Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=300 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = C_T(\varphi) L_T^n - B_a(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$L_{Lt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_a^n]^{1/n}$ (t=black threshold) [3]

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	L_{Lt}	L_a/L_t
300	120’	22,969	0,0718	0,2448	34,60	99,99	3,75	79,99
300	100’	23,128	0,0747	0,2494	34,60	99,99	3,75	79,99
300	90’	23,415	0,1086	0,2526	34,60	99,99	3,99	75,07
300	60’	23,973	0,1313	0,2657	34,60	100,00	4,45	67,31
300	30’	26,235	0,1797	0,3188	34,60	99,99	5,42	55,33
300	20’	27,971	0,2013	0,3555	34,60	100,00	10,10	29,68
300	10’	30,747	0,2730	0,3984	34,60	99,99	14,37	20,86
300	120’	22,969	0,0718	0,2448	34,60	99,99	3,75	79,99

hes30−1a j=0, L_r=300, L_{aj}=300, φ=120’, B_a=34,60, B^*_{LT}=99,99

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=300 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = s_x(\varphi) L_T^n - d_{xa}(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$s_x(\varphi) = C_T(\varphi)$ [3] $d_{xa}(\varphi) = B_a(L_a, \varphi)$ [4] (s=scaling factor)

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	$s_x(\varphi)$	$d_{xa}(\varphi)$
300	120’	22,969	0,0718	0,2448	34,60	99,99	22,96	34,60
300	100’	23,128	0,0747	0,2494	34,60	99,99	22,96	34,60
300	90’	23,415	0,1086	0,2526	34,60	99,99	23,12	35,53
300	60’	23,973	0,1313	0,2657	34,60	100,00	23,41	37,21
300	30’	26,235	0,1797	0,3188	34,60	99,99	23,97	40,48
300	20’	27,971	0,2013	0,3555	34,60	100,00	26,23	53,74
300	10’	30,747	0,2730	0,3984	34,60	99,99	27,97	63,91
300	120’	22,969	0,0718	0,2448	34,60	99,99	22,96	34,60

hes30−2a j=0, L_r=300, L_{aj}=300, φ=120’, B_a=34,60, B^*_{YT}=99,99, s_x=22,96, d_{xa}=34,60

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=300 cd/m²

$B^*_{YT}(L_T, L_r, L_r, \varphi) = [C_T(\varphi) L_T^n - B_r(L_r, \varphi)] B^*_{ra}$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$L_{Yt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_r^n]^{1/n} B^*_{ra}$ (t=black threshold) [3]

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	L_{Yt}	L_a/L_t
300	120’	22,969	0,0718	0,2448	34,60	99,99	3,75	79,99
300	100’	23,128	0,0747	0,2494	34,60	99,99	3,75	79,99
300	90’	23,415	0,1086	0,2526	34,60	99,99	3,99	75,07
300	60’	23,973	0,1313	0,2657	34,60	100,00	4,45	67,31
300	30’	26,235	0,1797	0,3188	34,60	99,99	5,42	55,33
300	20’	27,971	0,2013	0,3555	34,60	100,00	10,10	29,68
300	10’	30,747	0,2730	0,3984	34,60	99,99	14,37	20,86
300	120’	22,969	0,0718	0,2448	34,60	99,99	3,75	79,99

hes30−3a j=0, L_r=300, L_{aj}=300, φ=120’, B_r=34,60, B^*_{YT}=99,99

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=300 cd/m²

$B^*_{YT}(L_T, L_r, \varphi) = s_{yra}(\varphi) L_T^n - d_{yra}(\varphi)$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$s_{yra}(\varphi)=C_T(\varphi) B^*_{ra}$ [3] $d_{yra}(\varphi)=B_r(L_r, \varphi) B^*_{ra}$ [4] (s=scaling factor)

