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technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmnetik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_0=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	O	tristimulus values and chromaticities						nu-chromatic values		
		X	Y	Z	x	y	z	x_{AB}	y_{AB}	z_{AB}
00	376	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2
01	458	13.22	7.40	75.87	0.136	0.076	0.786	15.1	-69.8	71.5
02	460	13.26	8.89	77.33	0.133	0.089	0.777	11.6	-70.1	71.0
03	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-9.1	-65.6	66.2
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-22.2	-60.9	64.8
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-29.0	-58.0	64.8
08	475	18.32	36.37	81.08	0.134	0.267	0.597	-42.0	-51.5	66.5
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-60.7	-37.3	71.3
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-63.9	-31.9	71.5
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-72.0	-14.0	73.4
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-80.5	7.9	80.9
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-84.7	28.2	87.6
16	512	22.19	58.45	18.53	0.223	0.589	0.186	-85.6	28.9	90.4
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-85.6	35.3	92.7
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-83.2	42.2	93.3
19	541	41.29	73.93	10.07	0.320	0.589	0.080	-75.0	49.9	90.1
20	563	83.41	92.59	5.28	0.460	0.510	0.029	-11.5	69.8	71.4
21	564	83.37	91.09	3.82	0.467	0.510	0.021	-11.5	70.0	71.0
22	565	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1
23	565Y	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1
24	568	82.96	82.07	0.96	0.499	0.494	0.005	9.1	65.6	66.2
25	571	81.93	75.58	0.44	0.518	0.478	0.002	22.2	60.8	64.8
26	573	81.03	71.82	0.27	0.529	0.469	0.001	29.1	58.0	64.9
27	577	78.31	63.62	0.08	0.551	0.447	0.000	42.1	51.5	66.5
28	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3
29	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3
30	587	68.81	46.05	0.00	0.599	0.400	0.000	60.8	37.3	71.3
31	589	67.60	44.04	0.93	0.600	0.391	0.008	62.6	34.8	71.6
32	692	70.96	43.57	21.37	0.522	0.320	0.157	72.1	13.9	73.5
33	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0
34	708	75.07	42.59	56.88	0.430	0.244	0.365	84.8	-22.9	87.7
35	717	74.44	41.54	62.63	0.416	0.232	0.350	85.7	-28.9	90.5
36	726	72.35	39.38	67.37	0.403	0.219	0.376	85.7	-35.4	92.7
37	736	67.62	35.52	71.08	0.388	0.203	0.408	83.2	-42.2	93.4
38	745	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2
39	823	13.22	7.40	75.87	0.136	0.076	0.786	15.1	-69.8	71.5
U=D50	96.63	100.00	81.17	0.347	0.359	0.359	0.0	0.0	0.0	0.0

CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_0=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	O	λ	n-purities				nu-purities			
			Y	P_{nm}	P_{nm}	h_{nm}	Y	P_{nm}	P_{nm}	h_{nm}
00	376	26.06	5.29	-2.72	5.96	332	2.88	-1.91	3.46	326
01	458	7.40	4.46	-10.25	11.18	293	2.05	-9.44	9.66	282
02	460	8.89	3.72	-8.68	9.45	293	1.30	-7.87	7.98	279
03	462	10.68	3.10	-7.34	7.97	292	0.69	-6.53	6.56	273
04	462B	10.68	3.10	-7.34	7.97	292	0.69	-6.53	6.56	276
05	468	17.92	1.90	-4.47	4.86	293	-0.50	-3.66	3.69	262
06	471	24.41	1.50	-3.30	3.63	294	-0.90	-2.49	2.65	249
07	473	28.17	1.38	-2.87	3.18	295	-1.03	-2.06	2.30	236
08	475	36.37	1.25	-2.22	2.56	299	-1.15	-1.41	1.82	230
09	477	45.10	1.23	-1.79	2.18	304	-1.17	-0.98	1.53	226
10	477C	45.10	1.23	-1.79	2.18	304	-1.17	-0.98	1.53	226
11	479	53.94	1.28	-1.50	1.98	310	-1.12	-0.69	1.32	221
12	480	58.21	1.31	-1.36	1.89	314	-1.09	-0.54	1.22	206
13	484	56.42	1.13	-1.05	1.55	317	-1.27	-0.24	1.30	191
14	492	56.65	0.99	-0.67	1.19	325	-1.42	0.14	1.42	174
15	503	57.40	0.93	-0.42	1.02	335	-1.47	0.38	1.52	165
16	512G	58.45	0.94	-0.31	1.00	341	-1.46	0.49	1.54	162
17	521	60.61	1.00	-0.22	1.02	347	-1.41	0.58	1.52	157
18	531	64.47	1.12	-0.15	1.13	352	-1.29	0.65	1.44	153
19	541	73.93	1.26	-0.11	1.26	354	-1.01	0.67	1.21	146
20	563	92.59	2.25	-0.05	2.25	358	-0.16	0.75	1.77	122
21	564	91.09	2.28	-0.04	2.28	358	-0.12	0.76	1.78	95
22	565	89.31	2.33	-0.03	2.33	359	-0.08	0.78	1.95	95
23	565Y	89.31	2.33	-0.03	2.33	359	-0.08	0.78	1.95	95
24	568	82.07	0.96	0.499	0.494	0.005	9.1	65.6	66.2	92
25	571	75.58	0.44	0.518	0.478	0.002	22.2	60.8	64.8	92
26	573	71.82	0.28	0.529	0.469	0.001	29.1	58.0	64.9	93
27	577	63.62	0.07	0.551	0.447	0.000	42.1	51.5	66.5	93
28	581	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	93
29	581	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	93
30	587	46.05	0.00	0.599	0.400	0.000	60.8	37.3	71.3	93
31	589	44.04	0.383	0.602	0.383	359	1.42	0.79	1.62	29
32	692	43.57	0.07	-0.49	4.10	353	1.65	0.32	1.68	10
33	697	43.34	0.427	-0.99	4.38	346	1.86	-0.18	1.86	35
34	708	42.59	0.448	-1.33	4.60	343	1.99	-0.52	2.05	345
35	717	41.54	0.448	-1.70	4.72	341	2.06	-0.69	2.17	341
36	726	39.38	0.459	-2.11	4.90	339	2.17	-0.89	2.35	337
37	736	35.52	0.475	-2.50	5.16	337	2.34	-1.18	2.62	333
38	745	26.06	5.29	-2.72	5.96	332	2.88	-1.91	3.46	326
39	823	7.40	4.46	-10.25	11.18	293	2.05	-9.44	9.66	282
U=D50		100.00	2.415	-0.811	2.547	341	0.0	0.0	0.0	0

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CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_0=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	tristimulus values and chromaticities	chromatic values	putities						
λ	X	Y	Z	x	y	z	x_{AB}	y_{AB}	z_{AB}	
00	692	70.96	43.57	21.37	0.522	0.320	0.157	72.1	13.9	73.5
01	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0
02	708	75.07	42.59	56.88	0.430	0.244	0.365	84.8	-22.9	87.7
03	717	74.44	41.54	62.63	0.416	0.232	0.350	85.7	-28.9	90.5
04	726	72.35	39.38	67.37	0.403	0.219	0.376	85.7	-35.4	92.7
05	736	67.62	35.52	71.08	0.388	0.203	0.408	83.2	-42.2	93.4
06	376	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2
07	458	13.22	7.40	75.87	0.136	0.076	0.786	15.1	-69.8	71.5
08	460	13.26	8.89	77.33	0.133	0.089	0.777	11.6	-70.1	71.0
09	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1
10	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-9.1	-65.6	66.2
12	471	14.70	24.41	80.73	0.122	0.203	0.673	-22.2	-60.9	64.8
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-29.0	-58.0	64.8
14	475	18.32	36.37	81.08	0.134	0.267	0.597	-42.0	-51.5	66.5
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-60.7	-37.3	71.3
18	480	30.64	58.21	79.19	0.182	0.346	0.471	-63.9	-31.9	71.5
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-72.0	-14.0	73.4
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-80.5	7.9	80.9
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-84.7	28.2	87.6
22	512	22.19	58.45	18.53	0.223	0.589	0.186	-85.6	28.9	90.4
23	521	24.28	60.61	13.79	0.246	0.614	0.139	-85.6	35.3	92.7
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-83.2	42.2	93.3
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-75.0	49.9	91.1
26	563	81.31	92.59	5.28	0.460	0.510	0.029	-15.0	69.8	71.4
27	565	83.35	91.39	3.82	0.467	0.510	0.021	-11.5	70.0	71.9
28	567	84.89	90.31	3.24	0.470	0.509	0.015	-7.9	70.0	72.0
29	564	83.35	89.01	2.74	0.475	0.509	0.015	-7.3	69.7	70.1
30	568	82.96	82.07	0.96	0.499	0.494	0.005	9.1	65.6	66.2
31	571	81.99	75.58	0.44	0.518	0.478	0.002	22.2	60.8	64.8
32	573	81.03	71.82	0.27	0.529	0.469	0.001	29.1	58.0	64.9
33	578	63.63	62.69	0.12	0.547	0.447	0.002	42.0	51.5	66.5
34	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3
35	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3
36	587R	68.81	46.05	0.00	0.599	0.400	0.000	60.8	37.3	71.3
37	589	67.60	44.04	0.93	0.600	0.391	0.008	62.6	34.8	71.6
38	590	70.43	43.57	0.00	0.614	0.377	0.007	65.6	31.9	71.5
39	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0

$$a^* = \frac{100}{Y} [2.5(1.0000 + 0.0000 + 0.0000)Y - C_{AB} = (a^*)_Y \quad C_{AB,0} = [A^*_{AB} - B^*_{AB}]^2$$

$$b^* = \frac{100}{Y} [1.00(0.0000 + 0.0000 + 1.0000)Y - C_{AB} = (b^*)_Y \quad C_{AB,0} = [A^*_{AB} - B^*_{AB}]^2$$

D6090-31

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69.HTM>
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20180801-DE69/DE69L0NP.PI
application for measurement of offset print output

TUB material: code=rha4ta

CIE1931 tristimulus values, chromatic values, and purities ($\lambda=2.5, \dots, \lambda=1.0$). Normalized Ostwald (O) tristimulus values ($Y_N=100$), coded after wavelength.													
no. of λ	tristimulus values and chromaticities				non-chromatic values								
	X	Y	Z	λ	X_N	Y_N	Z_N	λ	C_{AB}	A_{AB}	B_{AB}		
00	386	51.50	23.94	74.68	0.343	0.159	0.487	71.0	-70.8	72.4	28.2		
01	460	12.38	6.54	76.19	0.130	0.068	0.801	71.1	-70.8	72.4	28.2		
02	465	12.41	5.98	78.25	0.123	0.059	0.780	7.9	-70.3	70.8	27.0		
03	467	12.45	11.64	78.87	0.120	0.113	0.766	3.0	-69.3	69.3	3.0		
04	473B	13.31	20.43	78.83	0.107	0.199	0.702	-15.9	-65.5	65.0	24.0		
05	475	13.40	20.43	79.13	0.118	0.209	0.702	-23.2	-60.0	59.4	24.0		
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	22.8		
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	22.8		
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	21.0		
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	21.0		
10	483	26.42	58.91	80.19	0.164	0.346	0.481	-65.7	-32.0	73.1	20.0		
11	484	28.85	79.07	79.07	0.174	0.346	0.478	-65.7	-32.0	73.1	20.0		
12	489	25.36	57.47	57.70	0.180	0.408	0.410	-75.0	-10.5	75.7	18.7		
13	497	22.33	57.47	36.81	0.191	0.492	0.315	-82.7	10.4	83.4	17.7		
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-86.6	23.3	89.7	16.6		
15	511	21.31	58.03	18.88	0.216	0.633	0.150	-87.9	29.4	92.7	16.6		
16	517	26.42	58.91	10.10	0.230	0.702	0.062	-88.3	39.3	93.3	16.6		
17	524	30.29	62.97	62.97	0.247	0.615	0.137	-88.5	37.6	96.1	15.0		
18	539	30.29	66.55	7.57	0.290	0.637	0.072	-87.4	47.1	96.9	15.0		
19	551	44.95	76.05	5.53	0.355	0.601	0.043	-70.9	56.9	91.0	14.0		
20	568	48.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	10.0		
21	568	48.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	10.0		
22	569	84.05	90.41	1.96	0.476	0.512	0.011	-7.8	72.3	72.7	9.0		
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007	-2.9	71.2	71.3	9.0		
24	573	83.15	79.56	0.38	0.509	0.487	0.002	16.0	65.0	66.9	7.0		
25	575	82.44	75.80	0.24	0.520	0.478	0.001	23.3	62.0	66.3	6.0		
26	575	82.44	75.80	0.24	0.520	0.478	0.001	23.3	62.0	66.3	6.0		
27	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7	68.3	4.0		
28	585	74.48	53.96	0.02	0.579	0.420	0.000	56.1	44.3	71.5	3.0		
29	590R	68.64	44.96	0.00	0.606	0.384	0.000	63.9	36.9	73.8	3.0		
30	592	67.61	42.78	1.14	0.606	0.393	0.010	65.8	34.1	74.1	2.0		
31	71.0	71.10	42.92	0.312	0.165	0.521	0.312	75.0	12.4	83.2	35.0		
32	71.0	71.10	42.92	0.312	0.165	0.521	0.312	75.0	12.4	83.2	35.0		
33	710	75.05	41.56	59.91	0.434	0.242	0.323	86.7	-21.4	89.3	34.0		
34	717	75.05	41.30	61.43	0.422	0.232	0.345	88.0	-27.4	92.2	34.0		
35	726M	74.04	40.08	66.11	0.410	0.222	0.366	88.4	-33.1	94.4	33.0		
36	729	71.14	37.92	66.11	0.408	0.212	0.379	88.6	-35.6	95.5	33.0		
37	731	71.14	37.92	66.11	0.408	0.212	0.379	88.6	-35.6	95.5	33.0		
38	756	51.50	23.94	74.68	0.343	0.159	0.487	71.0	-70.8	72.4	28.2		
39	825	12.38	6.54	76.19	0.130	0.068	0.801	71.1	-70.8	72.4	28.2		
D_{50}					96.46	100.00	82.22	0.346	0.338	0.358	0.0	0.0	0.0
$p=p_{\lambda}=p_{\lambda}^0=2.5/(1.000+0.000+0.000+0.000)Y_N$ $A_{\lambda}=(b-a)Y_N$ $C_{AB}=(A_{\lambda}B_{\lambda}-A_{\lambda}B_{\lambda})/A_{\lambda}B_{\lambda}$ $p=p_{\lambda}=p_{\lambda}^0=1.0/(0.000+0.000+1.000+0.000)Y_N$ $A_{\lambda}=(b-a)Y_N$ $C_{AB}=(A_{\lambda}B_{\lambda}-A_{\lambda}B_{\lambda})/A_{\lambda}B_{\lambda}$													

CIEF20 tristimulus values, chromatic values, and purities ($n_p=2.5$, $n_c=1.0$).											
Normalized Ostwald (O) tristimulus values ($Y=100$), edited by wavelength.											
no.	O	C	n -purities				n -purities				
			P_{an}	P_{bn}	P_{cn}	h_{bn}	P_{an}	P_{bn}	P_{cn}	h_{bn}	
00	386	23.94	5.37	-1.11	6.21	321	2.32	-2.02	7.55	322	
01	460	6.54	4.73	-1.16	1.257	292	2.32	-10.82	11.07	282	
02	465	9.58	3.23	-8.16	8.78	291	0.82	-7.34	7.39	276	
03	467	11.64	2.67	-6.77	7.28	291	0.26	-9.55	5.96	272	
04	473B	14.43	1.62	-3.90	4.23	292	-0.78	-3.08	3.18	255	
05	473B	19.44	1.44	-3.30	3.23	293	-0.35	-2.48	2.48	228	
06	479	36.91	1.20	-2.17	2.48	299	-1.20	-1.34	1.80	228	
07	479	36.91	1.20	-2.17	2.48	299	-1.20	-1.34	1.80	228	
08	481	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	
09	481	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	
10	483	46.03	1.25	-1.45	1.45	311	-1.10	-0.82	1.25	208	
11	484	57.21	1.26	-1.38	1.87	312	-1.15	-0.56	1.27	205	
12	489	57.41	1.10	-1.00	1.49	317	-1.30	-0.18	1.31	187	
13	497	57.50	0.97	-0.64	1.16	326	-1.43	0.18	1.45	172	
14	505	58.03	0.91	-0.41	1.00	335	-1.49	0.40	1.54	161	
15	515	58.69	0.91	-0.32	0.96	340	-1.49	0.50	1.58	161	
16	520	59.83	0.83	-0.23	0.85	345	-1.49	0.58	1.58	158	
17	524	62.97	1.00	-0.22	1.02	347	-1.40	0.59	1.52	150	
18	539	66.55	1.13	-0.11	1.14	354	-1.27	0.70	1.45	150	
19	551	76.05	1.47	-0.07	1.47	357	-0.93	0.74	1.19	141	
20	568	84.25	2.24	-0.04	2.24	358	-0.16	0.77	0.79	101	
21	580	93.45	2.24	0.04	2.24	358	-0.16	0.77	0.79	101	
22	599	90.41	2.32	-0.02	2.32	359	-0.03	0.80	0.80	92	
23	5707	88.35	2.37	-0.01	2.37	359	-0.08	0.80	0.80	92	
24	573	79.56	2.61	-0.00	2.61	359	0.20	0.81	0.84	76	
25	575	75.80	2.71	-0.00	2.71	359	0.30	0.81	0.87	69	
26	580	70.07	3.11	-0.00	3.11	359	0.12	0.82	0.87	69	
27	580	63.07	3.11	-0.00	3.11	359	0.70	0.82	0.88	49	
28	585	53.96	3.45	-0.00	3.45	359	1.03	0.82	1.32	38	
29	590R	44.96	3.83	0.00	3.83	0	1.42	0.82	1.64	30	
30	5982	42.78	3.95	-0.52	3.95	359	1.54	0.79	1.73	27	
31	694	42.58	4.17	-0.52	4.20	352	1.76	0.29	1.88	9	
32	709	42.49	4.36	-0.42	4.47	346	1.95	-0.19	1.95	354	
33	710	41.96	4.47	-1.33	4.67	343	2.06	-0.51	2.12	346	
34	717	41.30	4.54	-1.48	4.78	341	2.13	-0.66	2.23	342	
35	726M	40.08	4.61	-1.64	4.90	340	2.20	-0.82	2.35	339	
36	729	37.02	4.80	-1.78	5.12	339	2.39	-0.96	2.58	338	
37	734	34.24	4.94	-1.90	5.20	336	2.47	-1.27	2.67	311	
38	756	23.94	5.37	-1.11	6.21	329	2.59	-2.29	7.75	322	
39	825	6.54	4.73	-1.16	1.257	292	2.32	-10.82	11.07	282	
U-D50			100.00	2.410	-0.821	2.547	341	0.0	0.0	0.0	0
$b_{-P_{an}}=P_{an}-P_{-2.5}(1.0(0.000+0.000+0.000+0.000))$ $A_m=(a-a_c)Y$ $C_{AB_m}=[A_2^2+B_2^2]^{1/2}$											
$b_{-P_{bn}}=b_{-2.5}(1.0(0.000+0.000+1.000+0.000))$ $B_m=(b-b_c)Y$ $A_{AB_m}=[A_1^2+B_1^2]^{1/2}$											

DCE90-38

CIF02 trisructural values, chromatic values, and putities ($n=25, \dots, 10$).									
Normalized D-trisructural (0) trisructural values ($1_{\text{e}}=100$), cder-by hue angle.									
n	0	1	2	3	4	5	6	7	8
Trisructural values and chromaticities									
00	592	67.61	42.78	1.14	0.606	0.383	0.101	0.558	34.0
01	694	71.70	42.58	22.52	0.522	0.312	0.165	70.5	12.4
02	702	74.12	42.49	43.40	0.463	0.265	0.271	82.8	8.4
03	710	75.15	41.96	55.91	0.434	0.242	0.323	86.7	21.4
04	717	75.05	41.30	61.43	0.422	0.232	0.345	88.0	27.2
05	7259	74.04	40.08	66.11	0.410	0.222	0.356	88.4	33.1
06	7260	74.14	37.02	66.11	0.408	0.212	0.369	88.6	35.6
07	744	66.16	33.43	72.64	0.384	0.194	0.421	84.7	45.1
08	386	51.56	29.94	74.68	0.343	0.159	0.487	71.0	55.0
09	386	30.40	26.80	74.68	0.343	0.159	0.487	65.1	55.0
10	465	12.41	15.58	78.25	0.123	0.095	0.780	7.9	70.8
11	467	12.45	11.64	78.87	0.120	0.101	0.766	3.0	69.3
12	4738	13.31	20.33	79.83	0.117	0.179	0.702	-15.9	63.0
13	475	14.02	24.19	79.97	0.118	0.204	0.676	-23.2	60.0
14	481	14.02	26.80	80.16	0.118	0.230	0.654	-24.4	56.9
15	479	17.82	36.93	80.16	0.132	0.373	0.594	-44.4	49.8
16	481	19.8	46.03	80.19	0.148	0.310	0.541	-56.0	42.3
17	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	42.3
18	4838	27.52	55.03	80.21	0.169	0.338	0.482	-63.8	34.9
19	484	28.85	57.21	79.07	0.174	0.346	0.478	-65.7	32.2
20	489	26.35	57.41	57.70	0.180	0.408	0.410	-75.0	10.5
21	497	22.36	57.50	36.81	0.191	0.492	0.315	-82.7	10.4
22	505	21.31	58.03	24.30	0.205	0.559	0.234	-86.6	23.3
23	5126	21.41	58.69	18.88	0.216	0.633	0.190	-87.7	29.4
24	520	21.31	58.69	14.10	0.216	0.633	0.190	-88.3	29.4
25	524	20.32	62.97	14.10	0.247	0.615	0.137	-88.5	37.6
26	539	30.29	66.55	7.57	0.290	0.637	0.072	-84.7	47.1
27	551	44.95	76.06	5.53	0.355	0.601	0.043	-70.9	56.9
28	551	44.95	76.06	5.53	0.355	0.601	0.043	-70.9	56.9
29	568	48.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7
30	569	84.05	90.41	1.96	0.476	0.512	0.011	-7.8	72.7
31	570	84.00	88.35	1.33	0.483	0.508	0.007	-2.9	71.2
32	5733	83.13	79.56	0.38	0.509	0.487	0.002	16.0	65.9
33	5733	75.33	79.56	0.38	0.509	0.487	0.002	16.0	65.9
34	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7
35	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7
36	5858	74.48	53.96	0.02	0.579	0.420	0.000	56.1	44.5
37	590	68.94	44.96	0.00	0.665	0.394	0.000	63.9	36.9
38	590	68.94	44.96	0.00	0.665	0.394	0.000	63.9	36.9
39	694	71.70	42.58	22.52	0.522	0.312	0.165	70.5	12.4

$$a = \frac{D - D_{50}}{96} [1.000 + 0.000 + 0.000] \quad A = (a - a_0) \quad C_{\text{chrom}} = [A^2 - B^2 - 0.0] \\ b = \frac{D - D_{50}}{96} [1.000 + 0.000 + 0.000] \quad B = (b - b_0) \quad h_{\text{chrom}} = \text{atan} \left[\frac{A}{B} \right]$$

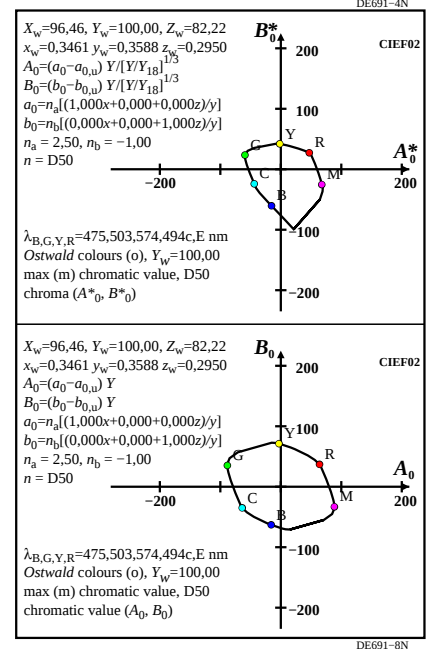
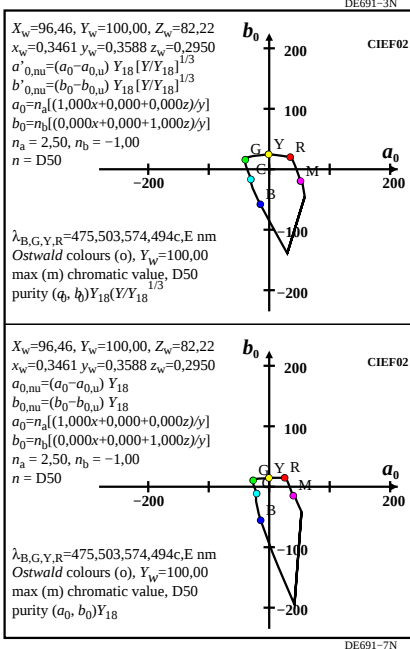
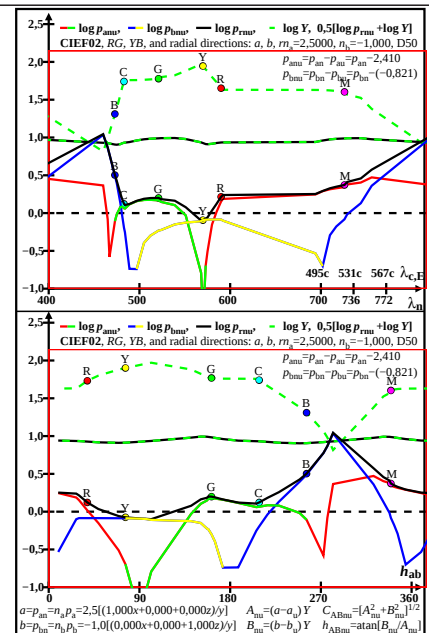
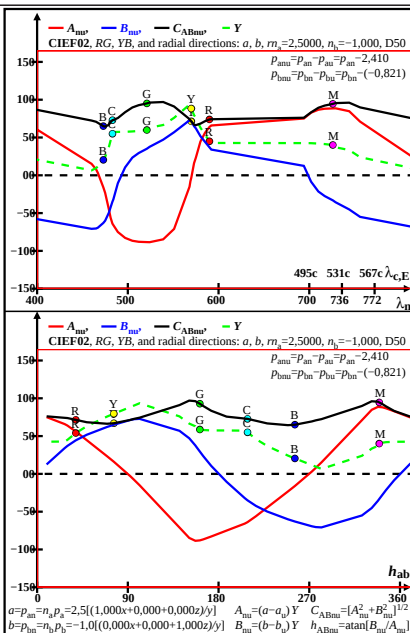
DCE90-38

DE690-49

CIEF02 tristimulus values, λ_m (nm), and putties ($n=2,5,\dots,10$).
Normalised Oswald (O) tristimulus values ($x_{\text{put}}, y_{\text{put}}, z_{\text{put}}$)—hue, by hue angle.

no. of C	C	n -putties				n -putties					
		y_{put}	x_{put}	y_{put}	p_{put}	x_{put}	y_{put}	x_{put}	y_{put}	x_{put}	y_{put}
00	592	42.78	3.85	-0.02	1.95	352	1.84	0.29	1.73	387	369
01	694	42.58	1.47	-0.52	4.20	352	1.76	0.29	1.78	369	369
02	702	42.49	4.36	-1.02	4.47	346	1.95	-0.19	1.96	354	354
03	710	41.96	4.46	-1.33	4.67	343	2.06	-0.51	2.12	346	346
04	717	41.30	4.54	-1.48	4.78	341	2.13	-0.60	2.25	342	342
05	726K	40.08	4.61	-1.64	5.00	340	2.20	-0.82	2.35	339	339
06	729	37.02	4.80	-1.78	5.12	339	2.39	-0.96	2.58	338	338
07	744	33.43	4.94	-2.17	5.40	336	2.53	-1.35	2.87	331	331
08	386	23.94	5.37	-3.11	6.21	239	2.96	-2.29	3.75	322	322
09	416	16.86	4.73	-1.61	6.28	232	2.32	-1.02	3.22	317	317
10	465	9.58	3.23	-0.86	7.78	291	0.82	-0.74	3.98	276	276
11	467	11.64	2.67	-0.77	8.28	291	0.26	-0.55	5.96	272	272
12	473B	20.43	1.62	-3.90	4.23	292	-0.78	-3.08	3.18	255	255
13	475	24.19	1.44	-3.30	3.60	293	-0.96	-2.48	2.66	248	248
14	477	26.91	1.20	-2.77	3.09	292	-1.14	-2.34	2.52	242	242
15	479	36.91	1.20	-2.17	2.48	299	-1.20	-1.34	1.80	228	228
16	481	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	217
17	484	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	217
18	483C	55.03	1.25	-1.45	1.92	310	-1.16	-0.63	1.32	208	208
19	487	72.1	1.26	-1.38	1.67	312	-1.15	-0.56	1.23	205	205
20	489	57.41	1.10	-1.00	1.49	317	-1.30	-0.18	1.31	187	187
21	497	57.50	0.97	-0.64	1.16	326	-1.43	0.18	1.45	172	172
22	505	58.03	0.91	-0.41	1.00	335	-1.49	0.40	1.54	164	164
23	512C	69.01	0.91	-0.32	0.96	340	-1.49	0.50	1.58	161	161
24	519	73.83	0.93	-0.23	0.83	345	-1.45	0.58	1.53	158	158
25	524	62.97	1.00	-0.22	1.02	347	-1.40	0.59	1.52	156	156
26	539	66.55	1.13	-0.11	1.14	354	-1.27	0.70	1.45	150	150
27	551	76.05	1.47	-0.07	1.47	357	-0.93	0.74	1.19	141	141
28	565	85.56	2.24	0.04	2.24	358	-0.73	0.81	0.78	131	131
29	568	93.45	2.24	-0.04	2.24	358	-0.16	-0.77	0.79	101	101
30	569	90.41	2.32	-0.02	2.32	359	-0.08	-0.80	0.80	96	96
31	570	88.35	2.37	-0.01	2.37	359	-0.03	-0.80	0.80	92	92
32	573	78.56	2.61	-0.00	2.61	359	0.20	0.81	0.84	76	76
33	580	71.80	2.71	-0.00	2.71	359	0.35	0.81	0.84	76	76
34	589	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	49	49
35	580	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	49	49
36	585R	53.96	3.45	-0.00	3.45	359	1.03	0.82	1.32	38	38
37	590	44.96	3.83	0.00	3.83	0	1.42	0.82	1.64	30	30
38	592	42.78	3.95	-0.02	1.95	352	1.84	0.29	1.73	387	369
39	694	42.58	1.47	-0.52	4.20	352	1.76	0.29	1.78	369	369
$U=D_{50} \quad D_{50} \quad 2.410 \quad -0.021 \quad 2.547 \quad 341 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0$											
$A = a_{\text{put}} = p_{\text{put}} = 2.5, (1.000 + 0.000 + 1.000) / y_{\text{put}} \quad A_{\text{m}} = (a_{\text{m}} - y_{\text{put}}) \quad C_{\text{A}_{\text{m}}} = 0.0 \quad A_{\text{m}}^2 = 0 \quad A_{\text{m}}^{1/2} = 0$											
$b = b_{\text{put}} = p_{\text{put}} = -1.0, (0.000 + 0.000 + 1.000) / y_{\text{put}} \quad B_{\text{m}} = (b_{\text{m}} - y_{\text{put}}) \quad B_{\text{m}}^2 = 0 \quad B_{\text{m}}^{1/2} = 0$											
$U = D_{50} \quad D_{50} \quad 2.410 \quad -0.021 \quad 2.547 \quad 341 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0 \quad 0$											

DE690-49



TUB-test chart DE69; 4 CIE and 2 R17M observers, colorimetric calculations of chromatic values

purity definition: $a=2,5[x/y]$, $b=-1,0[z/y]$

see similar files: <http://farbe.li-tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li-tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

<http://farbe.li-tu-berlin.de/DE69/DE69L0NP.PDF> /PS
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 4/30

TUB registration: 20180801-DE69/DE69L0NP.PDF /PS
application for measurement of offset print output

TUB material: code=rha4ta

CIEF10 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			nu-putities		
			X	Y	Z	x	y	z	λ_{AB}	P_{AB}	h_{AB}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322
01	455	13.14	6.61	74.65	0.139	0.070	0.793	16.8	-69.2	71.3	283
02	460	13.28	9.49	77.94	0.131	0.094	0.773	10.2	-70.2	71.0	278
03	462	13.30	11.32	78.97	0.128	0.109	0.762	5.8	-69.7	70.0	274
04	468	13.34	13.45	79.69	0.125	0.126	0.748	0.8	-68.7	68.7	270
05	468	13.69	18.67	80.47	0.121	0.165	0.713	-10.9	-65.3	66.2	260
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-24.1	-60.3	65.0	248
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-30.9	-57.4	65.2	241
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-43.7	-50.9	67.1	229
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-54.5	-43.9	70.0	218
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-58.7	-40.4	71.3	214
11	479	30.58	58.60	78.68	0.182	0.349	0.468	-65.2	-31.2	72.3	205
12	479	29.07	56.38	80.12	0.175	0.340	0.483	-63.6	-34.4	72.3	208
13	484	25.63	56.72	59.32	0.180	0.400	0.418	-73.0	-13.3	74.2	190
14	492	22.37	56.85	36.73	0.192	0.490	0.316	-81.5	9.3	82.0	173
15	503	21.57	57.63	22.95	0.211	0.564	0.224	-85.4	23.7	88.6	164
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-86.1	30.2	91.2	160
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-87.7	36.6	93.3	156
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-82.7	43.7	93.5	152
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-69.8	57.2	88.1	142
20	563	83.59	98.78	6.37	0.455	0.509	0.034	-16.8	69.2	71.2	103
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-1.0	70.2	70.9	98
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-5.8	69.7	70.0	94
23	566Y	83.29	86.54	1.34	0.486	0.505	0.007	-6.7	68.7	68.7	90
24	568	83.04	81.32	0.56	0.503	0.493	0.003	-10.9	65.3	66.2	80
25	571	82.00	74.78	0.23	0.522	0.476	0.001	-24.1	60.3	65.0	68
26	573	81.10	71.03	0.14	0.532	0.466	0.000	-31.0	57.3	65.2	61
27	577	78.40	62.93	0.05	0.554	0.445	0.000	-43.8	50.9	67.2	49
28	581	74.33	54.29	0.02	0.577	0.421	0.000	-54.5	43.9	70.0	38
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	-58.8	40.4	71.3	34
30	591	66.15	41.39	2.33	0.602	0.376	0.021	-65.3	31.1	72.3	25
31	588	67.67	43.61	0.91	0.603	0.388	0.008	-63.7	34.4	72.4	28
32	689	71.10	43.27	21.71	0.522	0.317	0.159	-73.1	13.3	74.3	10
33	697	74.36	43.14	44.30	0.459	0.266	0.273	-81.5	-9.3	82.1	353
34	708	75.16	42.36	58.08	0.428	0.241	0.330	-85.4	-23.7	88.7	344
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	-86.1	-30.3	91.3	340
36	726	72.17	39.11	68.41	0.401	0.217	0.380	-85.8	-36.7	93.3	336
37	737	66.83	34.86	71.99	0.384	0.200	0.414	-82.8	-43.7	93.6	332
38	750	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322
39	820	13.14	6.61	74.65	0.139	0.070	0.793	16.8	-69.2	71.3	283
U-D50 96.74 100.00 81.03 0.348 0.360 0.360 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{D50} = a^*_{D50} = 2.5 \cdot (1.000x + 0.000 + 0.000z)/y$ $A_{AB} = (a^* - a^*)/Y$ $C_{AB} = [A^2 + B^2 + B^2]^{1/2}$ $b^*_{D50} = b^*_{D50} = -1.0 \cdot (0.000x + 0.000 + 1.000z)/y$ $B_{AB} = (b^* - b^*)/Y$ $H_{AB} = \text{atan2}[B_{AB}/A_{AB}]$											

CIEF10 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			nu-putities		
			X	Y	Z	x	y	z	λ_{AB}	P_{AB}	h_{AB}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322
01	455	13.14	6.61	74.65	0.139	0.070	0.793	16.8	-69.2	71.3	283
02	460	13.28	9.49	77.94	0.131	0.094	0.773	10.2	-70.2	71.0	278
03	462	13.30	11.32	78.97	0.128	0.109	0.762	5.8	-69.7	70.0	274
04	468	13.34	13.45	79.69	0.125	0.126	0.748	0.8	-68.7	68.7	270
05	468	13.69	18.67	80.47	0.121	0.165	0.713	-10.9	-65.3	66.2	260
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-24.1	-60.3	65.0	248
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-30.9	-57.4	65.2	241
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-43.7	-50.9	67.1	229
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-54.5	-43.9	70.0	218
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-58.7	-40.4	71.3	214
11	479	30.58	58.60	78.68	0.182	0.349	0.468	-65.2	-31.2	72.3	205
12	479	29.07	56.38	80.12	0.175	0.340	0.483	-63.6	-34.4	72.3	208
13	484	25.63	56.72	59.32	0.180	0.400	0.418	-73.0	-13.3	74.2	190
14	492	22.37	56.85	36.73	0.192	0.490	0.316	-81.5	9.3	82.0	173
15	503	21.57	57.63	22.95	0.211	0.564	0.224	-85.4	23.7	88.6	164
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-86.1	30.2	91.2	160
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-87.7	36.6	93.3	156
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-82.7	43.7	93.5	152
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-69.8	57.2	88.1	142
20	563	83.59	98.78	6.37	0.455	0.509	0.034	-16.8	69.2	71.2	103
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-1.0	70.2	70.9	98
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-5.8	69.7	70.0	94
23	566Y	83.29	86.54	1.34	0.486	0.505	0.007	-6.7	68.7	68.7	90
24	568	83.04	81.32	0.56	0.503	0.493	0.003	-10.9	65.3	66.2	80
25	571	82.00	74.78	0.23	0.522	0.476	0.001	-24.1	60.3	65.0	68
26	573	81.10	71.03	0.14	0.532	0.466	0.000	-31.0	57.3	65.2	61
27	577	78.40	62.93	0.05	0.554	0.445	0.000	-43.8	50.9	67.2	49
28	581	74.33	54.29	0.02	0.577	0.421	0.000	-54.5	43.9	70.0	38
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	-58.8	40.4	71.3	34
30	591	66.15	41.39	2.33	0.602	0.376	0.021	-65.3	31.1	72.3	25
31	588	67.67	43.61	0.91	0.603	0.388	0.008	-63.7	34.4	72.4	28
32	689	71.10	43.27	21.71	0.522	0.317	0.159	-73.1	13.3	74.3	10
33	697	74.36	43.14	44.30	0.459	0.266	0.273	-81.5	-9.3	82.1	353
34	708	75.16	42.36	58.08	0.428	0.241	0.330	-85.4	-23.7	88.7	344
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	-86.1	-30.3	91.3	340
36	726	72.17	39.11	68.41	0.401	0.217	0.380	-85.8	-36.7	93.3	336
37	737	66.83	34.86	71.99	0.384	0.200	0.414	-82.8	-43.7	93.6	332
38	750	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322
39	820	13.14	6.61	74.65	0.139	0.070	0.793	16.8	-69.2	71.3	283
U-D50 100.00 2.417 -0.810 2.549 341 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{D50} = a^*_{D50} = 2.5 \cdot (1.000x + 0.000 + 0.000z)/y$ $A_{AB} = (a^* - a^*)/Y$ $C_{AB} = [A^2 + B^2 + B^2]^{1/2}$ $b^*_{D50} = b^*_{D50} = -1.0 \cdot (0.000x + 0.000 + 1.000z)/y$ $B_{AB} = (b^* - b^*)/Y$ $H_{AB} = \text{atan2}[B_{AB}/A_{AB}]$											

