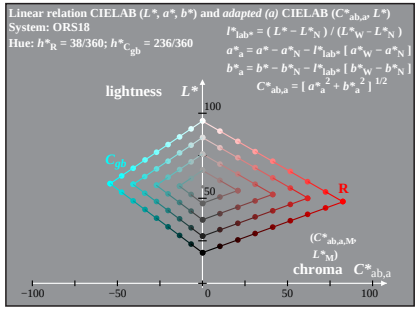
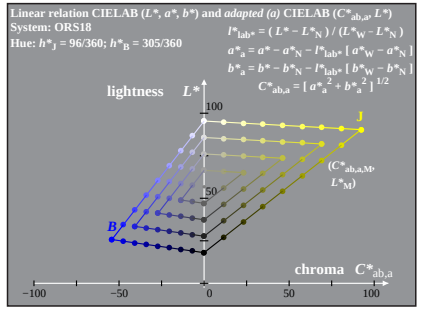
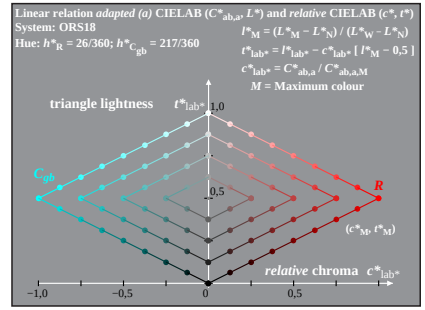
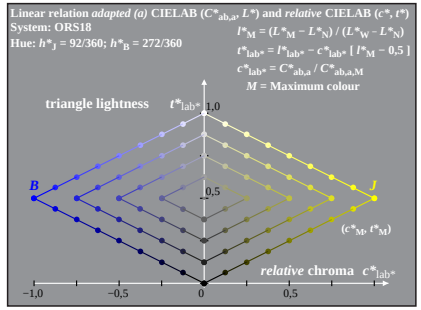
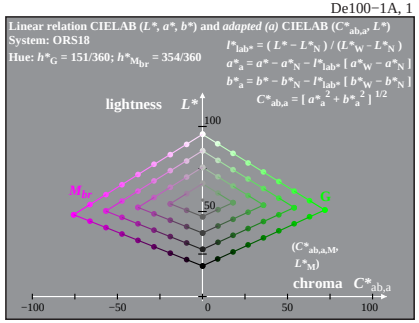
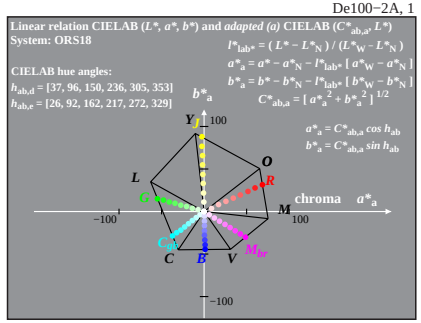

Linear relation CIELAB (L*, a*, b*) and adapted (a) CIELAB (C*ab,a, L*)
System: ORS18
Hue: h*R = 38/360; h*Cgb = 236/360
l*lab* = (L* − L*N) / (L*W − L*N)
a*a = a* − a*N − l*lab* [a*W − a*N]
b*a = b* − b*N − l*lab* [b*W − b*N]
C*ab,a = [a*a2 + b*a2] 1/2
lightness L*
chroma C*ab,a
(C*ab,a,M, L*M)
Cgb
R
De100−1A, 1

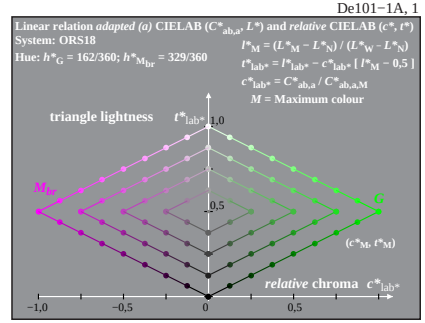

Linear relation CIELAB (L*, a*, b*) and adapted (a) CIELAB (C*ab,a, L*)
System: ORS18
Hue: h*J = 96/360; h*B = 305/360
l*lab* = (L* − L*N) / (L*W − L*N)
a*a = a* − a*N − l*lab* [a*W − a*N]
b*a = b* − b*N − l*lab* [b*W − b*N]
C*ab,a = [a*a2 + b*a2] 1/2
lightness L*
chroma C*ab,a
(C*ab,a,M, L*M)
J
B
De100−2A, 1

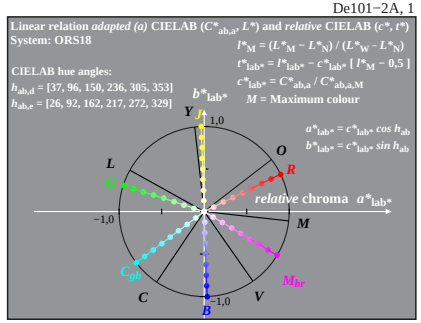

Linear relation adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*, t*)
System: ORS18
Hue: h*R = 26/360; h*Cgb = 217/360
l*M = (L*M − L*N) / (L*W − L*N)
t*lab* = l*lab* − c*lab* [l*M − 0,5]
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
triangle lightness t*lab*
relative chroma c*lab*
(c*M, t*M)
Cgb
R
De101−1A, 1

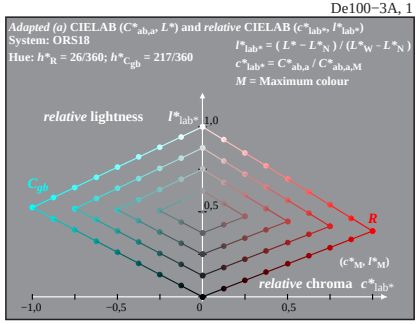

Linear relation adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*, t*)
System: ORS18
Hue: h*J = 92/360; h*B = 272/360
l*M = (L*M − L*N) / (L*W − L*N)
t*lab* = l*lab* − c*lab* [l*M − 0,5]
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
triangle lightness t*lab*
relative chroma c*lab*
(c*M, t*M)
B
J
De101−2A, 1

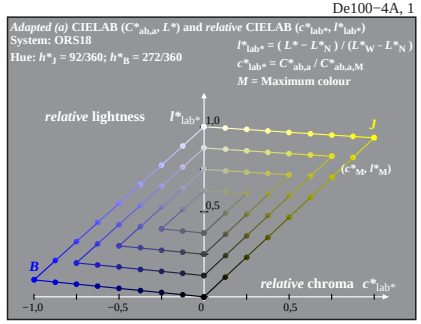

Linear relation CIELAB (L*, a*, b*) and adapted (a) CIELAB (C*ab,a, L*)
System: ORS18
Hue: h*G = 151/360; h*Mbr = 354/360
l*lab* = (L* − L*N) / (L*W − L*N)
a*a = a* − a*N − l*lab* [a*W − a*N]
b*a = b* − b*N − l*lab* [b*W − b*N]
C*ab,a = [a*a2 + b*a2] 1/2
lightness L*
chroma C*ab,a
(C*ab,a,M, L*M)
Mbr
G
De100−3A, 1

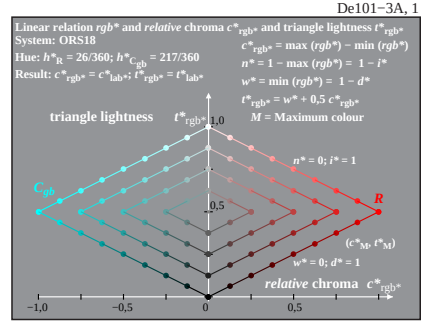

Linear relation CIELAB (L*, a*, b*) and adapted (a) CIELAB (C*ab,a, L*)
System: ORS18
CIELAB hue angles:
hab,d = [37, 96, 150, 236, 305, 353]
hab,e = [26, 92, 162, 217, 272, 329]
l*lab* = (L* − L*N) / (L*W − L*N)
a*a = a* − a*N − l*lab* [a*W − a*N]
b*a = b* − b*N − l*lab* [b*W − b*N]
C*ab,a = [a*a2 + b*a2] 1/2
a*a = C*ab,a cos hab
b*a = C*ab,a sin hab
b*a
chroma a*a
Y
O
L
R
G
M
C
B
V
Mbr
De100−4A, 1