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	$s_{yra}(\varphi)$	$d_{yra}(\varphi)$
300	120’	22,969	0,0718	0,2448	34,60	99,99	22,96	34,60
300	100’	23,128	0,0747	0,2494	34,60	99,99	22,96	34,60
300	90’	23,415	0,1086	0,2526	34,60	99,99	23,12	35,53
300	60’	23,973	0,1313	0,2657	34,60	100,00	23,41	37,21
300	30’	26,235	0,1797	0,3188	34,60	99,99	23,97	40,48
300	20’	27,971	0,2013	0,3555	34,60	100,00	26,23	53,74
300	10’	30,747	0,2730	0,3984	34,60	99,99	27,97	63,91
300	120’	22,969	0,0718	0,2448	34,60	99,99	22,96	34,60

hes30−4a j=0, L_r=300, L_{aj}=300, φ=120’, B_r=34,60, B^*_{YT}=99,99, s_{yra}=22,96, d_{yra}=34,60

hes30−3R_R

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=200 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = C_T(\varphi) L_T^n - B_a(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$L_{Lt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_a^n]^{1/n}$ (t=black threshold) [3]

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	L_{Lt}	L_a/L_t
200	120’	22,969	0,0718	0,2448	30,71	87,99	2,55	78,36
200	100’	23,128	0,0747	0,2494	30,71	87,98	2,72	73,51
200	90’	23,415	0,1086	0,2526	30,71	87,89	3,05	65,36
200	60’	23,973	0,1313	0,2657	30,71	87,81	3,73	53,51
200	30’	26,235	0,1797	0,3188	30,71	87,63	6,99	28,58
200	20’	27,971	0,2013	0,3555	30,71	87,52	9,95	20,09
200	10’	30,747	0,2730	0,3984	30,71	87,19	15,35	13,02
200	120’	22,969	0,0718	0,2448	30,71	87,99	2,55	78,36

hes31−1a j=2, L_r=300, L_{aj}=200, φ=120’, B_a=30,71, B^*_{LT}=87,99

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=200 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = s_x(\varphi) L_T^n - d_{xa}(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$s_x(\varphi) = C_T(\varphi)$ [3] $d_{xa}(\varphi) = B_a(L_a, \varphi)$ [4] (s=scaling factor)

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	$s_x(\varphi)$	$d_{xa}(\varphi)$
200	120’	22,969	0,0718	0,2448	30,71	87,99	22,96	30,71
200	100’	23,128	0,0747	0,2494	30,71	87,98	23,12	31,54
200	90’	23,415	0,1086	0,2526	30,71	87,89	23,41	33,11
200	60’	23,973	0,1313	0,2657	30,71	87,81	23,97	36,07
200	30’	26,235	0,1797	0,3188	30,71	87,63	26,23	47,94
200	20’	27,971	0,2013	0,3555	30,71	87,52	27,97	57,02
200	10’	30,747	0,2730	0,3984	30,71	87,19	30,74	71,70
200	120’	22,969	0,0718	0,2448	30,71	87,99	22,96	30,71

hes31−2a j=2, L_r=300, L_{aj}=200, φ=120’, B_a=30,71, B^*_{LT}=87,99, s_x=22,96, d_{xa}=30,71

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=200 cd/m²

$B^*_{YT}(L_T, L_r, L_r, \varphi) = [C_T(\varphi) L_T^n - B_r(L_r, \varphi)] B^*_{ra}$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$L_{Yt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_r^n]^{1/n} B^*_{ra}$ (t=black threshold) [3]

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	L_{Yt}	L_a/L_t
200	120’	22,969	0,0718	0,2448	34,60	95,57	2,90	78,36
200	100’	23,128	0,0747	0,2494	34,60	95,45	3,09	73,51
200	90’	23,415	0,1086	0,2526	34,60	95,22	3,47	65,36
200	60’	23,973	0,1313	0,2657	34,60	94,78	4,24	53,51
200	30’	26,235	0,1797	0,3188	34,60	93,00	7,95	28,58
200	20’	27,971	0,2013	0,3555	34,60	91,64	11,31	20,09
200	10’	30,747	0,2730	0,3984	34,60	89,45	17,45	13,02
200	120’	22,969	0,0718	0,2448	34,60	95,57	2,90	78,36

hes31−3a j=2, L_r=300, L_{aj}=200, φ=120’, B_r=34,60, B^*_{YT}=95,57

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=200 cd/m²

$B^*_{YT}(L_T, L_r, \varphi) = s_{yra}(\varphi) L_T^n - d_{yra}(\varphi)$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$s_{yra}(\varphi)=C_T(\varphi) B^*_{ra}$ [3] $d_{yra}(\varphi)=B_r(L_r, \varphi) B^*_{ra}$ [4] (s=scaling factor)

