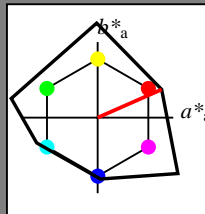


Eingabe: Farbmatisches Reflexions-System NCS11

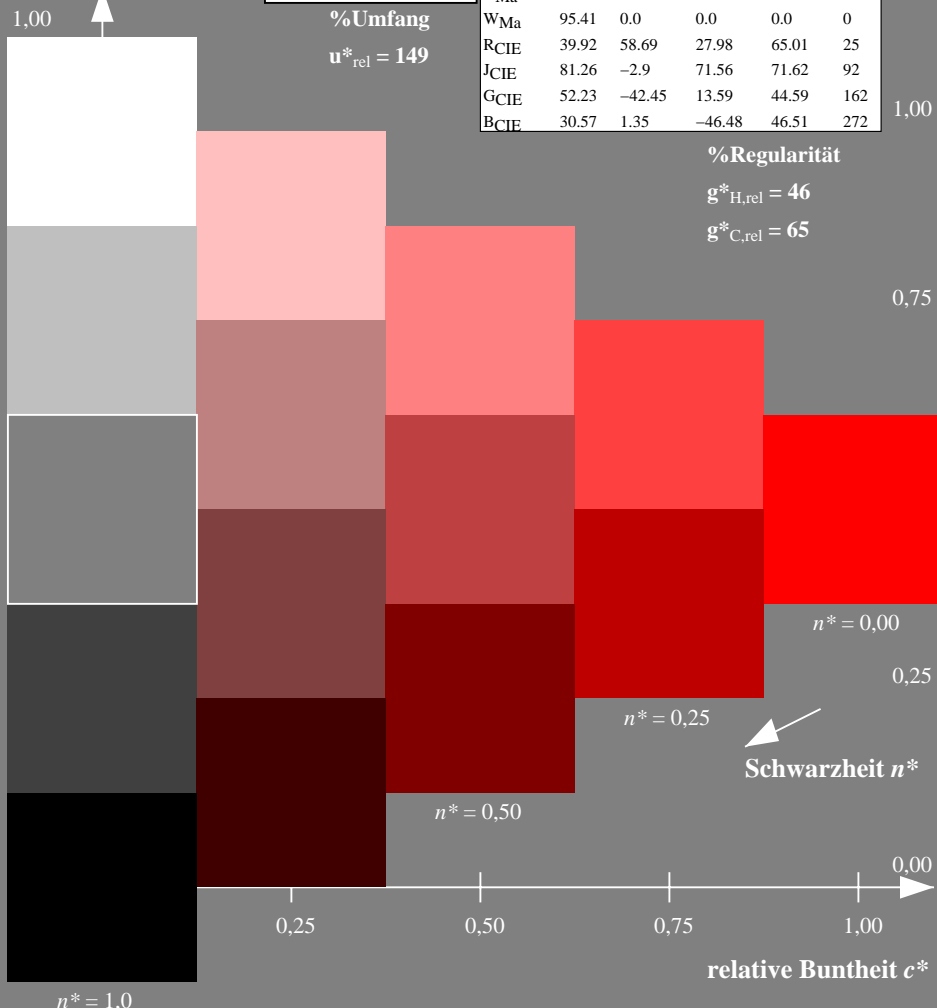
für Buntton $h^* = lab^*h = 24/360 = 0.066$
 lab^*tch und lab^*nch

D65: Buntton R
 LCH*Ma: 47 92 24
 rgb*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit



%Umfang
 $u^*_{rel} = 149$



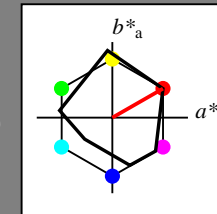
TG480-7, 5stufige Reihen für konstanten CIELAB Buntton 24/360 = 0.066 (links)

Ausgabe: Farbmatisches Reflexions-System MRS18

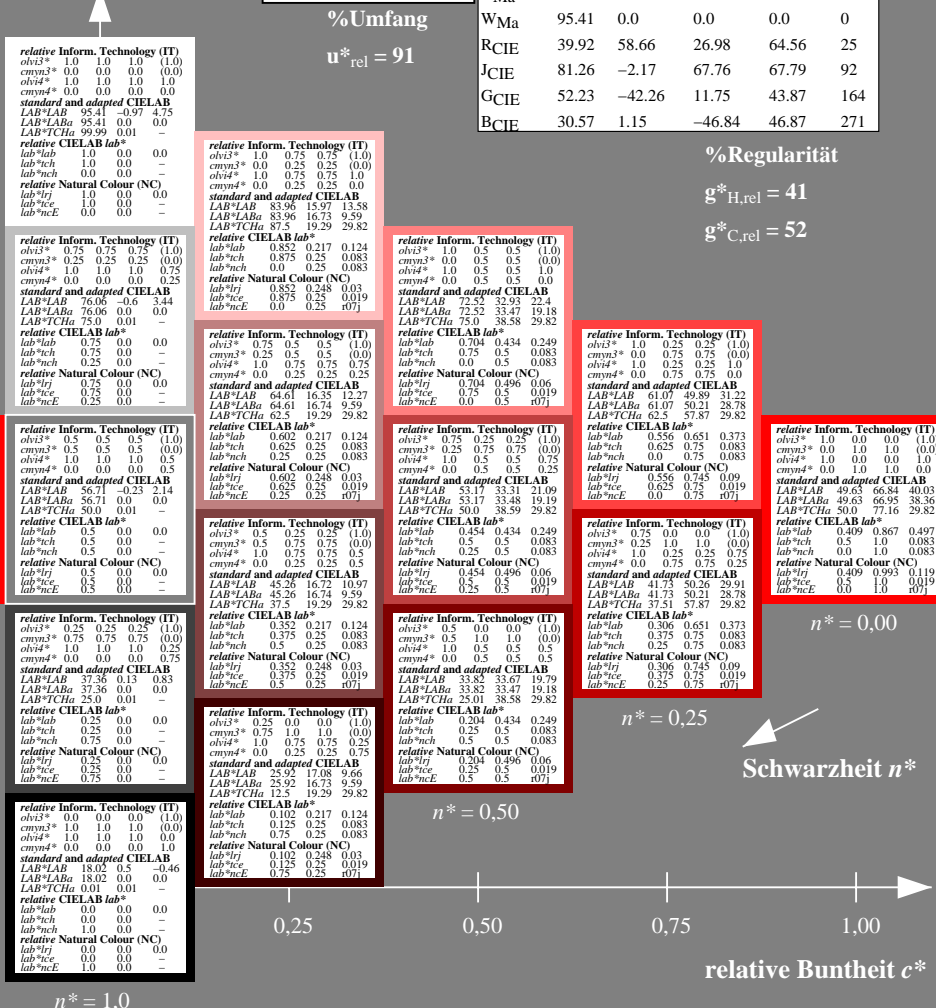
für Buntton $h^* = lab^*h = 30/360 = 0.083$
 lab^*tch und lab^*nch

D65: Buntton R
 LCH*Ma: 50 77 30
 rgb*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit



%Umfang
 $u^*_{rel} = 91$



5 stufige Reihen für konstanten CIELAB Buntton 30/360 = 0.083 (rechts)

NCS11; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

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

MRS18; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

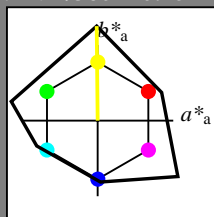
$g^*_{C,rel} = 52$

Eingabe: Farbmatisches Reflexions-System NCS11

für Bunnton $h^* = lab^*h = 91/360 = 0.252$
 lab^*tch und lab^*nch

D65: Bunnton J
 LCH*Ma: 91 125 91
 rgb*Ma: 1.0 1.0 0.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