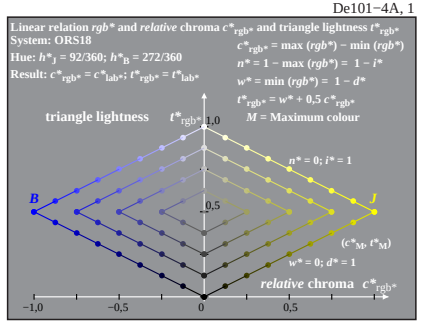

Linear relation adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*, t*)
System: ORS18
Hue: h*G = 162/360; h*Mbr = 329/360
l*M = (L*M − L*N) / (L*W − L*N)
t*lab* = l*lab* − c*lab* [l*M − 0,5]
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
triangle lightness t*lab*
relative chroma c*lab*
(c*M, t*M)
Mbr
G
De101−3A, 1

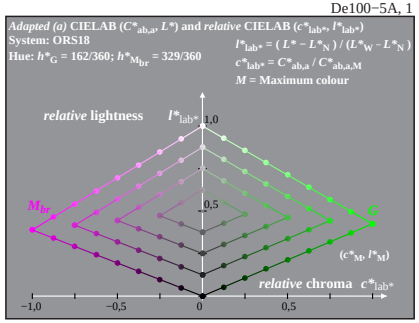

Linear relation adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*, t*)
System: ORS18
CIELAB hue angles:
hab,d = [37, 96, 150, 236, 305, 353]
hab,e = [26, 92, 162, 217, 272, 329]
l*M = (L*M − L*N) / (L*W − L*N)
t*lab* = l*lab* − c*lab* [l*M − 0,5]
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
a*lab* = c*lab* cos hab
b*lab* = c*lab* sin hab
b*lab*
relative chroma a*lab*
Y
O
L
R
G
M
C
B
V
Mbr
De101−4A, 1

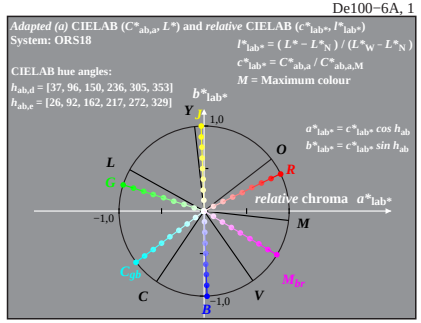

Adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*lab*, l*lab*)
System: ORS18
Hue: h*R = 26/360; h*Cgb = 217/360
l*lab* = (L* − L*N) / (L*W − L*N)
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
relative lightness l*lab*
relative chroma c*lab*
(c*M, l*M)
Cgb
R
De100−5A, 1

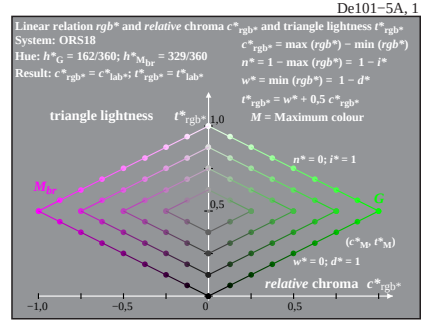

Adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*lab*, l*lab*)
System: ORS18
Hue: h*J = 92/360; h*B = 272/360
l*lab* = (L* − L*N) / (L*W − L*N)
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
relative lightness l*lab*
relative chroma c*lab*
(c*M, l*M)
J
B
De100−6A, 1

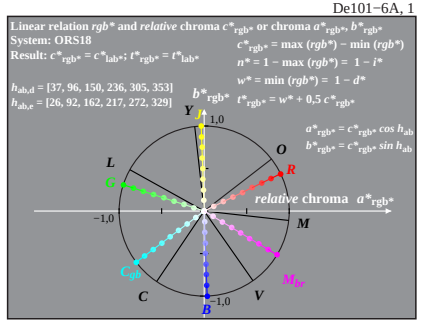

Linear relation rgb* and relative chroma c*rgb* and triangle lightness t*rgb*
System: ORS18
Hue: h*R = 26/360; h*Cgb = 217/360
Result: c*rgb* = c*lab*; t*rgb* = t*lab*
c*rgb* = max (rgb*) − min (rgb*)
n* = 1 − max (rgb*) = 1 − i*
w* = min (rgb*) = 1 − d*
t*rgb* = w* + 0,5 c*rgb*
M = Maximum colour
triangle lightness t*rgb*
n* = 0; i* = 1
w* = 0; d* = 1
relative chroma c*rgb*
(c*M, t*M)
Cgb
R
De101−5A, 1

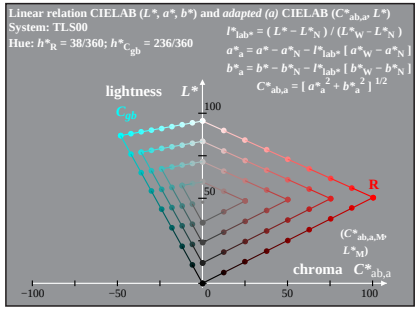

Linear relation rgb* and relative chroma c*rgb* and triangle lightness t*rgb*
System: ORS18
Hue: h*J = 92/360; h*B = 272/360
Result: c*rgb* = c*lab*; t*rgb* = t*lab*
c*rgb* = max (rgb*) − min (rgb*)
n* = 1 − max (rgb*) = 1 − i*
w* = min (rgb*) = 1 − d*
t*rgb* = w* + 0,5 c*rgb*
M = Maximum colour
triangle lightness t*rgb*
n* = 0; i* = 1
w* = 0; d* = 1
relative chroma c*rgb*
(c*M, t*M)
B
J
De101−6A, 1


Adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*lab*, l*lab*)
System: ORS18
Hue: h*G = 162/360; h*Mbr = 329/360
l*lab* = (L* − L*N) / (L*W − L*N)
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
relative lightness l*lab*
relative chroma c*lab*
(c*M, l*M)
Mbr
G
De101−7A, 1

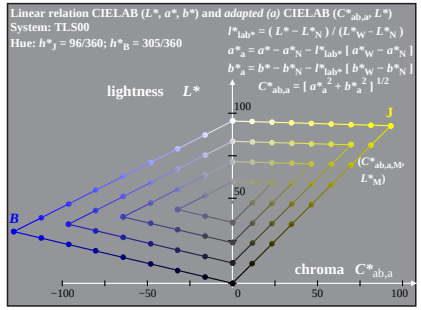

Adapted (a) CIELAB (C*ab,a, L*) and relative CIELAB (c*lab*, l*lab*)
System: ORS18
CIELAB hue angles:
hab,d = [37, 96, 150, 236, 305, 353]
hab,e = [26, 92, 162, 217, 272, 329]
l*lab* = (L* − L*N) / (L*W − L*N)
c*lab* = C*ab,a / C*ab,a,M
M = Maximum colour
a*lab* = c*lab* cos hab
b*lab* = c*lab* sin hab
b*lab*
relative chroma a*lab*
Y
O
L
R
G
M
C
B
V
Mbr
De101−8A, 1


Linear relation rgb* and relative chroma c*rgb* and triangle lightness t*rgb*
System: ORS18
Hue: h*G = 162/360; h*Mbr = 329/360
Result: c*rgb* = c*lab*; t*rgb* = t*lab*
c*rgb* = max (rgb*) − min (rgb*)
n* = 1 − max (rgb*) = 1 − i*
w* = min (rgb*) = 1 − d*
t*rgb* = w* + 0,5 c*rgb*
M = Maximum colour
triangle lightness t*rgb*
n* = 0; i* = 1
w* = 0; d* = 1
relative chroma c*rgb*
(c*M, t*M)
Mbr
G
De101−7A, 1

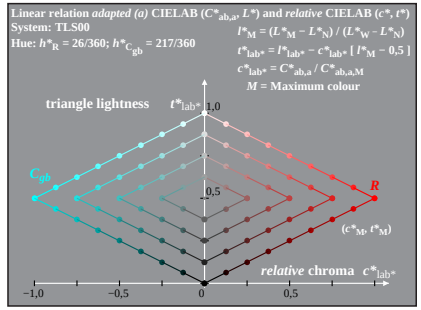

Linear relation rgb* and relative chroma c*rgb* or chroma a*rgb*, b*rgb*
System: ORS18
Result: c*rgb* = c*lab*; t*rgb* = t*lab*
c*rgb* = max (rgb*) − min (rgb*)
n* = 1 − max (rgb*) = 1 − i*
w* = min (rgb*) = 1 − d*
t*rgb* = w* + 0,5 c*rgb*
hab,d = [37, 96, 150, 236, 305, 353]
hab,e = [26, 92, 162, 217, 272, 329]
a*rgb* = c*rgb* cos hab
b*rgb* = c*rgb* sin hab
b*rgb*
relative chroma a*rgb*
Y
O
L
R
G
M
C
B
V
Mbr
De101−8A, 1