CIEF10 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C	tristimulus values and chromaticities					nu-chromatic values				
			X	Y	Z	x	y	z	λ_{AB}	P_{AB}	h_{AB}	
00	388	67.67	43.61	0.91	0.603	0.388	0.008	-63.7	34.4	72.4	28	
01	689	71.10	43.27	21.71	0.522	0.317	0.159	-73.1	13.3	74.3	370	
02	697	74.36	43.14	44.30	0.459	0.266	0.273	-81.5	-9.3	82.1	353	
03	708	75.16	42.36	58.08	0.428	0.241	0.330	-85.4	-23.7	88.7	344	
04	716	74.43	41.31	63.78	0.414	0.230	0.355	-86.1	-30.3	91.3	340	
05	726M	72.17	39.11	68.41	0.401	0.217	0.380	-85.8	-36.7	93.3	336	
06	737	66.83	34.86	71.99	0.384	0.200	0.414	-82.8	-43.7	93.6	332	
07	747	62.55	25.78	74.65	0.361	0.182	0.440	-81.7	-47.7	98.2	326	
08	455	13.18	6.91	74.94	0.139	0.070	0.790	-16.8	-69.7	100.0	278	
09	462	13.30	11.32	78.97	0.128	0.109	0.762	-5.8	-69.7	70.0	274	
10	464	13.34	13.45	79.69	0.125	0.126	0.748	0.8	-68.7	68.7	270	
12	468B	13.69	18.67	80.47	0.121	0.165	0.713	10.9	-65.3	66.2	260	
13	470	13.65	25.72	80.50	0.125	0.250	0.625	24.8	-64.4	68.6	246	
14	472	15.63	28.96	80.89	0.124	0.230	0.644	-30.9	-57.4	65.2	241	
15	475	18.33	37.06	80.98	0.134	0.271	0.593	-43.7	-50.9	67.1	229	
16	477	22.39	45.70	81.01	0.150	0.306	0.543	-54.5	-43.9	70.0	218	
17	479	25.01	50.19	81.03	0.164	0.336	0.519	-58.7	-40.4	71.3	214	
18	479C	30.58	58.60	78.68	0.182	0.349	0.469	-62.0	-34.8	72.3	208	
19	479D	30.29	56.38	80.12	0.175	0.340	0.481	-63.6	-34.4	73.3	204	
20	484	25.63	56.72	59.32	0.180	0.400	0.418	-73.0	-13.3	74.2	190	
21	492	23.27	56.85	36.73	0.192	0.490	0.316	-81.5	9.3	82.0	173	
22	501	25.57	57.63	23.95	0.211	0.564	0.224	-85.4	23.7	84.6	164	
23	511G	22.30	58.68	17.25	0.227	0.597	0.175	-86.8	30.2	93.3	156	
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-85.7	36.9	93.3	150	
25	532	28.89	65.12	9.04	0.287	0.625	0.086	-82.7	43.7	93.5	152	
26	545	43.69	72.41	6.37	0.352	0.596	0.051	-69.8	53.7	88.1	142	
27	550	49.39	83.95	4.00	0.426	0.576	0.016	-58.7	64.6	84.6	128	
28	564	83.45	90.50	3.08	0.471	0.511	0.017	-10.1	70.2	70.0	94	
29	565	83.43	88.67	2.06	0.479	0.509	0.011	-5.8	69.7	70.0	94	
30	568	83.04	86.54	1.34	0.486	0.505	0.007	-0.7	68.7	68.7	90	
31	568	83.39	81.32	0.56	0.503	0.493	0.003	-10.9	65.3	66.2	80	
32	570	80.00	74.78	0.00	0.492	0.376	0.000	-24.8	57.4	65.2	68	
33	573	81.10	71.03	0.14	0.532	0.466	0.000	-31.0	57.3	65.2	61	
34	577	78.40	63.93	0.05	0.554	0.445	0.000	-43.8	50.9	67.2	49	
35	581	74.39	54.29	0.02	0.577	0.421	0.000	-54.5	43.9	70.0	38	
36	584R	71.73	49.01	0.01	0.589	0.410	0.000	-58.8	40.4	71.3	34	
37	591	66.15	41.92	0.23	0.622	0.376	0.000	-62.0	34.8	72.3	28	
38	588	67.67	43.61	0.91	0.603	0.388	0.008	-63.7	34.4	72.4	28	
39	689	71.10	43.27	21.71	0.522	0.317	0.159	-73.1	13.3	74.3	370	
U=D50 $p_w=75.00$ 100.00 0.103 0.348 0.0000 0.362 0.000 0.0 0.0 0.0 0.0												
$a_{p=w}=p_w[2.5,(1.0000+0.0000+0.0000)g]$ $A_w=(a-q)_y$ $C_{ABM}=(a-b)_y$ $B_{ABM}^{1/2}$ $b_{p=w}=p_w[1.0,(0.0000+0.0000+1.0000)g]$ $B_w=(b-b)_y$ $h_{ABM}=(a-b)_y$ $A_{ABM}=(a-b)_y$												
DEGNO-78												

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
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N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 5/30

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$).
Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	n-purities
			X Y Z x y z	λ_{nm} p_m p_{nm} p_{nm} h_{nm}
00	373		50.84 23.58 64.46 0.366 0.169 0.464	71.6 -45.4 84.8 327
01	450		26.22 10.37 70.14 0.245 0.097 0.657	41.1 -61.7 74.2 303
02	463		19.81 9.03 72.37 0.195 0.089 0.715	28.3 -65.0 70.9 293
03	465		19.87 11.18 74.25 0.188 0.106 0.705	23.4 -65.2 69.2 289
04	470B		20.04 16.46 77.09 0.176 0.145 0.678	11.3 -63.6 64.7 280
05	474		20.76 23.15 78.71 0.169 0.188 0.641	-2.5 -60.0 60.0 267
06	477		22.69 31.32 79.75 0.169 0.234 0.596	-16.8 -54.4 56.9 252
07	479		24.27 35.77 80.07 0.173 0.255 0.571	-23.3 -51.1 56.2 245
08	481		28.86 45.22 80.48 0.186 0.292 0.520	-34.1 -43.9 55.6 232
09	482		30.21 48.30 79.14 0.191 0.306 0.501	-37.9 -40.1 55.2 226
10	487C		31.73 48.90 65.44 0.186 0.348 0.465	-49.5 -25.9 55.9 207
11	496		20.48 50.06 44.06 0.178 0.436 0.384	-66.4 -3.6 66.5 183
12	500		20.60 52.31 38.55 0.184 0.469 0.345	-71.4 3.7 71.5 177
13	509		19.40 53.50 28.42 0.191 0.528 0.280	-77.2 14.8 78.6 169
14	511		21.83 56.54 28.46 0.204 0.529 0.266	-78.2 17.2 80.1 167
15	518		24.65 60.36 24.01 0.226 0.553 0.220	-80.2 24.7 83.9 162
16	530G		29.99 65.40 16.35 0.268 0.585 0.146	-78.7 36.5 86.7 155
17	538		43.18 76.41 16.37 0.317 0.562 0.120	-71.6 45.3 84.7 147
18	553		67.80 89.62 10.69 0.403 0.533 0.063	-61.1 61.7 74.1 123
19	557		74.22 90.96 8.49 0.427 0.523 0.048	-57.9 65.0 70.9 113
20	558		74.15 88.81 6.58 0.437 0.523 0.038	-23.3 65.1 69.2 109
21	561		73.98 83.52 3.84 0.458 0.517 0.023	-11.3 63.6 64.6 100
22	565		73.26 76.83 2.11 0.481 0.504 0.013	2.5 59.9 60.0 87
23	570Y		71.33 68.67 1.09 0.505 0.486 0.007	16.9 54.4 56.9 72
24	572		69.75 64.22 0.76 0.517 0.476 0.005	23.4 51.1 56.2 65
25	578		65.16 54.77 0.35 0.541 0.455 0.002	34.1 43.9 55.6 52
26	581		63.81 51.69 1.69 0.544 0.441 0.014	38.0 40.0 55.2 46
27	600		67.89 51.09 15.38 0.505 0.380 0.114	49.6 25.9 56.0 27
28	705		73.42 47.68 42.28 0.449 0.291 0.258	71.4 -3.7 71.5 357
29	716		74.62 46.49 52.41 0.430 0.267 0.302	71.2 -14.6 78.7 349
30	716		72.19 43.45 52.37 0.429 0.258 0.311	78.3 -17.2 80.2 347
31	723		69.37 39.63 56.82 0.418 0.238 0.342	80.2 -24.7 84.0 342
32	735		64.03 34.59 64.49 0.392 0.212 0.395	78.7 -36.5 86.8 335
33	743		50.84 23.58 64.46 0.366 0.169 0.464	71.6 -45.4 84.8 327
34	745		26.22 10.37 70.14 0.245 0.097 0.657	41.1 -61.7 74.2 303
U=D50	94.03	100.00	80.83 0.342 0.363 0.363	0.0 0.0 0.0 0

$a^*P_m = n_a P_m = 2.5[(1.000x+0.000+0.000z)/y]$ $A_m = (a-a_0)Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*P_m = n_b P_m = -1.0[(0.000x+0.000+1.000z)/y]$ $B_m = (b-b_0)Y$ $h_{ABm} = \text{atan2}[B_m/A_m]$

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$).
Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	n-purities
			X Y Z x y z	λ_{nm} p_m p_{nm} p_{nm} h_{nm}
00	373		50.84 23.58 64.46 0.366 0.169 0.464	71.6 -45.4 84.8 327
01	450		26.22 10.37 70.14 0.245 0.097 0.657	41.1 -61.7 74.2 303
02	463		19.81 9.03 72.37 0.195 0.089 0.715	28.3 -65.0 70.9 293
03	465		19.87 11.18 74.25 0.188 0.106 0.705	23.4 -65.2 69.2 289
04	470B		20.04 16.46 77.09 0.176 0.145 0.678	11.3 -63.6 64.7 280
05	474		20.76 23.15 78.71 0.169 0.188 0.641	-2.5 -60.0 60.0 267
06	477		22.69 31.32 79.75 0.169 0.234 0.596	-16.8 -54.4 56.9 252
07	479		24.27 35.77 80.07 0.173 0.255 0.571	-23.3 -51.1 56.2 245
08	481		28.86 45.22 80.48 0.186 0.292 0.520	-34.1 -43.9 55.6 232
09	482		30.21 48.30 79.14 0.191 0.306 0.501	-37.9 -40.1 55.2 226
10	487C		31.73 48.90 65.44 0.186 0.348 0.465	-49.5 -25.9 55.9 207
11	496		20.48 50.06 44.06 0.178 0.436 0.384	-66.4 -3.6 66.5 183
12	500		20.60 52.31 38.55 0.184 0.469 0.345	-71.4 3.7 71.5 177
13	509		19.40 53.50 28.42 0.191 0.528 0.280	-77.2 14.8 78.6 169
14	511		21.83 56.54 28.46 0.204 0.529 0.266	-78.2 17.2 80.1 167
15	518		24.65 60.36 24.01 0.226 0.553 0.220	-80.2 24.7 83.9 162
16	530G		29.99 65.40 16.35 0.268 0.585 0.146	-78.7 36.5 86.7 155
17	538		43.18 76.41 16.37 0.317 0.562 0.120	-71.6 45.3 84.7 147
18	553		67.80 89.62 10.69 0.403 0.533 0.063	-61.1 61.7 74.1 123
19	557		74.22 90.96 8.49 0.427 0.523 0.048	-57.9 65.0 70.9 113
20	558		74.15 88.81 6.58 0.437 0.523 0.038	-23.3 65.1 69.2 109
21	561		73.98 83.52 3.84 0.458 0.517 0.023	-11.3 63.6 64.6 100
22	565		73.26 76.83 2.11 0.481 0.504 0.013	2.5 59.9 60.0 87
23	570Y		71.33 68.67 1.09 0.505 0.486 0.007	16.9 54.4 56.9 72
24	572		69.75 64.22 0.76 0.517 0.476 0.005	23.4 51.1 56.2 65
25	578		65.16 54.77 0.35 0.541 0.455 0.002	34.1 43.9 55.6 52
26	581		63.81 51.69 1.69 0.544 0.441 0.014	38.0 40.0 55.2 46
27	600		67.89 51.09 15.38 0.505 0.380 0.114	49.6 25.9 56.0 27
28	705		73.42 47.68 42.28 0.449 0.291 0.258	71.4 -3.7 71.5 357
29	716		74.62 46.49 52.41 0.430 0.267 0.302	71.2 -14.6 78.7 349
30	716		72.19 43.45 52.37 0.429 0.258 0.311	78.3 -17.2 80.2 347
31	723		69.37 39.63 56.82 0.418 0.238 0.342	80.2 -24.7 84.0 342
32	735		64.03 34.59 64.49 0.392 0.212 0.395	78.7 -36.5 86.8 335
33	743		50.84 23.58 64.46 0.366 0.169 0.464	71.6 -45.4 84.8 327
34	745		26.22 10.37 70.14 0.245 0.097 0.657	41.1 -61.7 74.2 303
U=D50	94.03	100.00	80.83 0.342 0.363 0.363	0.0 0.0 0.0 0

$a^*P_m = n_a P_m = 2.5[(1.000x+0.000+0.000z)/y]$ $A_m = (a-a_0)Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*P_m = n_b P_m = -1.0[(0.000x+0.000+1.000z)/y]$ $B_m = (b-b_0)Y$ $h_{ABm} = \text{atan2}[B_m/A_m]$

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$).
Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	n-purities
			X Y Z x y z	λ_{nm} p_m p_{nm} p_{nm} h_{nm}
00	600		67.89 51.09 15.38 0.505 0.380 0.114	49.6 25.9 56.0 387
01	705		73.42 47.68 42.28 0.449 0.291 0.258	71.4 -3.7 71.5 357
02	716		74.62 46.49 52.41 0.430 0.267 0.302	71.2 -14.6 78.7 349
03	716		72.19 43.45 52.37 0.429 0.258 0.311	78.3 -17.2 80.2 347
04	723		69.37 39.63 56.82 0.418 0.238 0.342	80.2 -24.7 84.0 342
05	735		64.03 34.59 64.49 0.392 0.212 0.395	78.7 -36.5 86.8 335
06	373		50.84 23.58 64.46 0.366 0.169 0.464	71.6 -45.4 84.8 327
07	450		26.22 10.37 70.14 0.245 0.097 0.657	41.1 -61.7 74.2 303
08	463		19.81 9.03 72.37 0.195 0.089 0.715	28.3 -65.0 70.9 293
09	465		19.87 11.18 74.25 0.188 0.106 0.705	23.4 -65.2 69.2 289
10	470		20.04 16.46 77.09 0.176 0.145 0.678	11.3 -63.6 64.7 280
11	474		20.76 23.15 78.71 0.169 0.188 0.641	-2.5 -60.0 60.0 267
12	477B		22.69 31.32 79.75 0.169 0.234 0.596	-16.8 -54.4 56.9 252
13	479		24.27 35.77 80.07 0.173 0.255 0.571	-23.3 -51.1 56.2 245
14	481		28.86 45.22 80.48 0.186 0.292 0.520	-34.1 -43.9 55.6 232
15	482		30.21 48.30 79.14 0.191 0.306 0.501	-37.9 -40.1 55.2 226
16	487		31.73 48.90 65.44 0.186 0.348 0.465	-49.5 -25.9 55.9 207
17	496		20.48 50.06 44.06 0.178 0.436 0.384	-66.4 -3.6 66.5 183
18	500		20.60 52.31 38.55 0.184 0.469 0.345	-71.4 3.7 71.5 177
19	509		19.40 53.50 28.42 0.191 0.528 0.280	-77.2 14.8 78.6 169
20	511		21.83 56.54 28.46 0.204 0.529 0.266	-78.2 17.2 80.1 167
21	518		24.65 60.36 24.01 0.226 0.553 0.220	-80.2 24.7 83.9 162
22	530		29.99 65.40 16.35 0.268 0.585 0.146	-78.7 36.5 86.7 155
23	538G		43.18 76.41 16.37 0.317 0.562 0.120	-71.6 45.3 84.7 147
24	553		67.80 89.62 10.69 0.403 0.533 0.063	-61.1 61.7 74.1 123
25	557		74.22 90.96 8.49 0.427 0.523 0.048	-57.9 65.0 70.9 113
26	558		74.15 88.81 6.58 0.437 0.523 0.038	-23.3 65.1 69.2 109
27	561		73.98 83.52 3.84 0.458 0.517 0.023	-11.3 63.6 64.6 100
28	565		73.26 76.83 2.11 0.481 0.504 0.013	2.5 59.9 60.0 87
29	570		71.33 68.67 1.09 0.505 0.486 0.007	16.9 54.4 56.9 72
30	572		69.75 64.22 0.76 0.517 0.476 0.005	23.4 51.1 56.2 65
31	578		65.16 54.77 0.35 0.541 0.455 0.002	34.1 43.9 55.6 52
32	581		63.81 51.69 1.69 0.544 0.441 0.014	38.0 40.0 55.2 46
33	600		67.89 51.09 15.38 0.505 0.380 0.114	49.6 25.9 56.0 27
34	705		73.42 47.68 42.28 0.449 0.291 0.258	71.4 -3.7 71.5 357
U=D50	94.03	100.00	80.83 0.342 0.363 0.363	0.0 0.0 0.0 0

$a^*P_m = n_a P_m = 2.5[(1.000x+0.000+0.000z)/y]$ $A_m = (a-a_0)Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*P_m = n_b P_m = -1.0[(0.000x+0.000+1.000z)/y]$ $B_m = (b-b_0)Y$ $h_{ABm} = \text{atan2}[B_m/A_m]$

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by hue angle.	no.	O	C	n -purities	p_m	p_{nm}	nu -purities	p_m	p_{nm}	h_{nm}
λ_{nm}	Y	x	y	x_{nm}	y_{nm}	z_{nm}	x_{nm}	y_{nm}	z_{nm}	h_{nm}
00	600	51.09	3.32	-0.30	3.33	354	0.97	0.50	1.50	387
01	705	47.68	3.84	-0.88	3.95	347	1.49	-0.07	1.50	357
02	716	46.49	4.01	-1.12	4.16	344	1.66	-0.31	1.69	349
03	716	43.45	4.15	-1.20	4.32	343	1.83	-0.59	1.84	347
04	723	39.63	4.37	-1.43	4.60	341	2.02	-0.62	2.12	342
05	735	34.59	4.62	-1.86	4.98	338	2.27	-1.05	2.51	335
06	373	23.58	5.39	-2.73	6.04	333	3.04	-1.92	3.59	327
07	450	10.37	6.32	-6.76	9.25	313	3.97	-5.95	7.15	303
08	463	9.03	6.38	-7.45	9.72	308	4.31	-7.85	7.85	293
09	465	11.18	6.44	-6.64	9.53	303	2.09	-8.83	6.19	289
10	470	16.46	3.04	-4.67	5.57	303	0.69	-3.86	3.92	280
11	474	23.15	2.24	-3.40	4.07	303	0.10	-2.59	2.59	267
12	477B	31.32	1.81	-2.54	3.12	305	-0.53	-1.73	2.02	252
13	479	35.77	1.69	-2.23	2.40	307	-0.65	-1.43	1.57	245
14	481	45.22	1.59	-1.77	2.39	311	-0.75	-0.97	1.23	232
15	482	48.30	1.56	-1.63	2.26	313	-0.78	-0.83	1.14	226
16	487	48.90	1.33	-1.33	1.89	314	-1.01	-0.53	1.14	207
17	496	46.46	1.02	-0.88	1.34	319	-1.32	-0.07	1.32	183
18	500C	52.31	0.98	-0.73	1.22	332	-1.26	0.37	1.36	177
19	509	53.50	1.00	-0.53	1.05	329	-1.44	0.27	1.66	169
20	511	56.54	0.96	-0.50	1.08	332	-1.38	0.30	1.41	167
21	518	60.36	1.02	-0.39	1.09	338	-1.32	0.41	1.39	162
22	530	64.00	1.14	-0.25	1.17	347	-1.20	0.55	1.32	155
23	535B	76.41	1.41	-0.21	1.42	351	-0.93	0.59	1.00	147
24	538	86.62	1.89	-0.11	1.89	356	-0.45	0.68	0.82	123
25	557	90.81	2.03	-0.09	2.04	357	-0.31	0.71	0.77	113
26	558	98.96	2.08	-0.07	2.08	357	-0.26	0.73	0.77	109
27	561	108.2	2.21	-0.04	2.22	353	0.03	0.78	0.78	87
28	565	76.83	2.38	-0.02	2.38	359	0.03	0.78	0.78	80
29	570	66.67	2.59	-0.01	2.59	359	0.24	0.79	0.82	72
30	572	64.22	2.71	-0.01	2.71	359	0.36	0.79	0.87	65
31	578	54.77	2.97	-0.00	2.97	359	0.62	0.81	1.01	52
32	581Y	45.15	3.08	0.00	3.08	359	0.78	0.77	1.06	46
33	600	51.09	3.32	-0.30	3.33	-5	0.97	0.50	1.50	27
34	705	47.68	3.84	-0.88	3.95	-12	1.49	-0.07	1.50	-2
U=D50 100.00 2.350 -0.808 2.485 341 0.0 0.0 0.0 0.0 0.0 0										
$a^*_{nm} = p_m \lambda_{nm}^{2.5} = 2.5(1,000+0,000+0,000) \lambda_{nm}^2$										
$b^*_{nm} = p_{nm} \lambda_{nm}^{2.5} = -1.0(0,000+0,000+1,000) \lambda_{nm}^2$										
$A_{nm} = (a^*-a_y) Y$										
$B_{nm} = (b^*-b_y) Y$										
$C_{ABnm} = A_{nm}^2 + B_{nm}^2$										
$h_{ABnm} = \sqrt{C_{ABnm}}$										
$D_{ABnm} = \sqrt{C_{ABnm}}$										
$E_{ABnm} = \sqrt{C_{ABnm}}$										
$F_{ABnm} = \sqrt{C_{ABnm}}$										
$G_{ABnm} = \sqrt{C_{ABnm}}$										
$H_{ABnm} = \sqrt{C_{ABnm}}$										
$I_{ABnm} = \sqrt{C_{ABnm}}$										
$J_{ABnm} = \sqrt{C_{ABnm}}$										
$K_{ABnm} = \sqrt{C_{ABnm}}$										
$L_{ABnm} = \sqrt{C_{ABnm}}$										
$M_{ABnm} = \sqrt{C_{ABnm}}$										
$N_{ABnm} = \sqrt{C_{ABnm}}$										
$O_{ABnm} = \sqrt{C_{ABnm}}$										
$P_{ABnm} = \sqrt{C_{ABnm}}$										
$Q_{ABnm} = \sqrt{C_{ABnm}}$										
$R_{ABnm} = \sqrt{C_{ABnm}}$										
$S_{ABnm} = \sqrt{C_{ABnm}}$										
$T_{ABnm} = \sqrt{C_{ABnm}}$										
$U_{ABnm} = \sqrt{C_{ABnm}}$										
$V_{ABnm} = \sqrt{C_{ABnm}}$										
$W_{ABnm} = \sqrt{C_{ABnm}}$										
$X_{ABnm} = \sqrt{C_{ABnm}}$										
$Y_{ABnm} = \sqrt{C_{ABnm}}$										
$Z_{ABnm} = \sqrt{C_{ABnm}}$										
$a^*_{nm} = p_m \lambda_{nm}^{2.5} = 2.5(1,000+0,000+0,000) \lambda_{nm}^2$										
$b^*_{nm} = p_{nm} \lambda_{nm}^{2.5} = -1.0(0,000+0,000+1,000) \lambda_{nm}^2$										
$A_{nm} = (a^*-a_y) Y$										
$B_{nm} = (b^*-b_y) Y$										
$C_{ABnm} = A_{nm}^2 + B_{nm}^2$										
$h_{ABnm} = \sqrt{C_{ABnm}}$										
$D_{ABnm} = \sqrt{C_{ABnm}}$										
$E_{ABnm} = \sqrt{C_{ABnm}}$										
$F_{ABnm} = \sqrt{C_{ABnm}}$										
$G_{ABnm} = \sqrt{C_{ABnm}}$										
$H_{ABnm} = \sqrt{C_{ABnm}}$										
$I_{ABnm} = \sqrt{C_{ABnm}}$										
$J_{ABnm} = \sqrt{C_{ABnm}}$										
$K_{ABnm} = \sqrt{C_{ABnm}}$										
$L_{ABnm} = \sqrt{C_{ABnm}}$										
$M_{ABnm} = \sqrt{C_{ABnm}}$										
$N_{ABnm} = \sqrt{C_{ABnm}}$										
$O_{ABnm} = \sqrt{C_{ABnm}}$										

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

<http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 6/30

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			n-purities		
			X	Y	Z	x	y	z	X	Y	Z
00 375	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326	326
01 444	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307	307
02 463	21.19	9.55	72.48	0.205	0.092	0.702	30.5	-64.7	71.6	295	295
03 465	22.27	11.71	74.36	0.198	0.109	0.692	25.7	-64.8	69.7	291	291
04 470	21.43	17.01	77.11	0.185	0.147	0.667	13.7	-63.3	64.8	282	282
05 464	22.09	23.68	78.83	0.177	0.193	0.632	-0.2	-59.6	59.6	269	269
06 476	22.83	27.59	79.42	0.175	0.212	0.611	-7.5	-57.0	57.5	262	262
07 479	25.44	36.25	80.19	0.179	0.255	0.565	-21.3	-50.8	55.1	247	247
08 480	27.14	40.88	80.43	0.184	0.274	0.540	-27.2	-47.3	54.6	240	240
09 481	29.88	45.66	80.60	0.191	0.292	0.516	-32.3	-43.6	54.3	233	233
10 482C	31.14	48.71	79.26	0.195	0.306	0.498	-36.3	-39.7	53.9	227	227
11 488	25.13	49.09	60.78	0.186	0.363	0.450	-52.2	-21.0	56.3	201	201
12 496	20.67	50.20	44.12	0.179	0.436	0.383	-65.9	-3.4	66.0	183	183
13 500	20.63	52.39	38.61	0.184	0.469	0.345	-71.2	3.7	71.3	176	176
14 505	20.59	54.04	33.36	0.190	0.500	0.308	-75.8	10.3	75.9	172	172
15 515	20.37	55.82	24.00	0.203	0.557	0.239	-79.1	21.1	82.6	165	165
16 522G	23.24	59.39	19.95	0.226	0.578	0.194	-81.1	28.1	85.8	160	160
17 530	29.26	65.19	16.37	0.264	0.588	0.147	-79.6	36.3	87.5	155	155
18 540	34.69	74.85	13.32	0.321	0.576	0.102	-71.2	47.2	85.4	146	146
19 542	36.62	90.66	13.33	0.390	0.531	0.078	-45.9	60.4	75.6	127	127
20 557	72.58	90.44	8.47	0.423	0.527	0.049	-30.5	64.7	71.5	115	115
21 558	72.51	88.28	6.59	0.433	0.527	0.039	-25.6	64.8	69.7	111	111
22 561	72.35	88.98	3.84	0.454	0.521	0.024	-13.6	63.3	64.7	102	102
23 565Y	71.69	76.31	2.11	0.477	0.508	0.014	0.3	59.6	59.6	89	89
24 567	70.94	72.40	1.53	0.489	0.499	0.010	7.6	57.0	57.5	82	82
25 572	68.33	63.74	0.76	0.514	0.479	0.005	21.4	50.8	55.1	67	67
26 575	66.36	59.11	0.52	0.526	0.469	0.004	27.3	47.3	54.6	59	59
27 578	63.90	54.33	0.35	0.538	0.458	0.002	32.4	43.6	54.3	53	53
28 581	62.64	51.28	1.69	0.541	0.443	0.014	36.4	39.8	53.9	47	47
29 583	68.65	50.90	20.17	0.491	0.364	0.144	52.3	30.1	56.3	33	33
30 701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	3	3
31 705	73.15	47.60	42.34	0.448	0.291	0.259	71.3	-3.8	71.4	356	356
32 710	73.19	45.95	47.59	0.438	0.275	0.285	75.2	-10.4	75.9	352	352
33 720	73.40	44.17	56.04	0.420	0.253	0.326	79.9	-21.1	82.7	345	345
34 727	70.53	40.59	61.00	0.409	0.235	0.354	81.1	-28.1	85.9	340	340
35 735M	64.51	34.79	64.58	0.393	0.212	0.394	79.7	-36.4	87.6	335	335
36 745	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326	326
37 809	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307	307
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0	0

$$\begin{aligned} a^*_{\text{D50}} &= a^*_{\text{D50}} = 2.5 \cdot (1.000x + 0.000 + 0.000z)/y \\ b^*_{\text{D50}} &= b^*_{\text{D50}} = -1.0 \cdot (0.000x + 0.000 + 1.000z)/y \\ A_{\text{D50}} &= (a^*_{\text{D50}})^2 + (b^*_{\text{D50}})^2 \\ C_{\text{D50}} &= \arctan[B_{\text{D50}}/A_{\text{D50}}] \\ h_{\text{D50}} &= \arctan[B_{\text{D50}}/A_{\text{D50}}] \end{aligned}$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			n-purities		
			X	Y	Z	x	y	z	X	Y	Z
00 614	68.65	50.90	20.17	0.491	0.364	0.144	52.3	30.1	56.3	33	33
01 701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	363	363
02 705	73.15	47.60	42.34	0.448	0.291	0.259	71.3	-3.8	71.4	356	356
03 710	73.19	45.95	47.59	0.438	0.275	0.285	75.2	-10.4	75.9	352	352
04 720	73.40	44.17	56.04	0.420	0.253	0.326	79.9	-21.1	82.7	345	345
05 727	70.53	40.59	61.00	0.409	0.235	0.354	81.1	-28.1	85.9	340	340
06 735	64.51	34.79	64.58	0.393	0.212	0.394	79.7	-36.4	87.6	335	335
07 375	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326	326
08 444	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307	307
09 463	21.19	9.55	72.48	0.205	0.092	0.702	30.5	-64.7	71.6	295	295
10 465	22.27	11.71	74.36	0.198	0.109	0.692	25.7	-64.8	69.7	291	291
11 470	21.43	17.01	77.11	0.185	0.147	0.667	13.7	-63.3	64.8	282	282
12 474B	22.09	23.68	78.83	0.177	0.193	0.632	-0.2	-59.6	59.6	269	269
13 476	22.83	27.59	79.42	0.175	0.212	0.611	-7.5	-57.0	57.5	262	262
14 479	25.44	36.25	80.19	0.179	0.255	0.565	-21.3	-50.8	55.1	247	247
15 480	27.14	40.88	80.43	0.184	0.274	0.540	-27.2	-47.3	54.6	240	240
16 481	29.88	45.66	80.60	0.191	0.292	0.516	-32.3	-43.6	54.3	233	233
17 482	31.14	48.71	79.26	0.195	0.306	0.498	-36.3	-39.7	53.9	227	227
18 488C	25.13	49.09	60.78	0.186	0.363	0.450	-52.2	-21.0	56.3	201	201
19 496	20.67	50.20	44.12	0.179	0.436	0.383	-65.9	-3.4	66.0	183	183
20 500	20.63	52.39	38.61	0.184	0.469	0.345	-71.2	3.7	71.3	176	176
21 505	20.59	54.04	33.36	0.190	0.500	0.308	-75.8	10.3	75.9	172	172
22 515	20.37	55.82	24.00	0.203	0.557	0.239	-79.1	21.1	82.6	165	165
23 522G	23.24	59.39	19.95	0.226	0.578	0.194	-81.1	28.1	85.8	160	160
24 530	29.26	65.19	16.37	0.264	0.588	0.147	-79.6	36.3	87.5	155	155
25 540	34.69	74.85	13.32	0.321	0.576	0.102	-71.2	47.2	85.4	146	146
26 552	66.62	90.66	13.33	0.390	0.531	0.078	-45.9	60.4	75.6	127	127
27 557	72.58	90.44	8.47	0.423	0.527	0.049	-30.5	64.7	71.5	115	115
28 558	72.51	88.28	6.59	0.433	0.527	0.039	-25.6	64.8	69.7	111	111
29 561	72.35	88.98	3.84	0.454	0.521	0.024	-13.6	63.3	64.7	102	102
30 565	71.69	76.31	2.11	0.477	0.508	0.014	0.3	59.6	59.6	89	89
31 567	70.94	72.40	1.53	0.489	0.499	0.010	7.6	57.0	57.5	82	82
32 572Y	68.33	63.74	0.76	0.514	0.479	0.005	21.4	50.8	55.1	67	67
33 575	66.36	59.11	0.52	0.526	0.469	0.004	27.3	47.3	54.6	59	59
34 578	63.90	54.33	0.35	0.538	0.458	0.002	32.4	43.6	54.3	53	53
35 581	62.64	51.28	1.69	0.541	0.443	0.014	36.4	39.8	53.9	47	47
36 614R	68.65	50.90	20.17	0.491	0.364	0.144	52.3	30.1	56.3	21	21
37 701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	3	3
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0	0

$$\begin{aligned} a^*_{\text{D50}} &= a^*_{\text{D50}} = 2.5 \cdot (1.000x + 0.000 + 0.000z)/y \\ b^*_{\text{D50}} &= b^*_{\text{D50}} = -1.0 \cdot (0.000x + 0.000 + 1.000z)/y \\ A_{\text{D50}} &= (a^*_{\text{D50}})^2 + (b^*_{\text{D50}})^2 \\ C_{\text{D50}} &= \arctan[B_{\text{D50}}/A_{\text{D50}}] \\ h_{\text{D50}} &= \arctan[B_{\text{D50}}/A_{\text{D50}}] \end{aligned}$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	n-purities					nu-purities			
λ	X	Y	X_m	Y_m	Z_m	x_{sh}	x	y	z	X_m	Y_m
00 375	25.14	5.17	-2.69	5.83	332	2.83	-1.88	3.40			
01 444	9.33	7.27	-7.24	10.27	315	4.93	-6.43	8.11			
02 463	9.55	5.54	-7.58	9.90	306	3.32	-6.78	7.49			
03 465	11.71	4.44	-8.00	8.50	305	2.80	-7.06	7.45			
04 470B	17.01	3.14	-8.53	5.51	304	0.80	-3.72	3.81			
05 474	23.68	2.33	-3.82	4.06	305	-0.01	-2.51	2.51			
06 476	27.59	2.06	-2.87	3.54	305	-0.27	-2.06	2.06			
07 479	36.25	1.75	-2.21	2.82	308	-0.58	-1.40	1.52			
08 480	40.88	1.31	-1.88	2.32	312	-0.85	-1.13	1.26			
09 481	45.66	1.63	-1.76	2.40	312	-0.70	-0.95	1.18			
10 482C	48.71	1.59	-1.62	2.28	314	-0.74	-0.81	1.10			
11 488	49.09	1.27	-1.23	1.78	315	-1.06	-0.42	1.14			
12 496	50.20	1.02	-0.87	1.35	319	-1.31	-0.06	1.31			
13 505	50.39	0.90	-0.73	1.22	323	-1.07	0.36	1.30			
14 506	54.04	0.95	-0.61	1.13	327	-1.39	0.19	1.41			
15 515	55.82	0.91	-0.42	1.00	334	-1.43	0.37	1.48			
16 522G	59.39	0.97	-0.33	1.03	341	-1.36	0.47	1.44			
17 530	65.19	1.12	-0.25	1.14	347	-1.22	0.55	1.34			
18 535	70.65	1.14	-0.15	1.03	352	-1.03	0.63	1.41			
19 552	90.66	1.83	-0.14	1.84	355	-0.50	0.66	0.83			
20 557	90.44	2.00	-0.09	2.00	357	-0.33	0.71	0.79			
21 558	88.28	2.05	-0.07	2.05	357	-0.29	0.73	0.79			
22 561	82.98	2.17	-0.04	2.18	359	-0.16	0.76	0.78			
23 565	73.31	2.34	-0.02	2.35	359	-0.08	0.78	0.79			
24 567	72.04	2.44	-0.02	2.45	359	-0.10	0.78	0.79			
25 572	63.74	2.68	-0.01	2.68	359	0.33	0.79	0.86			
26 575	59.11	2.80	-0.00	2.80	359	0.46	0.80	0.92			
27 578	54.33	2.94	-0.00	2.99	359	0.59	0.80	1.00			
28 582	48.28	3.00	-0.00	3.00	359	0.77	0.79	1.05			
29 614R	50.90	3.37	-0.39	3.39	333	1.02	0.41	1.17			
30 701	49.79	3.67	-0.73	3.74	348	1.32	0.06	1.32			
31 705	47.60	3.84	-0.88	3.94	346	1.49	-0.08	1.50			
32 710	45.95	3.98	-1.03	4.11	345	1.63	-0.22	1.65			
33 717	44.17	4.17	-1.17	4.34	342	1.77	-0.37	1.77			
34 727	40.94	3.94	-1.50	4.59	340	1.99	-0.69	1.81			
35 735M	34.79	4.63	-1.85	4.99	338	2.29	-1.04	2.52			
36 745	25.14	5.17	-2.69	5.83	332	2.83	-1.88	3.40			
37 480	9.33	7.27	-7.24	10.27	315	4.93	-6.43	8.11			
U-D50	100.00	2.343	-0.809	2.479	340	0.0	0.0	0.0			

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE02 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			non-chromatic values			non-putities		
			X	Y	Z	x	y	z	X _{AB}	Y _{AB}	h _{AB}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	11.9	-66.6	67.7	280
01	463	13.25	6.34	78.11	0.135	0.064	0.799	-16.3	-72.8	74.7	257
02	466	13.27	8.01	79.21	0.132	0.079	0.788	-19.5	-72.6	75.2	254
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-27.5	-70.2	75.4	248
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-37.4	-65.6	75.5	240
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-47.8	-59.2	76.1	231
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-57.1	-51.9	77.2	222
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-61.0	-48.0	77.7	218
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-64.3	-44.0	77.9	214
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-66.6	-40.1	77.8	211
10	486C	29.62	57.81	81.62	0.175	0.341	0.482	-68.5	-34.0	76.5	206
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-68.2	-15.6	70.0	192
12	497	23.01	58.66	84.28	0.185	0.472	0.342	-66.9	5.7	67.1	175
13	501	22.62	59.57	85.18	0.192	0.507	0.299	-66.1	13.7	67.5	168
14	506	22.26	60.29	86.28	0.200	0.543	0.255	-65.2	21.2	68.4	161
15	519	21.83	61.02	87.06	0.218	0.610	0.170	-62.3	33.1	70.6	152
16	522G	24.04	63.42	87.06	0.230	0.606	0.163	-61.7	35.0	71.0	150
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-56.5	44.7	72.1	141
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-48.8	52.0	71.3	133
19	571	65.07	87.80	5.54	0.410	0.554	0.034	-11.8	66.6	67.7	100
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-16.3	72.8	74.6	77
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-19.5	72.6	75.2	74
22	571	82.92	87.33	1.55	0.482	0.508	0.009	-27.5	70.2	75.4	68
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-37.4	65.6	75.5	60
24	577	80.69	72.49	0.38	0.525	0.472	0.002	-47.8	59.2	76.1	51
25	581	77.87	63.33	0.18	0.550	0.447	0.001	-57.1	51.8	77.2	42
26	583	75.96	58.54	0.13	0.564	0.434	0.000	-61.0	48.0	77.7	34
27	585	73.67	53.70	0.09	0.577	0.421	0.000	-64.3	44.0	77.9	26
28	587	71.01	48.93	0.07	0.591	0.407	0.000	-66.6	40.1	77.8	21
29	589	66.69	42.18	0.61	0.609	0.385	0.005	-68.5	34.0	76.5	26
30	631	69.99	41.82	18.71	0.536	0.320	0.143	-68.2	15.6	70.0	12
31	702	73.30	41.33	39.75	0.474	0.267	0.257	-66.9	-5.7	67.2	355
32	706	73.69	40.41	47.04	0.457	0.250	0.291	-66.1	-13.8	67.5	348
33	711	74.05	39.70	53.95	0.441	0.236	0.321	-65.1	-21.3	68.5	341
34	724	74.48	38.97	65.18	0.416	0.218	0.364	-62.4	-33.1	70.6	332
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	-61.7	-35.1	71.0	330
36	740	69.08	33.80	72.53	0.393	0.192	0.413	-56.6	-44.7	72.1	321
37	749	61.10	27.83	74.91	0.372	0.169	0.457	-48.8	-52.0	71.3	313
38	766	31.24	12.19	76.69	0.260	0.101	0.638	11.9	-66.6	67.7	280
39	828	13.25	6.34	78.11	0.135	0.064	0.799	-16.3	-72.8	74.7	257
U=D50 96.31 99.99 82.24 0.345 0.358 0.358 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{AB} = n_a P_a = 2.5[(1.000x - 0.171 + 0.000z)/y]$ $A_{AB} = (a^* - a^*_Y) Y$ $C_{ABAB} = [A_{AB}^2 + B_{AB}^2]^{1/2}$ $b^*_{AB} = n_b P_b = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{AB} = (b^* - b^*_Y) Y$ $h_{ABAB} = \text{atan2}[B_{AB}/A_{AB}]$											
DE690-3N											