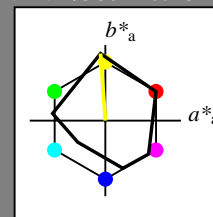
$g^*_{C,rel} = 65$

Ausgabe: Farbmatisches Reflexions-System MRS18

für Bunnton $h^* = lab^*h = 94/360 = 0.261$
 lab^*tch und lab^*nch

D65: Bunnton J
 LCH*Ma: 91 89 94
 rgb*Ma: 1.0 1.0 0.0

Dreiecks-Helligkeit



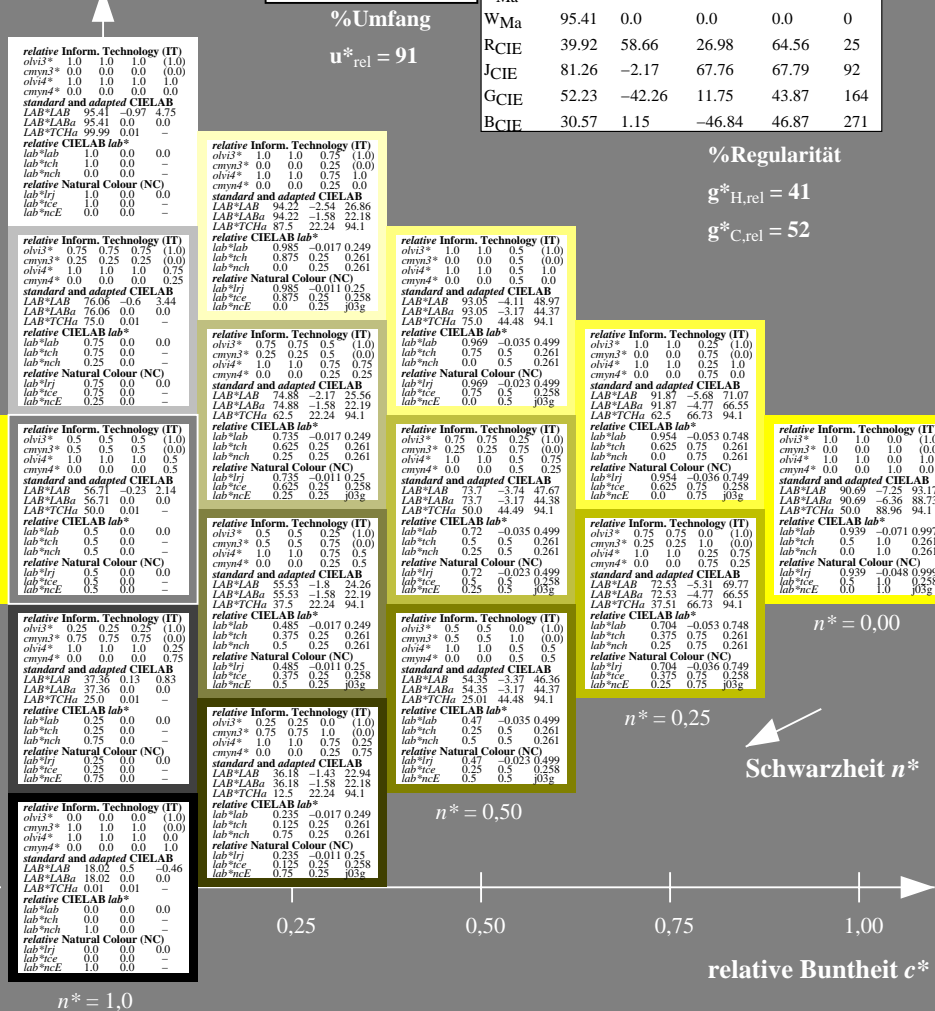
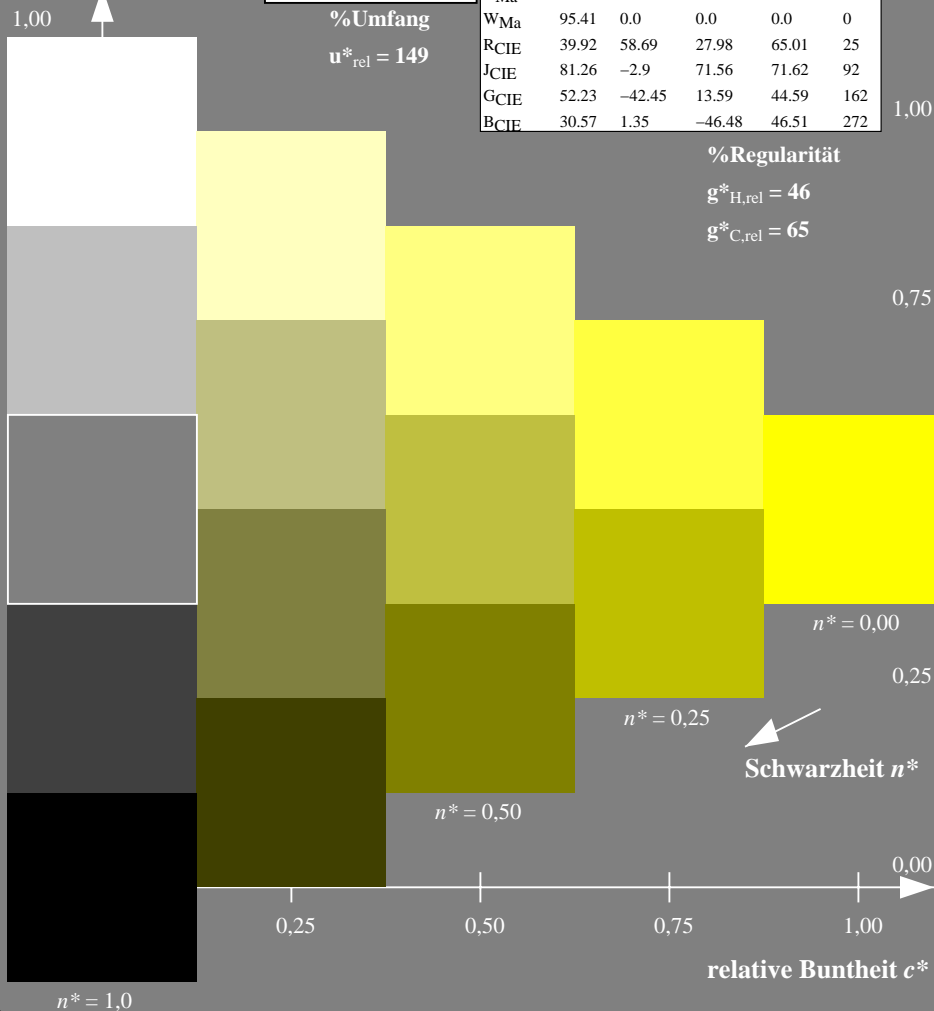
MRS18; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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



TG480-7, 5 stufige Reihen für konstanten CIELAB Bunnton 91/360 = 0.252 (links)

5 stufige Reihen für konstanten CIELAB Bunnton 94/360 = 0.261 (rechts)

BAM-Prüfvorlage TG48; Farbmatisches System ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunntöneoutput: *Startup (S) data dependend*

Siehe ähnliche Dateien: <http://www.ps.bam.de/TG48/>
 Technische Information: <http://www.ps.bam.de/Version 2.1, io=1,1?>

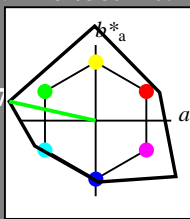
BAM-Registrierung: 20060101-TG48/10Q/Q48G01SP.PS/.PDF BAM-Material: Code=rhatha
 Anwendung für Beurteilung und Messung von Drucker- oder Monitorssystemen

Eingabe: Farbmetrisches Reflexions-System NCS11

für Buntton $h^* = lab^*h = 167/360 = 0.465$
 lab^*tch und lab^*nch

D65: Buntton G
 LCH*Ma: 63 117 167
 rgb*Ma: 0.0 1.0 0.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50BMa | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| BMa | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50RMa | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| NMa | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

