See original copy: http://web.me.com/klaus.ridder/KE89/KE89L0N1.TXT/.PS
Technical information: http://www.ps.bam.de or http://130.149.60.45/~farbmetrik

Interpretation *rgb* −> *rgb and CIELAB data of a 48 step elementary hue circle**
for a sRGB standard display with the luminance reflection L_r=5% compared to the white reference (100%)
48 step elementary hue circle with hues: *R*/*G*: R_{abs} = 25.5, 92.3, 162.2, 271.7, and / or *M* = 217.0, 328.6
comparison with six device hues *O*/*Y*: Y_{abs} = 31.0, 103.7, 137.6, 196.6, 302.8, 327.9
9 step equidistant grey scale: *L = 26.8, 35.4, 44.0, 52.6, 61.1, 69.7, 78.3, 86.8, 95.4**

a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$	a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$
r00/=R	30.0	55.1 67.8 32.3 75.1 25.5	1.000 0.000 0.000		c'00/=C'	210.8	80.4 −31.6 −23.7 39.6 217.0	0.000 1.000 1.000	
r12	36.6	55.9 64.0 42.9 77.0 33.8	1.000 0.125 0.000		c'12b	216.6	78.2 −28.1 −26.9 39.0 223.8	0.000 0.875 1.000	
r25	43.9	60.2 52.6 47.7 71.0 42.2	1.000 0.250 0.000		c'25b	223.9	76.1 −24.9 −30.4 39.5 230.7	0.000 0.750 1.000	
r37	51.8	64.0 42.7 51.9 67.2 50.5	1.000 0.375 0.000		c'37b	231.8	74.1 −21.4 −33.6 39.9 237.5	0.000 0.625 1.000	
r50	60.7	67.2 33.6 54.8 64.7 58.9	1.000 0.500 0.000		c'50b	240.7	72.1 −17.4 −36.4 40.3 244.4	0.000 0.500 1.000	
r62	68.2	71.4 24.9 59.3 64.3 67.2	1.000 0.625 0.000		c'62b	248.2	69.9 −13.4 −39.7 42.0 251.2	0.000 0.375 1.000	
r75	76.1	75.3 16.3 63.5 65.6 75.6	1.000 0.750 0.000		c'75b	256.1	67.5 −9.2 −43.8 44.9 258.0	0.000 0.250 1.000	
r87	84.9	79.5 7.1 67.4 67.7 84.8	1.000 0.875 0.000		c'87b	264.9	65.0 −4.2 −47.5 47.8 264.9	0.000 0.125 1.000	
j00g=J	90.0	84.4 −2.8 72.1 72.1 92.3	1.000 1.000 0.000		b00m'=B	270.0	62.3 1.6 −51.6 51.7 271.7	0.000 0.000 1.000	