CIE02 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			non-chromatic values			non-putities		
			X	Y	Z	x	y	z	X _{AB}	Y _{AB}	h _{AB}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	11.9	-66.6	67.7	280
01	463	13.25	6.34	78.11	0.135	0.064	0.799	-16.3	-72.8	74.7	257
02	466	13.27	8.01	79.21	0.132	0.079	0.788	-19.5	-72.6	75.2	254
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-27.5	-70.2	75.4	248
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-37.4	-65.6	75.5	240
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-47.8	-59.2	76.1	231
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-57.1	-51.9	77.2	222
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-61.0	-48.0	77.7	218
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-64.3	-44.0	77.9	214
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-66.6	-40.1	77.8	211
10	486C	29.62	57.81	81.62	0.175	0.341	0.482	-68.5	-34.0	76.5	206
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-68.2	-15.6	70.0	192
12	497	23.01	58.66	84.28	0.185	0.472	0.342	-66.9	5.7	67.1	175
13	501	22.62	59.57	85.18	0.192	0.507	0.299	-66.1	13.7	67.5	168
14	506	22.26	60.29	86.28	0.200	0.543	0.255	-65.2	21.2	68.4	161
15	519	21.83	61.02	87.06	0.218	0.610	0.170	-62.3	33.1	70.6	152
16	522G	24.04	63.42	87.06	0.230	0.606	0.163	-61.7	35.0	71.0	150
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-56.5	44.7	72.1	141
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-48.8	52.0	71.3	133
19	571	65.07	87.80	5.54	0.410	0.554	0.034	-11.8	66.6	67.7	100
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-16.3	72.8	74.6	77
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-19.5	72.6	75.2	74
22	571	82.92	87.33	1.55	0.482	0.508	0.009	-27.5	70.2	75.4	68
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-37.4	65.6	75.5	60
24	577	80.69	72.49	0.38	0.525	0.472	0.002	-47.8	59.2	76.1	51
25	581	77.87	63.33	0.18	0.550	0.447	0.001	-57.1	51.8	77.2	42
26	583	75.96	58.54	0.13	0.564	0.434	0.000	-61.0	48.0	77.7	34
27	585	73.67	53.70	0.09	0.577	0.421	0.000	-64.3	44.0	77.9	26
28	587	71.01	48.93	0.07	0.591	0.407	0.000	-66.6	40.1	77.8	21
29	589	66.69	42.18	0.61	0.609	0.385	0.005	-68.5	34.0	76.5	26
30	631	69.99	41.82	18.71	0.536	0.320	0.143	-68.2	15.6	70.0	12
31	702	73.30	41.33	39.75	0.474	0.267	0.257	-66.9	-5.7	67.2	355
32	706	73.69	40.41	47.04	0.457	0.250	0.291	-66.1	-13.8	67.5	348
33	711	74.05	39.70	53.95	0.441	0.236	0.321	-65.1	-21.3	68.5	341
34	724	74.48	38.97	65.18	0.416	0.218	0.364	-62.4	-33.1	70.6	332
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	-61.7	-35.1	71.0	330
36	740	69.08	33.80	72.53	0.393	0.192	0.413	-56.6	-44.7	72.1	321
37	749	61.10	27.83	74.91	0.372	0.169	0.457	-48.8	-52.0	71.3	313
38	766	31.24	12.19	76.69	0.260	0.101	0.638	11.9	-66.6	67.7	280
39	828	13.25	6.34	78.11	0.135	0.064	0.799	-16.3	-72.8	74.7	257
U=D50 99.99 12.16 -0.822 1.468 325 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{AB} = n_a P_a = 2.5[(1.000x - 0.171 + 0.000z)/y]$ $A_{AB} = (a^* - a^*_Y) Y$ $C_{ABAB} = [A_{AB}^2 + B_{AB}^2]^{1/2}$ $b^*_{AB} = n_b P_b = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{AB} = (b^* - b^*_Y) Y$ $h_{ABAB} = \text{atan2}[B_{AB}/A_{AB}]$											
DE690-4N											

CIE02 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no.	O	tristimulus values and chromaticities					non-chromatic values				
		X	Y	Z	x	y	X _{AB}	Y _{AB}	C _{AB}	h _{AB}	
00	331	69.99	41.82	18.71	0.536	0.320	0.143	-68.2	15.6	70.0	372
01	702	73.30	41.33	39.75	0.474	0.267	0.257	-66.9	-5.7	67.2	355
02	706	73.69	40.41	47.04	0.457	0.250	0.291	-66.1	-13.8	67.5	348
03	711	74.05	39.70	53.95	0.441	0.236	0.321	-65.1	-21.3	68.5	341
04	724	74.48	38.97	65.18	0.416	0.218	0.364	-62.4	-31.3	70.1	334
05	727M	72.66	36.57	65.17	0.415	0.210	0.374	-61.7	-35.1	71.0	330
06	740	69.08	33.80	72.53	0.393	0.192	0.413	-56.6	-44.7	72.1	321
07	749	61.10	27.83	74.11	0.372	0.169	0.457	-48.8	-52.0	71.3	313
08	754	54.91	21.70	79.05	0.344	0.141	0.500	-39.9	-58.8	70.4	305
09	463	13.25	6.34	78.11	0.135	0.064	0.499	-15.3	-72.8	74.7	287
10	466	13.27	8.01	79.21	0.132	0.079	0.788	-19.5	-72.6	75.2	254
11	471	13.39	12.66	80.68	0.125	0.118	0.775	-27.5	-70.2	75.4	248
12	475B	14.00	19.21	81.44	0.122	0.167	0.710	-37.4	-65.6	75.5	240
13	480	14.21	27.50	81.95	0.144	0.270	0.653	-46.8	-58.8	75.6	232
14	481	14.81	38.26	82.05	0.134	0.267	0.598	-57.1	-51.9	77.2	222
15	483	20.35	41.45	82.11	0.141	0.288	0.570	-61.0	-48.0	77.7	218
16	484	22.64	46.29	82.14	0.149	0.306	0.543	-64.3	-44.0	77.9	214
17	485	25.29	51.06	82.16	0.159	0.322	0.518	-66.6	-40.1	77.8	211
18	486	27.82	57.81	82.17	0.169	0.339	0.493	-68.2	-35.9	77.7	208
19	490	26.32	58.17	83.51	0.177	0.393	0.429	-68.2	-15.6	70.0	192
20	497	23.01	58.66	82.48	0.185	0.472	0.342	-66.9	5.7	67.1	175
21	501	22.61	59.57	83.18	0.192	0.507	0.299	-66.1	13.7	67.5	168
22	506	22.26	60.29	82.88	0.200	0.534	0.255	-65.0	21.2	68.4	161
23	510	22.03	61.02	82.62	0.206	0.518	0.210	-63.9	28.7	70.0	152
24	522	24.04	64.42	17.06	0.230	0.606	0.163	-61.7	35.0	71.0	150
25	535	27.22	66.19	7.31	0.263	0.641	0.094	-56.5	44.7	72.1	141
26	544	35.20	72.16	7.73	0.306	0.629	0.063	-48.8	52.0	71.3	133
27	561	65.07	80.80	0.534	0.444	0.344	0.055	-18.8	66.6	67.7	121
28	568	85.9	93.65	1.43	0.559	0.517	0.022	-1.6	72.6	77.2	77
29	569	83.03	93.98	3.02	0.466	0.516	0.016	19.5	72.6	75.2	74
30	571	82.92	87.33	1.55	0.482	0.508	0.009	27.5	70.2	75.4	68
31	573	82.30	80.76	0.80	0.502	0.492	0.004	37.4	65.6	75.5	60
32	575	80.68	72.49	0.38	0.525	0.472	0.002	47.8	59.2	76.1	51
33	581	75.96	58.73	0.18	0.554	0.444	0.001	57.1	51.9	77.2	43
34	583	75.96	58.14	0.13	0.564	0.434	0.000	61.1	48.0	77.7	38
35	585	73.67	53.70	0.09	0.571	0.421	0.000	64.3	44.0	77.9	33
36	587B	71.10	48.93	0.07	0.591	0.407	0.000	66.7	40.1	77.8	31
37	589	68.42	41.15	0.05	0.608	0.393	0.000	68.2	35.9	77.7	26
38	631	69.99	41.82	18.71	0.536	0.320	0.143	-68.2	15.6	70.0	12
39	702	73.30	41.33	39.75	0.474	0.267	0.257	-66.9	-5.7	67.2	-4
U=D50 96.31 99.99 82.24 0.345 0.358 0.358 0.00 0.00 0.00 0.0 0.0 0.0											
$a_{D50} = P_{50} - 0.561(0.00004 + 0.171 + 0.0002)Y$ $b_{D50} = (a - a_0)Y$ $C_{AB} = [A^2_{AB} - B^2_{AB}]^{1/2}$											
$b_{D50} = P_{50} - h_0P_{50} - 1.0[(0.00004 + 0.00001 + 1.0002)Y]$ $B_{AB} = (b - b_0)Y$ $h_{AB} = \text{atan2}[A_{AB} - B_{AB}]$											
DE690-7M											

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technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.									
no.	O	C	tristimulus values and chromaticities	nu-chromatic values					
λ	X	Y	Z	x	y	y	B_m	B_m	B_m
00 376	55.24	26.06	71.08	0.362	0.171	0.466	40.9	-49.9	64.5
01 458	13.22	7.40	75.87	0.136	0.076	0.786	-17.2	-69.8	71.9
02 460	13.26	8.89	77.33	0.133	0.089	0.777	-20.3	-70.1	73.0
03 462	13.28	10.68	78.42	0.129	0.104	0.765	-23.6	-69.7	73.6
04 464	13.28	12.68	78.42	0.129	0.104	0.765	-23.6	-69.7	73.6
05 466	13.66	17.92	80.19	0.122	0.160	0.717	-35.6	-65.6	74.7
06 471	14.70	24.41	80.73	0.122	0.203	0.673	-44.4	-60.9	75.4
07 473	15.60	28.17	80.89	0.125	0.225	0.648	-48.8	-58.0	75.8
08 475	18.32	36.37	81.08	0.134	0.267	0.597	-56.8	-51.5	76.7
09 477	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5	77.1
10 477C	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5	77.1
11 479	27.82	53.94	81.17	0.170	0.331	0.498	-66.3	-37.3	76.1
12 480	30.64	58.21	79.19	0.182	0.346	0.471	-66.7	-31.9	73.9
13 484	25.67	56.42	59.80	0.180	0.397	0.421	-65.7	-14.0	67.2
14 492	22.50	56.65	38.03	0.192	0.483	0.324	-63.4	7.9	63.8
15 503	21.56	57.40	24.28	0.208	0.555	0.235	-60.7	22.2	64.6
16 512G	22.19	58.45	18.53	0.223	0.589	0.186	-58.6	28.9	65.4
17 521	24.28	60.61	13.79	0.246	0.614	0.139	-55.9	35.3	66.1
18 531	29.00	64.47	10.07	0.280	0.622	0.097	-50.9	42.2	66.1
19 541	41.29	73.93	10.07	0.330	0.589	0.080	-40.9	49.9	64.5
20 563	83.41	92.59	5.28	0.460	0.510	0.029	-17.3	69.8	71.9
21 564	83.37	91.09	3.82	0.467	0.510	0.021	-20.3	70.1	73.0
22 565	83.35	89.31	2.74	0.475	0.509	0.015	-23.7	69.7	73.6
23 565Y	83.35	89.31	2.74	0.475	0.509	0.015	-23.7	69.7	73.6
24 568	82.96	82.07	0.96	0.490	0.494	0.005	-35.6	65.6	74.7
25 571	81.93	75.58	0.44	0.518	0.478	0.002	-44.5	60.8	75.4
26 573	81.03	71.82	0.27	0.529	0.469	0.001	-48.9	58.0	75.8
27 577	78.31	63.62	0.08	0.551	0.447	0.000	-56.9	51.5	76.8
28 581	74.28	54.89	0.01	0.575	0.424	0.000	-63.0	44.5	77.2
29 588	68.81	46.05	0.00	0.599	0.400	0.000	-66.3	37.3	76.1
31 589	67.60	44.04	0.93	0.600	0.391	0.008	-66.8	34.8	75.3
32 692	70.96	43.57	21.37	0.522	0.320	0.157	-65.8	13.9	67.2
33 697	74.12	43.34	43.14	0.461	0.269	0.268	-63.4	-7.9	63.9
34 708	75.07	42.59	56.88	0.430	0.244	0.350	-60.7	-22.3	64.7
35 717M	74.44	41.54	62.63	0.416	0.232	0.350	-58.9	-28.9	65.4
36 726	72.35	39.38	67.37	0.403	0.219	0.376	-55.9	-35.4	66.2
37 736	67.62	35.52	71.08	0.388	0.203	0.408	-50.9	-42.2	66.2
38 746	55.24	26.06	71.08	0.362	0.171	0.466	-40.9	-49.9	64.5
39 823	13.22	7.40	75.87	0.136	0.076	0.786	-17.2	-69.8	71.9
U=D50	96.63	100.00	81.17	0.347	0.359	0.359	0.0	0.0	0.0
$a^*_{p,m} = n_p \cdot a_p = 2.5 \cdot [(1.000x - 0.171 + 0.000z)/y]$ $A_m = (a - a_1) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$ $b^*_{p,m} = n_b \cdot b_p = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_1) Y$ $A_{AB,m} = \text{atan}([B_m/A_m])$									

CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.									
no.	O	C	tristimulus values and chromaticities	nu-putities					
λ	X	Y	Z	x	y	y	B_m	B_m	B_m
00 376	26.06	2.79	-2.72	3.90	315	1.57	-1.91	2.47	309
01 458	7.40	-1.10	-10.25	10.31	263	-2.33	-9.44	9.72	256
02 460	8.89	-1.05	-8.68	8.75	263	-2.28	-7.87	8.20	253
03 462	10.68	-0.98	-7.34	7.40	262	-2.21	-6.53	6.89	251
04 464	12.68	-0.98	-5.34	5.40	262	-2.21	-4.58	4.89	251
05 466	17.92	-0.76	-4.47	4.53	260	-1.98	-3.66	4.16	241
06 471	24.41	-0.59	-3.30	3.36	259	-1.82	-2.49	3.08	233
07 473	28.17	-0.50	-2.87	2.91	259	-1.73	-2.06	2.69	229
08 475	36.37	-0.33	-2.22	2.25	261	-1.56	-1.41	2.11	222
09 477	45.10	-0.16	-1.79	1.80	264	-1.39	-0.98	1.71	215
10 477C	45.10	-0.16	-1.79	1.80	264	-1.39	-0.98	1.71	215
11 479	53.94	-0.00	-1.50	1.50	269	-1.22	-0.69	1.41	209
12 480	58.21	0.08	-1.36	1.36	273	-1.14	-0.54	1.27	205
13 484	56.42	0.06	-1.05	1.06	273	-1.16	-0.24	1.19	192
14 492	56.65	0.07	-0.67	0.68	270	-1.11	0.14	1.12	172
15 503	57.40	0.17	-0.42	0.45	291	-1.05	0.38	1.12	159
16 512G	58.45	0.22	-0.31	0.38	305	-1.00	0.49	1.11	153
17 521	60.61	0.30	-0.22	0.38	323	-0.92	0.58	1.09	147
18 531	64.47	0.43	-0.15	0.46	340	-0.78	0.65	1.02	140
19 541	73.93	0.92	-0.04	0.93	348	-0.55	0.91	0.91	129
20 563	92.59	1.41	-0.05	1.41	357	-0.18	0.75	0.77	76
21 564	91.09	1.45	-0.04	1.45	358	-0.22	0.76	0.80	73
22 565	89.31	1.49	-0.03	1.49	358	-0.26	0.78	0.82	71
23 565Y	89.31	1.49	-0.03	1.49	358	-0.26	0.78	0.82	71
24 568	82.07	0.96	-0.01	0.96	359	-0.43	0.79	0.61	61
25 571	75.58	0.44	-0.00	0.44	359	-0.58	0.80	0.59	53
26 573	71.82	0.19	-0.00	0.19	359	-0.68	0.80	0.59	53
27 577	63.62	0.08	-0.00	0.08	359	-0.89	0.81	0.59	53
28 581	54.89	0.01	-0.00	0.01	359	-1.14	0.81	0.40	35
29 588	46.05	0.00	-0.00	0.00	359	-1.44	0.81	0.40	35
30 589	44.04	0.93	-0.02	0.93	359	-1.51	0.79	0.17	27
31 589	43.57	21.37	-0.49	2.78	349	-1.51	0.32	1.54	11
32 692	43.34	2.69	-0.99	2.86	339	-1.46	-0.18	1.47	352
33 697	42.59	2.65	-1.33	2.97	333	-1.42	-0.52	1.52	339
35 717M	41.54	2.64	-1.50	3.04	330	-1.41	-0.69	1.57	333
36 726	39.38	2.64	-1.71	3.15	327	-1.42	-0.89	1.68	327
37 736	35.52	2.66	-2.00	3.33	323	-1.43	-1.18	1.86	320
38 746	26.06	2.79	-2.72	3.90	315	-1.57	-1.91	2.47	309
39 823	7.40	-1.10	-10.25	10.31	263	-2.33	-9.44	9.72	256
U=D50	100.00	1.227	-0.811	1.471	326	0.0	0.0	0.0	0
$a^*_{p,m} = n_p \cdot a_p = 2.5 \cdot [(1.000x - 0.171 + 0.000z)/y]$ $A_m = (a - a_1) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$ $b^*_{p,m} = n_b \cdot b_p = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_1) Y$ $A_{AB,m} = \text{atan}([B_m/A_m])$									

DE690-1N

**CIE10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.**

no.	O	C	Y	P_m	P_m	P_m	h_{450}	nu - P_m	P_m	P_m	P_m	h_{450}
λ				P_m	P_m	P_m		P_m	P_m	P_m	P_m	
00	692		43.57	2.73	-0.49	2.78	349	1.51	0.32	1.54	371	
01	697		43.34	2.69	-0.99	2.86	339	1.46	-0.12	1.47	352	
02	708		42.59	2.65	-1.33	2.97	333	1.42	-0.52	1.52	339	
03	717		41.54	2.64	-1.64	3.00	330	1.41	-0.69	1.55	333	
04	726		39.38	2.64	-1.71	3.15	327	1.42	-0.68	1.68	327	
05	736		35.52	2.66	-2.00	3.33	323	1.43	-1.18	1.86	320	
06	376		26.06	2.79	-2.72	3.90	315	1.57	-1.91	2.47	309	
07	458		7.40	-1.10	-10.25	10.31	263	-2.33	-9.44	9.72	256	
08	460		8.89	-1.05	-8.68	8.75	263	-2.28	-7.87	8.20	253	
09	462		10.68	-0.98	-7.34	7.40	262	-2.21	-6.53	8.51	251	
10	464		12.68	-0.98	-7.34	7.40	262	-2.21	-6.53	8.59	251	
11	466		17.92	-0.76	-4.47	4.53	260	-1.98	-3.66	4.16	241	
12	471B		24.41	-0.59	-3.30	3.36	259	-1.82	-2.49	3.08	233	
13	473		28.17	-0.50	-2.87	2.91	259	-1.73	-2.06	2.69	229	
14	475		36.37	-0.33	-2.22	2.25	261	-1.56	-1.41	2.11	221	
15	477		45.10	-0.16	-1.79	1.80	260	-1.39	-0.98	1.79	215	
16	477		45.10	-0.16	-1.79	1.80	264	-1.39	-0.98	1.71	215	
17	479		53.94	-0.00	-1.50	1.50	269	-1.22	-0.69	1.41	209	
18	480C		58.21	0.08	-1.36	1.36	273	-1.14	-0.54	1.27	205	
19	484		56.42	0.06	-1.05	1.06	273	-1.16	-0.24	1.19	192	
20	492		56.65	0.10	-0.67	0.68	279	-1.11	0.14	1.12	172	
21	503		57.40	0.17	-0.42	0.45	291	-1.05	0.38	1.12	159	
22	512		58.45	0.22	-0.31	0.38	305	-1.00	0.49	1.11	153	
23	521G		60.61	0.30	-0.22	0.38	323	-0.92	0.58	1.09	147	
24	531		64.47	0.43	-0.15	0.46	340	-0.78	0.65	1.02	140	
25	541		73.93	0.67	-0.13	0.68	348	-0.55	0.67	0.87	129	
26	549		82.59	0.90	-0.07	0.68	359	-0.41	0.51	0.78	116	
27	564		91.09	1.45	-0.04	1.45	358	0.22	0.76	0.80	79	
28	565		89.31	1.49	-0.03	1.49	358	0.26	0.78	0.82	71	
29	565		89.31	1.49	-0.03	1.49	358	0.26	0.78	0.82	71	
30	568		82.07	1.66	-0.01	1.66	359	0.43	0.79	0.91	61	
31	577		75.58	1.81	-0.01	1.81	359	0.68	0.80	0.93	53	
32	573Y		71.82	1.90	-0.00	1.90	359	0.68	0.80	1.05	49	
33	577		63.62	2.12	-0.00	2.12	359	0.89	0.81	1.20	42	
34	581		54.89	2.37	-0.00	2.37	359	1.14	0.81	1.40	35	
35	581		54.89	2.37	-0.00	2.37	359	1.14	0.81	1.40	35	
36	587R		46.05	2.66	0.00	2.66	0	1.44	0.81	1.65	29	
37	589		44.04	2.74	0.02	2.74	0	1.51	0.79	1.71	27	
38	692		43.57	2.73	-0.49	2.78	-10	1.51	0.32	1.54	11	
39	697		43.34	2.69	-0.99	2.86	-20	1.46	-0.18	1.47	-7	

$u = \frac{P_m}{D_{50}}$ 100.00 1.27 -0.811 1.471 326 0 0 0 0 0 0 0
 $a = \frac{P_m}{D_{50}}$ 100.00 1.271 $(1.000x - 0.177 + 0.0002y)$ $u = (a - a_0) Y$ $C_{450m} = \frac{a - a_0}{a_0} A_0 B_0^{1/2}$
 $b = \frac{P_m}{D_{50}}$ 100.00 1.271 $-0.01(0.000x + 0.000 + 1.0002y)$ $v = (b - b_0) Y$ $h_{450m} = \frac{b - b_0}{b_0} A_0 B_0^{1/2}$

DE690-BN

see similar files: <http://farbe.li-tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li-tu-berlin.de> or <http://130.149.60.45/~farbmunik>

<http://farbe.li-tu-berlin.de/DE69/DE69L0NP.PDF> /PS

N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 3/30

CIEF02 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no. O			CIEF02 tristimulus values and chromaticities			no- μ -chromatic values			no- μ -purities		
			X	Y	Z	x	y	z	X _{AB}	Y _{AB}	h _{AB}
00	386	51.50	23.94	74.68	0.343	0.159	0.497	35.3	-55.0	65.3	302
01	460	12.38	6.54	76.19	0.130	0.068	0.801	-17.6	-70.8	72.9	255
02	465	12.41	9.58	78.25	0.123	0.095	0.780	-23.5	-70.3	74.1	251
03	467	14.25	11.64	78.87	0.120	0.113	0.766	-27.0	-69.3	74.4	248
04	468	13.31	20.43	79.83	0.117	0.179	0.702	-40.1	-63.0	74.7	237
05	475	14.02	24.19	79.97	0.118	0.204	0.676	-44.9	-60.9	75.0	233
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213
10	483C	27.52	55.03	80.21	0.169	0.338	0.492	-67.9	-34.9	76.3	207
11	484	28.85	57.21	79.07	0.174	0.346	0.478	-68.2	-32.0	75.4	205
12	489	25.36	57.41	57.70	0.180	0.408	0.410	-66.6	-10.5	67.5	188
13	497	22.33	57.50	36.81	0.191	0.492	0.315	-64.1	10.4	65.0	170
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-61.8	23.3	66.0	159
15	512	21.41	58.09	18.79	0.216	0.593	0.190	-60.3	29.4	67.1	153
16	521G	22.42	59.91	14.10	0.232	0.621	0.146	-58.2	35.1	68.0	148
17	524	25.32	62.97	14.10	0.247	0.615	0.137	-57.2	37.6	68.5	146
18	539	30.69	66.55	7.57	0.290	0.637	0.072	-50.0	47.1	68.7	136
19	541	44.95	76.05	0.54	0.355	0.601	0.043	-34.4	60.5	67.8	121
20	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75
21	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75
22	569	84.05	90.41	1.96	0.476	0.512	0.011	-24.5	72.3	76.3	71
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007	-27.9	71.2	76.5	68
24	573	83.15	79.56	0.38	0.509	0.487	0.002	-41.1	65.0	76.9	57
25	575	82.44	75.80	0.24	0.520	0.478	0.001	-45.8	62.0	77.1	53
26	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41
27	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41
28	585	74.48	53.96	0.02	0.579	0.420	0.000	-65.4	44.3	79.0	34
29	589	68.94	44.96	0.00	0.605	0.394	0.000	-68.8	36.9	78.1	28
30	592	67.61	42.78	1.14	0.606	0.383	0.010	-69.1	34.0	77.0	26
31	694	71.10	42.58	22.52	0.522	0.312	0.165	-67.5	12.4	68.7	10
32	702	74.12	42.49	43.40	0.463	0.265	0.271	-65.0	-8.4	65.6	352
33	710	75.15	41.96	55.91	0.434	0.242	0.323	-62.7	-21.4	66.2	341
34	717	75.05	41.30	61.43	0.422	0.232	0.345	-61.2	-27.4	67.1	335
35	726G	74.04	40.08	66.11	0.410	0.222	0.366	-59.1	-33.1	67.8	330
36	729	71.14	37.02	66.11	0.408	0.212	0.379	-58.1	-35.6	68.2	328
37	744	66.16	33.43	72.64	0.384	0.194	0.421	-50.9	-45.1	68.0	318
38	756	51.50	23.94	74.68	0.343	0.159	0.497	-35.3	-55.0	65.3	302
39	825	12.38	6.54	76.19	0.130	0.068	0.801	-17.6	-70.8	72.9	255
U=D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{AB} = n_a P_{AB} = 2.5[(1.000x + 0.171 + 0.000z)/y]$ $A_{AB} = (a - a_1)Y$ $C_{ABAB} = [A_{AB}^2 + B_{AB}^2]^{1/2}$ $b^*_{AB} = n_b P_{AB} = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{AB} = (b - b_1)Y$ $h_{ABAB} = \text{atan2}[B_{AB}/A_{AB}]$											

CIEF02 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no. O			CIEF02 tristimulus values and chromaticities			no- μ -chromatic values			no- μ -purities		
			X	Y	Z	x	y	z	X _{AB}	Y _{AB}	h _{AB}
00	386	51.50	23.94	74.68	0.343	0.159	0.497	35.3	-55.0	65.3	302
01	460	12.38	6.54	76.19	0.130	0.068	0.801	-17.6	-70.8	72.9	255
02	465	12.41	9.58	78.25	0.123	0.095	0.780	-23.5	-70.3	74.1	251
03	467	14.25	11.64	78.87	0.120	0.113	0.766	-27.0	-69.3	74.4	248
04	468	13.31	20.43	79.83	0.117	0.179	0.702	-40.1	-63.0	74.7	237
05	475	14.02	24.19	79.97	0.118	0.204	0.676	-44.9	-60.9	75.0	233
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213
10	483C	27.52	55.03	80.21	0.169	0.338	0.492	-67.9	-34.9	76.3	207
11	484	28.85	57.21	79.07	0.174	0.346	0.478	-68.2	-32.0	75.4	205
12	489	25.36	57.41	57.70	0.180	0.408	0.410	-66.6	-10.5	67.5	188
13	497	22.33	57.50	36.81	0.191	0.492	0.315	-64.1	10.4	65.0	170
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-61.8	23.3	66.0	159
15	512	21.41	58.09	18.79	0.216	0.593	0.190	-60.3	29.4	67.1	153
16	521G	22.42	59.91	14.10	0.232	0.621	0.146	-58.2	35.1	68.0	148
17	524	25.32	62.97	14.10	0.247	0.615	0.137	-57.2	37.6	68.5	146
18	539	30.69	66.55	7.57	0.290	0.637	0.072	-50.0	47.1	68.7	136
19	541	44.95	76.05	0.54	0.355	0.601	0.043	-34.4	60.5	67.8	121
20	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75
21	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75
22	569	84.05	90.41	1.96	0.476	0.512	0.011	-24.5	72.3	76.3	71
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007	-27.9	71.2	76.5	68
24	573	83.15	79.56	0.38	0.509	0.487	0.002	-41.1	65.0	76.9	57
25	575	82.44	75.80	0.24	0.520	0.478	0.001	-45.8	62.0	77.1	53
26	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41
27	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41
28	585	74.48	53.96	0.02	0.579	0.420	0.000	-65.4	44.3	79.0	34
29	589	68.94	44.96	0.00	0.605	0.394	0.000	-68.8	36.9	78.1	28
30	592	67.61	42.78	1.14	0.606	0.383	0.010	-69.1	34.0	77.0	26
31	694	71.10	42.58	22.52	0.522	0.312	0.165	-67.5	12.4	68.7	10
32	702	74.12	42.49	43.40	0.463	0.265	0.271	-65.0	-8.4	65.6	352
33	710	75.15	41.96	55.91	0.434	0.242	0.323	-62.7	-21.4	66.2	341
34	717	75.05	41.30	61.43	0.422	0.232	0.345	-61.2	-27.4	67.1	335
35	726G	74.04	40.08	66.11	0.410	0.222	0.366	-59.1	-33.1	67.8	330
36	729	71.14	37.02	66.11	0.408	0.212	0.379	-58.1	-35.6	68.2	328
37	744	66.16	33.43	72.64	0.384	0.194	0.421	-50.9	-45.1	68.0	318
38	756	51.50	23.94	74.68	0.343	0.159	0.497	-35.3	-55.0	65.3	302
39	825	12.38	6.54	76.19	0.130	0.068	0.801	-17.6	-70.8	72.9	255
U=D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0.0 0.0 0.0											
$a^*_{AB} = n_a P_{AB} = 2.5[(1.000x + 0.171 + 0.000z)/y]$ $A_{AB} = (a - a_1)Y$ $C_{ABAB} = [A_{AB}^2 + B_{AB}^2]^{1/2}$ $b^*_{AB} = n_b P_{AB} = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{AB} = (b - b_1)Y$ $h_{ABAB} = \text{atan2}[B_{AB}/A_{AB}]$											

CIEF02 tristimulus values, chromatic values, and putities ($n_s=2.5, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no. O			n-purities			h_{AB}			nu-purities		
		Y	P _{nm}	h _{nm}	h _{nm}		P _{nm}	h _{nm}		P _{nm}	h _{nm}
00	592	42.78	1.14	0.606	0.383	349	1.61	0.71	1.80	386	
01	694	42.58	22.52	0.522	0.312	349	1.58	0.29	1.57	370	
02	702	42.49	27.5	-1.02	0.293	339	1.53	-0.19	1.54	352	
03	710	41.96	27.1	-1.33	0.302	333	1.49	-0.51	1.57	341	
04	717	41.30	27.0	-1.48	0.308	331	1.48	-0.66	1.62	335	
05	726G	40.08	26.9	-1.64	0.316	326	1.47	-0.77	1.66	328	
06	729	40.02	27.9	-1.33	0.331	327	1.57	-0.96	1.84	328	
07	744	33.43	27.4	-2.17	0.349	321	1.52	-1.35	2.03	318	
08	386	23.94	26.9	-3.11	0.412	310	1.47	-2.29	2.73	302	
09	460	16.54	-1.48	-11.64	11.74	262	-2.70	-1.082	11.16	255	
10	461	9.58	-1.23	-6.77	6.86	260	-2.45	-0.74	6.86	248	
11	467	6.14	-1.10	-6.77	6.86	260	-2.32	-0.59	6.39	245	
12	473B	20.43	-0.74	-3.90	3.97	259	-1.96	-3.08	3.65	237	
13	475B	21.49	-0.63	-3.30	3.36	259	-1.85	-2.48	3.10	233	
14	478	36.91	-0.35	-2.17	2.20	260	-1.57	-1.34	2.07	220	
15	479	36.91	0.35	-2.23	2.25	260	-1.57	-1.34	2.07	222	
16	481	46.03	-1.18	-1.74	1.75	264	-1.40	-0.92	1.67	213	
17	481	46.03	-1.18	-1.74	1.75	264	-1.40	-0.92	1.67	213	
18	483C	55.03	-0.01	-1.45	1.45	269	-1.23	-0.63	1.38	207	
19	484	57.21	0.02	-1.38	1.38	271	-1.19	-0.56	1.31	205	
20	489	57.41	0.05	-1.00	1.00	273	-1.16	-0.18	1.17	188	
21	497	57.50	0.10	-0.64	0.64	279	-1.11	0.18	1.13	170	
22	505	58.03	0.15	-0.41	0.44	290	-1.06	0.40	1.13	159	
23	512G	58.69	0.19	-0.32	0.37	300	-1.02	0.50	1.14	153	
24	52	59.91	0.24	-0.24	0.316	303	-0.99	0.61	1.13	145	
25	524	62.97	0.31	-0.22	0.38	324	-0.90	0.59	1.08	146	
26	539	66.55	0.46	-0.11	0.48	346	-0.75	0.70	1.03	136	
27	551	76.05	0.47	-0.07	0.76	354	-0.45	0.74	0.87	121	
28	565	93.45	1.41	-0.04	1.41	358	-0.19	0.77	0.80	75	
29	568	93.45	1.41	-0.04	1.41	358	0.19	0.77	0.80	75	
30	569	90.41	1.48	-0.02	1.49	359	0.27	0.80	0.84	71	
31	570	88.35	1.53	-0.01	1.53	359	0.31	0.80	0.86	68	
32	573Y	79.56	1.73	-0.00	1.73	359	0.51	0.81	0.96	57	
33	575	75.80	1.82	0.00	1.82	359	0.61	0.81	1.01	41	
34	580	63.07	2.15	-0.00	2.15	359	0.93	0.82	1.24	41	
35	580	63.07	2.15	-0.00	2.15	359	0.93	0.82	1.24	41	
36	585R	53.96	2.43	-0.00	2.43	359	1.21	0.82	1.46	34	
37	590	44.96	2.75	0.00	2.75	0	1.53	0.82	1.73	28	
38	591	47.78	2.83	0.00	2.83	0	1.61	0.80	1.86	28	
39	694	42.58	28.00	-0.52	2.85	-10	1.58	0.29	1.61	10	
U-D50 1000 1.219 -0.0021 1.470 326 0.0 0.0 0.0 0.0 0.0 0.0											
$a^* = m_{nm} \cdot p_{nm} = 2.5(1.0000 - 0.171 - 0.0021 \cdot Y_{AB})$ $A_{nm} = (a - a_0) \cdot Y_{AB}$ $b^*_{AB} = B_{nm} + B_{nm}^2 \cdot Y_{AB}$											
$b^*_{nm} = m_{nm} \cdot p_{nm} - 1.0(1.0000 + 0.0000 + 1.0002 \cdot Y_{AB})$ $B_{nm} = (b - b_0) \cdot Y_{AB}$ $h^*_{AB} = h_{nm} + h_{nm}^2 \cdot Y_{AB}$											
DE90-8N											

CIEF10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

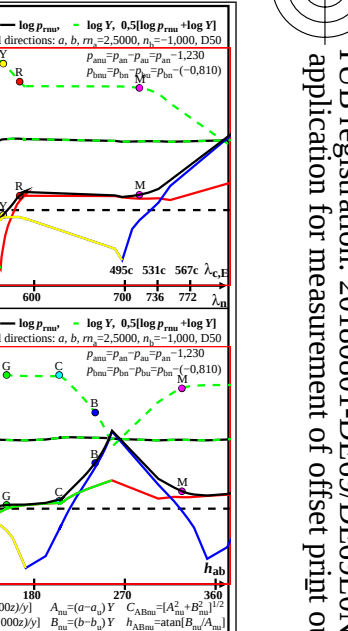
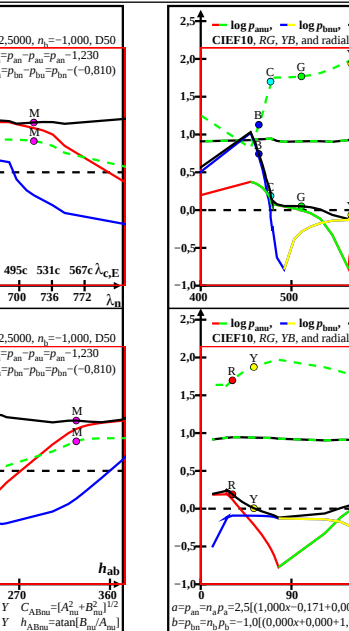
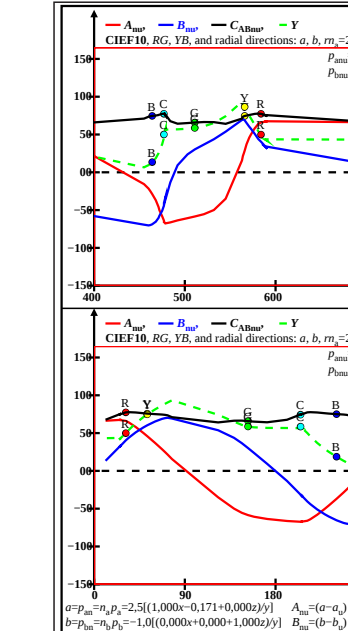
no.	O	C	tristimulus values and chromaticities	chromatic values	putities
X	Y	Z	x	y	z
00	380	52.92	25.78	74.65	0.345 0.168 0.486
01	455	13.14	6.61	74.65	0.139 0.070 0.790
02	460	13.28	9.49	77.94	0.131 0.094 0.773
03	462	13.30	11.32	78.97	0.128 0.109 0.762
04	468	13.34	13.45	79.69	0.125 0.126 0.748
05	468	13.69	18.67	80.47	0.121 0.165 0.713
06	471	14.73	25.21	80.80	0.121 0.208 0.669
07	472	15.63	28.96	80.89	0.124 0.230 0.644
08	475	18.33	37.06	80.98	0.134 0.271 0.593
09	477	22.39	45.70	81.01	0.150 0.306 0.543
10	477C	24.94	50.08	81.01	0.159 0.320 0.519
11	479	30.58	58.60	78.68	0.182 0.349 0.468
12	479	29.07	56.38	80.12	0.175 0.340 0.483
13	484	25.63	56.72	59.32	0.180 0.400 0.418
14	492	22.37	56.85	36.73	0.192 0.490 0.316
15	503	21.57	57.63	22.95	0.211 0.564 0.224
16	511G	22.30	58.68	17.25	0.227 0.597 0.175
17	521	24.56	60.88	12.62	0.250 0.620 0.128
18	532	29.89	65.12	9.04	0.287 0.625 0.086
19	545	43.82	74.21	6.37	0.352 0.596 0.051
20	563	83.59	93.38	6.37	0.455 0.509 0.034
21	564	83.45	90.50	3.08	0.471 0.511 0.017
22	565	83.43	88.67	2.06	0.479 0.509 0.011
23	566Y	83.29	86.54	1.34	0.486 0.505 0.007
24	568	83.04	81.32	0.56	0.503 0.493 0.003
25	571	82.00	74.28	0.23	0.522 0.476 0.001
26	573	81.10	71.03	0.14	0.532 0.466 0.000
27	577	78.40	62.93	0.05	0.554 0.445 0.000
28	581	74.33	54.29	0.02	0.577 0.421 0.000
29	584	71.79	49.91	0.01	0.589 0.410 0.000
30	591	66.15	41.39	2.33	0.602 0.376 0.021
31	588	67.67	43.61	0.91	0.603 0.388 0.008
32	689	71.10	43.27	21.71	0.522 0.317 0.159
33	697	74.36	43.14	44.30	0.459 0.266 0.273
34	708	75.16	42.36	58.08	0.428 0.241 0.330
35	716G	74.43	41.31	63.78	0.414 0.230 0.355
36	726	72.17	39.11	68.41	0.401 0.217 0.380
37	737	66.83	34.86	71.99	0.384 0.200 0.414
38	750	52.92	25.78	74.65	0.345 0.168 0.486
39	820	13.14	6.61	74.65	0.139 0.070 0.790
40	U-D50	96.74	100.00	81.03	0.348 0.360 0.360