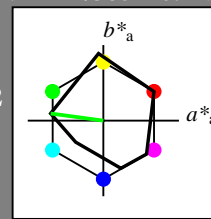
$g^*_{C,rel} = 65$

Ausgabe: Farbmetrisches Reflexions-System MRS18

für Buntton $h^* = lab^*h = 172/360 = 0.479$
 lab^*tch und lab^*nch

D65: Buntton G
 LCH*Ma: 52 70 172
 rgb*Ma: 0.0 1.0 0.0

Dreiecks-Helligkeit



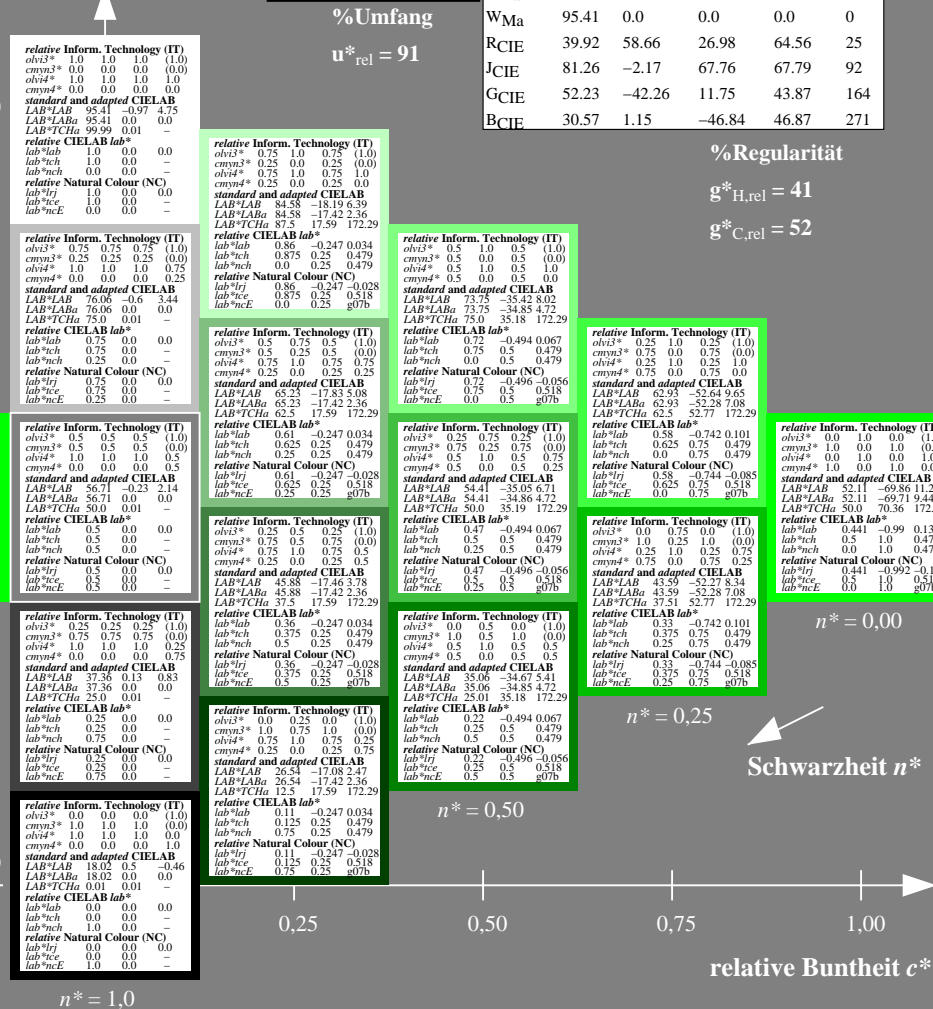
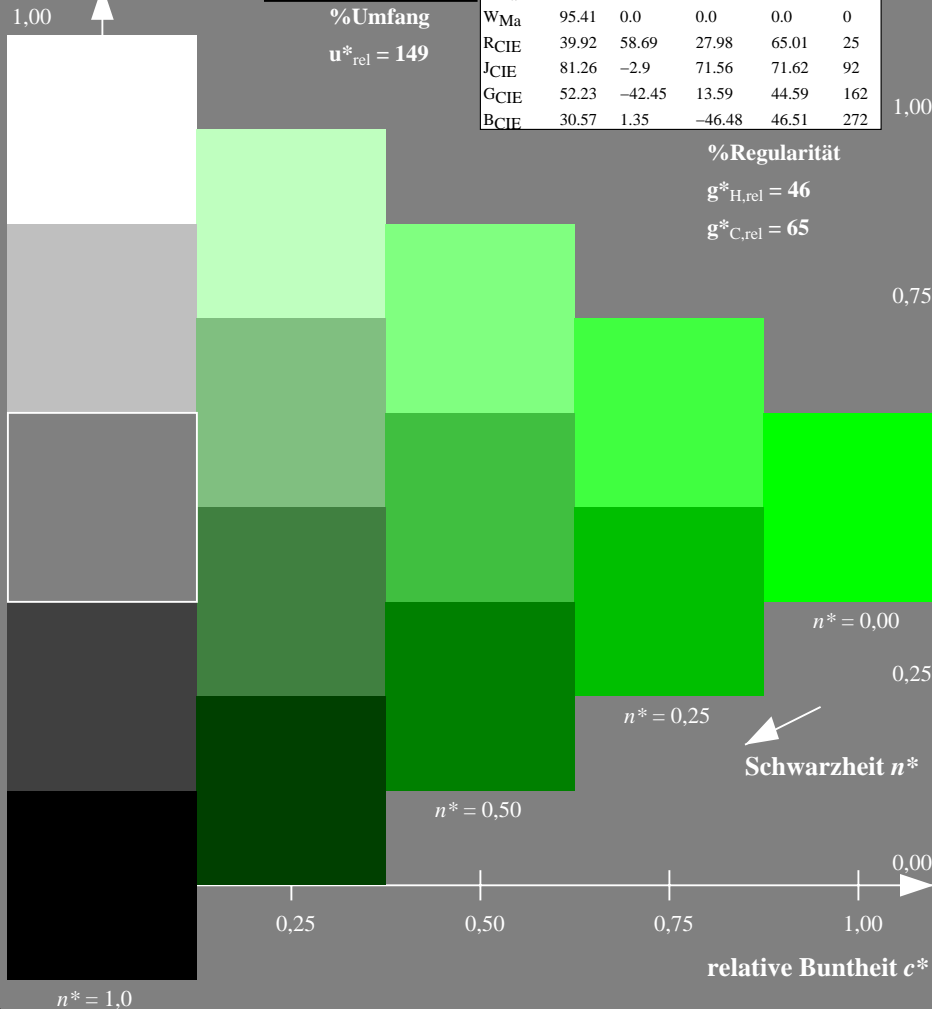
MRS18; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50BMa | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| BMa | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50RMa | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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



TG480-7, 5 stufige Reihen für konstanten CIELAB Buntton 167/360 = 0.465 (links)

5 stufige Reihen für konstanten CIELAB Buntton 172/360 = 0.479 (rechts)

BAM-Prüfvorlage TG48; Farbmetrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$

D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

Siehe ähnliche Dateien: <http://www.ps.bam.de/TG48/>
 Technische Information: <http://www.ps.bam.de/Version 2.1, io=1,1?>

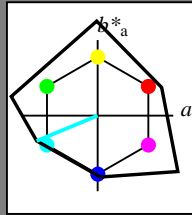
BAM-Registrierung: 20060101-TG48/10Q/Q48G02SP.PS/.PDF BAM-Material: Code=rhatha
 Anwendung für Beurteilung und Messung von Drucker- oder Monitorssystemen
 /TG48 Form 3/10, Serie: 1/1, Seite: 3
 Scherz hung 3

Eingabe: Farbmatisches Reflexions-System NCS11

für Buntton $h^* = lab^*h = 203/360 = 0.563$
 lab^*tch und lab^*nch

D65: Buntton G50B
 LCH*Ma: 59 87 203
 rgb*Ma: 0.0 1.0 1.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