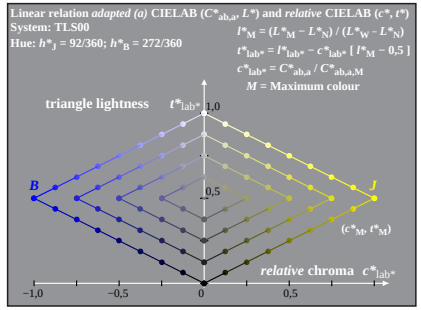
De100−1A, 2



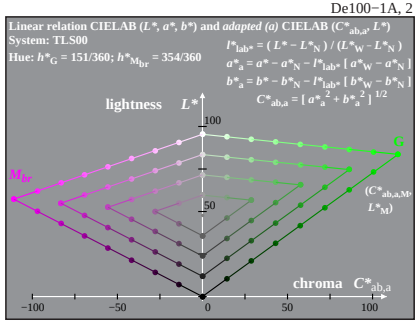
De100−2A, 2



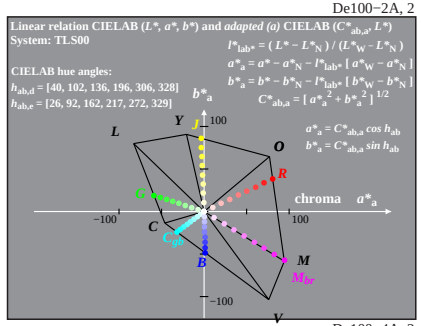
De101−1A, 2



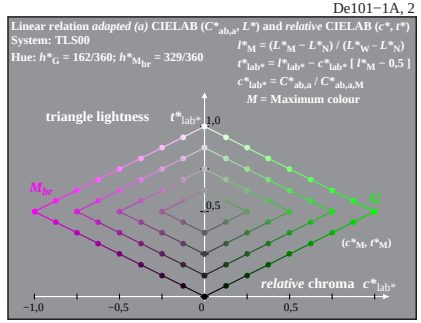
De101−2A, 2



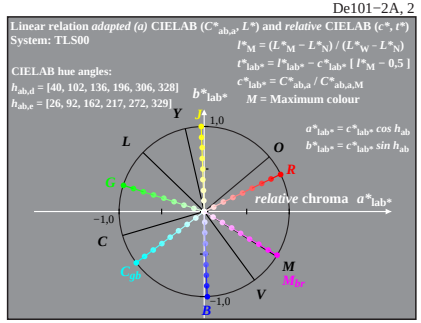
De100−3A, 2



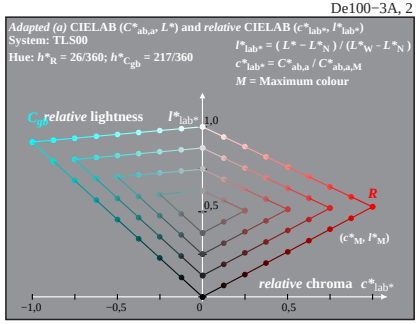
De100−4A, 2



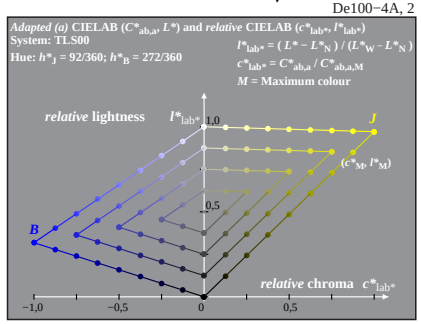
De101−3A, 2



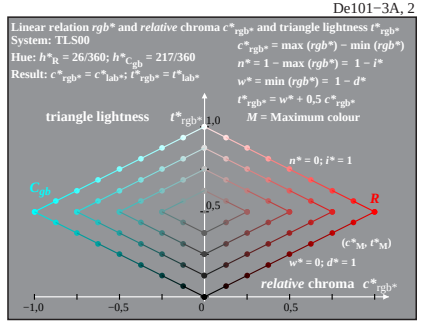
De101−4A, 2



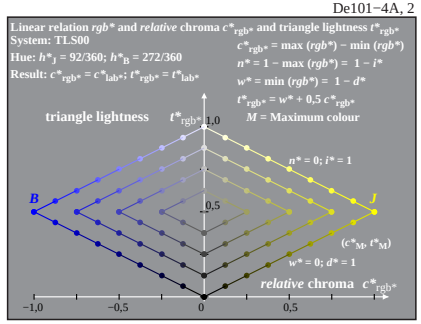
De100−5A, 2



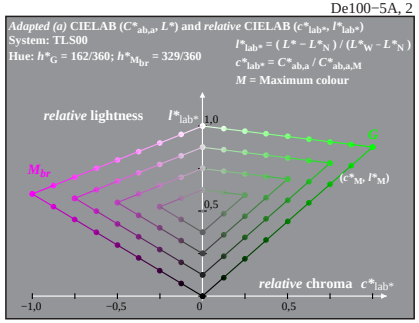
De100−6A, 2



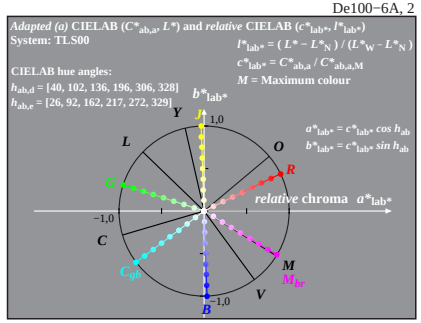
De101−5A, 2



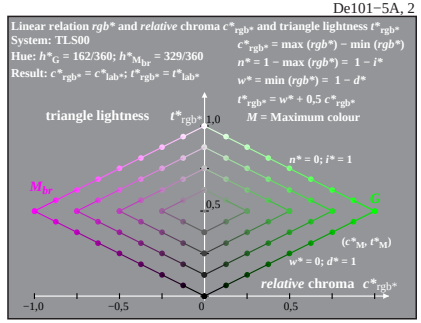
De101−6A, 2



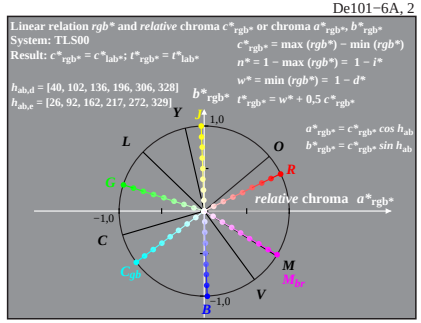
De101−7A, 2



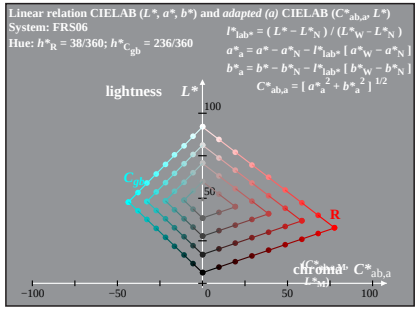
De101−8A, 2



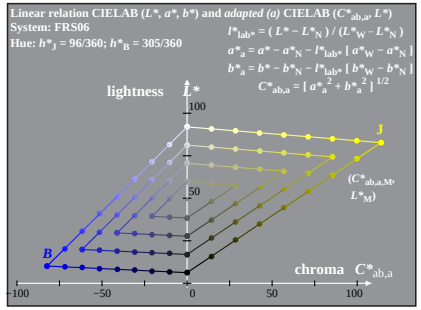
De101−7A, 2



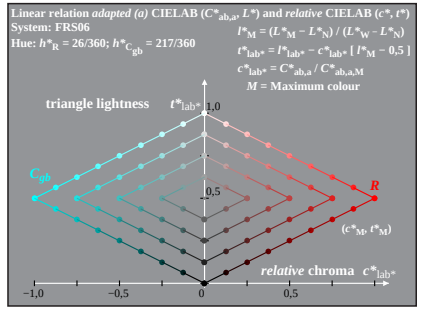
De101−8A, 2



De100−1A, 3



De100−2A, 3



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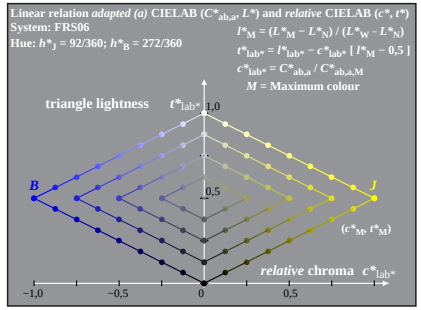

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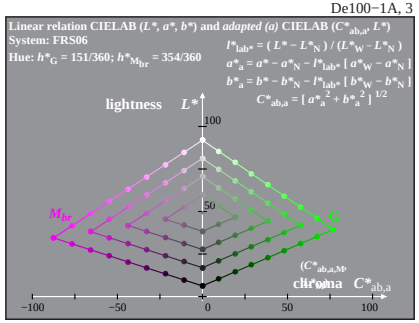