$a^*_{D50} = a^*_{D50} = 2.5 \cdot [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a^* - a^*_Y) Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{D50} = b^*_{D50} = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b^* - b^*_Y) Y$ $h_{ABm} = \text{atan2}(B_m/A_m)$

CIEF10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
X	Y	Z	x	y	z
00	380	52.92	25.78	74.65	0.345 0.168 0.486
01	455	13.14	6.61	74.65	0.139 0.070 0.790
02	460	13.28	9.49	77.94	0.131 0.094 0.773
03	462	13.30	11.32	78.97	0.128 0.109 0.762
04	468	13.34	13.45	79.69	0.125 0.126 0.748
05	468	13.69	18.67	80.47	0.121 0.165 0.713
06	471	14.73	25.21	80.80	0.121 0.208 0.669
07	472	15.63	28.96	80.89	0.124 0.230 0.644
08	475	18.33	37.06	80.98	0.134 0.271 0.593
09	477	22.39	45.70	81.01	0.150 0.306 0.543
10	477C	24.94	50.08	81.01	0.159 0.320 0.519
11	479	30.58	58.60	78.68	0.182 0.349 0.468
12	479	29.07	56.38	80.12	0.175 0.340 0.483
13	484	25.63	56.72	59.32	0.180 0.400 0.418
14	492	22.37	56.85	36.73	0.192 0.490 0.316
15	503	21.57	57.63	22.95	0.211 0.564 0.224
16	511G	22.30	58.68	17.25	0.227 0.597 0.175
17	521	24.56	60.88	12.62	0.250 0.620 0.128
18	532	29.89	65.12	9.04	0.287 0.625 0.086
19	545	43.82	74.21	6.37	0.352 0.596 0.051
20	563	83.59	93.38	6.37	0.455 0.509 0.034
21	564	83.45	90.50	3.08	0.471 0.511 0.017
22	565	83.43	88.67	2.06	0.479 0.509 0.011
23	566Y	83.29	86.54	1.34	0.486 0.505 0.007
24	568	83.04	81.32	0.56	0.503 0.493 0.003
25	571	82.00	74.28	0.23	0.522 0.476 0.001
26	573	81.10	71.03	0.14	0.532 0.466 0.000
27	577	78.40	62.93	0.05	0.554 0.445 0.000
28	581	74.33	54.29	0.02	0.577 0.421 0.000
29	584	71.79	49.91	0.01	0.589 0.410 0.000
30	591	66.15	41.39	2.33	0.602 0.376 0.021
31	588	67.67	43.61	0.91	0.603 0.388 0.008
32	689	71.10	43.27	21.71	0.522 0.317 0.159
33	697	74.36	43.14	44.30	0.459 0.266 0.273
34	708	75.16	42.36	58.08	0.428 0.241 0.330
35	716G	74.43	41.31	63.78	0.414 0.230 0.355
36	726	72.17	39.11	68.41	0.401 0.217 0.380
37	737	66.83	34.86	71.99	0.384 0.200 0.414
38	750	52.92	25.78	74.65	0.345 0.168 0.486
39	820	13.14	6.61	74.65	0.139 0.070 0.790
40	U-D50	96.74	100.00	81.03	0.348 0.360 0.360

$a^*_{D50} = a^*_{D50} = 2.5 \cdot [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a^* - a^*_Y) Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{D50} = b^*_{D50} = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b^* - b^*_Y) Y$ $h_{ABm} = \text{atan2}(B_m/A_m)$



CIEF10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
X	Y	Z	x	y	z
00	388	67.67	43.61	0.91	0.603 0.388 0.008
01	689	71.10	43.27	21.71	0.522 0.317 0.159
02	697	74.36	43.14	44.30	0.459 0.266 0.273
03	708	75.16	42.36	58.08	0.428 0.241 0.330
04	716	74.43	41.31	63.78	0.414 0.230 0.355
05	726	72.17	39.11	68.41	0.401 0.217 0.380
06	737	66.83	34.86	71.99	0.384 0.200 0.414
07	380	52.92	25.78	74.65	0.345 0.168 0.486
08	455	13.14	6.61	74.65	0.139 0.070 0.790
09	460	13.28	9.49	77.94	0.131 0.094 0.773
10	462	13.30	11.32	78.97	0.128 0.109 0.762
11	468	13.34	13.45	79.69	0.125 0.126 0.748
12	468	13.69	18.67	80.47	0.121 0.165 0.713
13	471	14.73	25.21	80.80	0.121 0.208 0.669
14	472	15.63	28.96	80.89	0.124 0.230 0.644
15	475	18.33	37.06	80.98	0.134 0.271 0.593
16	477	22.39	45.70	81.01	0.150 0.306 0.543
17	477C	24.94	50.08	81.01	0.159 0.320 0.519
18	479	30.58	58.60	78.68	0.182 0.349 0.468
19	479	29.07	56.38	80.12	0.175 0.340 0.483
20	484	25.63	56.72	59.32	0.180 0.400 0.418
21	492	22.37	56.85	36.73	0.192 0.490 0.316
22	503	21.57	57.63	22.95	0.211 0.564 0.224
23	511G	22.30	58.68	17.25	0.227 0.597 0.175
24	521	24.56	60.88	12.62	0.250 0.620 0.128
25	532	29.89	65.12	9.04	0.287 0.625 0.086
26	545	43.82	74.21	6.37	0.352 0.596 0.051
27	563	83.59	93.38	6.37	0.455 0.509 0.034
28	564	83.45	90.50	3.08	0.471 0.511 0.017
29	565	83.43	88.67	2.06	0.479 0.509 0.011
30	566	83.29	86.54	1.34	0.486 0.505 0.007
31	568	83.04	81.32	0.56	0.503 0.493 0.003
32	571	82.00	74.28	0.23	0.522 0.476 0.001
33	573	81.10	71.03	0.14	0.532 0.466 0.000
34	577	78.40	62.93	0.05	0.554 0.445 0.000
35	581	74.33	54.29	0.02	0.577 0.421 0.000
36	584	71.79	49.91	0.01	0.589 0.410 0.000
37	591	66.15	41.39	2.33	0.602 0.376 0.021
38	588	67.67	43.61	0.91	0.603 0.388 0.008
39	689	71.10	43.27	21.71	0.522 0.317 0.159
40	U-D50	96.74	100.00	81.03	0.348 0.360 0.360

$a^*_{D50} = a^*_{D50} = 2.5 \cdot [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a^* - a^*_Y) Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{D50} = b^*_{D50} = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b^* - b^*_Y) Y$ $h_{ABm} = \text{atan2}(B_m/A_m)$

CIEF10 tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
X	Y	Z	x	y	z
00	388	67.67	43.61	0.91	0.603 0.388 0.008
01	689	71.10	43.27	21.71	0.522 0.317 0.159
02	697	74.36	43.14	44.30	0.459 0.266 0.273
03	708	75.16	42.36	58.08	0.428 0.24

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> or [http://130.149.60.45/~farbmeterik](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			chromatic values			n-purities			
λ_{nm}	X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}	P_{nm}	P_{nm}	h_{nm}
00 373	50.84	23.58	64.46	0.366	0.169	0.464	40.0	-45.4	60.5	311		
01 450	26.22	10.37	70.14	0.245	0.097	0.657	7.7	-61.7	62.2	277		
02 463	19.81	9.03	72.37	0.195	0.089	0.715	-4.3	-65.0	65.2	266		
03 465	19.87	11.18	74.25	0.188	0.106	0.705	-8.4	-65.2	65.7	262		
04 470B	20.04	16.46	77.00	0.176	0.145	0.678	-17.7	-63.6	66.1	254		
05 474	20.76	23.15	78.71	0.169	0.188	0.641	-27.7	-60.0	66.0	245		
06 477	22.69	31.32	79.75	0.169	0.234	0.596	-37.2	-54.4	65.9	235		
07 479	24.27	35.77	80.07	0.173	0.255	0.571	-41.2	-51.1	65.7	231		
08 481	28.86	45.22	80.48	0.186	0.292	0.520	-47.0	-43.9	64.3	223		
09 482	30.21	48.30	79.14	0.191	0.306	0.501	-48.6	-40.1	63.0	219		
10 487C	31.73	48.90	65.44	0.186	0.348	0.465	-52.2	-25.9	58.2	206		
11 496	20.48	50.06	44.06	0.178	0.436	0.384	-56.6	-3.6	56.7	183		
12 500	20.60	52.31	38.55	0.184	0.469	0.345	-57.6	3.7	57.7	176		
13 509	19.40	53.50	28.42	0.191	0.528	0.280	-57.6	14.8	59.5	165		
14 511	21.83	56.54	28.46	0.204	0.529	0.266	-57.5	17.2	60.0	163		
15 518	24.65	60.36	24.01	0.226	0.553	0.220	-55.9	24.7	61.1	156		
16 530B	29.99	65.40	16.35	0.268	0.585	0.146	-49.6	36.5	61.6	143		
17 538	43.18	76.41	16.37	0.317	0.562	0.120	-39.9	45.3	60.4	131		
18 553	67.80	89.62	10.69	0.403	0.533	0.063	-7.7	61.7	62.2	97		
19 557	74.22	90.96	8.45	0.427	0.523	0.048	-4.3	65.0	65.2	86		
20 558	74.15	88.81	6.58	0.437	0.523	0.038	8.5	65.1	65.7	82		
21 561	73.98	83.52	3.84	0.458	0.517	0.023	17.8	63.6	66.1	74		
22 565	73.26	76.83	2.11	0.481	0.504	0.013	27.7	59.9	66.1	65		
23 570	71.33	68.67	1.09	0.505	0.486	0.007	37.2	54.4	65.9	55		
24 572	69.75	64.22	0.76	0.517	0.476	0.005	41.2	51.1	65.7	51		
25 578	65.16	54.77	0.35	0.541	0.455	0.002	47.1	43.9	64.4	42		
26 581	63.81	51.69	1.69	0.544	0.441	0.014	48.6	40.0	63.0	39		
27 600	67.89	51.09	15.38	0.505	0.380	0.114	52.2	25.9	58.3	26		
28 705	73.42	47.68	42.28	0.449	0.291	0.258	57.6	-3.7	57.7	356		
29 746	74.62	46.49	52.41	0.430	0.267	0.302	57.6	-14.8	59.6	345		
30 716	72.19	43.45	52.37	0.429	0.258	0.311	55.9	-17.2	60.1	343		
31 723	69.37	39.63	56.82	0.418	0.238	0.342	55.9	-24.7	61.2	336		
32 735	64.03	34.59	64.49	0.392	0.212	0.395	49.6	-36.5	61.6	323		
33 743	50.84	23.58	64.46	0.366	0.169	0.464	40.0	-45.4	60.5	311		
34 815	26.22	10.37	70.14	0.245	0.097	0.657	7.7	-61.7	62.2	277		
U=D50	94.03	100.00	80.83	0.342	0.363	0.363	0.0	0.0	0.0	0		

$a^*_{nm} = n_a n_b n_c = 2.5[(1.000x - 0.171 + 0.000z)/y]$ $A_{nm} = (a^*_{nm})/Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$
 $b^*_{nm} = n_b n_c = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{nm} = (b^*_{nm})/Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$
DE69-3N

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			chromatic values			n-purities			
λ_{nm}	X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}	P_{nm}	P_{nm}	h_{nm}
00 373	23.58	2.87	-2.73	3.96	316	1.69	-1.92	2.56	311			
01 450	10.37	1.92	-6.76	7.03	285	0.74	-5.95	6.00	277			
02 463	9.03	0.69	-8.01	8.04	274	-0.48	-7.20	7.22	266			
03 465	11.18	0.41	-6.64	6.65	273	-0.75	-5.83	5.88	262			
04 470B	16.46	77.00	0.176	0.145	0.678	-17.7	-63.6	66.1	254			
05 474	23.15	-0.02	-3.40	2.64	269	-1.19	-2.59	2.85	245			
06 477	31.32	-0.01	-2.54	2.54	269	-1.18	-1.73	2.10	235			
07 479	35.77	0.02	-2.23	2.23	270	-1.15	-1.43	1.83	231			
08 481	45.22	0.13	-1.77	1.78	274	-1.04	-0.97	1.42	223			
09 482	48.30	0.16	-1.63	1.64	275	-1.00	-0.83	1.30	219			
10 487C	48.90	0.10	-1.33	1.34	274	-1.06	-0.53	1.19	206			
11 496	50.06	0.04	-0.88	0.88	272	-1.13	-0.07	1.13	183			
12 500	52.31	0.07	-0.73	0.74	275	-1.10	0.07	1.10	176			
13 509	53.50	0.09	-0.53	0.54	280	-1.07	0.27	1.11	165			
14 511	60.36	0.21	-0.50	0.52	287	-1.01	0.30	1.06	156			
15 518	60.36	0.24	-0.39	0.46	302	-0.92	0.41	1.01	156			
16 530B	65.40	0.41	-0.25	0.48	329	-0.75	0.55	0.94	143			
17 538	76.41	0.65	-0.21	0.68	341	-0.52	0.59	0.79	131			
18 553	89.62	1.08	-0.11	1.09	353	-0.08	0.68	0.69	97			
19 557	90.96	0.47	0.427	0.523	0.048	0.04	0.71	0.71	86			
20 558	88.81	1.27	-0.07	1.27	356	0.09	0.73	0.74	82			
21 561	83.52	1.38	-0.04	1.38	358	0.21	0.76	0.79	74			
22 565	76.83	1.53	-0.02	1.53	358	0.36	0.78	0.86	65			
23 570	68.67	1.71	-0.01	1.71	359	0.54	0.79	0.96	55			
24 572	64.22	1.81	-0.01	1.81	359	0.64	0.79	1.02	51			
25 578	54.77	2.03	-0.00	2.03	359	0.86	0.80	1.17	42			
26 581	51.69	2.11	-0.03	2.11	359	0.94	0.77	1.21	39			
27 600	51.09	2.19	-0.30	2.21	352	1.02	0.50	1.14	26			
28 705	47.68	2.38	-0.88	2.54	339	1.20	-0.07	1.21	356			
29 746	46.49	2.41	-1.28	2.42	334	1.24	-0.31	1.28	345			
30 716	43.45	2.50	-1.20	2.77	334	1.32	-0.39	1.38	343			
31 723	39.63	2.58	-1.43	2.95	331	1.41	-0.62	1.54	336			
32 735	34.59	2.61	-1.86	3.20	324	1.43	-1.05	1.78	323			
33 743	23.58	2.87	-2.73	3.96	316	1.69	-1.92	2.56	311			
34 815	10.37	1.92	-6.76	7.03	285	0.74	-5.95	6.00	277			
U=D50	100.00	1.175	-0.808	1.426	325	0.0	0.0	0.0	0			

$a^*_{nm} = n_a n_b n_c = 2.5[(1.000x - 0.171 + 0.000z)/y]$ $A_{nm} = (a^*_{nm})/Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$
 $b^*_{nm} = n_b n_c = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{nm} = (b^*_{nm})/Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$
DE69-4N

R17M tristimulus values, chromatic values, and putities ($n_s=2.5, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C	tristimulus values and chromaticities			nu-chromatic values						
λ_{nm}	X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}	P_{nm}	P_{nm}	h_{nm}
00 600	67.89	51.09	15.38	0.505	0.380	0.114	52.2	25.9	58.3	306		
01 705	73.42	47.68	42.28	0.449	0.291	0.258	57.6	-3.7	57.7	356		
02 714	74.62	46.49	52.41	0.430	0.267	0.302	57.6	-14.8	59.6	345		
03 716	72.19	43.45	52.37	0.429	0.258	0.311	57.5	-17.2	60.1	343		
04 723	69.37	39.63	56.82	0.418	0.238	0.342	55.9	-24.7	61.2	336		
05 735B	64.03	34.59	64.49	0.392	0.212	0.395	49.6	-36.5	61.6	323		
06 373	50.84	23.58	64.46	0.366	0.169	0.464	40.0	-45.4	60.5	311		
07 450	26.22	10.37	70.14	0.245	0.097	0.657	7.7	-61.7	62.2	277		
08 463	19.81	9.03	72.37	0.195	0.089	0.715	-4.3	-65.0	65.2	266		
09 465	19.87	11.18	74.25	0.188	0.106	0.705	-8.4	-65.2	65.7	262		
10 470	20.04	16.46	77.00	0.176	0.145	0.678	-17.7	-63.6	66.1	254		
11 474	20.76	23.15	78.71	0.169	0.188	0.641	-27.7	-60.0	66.0	245		
12 477B	22.69	31.32	79.75	0.169	0.234	0.596	-37.2	-54.4	65.9	235		
13 479	24.27	35.77	80.07	0.173	0.255	0.571	-41.2	-51.1	65.7	231		
14 481	28.86	45.22	80.48	0.186	0.292	0.520	-47.0	-43.9	64.3	223		
15 482	30.21	48.30	79.14	0.191	0.306	0.501	-48.6	-40.1	63.0	219		
16 487	31.73	48.90	65.44	0.186	0.348	0.465	-52.2	-25.9	58.2	206		
17 496	20.60	50.06	44.06	0.178	0.434	0.384	-56.6	-3.6	56.7	183		
18 500C	20.60	52.31	38.55	0.184	0.469	0.345	-57.6	3.7	57.7	176		
19 508	24.40	53.50	28.42	0.191	0.528	0.280	-57.6	14.8	59.5	165		
20 511	21.36	56.23	20.91	0.186	0.572	0.242	-55.9	24.7	61.2	153		
21 519	24.65	60.36	24.01	0.226	0.553	0.220	-57.6	24.7	61.1	155		
22 530	29.99	65.40	16.35	0.268	0.585	0.146	-49.6	36.5	61.6	143		
23 538B	41.38	76.41	16.37	0.317	0.562	0.120	-39.9	45.3	60.4	131		
24 553	67.89	86.62	10.69	0.403	0.533	0.063	7.7	61.7	62.2	97		
25 557	72.19	89.58	8.45	0.427	0.538	0.048	-4.3	65.0	65.2	90		
26 561	74.62	88.81	5.38	0.437	0.523	0.048	-8.4	65.2	65.7	83		
27 561	73.98	85.83	3.84	0.458	0.517	0.023	17.8	63.9	66.1	74		
28 565	73.28	76.32	2.11	0.481	0.504	0.013	27.7	59.9	66.1	65		
29 570	71.33	68.67	1.09	0.505	0.486	0.007	37.2	54.4	65.9	55		
30 572	69.75	64.22	0.76	0.517	0.476	0.005	41.2	51.1	65.7	51		
31 575	65.41	54.19	0.35	0.528	0.441	0.014	47.0	43.9	64.3	45		
32 581B	63.81	51.69	0.19	0.544	0.414	0.014	48.6	40.1	63.0	39		
33 600	67.89	51.09	15.38	0.505	0.380	0.114	52.2	25.9	58.3	26		
34 705	73.42	47.68	42.28	0.449	0.291	0.258	57.6	-3.7	57.7	-3		
U=D50	94.03	100.00	80.83	0.342	0.363	0.263	0.0	0.0	0.0			

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmnetik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

R17Ms tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	X	Y	Z	x	y	u	v	u'	v'
no.	O	C	X	Y	Z	x	y	u	v	u'	v'
01	375	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2	309
01	444	27.16	9.33	67.62	0.260	0.089	0.649	12.4	-60.0	61.3	281
02	463	21.19	9.55	72.48	0.205	0.092	0.702	-2.3	-64.7	64.7	267
03	465	22.27	11.71	74.36	0.198	0.109	0.692	-6.4	-64.8	65.1	264
04	469	21.43	17.01	77.11	0.185	0.147	0.667	-15.7	-63.3	65.2	256
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-25.7	-59.6	68.0	246
06	476	22.83	27.59	79.42	0.175	0.212	0.611	-30.7	-57.0	68.4	241
07	479	25.44	36.25	80.19	0.179	0.255	0.565	-39.4	-50.8	64.3	232
08	480	27.41	40.88	80.43	0.184	0.274	0.540	-42.8	-47.3	63.8	227
09	481	29.88	45.66	80.60	0.191	0.292	0.516	-45.4	-43.6	63.0	223
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-47.1	-39.8	61.7	220
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-52.3	-21.0	56.3	201
12	496	20.67	50.20	44.12	0.179	0.436	0.383	-56.2	-3.4	56.3	183
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-57.4	3.4	57.5	176
14	505	20.59	54.04	33.36	0.190	0.500	0.308	-57.9	10.3	58.8	169
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-57.1	21.1	60.9	159
16	522G	23.24	59.39	19.95	0.226	0.578	0.194	-55.2	28.1	61.9	153
17	530	29.26	65.19	16.37	0.264	0.588	0.147	-50.4	36.3	62.2	144
18	540	41.69	74.85	13.32	0.321	0.576	0.102	-38.8	47.2	61.1	129
19	547	66.62	90.66	13.33	0.390	0.531	0.078	-12.4	60.0	61.3	101
20	557	72.58	90.44	8.47	0.423	0.527	0.049	-2.3	64.7	64.7	87
21	558	72.51	88.28	6.59	0.433	0.527	0.039	-6.4	64.8	65.1	84
22	561	72.35	82.98	3.84	0.454	0.521	0.024	-15.7	63.3	65.2	76
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	-25.7	59.6	64.9	66
24	567	70.94	72.40	1.53	0.489	0.499	0.010	-30.7	57.0	64.8	61
25	572	68.33	63.74	0.76	0.514	0.479	0.005	-39.5	50.8	64.3	52
26	575	66.36	59.11	0.52	0.526	0.469	0.004	-42.8	47.3	63.8	47
27	578	63.90	54.33	0.35	0.538	0.458	0.002	-45.5	43.6	63.0	43
28	581	62.64	51.28	1.69	0.541	0.443	0.014	-47.1	39.8	61.7	40
29	585	60.65	50.90	2.17	0.491	0.364	0.144	-52.3	-21.0	56.4	21
30	701	73.15	49.79	36.82	0.457	0.311	0.230	56.2	3.4	56.3	3
31	705	73.15	47.60	42.34	0.448	0.291	0.259	57.4	-3.8	57.6	356
32	710	73.19	45.95	47.59	0.438	0.275	0.285	57.9	-10.4	58.8	349
33	720	73.40	44.17	56.94	0.420	0.253	0.326	57.2	-21.1	61.0	339
34	727	70.53	40.59	61.00	0.409	0.235	0.354	55.2	-28.1	62.0	324
35	735M	64.51	34.79	64.58	0.393	0.212	0.394	50.5	-36.4	62.3	324
36	745	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2	309
37	809	27.16	9.33	67.62	0.260	0.089	0.649	12.4	-60.0	61.3	281
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0.0	0

$$a^*P_{nm} = n_a P_n = 2.5[(1.000x - 0.171 + 0.000z)/y] \quad A_{nm} = (a^* - a^*)_Y \quad C_{ABnm} = [A^2 + B^2]^{1/2}$$
$$b^*P_{nm} = n_b P_n = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^* - b^*)_Y \quad h_{ABnm} = \text{atan}[B_{nm}/A_{nm}]$$

DE690-3N

R17Ms tristimulus values, chromatic values, and putities ($n=2.5, n_c=1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no.	O	C	X	Y	Z	x	y	u	v	u'	v'
no.	O	C	X	Y	Z	x	y	u	v	u'	v'
01	614	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.4	381
02	701	73.11	49.79	36.82	0.457	0.311	0.230	56.2	3.4	56.3	363
03	705	73.15	47.60	42.34	0.448	0.291	0.259	57.4	-3.8	57.6	356
03	710	73.19	45.95	47.59	0.438	0.275	0.285	57.9	-10.4	58.8	349
04	720	73.40	44.17	56.94	0.420	0.253	0.326	57.2	-21.1	61.0	339
05	727	70.53	40.59	61.00	0.409	0.235	0.354	55.2	-28.1	62.0	324
06	735	64.51	34.79	64.58	0.393	0.212	0.394	50.5	-36.4	62.3	324
07	735	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2	309
08	444	27.16	9.33	67.62	0.260	0.089	0.649	12.4	-60.0	61.3	281
09	463	21.19	9.55	72.48	0.205	0.092	0.702	-2.3	-64.7	64.7	267
10	465	22.27	11.71	74.36	0.198	0.109	0.692	-6.4	-64.8	65.1	264
11	470	21.43	17.01	77.11	0.185	0.147	0.667	-15.7	-63.3	65.2	256
12	474	22.09	23.68	78.83	0.177	0.190	0.632	-25.7	-59.6	68.0	246
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-30.7	-57.0	68.4	241
14	479	25.44	36.25	80.19	0.179	0.255	0.565	-39.4	-50.8	64.3	232
15	480	27.41	40.88	80.43	0.184	0.274	0.540	-42.8	-47.3	63.8	227
16	481	29.88	45.66	80.60	0.191	0.292	0.516	-45.4	-43.6	63.0	223
17	482	31.14	48.71	79.26	0.195	0.306	0.498	-47.1	-39.8	61.7	220
18	488C	25.13	49.09	60.78	0.186	0.363	0.450	-52.3	-21.0	56.3	201
19	496	20.67	50.20	44.12	0.179	0.436	0.383	-56.2	-3.4	56.3	183
20	500	20.63	52.39	38.61	0.184	0.469	0.345	-57.4	3.4	57.5	176
21	505	20.59	54.04	33.36	0.190	0.500	0.308	-57.9	10.3	58.8	169
22	515	20.37	55.82	24.00	0.203	0.557	0.239	-57.1	21.1	60.9	159
23	522G	23.24	59.39	19.95	0.226	0.578	0.194	-55.2	28.1	61.9	153
24	530	29.26	65.19	16.37	0.264	0.588	0.147	-50.4	36.3	62.2	144
25	540	41.69	74.85	13.32	0.321	0.576	0.102	-38.8	47.2	61.1	129
26	547	66.62	90.66	13.33	0.390	0.531	0.078	-12.4	60.0	61.3	101
27	557	72.58	90.44	8.47	0.423	0.527	0.049	-2.3	64.7	64.7	87
28	558	72.51	88.28	6.59	0.433	0.527	0.039	-6.4	64.8	65.1	84
29	561	72.35	82.98	3.84	0.454	0.521	0.024	-15.7	63.3	65.2	76
30	565	71.69	76.31	2.11	0.477	0.508	0.014	-25.7	59.6	64.9	66
31	567	70.94	72.40	1.53	0.489	0.499	0.010	-30.7	57.0	64.8	61
32	572	68.33	63.74	0.76	0.514	0.479	0.005	-39.5	50.8	64.3	52
33	575	66.36	59.11	0.52	0.526	0.469	0.004	-42.8	47.3	63.8	47
34	578	63.90	54.33	0.35	0.538	0.458	0.002	-45.5	43.6	63.0	43
35	581	62.64	51.28	1.69	0.541	0.443	0.014	-47.1	39.8	61.7	40
36	614R	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.4	21
37	701	73.11	49.79	36.82	0.457	0.311	0.230	56.2	3.4	56.3	3
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0.0	0

$$a^*P_{nm} = n_a P_n = 2.5[(1.000x - 0.171 + 0.000z)/y] \quad A_{nm} = (a^* - a^*)_Y \quad C_{ABnm} = [A^2 + B^2]^{1/2}$$
$$b^*P_{nm} = n_b P_n = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^* - b^*)_Y \quad h_{ABnm} = \text{atan}[B_{nm}/A_{nm}]$$

DE690-7R_pchart=1_xcolor=5(R17Ms)

R17Ms tristimulus values, chromatic values, and putities ($n=2.5, n_p=1.0$). Normalized Ostwald (O) tristimulus values ($Y=100$), ordered by wavelength.											
no.	O	C	p-purities					np-purities			
			x_p	y_p	z_p	x_{np}	y_{np}	z_{np}	x_{np}	y_{np}	z_{np}
01	375	25.14	2.71	-2.69	3.82	315	1.54	-1.88	2.43	309	
01	444	9.33	2.50	-7.24	7.66	289	1.33	-6.43	6.57	281	
02	463	9.55	0.92	-7.58	7.64	276	-0.24	-6.78	6.78	267	
03	465	11.71	0.62	-6.35	6.38	275	-0.54	-5.54	5.56	264	
04	469	11.71	0.185	0.147	0.667	274	-15.7	-63.3	65.2	256	
05	474	22.68	0.08	-3.32	3.33	271	-1.08	-2.51	2.74	246	
06	476	27.59	0.05	-2.87	2.87	271	-1.11	-2.06	2.34	241	
07	479	36.25	0.08	-2.21	2.21	272	-1.08	-1.40	1.77	232	
08	480	40.88	0.12	-1.96	1.97	273	-1.04	-1.15	1.56	227	
09	481	45.66	0.17	-1.76	1.77	275	-0.99	-0.95	1.38	223	
10	482C	48.71	0.20	-1.62	1.63	277	-0.96	-0.81	1.26	220	
11	488	49.09	0.10	-1.23	1.24	274	-1.06	-0.42	1.14	201	
12	496	50.20	0.07	-0.87	0.88	273	-1.11	-0.06	1.12	183	
13	500	52.39	0.07	-0.73	0.74	275	-1.09	0.07	1.09	176	
14	505	54.04	0.09	-0.61	0.62	279	-1.07	0.19	1.08	169	
15	515	55.82	0.1	-0.5	0.5	288	-1.02	0.17	1.07	161	
16	522S	59.39	0.23	-0.33	0.41	305	-0.92	0.47	1.04	153	
17	530	65.19	0.39	-0.25	0.46	327	-0.77	0.55	0.95	144	
18	540	74.85	0.65	-0.11	0.67	344	-0.51	0.63	0.81	129	
19	552	90.66	1.03	-0.14	1.04	351	-0.33	0.66	0.67	101	
20	564	100.44	1.91	-0.09	1.19	355	-0.02	0.71	0.71	87	
21	558	88.28	1.24	-0.07	1.24	356	0.77	0.73	0.73	84	
22	561	82.98	1.35	-0.04	1.36	358	0.19	0.76	0.78	66	
23	565Y	76.31	1.50	-0.02	1.50	358	0.33	0.78	0.85	66	
24	567	72.40	1.59	-0.02	1.59	359	0.42	0.78	0.89	61	
25	570	67.49	1.69	-0.01	1.69	359	0.52	0.78	0.98	53	
26	575	61.59	1.89	-0.00	1.89	359	0.72	0.80	1.08	47	
27	578	54.23	2.00	-0.00	2.00	359	0.92	0.80	1.16	43	
28	581	51.28	2.09	-0.03	2.09	359	0.93	0.77	1.20	40	
29	6148	50.90	2.19	-0.39	2.23	349	1.02	0.41	1.21	21	
30	6175	48.79	2.22	-0.42	2.24	349	1.02	0.41	1.21	20	
31	700	46.70	2.37	-0.88	2.53	339	1.20	-0.08	1.20	15	
32	710	45.95	2.43	-1.03	2.64	336	1.26	-0.22	1.28	349	
33	720	44.17	2.46	-1.28	2.78	332	1.29	-0.47	1.38	339	
34	727	40.59	2.53	-1.59	2.92	329	1.36	-0.69	1.52	333	
35	737	37.49	2.71	-2.00	3.19	327	1.42	-0.98	1.74	309	
36	745	25.14	2.71	-2.69	3.82	315	1.54	-1.88	2.43	309	
37	809	9.33	2.50	-7.24	7.66	289	1.33	-6.43	6.57	281	
U=D=50	100.00	1.169	-0.809	1.422	325	0.0	0.0	0.0	0.0	0.0	0.0

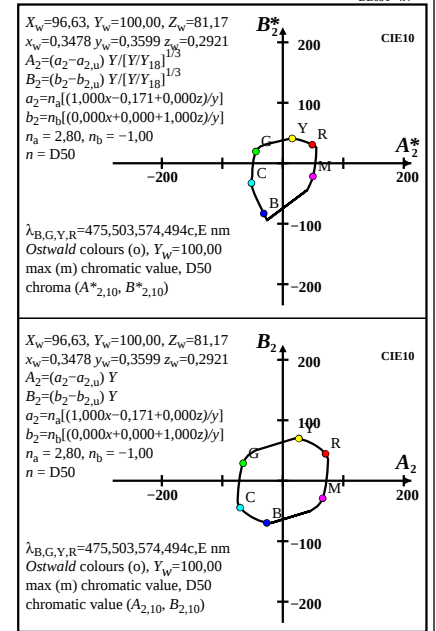
CIE02 tristimulus values, chromatic values, and putities ($n=2.8, n_0=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no. O			tristimulus values and chromaticities			no- n chromatic values			no- n putities		
			X	Y	Z	x	y	y ₁₈			
00	396	31.24	12.19	76.69	0.260	0.101	0.638	13.3	-66.6	67.9	281
01	463	13.25	6.34	78.11	0.135	0.064	0.799	-18.3	-72.8	75.1	255
02	466	13.27	8.01	79.21	0.132	0.079	0.788	-21.8	-72.6	75.8	253
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-30.8	-70.2	76.7	246
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-41.8	-65.6	77.8	237
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.5	-59.2	78.9	227
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-64.0	-51.9	82.4	219
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-68.4	-48.0	83.5	215
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-72.0	-44.0	84.4	211
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-74.6	-40.1	84.7	208
10	486C	26.62	57.81	81.62	0.175	0.341	0.482	-76.7	-34.0	84.0	203
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-76.4	-15.6	78.0	191
12	497	23.01	58.66	82.48	0.185	0.472	0.342	-74.9	-6.7	75.1	175
13	501	22.62	59.57	83.18	0.192	0.507	0.299	-74.0	13.7	75.3	169
14	506	22.26	60.29	82.28	0.200	0.543	0.255	-72.8	21.2	75.8	163
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-69.8	33.1	77.3	154
16	522G	24.04	63.42	17.06	0.230	0.606	0.163	-69.1	35.0	77.5	153
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-63.3	44.7	77.5	144
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-54.6	52.0	75.4	136
19	541	65.07	87.80	5.54	0.410	0.567	0.041	-13.3	66.6	67.9	101
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-18.3	72.8	75.1	75
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-21.8	72.6	75.8	73
22	571	82.92	87.33	1.55	0.482	0.508	0.009	-30.9	70.2	76.7	66
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-41.9	65.6	77.8	57
24	577	80.69	72.49	0.38	0.525	0.472	0.002	-53.5	59.2	78.9	47
25	581	77.87	63.33	0.18	0.550	0.447	0.001	-64.0	51.8	82.4	39
26	583	75.96	58.54	0.13	0.564	0.434	0.000	-68.4	-48.0	83.5	35
27	585	73.67	53.70	0.09	0.577	0.421	0.000	-72.0	-44.0	84.4	31
28	587	71.01	48.93	0.07	0.591	0.407	0.000	-74.6	-40.1	84.7	28
29	589	66.69	42.18	0.61	0.609	0.385	0.005	-76.7	-34.0	84.0	23
30	631	69.99	41.82	18.71	0.536	0.320	0.143	-74.9	15.6	78.0	11
31	702	73.30	41.33	39.75	0.474	0.267	0.257	-74.9	-5.7	75.2	355
32	706	73.69	40.41	47.04	0.457	0.250	0.291	-74.0	-13.8	75.3	349
33	711	74.05	39.70	53.95	0.441	0.236	0.321	-72.9	-21.3	75.9	343
34	724	74.48	38.97	65.18	0.416	0.218	0.364	-69.9	-33.1	77.3	334
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	-69.2	-35.1	77.5	333
36	740	69.08	33.80	72.53	0.393	0.192	0.413	-63.3	-44.7	77.5	324
37	749	61.10	27.83	74.91	0.372	0.169	0.457	-54.7	-52.0	75.4	316
38	766	31.24	12.19	76.69	0.260	0.101	0.638	13.3	-66.6	67.9	281
39	828	13.25	6.34	78.11	0.135	0.064	0.799	-18.3	-72.8	75.1	255
U=D50 96.31 99.99 82.24 0.345 0.358 0.358 0.0 0.0 0.0 0.0											
$a^*_{p,m} = n_p \cdot p_m = 2.8 \cdot [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a - a_2) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$ $b^*_{p,m} = n_b \cdot p_b = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_2) Y$ $H_{AB,m} = \text{atan2}[B_m/A_m]$											
DE690-3N											