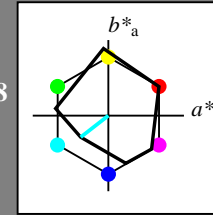
$g^*_{C,rel} = 65$

Ausgabe: Farbmatisches Reflexions-System MRS18

für Buntton $h^* = lab^*h = 218/360 = 0.605$
 lab^*tch und lab^*nch

D65: Buntton G50B
 LCH*Ma: 45 46 218
 rgb*Ma: 0.0 1.0 1.0

Dreiecks-Helligkeit



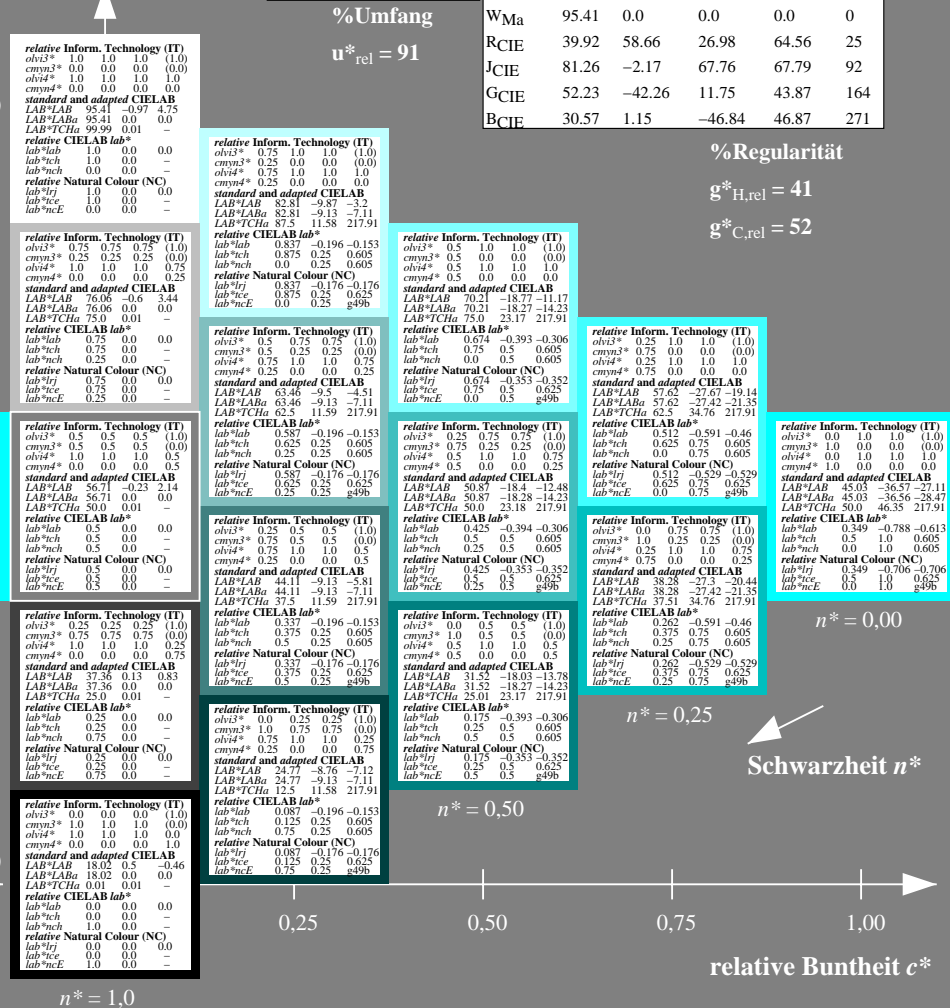
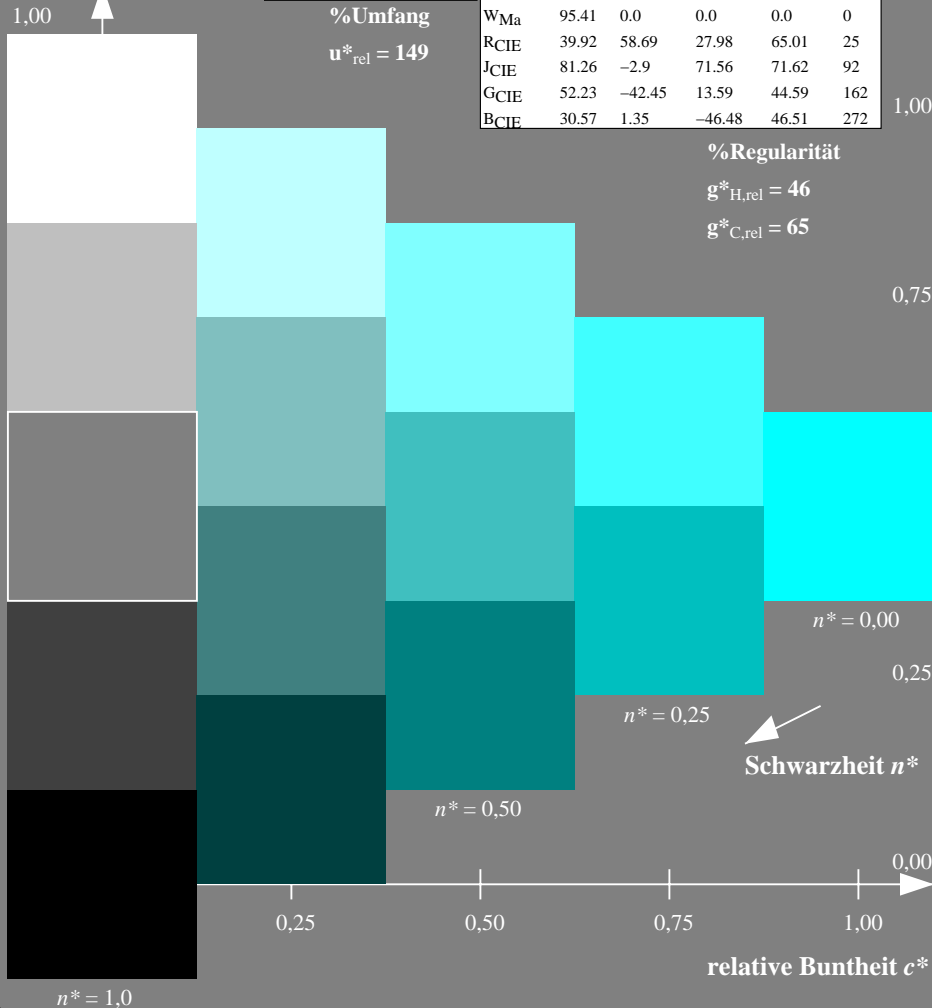
MRS18; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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



TG480-7, 5stufige Reihen für konstanten CIELAB Buntton 203/360 = 0.563 (links)

5 stufige Reihen für konstanten CIELAB Buntton 218/360 = 0.605 (rechts)

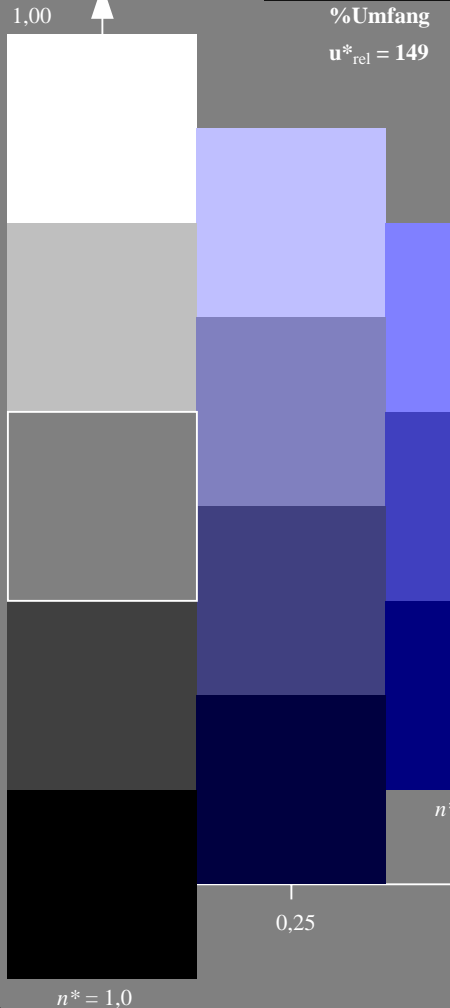
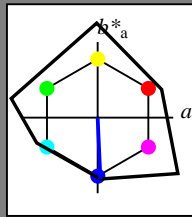
BAM-Prüfvorlage TG48; Farbmatrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

Eingabe: Farbmatisches Reflexions-System NCS11

für Buntton $h^* = lab^*h = 273/360 = 0.757$
 lab^*tch und lab^*nch

D65: Buntton B
 LCH*Ma: 49 81 273
 rgb*Ma: 0.0 0.0 1.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

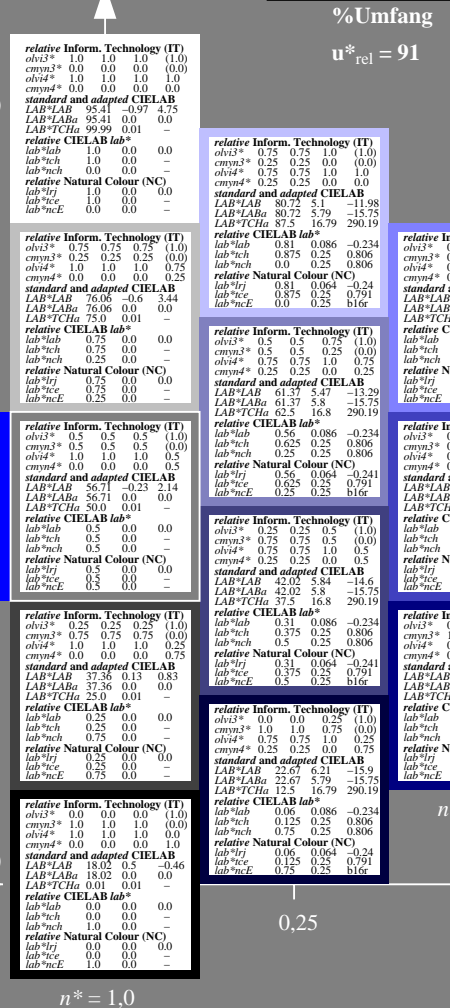
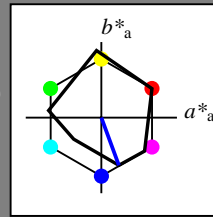
$g^*_{C,rel} = 65$

Ausgabe: Farbmatisches Reflexions-System MRS18

für Buntton $h^* = lab^*h = 290/360 = 0.806$
 lab^*tch und lab^*nch

D65: Buntton B
 LCH*Ma: 37 67 290
 rgb*Ma: 0.0 0.0 1.0

Dreiecks-Helligkeit



MRS18; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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

TG480-7, 5 stufige Reihen für konstanten CIELAB Buntton 273/360 = 0.757 (links)

5 stufige Reihen für konstanten CIELAB Buntton 290/360 = 0.806 (rechts)

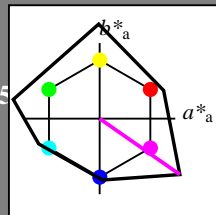
BAM-Prüfvorlage TG48; Farbmatrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