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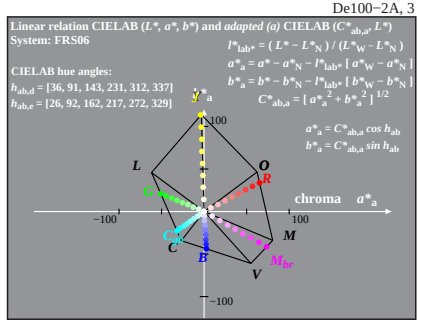

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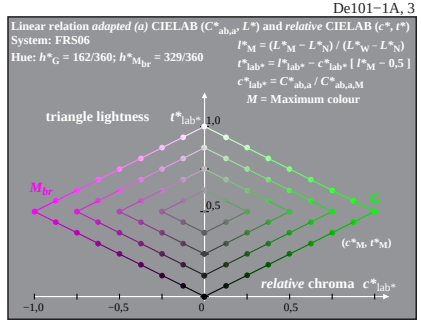

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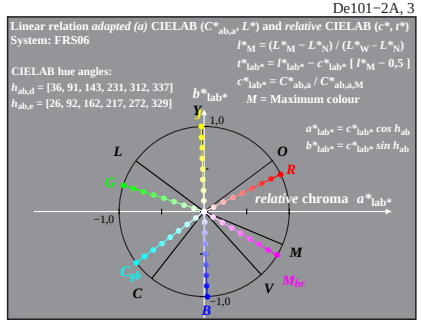

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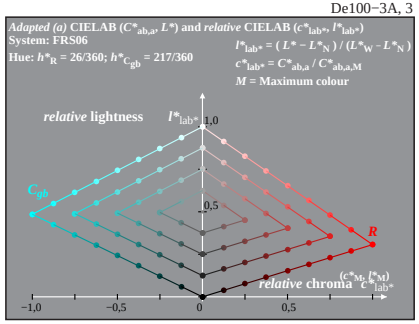

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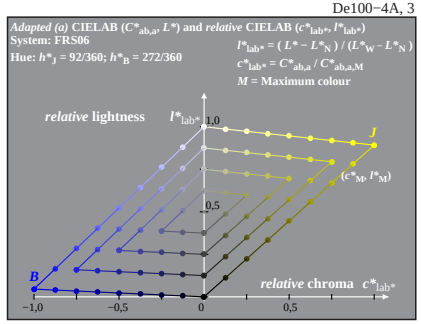

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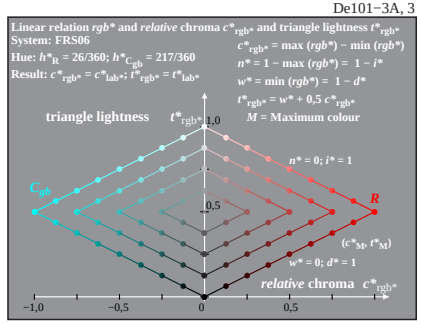

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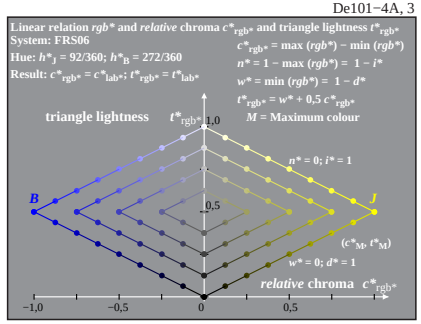

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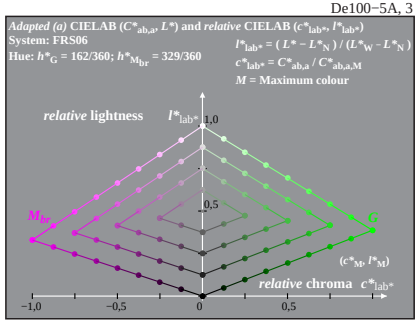

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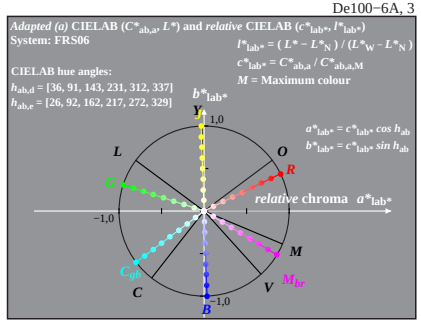

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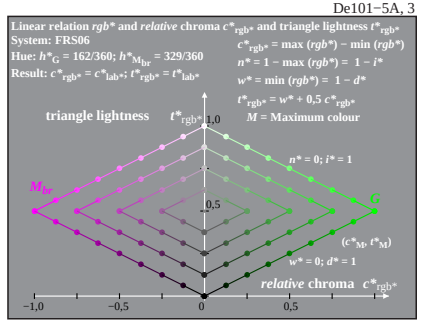

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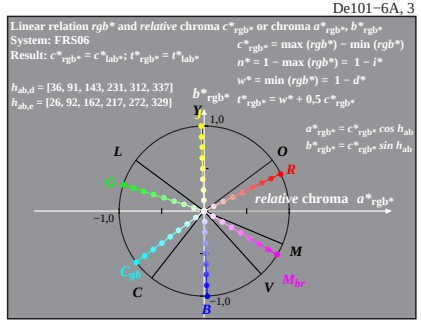

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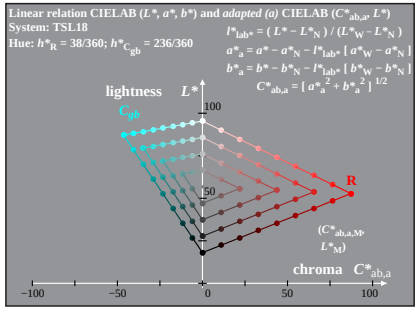

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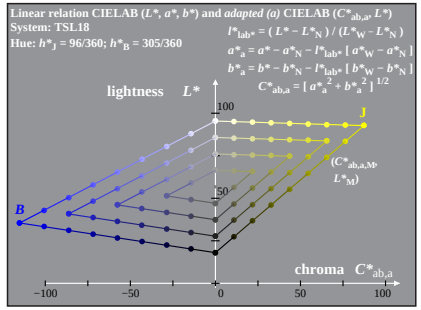

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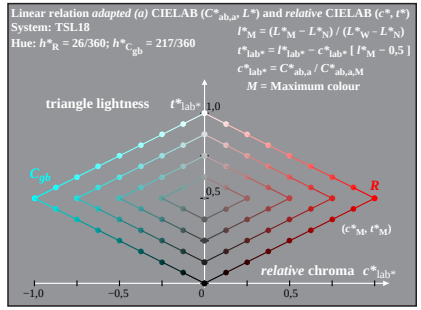

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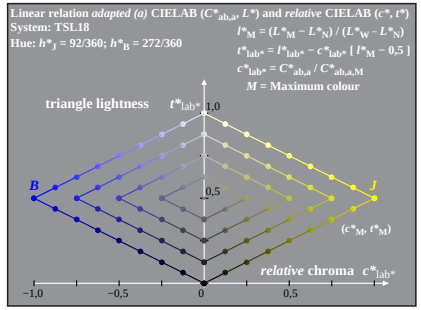

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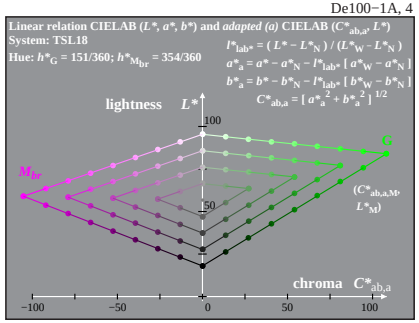

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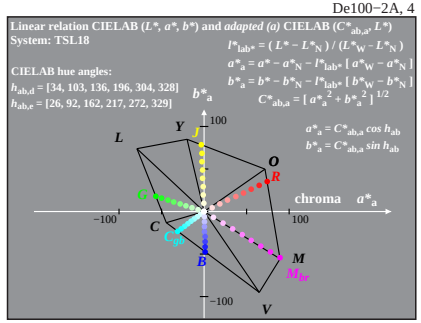

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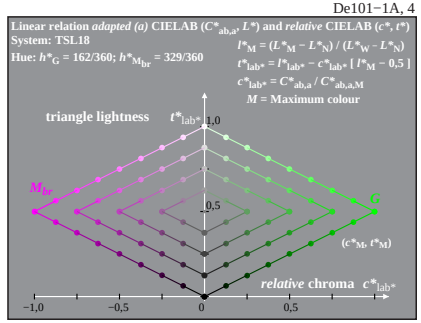

