

### Eingabe: Farbmimetrisches Reflexions-System MRS18

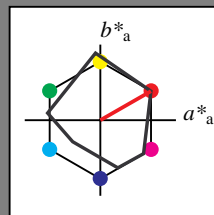
für Buntton  $h^* = lab^*h = 30/360 = 0.083$

$lab^*tch$  und  $lab^*nch$

D65: Buntton R

LCH\*Ma: 50 77 30

rgb\*Ma: 1.0 0.0 0.0



#### 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          |

Dreiecks-Helligkeit  $t^*$

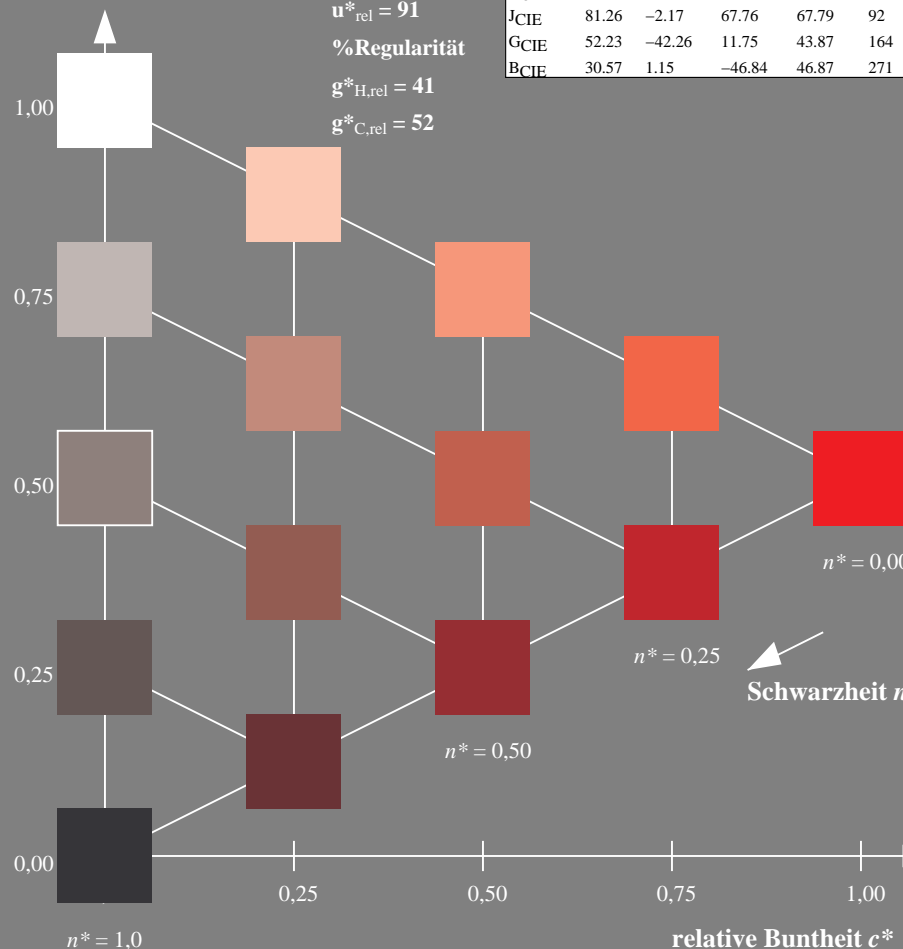
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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



UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 30/360 = 0.083 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

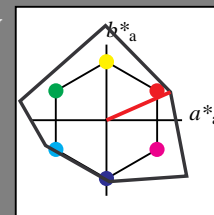
für Buntton  $h^* = lab^*h = 24/360 = 0.066$

$LAB^*LCH$ ,  $LAB^*NCH$

D65: Buntton R

LCH\*Ma: 47 92 24

rgb\*Ma: 1.0 0.0 0.0



#### 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          |

CIELAB-Helligkeit  $L^*$

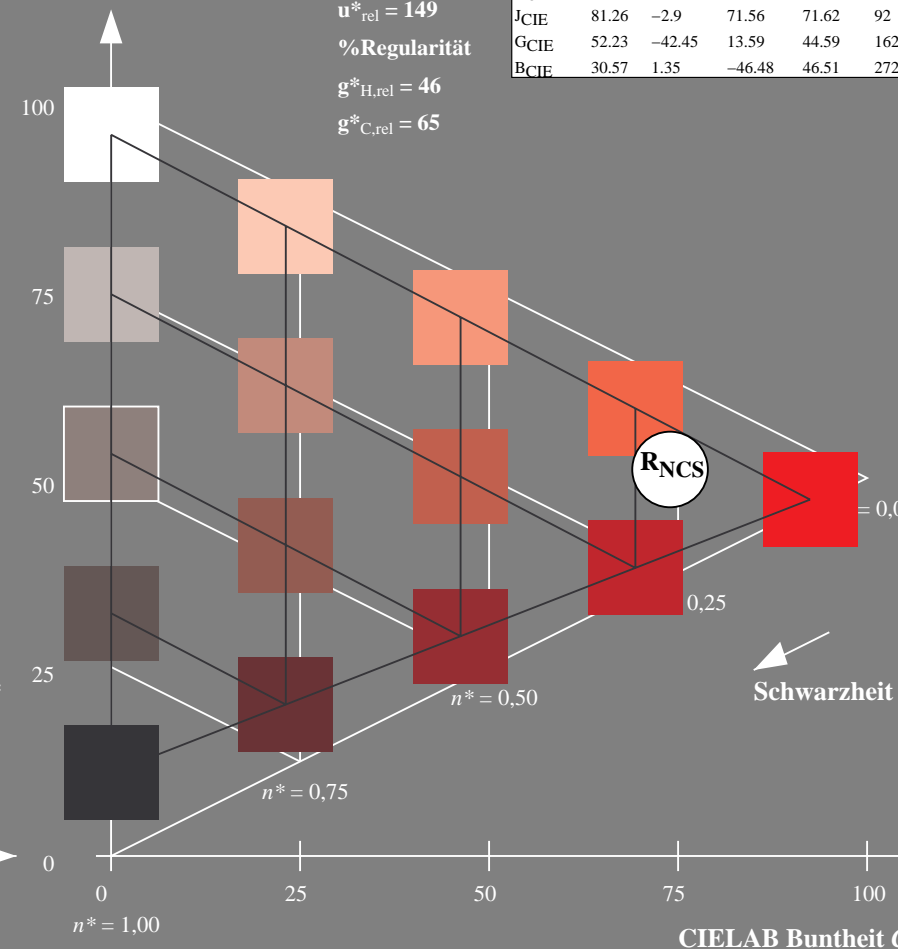
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton 24/360 = 0.066 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

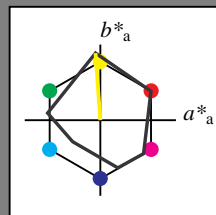
input:  $cmY0^* setcmykcolor$

input: no change compared to input

### Eingabe: Farbmimetrisches Reflexions-System MRS18

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

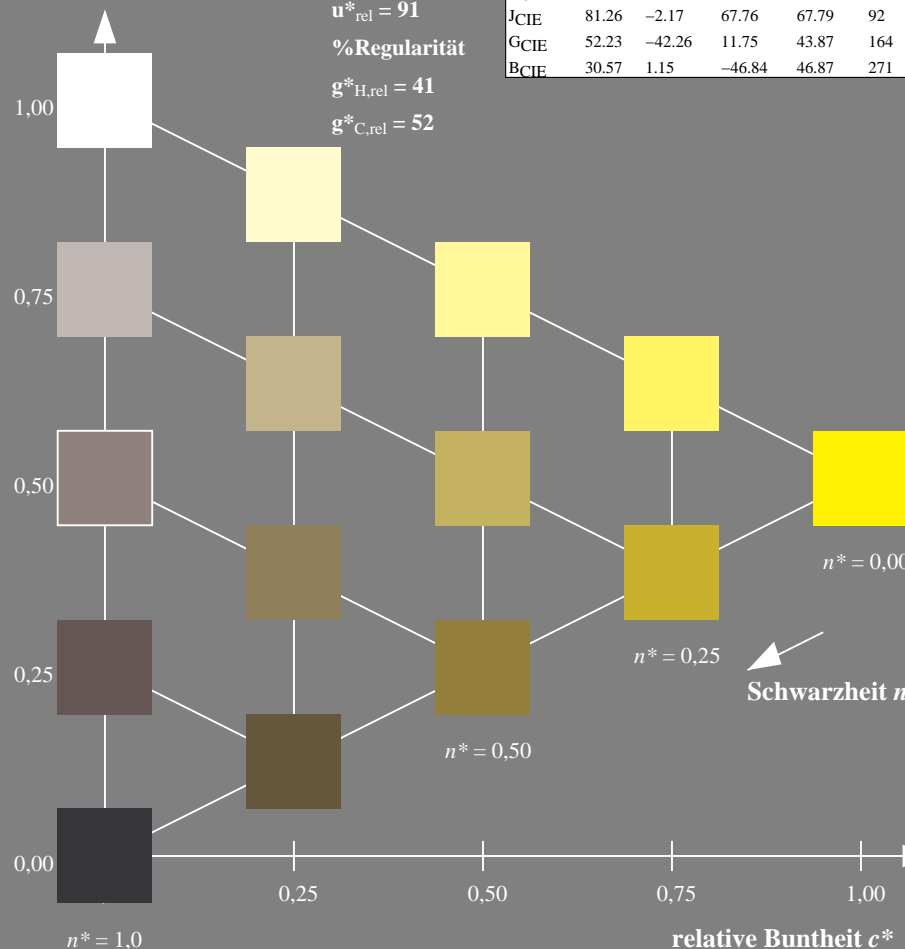
D65: Buntton J  
LCH\*Ma: 91 89 94  
rgb\*Ma: 1.0 1.0 0.0