CIE02 tristimulus values, chromatic values, and putities ($n=2.8, n_0=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no. O			tristimulus values and chromaticities			no- n chromatic values			no- n putities		
			X	Y	Z	x	y	y ₁₈			
00	631	69.99	41.82	18.71	0.536	0.320	0.143	-74.9	15.6	78.0	11
01	702	73.30	41.33	39.75	0.474	0.267	0.257	-74.9	-5.7	75.2	355
02	706	73.69	40.41	47.04	0.457	0.250	0.291	-74.0	-13.8	75.3	349
03	711	74.05	39.70	53.95	0.441	0.236	0.321	-72.9	-21.3	75.9	343
04	724	74.48	38.97	65.18	0.416	0.218	0.364	-69.9	-33.1	77.3	334
05	727M	72.26	36.57	65.17	0.415	0.210	0.374	-69.2	-35.1	77.5	333
06	740	69.08	33.80	72.53	0.393	0.192	0.413	-63.3	-44.7	77.5	324
07	749	61.10	27.83	74.91	0.372	0.169	0.457	-54.7	-52.0	75.4	316
08	396	31.24	12.19	76.69	0.260	0.101	0.638	13.3	-66.6	67.9	281
09	463	13.25	6.34	78.11	0.135	0.064	0.799	-18.3	-72.8	75.1	255
10	466	13.27	8.01	79.21	0.132	0.079	0.788	-21.8	-72.6	75.8	253
11	471	13.39	12.66	80.68	0.125	0.118	0.755	-30.8	-70.2	76.7	246
12	475B	14.00	19.21	81.44	0.122	0.167	0.710	-41.8	-65.6	77.8	237
13	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.5	-59.2	78.9	227
14	481	18.42	36.66	82.05	0.134	0.267	0.598	-64.0	-51.9	82.4	219
15	483	20.35	41.45	82.11	0.141	0.288	0.570	-68.4	-48.0	83.5	215
16	484	22.64	46.29	82.14	0.149	0.306	0.543	-72.0	-44.0	84.4	211
17	485	25.29	51.06	82.16	0.159	0.322	0.518	-74.6	-40.1	84.7	208
18	486C	26.62	57.81	81.62	0.175	0.341	0.482	-76.7	-34.0	84.0	203
19	490	26.32	58.17	83.51	0.177	0.393	0.429	-76.4	-15.6	78.0	191
20	497	23.01	58.66	82.48	0.185	0.472	0.342	-74.9	-6.7	75.1	175
21	501	22.62	59.57	83.18	0.192	0.507	0.299	-74.0	13.7	75.3	169
22	506	22.26	60.29	82.28	0.200	0.543	0.255	-72.8	21.2	75.8	163
23	519	21.83	61.02	17.06	0.218	0.610	0.170	-69.8	33.1	77.3	154
24	522G	24.04	63.42	17.06	0.230	0.606	0.163	-69.1	35.0	77.5	153
25	535	27.22	66.19	9.71	0.263	0.641	0.094	-63.3	44.7	77.5	144
26	544	35.20	72.16	7.33	0.306	0.629	0.063	-54.6	52.0	75.4	136
27	541	65.07	87.80	5.54	0.410	0.567	0.041	-13.3	66.6	67.9	101
28	568	83.05	93.65	4.13	0.459	0.517	0.022	-18.3	72.8	75.1	75
29	569	83.03	91.98	3.02	0.466	0.516	0.016	-21.8	72.6	75.8	73
30	571	82.92	87.33	1.55	0.482	0.508	0.009	-30.9	70.2	76.7	66
31	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-41.9	65.6	77.8	57
32	577	80.69	72.49	0.38	0.525	0.472	0.002	-53.5	59.2	78.9	47
33	581	77.87	63.33	0.18	0.550	0.447	0.001	-64.0	51.8	82.4	39
34	583	75.96	58.54	0.13	0.564	0.434	0.000	-68.4	-48.0	83.5	35
35	585	73.67	53.70	0.09	0.577	0.421	0.000	-72.0	-44.0	84.4	31
36	587	71.01	48.93	0.07	0.591	0.407	0.000	-74.6	-40.1	84.7	28
37	589	66.69	42.18	0.61	0.609	0.385	0.005	-76.7	-34.0	84.0	23
38	631	69.99	41.82	18.71	0.536	0.320	0.143	-74.9	15.6	78.0	11
39	702	73.30	41.33	39.75	0.474	0.267	0.257	-74.9	-5.7	75.2	355
U=D50 96.31 99.99 82.24 0.345 0.358 0.358 0.0 0.0 0.0 0.0											
$a^*_{p,m} = n_p \cdot p_m = 2.8 \cdot [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a - a_2) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$ $b^*_{p,m} = n_b \cdot p_b = -1.0 \cdot [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_2) Y$ $H_{AB,m} = \text{atan2}[B_m/A_m]$											
DE690-7N											

CIE02 tristimulus values, chromatic values, and putities ($n=2.8, n_0=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.														
no.	O	C	tristimulus values and chromaticities						no- n chromatic values					
			Y	P	P _{max}	P _{min}	P ₁₈	h _{max}	P	P _{max}	P _{min}	h _{min}		
00	396	31.24	12.19	4.45	-6.29	0.75	291	-1.09	-5.46	5.57	281			
01	463	6.34	-1.52	-12.32	12.41	0.26	268	-2.88	-1.49	11.85	255			
02	466	8.01	-1.36	-9.88	9.98	0.26	262	-2.73	-0.96	9.46	253			
03	471	12.66	-1.07	-6.37	6.46	0.26	260	-2.43	-5.55	0.06	246			
04	475	18.23	-0.81	-2.23	2.27	0.26	258	-2.17	-3.44	4.34	237			
05	479	27.00	-0.68	-2.97	3.03	0.258	258	-1.94	-2.15	1.90	227			
06	481	36.56	-0.38	-2.23	2.27	0.26	260	-1.74	-1.44	2.24	219			
07	483	44.45	-0.28	-1.98	2.00	0.261	261	-1.65	-1.15	2.01	215			
08	484	46.29	-0.19	-1.77	1.78	0.263	263	-1.55	-0.95	1.82	211			
09	485	50.09	-0.16	-1.60	1.61	0.266	266	-1.46	-0.78	1.66	208			
10	486	57.81	0.00	-1.41	1.41	0.269	269	-1.40	-0.49	1.40	204			
11	490	58.17	0.04	-1.09	1.09	0.272	272	-1.31	-0.26	1.34	191			
12	497	58.66	0.08	-0.72	0.72	0.276	276	-1.27	0.09	1.28	175			
13	501	59.57	0.11	-0.59	0.60	0.281	281	-1.24	0.23	1.26	169			
14	506	60.15	0.15	-0.46	0.48	0.288	288	-1.20	0.35	1.25	163			
15	510	60.42	0.17	-0.40	0.41	0.293	293	-1.17	0.41	1.22	157			
16	522/62	63.42	0.27	-0.26	0.38	0.311	311	-1.09	0.55	1.22	153			
17	535	66.19	0.40	-0.14	0.43	0.340	340	-0.95	0.67	1.17	144			
18	544	72.16	0.60	-0.10	0.61	0.350	350	-0.75	0.72	1.04	136			
19	561	87.80	1.21	-0.06	1.21	0.357	357	-0.15	0.75	0.77	101			
20	568	88.00	1.25	-0.05	1.25	0.358	358	-0.14	0.75	0.77	75			
21	595	91.98	1.60	-0.03	1.60	0.358	358	0.23	0.78	0.82	71			
22	571	87.33	1.71	-0.01	1.71	0.359	359	0.35	0.80	0.87	66			
23	573/80	80.76	1.88	-0.00	1.88	0.359	359	0.51	0.81	0.96	57			
24	577	72.49	2.10	-0.00	2.10	0.359	359	0.73	0.81	1.10	47			
25	583	59.33	2.37	0.00	2.37	0.359	359	1.00	0.78	1.30	39			
26	588	58.53	2.53	0.00	2.53	0.359	359	1.16	0.82	1.42	35			
27	585	53.70	2.70	-0.00	2.70	0.359	359	1.34	0.82	1.57	31			
28	587	48.93	2.88	-0.00	2.88	0.359	359	1.52	0.82	1.73	28			
29	592/42	42.18	3.18	-0.01	3.18	0.359	359	1.82	0.80	1.99	23			
30	631	41.82	3.19	-0.44	3.32	0.352	352	1.82	0.37	1.86	20			
31	612	38.97	3.15	-0.44	3.32	0.352	352	1.82	0.37	1.86	35			
32	706	40.41	3.19	-1.16	3.40	0.339	339	1.83	-0.34	1.86	349			
33	711	39.70	3.20	-1.35	3.47	0.336	336	1.83	-0.53	1.91	343			
34	724	38.97	3.15	-1.67	3.57	0.332	332	1.89	-0.85	1.98	334			
35	727/36	36.57	3.25	-1.87	3.71	0.331	331	1.89	-0.95	2.12	333			
36	730	33.80	3.29	-2.04	3.55	0.326	326	1.87	-1.29	2.34	324			
37	749	27.83	3.32	-2.69	4.28	0.321	321	1.96	-1.86	2.71	316			
38	766	12.19	2.45	-6.29	6.75	0.291	291	1.09	-5.46	5.57	281			
39	828	6.34	-1.52	-12.32	12.41	0.26	268	-2.88	-1.49	11.85	255			
U-D50	99.99	1.362	-0.222	1.191	0.259	328	0.0	0.0	0.0	0.0	0.0			

$$a_{P-n} = P_{-n} - 2.81(1.000n - 0.171 + 0.0002n^2) \quad A_{-n} = (c-b) \cdot Y \quad C_{ABM} = A_{-n}^2 + B_{-n}^2 \cdot 12$$
$$b_{P-n} = P_{-n} - 1.0(1.000n - 0.0001 + 0.0002n^2) \quad B_{-n} = (b-a) \cdot Y \quad C_{ABM} = \text{atan2}(B_{-n}, A_{-n})$$

CIE10 tristimulus values, chromatic values, and putities ($\gamma_0=2.8, n_0=1.0$).																
Normalized Ostwald (O_{λ}) tristimulus values ($\gamma_0=1.00$), ordered by hue angle.																
no.	O	C	n-purities				m-purities									
			P_{λ}	P_{λ}	P_{λ}	h_{λ}	P_{λ}	P_{λ}	P_{λ}	h_{λ}						
00 692	43.57	3.06	-0.49	3.10	350	1.69	0.32	1.72	370							
01 697	43.34	3.01	-0.99	3.17	341	1.63	-0.18	1.64	353							
02 708	42.59	2.97	-1.33	3.25	335	1.58	-0.59	1.68	341							
03 720	41.54	2.95	-1.50	3.33	332	1.56	-0.92	1.73	331							
04 726	39.99	2.96	-1.31	3.42	330	1.55	-0.89	1.80	330							
05 736M	35.52	2.98	-2.00	3.59	326	1.60	-1.18	1.99	323							
06 376	26.06	3.13	-2.72	4.15	318	1.76	-1.91	2.60	312							
07 458	7.80	-1.24	-10.25	10.32	263	-2.61	-9.44	9.79	254							
08 460	6.88	-1.18	-8.68	6.73	262	-2.55	-7.87	8.28	252							
09 462	6.60	-1.03	-7.48	6.03	261	-2.42	-6.93	7.58	249							
10 462	10.68	-1.10	-7.34	7.42	261	-2.48	-6.53	6.98	249							
11 468	17.92	-0.85	-4.47	4.55	259	-2.22	-3.66	4.28	238							
12 471B	24.41	-0.66	-3.30	3.37	258	-2.03	-2.49	3.22	230							
13 473	28.17	-0.56	-2.87	2.92	258	-1.94	-2.06	2.83	226							
14 475	31.47	-0.47	-2.32	2.46	256	-1.84	-1.72	2.58	218							
15 477	45.10	-0.19	-1.79	1.80	263	-1.56	-0.98	1.85	212							
16 477	45.10	-0.19	-1.79	1.80	263	-1.56	-0.98	1.85	212							
17 479	53.94	-0.00	-1.50	1.50	269	-1.37	-0.69	1.54	206							
18 480S	58.21	0.09	-1.36	1.36	273	-1.28	-0.54	1.39	203							
19 484	56.42	0.06	-1.05	1.06	280	-1.20	-0.34	1.32	190							
20 492	46.65	0.12	-0.67	0.68	280	-1.25	0.14	1.32	190							
21 503	57.40	0.19	-0.42	0.46	294	-1.18	0.38	1.24	161							
22 512	58.45	0.25	-0.31	0.40	308	-1.12	0.49	1.22	156							
23 521G	60.61	0.34	-0.22	0.41	326	-1.03	0.58	1.18	150							
24 531	64.47	0.49	-0.15	0.51	342	-0.88	0.65	1.10	143							
25 543	69.75	0.75	-0.19	0.65	349	-0.67	0.90	1.03	133							
26 563	92.59	1.58	-0.05	1.58	357	0.20	0.75	0.78	74							
27 564	91.09	1.62	-0.04	1.62	358	0.25	0.76	0.80	71							
28 565	89.31	1.67	-0.03	1.67	358	0.29	0.78	0.83	69							
29 565	89.31	1.67	-0.03	1.67	358	0.29	0.78	0.83	69							
30 568	88.22	1.86	-0.33	1.86	358	0.39	0.93	0.78	68							
31 571S	83.38	0.03	-0.20	2.07	359	0.65	0.80	1.04	50							
32 573Y	71.82	2.13	-0.00	2.13	359	0.76	0.80	1.11	46							
33 577	63.22	0.31	-0.00	2.37	359	1.00	0.81	1.28	38							
34 581	54.89	2.66	-0.00	2.66	359	1.28	0.81	1.52	32							
35 581	54.89	2.66	-0.00	2.66	359	1.28	0.81	1.52	32							
36 587R	40.05	2.98	0.00	2.98	0	1.61	1.80	2.16	26							
37 589	44.04	3.07	-0.02	3.07	0	1.69	0.79	1.87	24							
38 692	43.57	3.06	-0.49	3.10	-9	1.69	0.32	1.72	10							
39 697	43.34	3.01	-0.99	3.17	-18	1.63	-0.18	1.64	-6							
U=D50						100.00	1.375	-0.811	1.596	329	0.0	0.0	0.0	0		
$dP_{\lambda} = P_{\lambda} - p_{\lambda} = 2.8(1.0000(-0.171+0.0002)Y)$											$A_{\lambda} = (a-b-c)Y$				$Y_{C_{10}} = \text{atan2}(A_{\lambda}, B_{\lambda})^{1/2}$	
$B_{\lambda} = (b-b-b)Y$											$A_{\lambda} = (a-b-c)Y$				$Y_{C_{10}} = \text{atan2}(A_{\lambda}, B_{\lambda})^{1/2}$	



see similar files: <http://farbe.li-tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li-tu-berlin.de> or <http://130.149.60.45/~farbmunik>

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N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 3/30

CIEF02 tristimulus values, chromatic values, and putities ($n_s=2.8, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.														
no. O C tristimulus values and chromaticities no-chromatic values														
X Y Z x y z λ_{nm} λ_{nm} λ_{nm} λ_{nm} λ_{nm} λ_{nm} λ_{nm} λ_{nm} λ_{nm}														
00	386	51.50	23.94	74.68	0.343	0.159	0.497	39.6	-55.0	67.7	305	19.8	-70.8	73.5
01	460	12.38	6.54	76.19	0.130	0.068	0.801	-26.3	-70.3	75.1	249	26.3	-69.3	75.6
02	465	12.41	9.58	78.25	0.123	0.095	0.780	-26.3	-70.3	75.1	249	26.3	-69.3	75.6
03	467	14.25	11.64	78.87	0.120	0.113	0.766	-30.3	-69.3	75.6	246	30.3	-69.3	75.6
04	473	13.31	20.43	79.83	0.117	0.179	0.702	-45.0	-63.0	77.4	234	45.0	-63.0	77.4
05	475	14.02	24.19	79.97	0.118	0.204	0.676	-50.3	-60.9	78.4	230	50.3	-60.9	78.4
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217	65.1	-49.8	81.9
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217	65.1	-49.8	81.9
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	210	72.3	-42.3	83.8
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	210	72.3	-42.3	83.8
10	483C	27.52	55.03	80.21	0.169	0.338	0.492	-76.0	-34.9	83.7	204	76.0	-34.9	83.7
11	484	28.85	57.21	79.07	0.174	0.346	0.478	-74.6	-32.0	82.8	202	74.6	-32.0	82.8
12	489	25.36	57.41	57.70	0.180	0.408	0.410	-74.6	-10.5	75.4	188	74.6	-10.5	75.4
13	497	22.33	57.50	36.81	0.191	0.492	0.315	-71.8	10.4	72.6	171	71.8	10.4	72.6
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-69.2	23.3	73.0	161	69.2	23.3	73.0
15	512	21.41	58.69	18.79	0.216	0.593	0.190	-67.5	29.4	73.7	156	67.5	29.4	73.7
16	521G	22.42	59.91	14.10	0.232	0.621	0.146	-65.2	35.1	74.1	151	65.2	35.1	74.1
17	524	25.32	62.97	14.10	0.247	0.615	0.137	-64.1	37.6	74.3	149	64.1	37.6	74.3
18	539	30.29	66.55	7.57	0.290	0.637	0.072	-56.0	47.1	73.2	139	56.0	47.1	73.2
19	541	44.95	76.05	0.42	0.355	0.613	0.043	-38.6	65.0	79.6	124	38.6	65.0	79.6
20	568	84.08	93.45	4.02	0.463	0.514	0.022	20.8	72.7	75.7	74	20.8	72.7	75.7
21	568	84.08	93.45	4.02	0.463	0.514	0.022	20.8	72.7	75.7	74	20.8	72.7	75.7
22	569	84.05	90.41	1.96	0.476	0.512	0.011	27.3	72.3	77.3	69	27.3	72.3	77.3
23	570Y	84.04	88.35	1.33	0.483	0.508	0.007	31.3	71.2	77.8	66	31.3	71.2	77.8
24	573	83.15	79.56	0.38	0.509	0.487	0.002	46.1	61.0	80.0	54	46.1	61.0	80.0
25	575	82.44	75.00	0.24	0.520	0.478	0.001	51.3	62.0	80.5	50	51.3	62.0	80.5
26	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38	66.1	51.7	84.0
27	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38	66.1	51.7	84.0
28	585	74.48	53.96	0.02	0.579	0.420	0.000	73.3	44.3	85.6	31	73.3	44.3	85.6
29	590	68.94	44.96	0.00	0.605	0.394	0.000	77.0	36.9	85.4	25	77.0	36.9	85.4
30	592	67.61	42.78	1.14	0.606	0.383	0.010	77.4	34.0	84.6	23	77.4	34.0	84.6
31	694	71.10	42.58	22.52	0.522	0.312	0.165	75.6	12.4	76.7	9	75.6	12.4	76.7
32	702	74.12	42.49	43.40	0.463	0.265	0.271	72.8	-8.4	73.3	353	72.8	-8.4	73.3
33	710	75.15	41.96	55.91	0.434	0.242	0.323	70.2	-21.4	73.4	343	70.2	-21.4	73.4
34	717	75.05	41.30	61.43	0.422	0.232	0.345	68.5	-27.4	73.8	338	68.5	-27.4	73.8
35	726G	74.04	40.08	66.11	0.410	0.222	0.360	66.2	-33.1	74.0	333	66.2	-33.1	74.0
36	729	71.14	37.02	66.11	0.408	0.212	0.379	65.1	-35.6	74.3	331	65.1	-35.6	74.3
37	744	66.16	33.43	72.64	0.384	0.194	0.421	57.0	-45.1	72.7	321	57.0	-45.1	72.7
38	756	51.50	23.94	74.68	0.343	0.159	0.497	39.6	-55.0	67.7	305	19.8	-70.8	73.5
39	825	12.38	6.54	76.19	0.130	0.068	0.801	-26.3	-70.3	75.1	249	26.3	-69.3	75.6
U-D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0														
$a^*_{pnm} = n_p a_p = 2.8[(1.000x+0.171+0.000z)/y]$ $A_{nm} = (a-a_u) Y$ $C_{ABnm} = [A^2 + B^2]^{1/2}$ $b^*_{pnm} = n_b b_p = -1.0[(0.000x+0.000+1.000z)/y]$ $B_{nm} = (b-b_u) Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$														
DE690-3N														

CIEF02 tristimulus values, chromatic values, and putities ($n_s=2.8, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.														
no. O		n -purities					m -purities							
λ_{nm}	λ_{nm}	Y	P_{nm}	P_{nm}	h_{nm}	Y	P_{nm}	P_{nm}	h_{nm}	Y	P_{nm}	P_{nm}	h_{nm}	Y
00	386	23.94	3.02	-3.11	4.34	314	1.65	-2.29	2.83	305	-3.02	-10.82	11.24	254
01	460	6.54	-1.66	-11.64	11.76	261	-2.74	-7.34	7.84	249	2.74	-7.34	7.84	249
02	465	9.58	-1.38	-8.16	8.28	260	-2.60	-5.95	6.50	246	2.60	-5.95	6.50	246
03	467	11.64	-1.24	-6.77	6.88	259	-2.40	-5.00	5.40	240	2.40	-5.00	5.40	240
04	473	13.31	-0.43	-3.90	4.17	242	-1.19	-0.40	1.25	165	1.19	-0.40	1.25	165
05	475	14.02	-0.71	-3.30	3.38	257	-1.08	-0.58	1.23	151	1.08	-0.58	1.23	151
06	479	36.91	-0.39	-2.17	2.20	259	-1.76	-1.34	2.22	217	1.76	-1.34	2.22	217
07	479	36.91	-0.39	-2.17	2.20	259	-1.76	-1.34	2.22	217	1.76	-1.34	2.22	217
08	481	46.03	-0.20	-1.74	1.75	263	-1.57	-0.92	1.82	210	1.57	-0.92	1.82	210
09	481	46.03	-0.20	-1.74	1.75	263	-1.57	-0.92	1.82	210	1.57	-0.92	1.82	210
10	483C	55.03	-0.01	-1.45	1.45	269	-1.38	-0.63	1.52	204	1.38	-0.63	1.52	204
11	484	57.21	0.02	-1.38	1.38	271	-1.33	-0.56	1.44	202	1.33	-0.56	1.44	202
12	489	57.41	0.06	-1.00	1.00	273	-1.30	-0.18	1.31	188	1.30	-0.18	1.31	188
13	497	57.50	0.11	-0.64	0.65	280	-1.25	0.18	1.26	171	1.25	0.18	1.26	171
14	505	58.03	0.17	-0.41	0.41	292	-1.19	0.40	1.25	161	1.19	0.40	1.25	161
15	512	58.69	0.21	-0.38	0.38	303	-1.15	0.50	1.25	156	1.15	0.50	1.25	156
16	521G	59.91	0.27	-0.23	0.36	319	-1.08	0.58	1.23	151	1.08	0.58	1.23	151
17	524	62.97	0.34	-0.22	0.41	327	-1.01	0.59	1.18	149	1.01	0.59	1.18	149
18	539	66.55	0.52	-0.11	0.53	347	-0.84	0.70	1.00	139	0.84	0.70	1.00	139
19	541	76.05	0.85	-0.07	0.86	355	-0.50	0.74	0.90	124	0.50	0.74	0.90	124
20	568	93.45	1.58	-0.04	1.58	358	-0.22	0.77	0.81	74	0.22	0.77	0.81	74
21	568	93.45	1.58	-0.04	1.58	358	-0.22	0.77	0.81	74	0.22	0.77	0.81	74
22	569	90.41	1.66	-0.02	1.66	359	-0.30	0.80	0.85	69	0.30	0.80	0.85	69
23	570Y	88.35	1.72	-0.01	1.72	359	-0.35	0.80	0.88	66	0.35	0.80	0.88	66
24	573	79.56	1.94	-0.00	1.94	359	-0.57	0.81	1.00	54	0.57	0.81	1.00	54
25	575	75.00	2.04	-0.00	2.04	359	-0.67	0.81	1.06	50	0.67	0.81	1.06	50
26	580	63.07	2.41	-0.00	2.41	359	-1.04	0.82	1.33	38	1.04	0.82	1.33	38
27	580	63.07	2.41	-0.00	2.41	359	-1.04	0.82	1.33	38	1.04	0.82	1.33	38
28	585	53.96	2.72	-0.00	2.72	359	-1.35	0.82	1.58	31	1.35	0.82	1.58	31
29	590	44.96	3.08	0.00	3.08	359	-1.71	0.82	1.90	25	1.71	0.82	1.90	25
30	592	42.78	3.17	-0.02	3.17	359	-1.81	0.79	1.97	23	1.81	0.79	1.97	23
31	694	42.58	3.14	-0.52	3.18	350	-1.77	0.29	1.80	9	1.77	0.29	1.80	9
32	702	42.49	3.08	-1.02	3.24	341	-1.71	-0.19	1.72	353	1.71	-0.19	1.72	353
33	710	41.96	3.04	-1.33	3.31	336	-1.67	-0.51	1.75	343	1.67	-0.51	1.75	343
34	717	41.30	3.02	-1.48	3.37	333	-1.66	-0.66	1.78					
35	726M	40.67	3.01	-1.64	3.34	331	-1.65	-0.72	1.83					
36	731	37.02	3.11	-1.78	3.50	324	-1.63	-0.80	2.00	334	1.63	-0.80	2.00	334
37	734	34.83	3.07	-1.77	3.76	324	-1.70	-1.35	2.17	321	1.70	-1.35	2.17	321
38	756	23.94	3.02	-3.11	4.34	314	1.65	-2.29	2.83	305	-3.02	-10.82	11.24	254
39	825	6.54	-1.66	-11.64	11.76	261	-2.74	-7.34	7.84	249	2.74	-7.34	7.84	249
U-D50		100.00	1.366	-0.821	1.594	328	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$p_{nm} = n_p - p_s - 2.1(0.000x - 0.171 + 0.0002y) \quad A_{nm} = (a-b)y \quad Y_{nm} = A_{nm}^2 + B_{nm}^{1/2}$ $b = p_{nm} - p_s - 2.1(0.000x - 0.0001 + 0.0002y) \quad B_{nm} = (a-b)y \quad Y_{nm} = A_{nm}^2 + B_{nm}^{1/2}$														

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /PS
application for measurement of offset print output

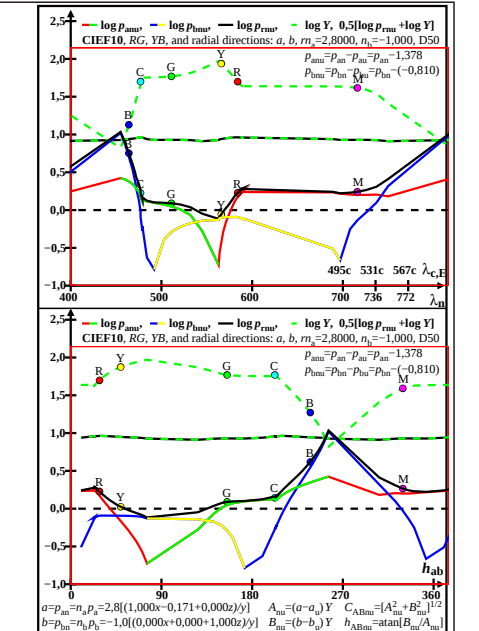
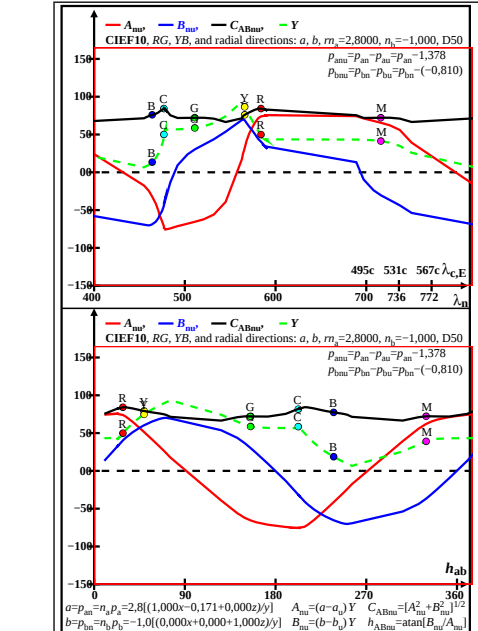
TUB material: code=rha4ta

TUB-test chart DE69; 4 CIE and 2 R17M observers, colorimetric calculations of chromatic values
purity definition: $a=2,8[(x-0,171)/y]$, $b=-1,0[z/y]$

http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF /PS
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 4/30

CIEF10 tristimulus values, chromatic values, and putities ($n=2,8, n_0=-1,0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	X	Y	Z	x	y	z	A ₁₀₀	B ₁₀₀	h ₁₀₀
00	380	52,92	25,78	74,65	0,345	0,168	0,486	39,2	-53,7	66,5	306
01	455	13,14	6,61	74,65	0,139	0,070	0,790	-17,5	-69,2	71,4	255
02	460	13,28	9,49	77,94	0,131	0,094	0,773	-24,1	-70,2	74,2	251
03	462	13,30	11,32	78,97	0,128	0,109	0,762	-27,9	-69,7	75,1	248
04	464	13,34	13,45	79,69	0,125	0,126	0,748	-32,1	-68,7	75,9	244
05	468	13,69	18,67	80,47	0,121	0,165	0,713	-41,4	-65,3	77,3	237
06	471	14,73	25,21	80,80	0,121	0,208	0,669	-51,3	-60,3	79,2	229
07	472	15,63	28,96	80,89	0,124	0,230	0,644	-56,2	-57,4	80,3	225
08	475	18,33	37,06	80,98	0,134	0,271	0,593	-65,0	-50,9	82,6	218
09	477	22,39	45,70	81,01	0,150	0,306	0,543	-71,6	-43,9	84,1	211
10	477C	24,94	50,08	81,01	0,159	0,320	0,519	-73,9	-40,4	84,2	208
11	479	30,58	58,60	78,68	0,182	0,349	0,468	-75,5	-31,2	81,7	202
12	479	29,07	56,38	80,12	0,175	0,340	0,483	-75,5	-34,4	83,0	204
13	484	25,63	56,72	79,32	0,180	0,400	0,418	-74,2	-13,3	75,4	190
14	492	22,37	56,85	76,73	0,192	0,490	0,316	-71,2	-0,64	72,9	162
15	503	21,57	57,63	72,95	0,211	0,564	0,224	-67,9	23,7	71,9	160
16	511G	22,30	58,68	72,25	0,227	0,597	0,175	-65,4	30,2	72,1	155
17	521	24,56	60,88	72,62	0,250	0,620	0,128	-62,0	36,6	72,1	149
18	532	29,89	65,12	63,04	0,287	0,625	0,086	-55,9	43,7	70,9	141
19	545	43,82	74,21	6,37	0,352	0,596	0,051	-39,1	53,7	66,5	126
20	563	83,59	93,38	6,37	0,455	0,509	0,034	-17,5	69,2	71,4	75
21	564	83,45	90,50	3,08	0,471	0,511	0,017	-24,1	70,2	74,2	71
22	565	83,43	88,67	2,06	0,479	0,509	0,011	-27,9	69,7	75,1	68
23	566Y	83,39	86,54	1,34	0,486	0,505	0,007	-32,2	68,7	75,9	64
24	568	83,04	81,32	0,56	0,503	0,493	0,003	-62,1	-36,7	75,1	48
25	571	82,00	74,78	0,23	0,522	0,476	0,001	-51,3	-60,3	79,2	47
26	573	81,10	71,03	0,14	0,532	0,466	0,000	-56,2	-57,3	80,3	45
27	577	78,40	62,93	0,05	0,554	0,445	0,000	-65,0	-50,9	82,6	38
28	581	74,33	54,29	0,02	0,577	0,421	0,000	-71,7	-43,9	84,1	31
29	584	71,79	49,91	0,01	0,589	0,410	0,000	-73,9	-40,4	84,2	28
30	591	66,15	41,39	2,33	0,602	0,376	0,021	-75,5	-31,2	81,7	22
31	588	67,67	43,61	0,91	0,603	0,388	0,008	-75,6	-34,4	83,1	24
32	689	71,10	43,27	21,71	0,522	0,317	0,159	-74,2	13,3	75,4	10
33	697	74,36	43,14	44,30	0,459	0,266	0,273	-71,2	-0,64	72,9	352
34	708	75,16	42,36	58,08	0,428	0,241	0,330	-65,9	-30,3	72,1	335
35	716M	74,43	41,31	63,78	0,414	0,230	0,355	-62,1	-36,7	75,1	348
36	726	72,17	39,11	68,41	0,401	0,217	0,380	-62,1	-36,7	75,1	329
37	737	66,83	34,86	71,99	0,384	0,200	0,414	-55,9	-43,7	71,0	321
38	750	52,92	25,78	74,65	0,345	0,168	0,486	-39,2	-53,7	66,5	306
39	820	13,14	6,61	74,65	0,139	0,070	0,790	-17,5	-69,2	71,4	255
U=D50 96,74 100,00 81,03 0,348 0,360 0,360 0,0 0,0 0,0 0,0											
$a^*_{P_{100}}=a^*_{P_{100}}=2,8[(1,000x-0,171+0,000z)/y]$ $A_{100}=(a^*-a_0)/Y$ $C_{AB80}=[A^2+B^2]^{1/2}$ $b^*_{P_{100}}=b^*_{P_{100}}=-1,0[(0,000x+0,000+1,000z)/y]$ $B_{100}=(b-b_0)/Y$ $h_{AB80}=\arctan[B_{100}/A_{100}]$											

CIEF10 tristimulus values, chromatic values, and putities ($n=2,8, n_0=-1,0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	X	Y	Z	x	y	z	A ₁₀₀	B ₁₀₀	h ₁₀₀
00	380	52,92	25,78	74,65	0,345	0,168	0,486	39,2	-53,7	66,5	306
01	455	13,14	6,61	74,65	0,139	0,070	0,790	-17,5	-69,2	71,4	255
02	460	13,28	9,49	77,94	0,131	0,094	0,773	-24,1	-70,2	74,2	251
03	462	13,30	11,32	78,97	0,128	0,109	0,762	-27,9	-69,7	75,1	248
04	464	13,34	13,45	79,69	0,125	0,126	0,748	-32,1	-68,7	75,9	244
05	468	13,69	18,67	80,47	0,121	0,165	0,713	-41,4	-65,3	77,3	237
06	471	14,73	25,21	80,80	0,121	0,208	0,669	-51,3	-60,3	79,2	229
07	472	15,63	28,96	80,89	0,124	0,230	0,644	-56,2	-57,4	80,3	225
08	475	18,33	37,06	80,98	0,134	0,271	0,593	-65,0	-50,9	82,6	218
09	477	22,39	45,70	81,01	0,150	0,306	0,543	-71,6	-43,9	84,1	211
10	477C	24,94	50,08	81,01	0,159	0,320	0,519	-73,9	-40,4	84,2	208
11	479	30,58	58,60	78,68	0,182	0,349	0,468	-75,5	-31,2	81,7	202
12	479	29,07	56,38	80,12	0,175	0,340	0,483	-75,5	-34,4	83,0	204
13	484	25,63	56,72	79,32	0,180	0,400	0,418	-74,2	-13,3	75,4	190
14	492	22,37	56,85	76,73	0,192	0,490	0,316	-71,2	-0,64	72,9	162
15	503	21,57	57,63	72,95	0,211	0,564	0,224	-67,9	23,7	71,9	160
16	511G	22,30	58,68	72,25	0,227	0,597	0,175	-65,4	30,2	72,1	155
17	521	24,56	60,88	72,62	0,250	0,620	0,128	-62,0	36,6	72,1	149
18	532	29,89	65,12	63,04	0,287	0,625	0,086	-55,9	43,7	70,9	141
19	545	43,82	74,21	6,37	0,352	0,596	0,051	-39,1	53,7	66,5	126
20	563	83,59	93,38	6,37	0,455	0,509	0,034	-17,5	69,2	71,4	75
21	564	83,45	90,50	3,08	0,471	0,511	0,017	-24,1	70,2	74,2	71
22	565	83,43	88,67	2,06	0,479	0,509	0,011	-27,9	69,7	75,1	68
23	566Y	83,39	86,54	1,34	0,486	0,505	0,007	-32,2	68,7	75,9	64
24	568	83,04	81,32	0,56	0,503	0,493	0,003	-62,1	-36,7	75,1	48
25	571	82,00	74,78	0,23	0,522	0,476	0,001	-51,3	-60,3	79,2	47
26	573	81,10	71,03	0,14	0,532	0,466	0,000	-56,2	-57,3	80,3	45
27	577	78,40	62,93	0,05	0,554	0,445	0,000	-65,0	-50,9	82,6	38
28	581	74,33	54,29	0,02	0,577	0,421	0,000	-71,7	-43,9	84,1	31
29	584	71,79	49,91	0,01	0,589	0,410	0,000	-73,9	-40,4	84,2	28
30	591	66,15	41,39	2,33	0,602	0,376	0,021	-75,5	-31,2	81,7	22
31	588	67,67	43,61	0,91	0,603	0,388	0,008	-75,6	-34,4	83,1	24
32	689	71,10	43,27	21,71	0,522	0,317	0,159	-74,2	13,3	75,4	10
33	697	74,36	43,14	44,30	0,459	0,266	0,273	-71,2	-0,64	72,9	352
34	708	75,16	42,36	58,08	0,428	0,241	0,330	-65,9	-30,3	72,1	335
35	716M	74,43	41,31	63,78	0,414	0,230	0,355	-62,1	-36,7	75,1	348
36	726	72,17	39,11	68,41	0,401	0,217	0,380	-62,1	-36,7	75,1	329
37	737	66,83	34,86	71,99	0,384	0,200	0,414	-55,9	-43,7	71,0	321
38	750	52,92	25,78	74,65	0,345	0,168	0,486	-39,2	-53,7	66,5	306
39	820	13,14	6,61	74,65	0,139	0,070	0,790	-17,5	-69,2	71,4	255
U=D50 100,00 1,378 -0,810 1,598 329 0,0 0,0 0,0 0,0											
$a^*_{P_{100}}=a^*_{P_{100}}=2,8[(1,000x-0,171+0,000z)/y]$ $A_{100}=(a^*-a_0)/Y$ $C_{AB80}=[A^2+B^2]^{1/2}$ $b^*_{P_{100}}=b^*_{P_{100}}=-1,0[(0,000x+0,000+1,000z)/y]$ $B_{100}=(b-b_0)/Y$ $h_{AB80}=\arctan[B_{100}/A_{100}]$											



CIEF10 tristimulus values, chromatic values, and putities ($n=2,8, n_0=-1,0$). Normalized Ostwald (O) tristimulus values ($Y_{100}=100$), ordered by hue angle.											
no.	O	C	tristimulus values and chromaticities					mu-chromatic values			
			X	Y	Z	x	y	z	A ₁₀₀	B ₁₀₀	h ₁₀₀
00	388	67,67	43,61	0,91	0,603	0,388	0,008	-75,6	-34,4	83,1	304
01	689	71,10	43,27	21,71	0,522	0,317	0,159	-74,2	13,3	75,4	370
02	697	74,36	43,14	44,30	0,459	0,266	0,273	-71,2	-0,64	72,9	352
03	708	75,16	42,36	58,08	0,428	0,241	0,330	-65,9	-30,3	72,1	335
04	716	74,43	41,31	63,78	0,414	0,230	0,355	-62,1	-36,7	72,1	330
05	726M	72,17	39,11	68,41	0,401	0,217	0,380	-62,1	-36,7	72,1	329
06	737	66,83	34,86	71,99	0,384	0,200	0,414	-55,9	-43,7	71,0	321
07	380	52,92	2,00	0,000	0,000	0,000	0,000	-55,9	-43,7	71,0	321
08	455	13,34	6,61	74,65	0,139	0,070	0,790	-71,5	-69,2	71,4	255
09	460	13,28	4,99	77,94	0,131	0,094	0,773	-24,1	-70,2	74,2	251
10	462	13,34	13,32	78,97	0,128	0,109	0,762	-27,9	-69,7	75,1	248
11	464	13,34	13,45	79,69	0,125	0,126	0,748	-32,1	-68,7	75,9	244
12	465	13,34	13,48	80,41	0,122	0,146	0,735	-36,3	-67,7	76,7	240
13	471	14,73	25,21	80,80	0,121	0,208	0,669	-51,3	-60,3	79,2	229
14	472	15,63	28,96	80,89	0,124	0,230	0,644	-56,2	-57,4	80,3	225
15	475	18,33	37,06	80,98	0,134	0,271	0,593	-65,0	-50,9	82,6	218
16	477	22,39	45,07	81,01	0,150	0,306	0,543	-71,6	-43,9	84,1	211
17	479	25,10	50,10	81,01	0,167	0,334	0,498	-75,5	-38,2	84,1	207
18	479C	30,58	58,60	78,68	0,182	0,349	0,463	-75,5	-31,2	81,7	202
19	479	30,57	56,38	80,12	0,175	0,340	0,483	-75,5	-34,4	83,0	204
20	484	25,63	56,72	59,32	0,180	0,400	0,448	-74,2	-13,3	75,4	192
21	492	23,27	56,85	36,73	0,192	0,490	0,316	-71,3	9,3	71,8	172
22	503	21,51	57,63	23,55	0,211	0,564	0,228	-65,9	-30,3	72,1	160
23	511G	23,30	56,88	17,25	0,227	0,597	0,175	-65,4	-30,2	72,1	155
24	521	24,56	60,68	12,62	0,250	0,620	0,128	-62,0	-36,6	72,1	149
25	532	24,99	65,12	9,04	0,287	0,625	0,080	-55,9	-43,7	71,0	142
26	545	43,82	74,21	6,37	0,382	0,551	0,051	-39,9	-53,7	66,5	126
27	561	51,37	82,33	4,37	0,464	0,509	0,017	-24,1	-70,2	74,2	117
28	564	83,45	90,50	3,08	0,471	0,511	0,017	-24,1	69,2	74,2	71
29	565	83,43	88,67	2,60	0,479	0,509	0,011	27,9	-69,7	75,1	68
30	566	83,39	86,54	1,34	0,486	0,505	0,007	32,2	68,7	75,9	65
31	568	83,04	81,62	0,56	0,493	0,503	0,000	41,4	-63,3	77,3	54
32	570	74,74	74,74	0,00	0,500	0,476	0,001	51,3	-57,4	80,3	49
33	573	81,10	71,03	0,14	0,532	0,466	0,000	56,2	-57,3	80,3	45
34	577	78,40	62,93	0,05	0,554	0,445	0,000	65,0	-50,9	82,6	38
35	581	74,33	54,29	0,02	0,577	0,421	0,001	71,7	-43,9	84,1	34
36	581	74,39	49,01	0,01	0,580	0,400	0,000	73,0	-40,4	84,1	31
37	583	66,31	41,39	0,03	0,602	0,376	0,021	75,5	-38,2	81,7	27
38	588	67,67	43,61	0,91	0,603	0,388	0,008	75,6	-34,4	83,1	24
39	689	71,10	43,27	21,71	0,522	0,317	0,159	-74,2	13,3	75,4	21
D=50											
$d_{p=0} = 96,74(1,000,010,8103,038,346,360,360) \quad A_{100} = 0,00 \quad A_{100}^2 = 0,00$											
$d_{b=p=0} = 2,8(1,000,011,000,017,000,002) \quad B_{100} = (a-b) \quad Y_{100} = 100 \quad C_{A100} = A_{100}^2 \quad B_{100}^2$											
$b_{p=0} = 96,74(1,000,010,8103,038,346,360,360) \quad B_{100} = (b-b) \quad Y_{100} = 100 \quad h_{A100} = A_{100}^2 \quad B_{100}^2$											