j12g	96.6	90.8 −15.2 78.2 79.6 101.1	0.875 1.000 0.000		b12m'	276.6	58.7 9.0 −57.6 58.4 278.8	0.125 0.000 1.000	
j25g	103.9	91.3 −27.9 77.9 82.8 109.8	0.750 1.000 0.000		b25m'	283.9	54.7 18.3 −63.8 66.4 286.0	0.250 0.000 1.000	
j37g	111.8	89.1 −40.7 75.1 85.4 118.5	0.625 1.000 0.000		b37m'	291.8	49.6 30.6 −71.8 78.0 293.1	0.375 0.000 1.000	
j50g	120.0	87.0 −54.9 72.3 90.9 127.3	0.500 1.000 0.000		b50m'	300.0	42.7 48.4 −83.1 96.3 300.2	0.500 0.000 1.000	
j62g	128.2	84.8 −71.7 69.3 99.8 136.0	0.375 1.000 0.000		b62m'	308.2	43.5 62.1 −81.5 102.6 307.3	0.625 0.000 1.000	
j75g	136.1	84.0 −75.5 49.9 86.4 90.8	0.250 1.000 0.000		b75m'	316.1	46.5 70.2 −71.4 100.1 314.4	0.750 0.000 1.000	
j87g	143.4	85.3 −64.6 32.3 72.3 153.5	0.125 1.000 0.000		b87m'	323.4	55.3 77.9 −61.9 99.5 321.5	0.875 0.000 1.000	
g00c'=G	150.0	85.8 −59.3 19.0 62.4 162.2	0.000 1.000 0.000		m'00a=M'	330.0	65.0 84.2 −51.3 98.7 328.6	1.000 0.000 1.000	
g12c'	156.6	86.2 −55.6 10.7 56.7 169.1	0.000 1.000 0.125		m'12a	336.6	58.9 79.8 −35.9 87.6 335.7	1.000 0.000 0.875	
g25c'	163.9	86.9 −50.0 1.7 50.0 178.2	0.000 1.000 0.250		m'25a	343.9	52.2 75.9 −23.6 80.1 342.8	1.000 0.000 0.750	
g37c'	171.8	86.8 −48.9 −2.3 49.1 182.8	0.000 1.000 0.375		m'37a	351.8	57.2 74.4 −13.1 75.6 349.9	1.000 0.000 0.625	
g50c'	180.0	87.1 −46.1 −7.7 46.9 189.6	0.000 1.000 0.500		m'50a	360.0	56.6 72.8 −7.3 72.9 357.0	1.000 0.000 0.500	
g62c'	188.2	87.4 −42.7 −12.4 44.5 195.9	0.000 1.000 0.625		m'62a	368.2	58.9 −33.4 −9.8 34.8 352.8	1.000 0.000 0.375	
g75c'	196.1	85.1 −39.4 −16.9 43.0 203.3	0.000 1.000 0.750		m'75a	376.1	55.7 69.9 −13.9 71.3 11.3	1.000 0.000 0.250	
g87c'	203.4	82.7 −35.6 −20.6 41.3 210.1	0.000 1.000 0.875		m'87a	383.4	55.4 68.9 22.9 72.6 18.4	1.000 0.000 0.125	