| 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 <sub>Ma</sub>             | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>                | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub>             | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>               | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>               | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>               | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

Dreiecks-Helligkeit  $t^*$

%Umfang  
 $u^*_{rel} = 91$   
%Regularität  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$

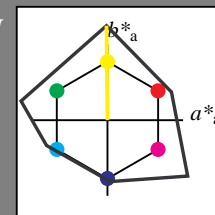


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 94/360 = 0.261 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab^*h = 91/360 = 0.252$   
 $LAB^*LCH$ ,  $LAB^*NCH$

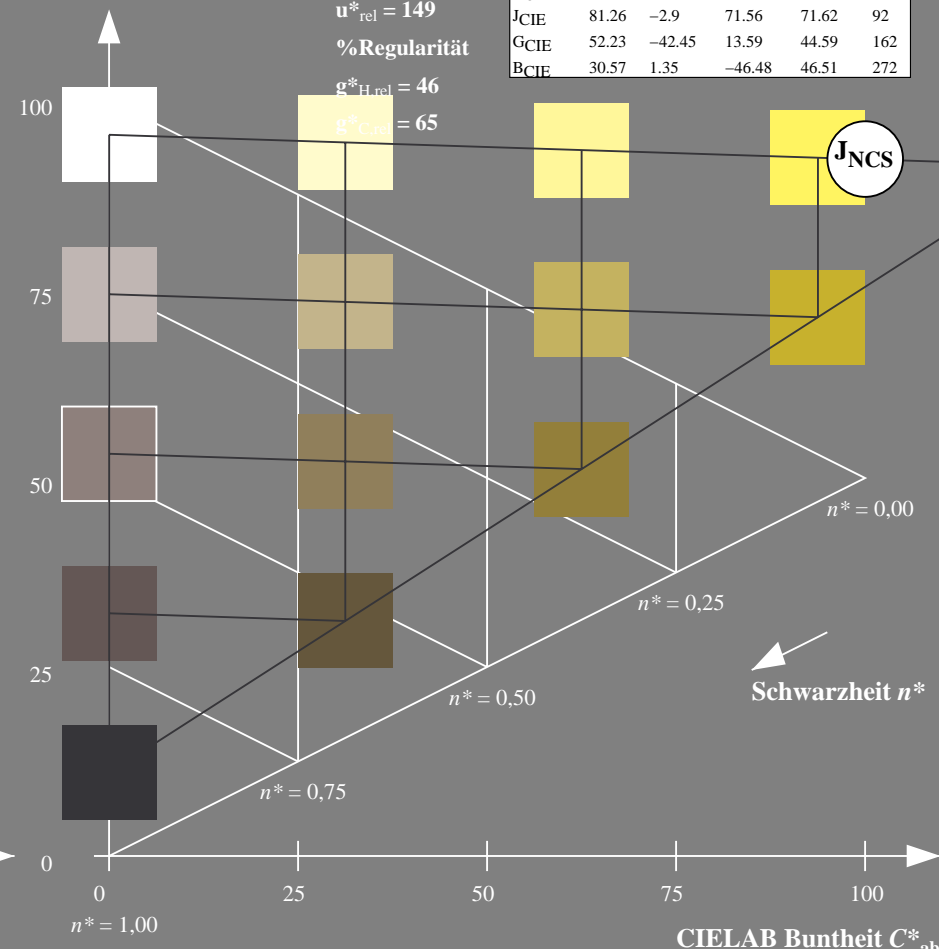
D65: Buntton J  
LCH\*Ma: 91 125 91  
rgb\*Ma: 1.0 1.0 0.0



| 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 <sub>Ma</sub>             | 59.47       | -80.6   | -33.45  | 87.28        | 203          |
| B <sub>Ma</sub>                | 49.01       | 3.65    | -81.19  | 81.28        | 273          |
| B50R <sub>Ma</sub>             | 44.06       | 106.09  | -73.93  | 129.32       | 325          |
| N <sub>Ma</sub>                | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| J <sub>CIE</sub>               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub>               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| B <sub>CIE</sub>               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |

CIELAB-Helligkeit  $L^*$

%Umfang  
 $u^*_{rel} = 149$   
%Regularität  
 $g^*_{H,rel} = 46$   
 $g^*_{C,rel} = 65$



5 stufige Reihen für konstanten CIELAB Buntton 91/360 = 0.252 (rechts)

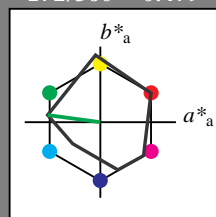
BAM-Prüfvorlage UG23; Farbmimetrik-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen  
input:  $cmY0^* setcmykcolor$   
input: no change compared to input

### Eingabe: Farbmimetrisches 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



| 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          |

Dreiecks-Helligkeit  $t^*$

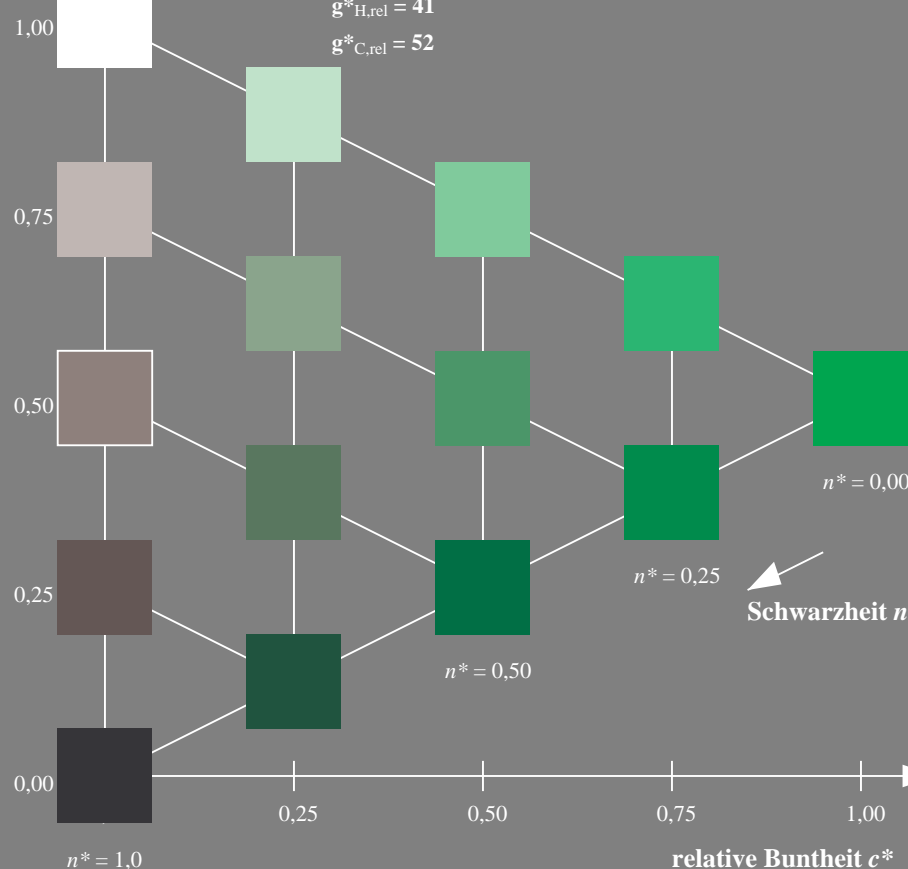
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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