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	$s_{yra}(\varphi)$	$d_{yra}(\varphi)$
200	120’	22,969	0,0718	0,2448	34,60	95,57	26,10	34,90
200	100’	23,128	0,0747	0,2494	34,60	95,45	26,28	35,84
200	90’	23,415	0,1086	0,2526	34,60	95,22	26,60	37,63
200	60’	23,973	0,1313	0,2657	34,60	94,78	27,24	40,99
200	30’	26,235	0,1797	0,3188	34,60	93,00	29,81	54,49
200	20’	27,971	0,2013	0,3555	34,60	91,64	31,78	64,81
200	10’	30,747	0,2730	0,3984	34,60	89,45	34,94	81,48
200	120’	22,969	0,0718	0,2448	34,60	95,57	26,10	34,90

hes31−4a j=2, L_r=300, L_{aj}=200, φ=120’, B_r=34,60, B^*_{YT}=95,57, s_{yra}=26,10, d_{yra}=34,90

hes30−3R_R

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=1000 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = C_T(\varphi) L_T^n - B_a(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$L_{Lt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_a^n]^{1/n}$ (t=black threshold) [3]

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	L_{Lt}	L_a/L_t
1000	120’	22,969	0,0718	0,2448	49,51	145,98	11,91	83,94
1000	100’	23,128	0,0747	0,2494	49,51	146,02	12,68	78,86
1000	90’	23,415	0,1086	0,2526	49,51	146,39	13,85	72,15
1000	60’	23,973	0,1313	0,2657	49,51	146,66	16,69	59,88
1000	30’	26,235	0,1797	0,3188	49,51	147,37	30,80	32,46
1000	20’	27,971	0,2013	0,3555	49,51	147,78	43,81	22,82
1000	10’	30,747	0,2730	0,3984	49,51	149,03	65,96	15,16
1000	120’	22,969	0,0718	0,2448	49,51	145,98	11,91	83,94

hes30−5a j=1, L_r=300, L_{aj}=1000, φ=120’, B_a=49,51, B^*_{LT}=145,98

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=1000 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = s_x(\varphi) L_T^n - d_{xa}(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$s_x(\varphi) = C_T(\varphi)$ [3] $d_{xa}(\varphi) = B_a(L_a, \varphi)$ [4] (s=scaling factor)

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	$s_x(\varphi)$	$d_{xa}(\varphi)$
1000	120’	22,969	0,0718	0,2448	49,51	145,98	22,96	49,51
1000	100’	23,128	0,0747	0,2494	49,51	146,02	23,12	50,82
1000	90’	23,415	0,1086	0,2526	49,51	146,39	23,41	52,89
1000	60’	23,973	0,1313	0,2657	49,51	146,66	23,97	57,37
1000	30’	26,235	0,1797	0,3188	49,51	147,37	26,23	75,92
1000	20’	27,971	0,2013	0,3555	49,51	147,78	27,97	90,28
1000	10’	30,747	0,2730	0,3984	49,51	149,03	30,74	112,66
1000	120’	22,969	0,0718	0,2448	49,51	145,98	22,96	49,51

hes30−6a j=1, L_r=300, L_{aj}=1000, φ=120’, B_a=49,51, B^*_{YT}=145,98, s_x=22,96, d_{xa}=49,51

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=1000 cd/m²

$B^*_{YT}(L_T, L_r, L_r, \varphi) = [C_T(\varphi) L_T^n - B_r(L_r, \varphi)] B^*_{ra}$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$L_{Yt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_r^n]^{1/n} B^*_{ra}$ (t=black threshold) [3]