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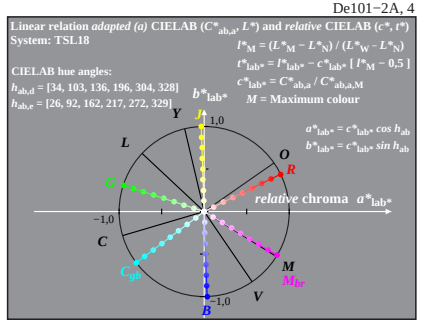

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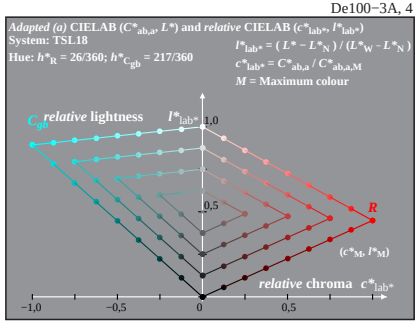

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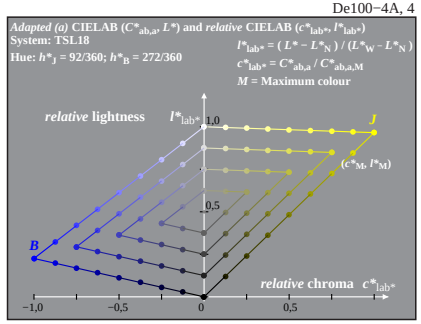

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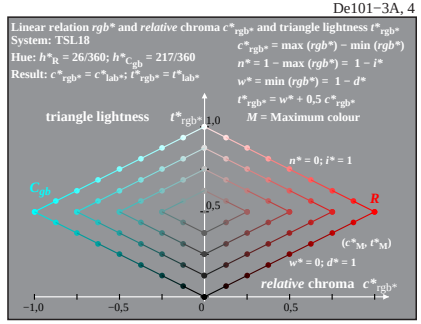

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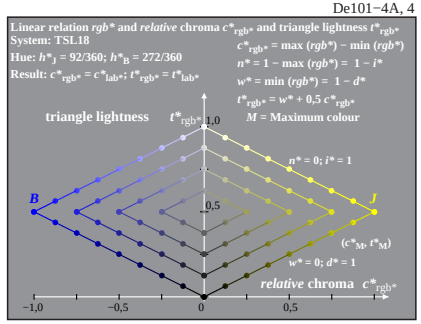

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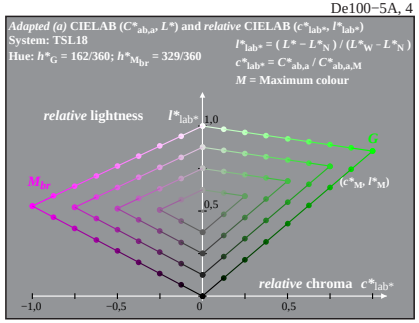

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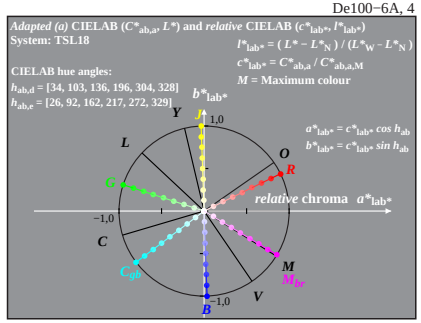

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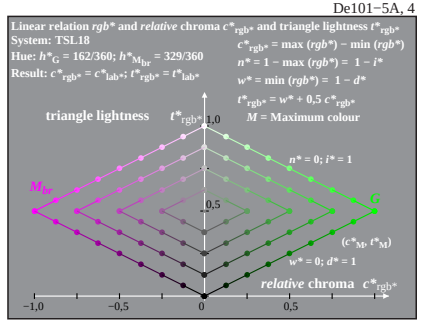

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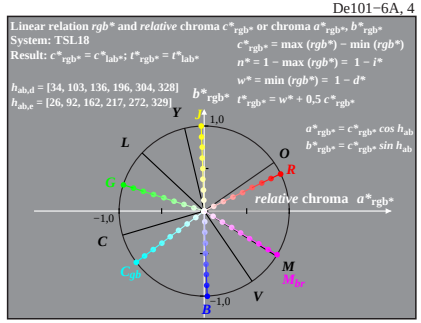

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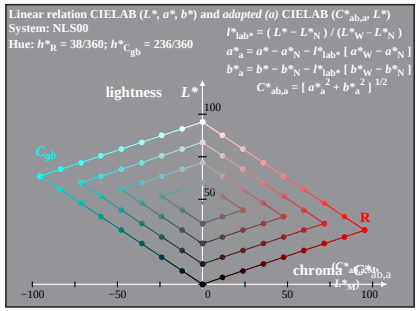

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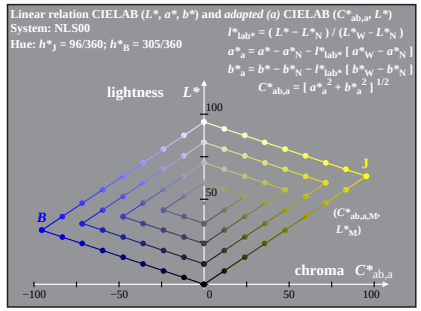

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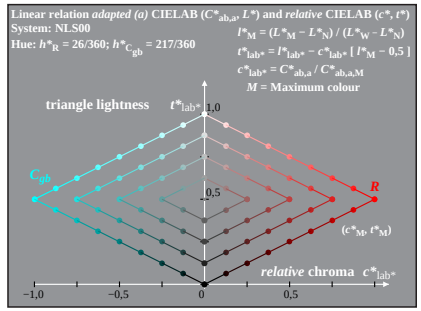

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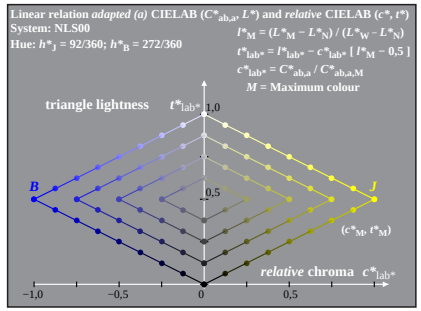

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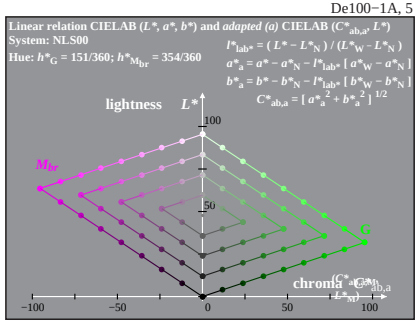

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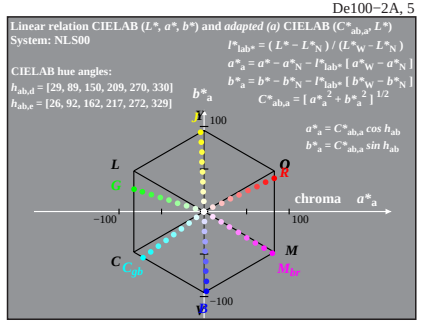

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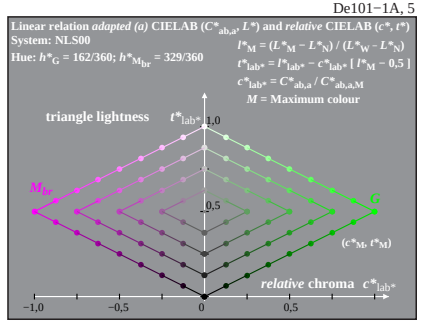

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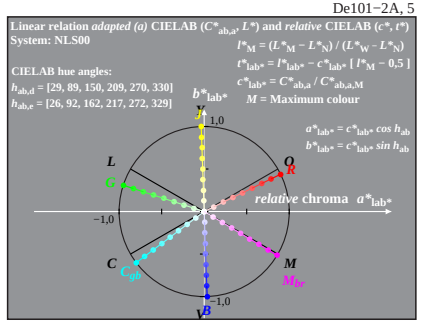

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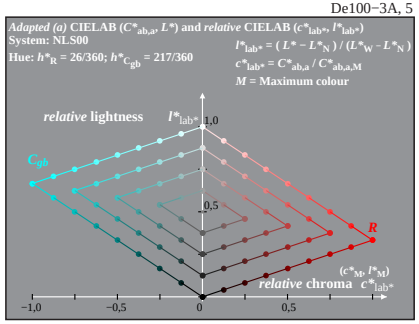