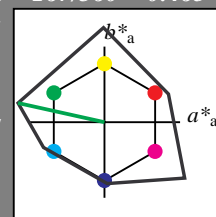


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton  $172/360 = 0.479$  (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab^*h = 167/360 = 0.465$   
 $LAB^*LCH$ ,  $LAB^*NCH$

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



| 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          |

CIELAB-Helligkeit  $L^*$

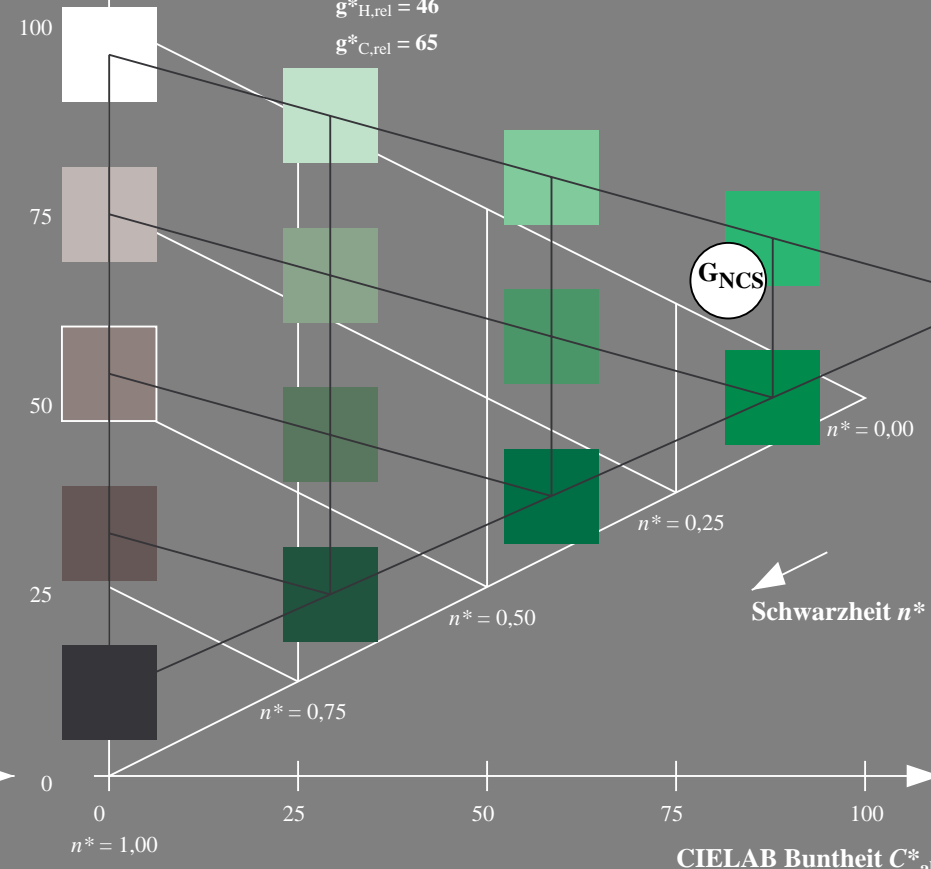
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton  $167/360 = 0.465$  (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

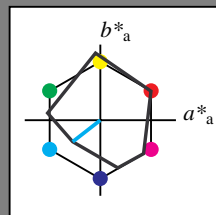
input:  $cmY0^*setcmykcolor$

input: no change compared to input

### Eingabe: Farbmimetrisches 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



| 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 <sub>Ma</sub>             | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>                | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub>             | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 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          |

Dreiecks-Helligkeit  $t^*$

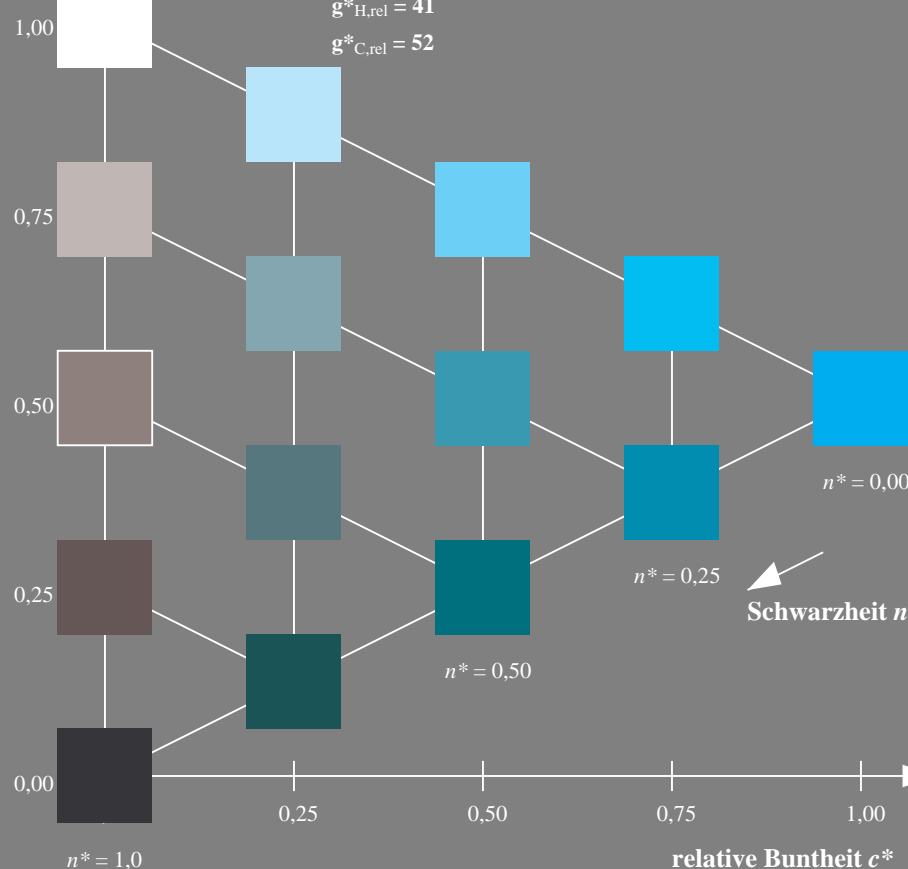
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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

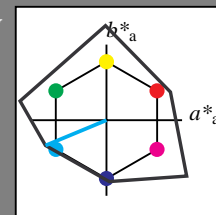


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 218/360 = 0.605 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab^*h = 203/360 = 0.563$   
 $LAB^*LCH$ ,  $LAB^*NCH$

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



| 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 <sub>Ma</sub>             | 59.47       | -80.6   | -33.45  | 87.28        | 203          |
| B <sub>Ma</sub>                | 49.01       | 3.65    | -81.19  | 81.28        | 273          |
| B50R <sub>Ma</sub>             | 44.06       | 106.09  | -73.93  | 129.32       | 325          |
| N <sub>Ma</sub>                | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 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          |

CIELAB-Helligkeit  $L^*$

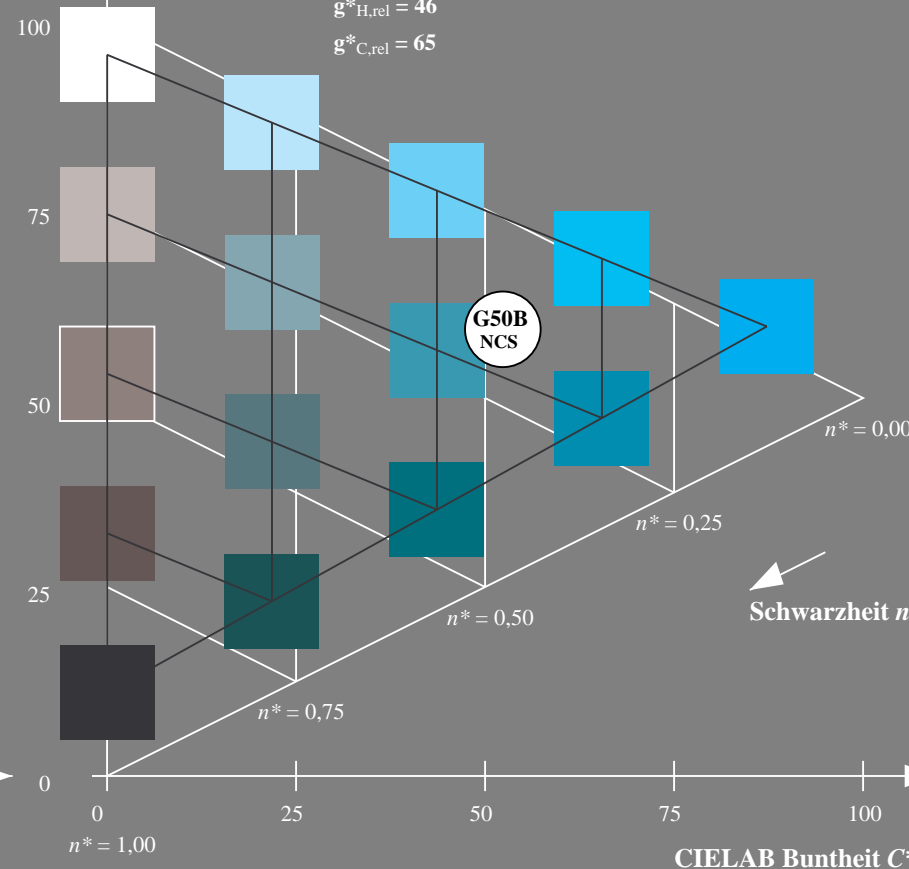
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton 203/360 = 0.563 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrik-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