DEGNO-7

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technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmeterik>

R17M tristimulus values, chromatic values, and putities ($n=2.8, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			nu-putities			
λ_{nm}	X	Y	Z	x	y	z	A_{nm}	B_{nm}	P_{nm}	P_{nm}	P_{nm}	h_{nm}
00 373	50.84	23.58	64.46	0.366	0.169	0.464	44.8	-45.4	63.7	314		
01 450	26.22	10.37	70.14	0.245	0.097	0.657	8.6	-61.7	62.3	277		
02 463	19.81	9.03	72.37	0.195	0.089	0.715	-4.8	-65.0	65.2	265		
03 465	19.87	11.18	74.25	0.188	0.106	0.705	-9.4	-65.2	65.9	261		
04 470B	20.04	16.46	77.00	0.176	0.145	0.678	-19.9	-63.6	66.7	252		
05 474	20.76	23.15	78.71	0.169	0.188	0.641	-31.0	-60.0	67.5	242		
06 477	22.69	31.32	79.75	0.169	0.234	0.596	-41.7	-54.4	68.6	232		
07 479	24.27	35.77	80.07	0.173	0.255	0.571	-46.2	-51.1	68.9	227		
08 481	28.86	45.22	80.48	0.186	0.292	0.520	-52.7	-43.9	68.6	219		
09 482	30.21	48.30	79.14	0.191	0.306	0.501	-54.4	-40.1	67.6	216		
10 487C	28.13	48.90	65.44	0.186	0.348	0.465	-58.4	-25.9	63.9	203		
11 496	20.48	50.06	44.06	0.178	0.436	0.384	-63.4	-3.6	63.5	183		
12 500	20.60	52.31	38.55	0.184	0.469	0.345	-64.5	-3.7	64.6	176		
13 509	19.40	53.50	28.42	0.191	0.528	0.280	-66.6	14.8	66.2	167		
14 511	21.83	56.54	28.46	0.204	0.529	0.266	-64.4	17.2	66.7	165		
15 518	24.65	60.36	24.01	0.226	0.553	0.220	-62.6	24.7	67.3	158		
16 530G	29.99	65.40	16.35	0.268	0.585	0.146	-55.6	36.5	66.5	146		
17 538	43.18	76.41	16.37	0.317	0.562	0.120	-44.7	45.3	63.7	134		
18 553	67.80	89.62	10.69	0.403	0.533	0.063	-8.6	61.7	62.3	97		
19 557	74.22	90.96	8.45	0.427	0.523	0.048	-4.9	65.0	65.2	85		
20 558	74.15	88.81	6.58	0.437	0.523	0.038	9.5	65.1	65.8	81		
21 561	73.98	83.52	3.84	0.458	0.517	0.023	19.9	63.6	66.7	72		
22 565	73.26	76.83	2.11	0.481	0.504	0.013	31.1	59.9	67.5	62		
23 570Y	71.33	68.67	1.09	0.505	0.486	0.007	41.7	54.4	68.5	52		
24 572	69.75	64.22	0.76	0.517	0.476	0.005	46.2	51.1	68.9	47		
25 578B	65.16	54.77	0.35	0.541	0.455	0.002	52.7	43.9	68.6	39		
26 581	63.81	51.69	1.69	0.544	0.441	0.014	54.5	40.0	67.6	36		
27 600	67.89	51.09	15.38	0.505	0.380	0.114	58.5	25.9	63.9	23		
28 705	73.42	47.68	42.28	0.449	0.291	0.258	64.5	-3.7	64.6	356		
29 716	74.62	46.49	52.41	0.430	0.267	0.302	64.6	-14.8	66.3	347		
30 716	72.19	43.45	52.37	0.429	0.258	0.311	64.4	-17.2	66.7	345		
31 723	69.37	39.63	56.82	0.418	0.238	0.342	62.6	-24.7	67.3	338		
32 735	64.03	34.59	64.49	0.392	0.212	0.395	55.6	-36.5	66.5	326		
33 743	50.84	23.58	64.46	0.366	0.169	0.464	44.8	-45.4	63.7	314		
34 815	26.22	10.37	70.14	0.245	0.097	0.657	8.6	-61.7	62.3	277		
U=D50	94.03	100.00	80.83	0.342	0.363	0.363	0.0	0.0	0.0	0		
DE69-3N												
$a^*_{nm} = n_{nm} p_{nm} = 2.8[(1.000x - 0.171 + 0.000z)/y]$ $A_{nm} = (a^*_{nm})/Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$ $b^*_{nm} = n_{nm} p_{nm} = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{nm} = (b^*_{nm})/Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$												

R17M tristimulus values, chromatic values, and putities ($n=2.8, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			nu-chromatic values			nu-putities			
λ_{nm}	X	Y	Z	x	y	z	A_{nm}	B_{nm}	P_{nm}	P_{nm}	P_{nm}	h_{nm}
00 373	23.58	3.21	-2.73	4.22	319	1.90	-1.92	2.70	314			
01 450	10.37	2.15	-6.76	7.09	287	0.83	-5.95	6.01	277			
02 463	9.03	0.77	-8.01	8.05	275	-0.54	-7.20	7.22	265			
03 465	11.18	0.46	-6.64	6.65	274	-0.84	-5.83	5.89	261			
04 470B	16.46	0.70	-4.67	4.67	271	-1.30	-4.06	4.05	252			
05 474	23.15	-0.02	-3.40	3.40	269	-1.34	-2.59	2.91	242			
06 477	31.32	-0.01	-2.54	2.54	269	-1.33	-1.73	2.19	232			
07 479	35.77	0.02	-2.23	2.23	270	-1.29	-1.43	1.92	227			
08 481	45.22	0.15	-1.77	1.78	274	-1.16	-0.97	1.51	219			
09 482	48.30	0.18	-1.63	1.64	276	-1.12	-0.83	1.40	216			
10 487C	48.90	0.12	-1.33	1.34	275	-1.19	-0.53	1.30	203			
11 496	50.06	0.04	-0.88	0.88	273	-1.26	-0.07	1.26	183			
12 500	52.31	0.08	-0.73	0.74	276	-1.23	0.07	1.23	176			
13 509	53.50	0.10	-0.53	0.54	281	-1.20	0.27	1.23	167			
14 511	56.54	0.17	-0.50	0.53	280	-1.13	0.30	1.16	165			
15 518	60.36	0.27	-0.39	0.48	305	-1.03	0.41	1.11	158			
16 530G	65.40	0.46	-0.25	0.52	331	-0.85	0.55	1.01	146			
17 538	76.41	0.73	-0.21	0.76	343	-0.58	0.59	0.83	134			
18 553	89.62	1.22	-0.11	1.22	354	-0.09	0.68	0.69	97			
19 557	90.96	0.70	0.05	0.90	357	0.05	0.71	0.71	85			
20 558	88.81	1.42	-0.07	1.42	357	0.10	0.73	0.74	81			
21 561	83.52	1.55	-0.04	1.55	358	0.23	0.76	0.79	72			
22 565	76.83	1.72	-0.02	1.72	359	0.40	0.78	0.87	62			
23 570Y	68.67	1.92	-0.01	1.92	359	0.60	0.79	0.99	52			
24 572	64.22	2.03	-0.01	2.03	359	0.72	0.79	1.07	47			
25 578B	54.77	2.27	-0.00	2.27	359	0.96	0.80	1.25	39			
26 581	51.69	2.37	-0.03	2.37	359	1.05	0.77	1.30	36			
27 600	51.09	2.46	-0.30	2.47	353	1.14	0.50	1.25	23			
28 705	47.68	2.67	-0.88	2.81	341	1.35	-0.07	1.35	356			
29 716	46.49	2.67	-1.12	2.93	337	1.39	-0.31	1.42	347			
30 716	43.45	2.80	-1.20	3.04	336	1.48	-0.39	1.53	345			
31 723	39.63	2.89	-1.43	3.23	333	1.58	-0.62	1.70	338			
32 735	34.59	2.92	-1.86	3.46	327	1.60	-1.05	1.92	326			
33 743	23.58	3.21	-2.73	4.22	319	1.90	-1.92	2.70	314			
34 815	10.37	2.15	-6.76	7.09	287	0.83	-5.95	6.01	277			
U=D50	100.00	1.316	-0.808	1.544	328	0.0	0.0	0.0	0			
DE69-4N												
$a^*_{nm} = n_{nm} p_{nm} = 2.8[(1.000x - 0.171 + 0.000z)/y]$ $A_{nm} = (a^*_{nm})/Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$ $b^*_{nm} = n_{nm} p_{nm} = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_{nm} = (b^*_{nm})/Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$												

R17M tristimulus values, chromatic values, and putities ($n=2.8, n_c=1.0$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C	tristimulus values and chromaticities					nu-chromatic values				
			X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}	h_{nm}
00	6705	67.89	51.09	15.38	0.505	0.380	0.114	0.414	56.5	-35.9	63.9	383
01	700	74.23	47.68	42.28	0.449	0.291	0.258	0.258	64.4	-3.7	64.6	356
02	714	74.62	46.49	52.41	0.430	0.267	0.302	0.302	64.6	-14.8	66.3	347
03	716	72.19	43.45	52.37	0.429	0.258	0.311	0.311	64.4	-17.2	66.7	345
04	718	68.35	43.59	56.82	0.429	0.258	0.311	0.311	62.6	-16.5	66.7	345
05	735A	64.03	34.59	59.49	0.392	0.212	0.395	0.395	64.6	-36.5	66.5	326
06	737A	58.04	28.58	64.46	0.366	0.169	0.464	0.464	64.6	-45.4	63.7	314
07	450	26.22	10.37	70.14	0.245	0.097	0.657	0.657	8.6	-61.7	62.3	277
08	463	19.81	9.03	72.37	0.195	0.089	0.715	0.715	-4.8	-65.0	65.2	265
09	465	19.87	11.18	74.25	0.188	0.106	0.705	0.705	-9.4	-65.2	65.9	261
10	470B	20.04	16.46	77.00	0.176	0.145	0.678	0.678	-19.9	-63.6	66.7	252
11	474	20.76	23.15	78.71	0.169	0.188	0.641	0.641	-31.0	-60.0	67.5	242
12	477B	22.69	31.32	79.75	0.169	0.234	0.596	0.596	-41.7	-54.4	68.6	232
13	479	24.27	35.77	80.07	0.173	0.255	0.571	0.571	-46.2	-51.1	68.9	227
14	481	28.86	45.22	80.48	0.186	0.292	0.520	0.520	-52.7	-43.9	68.6	219
15	482	30.21	48.30	79.14	0.191	0.306	0.501	0.501	-54.4	-40.1	67.6	216
16	487	28.13	48.90	65.44	0.186	0.348	0.465	0.465	-58.4	-25.9	63.9	203
17	496	20.48	50.06	44.06	0.178	0.436	0.384	0.384	-63.4	-3.6	63.5	183
18	500	20.60	52.31	38.55	0.184	0.469	0.345	0.345	-64.5	-3.7	64.6	176
19	509	19.40	53.50	28.42	0.191	0.528	0.280	0.280	-66.6	14.8	66.2	167
20	511	21.83	56.54	28.46	0.204	0.529	0.266	0.266	-64.4	17.2	66.7	165
21	518	24.65	60.36	20.01	0.226	0.153	0.220	0.220	-62.6	24.7	67.3	158
22	530	29.99	65.40	16.35	0.268	0.085	0.146	0.146	-55.6	36.5	66.5	146
23	538B	43.18	76.41	16.37	0.317	0.062	0.120	0.120	-44.7	45.3	63.7	134
24	553	67.80	89.02	10.69	0.403	0.533	0.063	0.063	-8.6	61.7	62.3	97
25	557	74.22	90.96	8.45	0.427	0.533	0.063	0.063	-9.4	65.0	65.2	93
26	558	74.15	89.81	6.58	0.437	0.523	0.039	0.039	-9.5	65.1	65.3	91
27	561	73.98	83.52	3.84	0.458	0.517	0.023	0.023	-19.9	63.6	66.7	72
28	565	73.26	76.83	2.11	0.481	0.504	0.013	0.013	-31.1	59.9	67.5	62
29	570	71.73	68.67	1.09	0.505	0.486	0.005	0.005	-41.7	54.4	68.6	52
30	572	69.75	64.22	0.76	0.517	0.476	0.005	0.005	-46.2	51.1	68.9	47
31	578	65.16	54.47	0.35	0.541	0.402	0.002	0.002	-52.7	43.9	68.6	39
32	581B	63.81	51.69	1.69	0.544	0.441	0.014	0.014	-54.5	40.0	67.6	36
33	589	61.09	49.09	15.38	0.505	0.380	0.114	0.114	56.5	-25.9	63.9	383
34	705	74.23	47.68	42.28	0.449	0.291	0.258	0.258	64.4	-3.7	64.6	-3
U=50	94.03	100.00	80.83	0.342	0.363	0.363	0.363	0.363	0.0	0.0	0.0	0

$$d=P_{nm}n_{nm}n_c=2.8(1.000(0.0-0.171+0.0002)y) \quad A_{nm}=(c-b)_{nm} \quad C_{ABnm}=\frac{A_{nm}B_{nm}}{A_{nm}+B_{nm}} \quad B_{ABnm}=\frac{B_{nm}C_{nm}}{B_{nm}+C_{nm}} \quad C_{ABnm}=\frac{C_{nm}A_{nm}}{C_{nm}+A_{nm}}$$
$$P_{nm}=\frac{A_{nm}B_{nm}C_{nm}}{A_{nm}+B_{nm}+C_{nm}} \quad A_{nm}=\frac{A_{nm}B_{nm}C_{nm}}{A_{nm}+B_{nm}+C_{nm}} \quad B_{nm}=\frac{A_{nm}B_{nm}C_{nm}}{A_{nm}+B_{nm}+C_{nm}} \quad C_{nm}=\frac{A_{nm}B_{nm}C_{nm}}{A_{nm}+B_{nm}+C_{nm}}$$

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technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

<http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 6/30

TUB registration: 20180801-DE69/DE69L0NP.PDF /PS
application for measurement of offset print output

TUB material: code=rha4ta

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.8, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values					
			X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}
01 375	52.09	25.14	67.62	0.359	0.173	0.466	0.359	0.173	0.466	0.359	0.173
01 444	27.16	9.33	67.62	0.260	0.089	0.649	0.260	0.089	0.649	0.260	0.089
02 463	21.19	9.55	72.48	0.205	0.092	0.702	0.205	0.092	0.702	0.205	0.092
03 465	22.27	11.71	74.36	0.198	0.109	0.692	0.198	0.109	0.692	0.198	0.109
04 508	21.43	17.01	77.11	0.185	0.147	0.667	0.185	0.147	0.667	0.185	0.147
05 474	22.09	23.68	78.83	0.177	0.190	0.632	0.177	0.190	0.632	0.177	0.190
06 476	22.83	27.59	79.42	0.175	0.212	0.611	0.175	0.212	0.611	0.175	0.212
07 479	25.44	36.25	80.19	0.179	0.255	0.565	0.179	0.255	0.565	0.179	0.255
08 480	27.41	40.88	80.43	0.184	0.274	0.540	0.184	0.274	0.540	0.184	0.274
09 481	29.88	45.66	80.60	0.191	0.292	0.516	0.191	0.292	0.516	0.191	0.292
10 482C	31.14	48.71	79.26	0.195	0.306	0.498	0.195	0.306	0.498	0.195	0.306
11 488	25.13	49.09	60.78	0.186	0.363	0.450	0.186	0.363	0.450	0.186	0.363
12 496	20.67	50.20	44.12	0.179	0.436	0.383	0.179	0.436	0.383	0.179	0.436
13 500	20.63	52.39	38.61	0.184	0.469	0.345	0.184	0.469	0.345	0.184	0.469
14 505	20.59	54.04	33.36	0.190	0.500	0.308	0.190	0.500	0.308	0.190	0.500
15 515	20.37	55.82	24.00	0.203	0.557	0.239	0.203	0.557	0.239	0.203	0.557
16 522G	23.24	59.39	19.95	0.226	0.578	0.194	0.226	0.578	0.194	0.226	0.578
17 530	29.26	65.19	16.37	0.264	0.588	0.147	0.264	0.588	0.147	0.264	0.588
18 540	41.69	74.85	13.32	0.321	0.576	0.102	0.321	0.576	0.102	0.321	0.576
19 542	66.62	90.66	13.33	0.390	0.531	0.078	0.390	0.531	0.078	0.390	0.531
20 557	72.58	90.44	8.47	0.423	0.527	0.049	0.423	0.527	0.049	0.423	0.527
21 558	72.51	88.28	6.59	0.433	0.527	0.039	0.433	0.527	0.039	0.433	0.527
22 561	72.35	82.98	3.84	0.454	0.521	0.024	0.454	0.521	0.024	0.454	0.521
23 565Y	71.69	76.31	2.11	0.477	0.508	0.014	0.477	0.508	0.014	0.477	0.508
24 567	70.94	72.40	1.53	0.489	0.499	0.010	0.489	0.499	0.010	0.489	0.499
25 572	68.33	63.74	0.76	0.514	0.479	0.005	0.514	0.479	0.005	0.514	0.479
26 575	66.36	59.11	0.52	0.526	0.469	0.004	0.526	0.469	0.004	0.526	0.469
27 578	63.90	54.33	0.35	0.538	0.458	0.002	0.538	0.458	0.002	0.538	0.458
28 581	62.64	51.28	1.69	0.541	0.443	0.014	0.541	0.443	0.014	0.541	0.443
29 585	60.65	50.90	2.46	0.549	0.434	0.016	0.549	0.434	0.016	0.549	0.434
30 701	73.13	49.79	36.82	0.457	0.311	0.230	0.457	0.311	0.230	0.457	0.311
31 705	73.15	47.60	42.34	0.448	0.291	0.259	0.448	0.291	0.259	0.448	0.291
32 710	73.19	45.95	47.59	0.438	0.275	0.285	0.438	0.275	0.285	0.438	0.275
33 720	73.40	44.17	56.94	0.420	0.253	0.326	0.420	0.253	0.326	0.420	0.253
34 727	70.53	40.59	61.00	0.409	0.235	0.364	0.409	0.235	0.364	0.409	0.235
35 735M	64.51	34.79	64.58	0.393	0.212	0.394	0.393	0.212	0.394	0.393	0.212
36 745	52.09	25.14	67.62	0.359	0.173	0.466	0.359	0.173	0.466	0.359	0.173
37 809	27.16	9.33	67.62	0.260	0.089	0.649	0.260	0.089	0.649	0.260	0.089
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0.0	0.0

$$a^*_{nm} = n_a n_b = 2.8[(1.000x - 0.171 + 0.000z)/y] \quad A_{nm} = (a^*_{nm})/Y \quad C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$$
$$b^*_{nm} = n_a n_b = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^*_{nm})/Y \quad h_{ABnm} = \text{atan}[B_{nm}/A_{nm}]$$

DE690-3N

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.8, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no.	O	C	tristimulus values and chromaticities			nu-chromatic values					
			X	Y	Z	x	y	z	A_{nm}	B_{nm}	C_{nm}
01 614	68.65	50.90	20.17	0.491	0.364	0.144	0.491	0.364	0.144	0.491	0.364
02 701	73.11	49.79	36.82	0.457	0.311	0.230	0.457	0.311	0.230	0.457	0.311
03 705	73.15	47.60	42.34	0.448	0.291	0.259	0.448	0.291	0.259	0.448	0.291
04 720	73.40	44.17	56.94	0.420	0.253	0.326	0.420	0.253	0.326	0.420	0.253
05 727	70.53	40.59	61.00	0.409	0.235	0.364	0.409	0.235	0.364	0.409	0.235
06 735	64.51	34.79	64.58	0.393	0.212	0.394	0.393	0.212	0.394	0.393	0.212
07 375	52.09	25.14	67.62	0.359	0.173	0.466	0.359	0.173	0.466	0.359	0.173
08 444	27.16	9.33	67.62	0.260	0.089	0.649	0.260	0.089	0.649	0.260	0.089
09 463	21.19	9.55	72.48	0.205	0.092	0.702	0.205	0.092	0.702	0.205	0.092
10 465	22.27	11.71	74.36	0.198	0.109	0.692	0.198	0.109	0.692	0.198	0.109
11 470	21.43	17.01	77.11	0.185	0.147	0.667	0.185	0.147	0.667	0.185	0.147
12 474B	22.09	23.68	78.83	0.177	0.190	0.632	0.177	0.190	0.632	0.177	0.190
13 476	22.83	27.59	79.42	0.175	0.212	0.611	0.175	0.212	0.611	0.175	0.212
14 479	25.44	36.25	80.19	0.179	0.255	0.565	0.179	0.255	0.565	0.179	0.255
15 480	27.41	40.88	80.43	0.184	0.274	0.540	0.184	0.274	0.540	0.184	0.274
16 481	29.88	45.66	80.60	0.191	0.292	0.516	0.191	0.292	0.516	0.191	0.292
17 482	31.14	48.71	79.26	0.195	0.306	0.498	0.195	0.306	0.498	0.195	0.306
18 488C	25.13	49.09	60.78	0.186	0.363	0.450	0.186	0.363	0.450	0.186	0.363
19 496	20.67	50.20	44.12	0.179	0.436	0.383	0.179	0.436	0.383	0.179	0.436
20 500	20.63	52.39	38.61	0.184	0.469	0.345	0.184	0.469	0.345	0.184	0.469
21 505	20.59	54.04	33.36	0.190	0.500	0.308	0.190	0.500	0.308	0.190	0.500
22 515	20.37	55.82	24.00	0.203	0.557	0.239	0.203	0.557	0.239	0.203	0.557
23 522G	23.24	59.39	19.95	0.226	0.578	0.194	0.226	0.578	0.194	0.226	0.578
24 530	29.26	65.19	16.37	0.264	0.588	0.147	0.264	0.588	0.147	0.264	0.588
25 540	41.69	74.85	13.32	0.321	0.576	0.102	0.321	0.576	0.102	0.321	0.576
26 552	66.62	90.66	13.33	0.390	0.531	0.078	0.390	0.531	0.078	0.390	0.531
27 557	72.58	90.44	8.47	0.423	0.527	0.049	0.423	0.527	0.049	0.423	0.527
28 558	72.51	88.28	6.59	0.433	0.527	0.039	0.433	0.527	0.039	0.433	0.527
29 561	72.35	82.98	3.84	0.454	0.521	0.024	0.454	0.521	0.024	0.454	0.521
30 565	71.69	76.31	2.11	0.477	0.508	0.014	0.477	0.508	0.014	0.477	0.508
31 567	70.94	72.40	1.53	0.489	0.499	0.010	0.489	0.499	0.010	0.489	0.499
32 572Y	68.33	63.74	0.76	0.514	0.479	0.005	0.514	0.479	0.005	0.514	0.479
33 575	66.36	59.11	0.52	0.526	0.469	0.004	0.526	0.469	0.004	0.526	0.469
34 578	63.90	54.33	0.35	0.538	0.458	0.002	0.538	0.458	0.002	0.538	0.458
35 581	62.64	51.28	1.69	0.541	0.443	0.014	0.541	0.443	0.014	0.541	0.443
36 614R	68.65	50.90	20.17	0.491	0.364	0.144	0.491	0.364	0.144	0.491	0.364
37 701	73.11	49.79	36.82	0.457	0.311	0.230	0.457	0.311	0.230	0.457	0.311
U=D50	93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0.0	0.0

$$a^*_{nm} = n_a n_b = 2.8[(1.000x - 0.171 + 0.000z)/y] \quad A_{nm} = (a^*_{nm})/Y \quad C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$$
$$b^*_{nm} = n_a n_b = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^*_{nm})/Y \quad h_{ABnm} = \text{atan}[B_{nm}/A_{nm}]$$

DE690-7R_pchart=2_xcolor=5(R17Ms)

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.8, n_b=-1.0$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no.	O	C	n-purities			nu-purities					
			p_{nm}	p_{nm}	p_{nm}	p_{nm}	p_{nm}	p_{nm}	p_{nm}	p_{nm}	p_{nm}
01 375	25.14	3.04	-2.69	4.06	318	1.73	-1.88	2.55	312		
01 444	9.33	2.80	-7.24	7.77	291	1.49	-6.43	6.61	283		
02 463	9.55	1.03	-7.58	7.66	277	-0.27	-6.78	6.78	267		
03 465	11.71	0.69	-6.35	6.38	276	-0.61	-5.54	5.57	263		
04 508	17.01	0.57	-4.53	6.33	272	-1.03	-3.72	3.82	254		
05 474	23.68	0.99	-3.32	3.33	271	-1.21	-2.51	2.79	244		
06 476	27.59	0.06	-2.87	2.87	271	-1.24	-2.06	2.41	238		
07 479	36.25	0.09	-2.21	2.21	272	-1.21	-1.40	1.85	229		
08 480	40.88	0.13	-1.96	1.97	273	-1.17	-1.15	1.64	225		
09 482	45.66	0.19	-1.73	1.73	274	-1.15	-0.96	1.45	222		
10 482C	47.81	0.22	-1.62	1.64	277	-1.08	-0.81	1.35	217		
11 488	49.09	0.11	-1.23	1.24	275	-1.19	-0.42	1.26	199		
12 496	50.00	0.05	-0.87	0.88	273	-1.25	-0.06	1.25	183		
13 500	52.39	0.08	-0.73	0.74	276	-1.22	0.07	1.22	176		
14 504	54.04	0.11	-0.53	0.54	277	-1.20	0.17	1.20	169		
15 515	55.82	0.16	-0.42	0.45	290	-1.14	0.37	1.20	161		
16 522G	59.39	0.26	-0.33	0.43	308	-1.04	0.47	1.14	155		
17 530	65.19	0.44	-0.25	0.50	330	-0.86	0.55	1.03	147		
18 540	74.85	0.72	-0.17	0.75	346	-0.58	0.63	0.85	132		
19 546	80.66	1.15	-0.10	1.15	356	-0.47	0.67	0.79	117		
20 557	90.44	1.33	-0.09	1.34	356	0.02	0.71	0.71	87		
21 558	88.28	1.39	-0.07	1.39	356	0.08	0.73	0.73	83		
22 561	82.98	1.52	-0.04	1.52	358	0.21	0.76	0.79	74		
23 565Y	73.61	1.68	-0.02	1.68	359	0.37	0.78	0.86	64		
24 720	78.78	1.72	0.01	1.72	359	0.47	0.78	0.86	57		
25 572	63.74	2.00	-0.01	2.00	359	0.69	0.79	1.05	44		
26 575	59.11	2.12	-0.00	2.12	359	0.81	0.80	1.14	44		
27 578	54.31	2.00	-0.00	2.24	359	0.93	0.80	1.23	40		
28 581	51.28	2.34	-0.03	2.34	359	1.03	0.77	1.29	36		
29 590	47.26	2.46	-0.05	2.46	359	1.15	0.74	1.34	32		
30 701	49.79	2.57	-0.73	2.67	343	1.26	-0.06	1.26	3		
31 705	47.60	2.66	-0.88	2.80	341	1.35	-0.08	1.35	356		
32 710	45.95	2.72	-1.03	2.91	339	1.41	-0.22	1.43	350		
33 720	44.17	2.76	-1.28	3.04	334	1.45	-0.47	1.52	341		
34 730	42.83	2.83	-1.54	3.12	334	1.49	-0.69	1.56	327		
35 735M	34.79	2.93	-1.85	3.47	327	1.62	-1.04	1.93	327		
36 745	25.14	3.04	-2.69	4.06	318	1.73	-1.88	2.55	312		
37 809	9.33	2.80	-7.24	7.77	291	1.49	-6.43	6.61	283		
U-D50	100.00	1.310	-0.849	1.539	328	0.0	0.0	0.0	0.0		

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	376	55.24	26.06	71.08	0.362 0.171 0.466
01	458	13.22	7.40	75.87	0.136 0.076 0.776
02	460	13.26	8.89	77.33	0.133 0.089 0.777
03	462	13.28	10.68	78.42	0.129 0.104 0.765
04	463	13.28	10.68	78.42	0.129 0.104 0.765
05	468	13.66	17.92	80.19	0.122 0.160 0.717
06	471	14.70	24.41	80.73	0.122 0.203 0.673
07	473	15.60	28.17	80.89	0.125 0.225 0.648
08	475	18.32	36.37	81.08	0.134 0.267 0.597
09	477	22.35	45.10	81.16	0.150 0.303 0.546
10	477C	22.35	45.10	81.16	0.150 0.303 0.546
11	479	27.82	53.94	81.17	0.170 0.331 0.498
12	480	30.64	58.21	79.19	0.182 0.346 0.471
13	484	25.67	56.42	59.80	0.180 0.397 0.421
14	492	22.50	56.65	38.03	0.192 0.483 0.324
15	503	21.56	57.40	24.28	0.208 0.555 0.235
16	512G	22.19	58.45	18.53	0.223 0.589 0.186
17	521	24.28	60.61	13.79	0.246 0.614 0.139
18	531	29.00	64.47	10.07	0.280 0.622 0.097
19	541	41.29	73.93	10.07	0.330 0.589 0.080
20	563	83.41	92.59	5.28	0.460 0.510 0.029
21	564	83.37	91.09	3.82	0.467 0.510 0.021
22	565	83.35	89.31	2.74	0.475 0.509 0.015
23	565Y	83.35	89.31	2.74	0.475 0.509 0.015
24	568	82.96	82.07	0.96	0.490 0.494 0.005
25	571	81.93	75.58	0.44	0.518 0.478 0.002
26	573	81.03	71.82	0.27	0.529 0.469 0.001
27	577	78.31	63.62	0.08	0.551 0.447 0.000
28	581	74.28	54.89	0.01	0.575 0.424 0.000
29	581R	74.28	54.89	0.01	0.575 0.424 0.000
30	587	68.81	46.05	0.00	0.599 0.400 0.000
31	589	67.60	44.04	0.93	0.600 0.391 0.008
32	692	70.96	43.57	21.37	0.522 0.320 0.157
33	697	74.12	43.34	43.14	0.461 0.269 0.268
34	708	75.07	42.59	56.88	0.434 0.261 0.325
35	717M	74.44	41.54	62.63	0.416 0.232 0.350
36	726	72.35	39.38	67.37	0.403 0.219 0.376
37	736	67.62	35.52	71.08	0.388 0.203 0.408
38	745	55.24	26.06	71.08	0.362 0.171 0.466
39	823	13.22	7.40	75.87	0.136 0.076 0.776

$a=P_{nm}=n_a P_n n_b n_{b1} [(b_{21}-b_{23})x + (b_{22}-b_{23})y + b_{23}] = 1.4(3.0757x - 2.5702y - 0.0960)/y$
 $b=P_{bm}=n_b P_n n_b n_{b1} [(b_{31}-b_{33})x + (b_{32}-b_{33})y + b_{33}] = 0.5(1.9906x + 3.8617y - 2.4046)/y$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	376	55.24	26.06	71.08	0.362 0.171 0.466
01	458	13.22	7.40	75.87	0.136 0.076 0.776
02	460	13.26	8.89	77.33	0.133 0.089 0.777
03	462	13.28	10.68	78.42	0.129 0.104 0.765
04	463	13.28	10.68	78.42	0.129 0.104 0.765
05	468	13.66	17.92	80.19	0.122 0.160 0.717
06	471	14.70	24.41	80.73	0.122 0.203 0.673
07	473	15.60	28.17	80.89	0.125 0.225 0.648
08	475	18.32	36.37	81.08	0.134 0.267 0.597
09	477	22.35	45.10	81.16	0.150 0.303 0.546
10	477C	22.35	45.10	81.16	0.150 0.303 0.546
11	479	27.82	53.94	81.17	0.170 0.331 0.498
12	480	30.64	58.21	79.19	0.182 0.346 0.471
13	484	25.67	56.42	59.80	0.180 0.397 0.421
14	492	22.50	56.65	38.03	0.192 0.483 0.324
15	503	21.56	57.40	24.28	0.208 0.555 0.235
16	512G	22.19	58.45	18.53	0.223 0.589 0.186
17	521	24.28	60.61	13.79	0.246 0.614 0.139
18	531	29.00	64.47	10.07	0.280 0.622 0.097
19	541	41.29	73.93	10.07	0.330 0.589 0.080
20	563	83.41	92.59	5.28	0.460 0.510 0.029
21	564	83.37	91.09	3.82	0.467 0.510 0.021
22	565	83.35	89.31	2.74	0.475 0.509 0.015
23	565Y	83.35	89.31	2.74	0.475 0.509 0.015
24	568	82.96	82.07	0.96	0.490 0.494 0.005
25	571	81.93	75.58	0.44	0.518 0.478 0.002
26	573	81.03	71.82	0.27	0.529 0.469 0.001
27	577	78.31	63.62	0.08	0.551 0.447 0.000
28	581	74.28	54.89	0.01	0.575 0.424 0.000
29	581R	74.28	54.89	0.01	0.575 0.424 0.000
30	587	68.81	46.05	0.00	0.599 0.400 0.000
31	589	67.60	44.04	0.93	0.600 0.391 0.008
32	692	70.96	43.57	21.37	0.522 0.320 0.157
33	697	74.12	43.34	43.14	0.461 0.269 0.268
34	708	75.07	42.59	56.88	0.434 0.261 0.325
35	717M	74.44	41.54	62.63	0.416 0.232 0.350
36	726	72.35	39.38	67.37	0.403 0.219 0.376
37	736	67.62	35.52	71.08	0.388 0.203 0.408
38	745	55.24	26.06	71.08	0.362 0.171 0.466
39	823	13.22	7.40	75.87	0.136 0.076 0.776

$a=P_{nm}=n_a P_n n_b n_{b1} [(b_{21}-b_{23})x + (b_{22}-b_{23})y + b_{23}] = 1.4(3.0757x - 2.5702y - 0.0960)/y$
 $b=P_{bm}=n_b P_n n_b n_{b1} [(b_{31}-b_{33})x + (b_{32}-b_{33})y + b_{33}] = 0.5(1.9906x + 3.8617y - 2.4046)/y$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	692	70.96	43.57	21.37	0.522 0.320 0.157
01	697	74.12	43.34	43.14	0.461 0.269 0.268
02	708	75.07	42.59	56.88	0.434 0.261 0.325
03	717	74.44	41.54	62.63	0.416 0.232 0.350
04	726	72.35	39.38	67.37	0.403 0.219 0.376
05	736	67.62	35.52	71.08	0.388 0.203 0.408
06	376	55.24	26.06	71.08	0.362 0.171 0.466
07	458	13.22	7.40	75.87	0.136 0.076 0.776
08	460	13.26	8.89	77.33	0.133 0.089 0.777
09	462	13.28	10.68	78.42	0.129 0.104 0.765
10	463	13.28	10.68	78.42	0.129 0.104 0.765
11	468	13.66	17.92	80.19	0.122 0.160 0.717
12	471	14.70	24.41	80.73	0.122 0.203 0.673
13	473	15.60	28.17	80.89	0.125 0.225 0.648
14	475	18.32	36.37	81.08	0.134 0.267 0.597
15	477	22.35	45.10	81.16	0.150 0.303 0.546
16	477C	22.35	45.10	81.16	0.150 0.303 0.546
17	479	27.82	53.94	81.17	0.170 0.331 0.498
18	480	30.64	58.21	79.19	0.182 0.346 0.471
19	484	25.67	56.42	59.80	0.180 0.397 0.421
20	492	22.50	56.65	38.03	0.192 0.483 0.324
21	503	21.56	57.40	24.28	0.208 0.555 0.235
22	512	22.19	58.45	18.53	0.223 0.589 0.186
23	521G	24.28	60.61	13.79	0.246 0.614 0.139
24	531	29.00	64.47	10.07	0.280 0.622 0.097
25	541	41.29	73.93	10.07	0.330 0.589 0.080
26	563	83.41	92.59	5.28	0.460 0.510 0.029
27	564	83.37	91.09	3.82	0.467 0.510 0.021
28	565	83.35	89.31	2.74	0.475 0.509 0.015
29	565Y	83.35	89.31	2.74	0.475 0.509 0.015
30	568	82.96	82.07	0.96	0.490 0.494 0.005
31	571	81.93	75.58	0.44	0.518 0.478 0.002
32	573	81.03	71.82	0.27	0.529 0.469 0.001
33	577	78.31	63.62	0.08	0.551 0.447 0.000
34	581	74.28	54.89	0.01	0.575 0.424 0.000
35	581R	74.28	54.89	0.01	0.575 0.424 0.000
36	587	68.81	46.05	0.00	0.599 0.400 0.000
37	589	67.60	44.04	0.93	0.600 0.391 0.008
38	692	70.96	43.57	21.37	0.522 0.320 0.157
39	697	74.12	43.34	43.14	0.461 0.269 0.268

$a=P_{nm}=n_a P_n n_b n_{b1} [(b_{21}-b_{23})x + (b_{22}-b_{23})y + b_{23}] = 1.4(3.0757x - 2.5702y - 0.0960)/y$
 $b=P_{bm}=n_b P_n n_b n_{b1} [(b_{31}-b_{33})x + (b_{32}-b_{33})y + b_{33}] = 0.5(1.9906x + 3.8617y - 2.4046)/y$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	692	70.96	43.57	21.37	0.522 0.320 0.157
01	697	74.12	43.34	43.14	0.461 0.269 0.268
02	708	75.07	42.59	56.88	0.434 0.261 0.325
03	717	74.44	41.54	62.63	0.416 0.232 0.350
04	726	72.35	39.38	67.37	0.403 0.219 0.376
05	736	67.62	35.52	71.08	0.388 0.203 0.408
06	376	55.24	26.06	71.08	0.362 0.171 0.466
07	458	13.22	7.40	75.87	0.136 0.076 0.776
08	460	13.26	8.89	77.33	0.133 0.089 0.777
09	462	13.28	10.68	78.42	0.129 0.104 0.765
10	463	13.28	10.68	78.42	0.129 0.104 0.765
11	468	13.66	17.92	80.19	0.122 0.160 0.717
12	471	14.70	24.41	80.73	0.122 0.203 0.673
13	473	15.60	28.17	80.89	0.125 0.225 0.648
14	475	18.32	36.37	81.08	0.134 0.267 0.597
15	477	22.35	45.10	81.16	0.150 0.303 0.546
16	477C	22.35	45.10	81.16	0.150 0.303 0.546
17	479	27.82	53.94	81.17	0.170 0.331 0.498
18	480	30.64	58.21	79.19	0.182 0.346 0.471
19	484	25.67	56.42	59.80	0.180 0.397 0.421
20	492	22.50	56.65	38.03	0.192 0.483 0.324
21	503	21.56	57.40	24.28	0.208 0.555 0.235
22	512	22.19	58.45	18.53	0.223 0.589 0.186
23	521G	24.28	60.61	13.79	0.246 0.614 0.139
24	531	29.00	64.47	10.07	0.280 0.622 0.097