KE89E−3N_2

Interpretation *rgb* −> *rgb and CIELAB data of a 48 step elementary hue circle**
for a sRGB standard display with the luminance reflection L_r=10% compared to the white reference (100%)
48 step elementary hue circle with hues: *R*/*G*: R_{abs} = 25.5, 92.3, 162.2, 271.7, and / or *M* = 217.0, 328.6
comparison with six device hues *O*/*Y*: Y_{abs} = 31.0, 103.7, 137.6, 196.6, 302.8, 327.9
9 step equidistant grey scale: *L = 38.0, 45.2, 52.3, 59.5, 66.7, 73.9, 81.1, 88.2, 95.4**

a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$	a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$
r00/=R	30.0	58.9 58.9 28.1 65.3 25.5	1.000 0.000 0.000		c'00/=C'	210.8	81.6 −29.1 −21.9 36.6 217.0	0.000 1.000 1.000	
r12	36.6	61.2 51.9 34.8 62.5 33.8	1.000 0.125 0.000		c'12b	216.6	79.5 −25.7 −24.7 35.8 223.8	0.000 0.875 1.000	
r25	43.9	64.7 43.1 39.1 58.2 42.2	1.000 0.250 0.000		c'25b	223.9	77.7 −22.9 −27.9 36.2 230.7	0.000 0.750 1.000	
r37	51.8	67.8 35.4 43.0 52.7 50.8	1.000 0.375 0.000		c'37b	231.8	75.9 −19.6 −30.8 36.6 237.5	0.000 0.625 1.000	
r50	60.0	70.9 28.2 46.8 54.7 58.9	1.000 0.500 0.000		c'50b	240.0	74.0 −15.9 −33.3 37.0 244.4	0.000 0.500 1.000	
r62	68.2	73.9 21.0 50.4 54.3 67.2	1.000 0.625 0.000		c'62b	248.2	72.0 −12.3 −36.2 38.3 251.2	0.000 0.375 1.000	
r75	76.1	77.3 13.9 54.1 55.9 75.6	1.000 0.750 0.000		c'75b	256.1	69.8 −8.4 −40.0 41.0 258.0	0.000 0.250 1.000	
r87	83.4	80.9 6.1 50.0 58.3 84.0	1.000 0.875 0.000		c'87b	263.4	67.6 −3.8 −43.4 44.0 264.9	0.000 0.125 1.000	
j00g=J	90.0	85.0 −2.4 62.6 62.6 92.3	1.000 1.000 0.000		b00m'=B'	270.0	65.1 1.4 −47.0 47.1 271.7	0.000 0.000 1.000	
j12g	96.6	90.7 −13.3 68.7 70.0 101.1	0.875 1.000 0.000		b12m'	276.6	61.8 8.2 −52.4 53.2 278.8	0.125 0.000 1.000	
j25g	103.9	91.1 −24.8 69.3 73.7 109.8	0.750 1.000 0.000		b25m'	283.9	58.1 16.7 −58.2 60.7 286.0	0.250 0.000 1.000	
j37g	111.8	89.9 −36.1 66.6 75.8 118.5	0.625 1.000 0.000		b37m'	291.8	53.3 28.1 −65.8 71.6 293.1	0.375 0.000 1.000	
j50g	120.0	87.8 −48.5 63.8 80.2 127.3	0.500 1.000 0.000		b50m'	300.0	46.9 44.3 −76.1 88.1 300.2	0.500 0.000 1.000	
j62g	128.2	85.8 −63.1 61.0 87.8 136.0	0.375 1.000 0.000		b62m'	308.2	50.7 53.2 −69.8 87.8 307.3	0.625 0.000 1.000	
j75g	136.1	85.5 −64.5 45.7 78.2 94.7	0.250 1.000 0.000		b75m'	316.1	55.0 61.3 −62.6 87.7 314.4	0.750 0.000 1.000	
j87g	143.4	86.0 −59.1 29.6 66.2 153.5	0.125 1.000 0.000		b87m'	323.4	59.6 69.2 −55.0 88.5 321.5	0.875 0.000 1.000	
g00c'=G	150.0	86.4 −54.3 17.4 57.1 162.2	0.000 1.000 0.000		m'00a=M'	330.0	63.5 75.4 −45.9 88.3 328.6	1.000 0.000 1.000	
g12c'	156.6	86.8 −51.0 9.9 52.0 169.1	0.000 1.000 0.125		m'12a	336.6	62.2 71.2 −32.0 78.1 335.7	1.000 0.000 0.875	
g25c'	163.9	87.1 −47.8 3.4 48.0 175.7	0.000 1.000 0.250		m'25a	343.9	61.3 68.0 −20.7 71.2 342.8	1.000 0.000 0.750	
g37c'	171.8	87.4 −45.1 −2.4 45.2 182.8	0.000 1.000 0.375		m'37a	351.8	60.7 65.9 −11.6 66.9 349.9	1.000 0.000 0.625	
g50c'	180.0	87.6 −42.6 −7.1 43.3 189.6	0.000 1.000 0.500		m'50a	360.0	60.2 64.2 −3.2 64.3 357.0	1.000 0.000 0.500	
g62c'	188.2	87.9 −39.5 −11.4 41.3 196.4	0.000 1.000 0.625		m'62a	368.2	59.8 62.5 4.5 62.7 4.2	1.000 0.000 0.375	
g75c'	196.1	85.9 −36.4 −15.6 39.7 203.3	0.000 1.000 0.750		m'75a	376.1	59.5 61.2 12.2 62.4 11.3	1.000 0.000 0.250	
g87c'	203.4	83.7 −32.9 −19.0 38.1 210.1	0.000 1.000 0.875		m'87a	383.4	59.2 60.1 20.0 63.3 18.4	1.000 0.000 0.125	