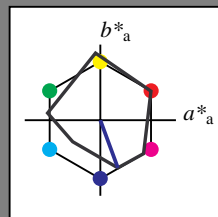
input:  $cmY0^* setcmykcolor$

input: no change compared to input

## Eingabe: Farbmimetrisches Reflexions-System MRS18

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

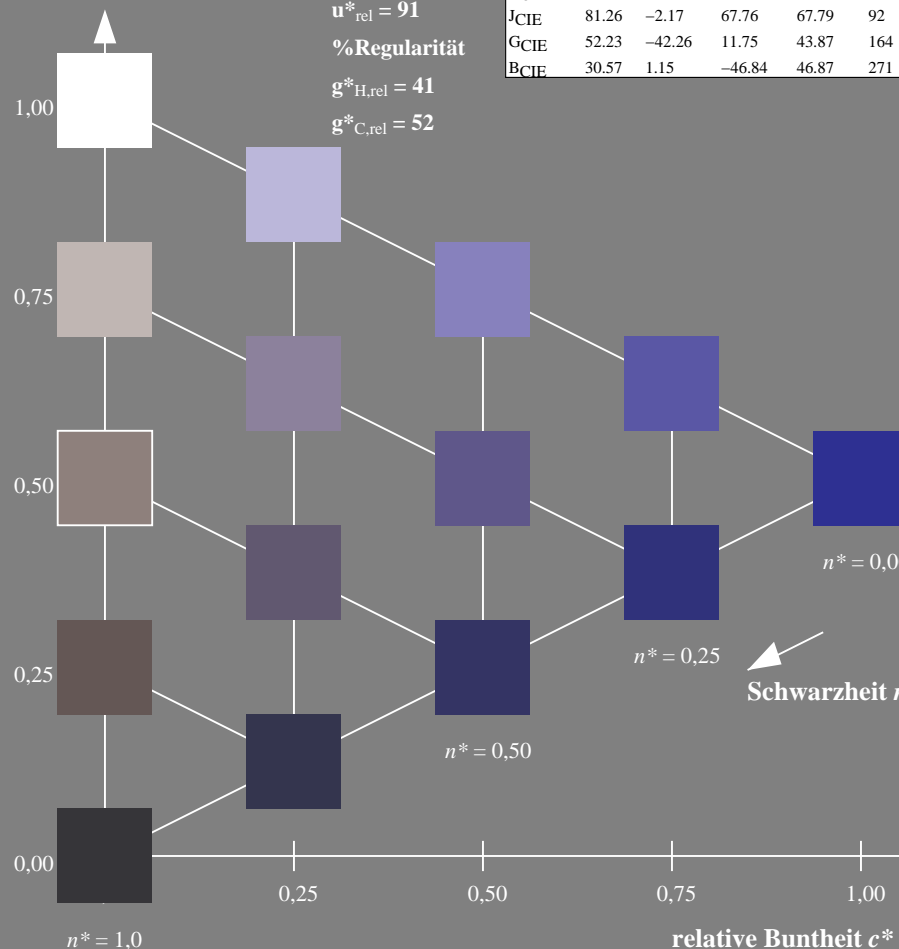
D65: Buntton B  
LCH\*Ma: 37 67 290  
rgb\*Ma: 0.0 0.0 1.0



| 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          |

Dreiecks-Helligkeit  $t^*$

%Umfang  
 $u^*_{rel} = 91$   
%Regularität  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$

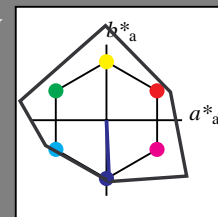


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 290/360 = 0.806 (links)

## Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab \cdot h = 273/360 = 0.757$   
 $LAB \cdot LCH$ ,  $LAB \cdot NCH$

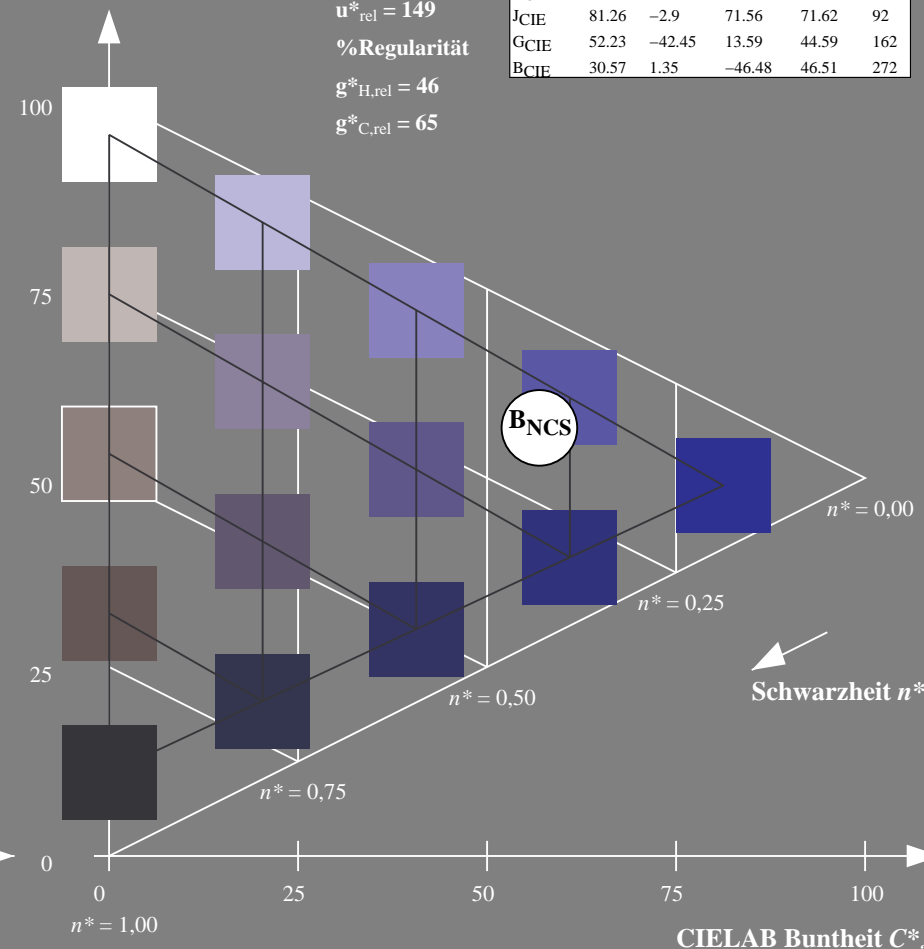
D65: Buntton B  
LCH\*Ma: 49 81 273  
rgb\*Ma: 0.0 0.0 1.0



| 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          |

CIELAB-Helligkeit  $L^*$

%Umfang  
 $u^*_{rel} = 149$   
%Regularität  
 $g^*_{H,rel} = 46$   
 $g^*_{C,rel} = 65$



5 stufige Reihen für konstanten CIELAB Buntton 273/360 = 0.757 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

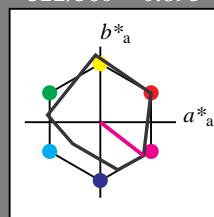
input: cmy0\* setcmykcolor

input: no change compared to input

### Eingabe: Farbmimetrisches Reflexions-System MRS18

für Buntton  $h^* = lab \cdot h = 322/360 = 0.895$   
 $lab \cdot tch$  und  $lab \cdot nch$