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
			X Y Z x y z	x_{ab} y_{ab} z_{ab}	x_{ab} y_{ab} z_{ab}
00 386	51.50	23.94	74.68	0.343 0.159 0.497	111.1 -72.0 132.4 327
01 460	12.38	6.54	76.19	0.130 0.068 0.801	15.8 -86.3 87.8 280
02 465	12.41	9.58	78.25	0.123 0.095 0.780	3.7 -85.2 85.3 272
03 467	14.25	11.64	78.87	0.120 0.113 0.766	-4.2 -83.5 83.6 267
04 473	13.31	20.43	79.83	0.117 0.179 0.702	-35.1 -74.4 82.3 244
05 475	14.02	24.19	79.97	0.118 0.204 0.676	-46.9 -70.1 84.5 236
06 479	17.82	36.91	80.16	0.132 0.273 0.594	-80.9 -56.2 98.5 214
07 479	17.82	36.91	80.16	0.132 0.273 0.594	-80.9 -56.2 98.5 214
08 481	21.98	46.03	80.19	0.148 0.310 0.541	-99.2 -46.2 109.4 205
09 481	21.98	46.03	80.19	0.148 0.310 0.541	-99.2 -46.2 109.4 205
10 483C	27.52	55.03	80.21	0.169 0.338 0.492	-111.3 -36.3 117.2 198
11 484	28.85	57.21	79.07	0.174 0.346 0.478	-114.1 -33.0 118.8 196
12 489	25.36	57.41	57.70	0.180 0.408 0.410	-126.6 -6.4 126.7 182
13 497	22.33	57.50	36.81	0.191 0.492 0.315	-136.8 19.4 138.1 171
14 505	21.31	58.03	24.30	0.205 0.559 0.234	-141.4 35.3 145.8 165
15 512	21.41	58.69	18.79	0.216 0.593 0.190	-142.8 42.7 149.1 163
16 521G	22.42	59.91	14.10	0.232 0.621 0.146	-142.8 49.5 151.1 160
17 524	25.32	62.97	14.10	0.247 0.615 0.137	-142.6 52.6 152.0 159
18 539	30.29	66.55	7.57	0.290 0.637 0.072	-135.0 63.6 149.3 154
19 541	44.95	76.05	0.00	0.605 0.394 0.000	-111.6 39.1 118.3 15
20 568	84.08	93.45	4.02	0.463 0.514 0.022	-15.4 88.7 90.1 99
21 568	84.08	93.45	4.02	0.463 0.514 0.022	-15.4 88.7 90.1 99
22 569	84.05	90.41	1.96	0.476 0.512 0.011	-3.4 87.6 87.7 92
23 570Y	84.00	88.35	1.33	0.483 0.508 0.007	4.4 85.9 86.1 87
24 573	83.15	79.56	0.38	0.509 0.487 0.002	35.4 76.8 84.6 65
25 575	82.44	75.20	0.24	0.520 0.478 0.001	47.2 72.7 86.7 56
26 580	78.64	63.07	0.05	0.554 0.444 0.000	81.2 58.5 100.1 35
27 580	78.64	63.07	0.05	0.554 0.444 0.000	81.2 58.5 100.1 35
28 585	74.48	53.96	0.02	0.579 0.420 0.000	99.5 48.6 110.7 26
29 590	68.94	44.96	0.00	0.605 0.394 0.000	111.6 39.1 118.3 19
30 592	67.61	42.78	1.14	0.606 0.383 0.010	114.4 35.4 119.8 17
31 694	71.10	42.58	22.52	0.522 0.312 0.165	126.9 8.7 127.2 3
32 702	74.12	42.49	43.40	0.463 0.265 0.271	137.0 -17.0 138.1 352
33 710	75.15	41.96	55.91	0.434 0.242 0.323	141.7 -32.9 145.5 346
34 717	75.05	41.30	61.43	0.422 0.232 0.345	143.1 -40.3 148.7 344
35 726G	74.04	40.08	66.11	0.410 0.222 0.366	143.1 -47.1 150.7 341
36 729	71.14	37.02	66.11	0.408 0.212 0.379	143.0 -50.2 151.5 340
37 744	66.16	33.43	72.64	0.384 0.194 0.421	135.3 -61.2 148.5 335
38 756	51.50	23.94	74.68	0.343 0.159 0.497	111.1 -72.0 132.4 327
39 825	12.38	6.54	76.19	0.130 0.068 0.801	15.8 -86.3 87.8 280

U-D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0

$a^*_{P_{lum}} = a^*_{P_{lum}}(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}z = 1.4(3.0757x - 2.5702y - 0.0960z)$
 $b^*_{P_{lum}} = b^*_{P_{lum}}(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}z = 0.5(1.9906x + 3.8617y - 2.4046z)$

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
			X Y Z x y z	x_{ab} y_{ab} z_{ab}	x_{ab} y_{ab} z_{ab}
00 386	51.50	23.94	74.68	0.343 0.159 0.497	111.1 -72.0 132.4 327
01 460	12.38	6.54	76.19	0.130 0.068 0.801	15.8 -86.3 87.8 280
02 465	12.41	9.58	78.25	0.123 0.095 0.780	3.7 -85.2 85.3 272
03 467	14.25	11.64	78.87	0.120 0.113 0.766	-4.2 -83.5 83.6 267
04 473	13.31	20.43	79.83	0.117 0.179 0.702	-35.1 -74.4 82.3 244
05 475	14.02	24.19	79.97	0.118 0.204 0.676	-46.9 -70.1 84.5 236
06 479	17.82	36.91	80.16	0.132 0.273 0.594	-80.9 -56.2 98.5 214
07 479	17.82	36.91	80.16	0.132 0.273 0.594	-80.9 -56.2 98.5 214
08 481	21.98	46.03	80.19	0.148 0.310 0.541	-99.2 -46.2 109.4 205
09 481	21.98	46.03	80.19	0.148 0.310 0.541	-99.2 -46.2 109.4 205
10 483C	27.52	55.03	80.21	0.169 0.338 0.492	-111.3 -36.3 117.2 198
11 484	28.85	57.21	79.07	0.174 0.346 0.478	-114.1 -33.0 118.8 196
12 489	25.36	57.41	57.70	0.180 0.408 0.410	-126.6 -6.4 126.7 182
13 497	22.33	57.50	36.81	0.191 0.492 0.315	-136.8 19.4 138.1 171
14 505	21.31	58.03	24.30	0.205 0.559 0.234	-141.4 35.3 145.8 165
15 512	21.41	58.69	18.79	0.216 0.593 0.190	-142.8 42.7 149.1 163
16 521G	22.42	59.91	14.10	0.232 0.621 0.146	-142.8 49.5 151.1 160
17 524	25.32	62.97	14.10	0.247 0.615 0.137	-142.6 52.6 152.0 159
18 539	30.29	66.55	7.57	0.290 0.637 0.072	-135.0 63.6 149.3 154
19 541	44.95	76.05	0.00	0.605 0.394 0.000	-111.6 39.1 118.3 15
20 568	84.08	93.45	4.02	0.463 0.514 0.022	-15.4 88.7 90.1 99
21 568	84.08	93.45	4.02	0.463 0.514 0.022	-15.4 88.7 90.1 99
22 569	84.05	90.41	1.96	0.476 0.512 0.011	-3.4 87.6 87.7 92
23 570Y	84.00	88.35	1.33	0.483 0.508 0.007	4.4 85.9 86.1 87
24 573	83.15	79.56	0.38	0.509 0.487 0.002	35.4 76.8 84.6 65
25 575	82.44	75.20	0.24	0.520 0.478 0.001	47.2 72.7 86.7 56
26 580	78.64	63.07	0.05	0.554 0.444 0.000	81.2 58.5 100.1 35
27 580	78.64	63.07	0.05	0.554 0.444 0.000	81.2 58.5 100.1 35
28 585	74.48	53.96	0.02	0.579 0.420 0.000	99.5 48.6 110.7 26
29 590	68.94	44.96	0.00	0.605 0.394 0.000	111.6 39.1 118.3 19
30 592	67.61	42.78	1.14	0.606 0.383 0.010	114.4 35.4 119.8 17
31 694	71.10	42.58	22.52	0.522 0.312 0.165	126.9 8.7 127.2 3
32 702	74.12	42.49	43.40	0.463 0.265 0.271	137.0 -17.0 138.1 352
33 710	75.15	41.96	55.91	0.434 0.242 0.323	141.7 -32.9 145.5 346
34 717	75.05	41.30	61.43	0.422 0.232 0.345	143.1 -40.3 148.7 344
35 726G	74.04	40.08	66.11	0.410 0.222 0.366	143.1 -47.1 150.7 341
36 729	71.14	37.02	66.11	0.408 0.212 0.379	143.0 -50.2 151.5 340
37 744	66.16	33.43	72.64	0.384 0.194 0.421	135.3 -61.2 148.5 335
38 756	51.50	23.94	74.68	0.343 0.159 0.497	111.1 -72.0 132.4 327
39 825	12.38	6.54	76.19	0.130 0.068 0.801	15.8 -86.3 87.8 280

U-D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0

$a^*_{P_{lum}} = a^*_{P_{lum}}(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}z = 1.4(3.0757x - 2.5702y - 0.0960z)$
 $b^*_{P_{lum}} = b^*_{P_{lum}}(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}z = 0.5(1.9906x + 3.8617y - 2.4046z)$

DE690-3N
CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.											
no.	O	C	n-purities						nu-purities		
			x_m	y_m	z_m	x_{ab}	y_{ab}	z_{ab}	x_{ab}	y_{ab}	z_{ab}
00 592	42.78	2.85	0.36	0.68	0.67	2.67	0.82	2.80	3.77		
01 694	42.58	1.16	-0.25	3.17	3.55	2.98	0.20	2.98	3.63		
02 702	42.49	0.31	-0.68	3.31	3.55	2.97	0.08	2.97	3.63		
03 710	41.96	3.55	-1.24	3.77	3.40	3.37	-0.78	3.46	3.46		
04 717	41.30	3.64	-1.43	3.92	3.38	3.46	-0.97	3.60	3.44		
05 726G	40.08	3.75	-1.63	4.09	3.36	3.57	-1.17	3.76	3.41		
06 729	37.02	4.42	-1.81	4.13	3.35	3.65	-1.35	3.82	3.40		
07 744	33.43	4.22	-2.29	4.81	3.31	4.04	-1.83	4.44	3.35		
08 756	23.94	4.82	-3.46	5.93	3.24	4.64	-3.00	5.53	3.27		
09 460	6.54	2.59	-13.66	1.93	2.80	2.41	-13.21	2.13	2.80		
10 465	9.58	0.57	-16.86	9.37	2.73	2.60	-13.00	8.90	2.72		
11 467	11.64	0.61	-17.65	16.48	2.73	2.36	-7.10	16.48	2.72		
12 473B	20.43	-1.54	-4.10	4.38	2.49	-1.72	4.74	4.03	2.44		
13 475	24.19	-1.75	-3.36	3.79	2.42	-1.93	-2.90	3.49	2.36		
14 479	36.91	-2.01	-1.98	2.82	2.24	-1.19	-1.52	2.66	2.14		
15 479	36.91	-2.01	-1.98	2.82	2.24	-1.19	-1.52	2.66	2.14		
16 481	46.03	-1.97	-1.46	2.45	2.16	-1.15	-1.00	2.37	2.05		
17 481	46.03	-1.97	-1.46	2.45	2.16	-1.15	-1.00	2.37	2.05		
18 483C	55.03	-1.84	-1.12	2.15	2.11	-1.20	-0.66	2.13	1.98		
19 484	57.21	-1.81	-1.05	2.15	2.11	-1.20	-0.66	2.13	1.98		
20 489	57.41	-2.02	-0.57	2.10	1.95	-2.20	-1.11	2.20	1.82		
21 497	57.50	-2.19	-0.12	2.20	1.83	-2.37	-0.33	2.40	1.71		
22 505	58.03	-2.25	0.14	2.26	1.76	-2.43	0.60	2.51	1.65		
23 512G	58.69	-2.25	0.26	2.26	1.73	-2.43	0.72	2.54	1.63		
24 521	59.91	-2.10	0.36	2.33	1.69	-2.43	0.88	2.62	1.60		
25 524	62.97	-2.08	0.37	2.11	1.69	-2.26	0.83	2.41	1.59		
26 539	66.55	-1.84	0.49	1.91	1.64	-2.02	0.95	2.24	1.54		
27 551	76.05	-1.27	0.51	1.37	1.57	-1.45	0.97	1.75	1.46		
28 568	93.45	0.01	0.49	0.89	1.57	-0.85	0.97	0.96	1.56		
29 568	93.45	0.01	0.49	0.89	1.57	-0.85	0.95	0.96	1.56		
30 569	90.41	0.51	0.52	0.74	1.48	-0.13	0.96	0.97	1.92		
31 570Y	88.35	0.23	0.51	0.56	1.50	0.05	0.97	0.97	1.96		
32 573Y	79.56	0.62	0.50	0.80	1.63	0.44	0.96	1.06	1.67		
33 575	75.20	0.64	0.49	0.84	1.64	0.31	0.95	1.07	1.64		
34 580	63.07	1.46	0.46	1.54	1.37	1.28	0.92	1.58	1.35		
35 580	63.07	1.46	0.46	1.54	1.37	1.28	0.92	1.58	1.35		
36 568S	53.96	2.02	0.44	2.07	1.23	1.14	0.90	2.05	2.63		
37 569	44.59	2.64	0.43	1.69	1.18	1.27	0.88	2.05	2.63		
38 592	42.78	2.85	0.36	2.88	7	2.67	0.82	2.80	1.7		
39 594	42.58	1.16	-0.25	3.17	-4	2.98	0.20	2.98	3		
U=D50	100	0.180	-0.459	0.493	291	0	0	0	0	0	0

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmnetik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIEF10 tristimulus values, chromatic values, and putities ($n_s=1.4$, $n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	O	C	tristimulus values and chromaticities			nu-chromatic values				
			X	Y	Z	x	y	z	x_{ab} y_{ab} z_{ab}	
00	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	181.287
01	455	13.14	6.61	74.65	0.139	0.070	0.790	18.8	-84.7	86.7
02	460	13.28	9.49	77.94	0.131	0.094	0.773	7.6	-85.3	85.4
03	462	13.30	11.32	78.97	0.128	0.109	0.762	0.4	-84.4	84.6
04	468	13.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7	83.1
05	468	13.39	16.87	80.47	0.121	0.165	0.713	-27.0	-80.5	81.2
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-48.4	-80.5	85.3
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4	89.1
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-67.6	98.5
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3	108.3
10	477	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-48.3	108.3
11	479	30.58	58.60	78.68	0.182	0.349	0.468	-113.1	-32.1	117.95
12	479	29.07	56.38	80.12	0.175	0.340	0.483	-110.8	-36.1	116.6
13	484	25.63	56.72	79.92	0.180	0.400	0.418	-123.7	-100.1	124.184
14	492	22.37	56.85	76.73	0.192	0.490	0.316	-134.8	-179.9	136.0172
15	503	21.57	57.63	22.95	0.211	0.564	0.221	-139.3	-356	143.615
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	-448	143.9202
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	-512	147.4
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	-594	145.055
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-109.4	-704	130.1
20	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	-84.6	86.7
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	-85.3	85.4
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	-84.3	84.3
23	566Y	83.29	86.54	1.34	0.486	0.505	0.007	7.8	-82.7	83.1
24	568	83.04	81.32	0.56	0.503	0.493	0.003	27.0	-77.6	82.2
25	571	82.00	74.78	0.23	0.522	0.476	0.001	48.4	-70.5	85.5
26	573	81.10	71.03	0.14	0.532	0.466	0.000	59.3	-67.6	98.5
27	577	78.40	62.93	0.05	0.554	0.445	0.000	79.9	-57.6	98.5
28	581	74.33	54.29	0.02	0.577	0.421	0.000	96.9	-48.3	108.3
29	584	71.79	49.91	0.01	0.589	0.410	0.000	113.1	-32.1	117.95
30	591	66.15	41.39	2.33	0.602	0.376	0.021	113.1	-32.1	117.95
31	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	-36.1	116.6
32	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	-100.1	124.184
33	697	74.36	43.14	44.30	0.459	0.266	0.273	134.8	-179.9	136.0352
34	708	75.16	42.36	58.08	0.428	0.241	0.330	139.3	-356	143.6345
35	716G	74.43	41.31	63.78	0.414	0.230	0.353	139.7	-448	143.943
36	726	72.17	39.11	68.41	0.401	0.217	0.380	138.2	-512	147.4339
37	737	66.83	34.86	71.99	0.384	0.200	0.414	132.2	-594	145.055
38	750	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	181.287
39	820	13.14	6.61	74.65	0.139	0.070	0.790	18.8	-84.7	86.7

D50 96.74 100.00 81.03 0.348 0.360 0.360 0.0 0.0 0.0 0.0

$a^*_{D50} = n_s \cdot n_0 \cdot n_{ab} \cdot (b_{21} - b_{23}) \cdot (b_{22} - b_{23}) \cdot (b_{23} - b_{33}) = 1.4(3.0757x - 2.5702y - 0.0960y)$
 $b^*_{D50} = n_s \cdot n_0 \cdot n_{ab} \cdot (b_{31} - b_{33}) \cdot (b_{32} - b_{33}) \cdot (b_{33} - b_{43}) = 0.5(1.9906x + 3.8617y - 2.4046y)$

CIEF10 tristimulus values, chromatic values, and putities ($n_s=1.4$, $n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	O	C	p-purities				m-purities			
			x	y	z	p_m	h_{21}	x_{ab}	y_{ab}	h_{23}
00	380	25.78	74.65	0.345	0.168	0.486	324	2.84	-2.73	0.45
01	455	6.61	3.04	-13.26	13.60	282	4.24	-12.81	13.12	28
02	460	9.49	1.00	-9.43	9.48	276	8.00	-8.99	9.02	27
03	462	11.32	0.23	-7.90	7.90	271	0.03	-7.45	7.45	27
04	468	13.45	-0.09	-6.61	266	-0.58	-1.65	6.18	26	26
05	468	16.87	-0.25	-4.60	244	-1.44	-4.47	4.47	26	26
06	471	25.21	-1.72	-3.24	3.67	241	-1.91	-2.80	3.39	23
07	472	28.96	-1.85	-2.74	3.31	235	-2.05	-2.29	3.07	22
08	475	37.06	-1.96	-2.00	2.80	225	-2.15	-1.55	2.65	21
09	477	45.70	-1.92	-1.50	2.44	217	-2.12	-1.05	2.37	20
10	477	50.08	-1.80	-1.00	2.00	209	-2.14	-0.50	2.00	19
11	479	58.60	-1.73	-0.99	2.00	203	-1.93	-0.54	2.00	19
12	479	56.38	-1.77	-1.08	2.07	211	-1.96	-0.64	2.06	19
13	484	56.72	-1.98	-0.62	2.08	197	-2.18	-0.17	2.18	18
14	492	56.85	-2.17	-0.12	2.18	183	-2.37	0.31	2.39	17
15	503	57.63	-2.21	0.23	2.23	175	-2.42	0.61	2.49	16
16	511G	58.68	1.18	0.29	2.22	172	-2.48	0.74	2.49	16
17	521	60.88	-2.07	0.39	2.11	169	-2.27	0.84	2.42	15
18	532	65.12	-1.83	0.46	1.89	165	-2.03	0.91	2.22	15
19	545	74.21	-1.28	0.50	1.37	158	-1.47	0.94	1.75	14
20	563	93.38	-0.00	0.46	0.46	90	-0.20	0.90	0.92	10
21	564	90.50	0.01	0.49	0.50	77	-0.09	0.94	0.94	9
22	565	88.67	0.18	0.50	0.54	69	0.00	0.95	0.95	9
23	566Y	86.54	0.28	0.51	0.58	60	0.09	0.95	0.96	8
24	568	81.32	0.52	0.50	0.73	40	0.33	0.95	1.01	7
25	571	74.78	0.84	0.49	0.97	44	0.64	0.94	1.14	5
26	573	71.03	0.98	0.48	1.03	39	0.83	0.92	1.25	4
27	577	62.93	1.46	0.46	1.53	17	1.27	0.91	1.56	3
28	581	54.29	1.97	0.44	2.02	12	1.78	0.89	1.99	2
29	584R	49.91	2.26	0.43	2.30	10	2.07	0.87	2.25	2
30	591	41.39	2.92	0.32	2.94	6	2.73	0.77	2.84	1
31	588	43.61	2.73	0.33	2.73	5	2.83	0.75	2.82	1
32	689	43.27	0.30	-0.21	3.06	355	2.86	-0.23	2.86	3
33	697	43.14	3.31	-0.86	3.43	345	3.12	-0.41	3.15	35
34	708	42.36	3.48	-1.28	3.71	339	3.52	-1.04	3.39	34
35	716M	41.31	3.57	-1.50	3.87	337	3.38	-1.05	3.34	34
36	726	39.11	3.73	-1.75	4.14	334	3.53	-1.31	3.77	33
37	737	34.86	3.73	-2.00	4.33	331	3.79	-1.70	3.79	33
38	750	25.78	0.44	-3.17	5.46	324	4.24	-2.73	0.50	28
39	820	6.61	3.04	-13.26	13.60	282	4.24	-12.81	13.12	28
U-D50 100.00 0.193 -0.445 0.486 293 0.0 0.0 0.0										
$a^*_{D50} = n_s \cdot n_0 \cdot n_{ab} \cdot (b_{21} - b_{23}) \cdot (b_{22} - b_{23}) \cdot (b_{23} - b_{33}) = 1.4(3.0757x - 2.5702y - 0.0960y)$ $b^*_{D50} = n_s \cdot n_0 \cdot n_{ab} \cdot (b_{31} - b_{33}) \cdot (b_{32} - b_{33}) \cdot (b_{33} - b_{43}) = 0.5(1.9906x + 3.8617y - 2.4046y)$										

DE690-1

CIEF10 tristimulus values, chromatic values, and putities ($n_s=1.4$, $n_0=0.5$)

Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	λ			n -putities			n -putities		
			X	Y	Z	x	y	z	x_{ab}	y_{ab}	z_{ab}
00	388	43.61	2.73	0.38	0.76	0.367	0.254	0.82	2.67	3.77	11.0
01	689	43.27	3.05	-0.21	0.36	0.355	2.86	-0.21	2.86	3.66	11.0
02	697	43.14	3.31	-0.86	0.34	0.345	3.12	-0.41	3.15	3.65	10.9
03	708	42.36	3.58	-1.50	0.33	0.339	3.38	-0.74	3.40	3.64	10.8
04	716	41.31	3.77	-1.50	0.37	0.337	3.58	-1.05	3.54	3.64	10.7
05	726	39.11	3.73	-1.75	0.41	0.34	3.33	-1.31	3.77	3.63	10.6
06	737	34.86	3.98	-2.15	0.53	0.31	3.29	-1.70	4.15	3.63	10.5
07	380	25.78	4.44	-3.17	0.46	0.34	4.24	-2.73	5.05	3.62	10.4
08	455	6.61	3.04	-13.26	0.30	0.282	2.84	-12.81	13.12	2.86	10.3
09	460	9.49	1.00	-9.43	0.48	0.276	8.90	-8.90	9.49	2.86	10.2
10	462	11.32	0.23	-7.90	0.90	0.271	0.03	-7.45	7.45	2.73	10.1
11	464	13.45	-0.39	-6.60	0.61	0.266	-0.58	-6.15	6.18	2.66	10.0
12	468	18.67	-1.25	-4.60	0.77	0.254	-1.44	-4.15	4.40	2.54	9.9
13	471	25.21	-2.17	-3.24	0.67	0.24	-1.91	-2.80	3.39	2.53	9.8
14	472	28.96	-3.26	-2.04	0.60	0.230	-2.05	-2.26	3.39	2.41	9.7
15	475	37.06	-1.96	-2.00	0.80	0.225	-1.55	-1.55	2.65	2.15	9.6
16	477	45.70	-1.92	-1.50	0.44	0.217	-2.12	-0.05	2.37	2.00	9.5
17	477	50.08	-1.87	-1.31	0.29	0.215	-2.06	-0.87	2.24	2.00	9.4
18	479	58.68	-1.73	-0.99	0.20	0.209	-1.93	-0.54	2.00	1.93	9.3
19	479	56.38	-1.77	-0.99	0.27	0.211	-1.96	-0.64	2.06	1.96	9.2
20	484	56.72	-1.98	-0.62	0.08	0.197	-2.18	-1.17	2.18	1.93	9.1
21	492	56.85	-2.17	-0.12	0.18	0.183	-2.37	-0.31	2.39	1.77	9.0
22	503	57.63	-2.22	0.17	0.23	0.175	-2.41	0.61	2.49	1.68	8.9
23	511G	58.68	-2.18	0.29	0.22	0.172	-2.38	0.74	2.49	1.68	8.8
24	521	60.88	-2.07	0.39	0.21	0.169	-2.27	0.84	2.42	1.55	8.7
25	532	65.12	-1.86	0.46	0.18	0.165	-2.00	0.91	2.22	1.44	8.6
26	545	74.21	-1.28	0.50	0.15	0.158	-1.47	0.94	1.84	1.33	8.5
27	563	93.38	0.00	0.46	0.06	0.150	-0.20	0.90	0.92	1.00	8.4
28	564	90.50	0.10	0.49	0.50	0.147	-0.08	0.94	0.94	0.99	8.3
29	565	88.67	0.18	0.50	0.54	0.149	-0.00	0.95	0.95	0.95	8.2
30	566	86.54	0.28	0.51	0.58	0.149	0.00	0.95	0.95	0.96	8.1
31	568	81.32	0.42	0.50	0.63	0.148	0.03	0.94	0.94	0.94	8.0
32	571	74.78	0.48	0.49	0.95	0.140	0.04	0.94	1.14	0.87	7.9
33	573	71.03	0.48	0.48	1.14	0.125	0.03	0.93	1.25	0.4	7.8
34	577	62.93	0.46	0.46	1.53	0.17	0.27	0.91	1.56	0.3	7.7
35	581	54.29	0.49	0.44	2.02	0.12	0.78	0.89	1.99	0.2	7.6
36	584	49.91	0.25	0.43	2.84	0.07	1.07	0.87	2.84	0.1	7.5
37	591	41.39	0.32	0.32	3.90	0.1	1.77	0.77	2.84	0.1	7.4
38	588	43.61	0.73	0.38	2.76	0.7	2.54	0.82	2.67	0.1	7.3
39	689	43.27	3.05	-0.21	0.36	-4	2.86	0.23	2.86	0.4	7.2

$$a^* = P_{-0.50} [100.0, 0.193 \times (b_2 - b_3) + (b_2 - b_3) \times 0.445, 0.486, 293, 0,$$

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

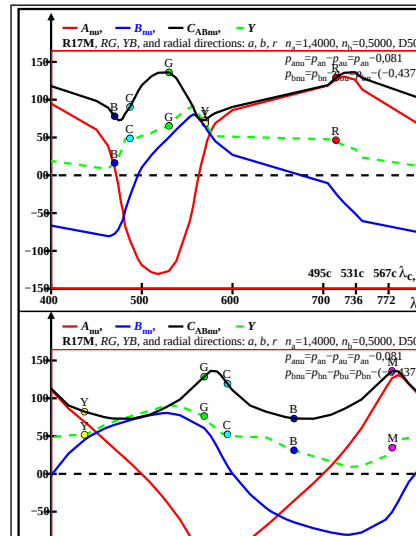
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R17M tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no. O	A	tristimulus values and chromaticities			n-purities			n-purities			
		X	Y	Z	x	y	z	X	Y	Z	
00	373	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
01	450	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
02	463	19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295
03	465	19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290
04	470B	20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	78.2	277
05	474	20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260
06	477	22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240
07	479	24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.7	75.2	232
08	481	28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218
09	482	30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213
10	487C	31.73	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197
11	496	20.48	50.06	44.06	0.178	0.436	0.384	-111.4	1.1	111.4	179
12	500	20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174
13	509	19.40	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169
14	511	21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168
15	518	24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164
16	530G	29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158
17	538	43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151
18	553	67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127
19	557	74.22	90.96	8.45	0.427	0.523	0.048	-59.9	80.5	89.2	115
20	558	74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110
21	561	73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97
22	565	73.26	76.83	2.11	0.481	0.504	0.013	12.3	71.9	72.9	80
23	570Y	71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60
24	572	69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.5	75.2	52
25	578	65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38
26	581	63.81	51.69	1.69	0.544	0.441	0.014	68.8	45.0	82.2	33
27	600	67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17
28	705	73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354
29	717	74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349
30	716	72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348
31	723	69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344
32	735	64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338
33	743	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
34	705	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
U=D50		94.03	100.00	80.83	0.342	0.363	0.363	0.0	0.0	0.0	0

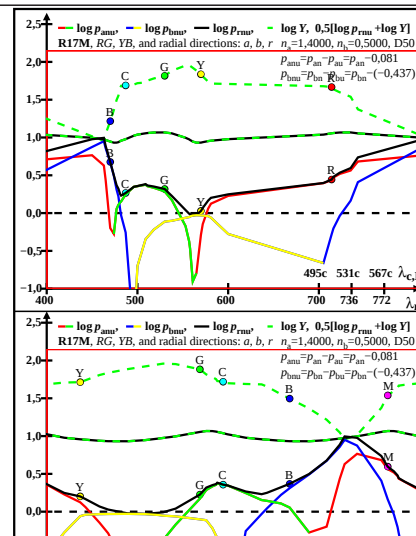
$$a^*P_m = n_a P_m n_b [(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}]y = 1.4(3.0757x - 2.5702y - 0.0960)y$$
$$b^*P_m = n_b P_m n_b [(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}]y = 0.5(1.9906x + 3.8617y - 2.4046)y$$

R17M tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Oswald (O) tristimulus values ($Y_w=100$), ordered by wavelength.											
no. O			tristimulus values and chromaticities			n-purities			n-purities		
			X	Y	Z	x	y	z	X	Y	Z
00	373	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
01	450	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
02	463	19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295
03	465	19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290
04	470B	20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	78.2	277
05	474	20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260
06	477	22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240
07	479	24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.7	75.2	232
08	481	28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218
09	482	30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213
10	487C	31.73	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197
11	496	20.48	50.06	44.06	0.178	0.436	0.384	-111.4	1.1	111.4	179
12	500	20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174
13	509	19.40	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169
14	511	21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168
15	518	24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164
16	530G	29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158
17	538	43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151
18	553	67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127
19	557	74.22	90.96	8.45	0.427	0.523	0.048	-59.9	80.5	89.2	115
20	558	74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110
21	561	73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97
22	565	73.26	76.83	2.11	0.481	0.504	0.013	12.3	71.9	72.9	80
23	570Y	71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60
24	572	69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.5	75.2	52
25	578	65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38
26	581	63.81	51.69	1.69	0.544	0.441	0.014	68.8	45.0	82.2	33
27	600	67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17
28	705	73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354
29	717	74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349
30	716	72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348
31	723	69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344
32	735	64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338
33	743	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
34	705	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
U=D50			100.00	0.081	-0.437	0.445	280	0.0	0.0	0.0	0

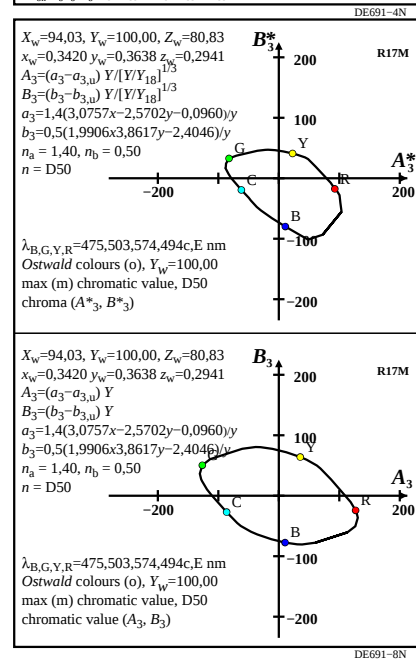
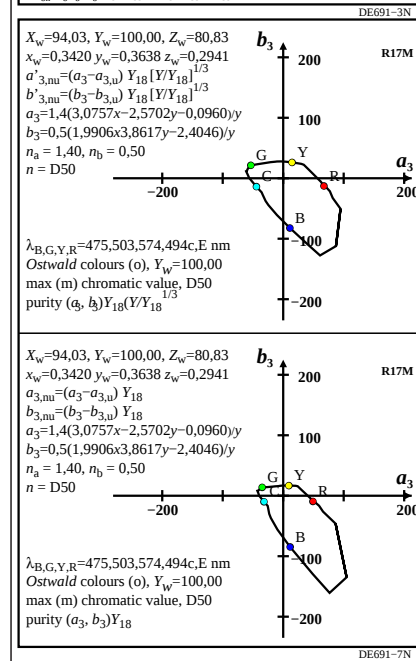
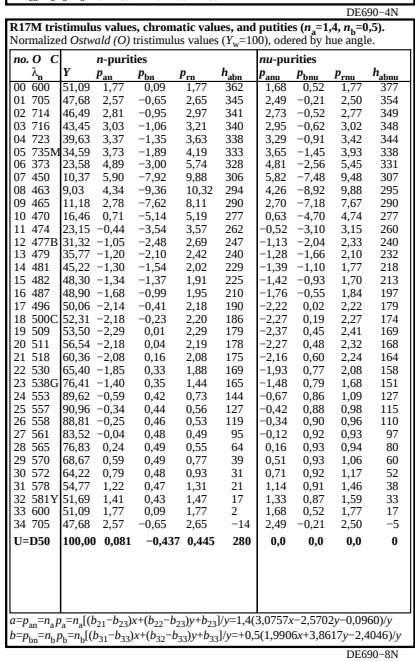
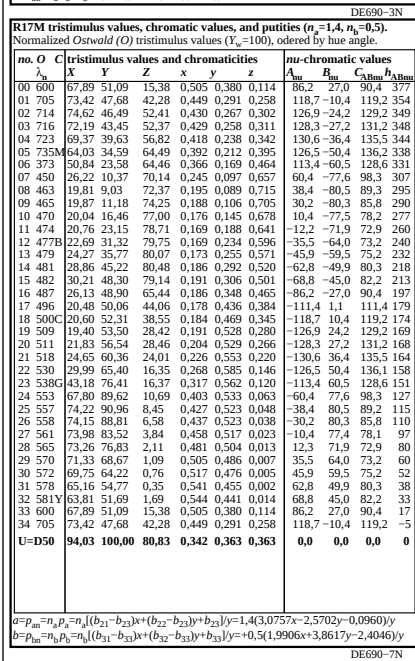
$$a^*P_m = n_a P_m n_b [(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}]y = 1.4(3.0757x - 2.5702y - 0.0960)y$$
$$b^*P_m = n_b P_m n_b [(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}]y = 0.5(1.9906x + 3.8617y - 2.4046)y$$



$$X_w = 94.03, Y_w = 100.00, Z_w = 80.83$$
$$x_w = 0.3420, y_w = 0.3638, z_w = 0.2941$$
$$a^*_{3,m} = (a^*_3 - a^*_{3,w}) Y_{18} / [Y_{18}]^{1/3}$$
$$b^*_{3,m} = (b^*_3 - b^*_{3,w}) Y_{18} / [Y_{18}]^{1/3}$$
$$a^*_3 = 1.4(3.0757x - 2.5702y - 0.0960)y$$
$$b^*_3 = 0.5(1.9906x + 3.8617y - 2.4046)y$$
$$n_a = 1.40, n_b = 0.50$$
$$n = D50$$



$$X_w = 94.03, Y_w = 100.00, Z_w = 80.83$$
$$x_w = 0.3420, y_w = 0.3638, z_w = 0.2941$$
$$a^*_{3,m} = (a^*_3 - a^*_{3,w}) Y_{18} / [Y_{18}]^{1/3}$$
$$b^*_{3,m} = (b^*_3 - b^*_{3,w}) Y_{18} / [Y_{18}]^{1/3}$$
$$a^*_3 = 1.4(3.0757x - 2.5702y - 0.0960)y$$
$$b^*_3 = 0.5(1.9906x + 3.8617y - 2.4046)y$$
$$n_a = 1.40, n_b = 0.50$$
$$n = D50$$



TUB-test chart DE69; 4 CIE and 2 R17M observers, colorimetric calculations of chromatic values
purity definition: $a = 1.4[3.0757x - 2.5702y - 0.0960]/y$, $b = 0.5[1.9906x + 3.8617y - 2.4046]/y$

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmeterik>

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	λ_n	CIE tristimulus values and chromaticities					chromatic values and putities			
		X	Y	Z	x	y	z	x_{AB}	y_{AB}	z_{AB}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0
01	463	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3
02	466	13.27	8.01	79.21	0.132	0.079	0.788	13.4	-88.4	89.4
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-4.4	-84.7	84.8
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9	82.7
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9	87.1
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-77.4	-58.9	97.2
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-88.1	-53.6	103.1
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-97.4	-48.4	108.8
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-105.0	-43.3	113.6
10	486C	26.62	57.81	81.62	0.175	0.341	0.482	-113.2	-35.5	118.7
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-126.0	-12.6	126.6
12	497	23.01	58.66	82.48	0.185	0.472	0.342	-138.9	13.8	139.6
13	501	22.62	59.57	83.18	0.192	0.507	0.299	-143.1	23.7	145.0
14	506	22.26	60.29	82.28	0.200	0.543	0.255	-149.6	47.4	157.0
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-149.8	49.8	157.9
16	522G	24.04	63.42	17.06	0.230	0.606	0.163	-146.3	61.3	158.7
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-136.1	69.6	152.8
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-123.4	88.4	89.4
19	548	41.07	87.80	5.54	0.410	0.554	0.034	-72.3	84.1	111.0
20	568	83.03	93.65	4.13	0.459	0.517	0.022	-20.0	89.1	91.3
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-13.4	88.4	89.4
22	571	82.92	87.33	1.55	0.482	0.508	0.009	-4.4	84.7	84.8
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	27.6	77.9	82.7
24	577	80.69	72.49	0.38	0.525	0.472	0.002	72.3	68.9	87.1
25	581	77.87	63.33	0.18	0.550	0.447	0.001	77.3	58.9	97.2
26	583	75.96	58.54	0.13	0.564	0.434	0.000	88.1	53.6	103.1
27	585	73.67	53.70	0.09	0.577	0.421	0.000	97.4	48.4	108.8
28	587	71.01	48.93	0.07	0.591	0.407	0.000	105.0	43.3	113.6
29	588	66.69	42.18	0.06	0.609	0.385	0.000	113.3	35.5	118.7
30	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6
31	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6
32	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7	145.0
33	711	74.05	39.70	53.95	0.441	0.236	0.321	146.3	-33.0	150.2
34	724	74.48	38.97	65.18	0.416	0.218	0.364	149.6	-47.4	157.0
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	149.8	-49.8	157.9
36	740	69.08	33.80	72.53	0.393	0.192	0.413	146.3	-61.3	158.7
37	749	61.10	27.83	74.91	0.372	0.169	0.457	136.0	-69.6	152.8
38	766	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0
39	828	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3
40	D50	96.31	99.99	82.24	0.345	0.358	0.358	0.0	0.0	0.0