Eingabe: Farbmatisches Reflexions-System NCS11

für Bunnton $h^* = lab^*h = 325/360 = 0.903$
 lab^*tch und lab^*nch

D65: Bunnton B50R
 LCH*Ma: 44 129 325
 rgb*Ma: 1.0 0.0 1.0

Dreiecks-Helligkeit



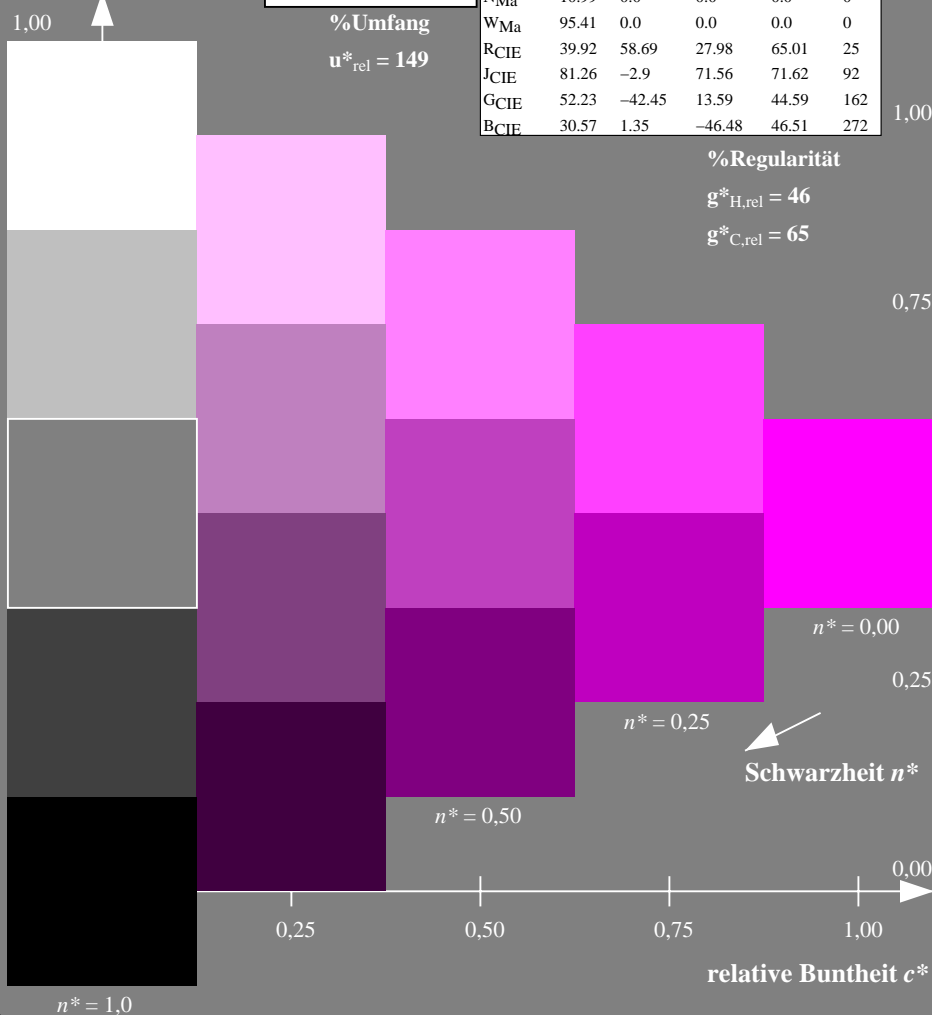
NCS11; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50BMa | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| BMa | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50RMa | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| NMa | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

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



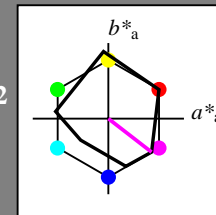
TG480-7, 5 stufige Reihen für konstanten CIELAB Bunnton 325/360 = 0.903 (links)

Ausgabe: Farbmatisches Reflexions-System MRS18

für Bunnton $h^* = lab^*h = 322/360 = 0.895$
 lab^*tch und lab^*nch

D65: Bunnton B50R
 LCH*Ma: 35 72 322
 rgb*Ma: 1.0 0.0 1.0

Dreiecks-Helligkeit



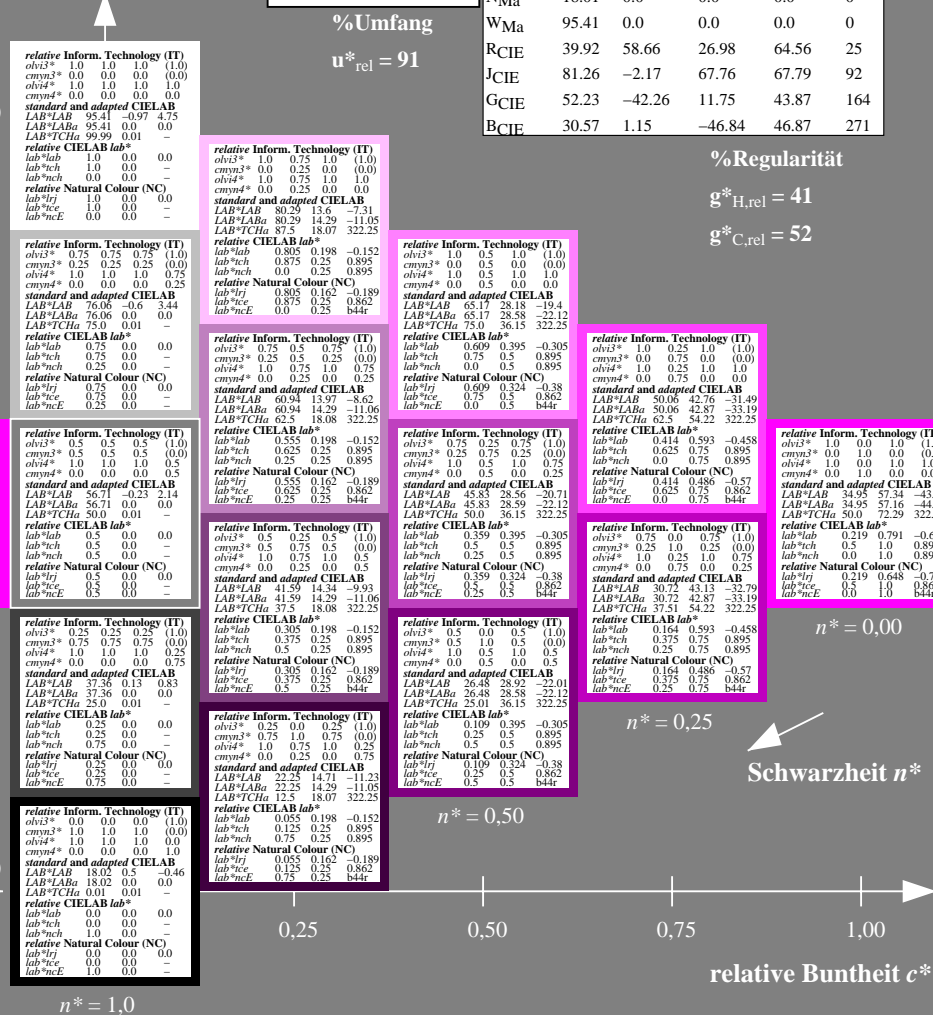
MRS18; adaptierte CIELAB-Daten

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50BMa | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| BMa | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50RMa | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Bunnton 322/360 = 0.895 (rechts)

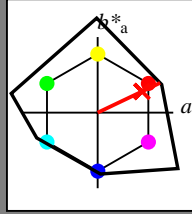
BAM-Prüfvorlage TG48; Farbmatrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