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



| 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          |

Dreiecks-Helligkeit  $t^*$

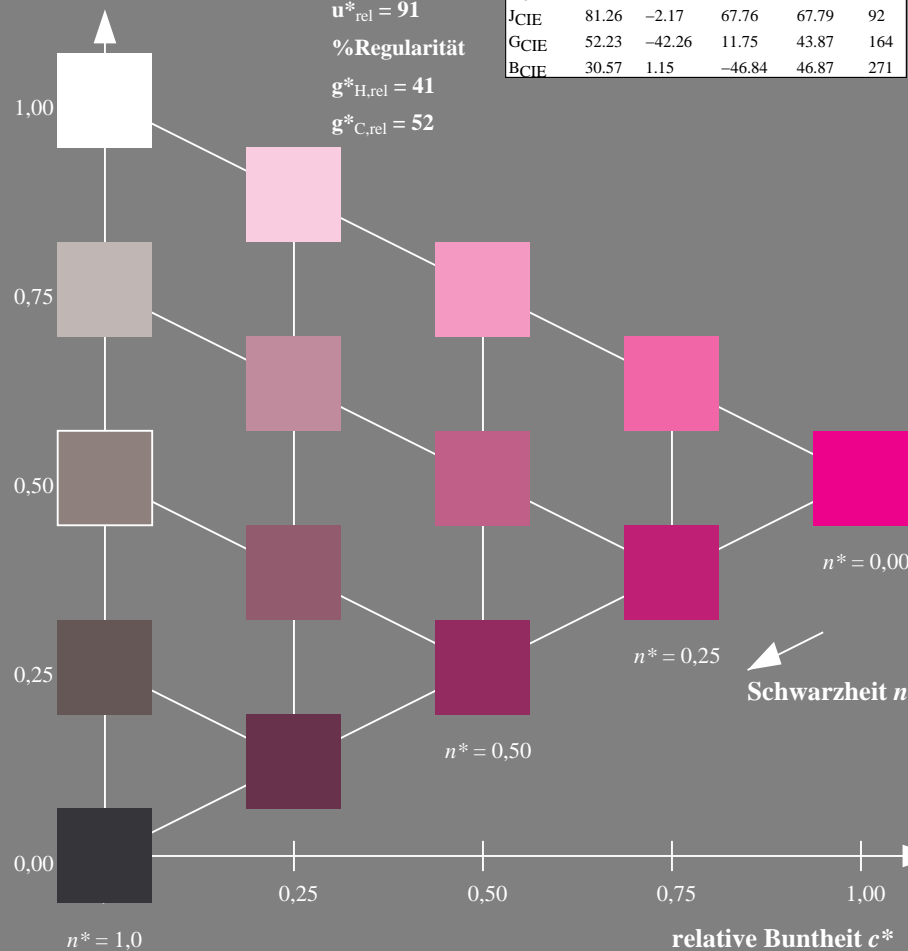
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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

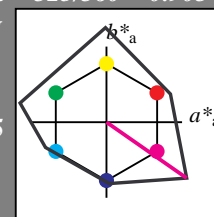


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton  $322/360 = 0.895$  (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab \cdot h = 325/360 = 0.903$   
 $LAB \cdot LCH$ ,  $LAB \cdot NCH$

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



| 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          |

CIELAB-Helligkeit  $L^*$

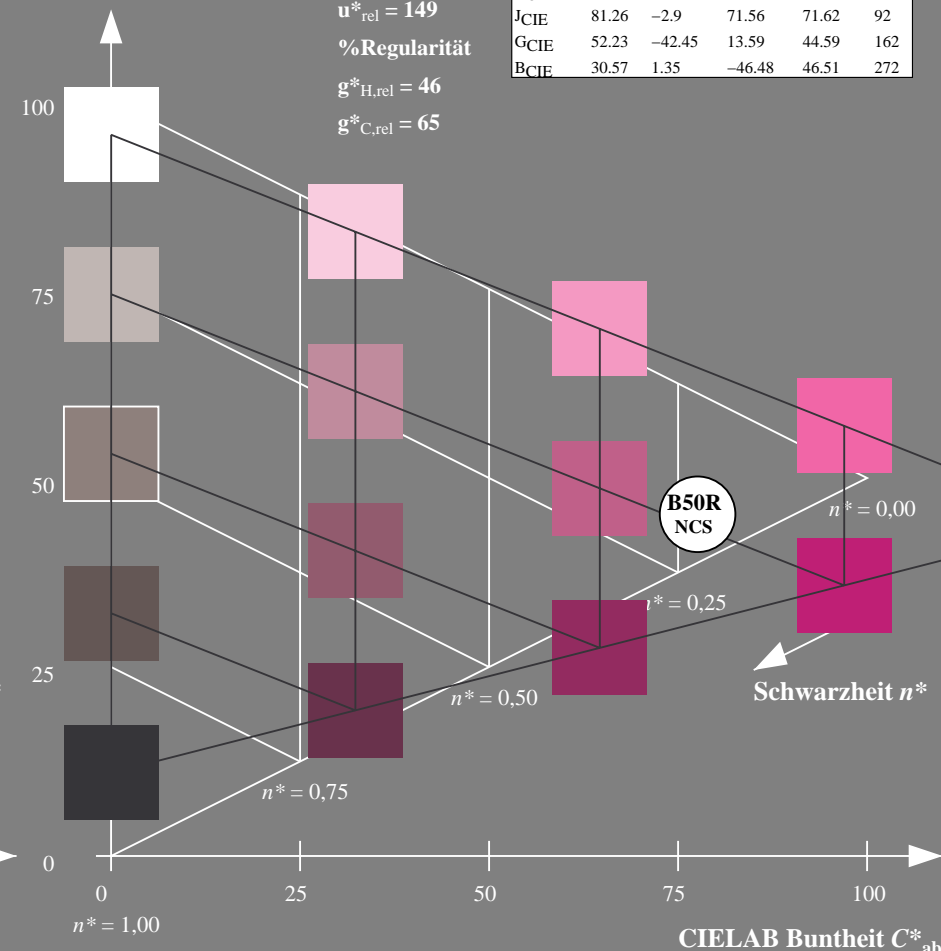
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton  $325/360 = 0.903$  (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

input:  $cmY0^* setcmykcolor$

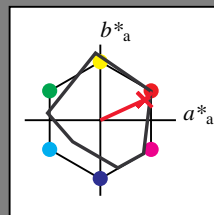
input: no change compared to input



### Eingabe: Farbmimetrisches Reflexions-System MRS18

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

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



#### 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          |

Dreiecks-Helligkeit  $t^*$

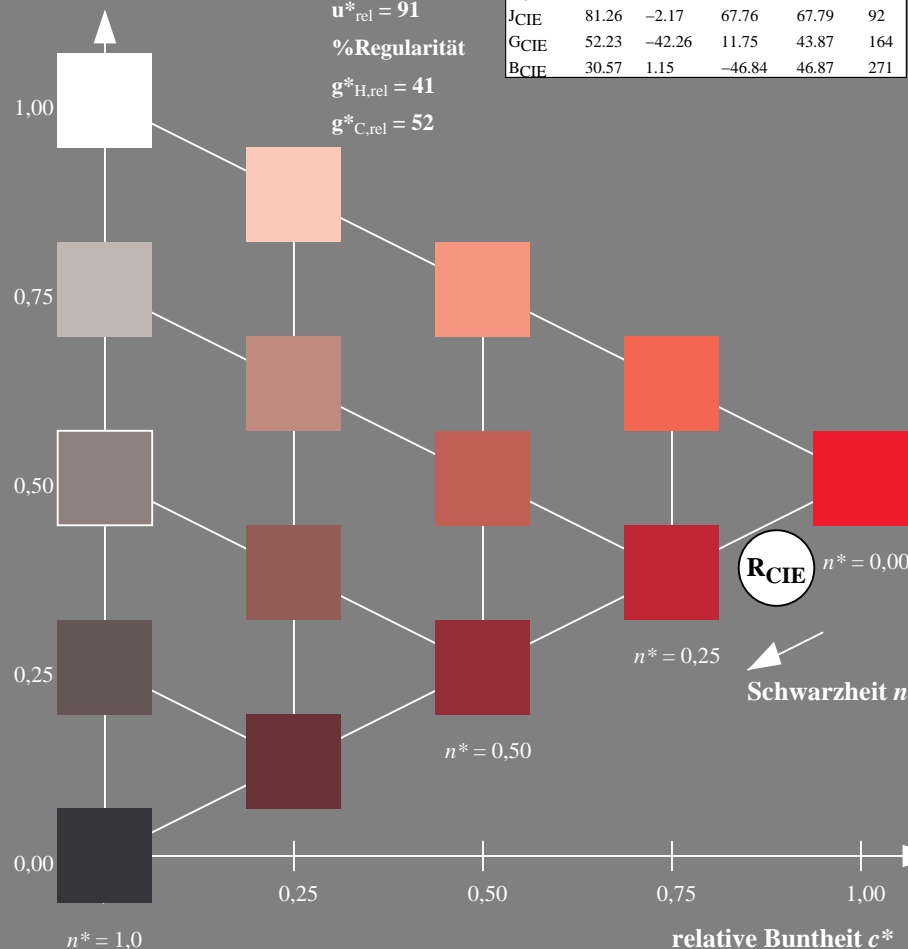
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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

