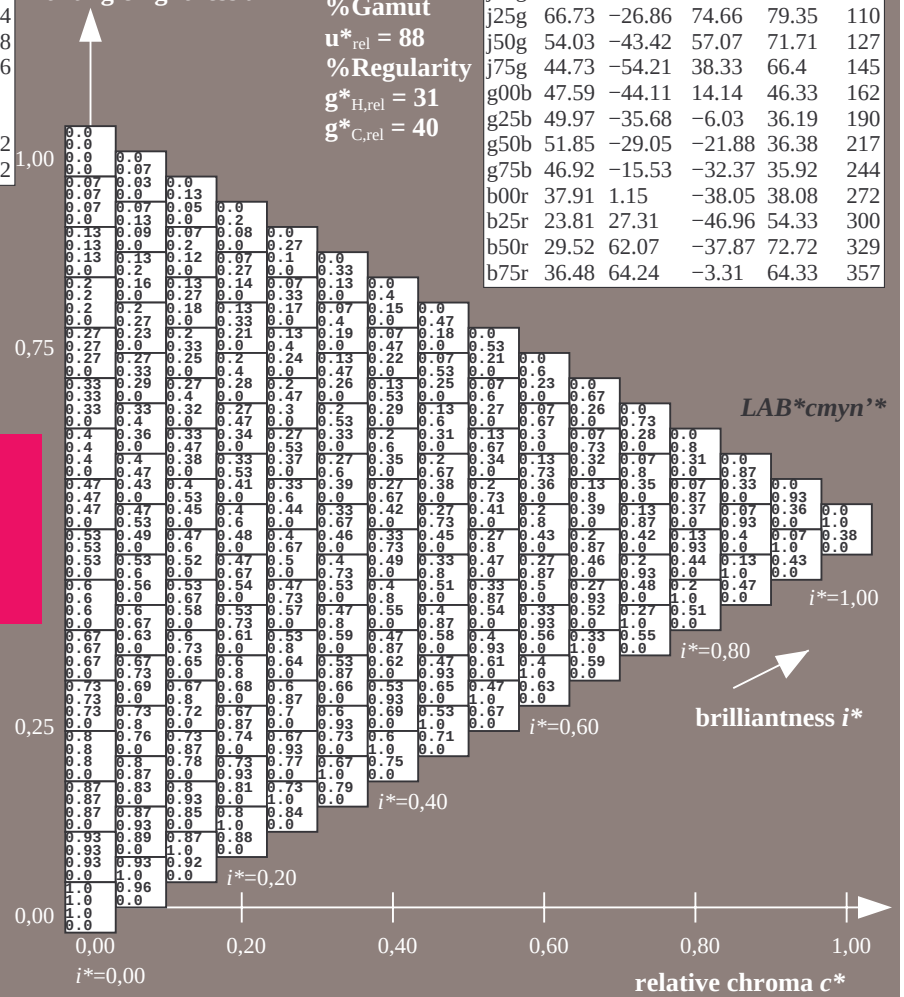
$g^*_{H,rel} = 31$

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

FRS15_90a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	35.47	56.92	27.12	63.05	25
r25j	39.12	49.04	44.45	66.19	42
r50j	50.64	35.19	58.33	68.13	59
r75j	64.01	19.11	74.45	76.87	76
j00g	83.18	−3.93	97.56	97.64	92
j25g	66.73	−26.86	74.66	79.35	110
j50g	54.03	−43.42	57.07	71.71	127
j75g	44.73	−54.21	38.33	66.4	145
g00b	47.59	−44.11	14.14	46.33	162
g25b	49.97	−35.68	−6.03	36.19	190
g50b	51.85	−29.05	−21.88	36.38	217
g75b	46.92	−15.53	−32.37	35.92	244
b00r	37.91	1.15	−38.05	38.08	272
b25r	23.81	27.31	−46.96	54.33	300
b50r	29.52	62.07	−37.87	72.72	329
b75r	36.48	64.24	−3.31	64.33	357





	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	LAB*cmyn'*		
01	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
02	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.88	0.88	0.88	0.88
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.88	0.88	0.88	0.88
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
03	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.75	0.75	0.75	0.75
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.63	0.63	0.63	0.63
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.63	0.63	0.63	0.63
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.38	0.38	0.38	0.38
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.38	0.38	0.38	0.38
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.25	0.25	0.25	0.25
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.25
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.25	0.25	0.25	0.25
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.13	0.13	0.13	0.13
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.13	0.13
	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.13	0.13	0.13	0.13
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	1.0	1.0	1.0	1.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.93	0.93	0.93	0.93
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.93	0.93	0.93	0.93
	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.93	0.93	0.93	0.93
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.87	0.87	0.87	0.87
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.87	0.87	0.87	0.87
	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.87	0.87	0.87	0.87
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.8	0.8	0.8	0.8
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.8	0.8	0.8	0.8
	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.8	0.8	0.8	0.8
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.73	0.73	0.73	0.73
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.73	0.73	0.73	0.73
	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.5	0.5	0.5	0.5
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67
	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.67	0.67	0.67	0.67
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.6	0.6	0.6	0.6
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.6	0.6	0.6	0.6
	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.0	0.13	0.25	0.38	0.5	0.63	0.75	0.88	1.0	0.6	0.6	0.6	0.6
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.53	0.53	0.53	0.53
	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	1.0	0.88	0.75	0.63	0.5	0.38	0.25	0.13	0.0	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0