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	L_{Yt}	L_a/L_t
1000	120’	22,969	0,0718	0,2448	34,60	110,21	8,15	83,94
1000	100’	23,128	0,0747	0,2494	34,60	110,49	8,68	78,86
1000	90’	23,415	0,1086	0,2526	34,60	111,02	9,49	72,15
1000	60’	23,973	0,1313	0,2657	34,60	112,03	11,43	59,88
1000	30’	26,235	0,1797	0,3188	34,60	116,14	21,10	32,46
1000	20’	27,971	0,2013	0,3555	34,60	119,29	30,01	22,82
1000	10’	30,747	0,2730	0,3984	34,60	124,33	45,18	15,16
1000	120’	22,969	0,0718	0,2448	34,60	110,21	8,15	83,94

hes30−7a j=1, L_r=300, L_{aj}=1000, φ=120’, B_r=34,60, B^*_{YT}=110,21

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=1000 cd/m²

$B^*_{YT}(L_T, L_r, \varphi) = s_{yra}(\varphi) L_T^n - d_{yra}(\varphi)$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$s_{yra}(\varphi)=C_T(\varphi) B^*_{ra}$ [3] $d_{yra}(\varphi)=B_r(L_r, \varphi) B^*_{ra}$ [4] (s=scaling factor)

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	$s_{yra}(\varphi)$	$d_{yra}(\varphi)$
1000	120’	22,969	0,0718	0,2448	34,60	110,21	15,73	33,91
1000	100’	23,128	0,0747	0,2494	34,60	110,49	15,84	34,81
1000	90’	23,415	0,1086	0,2526	34,60	111,02	16,03	36,23
1000	60’	23,973	0,1313	0,2657	34,60	112,03	16,42	39,30
1000	30’	26,235	0,1797	0,3188	34,60	116,14	17,97	52,00
1000	20’	27,971	0,2013	0,3555	34,60	119,29	19,15	61,84
1000	10’	30,747	0,2730	0,3984	34,60	124,33	21,06	77,17
1000	120’	22,969	0,0718	0,2448	34,60	110,21	15,73	33,91

hes30−8a j=1, L_r=300, L_{aj}=1000, φ=120’, B_r=34,60, B^*_{YT}=110,21, s_{yra}=15,73, d_{yra}=33,9

hes30−3R_R

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=40 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = C_T(\varphi) L_T^n - B_a(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$L_{Lt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_a^n]^{1/n}$ (t=black threshold) [3]

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	L_{Lt}	L_a/L_t
40	120’	22,969	0,0718	0,2448	19,29	52,77	0,56	70,18
40	100’	23,128	0,0747	0,2494	19,29	52,74	0,60	65,70
40	90’	23,415	0,1086	0,2526	19,29	52,36	0,71	55,89
40	60’	23,973	0,1313	0,2657	19,29	52,08	0,89	44,82
40	30’	26,235	0,1797	0,3188	19,29	51,35	1,70	23,42
40	20’	27,971	0,2013	0,3555	19,29	50,93	2,43	16,45
40	10’	30,747	0,2730	0,3984	19,29	49,64	3,88	10,29
40	120’	22,969	0,0718	0,2448	19,29	52,77	0,56	70,18

hes31−5a j=3, L_r=300, L_{aj}=40, φ=120’, B_a=19,29, B^*_{LT}=52,77

Relationship brightness B^*_{LT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=40 cd/m²

$B^*_{LT}(L_T, L_a, \varphi) = s_x(\varphi) L_T^n - d_{xa}(L_a, \varphi)$ brightness B^*_{LT} [1]
$B_a(L_a, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_a^n]$ (n=0,31) [2]
$s_x(\varphi) = C_T(\varphi)$ [3] $d_{xa}(\varphi) = B_a(L_a, \varphi)$ [4] (s=scaling factor)