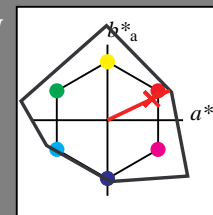


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 25/360 = 0.069 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab^*h = 25/360 = 0.071$   
 $LAB^*LCH$ ,  $LAB^*NCH$

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



#### 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          |

CIELAB-Helligkeit  $L^*$

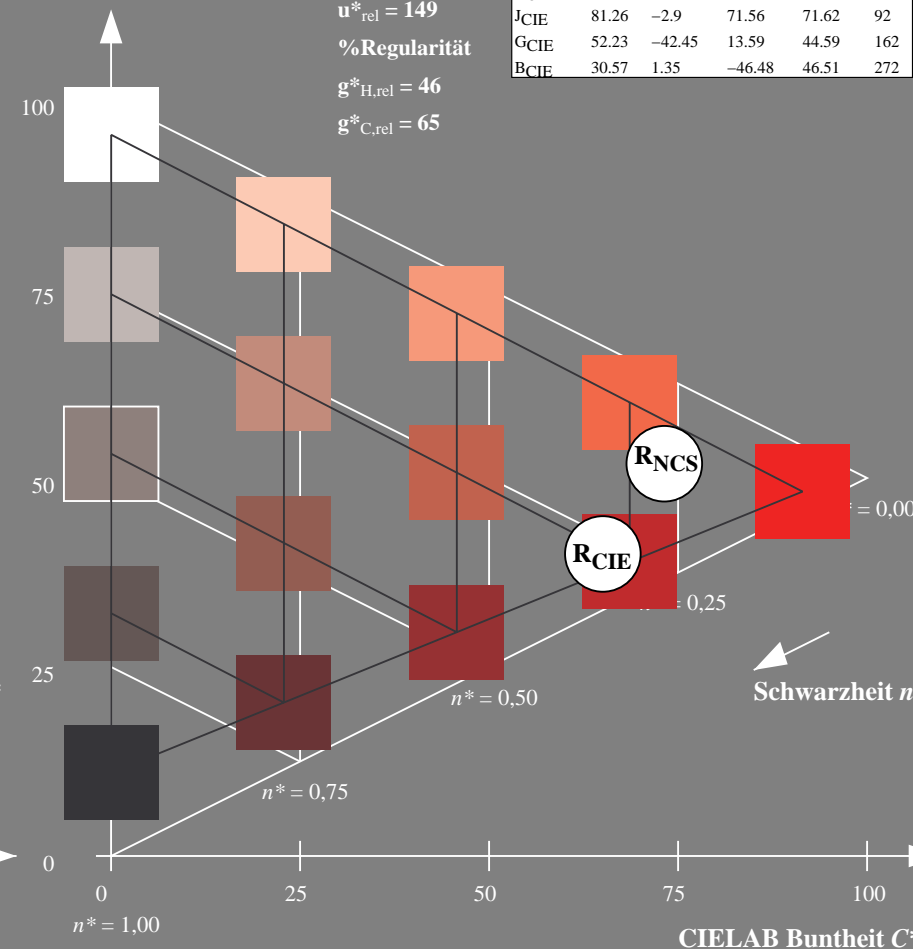
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton 25/360 = 0.071 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttonen

input: cmy0\* setcmykcolor

input: no change compared to input

### Eingabe: Farbmimetrisches Reflexions-System MRS18

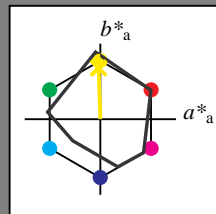
für Buntton  $h^* = lab^*h = 92/360 = 0.255$

$lab^*tch$  und  $lab^*nch$

D65: Buntton J

LCH\*Ma: 89 86 92

rgb\*Ma: 1.0 0.95 0.0



#### 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 <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| N <sub>Ma</sub>    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 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          |

Dreiecks-Helligkeit  $t^*$

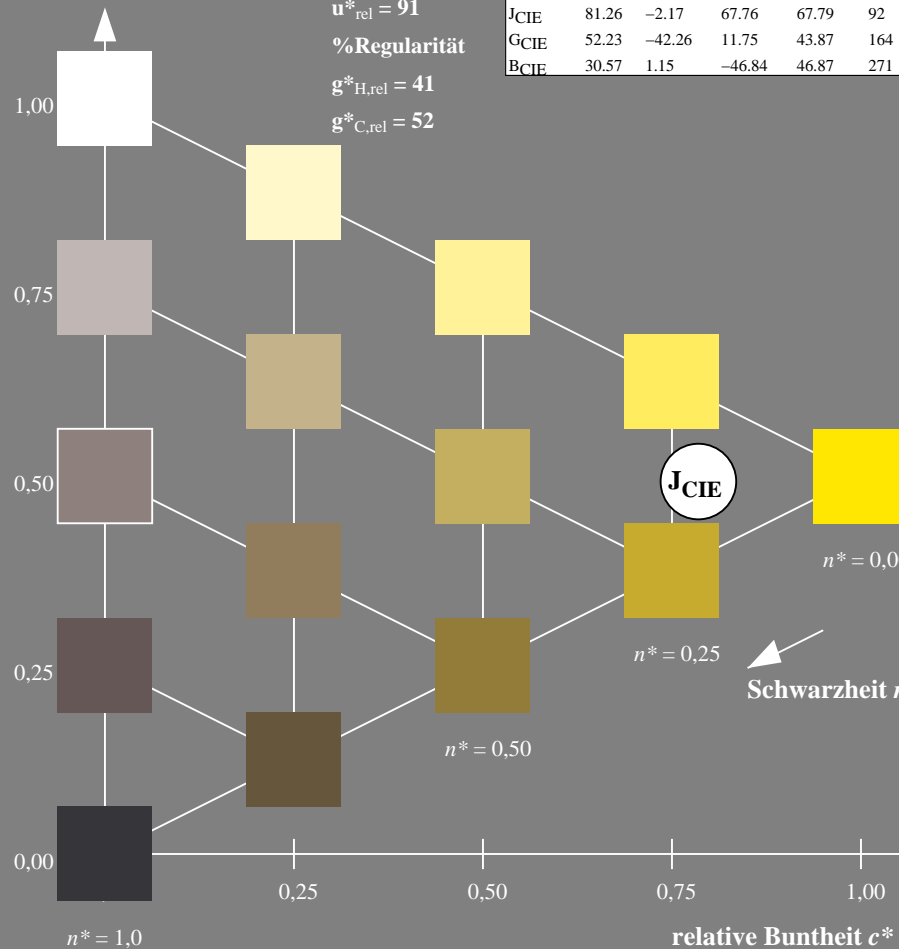
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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



UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 92/360 = 0.255 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

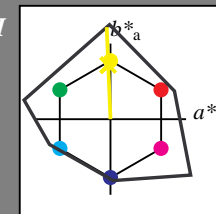
für Buntton  $h^* = lab^*h = 92/360 = 0.256$

$LAB^*LCH$ ,  $LAB^*NCH$

D65: Buntton J

LCH\*Ma: 90 122 92

rgb\*Ma: 0.97 1.0 0.0



#### 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 <sub>Ma</sub> | 59.47       | -80.6   | -33.45  | 87.28        | 203          |
| B <sub>Ma</sub>    | 49.01       | 3.65    | -81.19  | 81.28        | 273          |
| B50R <sub>Ma</sub> | 44.06       | 106.09  | -73.93  | 129.32       | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| J <sub>CIE</sub>   | 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          |