KE89E−3N_2

Interpretation *rgb* −> *rgb and CIELAB data of a 48 step elementary hue circle**
for a sRGB standard display with the luminance reflection L_r=40% compared to the white reference (100%)
48 step elementary hue circle with hues: *R*/*G*: R_{abs} = 25.5, 92.3, 162.2, 271.7, and / or *M* = 217.0, 328.6
comparison with six device hues *O*/*Y*: Y_{abs} = 31.0, 103.7, 137.6, 196.6, 302.8, 327.9
9 step equidistant grey scale: *L = 69.7, 72.9, 76.1, 79.3, 82.6, 85.8, 89.0, 92.2, 95.4**

a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$	a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$
r00/=R	30.0	77.2 24.5 11.7 27.1 25.5	1.000 0.000 0.000		c'00/=C'	210.8	87.8 −16.2 −12.2 20.4 217.0	0.000 1.000 1.000	
r12	36.6	78.8 20.8 13.9 25.1 33.8	1.000 0.125 0.000		c'12b	216.6	86.6 −14.0 −13.4 19.5 223.8	0.000 0.875 1.000	
r25	43.9	80.2 17.6 16.0 23.9 42.2	1.000 0.250 0.000		c'25b	223.9	85.7 −22.9 −15.1 19.7 230.7	0.000 0.750 1.000	
r37	51.8	81.6 14.8 18.0 23.1 50.8	1.000 0.375 0.000		c'37b	231.8	84.7 −10.6 −16.7 19.9 237.5	0.000 0.625 1.000	
r50	60.0	83.0 11.9 19.7 23.0 58.9	1.000 0.500 0.000		c'50b	240.0	83.7 −8.6 −18.1 20.1 244.4	0.000 0.500 1.000	
r62	68.2	84.3 9.1 21.7 23.6 67.2	1.000 0.625 0.000		c'62b	248.2	82.8 −6.5 −19.2 20.4 251.2	0.000 0.375 1.000	
r75	76.1	85.7 6.1 23.6 24.4 75.6	1.000 0.750 0.000		c'75b	256.1	81.6 −4.4 −20.1 21.0 258.0	0.000 0.250 1.000	
r87	83.4	87.3 2.7 25.9 26.1 84.0	1.000 0.875 0.000		c'87b	263.4	80.4 −2.0 −20.8 21.0 264.9	0.000 0.125 1.000	
j00g=J	90.0	89.2 −1.0 28.4 28.5 92.3	1.000 1.000 0.000		b00m'=B	270.0	79.1 0.8 −24.9 25.0 271.7	0.000 0.000 1.000	
j12g	96.6	91.8 −6.2 32.0 32.6 101.1	0.875 1.000 0.000		b12m'	276.6	77.4 4.3 −27.6 28.0 278.8	0.125 0.000 1.000	
j25g	103.9	93.6 −22.2 34.3 36.4 109.8	0.750 1.000 0.000		b25m'	283.9	75.2 8.8 −30.7 32.1 286.0	0.250 0.000 1.000	
j37g	111.8	92.5 −38.3 33.1 50.6 118.5	0.625 1.000 0.000		b37m'	291.8	72.5 13.9 −35.0 38.1 293.1	0.375 0.000 1.000	
j50g	120.0	91.5 −23.5 31.0 38.9 127.3	0.500 1.000 0.000		b50m'	300.0	69.7 19.7 −33.8 39.3 300.2	0.500 0.000 1.000	
j62g	128.2	90.3 −30.1 29.1 41.9 136.0	0.375 1.000 0.000		b62m'	308.2	74.4 24.2 −31.8 40.0 307.3	0.625 0.000 1.000	
j75g	136.1	89.4 −34.7 24.4 42.7 94.7	0.250 1.000 0.000		b75m'	316.1	78.8 28.1 −31.5 43.1 314.4	0.750 0.000 1.000	
j87g	143.4	89.8 −31.7 15.8 35.5 153.5	0.125 1.000 0.000		b87m'	323.4	83.7 34.1 −27.0 43.6 321.5	0.875 0.000 1.000	
g00c'=G	150.0	90.1 −29.2 9.4 30.8 162.2	0.000 1.000 0.000		m'00a=M'	330.0	78.3 36.7 −22.3 43.0 328.6	1.000 0.000 1.000	
g12c'	156.6	90.3 −27.5 5.4 28.2 169.1	0.000 1.000 0.125		m'12a	336.6	77.8 34.2 −15.3 37.5 335.7	1.000 0.000 0.875	
g25c'	163.9	90.4 −26.0 1.5 26.0 175.7	0.000 1.000 0.250		m'25a	343.9	77.5 32.3 −9.9 33.8 342.8	1.000 0.000 0.750	
g37c'	171.8	90.5 −24.8 −1.2 24.8 182.8	0.000 1.000 0.375		m'37a	351.8	77.3 30.8 −5.4 31.4 349.9	1.000 0.000 0.625	
g50c'	180.0	90.7 −23.7 −3.9 24.1 189.6	0.000 1.000 0.500		m'50a	360.0	77.0 29.8 −1.4 29.8 357.0	1.000 0.000 0.500	
g62c'	188.2	90.9 −22.5 −6.5 23.3 196.4	0.000 1.000 0.625		m'62a	368.2	76.8 28.6 2.1 28.7 4.2	1.000 0.000 0.375	
g75c'	196.1	90.0 −20.4 −8.7 22.3 203.3	0.000 1.000 0.750		m'75a	376.1	76.7 27.6 5.5 28.2 11.3	1.000 0.000 0.250	
g87c'	203.4	89.2 −18.4 −10.6 21.4 210.1	0.000 1.000 0.875		m'87a	383.4	76.5 26.7 8.9 28.2 18.4	1.000 0.000 0.125	