Eingabe: Farbmatisches Reflexions-System NCS11

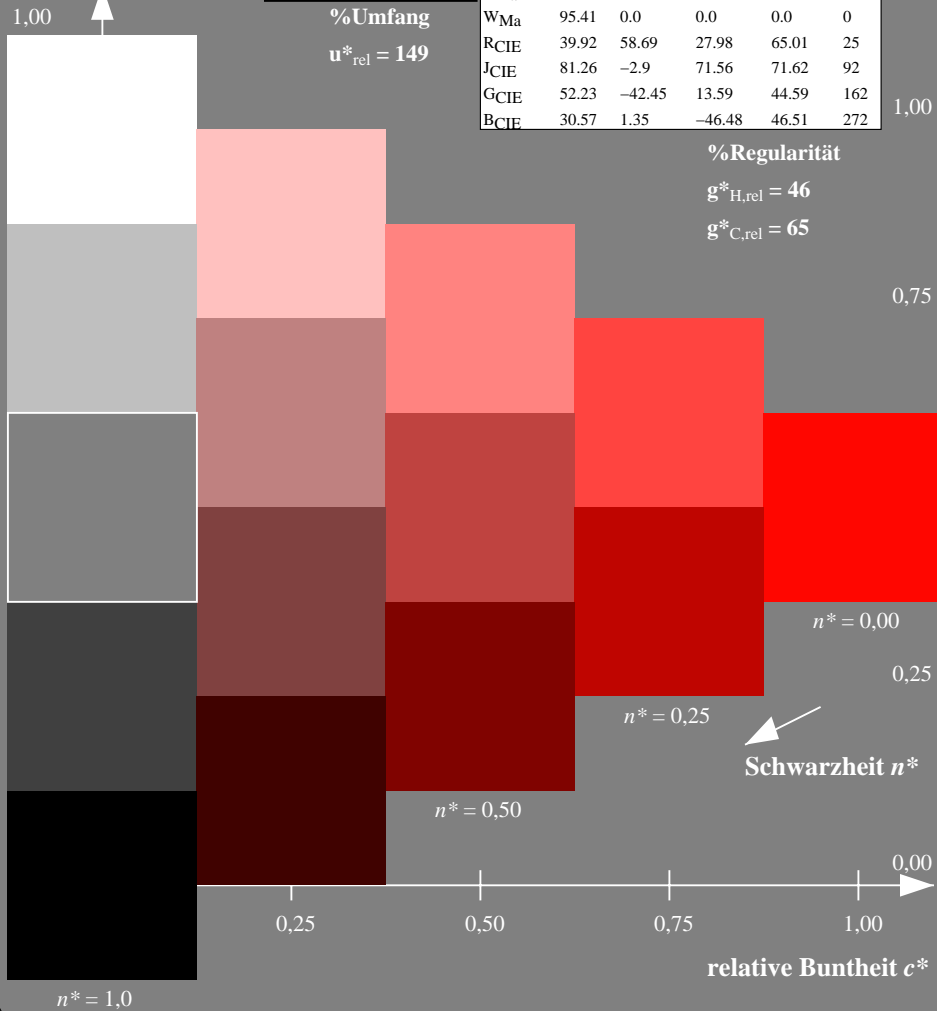
für Bunnton $h^* = lab^*h = 25/360 = 0.071$
 lab^*tch und lab^*nch

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

Dreiecks-Helligkeit



%Umfang
 $u^*_{rel} = 149$



NCS11; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

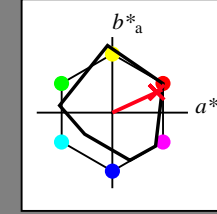
%Regularität
 $g^*_{H,rel} = 46$
 $g^*_{C,rel} = 65$

Ausgabe: Farbmatisches Reflexions-System MRS18

für Bunnton $h^* = lab^*h = 25/360 = 0.069$
 lab^*tch und lab^*nch

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

Dreiecks-Helligkeit

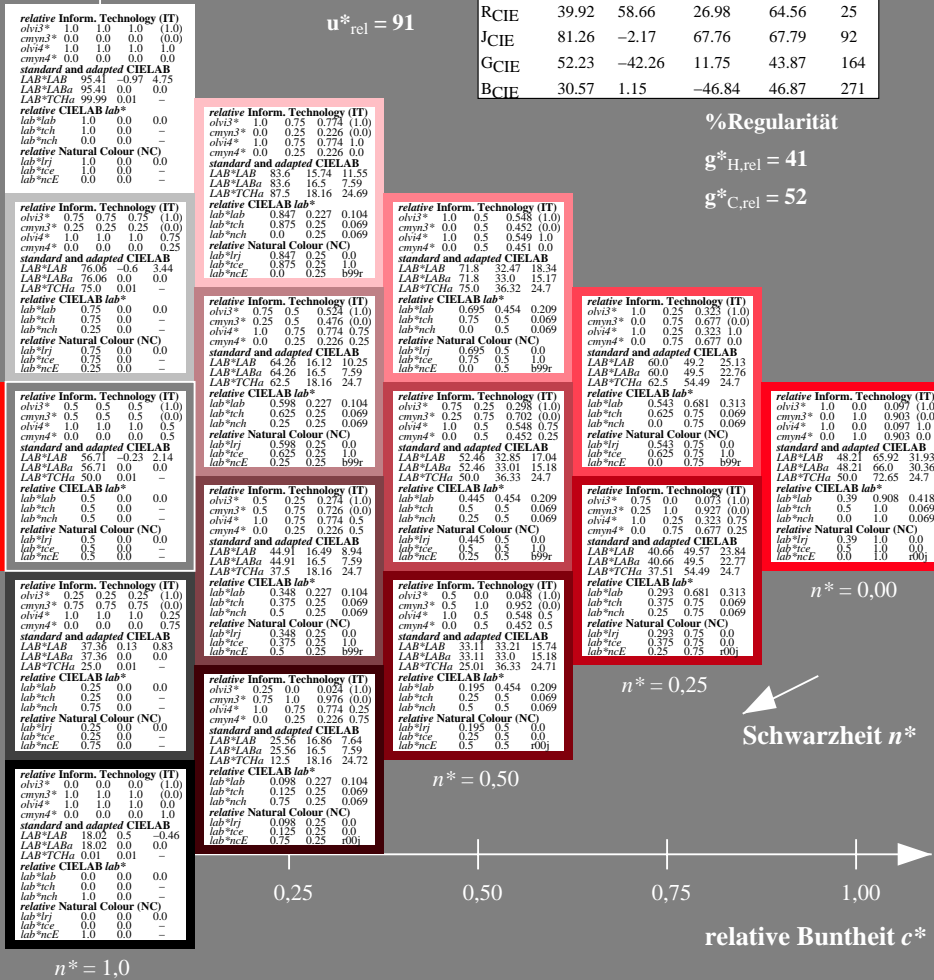


%Umfang
 $u^*_{rel} = 91$

MRS18; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität
 $g^*_{H,rel} = 41$
 $g^*_{C,rel} = 52$



relative Inform. Technology (IT)

| | | | | |
|-----------|-----|-----|-----|-------|
| $olvi3^*$ | 1.0 | 1.0 | 1.0 | (1.0) |
| $cmyn3^*$ | 0.0 | 0.0 | 0.0 | (0.0) |
| $olvi4^*$ | 1.0 | 1.0 | 1.0 | 1.0 |
| $cmyn4^*$ | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|------------|-------|-------|------|
| LAB^*LAB | 95.41 | -0.97 | 4.75 |
| LAB^*LAb | 95.41 | 0.0 | 0.0 |
| LAB^*TCh | 99.99 | 0.01 | - |

relative CIELAB lab*

| | | | |
|------------|-----|-----|-----|
| lab^*lab | 1.0 | 0.0 | 0.0 |
| lab^*tch | 1.0 | 0.0 | - |
| lab^*nch | 0.0 | 0.0 | - |
| lab^*trj | 1.0 | 0.0 | 0.0 |
| lab^*tce | 1.0 | 0.0 | - |
| lab^*nce | 0.0 | 0.0 | - |

relative Natural Colour (NC)

| | | | |
|------------|-----|-----|-----|
| lab^*trj | 1.0 | 0.0 | 0.0 |
| lab^*tce | 1.0 | 0.0 | - |
| lab^*nce | 0.0 | 0.0 | - |

TG480-7, 5 stufige Reihen für konstanten CIELAB Bunnton 25/360 = 0.071 (links)

5 stufige Reihen für konstanten CIELAB Bunnton 25/360 = 0.069 (rechts)

BAM-Prüfvorlage TG48; Farbmatrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

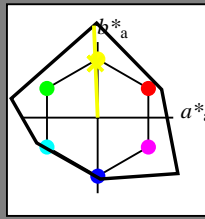
BAM-Registrierung: 20060101-TG48/10Q/Q48G06SP.PS/.PDF BAM-Material: Code=rh4ta
 Anwendung für Beurteilung und Messung von Drucker- oder Monitorsystemen
 /TG48 Form 7/10, Serie: 1/1, Seite: 7
 Schenzhung 7

Eingabe: Farbmatisches Reflexions-System NCS11

für Bunnton $h^* = lab^*h = 92/360 = 0.256$
 lab^*tch und lab^*nch

D65: Bunnton J
 LCH*Ma: 90 122 92
 rgb*Ma: 0.97 1.0 0.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

Schwarzheit n^*

$n^* = 0,50$

relative Buntheit c^*

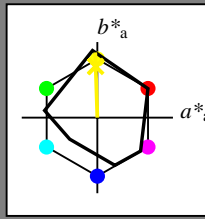
1,00

Ausgabe: Farbmatisches Reflexions-System MRS18

für Bunnton $h^* = lab^*h = 92/360 = 0.255$
 lab^*tch und lab^*nch

D65: Bunnton J
 LCH*Ma: 89 86 92
 rgb*Ma: 1.0 0.95 0.0

Dreiecks-Helligkeit



MRS18; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

Schwarzheit n^*

$n^* = 0,50$

relative Buntheit c^*

1,00

TG480-7, 5 stufige Reihen für konstanten CIELAB Bunnton 92/360 = 0.256 (links)