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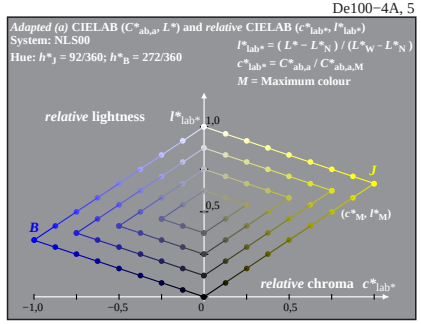

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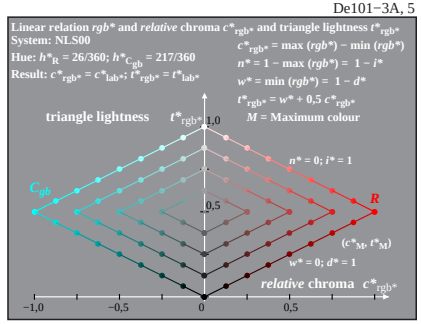

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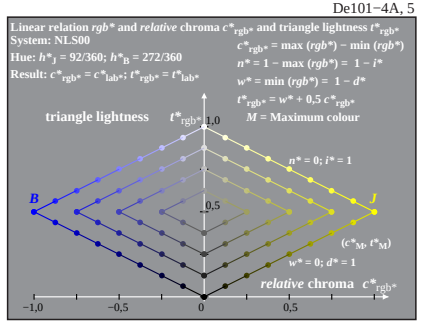

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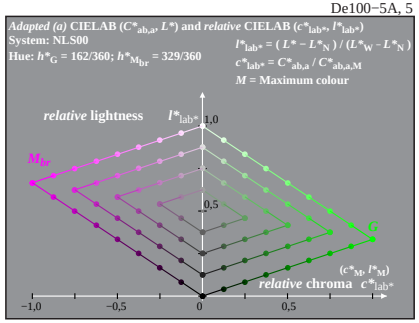

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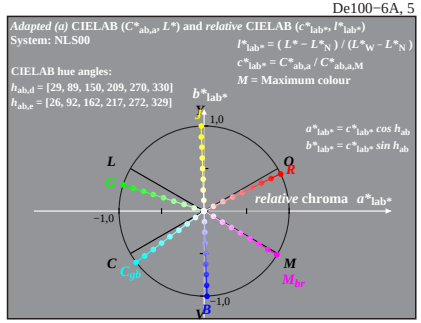

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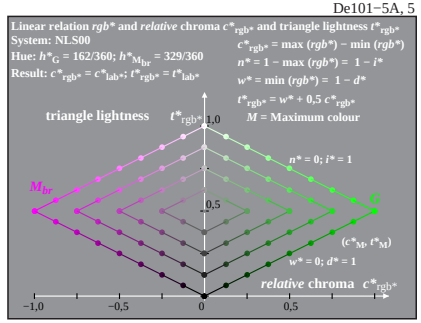

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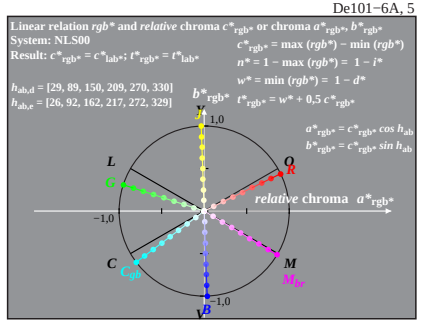

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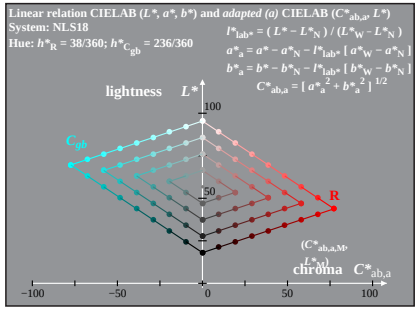

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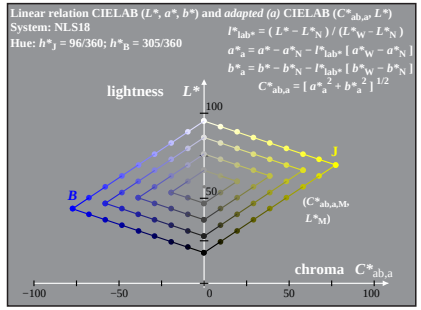

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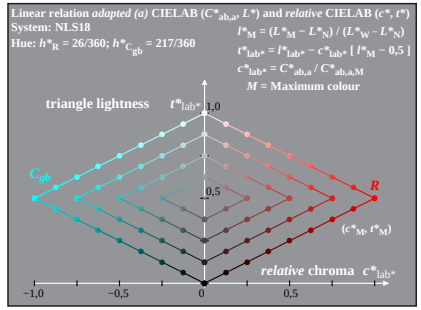

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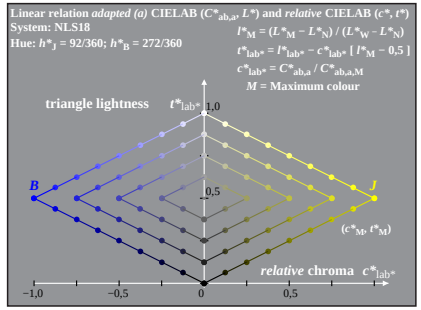

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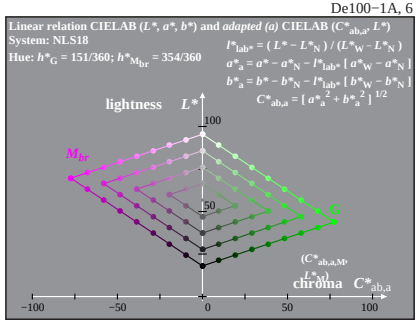

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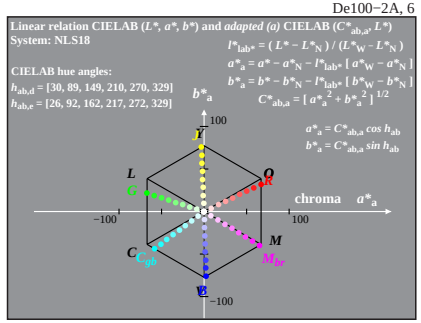

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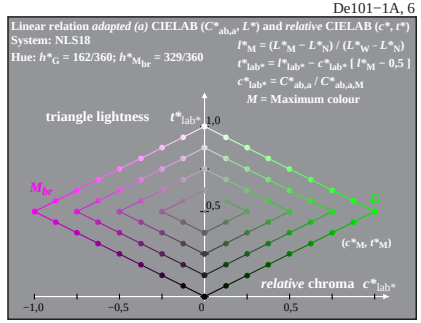

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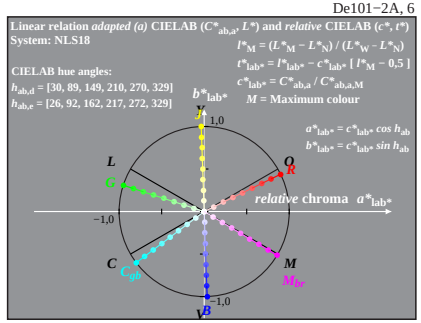

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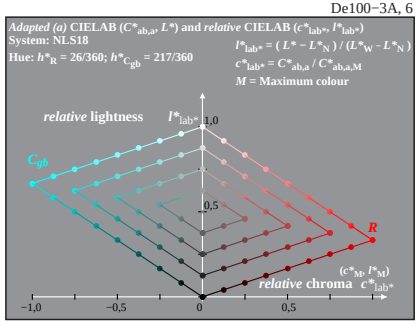

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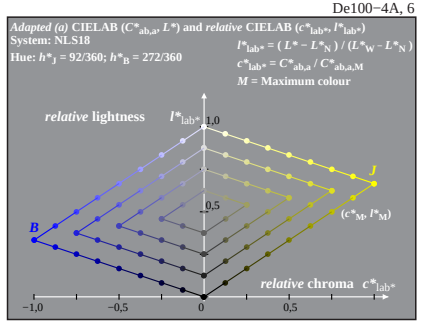

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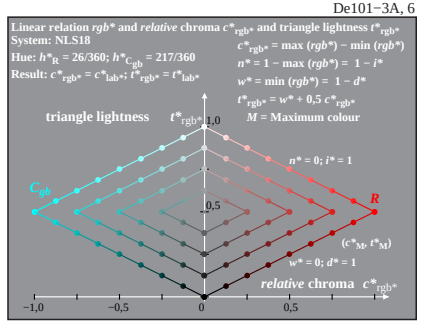

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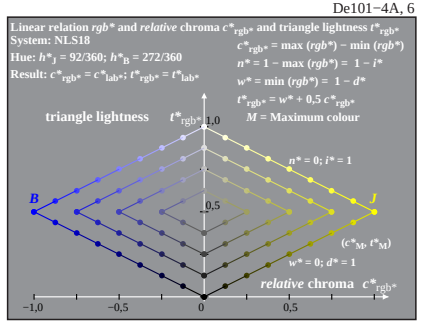