CIELAB-Helligkeit  $L^*$

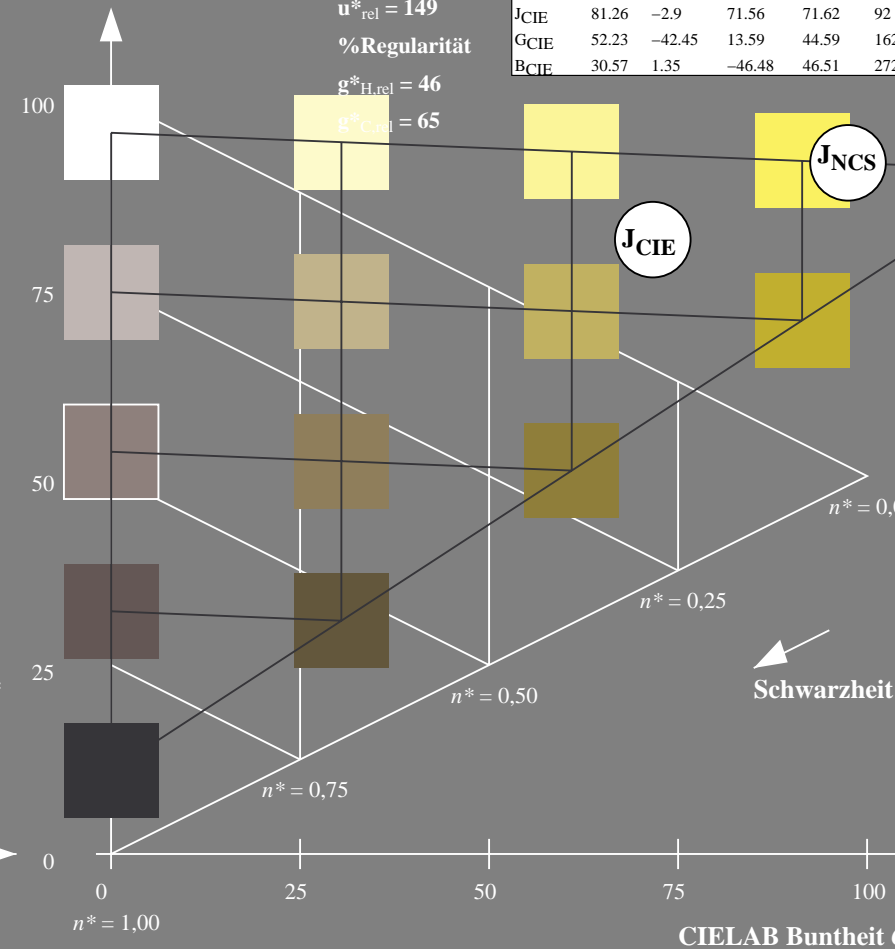
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton 92/360 = 0.256 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrik-Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Buntton

input:  $cmY0^* setcmykcolor$

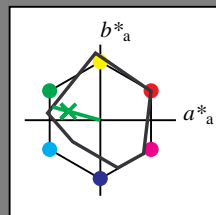
input: no change compared to input



### Eingabe: Farbmimetrisches 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



| 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          |

Dreiecks-Helligkeit  $t^*$

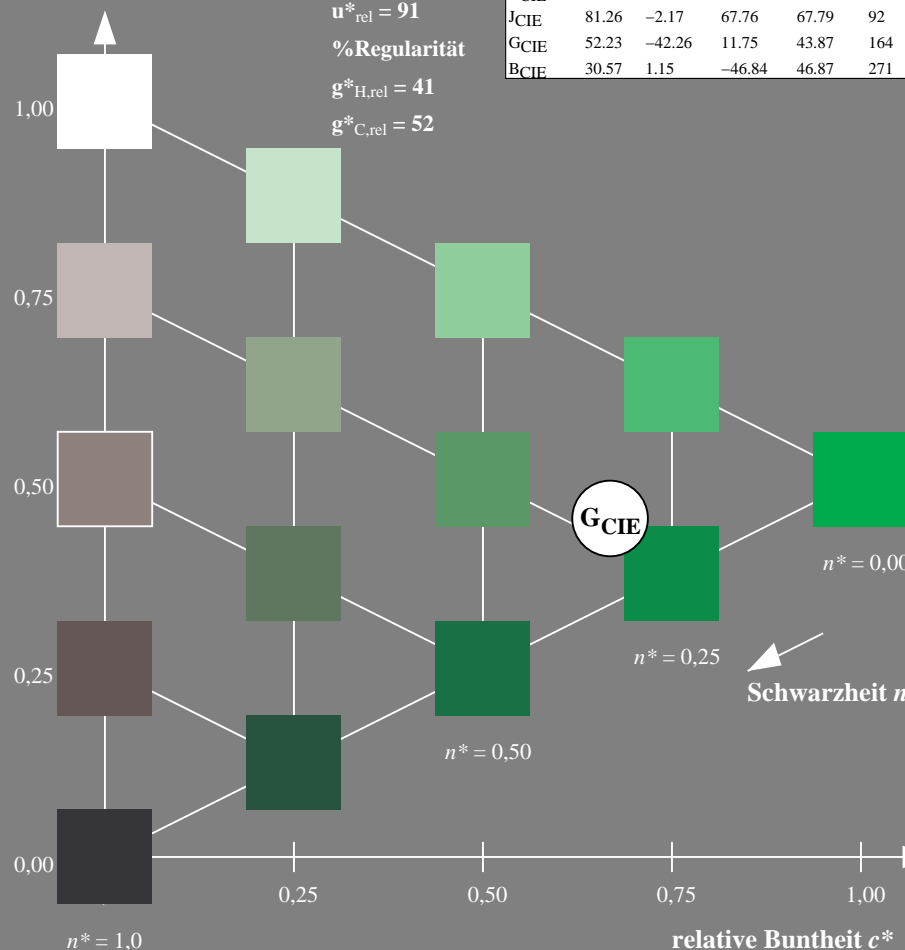
%Umfang

$u^*_{rel} = 91$

%Regularität

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

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

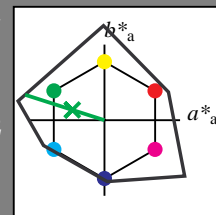


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 164/360 = 0.457 (links)

### Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab^*h = 162/360 = 0.451$   
 $LAB^*LCH$ ,  $LAB^*NCH$

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



| 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          |

CIELAB-Helligkeit  $L^*$

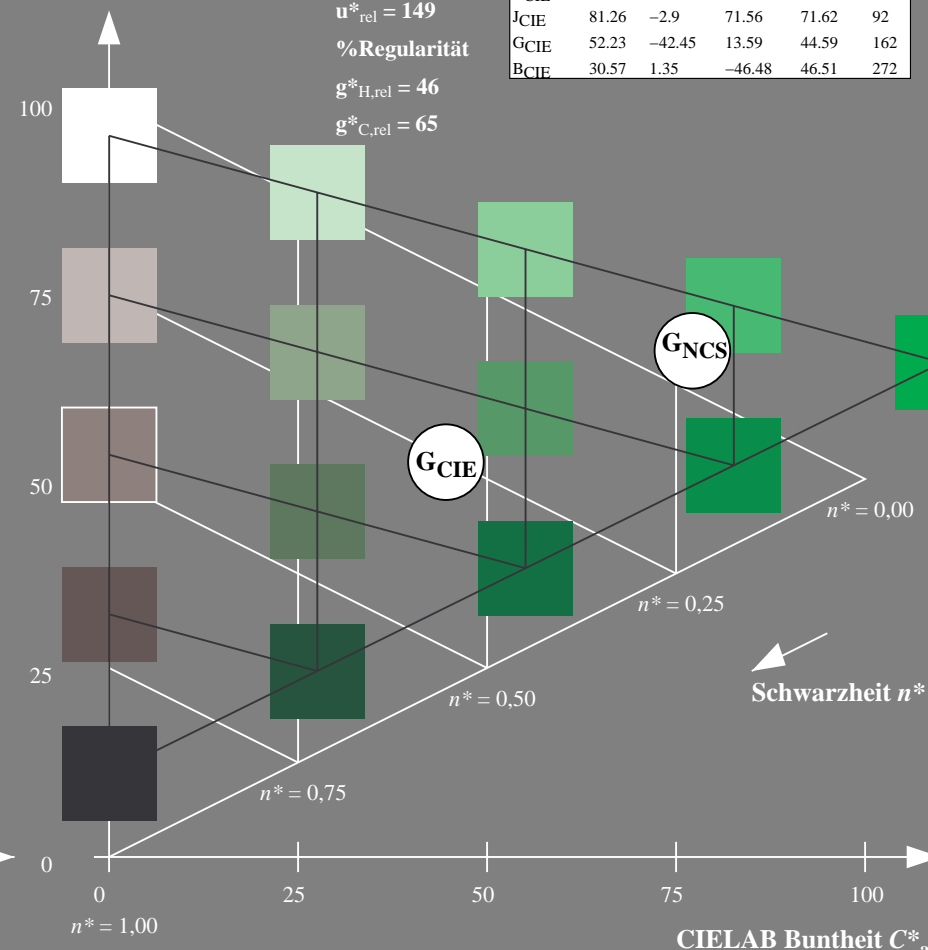
%Umfang

$u^*_{rel} = 149$

%Regularität

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

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



5 stufige Reihen für konstanten CIELAB Buntton 162/360 = 0.451 (rechts)