5 stufige Reihen für konstanten CIELAB Bunnton 92/360 = 0.255 (rechts)

BAM-Prüfvorlage TG48; Farbmatisches System ORS18 & ORS18 input: $olv^* setrgbcolor$

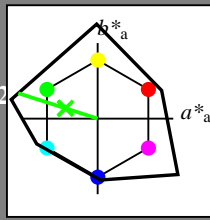
D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunntöneoutput: *Startup (S) data dependend*

Eingabe: Farbmatisches Reflexions-System NCS11

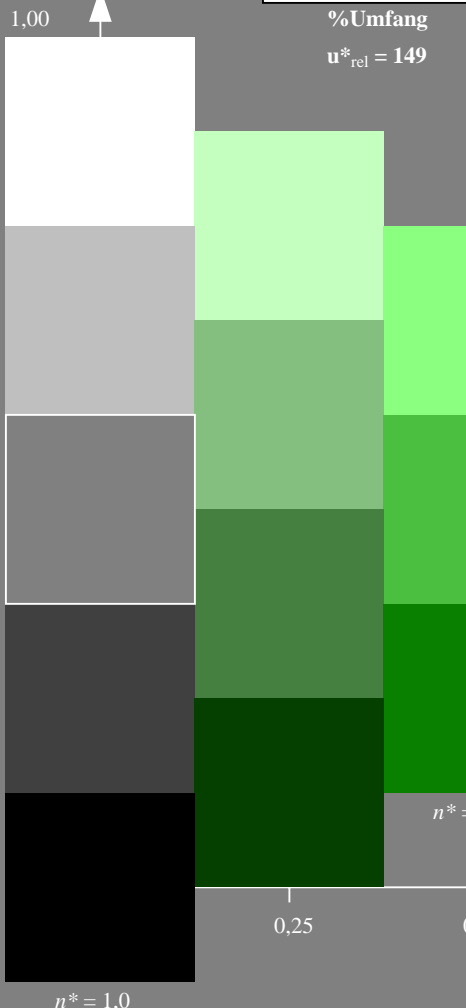
für Buntton $h^* = lab^*h = 162/360 = 0.451$
 lab^*tch und lab^*nch

D65: Buntton G
 LCH*Ma: 65 110 162
 rgb*Ma: 0.08 1.0 0.0

Dreiecks-Helligkeit



%Umfang
 $u^*_{rel} = 149$



NCS11; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

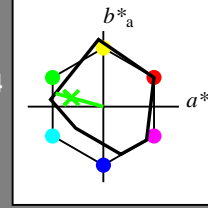
$g^*_{C,rel} = 65$

Ausgabe: Farbmatisches Reflexions-System MRS18

für Buntton $h^* = lab^*h = 164/360 = 0.457$
 lab^*tch und lab^*nch

D65: Buntton G
 LCH*Ma: 56 66 164
 rgb*Ma: 0.1 1.0 0.0

Dreiecks-Helligkeit



%Umfang
 $u^*_{rel} = 91$

MRS18; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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

relative Inform. Technology (IT)

| | | | | |
|-------|-----|-----|-----|-------|
| obv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| cmv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 1.0 |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0 |
| cmv5* | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 95.41 | -0.97 | 4.75 |
| LAB*LABa | 95.41 | 0.0 | 0.0 |
| LAB*TCHa | 99.99 | 0.01 | - |

relative CIELAB lab*

| | | | |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | - |
| lab*tch | 0.0 | 0.0 | - |

relative Natural Colour (NC)

| | | | |
|---------|-----|-----|-----|
| lab*lj | 1.0 | 0.0 | 0.0 |
| lab*lc | 1.0 | 0.0 | - |
| lab*ncc | 0.0 | 0.0 | - |

relative Inform. Technology (IT)

| | | | | |
|-------|-------|-----|------|-------|
| obv3* | 0.776 | 1.0 | 0.75 | (1.0) |
| cmv3* | 0.224 | 0.0 | 0.25 | (0.0) |
| olv3* | 0.776 | 1.0 | 0.75 | 1.0 |
| cmv4* | 0.224 | 0.0 | 0.25 | 0.0 |
| cmv5* | 0.224 | 0.0 | 0.25 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 85.57 | -16.58 | 8.49 |
| LAB*LABa | 85.57 | -15.29 | 4.4 |
| LAB*TCHa | 87.5 | 16.4 | 164.45 |

relative CIELAB lab*

| | | | |
|---------|-------|------|-------|
| lab*lab | 0.776 | 0.24 | 0.067 |
| lab*nch | 0.875 | 0.25 | 0.457 |
| lab*tch | 0.0 | 0.25 | 0.457 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lj | 0.873 | 0.249 | 0.0 |
| lab*lc | 0.875 | 0.25 | 0.0 |
| lab*ncc | 0.0 | 0.25 | 0.999 |

relative Inform. Technology (IT)

| | | | | |
|-------|-------|-----|-----|-------|
| obv3* | 0.551 | 1.0 | 0.5 | (1.0) |
| cmv3* | 0.449 | 0.0 | 0.5 | (0.0) |
| olv3* | 0.551 | 1.0 | 0.5 | 1.0 |
| cmv4* | 0.449 | 0.0 | 0.5 | 0.0 |
| cmv5* | 0.449 | 0.0 | 0.5 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 75.74 | -32.2 | 12.22 |
| LAB*LABa | 75.74 | -31.6 | 8.79 |
| LAB*TCHa | 75.0 | 32.81 | 164.46 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.746 | -0.481 | 0.134 |
| lab*nch | 0.75 | 0.5 | 0.457 |
| lab*tch | 0.0 | 0.5 | 0.457 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lj | 0.746 | -0.499 | 0.0 |
| lab*lc | 0.75 | 0.5 | 0.5 |
| lab*ncc | 0.0 | 0.5 | 0.999 |

relative Inform. Technology (IT)

| | | | | |
|-------|-------|-----|------|-------|
| obv3* | 0.327 | 1.0 | 0.25 | (1.0) |
| cmv3* | 0.673 | 0.0 | 0.75 | (0.0) |
| olv3* | 0.327 | 1.0 | 0.25 | 1.0 |
| cmv4* | 0.673 | 0.0 | 0.75 | 0.0 |
| cmv5* | 0.673 | 0.0 | 0.75 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|------|--------|--------|
| LAB*LAB | 65.9 | -47.82 | 15.96 |
| LAB*LABa | 65.9 | -47.41 | 13.19 |
| LAB*TCHa | 62.5 | 49.22 | 164.46 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.619 | -0.721 | 0.201 |
| lab*nch | 0.625 | 0.75 | 0.457 |
| lab*tch | 0.0 | 0.75 | 0.457 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lj | 0.619 | -0.749 | 0.0 |
| lab*lc | 0.625 | 0.75 | 0.5 |
| lab*ncc | 0.0 | 0.75 | 0.999 |

relative Inform. Technology (IT)

| | | | | |
|-------|-------|-----|-----|-------|
| obv3* | 0.103 | 1.0 | 0.0 | (1.0) |
| cmv3* | 0.897 | 0.0 | 1.0 | (0.0) |
| olv3* | 0.103 | 1.0 | 0.0 | 1.0 |
| cmv4* | 0.897 | 0.0 | 1.0 | 0.0 |
| cmv5* | 0.897 | 0.0 | 1.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 56.07 | -63.44 | 19.68 |
| LAB*LABa | 56.07 | -63.21 | 17.88 |
| LAB*TCHa | 50.0 | 65.62 | 164.46 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.492 | -0.962 | 0.268 |
| lab*nch | 0.5 | 1.0 | 0.457 |
| lab*tch | 0.0 | 1.0 | 0.457 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lj | 0.492 | -0.999 | 0.0 |
| lab*lc | 0.5 | 1.0 | 0.5 |
| lab*ncc | 0.0 | 1.0 | 0.906 |

TG480-7, 5 stufige Reihen für konstanten CIELAB Buntton 162/360 = 0.451 (links)

5 stufige Reihen für konstanten CIELAB Buntton 164/360 = 0.457 (rechts)

BAM-Prüfvorlage TG48; Farbmeter-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*

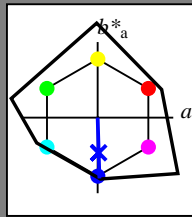
BAM-Registrierung: 20060101-TG48/10Q/Q48G08SP.PS/.PDF BAM-Material: Code=thata
 Anwendung für Beurteilung und Messung von Drucker- oder Monitorsystemen
 Form 9/10, Serie: 1/1, Seite: 9
 Schenztung 9