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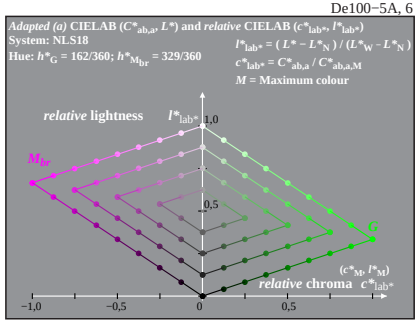

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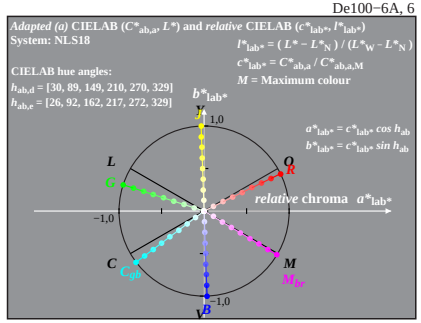

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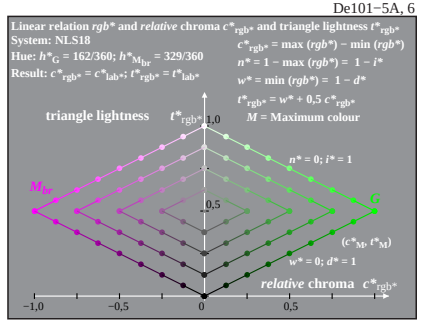

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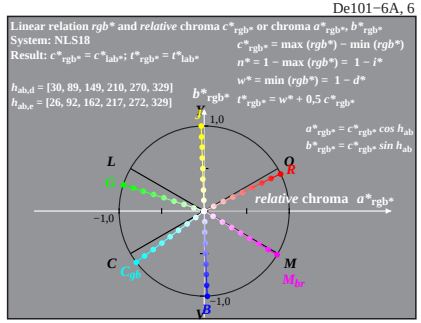

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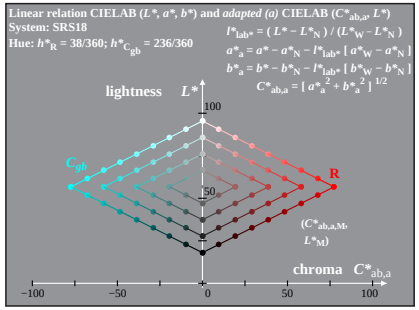

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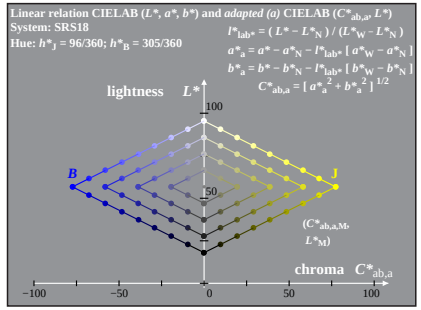

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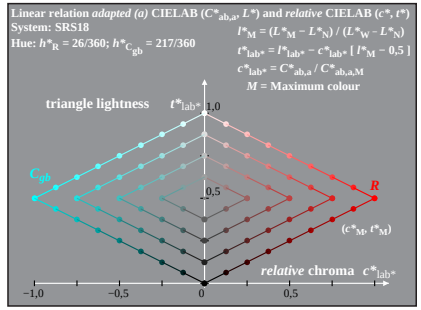

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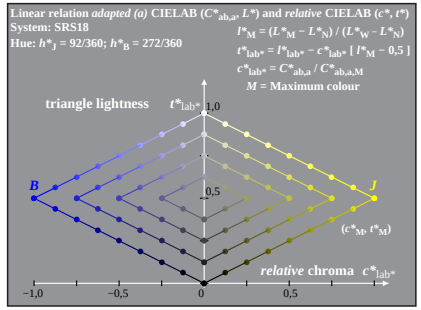

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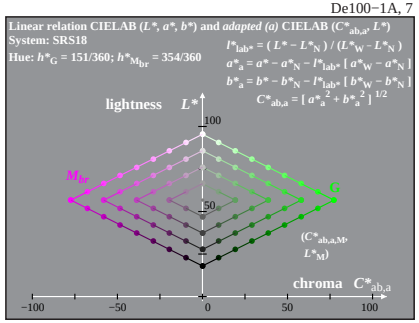

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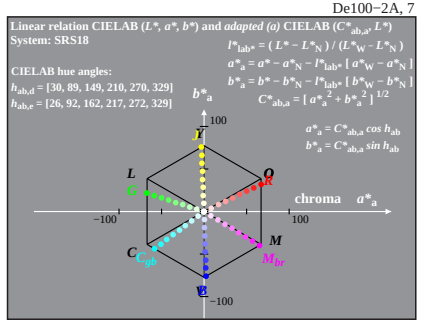

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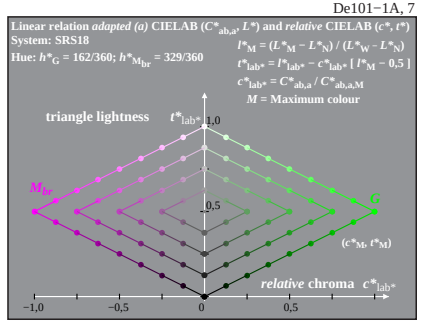

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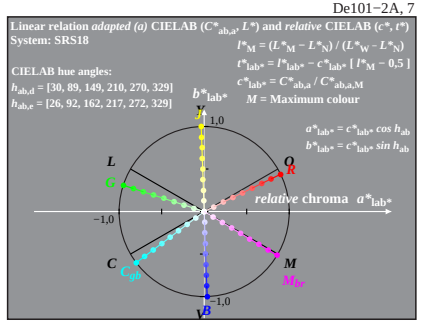

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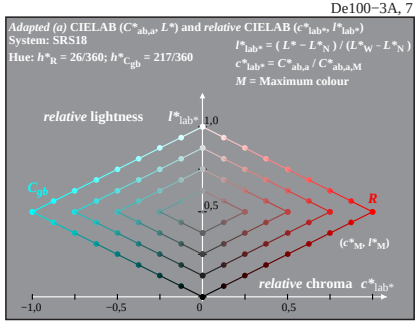

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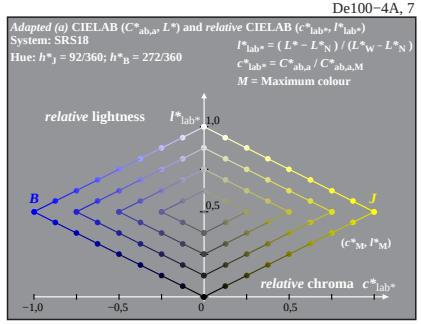

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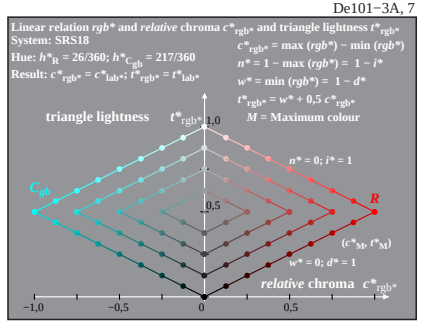

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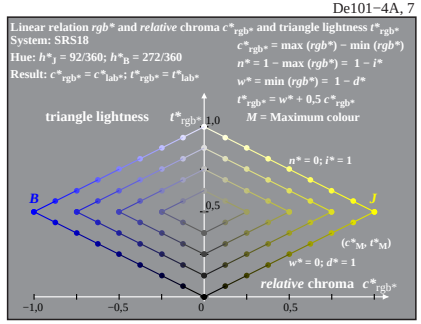

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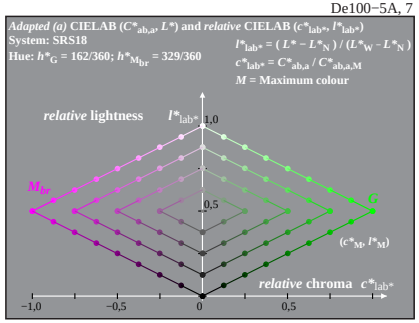

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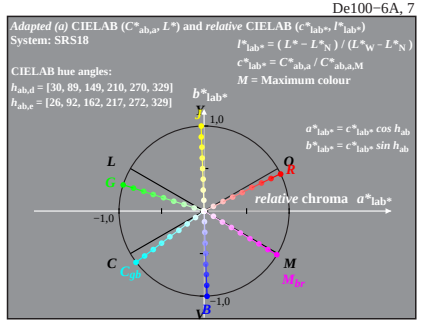