L_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_a(L_a,\varphi)$	B^*_{LT}	$s_x(\varphi)$	$d_{xa}(\varphi)$
40	120’	22,969	0,0718	0,2448	19,29	52,77	22,96	19,29
40	100’	23,128	0,0747	0,2494	19,29	52,74	23,12	19,83
40	90’	23,415	0,1086	0,2526	19,29	52,36	23,41	21,10
40	60’	23,973	0,1313	0,2657	19,29	52,08	23,97	23,14
40	30’	26,235	0,1797	0,3188	19,29	51,35	26,23	30,96
40	20’	27,971	0,2013	0,3555	19,29	50,93	27,97	36,83
40	10’	30,747	0,2730	0,3984	19,29	49,64	30,74	46,83
40	120’	22,969	0,0718	0,2448	19,29	52,77	22,96	19,29

hes31−6a j=3, L_r=300, L_{aj}=40, φ=120’, B_a=19,29, B^*_{YT}=52,77, s_x=22,96, d_{xa}=19,29

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=40 cd/m²

$B^*_{YT}(L_T, L_r, L_r, \varphi) = [C_T(\varphi) L_T^n - B_r(L_r, \varphi)] B^*_{ra}$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$L_{Yt}(L_a, \varphi) = [S_0(\varphi) + S_1(\varphi) L_r^n]^{1/n} B^*_{ra}$ (t=black threshold) [3]

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	L_{Yt}	L_a/L_t
40	120’	22,969	0,0718	0,2448	34,60	70,99	1,07	70,18
40	100’	23,128	0,0747	0,2494	34,60	70,17	1,15	65,70
40	90’	23,415	0,1086	0,2526	34,60	68,70	1,35	55,89
40	60’	23,973	0,1313	0,2657	34,60	65,81	1,69	44,82
40	30’	26,235	0,1797	0,3188	34,60	54,15	3,23	23,42
40	20’	27,971	0,2013	0,3555	34,60	45,19	4,60	16,45
40	10’	30,747	0,2730	0,3984	34,60	30,87	7,36	10,29
40	120’	22,969	0,0718	0,2448	34,60	70,99	1,07	70,18

hes31−7a j=3, L_r=300, L_{aj}=40, φ=120’, B_r=34,60, B^*_{YT}=70,99

Relationship brightness B^*_{YT} and luminance L_T as function of tristimulus value Y_T for the adaptation luminance L_a=40 cd/m²

$B^*_{YT}(L_T, L_r, \varphi) = s_{yra}(\varphi) L_T^n - d_{yra}(\varphi)$ brightness B^*_{YT} [1]
$B_r(L_r, \varphi) = C_T(\varphi)[S_0(\varphi) + S_1(\varphi) L_r^n]$ (n=0,31, $B^*_{ra}=B^*_{LT,r}/B^*_{LT,a}$) [2]
$s_{yra}(\varphi)=C_T(\varphi) B^*_{ra}$ [3] $d_{yra}(\varphi)=B_r(L_r, \varphi) B^*_{ra}$ [4] (s=scaling factor)

Y_T	φ	$C_T(\varphi)$	$S_0(\varphi)$	$S_1(\varphi)$	$B_r(L_r,\varphi)$	B^*_{YT}	$s_{yra}(\varphi)$	$d_{yra}(\varphi)$
40	120’	22,969	0,0718	0,2448	34,60	70,99	43,51	36,55
40	100’	23,128	0,0747	0,2494	34,60	70,17	43,81	37,57
40	90’	23,415	0,1086	0,2526	34,60	68,70	44,36	39,99
40	60’	23,973	0,1313	0,2657	34,60	65,81	45,42	43,84
40	30’	26,235	0,1797	0,3188	34,60	54,15	49,70	58,67
40	20’	27,971	0,2013	0,3555	34,60	45,19	52,99	69,79
40	10’	30,747	0,2730	0,3984	34,60	30,87	58,25	88,73
40	120’	22,969	0,0718	0,2448	34,60	70,99	43,51	36,55

hes31−8a j=3, L_r=300, L_{aj}=40, φ=120’, B_r=34,60, B^*_{YT}=70,99, s_{yra}=43,51, d_{yra}=36,55

hes30−3R_R

TUB-test chart hes3; HAULAB, scaling of achromatic colours in white surround of 180 degree, *Haubner* (1980), Adaptations L_{wa}=300, 1000, 200 & 40cd/m²; 7 viewing angles 120’ to 10’