Eingabe: Farbmetrisches Reflexions-System NCS11

für Buntton $h^* = lab^*h = 272/360 = 0.755$
 lab^*tch und lab^*nch

D65: Buntton B
 LCH*Ma: 49 80 272
 rgb*Ma: 0.0 0.02 1.0

Dreiecks-Helligkeit



NCS11; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 47.15 | 84.64 | 37.25 | 92.48 | 24 |
| JMa | 91.37 | -1.27 | 125.03 | 125.03 | 91 |
| GMa | 63.07 | -114.28 | 25.35 | 117.06 | 167 |
| G50B _{Ma} | 59.47 | -80.6 | -33.45 | 87.28 | 203 |
| B _{Ma} | 49.01 | 3.65 | -81.19 | 81.28 | 273 |
| B50R _{Ma} | 44.06 | 106.09 | -73.93 | 129.32 | 325 |
| N _{Ma} | 10.99 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.69 | 27.98 | 65.01 | 25 |
| JCIE | 81.26 | -2.9 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | -42.45 | 13.59 | 44.59 | 162 |
| BCIE | 30.57 | 1.35 | -46.48 | 46.51 | 272 |

%Regularität

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

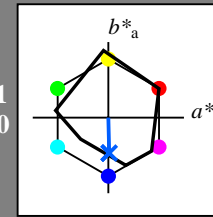
$g^*_{C,rel} = 65$

Ausgabe: Farbmetrisches Reflexions-System MRS18

für Buntton $h^* = lab^*h = 271/360 = 0.754$
 lab^*tch und lab^*nch

D65: Buntton B
 LCH*Ma: 40 50 271
 rgb*Ma: 0.0 0.37 1.0

Dreiecks-Helligkeit



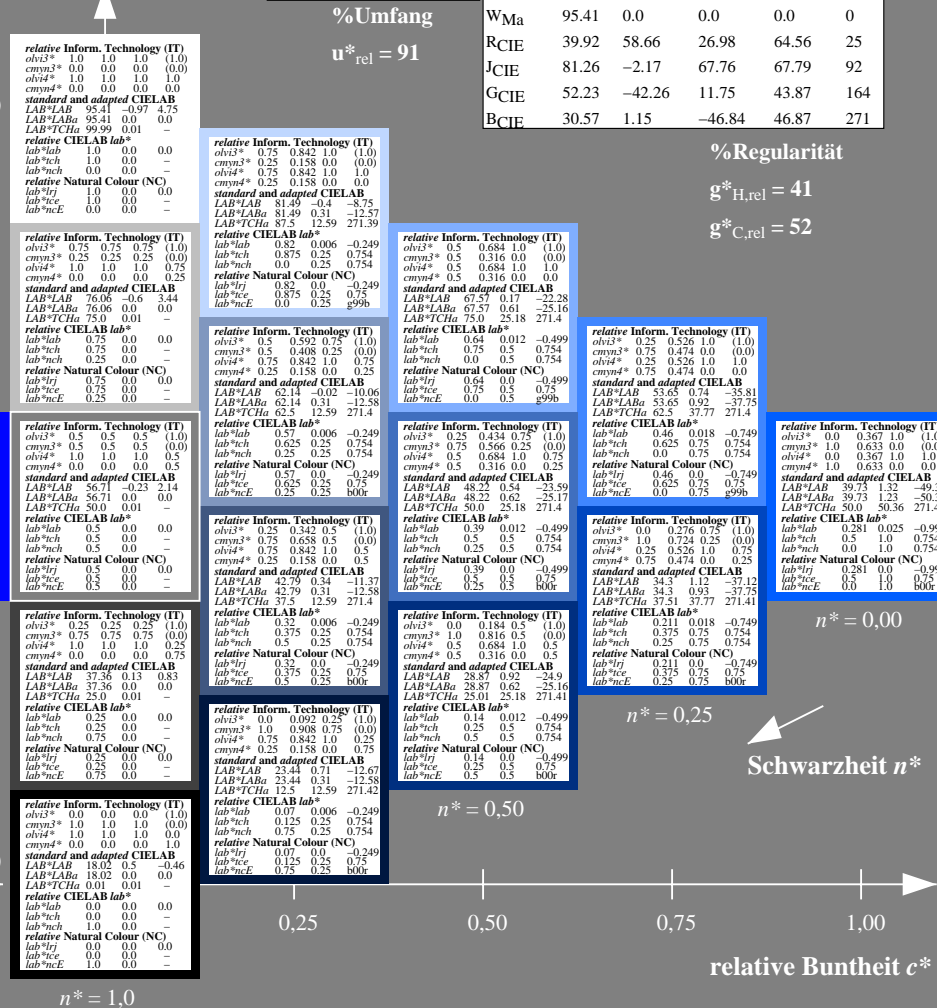
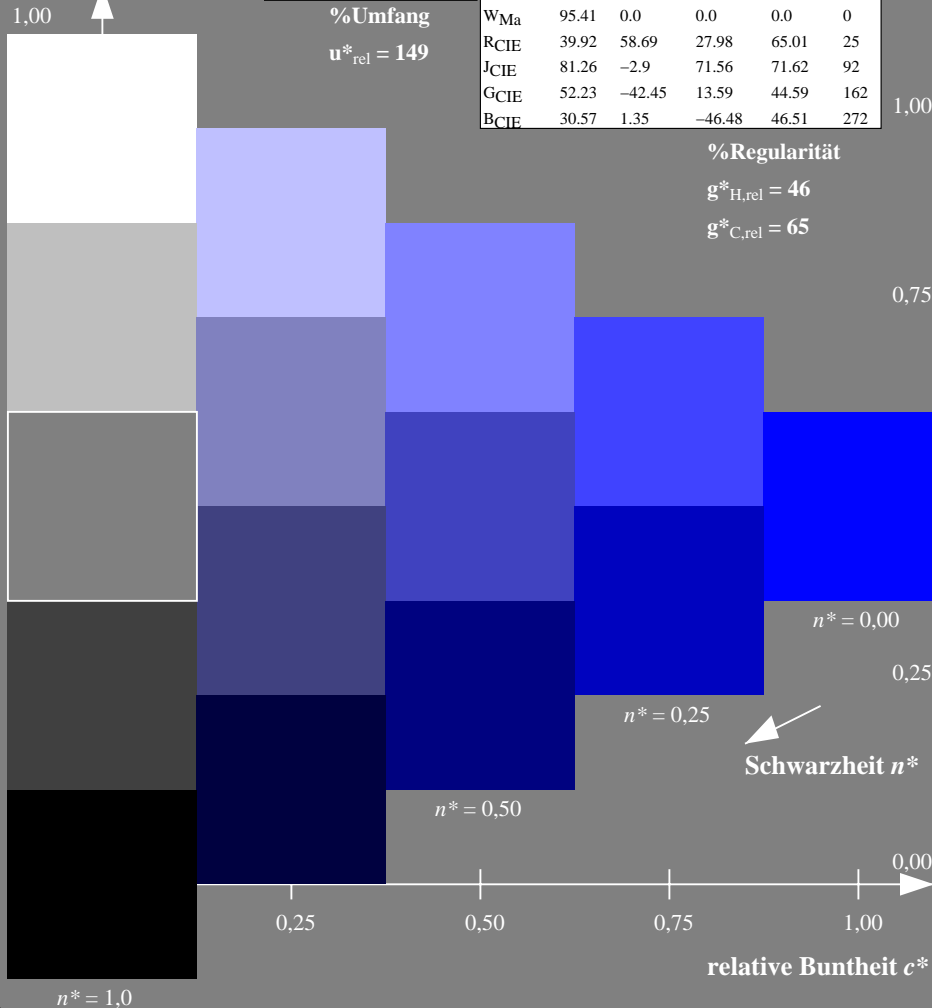
MRS18; adaptierte CIELAB-Daten

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|---------------|---------|---------|--------------|--------------|
| RMa | 49.63 | 66.96 | 38.37 | 77.18 | 30 |
| JMa | 90.7 | -6.36 | 88.75 | 88.98 | 94 |
| GMa | 52.11 | -69.73 | 9.44 | 70.37 | 172 |
| G50B _{Ma} | 45.03 | -36.57 | -28.47 | 46.36 | 218 |
| B _{Ma} | 36.65 | 23.19 | -63.05 | 67.18 | 290 |
| B50R _{Ma} | 34.94 | 57.17 | -44.26 | 72.31 | 322 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.66 | 26.98 | 64.56 | 25 |
| JCIE | 81.26 | -2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | -42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | -46.84 | 46.87 | 271 |

%Regularität

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

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



TG480-7, 5 stufige Reihen für konstanten CIELAB Buntton 272/360 = 0.755 (links)

5 stufige Reihen für konstanten CIELAB Buntton 271/360 = 0.754 (rechts)

BAM-Prüfvorlage TG48; Farbmetrik-Systeme ORS18 & ORS18 input: $olv^* setrgbcolor$
 D65: 5stufige Farbreihen und Koordinaten-Daten für 10 Bunttöneoutput: *Startup (S) data dependend*