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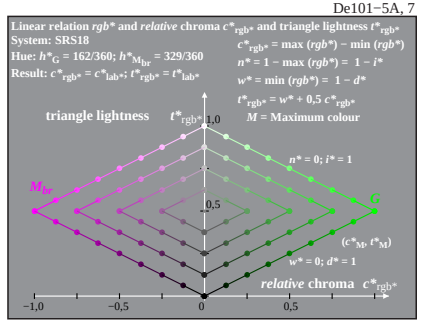

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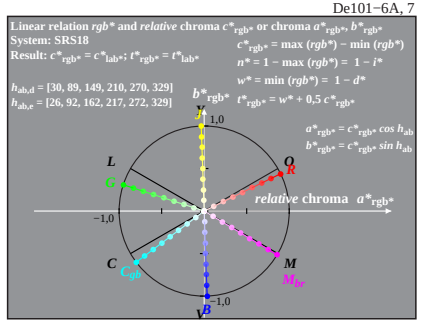

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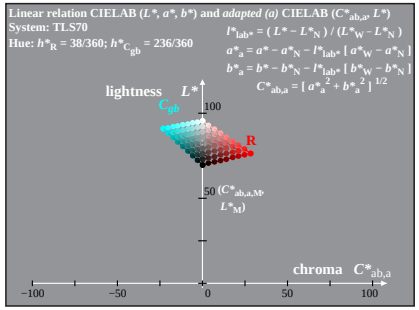

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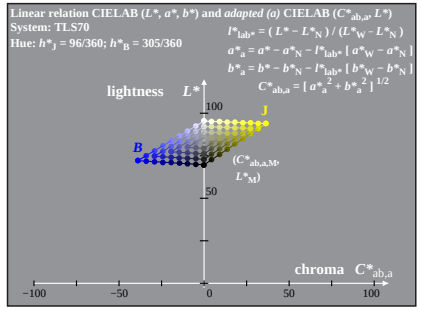

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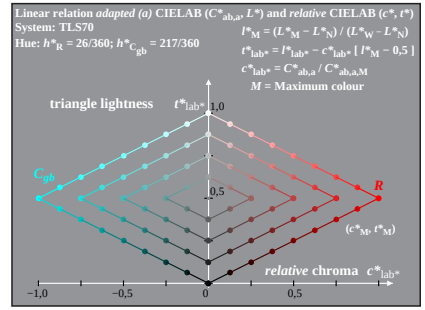

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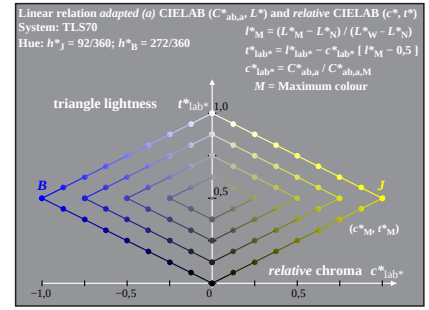

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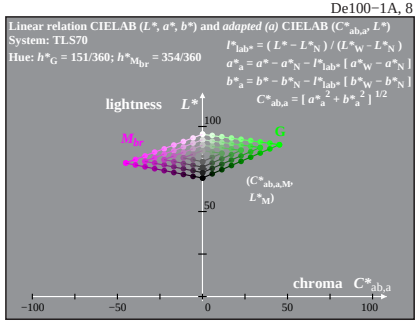

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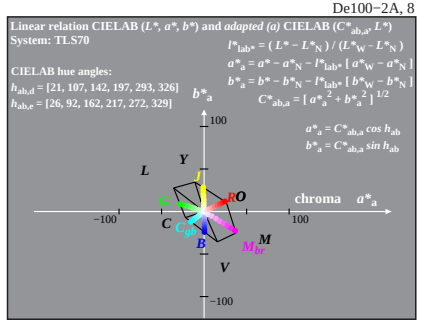

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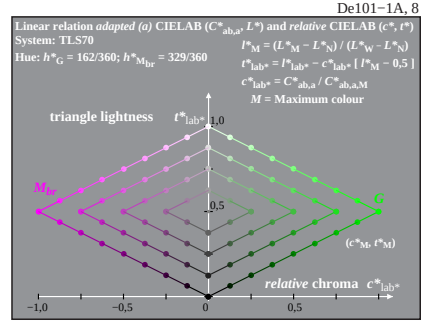

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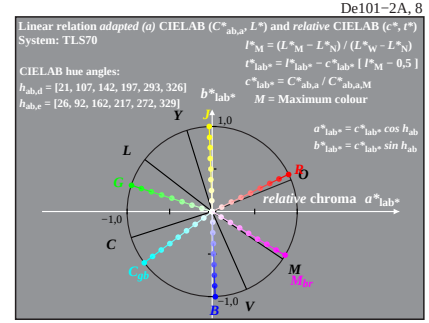

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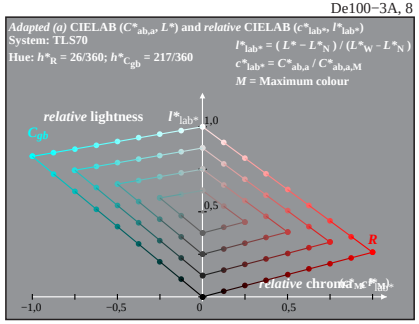

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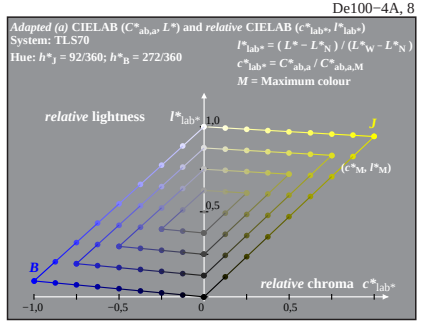

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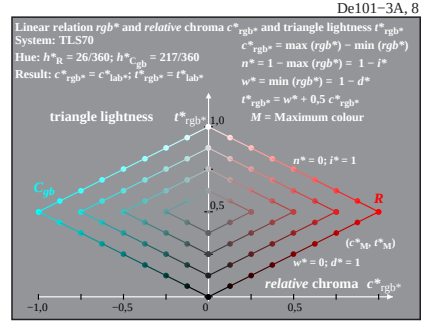

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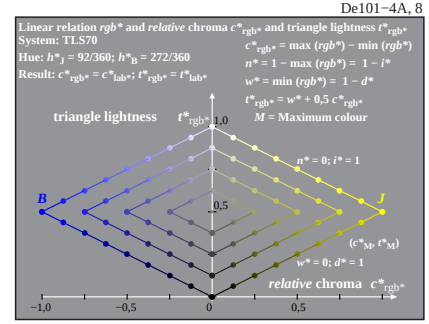

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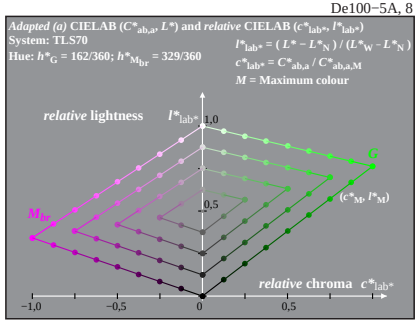

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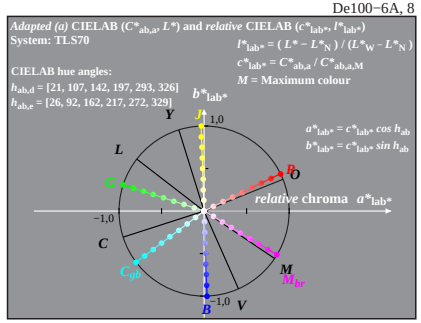

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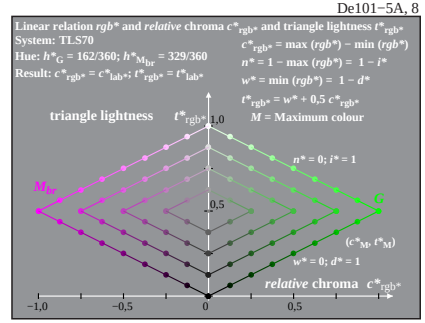

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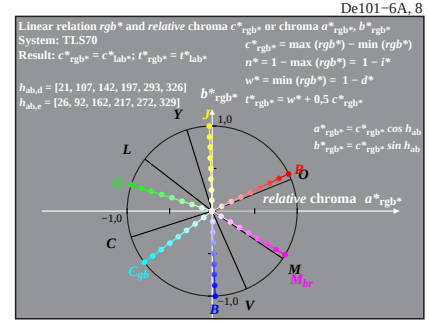

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