BAM-Prüfvorlage UG23; Farbmimetrische Systeme MRS18 & NCS11

D65: Koordinaten-Systeme von 5stufigen Farbreihen für 10 Bunttöne

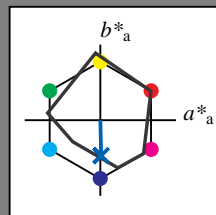
input:  $cmY0^*$  setcmykcolor

input: no change compared to input

## Eingabe: Farbmimetrisches Reflexions-System MRS18

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

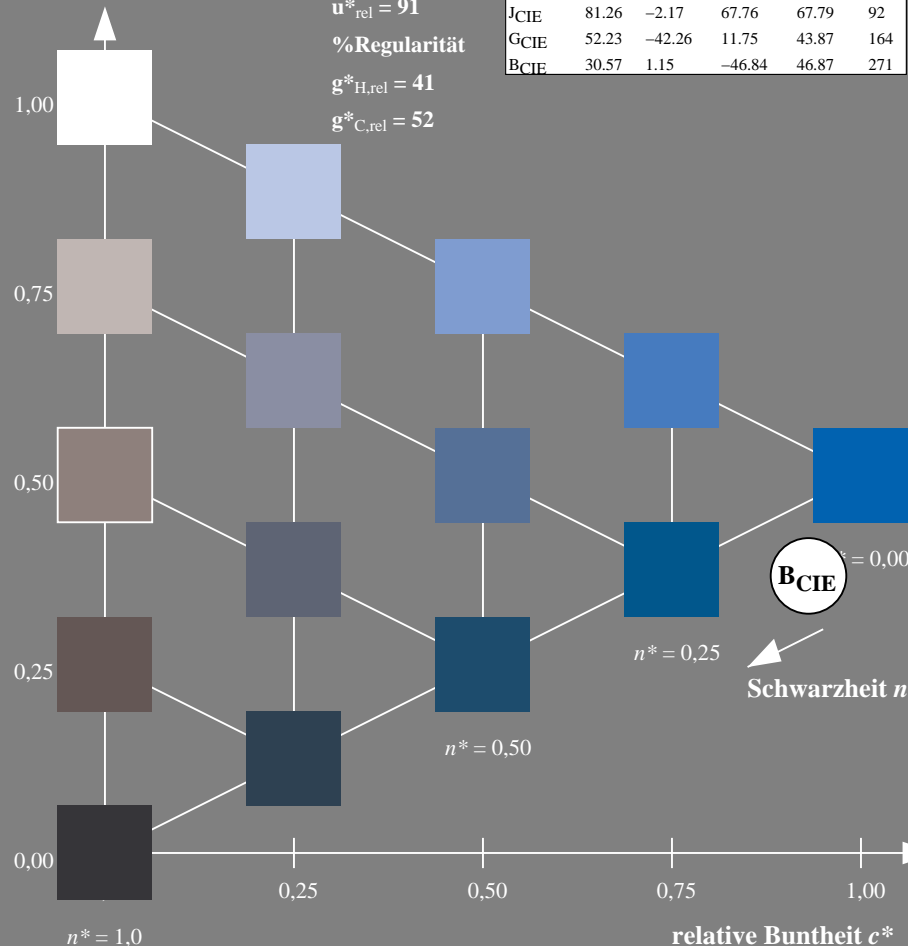
D65: Buntton B  
LCH\*Ma: 40 50 271  
rgb\*Ma: 0.0 0.37 1.0



| 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 <sub>Ma</sub>             | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>                | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub>             | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| N <sub>Ma</sub>                | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 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          |

Dreiecks-Helligkeit  $t^*$

%Umfang  
 $u^*_{rel} = 91$   
%Regularität  
 $g^*_{H,rel} = 41$   
 $g^*_{C,rel} = 52$

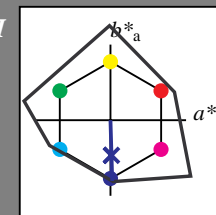


UG230-7, 5 stufige Reihen für konstanten CIELAB Buntton 271/360 = 0.754 (links)

## Ausgabe: Farbmimetrisches Reflexions-System NCS11

für Buntton  $h^* = lab \cdot h = 272/360 = 0.755$   
 $LAB \cdot LCH$ ,  $LAB \cdot NCH$

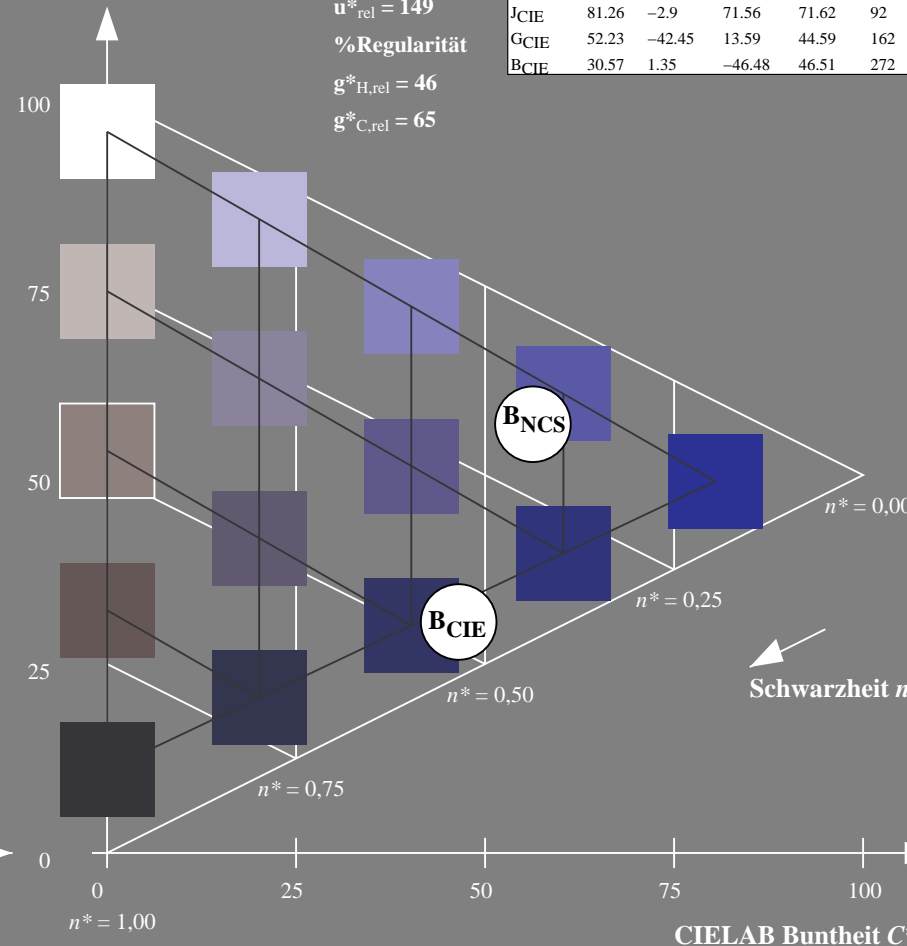
D65: Buntton B  
LCH\*Ma: 49 80 272  
rgb\*Ma: 0.0 0.02 1.0



| 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 <sub>Ma</sub>             | 59.47       | -80.6   | -33.45  | 87.28        | 203          |
| B <sub>Ma</sub>                | 49.01       | 3.65    | -81.19  | 81.28        | 273          |
| B50R <sub>Ma</sub>             | 44.06       | 106.09  | -73.93  | 129.32       | 325          |
| N <sub>Ma</sub>                | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 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          |

CIELAB-Helligkeit  $L^*$

%Umfang  
 $u^*_{rel} = 149$   
%Regularität  
 $g^*_{H,rel} = 46$   
 $g^*_{C,rel} = 65$



5 stufige Reihen für konstanten CIELAB Buntton 272/360 = 0.755 (rechts)