KE89I−3N_2

Interpretation *rgb* −> *rgb and CIELAB data of a 48 step elementary hue circle**
for a sRGB standard display with the luminance reflection L_r=100% compared to the white reference (100%)
48 step elementary hue circle with hues: *R*/*G*: R_{abs} = 25.5, 92.3, 162.2, 271.7, and / or *M* = 217.0, 328.6
comparison with six device hues *O*/*Y*: Y_{abs} = 31.0, 103.7, 137.6, 196.6, 302.8, 327.9
9 step equidistant grey scale: *L = 89.8, 91.1, 92.3, 93.5, 94.7, 95.9, 97.1, 98.2, 99.4**

a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$	a^*_{abs}	b^*_{rgb}	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	L^*_{abs}	$rgb \rightarrow rgb^*_{abs}$
r00/=R	30.0	89.2 −1.0 28.4 28.5 92.3	1.000 1.000 0.000		c'00/=C'	210.8	97.8 −16.2 −12.2 20.4 217.0	0.000 1.000 1.000	
r12	36.6	90.4 −6.2 32.0 32.6 101.1	0.875 1.000 0.000		c'12b	216.6	96.6 −14.0 −13.4 19.5 223.8	0.000 0.875 1.000	
r25	43.9	91.8 −22.2 34.3 36.4 109.8	0.750 1.000 0.000		c'25b	223.9	95.7 −22.9 −15.1 19.7 230.7	0.000 0.750 1.000	
r37	51.8	93.1 −38.3 33.1 50.6 118.5	0.625 1.000 0.000		c'37b	231.8	94.7 −10.6 −16.7 19.9 237.5	0.000 0.625 1.000	
r50	60.0	94.5 −23.5 31.0 38.9 127.3	0.500 1.000 0.000		c'50b	240.0	93.7 −8.6 −18.1 20.1 244.4	0.000 0.500 1.000	
r62	68.2	95.8 −30.1 29.1 41.9 136.0	0.375 1.000 0.000		c'62b	248.2	92.8 −6.5 −19.2 20.4 251.2	0.000 0.375 1.000	
r75	76.1	97.1 −34.7 24.4 42.7 144.7	0.250 1.000 0.000		c'75b	256.1	91.6 −4.4 −20.1 21.0 258.0	0.000 0.250 1.000	
r87	83.4	98.4 −31.7 15.8 35.5 153.5	0.125 1.000 0.000		c'87b	263.4	90.4 −2.0 −20.8 21.0 264.9	0.000 0.125 1.000	
j00g=J	90.0	89.2 −1.0 28.4 28.5 92.3	1.000 1.000 0.000		b00m'=B	270.0	79.1 0.8 −24.9 25.0 271.7	0.000 0.000 1.000	
j12g	96.6	91.8 −6.2 32.0 32.6 101.1	0.875 1.000 0.000		b12m'	276.6	77.4 4.3 −27.6 28.0 278.8	0.125 0.000 1.000	
j25g	103.9	93.6 −22.2 34.3 36.4 109.8	0.750 1.000 0.000		b25m'	283.9	75.2 8.8 −30.7 32.1 286.0	0.250 0.000 1.000	
j37g	111.8	92.5 −38.3 33.1 50.6 118.5	0.625 1.000 0.000		b37m'	291.8	72.5 13.9 −35.0 38.1 293.1	0.375 0.000 1.000	
j50g	120.0	91.5 −23.5 31.0 38.9 127.3	0.500 1.000 0.000		b50m'	300.0	69.7 19.7 −33.8 39.3 300.2	0.500 0.000 1.000	
j62g	128.2	90.3 −30.1 29.1 41.9 136.0	0.375 1.000 0.000		b62m'	308.2	74.4 24.2 −31.8 40.0 307.3	0.625 0.000 1.000	
j75g	136.1	89.4 −34.7 24.4 42.7 144.7	0.250 1.000 0.000		b75m'	316.1	78.8 28.1 −31.5 43.1 314.4	0.750 0.000 1.000	
j87g	143.4	89.8 −31.7 15.8 35.5 153.5	0.125 1.000 0.000		b87m'	323.4	83.7 34.1 −27.0 43.6 321.5	0.875 0.000 1.000	
g00c'=G	150.0	90.1 −29.2 9.4 30.8 162.2	0.000 1.000 0.000		m'00a=M'	330.0	78.3 36.7 −22.3 43.0 328.6	1.000 0.000 1.000	
g12c'	156.6	90.3 −27.5 5.4 28.2 169.1	0.000 1.000 0.125		m'12a	336.6	77.8 34.2 −15.3 37.5 335.7	1.000 0.000 0.875	
g25c'	163.9	90.4 −26.0 1.5 26.0 175.7	0.000 1.000 0.250		m'25a	343.9	77.5 32.3 −9.9 33.8 342.8	1.000 0.000 0.750	
g37c'	171.8	90.5 −24.8 −1.2 24.8 182.8	0.000 1.000 0.375		m'37a	351.8	77.3 30.8 −5.4 31.4 349.9	1.000 0.000 0.625	
g50c'	180.0	90.7 −23.7 −3.9 24.1 189.6	0.000 1.000 0.500		m'50a	360.0	77.0 29.8 −1.4 29.8 357.0	1.000 0.000 0.500	
g62c'	188.2	90.9 −22.5 −6.5 23.3 196.4	0.000 1.000 0.625		m'62a	368.2	76.8 28.6 2.1 28.7 4.2	1.000 0.000 0.375	
g75c'	196.1	90.0 −20.4 −8.7 22.3 203.3	0.000 1.000 0.750		m'75a	376.1	76.7 27.6 5.5 28.2 11.3	1.000 0.000 0.250	
g87c'	203.4	89.2 −18.4 −10.6 21.4 210.1	0.000 1.000 0.875		m'87a	383.4	76.5 26.7 8.9 28.2 18.4	1.000 0.000 0.125	

KE89I−7N_2

TUB registration: 20100601-KE89/KE89L0N1.TXT /.PS
application for measurement of printer or monitor systems

TUB material: code=fha4a

TUB-test chart KE89; 48 step sRGB elementary hue circle
Interpretation *rgb* −> *rgb** and CIELAB data of colours Ma

input: *rgb*−>*rgb** *setrgbcolor*
output: *no change compared to input*