CIE02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.										
no.	O	C	n-purities				nu-purities			
λ_{nm}	X	Y	Z	x_{nm}	y_{nm}	z_{nm}	x_{nu}	y_{nu}	z_{nu}	h_{nu}
00	396	12.19	6.11	-7.36	9.57	309	5.93	-6.90	9.10	310
01	463	6.34	3.32	-14.51	14.89	282	3.15	-14.05	14.40	282
02	466	8.01	1.84	-11.50	11.65	279	1.67	-11.04	11.17	278
03	471	12.66	-0.17	-7.15	7.15	268	-0.35	-6.69	6.70	267
04	475B	19.21	-1.26	-4.51	4.69	254	-1.43	-4.05	4.30	250
05	479	27.50	-1.76	-2.96	3.45	239	-1.93	-2.50	3.17	232
06	481	36.66	-1.93	-2.06	2.83	226	-2.11	-1.60	2.65	217
07	483	41.45	-1.95	-1.75	2.62	221	-2.12	-1.29	2.48	217
08	484	46.29	-1.93	-1.50	2.44	217	-2.10	-1.04	2.35	206
09	485	51.06	-1.88	-1.30	2.29	214	-2.05	-0.84	2.22	202
10	486C	57.81	-1.78	-1.07	2.08	211	-1.95	-0.61	2.05	197
11	490	58.17	-1.99	-0.67	2.10	198	-2.16	-0.21	2.17	185
12	497	58.66	-2.19	-0.22	2.20	185	-2.36	0.23	2.38	172
13	501	59.57	-2.22	-0.06	2.22	181	-2.40	0.39	2.43	170
14	506	60.29	-2.25	0.08	2.25	177	-2.43	0.54	2.49	167
15	519	61.02	-2.27	0.31	2.30	172	-2.45	0.77	2.57	162
16	522G	63.42	-2.18	0.32	2.21	171	-2.36	0.78	2.48	158
17	535	66.19	-2.03	0.46	2.08	167	-2.21	0.92	2.39	151
18	544	72.16	-1.71	0.50	1.78	163	-1.88	0.96	2.11	152
19	548	87.80	-0.64	0.49	0.81	142	-0.82	0.95	1.26	130
20	568	93.65	-0.03	0.49	0.49	94	-0.21	0.95	0.97	122
21	569	91.98	0.02	0.50	0.50	86	-0.14	0.96	0.97	118
22	571	87.33	0.22	0.51	0.55	66	0.05	0.97	0.97	86
23	573Y	80.76	0.51	0.50	0.72	44	0.34	0.96	1.02	70
24	577	72.49	0.91	0.49	1.03	28	0.73	0.95	1.20	53
25	581	63.33	1.39	0.47	1.47	18	1.22	0.93	1.53	37
26	583	58.54	1.67	0.45	1.74	15	1.50	0.91	1.76	31
27	585	53.70	1.98	0.44	2.03	12	1.81	0.90	2.02	26
28	587	48.93	2.32	0.42	2.36	10	2.14	0.88	2.32	22
29	588	42.18	2.86	0.38	2.88	7	2.68	0.84	2.81	7
30	631	41.82	3.18	-0.15	3.19	357	3.01	0.30	3.02	5
31	702	41.33	3.53	-0.79	3.62	347	3.36	-0.33	3.37	354
32	706	40.41	3.71	-1.04	3.86	344	3.54	-0.58	3.58	350
33	711	39.70	3.86	-1.29	4.07	341	3.69	-0.83	3.78	347
34	724	38.97	4.01	-1.67	4.35	337	3.84	-1.21	4.02	342
35	727M	36.57	4.27	-1.82	4.64	336	4.09	-1.36	4.31	341
36	740	33.80	4.50	-2.27	5.04	333	4.33	-1.81	4.69	337
37	749	27.83	5.06	-2.96	5.86	329	4.88	-2.50	5.49	332
38	766	12.19	6.11	-7.36	9.57	309	5.93	-6.90	9.10	310
39	828	6.34	3.32	-14.51	14.89	282	3.15	-14.05	14.40	282
U=D50	99.99	0.174	-0.459	0.491	290	0.0	0.0	0.0	0.0	

$$a = p_{nm} \frac{p_{nm}}{p_m} p_{\lambda} = 1.0, (5.645x - 2.666 + 2.570y) / y \quad A_{nm} = (a - b) / y \quad C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$$

$$b = p_{nm} \frac{p_{nm}}{p_m} p_{\lambda} = 0.5(-1.871x + 1.457 - 3.861z) / y \quad B_{nm} = (b - b) / y \quad h_{ABnm} = \arctan(B_{nm} / A_{nm})$$

DE690-4N

CIE02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	n-purities	n-purities	n-purities	n-purities	n-purities	n-purities	n-purities
λ_{nm}	X	Y	Z	x	y	z	x_{AB}	y_{AB}	z_{AB}
00	331	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6
01	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8
02	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7
03	711	74.05	39.70	53.95	0.441	0.236	0.321	146.3	-33.0
04	724	74.48	38.97	65.18	0.416	0.218	0.364	149.6	-47.4
05	727M	72.26	36.57	65.17	0.415	0.210	0.374	149.8	-49.8
06	740	69.08	33.80	72.53	0.393	0.192	0.413	146.3	-61.3
07	749	61.10	27.83	74.91	0.372	0.169	0.457	136.0	-69.6
08	396	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1
09	463	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1
10	466	13.27	8.01	79.21	0.132	0.079	0.788	13.4	-88.4
11	471	13.39	12.66	80.68	0.125	0.118	0.755	-4.4	-84.7
12	475B	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9
13	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9
14	481	18.42	36.66	82.05	0.134	0.267	0.598	-77.4	-58.9
15	483	20.35	41.45	82.11	0.141	0.288	0.570	-88.1	-53.6
16	484	22.64	46.29	82.14	0.149	0.306	0.543	-97.4	-48.4
17	485	25.29	51.06	82.16	0.159	0.322	0.518	-105.0	-43.3
18	486C	26.62	57.81	81.62	0.175	0.341	0.482	-113.2	-35.5
19	490	26.32	58.17	83.51	0.177	0.393	0.429	-126.0	-12.6
20	497	23.01	58.66	82.48	0.185	0.472	0.342	-138.9	13.8
21	501	22.62	59.57	83.18	0.192	0.507	0.299	-143.1	23.7
22	506	22.26	60.29	82.28	0.200	0.543	0.255	-149.6	47.4
23	519	21.83	61.02	17.06	0.218	0.610	0.170	-149.8	49.8
24	522G	24.04	63.42	17.06	0.230	0.606	0.163	-146.3	61.3
25	535	27.22	66.19	9.71	0.263	0.6	0.136	-138.9	69.6
26	541	28.12	72.15	17.71	0.288	0.688	0.022	-143.1	73.7
27	565	36.17	87.00	-0.64	0.49	0.81	0.142	-82.1	95.2
28	568	39.65	-0.03	0.49	0.49	0.94	0.21	95.9	97.7
29	569	39.98	0.02	0.50	0.50	0.86	-0.14	95.6	97
30	571	37.73	0.22	0.51	0.53	0.66	0.05	97	97.7
31	573	36.76	0.51	0.50	0.72	0.44	0.34	96	102
32	574	32.49	0.91	0.49	0.63	0.29	0.73	95	102
33	581	36.33	1.39	0.47	1.47	0.18	1.22	93	115
34	583	58.54	1.67	0.45	1.74	0.15	1.50	93	176
35	585	53.70	1.98	0.44	2.03	0.12	1.81	90	202
36	587R	49.93	2.32	0.42	2.36	0.10	2.14	88	232
37	590	42.18	2.66	0.40	2.68	0.08	2.48	87	261
38	631	41.82	3.18	-0.15	3.19	-0.2	3.01	83	302
39	702	41.33	3.53	-0.79	3.62	-12	3.36	-33	357

$$a = p_{nm} \frac{p_{nm}}{p_m} p_{\lambda} = 1.0, (5.645x - 2.666 + 2.570y) / y \quad A_{nm} = (a - b) / y \quad C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$$

$$b = p_{nm} \frac{p_{nm}}{p_m} p_{\lambda} = 0.5(-1.871x + 1.457 - 3.861z) / y \quad B_{nm} = (b - b) / y \quad h_{ABnm} = \arctan(B_{nm} / A_{nm})$$

DE690-8N

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[.PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	376	55.24	26.06	71.08	0.362 0.171 0.466
01	458	13.22	7.40	75.87	0.136 0.076 0.776
02	460	13.26	8.89	77.33	0.133 0.089 0.777
03	462	13.28	10.68	78.42	0.129 0.104 0.765
04	463	13.28	10.68	78.42	0.129 0.104 0.765
05	468	13.66	17.92	80.19	0.122 0.160 0.717
06	471	14.70	24.41	80.73	0.122 0.203 0.673
07	473	15.60	28.17	80.89	0.125 0.225 0.648
08	475	18.32	36.37	81.08	0.134 0.267 0.597
09	477	22.35	45.10	81.16	0.150 0.303 0.546
10	477C	22.35	45.10	81.16	0.150 0.303 0.546
11	479	27.82	53.94	81.17	0.170 0.331 0.498
12	480	30.64	58.21	79.19	0.182 0.346 0.471
13	484	25.67	56.42	59.80	0.180 0.397 0.421
14	492	22.50	56.65	38.03	0.192 0.483 0.324
15	503	21.56	57.40	24.28	0.208 0.555 0.235
16	512G	22.19	58.45	18.53	0.223 0.589 0.186
17	521	24.28	60.61	13.79	0.246 0.614 0.139
18	531	29.00	64.47	10.07	0.280 0.622 0.097
19	541	41.29	73.93	10.07	0.330 0.589 0.080
20	563	83.41	92.59	5.28	0.460 0.510 0.029
21	564	83.37	91.09	3.82	0.467 0.510 0.021
22	565	83.35	89.31	2.74	0.475 0.509 0.015
23	565Y	83.35	89.31	2.74	0.475 0.509 0.015
24	568	82.96	82.07	0.96	0.490 0.494 0.005
25	571	81.93	75.58	0.44	0.518 0.478 0.002
26	573	81.03	71.82	0.27	0.529 0.469 0.001
27	577	78.31	63.62	0.08	0.551 0.447 0.000
28	581	74.28	54.89	0.01	0.575 0.424 0.000
29	581	74.28	54.89	0.01	0.575 0.424 0.000
30	587	68.81	46.05	0.00	0.599 0.400 0.000
31	589	67.60	44.04	0.93	0.600 0.391 0.008
32	692	70.96	43.57	21.37	0.522 0.320 0.157
33	697	74.12	43.34	43.14	0.461 0.269 0.268
34	708	75.07	42.59	56.88	0.434 0.261 0.325
35	717	74.44	41.54	62.63	0.416 0.232 0.350
36	726	72.35	39.38	67.37	0.403 0.219 0.376
37	736	67.62	35.52	71.08	0.388 0.203 0.408
38	745	55.24	26.06	71.08	0.362 0.171 0.466
39	823	13.22	7.40	75.87	0.136 0.076 0.776

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 0.0 0.0 0.0 0.0
 $a^*_{p,m} = n_p \cdot p_m \cdot 1.4[(5.645x - 2.666 + 2.570z)/y]$ $A_m = (a - a_0) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{p,m} = n_p \cdot p_m \cdot 0.5[(-1.871x + 1.457 - 3.861z)/y]$ $B_m = (b - b_0) Y$ $H_{AB,m} = \text{atan2}[B_m, A_m]$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	376	55.24	26.06	71.08	0.362 0.171 0.466
01	458	13.22	7.40	75.87	0.136 0.076 0.776
02	460	13.26	8.89	77.33	0.133 0.089 0.777
03	462	13.28	10.68	78.42	0.129 0.104 0.765
04	463	13.28	10.68	78.42	0.129 0.104 0.765
05	468	13.66	17.92	80.19	0.122 0.160 0.717
06	471	14.70	24.41	80.73	0.122 0.203 0.673
07	473	15.60	28.17	80.89	0.125 0.225 0.648
08	475	18.32	36.37	81.08	0.134 0.267 0.597
09	477	22.35	45.10	81.16	0.150 0.303 0.546
10	477C	22.35	45.10	81.16	0.150 0.303 0.546
11	479	27.82	53.94	81.17	0.170 0.331 0.498
12	480	30.64	58.21	79.19	0.182 0.346 0.471
13	484	25.67	56.42	59.80	0.180 0.397 0.421
14	492	22.50	56.65	38.03	0.192 0.483 0.324
15	503	21.56	57.40	24.28	0.208 0.555 0.235
16	512G	22.19	58.45	18.53	0.223 0.589 0.186
17	521	24.28	60.61	13.79	0.246 0.614 0.139
18	531	29.00	64.47	10.07	0.280 0.622 0.097
19	541	41.29	73.93	10.07	0.330 0.589 0.080
20	563	83.41	92.59	5.28	0.460 0.510 0.029
21	564	83.37	91.09	3.82	0.467 0.510 0.021
22	565	83.35	89.31	2.74	0.475 0.509 0.015
23	565Y	83.35	89.31	2.74	0.475 0.509 0.015
24	568	82.96	82.07	0.96	0.490 0.494 0.005
25	571	81.93	75.58	0.44	0.518 0.478 0.002
26	573	81.03	71.82	0.27	0.529 0.469 0.001
27	577	78.31	63.62	0.08	0.551 0.447 0.000
28	581	74.28	54.89	0.01	0.575 0.424 0.000
29	581	74.28	54.89	0.01	0.575 0.424 0.000
30	587	68.81	46.05	0.00	0.599 0.400 0.000
31	589	67.60	44.04	0.93	0.600 0.391 0.008
32	692	70.96	43.57	21.37	0.522 0.320 0.157
33	697	74.12	43.34	43.14	0.461 0.269 0.268
34	708	75.07	42.59	56.88	0.434 0.261 0.325
35	717	74.44	41.54	62.63	0.416 0.232 0.350
36	726	72.35	39.38	67.37	0.403 0.219 0.376
37	736	67.62	35.52	71.08	0.388 0.203 0.408
38	745	55.24	26.06	71.08	0.362 0.171 0.466
39	823	13.22	7.40	75.87	0.136 0.076 0.776

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 0.0 0.0 0.0 0.0
 $a^*_{p,m} = n_p \cdot p_m \cdot 1.4[(5.645x - 2.666 + 2.570z)/y]$ $A_m = (a - a_0) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{p,m} = n_p \cdot p_m \cdot 0.5[(-1.871x + 1.457 - 3.861z)/y]$ $B_m = (b - b_0) Y$ $H_{AB,m} = \text{atan2}[B_m, A_m]$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
λ	X	Y	Z	x	y
00	692	70.96	43.57	21.37	0.522 0.320 0.157
01	697	74.12	43.34	43.14	0.461 0.269 0.268
02	708	75.07	42.59	56.88	0.434 0.261 0.325
03	717	74.44	41.54	62.63	0.416 0.232 0.350
04	726	72.35	39.38	67.37	0.403 0.219 0.376
05	736	67.62	35.52	71.08	0.388 0.203 0.408
06	376	55.24	26.06	71.08	0.362 0.171 0.466
07	458	13.22	7.40	75.87	0.136 0.076 0.776
08	460	13.26	8.89	77.33	0.133 0.089 0.777
09	462	13.28	10.68	78.42	0.129 0.104 0.765
10	463	13.28	10.68	78.42	0.129 0.104 0.765
11	468	13.66	17.92	80.19	0.122 0.160 0.717
12	471	14.70	24.41	80.73	0.122 0.203 0.673
13	473	15.60	28.17	80.89	0.125 0.225 0.648
14	475	18.32	36.37	81.08	0.134 0.267 0.597
15	477	22.35	45.10	81.16	0.150 0.303 0.546
16	477C	22.35	45.10	81.16	0.150 0.303 0.546
17	479	27.82	53.94	81.17	0.170 0.331 0.498
18	480	30.64	58.21	79.19	0.182 0.346 0.471
19	484	25.67	56.42	59.80	0.180 0.397 0.421
20	492	22.50	56.65	38.03	0.192 0.483 0.324
21	503	21.56	57.40	24.28	0.208 0.555 0.235
22	512	22.19	58.45	18.53	0.223 0.589 0.186
23	521G	24.28	60.61	13.79	0.246 0.614 0.139
24	531	29.00	64.47	10.07	0.280 0.622 0.097
25	541	41.29	73.93	10.07	0.330 0.589 0.080
26	563	83.41	92.59	5.28	0.460 0.510 0.029
27	564	83.37	91.09	3.82	0.467 0.510 0.021
28	565	83.35	89.31	2.74	0.475 0.509 0.015
29	565Y	83.35	89.31	2.74	0.475 0.509 0.015
30	568	82.96	82.07	0.96	0.490 0.494 0.005
31	571	81.93	75.58	0.44	0.518 0.478 0.002
32	573	81.03	71.82	0.27	0.529 0.469 0.001
33	577	78.31	63.62	0.08	0.551 0.447 0.000
34	581	74.28	54.89	0.01	0.575 0.424 0.000
35	581	74.28	54.89	0.01	0.575 0.424 0.000
36	587	68.81	46.05	0.00	0.599 0.400 0.000
37	589	67.60	44.04	0.93	0.600 0.391 0.008
38	692	70.96	43.57	21.37	0.522 0.320 0.157
39	697	74.12	43.34	43.14	0.461 0.269 0.268

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 0.0 0.0 0.0 0.0
 $a^*_{p,m} = n_p \cdot p_m \cdot 1.4[(5.645x - 2.666 + 2.570z)/y]$ $A_m = (a - a_0) Y$ $C_{AB,m} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_{p,m} = n_p \cdot p_m \cdot 0.5[(-1.871x + 1.457 - 3.861z)/y]$ $B_m = (b - b_0) Y$ $H_{AB,m} = \text{atan2}[B_m, A_m]$

CIE10 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle														
no.	O	C	n-purities						nu-purities					
			λ	Y	P_{nm}	P_{nm}	P_{nm}	h_{nm}	λ	Y	P_{nm}	P_{nm}	P_{nm}	h_{nm}
00	692	43.57	2.99	-0.11	3.00	356		2.80	0.24	2.81	365			
01	697	43.34	3.26	-0.82	3.36	345		3.07	-0.37	3.10	353			
02	708	42.59	3.44	-1.24	3.65	340		3.25	-0.79	3.34	346			
03	717	41.54	3.54	-1.45	3.68	337		3.35	-1.09	3.43	340			
04	726	39.38	3.70	-1.47	4.07	335		3.51	-1.26	3.73	340			
05	736	35.52	3.94	-2.07	4.45	332		3.75	-1.62	4.08	336			
06	376	26.06	4.74	-2.98	5.00	327		4.55	-2.54	5.21	330			
07	458	7.40	2.34	-1.19	12.19	281		2.15	-11.52	11.72	280			
08	460	8.89	2.40	-1.02	12.62	277		2.15	-11.52	11.72	280			
09	462	10.68	0.46	-8.35	8.36	273		0.27	-9.70	7.91	272			
10	463	10.68	0.46	-8.35	8.36	273		0.27	-9.70	7.91	272			
11	468	17.92	-1.15	-4.81	4.94	256		-1.34	-4.36	4.56	252			
12	471	24.41	-1.66	-3.37	3.76	243		-1.85	-2.92	3.64	237			
13	473	28.17	-1.88	-3.83	4.23	237		-2.09	-3.11	3.20	230			
14	475	36.37	-1.93	-2.05	8.22	226		-2.12	-1.60	2.66	217			
15	477	45.10	-1.90	-1.53	2.44	218		-2.09	-1.09	2.36	207			
16	477C	45.10	-1.90	-1.53	2.44	218		-2.09	-1.09	2.36	207			
17	479	53.94	-1.78	-1.18	2.14	213		-1.97	-0.74	2.10	200			
18	480	58.21	-1.71	-0.93	2.07	207		-1.97	-0.56	2.10	185			
19	484	56.42	-1.97	-0.63	2.07	197		-2.16	-0.19	2.17	185			
20	492	56.65	-2.16	-0.16	2.17	184		-2.35	-0.28	2.37	173			
21	503	57.40	-2.22	0.14	2.22	176		-2.41	0.58	2.48	166			
22	518	58.45	-2.19	0.26	2.20	173		-2.38	0.78	2.48	163			
23	531	61.61	-2.09	0.27	2.12	169		-2.69	0.81	2.73	155			
24	531	64.47	-1.87	0.44	1.92	166		-2.06	0.89	2.25	156			
25	541	73.93	-1.41	0.44	1.48	162		-1.60	0.89	1.83	150			
26	563	92.59	0.01	0.47	0.47	87		-0.17	0.92	0.93	100			
27	564	90.9	0.07	0.48	0.49	80		-0.06	0.93	0.94	96			
28	565	89.31	0.15	0.49	0.52	72		0.03	0.94	0.94	91			
29	565	89.31	0.15	0.49	0.52	72		0.03	0.94	0.94	91			
30	568	87.07	0.48	0.50	0.60	64		0.29	0.95	0.99	72			
31	571	75.58	0.78	0.49	0.93	32		0.59	0.94	1.11	57			
32	573	71.82	0.97	0.49	1.09	26		0.78	0.93	1.22	50			
33	583	65.62	1.09	0.47	1.18	18		0.91	0.91	1.21	38			
34	584	59.58	1.91	0.44	1.96	13		1.72	0.89	1.94	20			
35	581	54.89	1.91	0.44	1.96	13		1.72	0.89	1.94	20			
36	587R	46.05	2.50	0.41	2.53	9		2.31	0.86	2.46	27			
37	589	44.04	2.66	0.38	2.69	8		2.40	0.83	2.61	18			
38	599	33.34	2.99	-0.19	3.00	4		2.80	-0.24	2.80	24			
39	697	43.34	3.26	-0.82	3.36	-1		3.07	-0.37	3.10	-6			

$a^*_{nm} = P_{nm} \cdot 1.41, (5.6455 \cdot 2.666 + 2.5702) \cdot Y_w$
 $b^*_{nm} = P_{nm} \cdot 0.51, (-1.871 \times 1.457 - 3.861) \cdot Y_w$

$A^*_{nm} = (a^*_{nm} \cdot Y) / C_{A,nm}$
 $B^*_{nm} = (b^*_{nm} \cdot Y) / h_{A,nm}$

DE90-D

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)
technical information: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /[PS](http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF)

TUB registration: 20180801-DE69/DE69L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
			X Y Z x y z	$A_m B_m C_m$	$A_p B_p C_p$
00	386		51.50 23.94 74.68 0.343 0.159 0.497	111.1 -72.0 132.4 327	
01	460		12.38 6.54 76.19 0.130 0.068 0.801	15.8 -86.3 87.8 280	
02	465		12.41 9.58 78.25 0.123 0.095 0.780	3.7 -85.2 85.3 272	
03	467		14.25 11.64 78.87 0.120 0.113 0.766	-4.2 -83.5 83.6 267	
04	473		13.31 20.43 79.83 0.117 0.179 0.702	-35.1 -74.4 82.3 244	
05	475		14.02 24.19 79.97 0.118 0.204 0.676	-46.9 -70.1 87.5 236	
06	479		17.82 36.91 80.16 0.132 0.273 0.594	-80.9 -56.2 98.5 214	
07	479		17.82 36.91 80.16 0.132 0.273 0.594	-80.9 -56.2 98.5 214	
08	481		21.98 46.03 80.19 0.148 0.310 0.541	-99.2 -46.2 109.4 205	
09	481		21.98 46.03 80.19 0.148 0.310 0.541	-99.2 -46.2 109.4 205	
10	483C		25.52 55.03 80.21 0.169 0.338 0.492	-111.3 -36.3 117.2 198	
11	484		28.85 57.21 79.07 0.174 0.346 0.478	-114.1 -33.0 118.8 196	
12	489		25.36 57.41 57.70 0.180 0.408 0.410	-126.6 -6.4 126.7 182	
13	497		22.33 57.50 36.81 0.191 0.492 0.315	-136.8 19.4 138.1 171	
14	505		21.31 58.03 24.30 0.205 0.559 0.234	-141.4 35.3 145.8 165	
15	512		21.41 58.69 18.79 0.216 0.593 0.190	-142.8 42.7 149.1 163	
16	521G		22.42 59.91 14.10 0.232 0.621 0.146	-142.8 49.5 151.1 160	
17	524		25.32 62.97 14.10 0.247 0.615 0.137	-142.6 52.6 152.0 159	
18	539		30.29 66.55 7.57 0.290 0.637 0.072	-135.0 63.6 149.3 154	
19	541		44.95 76.05 0.35 0.509 0.487 0.012	35.7 76.8 84.6 65	
20	568		84.08 93.45 4.02 0.463 0.514 0.022	-15.4 88.7 90.1 99	
21	568		84.08 93.45 4.02 0.463 0.514 0.022	-15.4 88.7 90.1 99	
22	569		84.05 90.41 1.96 0.476 0.512 0.011	-3.4 87.6 87.7 92	
23	570Y		84.04 88.35 1.33 0.483 0.508 0.007	-4.4 85.9 86.1 87	
24	573		83.15 79.56 0.38 0.509 0.487 0.012	35.7 76.8 84.6 65	
25	575		82.44 75.80 0.24 0.520 0.478 0.001	47.2 72.7 86.7 56	
26	580		78.64 63.07 0.05 0.554 0.444 0.000	81.2 58.5 100.1 35	
27	580		78.64 63.07 0.05 0.554 0.444 0.000	81.2 58.5 100.1 35	
28	585		74.48 53.96 0.02 0.579 0.420 0.000	99.5 48.6 110.7 26	
29	591		68.94 44.96 0.00 0.605 0.394 0.000	111.6 35.4 119.8 17	
30	592		67.61 42.78 1.14 0.606 0.383 0.010	114.4 35.4 119.8 17	
31	694		71.10 42.58 22.52 0.522 0.312 0.165	126.9 8.7 127.2 3	
32	702		74.12 42.49 43.40 0.463 0.265 0.271	137.0 -17.0 138.1 352	
33	710		75.15 41.96 55.91 0.434 0.242 0.323	141.7 -32.9 145.5 346	
34	717		75.05 41.30 61.43 0.422 0.232 0.345	143.1 -40.3 148.7 344	
35	726G		74.04 40.08 66.11 0.410 0.222 0.366	143.1 -47.1 150.7 341	
36	729		71.14 37.02 66.11 0.408 0.212 0.379	143.0 -50.2 151.5 340	
37	744		66.16 33.43 72.64 0.384 0.194 0.421	135.3 -61.2 148.5 335	
38	756		51.50 23.94 74.68 0.343 0.159 0.497	111.1 -72.0 132.4 327	
39	825		12.38 6.54 76.19 0.130 0.068 0.801	15.8 -86.3 87.8 280	

U=D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0.0
 $a^*_p=a^*_m=1.4[(5.645x-2.666+2.570z)/y]$ $A_m=(a^*_m/a^*_p)$ $C_{ABm}=[A_m^2+B_m^2+C_m^2]^{1/2}$
 $b^*_p=b^*_m=0.5[(-1.871x+1.457-3.861z)/y]$ $B_m=(b^*_m/b^*_p)$ $h_{ABm}=atan[B_m/C_m]$

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	C	tristimulus values and chromaticities	chromatic values	putities
			X Y Z x y z	$A_m B_m C_m$	$A_p B_p C_p$
00	386		51.50 23.94 74.68 0.343 0.159 0.497	111.1 -72.0 132.4 327	
01	460		12.38 6.54 76.19 0.130 0.068 0.801	15.8 -86.3 87.8 280	
02	465		12.41 9.58 78.25 0.123 0.095 0.780	3.7 -85.2 85.3 272	
03	467		14.25 11.64 78.87 0.120 0.113 0.766	-4.2 -83.5 83.6 267	
04	473		13.31 20.43 79.83 0.117 0.179 0.702	-35.1 -74.4 82.3 244	
05	475		14.02 24.19 79.97 0.118 0.204 0.676	-46.9 -70.1 87.5 236	
06	479		17.82 36.91 80.16 0.132 0.273 0.594	-80.9 -56.2 98.5 214	
07	479		17.82 36.91 80.16 0.132 0.273 0.594	-80.9 -56.2 98.5 214	
08	481		21.98 46.03 80.19 0.148 0.310 0.541	-99.2 -46.2 109.4 205	
09	481		21.98 46.03 80.19 0.148 0.310 0.541	-99.2 -46.2 109.4 205	
10	483C		25.52 55.03 80.21 0.169 0.338 0.492	-111.3 -36.3 117.2 198	
11	484		28.85 57.21 79.07 0.174 0.346 0.478	-114.1 -33.0 118.8 196	
12	489		25.36 57.41 57.70 0.180 0.408 0.410	-126.6 -6.4 126.7 182	
13	497		22.33 57.50 36.81 0.191 0.492 0.315	-136.8 19.4 138.1 171	
14	505		21.31 58.03 24.30 0.205 0.559 0.234	-141.4 35.3 145.8 165	
15	512		21.41 58.69 18.79 0.216 0.593 0.190	-142.8 42.7 149.1 163	
16	521G		22.42 59.91 14.10 0.232 0.621 0.146	-142.8 49.5 151.1 160	
17	524		25.32 62.97 14.10 0.247 0.615 0.137	-142.6 52.6 152.0 159	
18	539		30.29 66.55 7.57 0.290 0.637 0.072	-135.0 63.6 149.3 154	
19	541		44.95 76.05 0.35 0.509 0.487 0.012	35.7 76.8 84.6 65	
20	568		84.08 93.45 4.02 0.463 0.514 0.022	-15.4 88.7 90.1 99	
21	568		84.08 93.45 4.02 0.463 0.514 0.022	-15.4 88.7 90.1 99	
22	569		84.05 90.41 1.96 0.476 0.512 0.011	-3.4 87.6 87.7 92	
23	570Y		84.04 88.35 1.33 0.483 0.508 0.007	-4.4 85.9 86.1 87	
24	573		83.15 79.56 0.38 0.509 0.487 0.012	35.7 76.8 84.6 65	
25	575		82.44 75.80 0.24 0.520 0.478 0.001	47.2 72.7 86.7 56	
26	580		78.64 63.07 0.05 0.554 0.444 0.000	81.2 58.5 100.1 35	
27	580		78.64 63.07 0.05 0.554 0.444 0.000	81.2 58.5 100.1 35	
28	585		74.48 53.96 0.02 0.579 0.420 0.000	99.5 48.6 110.7 26	
29	591		68.94 44.96 0.00 0.605 0.394 0.000	111.6 35.4 119.8 17	
30	592		67.61 42.78 1.14 0.606 0.383 0.010	114.4 35.4 119.8 17	
31	694		71.10 42.58 22.52 0.522 0.312 0.165	126.9 8.7 127.2 3	
32	702		74.12 42.49 43.40 0.463 0.265 0.271	137.0 -17.0 138.1 352	
33	710		75.15 41.96 55.91 0.434 0.242 0.323	141.7 -32.9 145.5 346	
34	717		75.05 41.30 61.43 0.422 0.232 0.345	143.1 -40.3 148.7 344	
35	726G		74.04 40.08 66.11 0.410 0.222 0.366	143.1 -47.1 150.7 341	
36	729		71.14 37.02 66.11 0.408 0.212 0.379	143.0 -50.2 151.5 340	
37	744		66.16 33.43 72.64 0.384 0.194 0.421	135.3 -61.2 148.5 335	
38	756		51.50 23.94 74.68 0.343 0.159 0.497	111.1 -72.0 132.4 327	
39	825		12.38 6.54 76.19 0.130 0.068 0.801	15.8 -86.3 87.8 280	

U=D50 100.00 100.00 -0.459 0.493 291 0.0 0.0 0.0 0.0
 $a^*_p=a^*_m=1.4[(5.645x-2.666+2.570z)/y]$ $A_m=(a^*_m/a^*_p)$ $C_{ABm}=[A_m^2+B_m^2+C_m^2]^{1/2}$
 $b^*_p=b^*_m=0.5[(-1.871x+1.457-3.861z)/y]$ $B_m=(b^*_m/b^*_p)$ $h_{ABm}=atan[B_m/C_m]$

CIEF02 tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$).												
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C	tristimulus values and chromaticities						nu-chromatic values			
			X	Y	Z	x	y	z	A_m	B_m	C_m	A_{Bm}
00	592		67.61	42.78	1.14	0.606	0.383	0.010	114.4	35.4	119.8	17
01	694		71.10	42.58	22.52	0.522	0.312	0.165	126.9	8.7	127.2	3
02	702		74.12	42.49	43.40	0.463	0.265	0.271	137.0	-17.0	138.1	352
03	710		75.15	41.96	55.91	0.434	0.242	0.323	141.7	-32.9	145.5	346
04	717		75.05	41.30	61.43	0.422	0.232	0.345	143.1	-40.3	148.7	344
05	726G		74.04	40.08	66.11	0.410	0.222	0.366	143.1	-47.1	150.7	341
06	729		71.14	37.02	66.11	0.408	0.212	0.379	143.0	-50.2	151.5	340
07	744		66.16	33.43	72.64	0.384	0.194	0.421	135.3	-61.2	148.5	335
08	756		51.50	23.94	74.68	0.343	0.159	0.497	111.1	-72.0	132.4	327
09	460		12.38	6.54	76.19	0.130	0.068	0.801	15.8	-86.3	87.8	280
10	465		12.41	9.58	78.25	0.123	0.095	0.780	3.7	-85.2	85.3	272
11	467		14.25	11.64	78.87	0.120	0.113	0.766	-4.2	-83.5	83.6	267
12	473B		13.31	20.43	79.83	0.117	0.179	0.702	-35.1	-74.4	82.3	244
13	475		14.02	24.19	79.97	0.118	0.204	0.676	-46.9	-70.1	87.5	236
14	479		17.82	36.91	80.16	0.132	0.273	0.594	-80.9	-56.2	98.5	214
15	479		17.82	36.91	80.16	0.132	0.273	0.594	-80.9	-56.2	98.5	214
16	481		21.98	46.03	80.19	0.148	0.310	0.541	-99.2	-46.2	109.4	205
17	481		21.98	46.03	80.19	0.148	0.310	0.541	-99.2	-46.2	109.4	205
18	483C		25.52	55.03	80.21	0.169	0.338	0.492	-111.3	-36.3	117.2	198
19	484		28.85	57.21	79.07	0.174	0.346	0.478	-114.1	-33.0	118.8	196
20	489		25.36	57.41	57.70	0.180	0.408	0.410	-126.6	-6.4	126.7	182
21	497		22.33	57.50	36.81	0.191	0.492	0.315	-136.8	19.4	138.1	171
22	505		21.31	58.03	24.30	0.205	0.559	0.234	-141.4	35.3	145.8	165
23	512G		21.41	58.69	18.79	0.216	0.593	0.190	-142.8	42.7	149.1	163
24	521		22.42	59.91	14.10	0.232	0.621	0.146	-142.8	49.5	151.1	160
25	524		25.32	62.97	14.10	0.247	0.615	0.137	-142.6	52.6	152.0	159
26	539		30.29	66.55	7.57	0.290	0.637	0.072	-135.0	63.6	149.3	154
27	541		44.95	76.05	0.35	0.509	0.487	0.012	35.7	76.8	84.6	65
28	568		84.08	93.45	4.02	0.463	0.514	0.022	-15.4	88.7	90.1	99
29	568		84.08	93.45	4.02	0.463	0.514	0.022	-15.4	88.7	90.1	99
30	569		84.05	90.41	1.96	0.476	0.512	0.011	-3.4	87.6	87.7	92
31	570		84.04	88.35	1.33	0.483	0.508	0.007	-4.4	85.9	86.1	87
32	573Y		83.15	79.56	0.38	0.509	0.487	0.012	35.7	76.8	84.6	65
33	575		82.44	75.80	0.24	0.520	0.478	0.001	47.2	72.7	86.7	56
34	580		78.64	63.07	0.05	0.554	0.444	0.000	81.2	58.5	100.1	35
35	580		78.64	63.07	0.05	0.554	0.444	0.000	81.2	58.5	100.1	35
36	585R		74.48	53.96	0.02	0.579	0.420	0.000	99.5	48.6	110.7	26
37	590		68.94	44.96	0.00	0.605	0.394	0.000	111.6	35.4	119.8	17
38	592		67.61	42.78	1.14	0.606	0.383	0.010	114.4	35.4	119.8	17
39	694		71.10	42.58	22.52	0.522	0.312	0.165	126.9	8.7	127.2	3
U-D50 $\mathbf{96, 46, 100} \rightarrow \mathbf{0.222, 0.346, 0.570}$ $\mathbf{A_m} = \mathbf{0.000}$ $\mathbf{B_m} = \mathbf{0.000}$ $\mathbf{C_m} = \mathbf{0.000}$												
$a_m = m_{31} \cdot A_m + n_{31} \cdot B_m + o_{31} \cdot C_m$ ($5.645x - 2.666x + 2.570x$) $A_{Bm} = (a - a_0) \cdot Y$ $C_{ABm} = (A - A_0) \cdot B_{ABm}^{1/2}$												
$b_m = m_{32} \cdot A_m + n_{32} \cdot B_m + o_{32} \cdot C_m$ ($-1.871x + 1.457 - 3.861x$) $B_{ABm} = (b - b_0) \cdot Y$ $h_{ABm} = \text{atan}[B_{ABm} / A_{ABm}]$												
DE690-7N												

CIEF10 tristimulus values, chromatic values, and putities ($n=1.4$, $n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.									
no.	O	C	tristimulus values and chromaticities	nu-chromatic values					
			X Y Z	x y z	λ_{AB}	λ_{AB}	λ_{AB}	λ_{AB}	λ_{AB}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4
01	455	13.14	6.61	74.65	0.139	0.070	0.793	18.8	-84.7
02	460	13.28	9.49	77.94	0.131	0.094	0.773	7.6	-85.3
03	462	13.39	11.32	78.97	0.128	0.109	0.762	0.4	-84.4
04	464	13.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7
05	468	13.69	16.87	80.47	0.121	0.165	0.713	-27.0	-77.6
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-48.4	-70.5
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-57.6
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-43.7
11	479	30.58	58.60	80.80	0.182	0.349	0.468	-113.1	-32.1
12	479	30.58	58.60	80.12	0.175	0.340	0.483	-110.8	-36.1
13	484	25.63	56.72	79.92	0.180	0.400	0.418	-123.7	-10.0
14	492	22.37	56.85	76.73	0.192	0.490	0.316	-134.8	17.9
15	503	21.57	57.63	22.95	0.211	0.564	0.224	-139.3	35.6
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	43.5
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	51.2
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	59.4
19	545	43.62	74.21	6.37	0.352	0.596	0.051	-108.4	84.6
20	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	84.6
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	85.3
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	84.3
23	566Y	83.49	86.54	1.34	0.486	0.505	0.007	7.8	82.7
24	568	83.04	81.32	0.56	0.503	0.493	0.003	27.0	77.6
25	571	82.00	74.78	0.23	0.522	0.476	0.001	48.4	70.5
26	573	81.10	71.03	0.14	0.532	0.466	0.000	59.3	66.4
27	577	78.40	62.93	0.05	0.554	0.445	0.000	79.9	57.6
28	581	74.33	54.29	0.02	0.577	0.421	0.000	96.9	48.3
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	103.4	43.7
30	591	66.15	41.39	2.33	0.602	0.376	0.021	113.1	32.1
31	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1
32	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9
33	697	74.36	43.14	44.30	0.459	0.266	0.273	134.8	-17.9
34	708	75.16	42.36	58.08	0.428	0.241	0.300	139.3	-35.6
35	716G	74.43	41.31	67.38	0.414	0.230	0.353	138.2	-51.2
36	726	72.17	39.11	68.41	0.401	0.217	0.380	132.2	-59.4
37	737	66.83	34.86	71.99	0.384	0.200	0.414	123.7	-67.3
38	750	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4
39	820	13.14	6.61	74.65	0.139	0.070	0.793	18.8	-84.7

CIEF10 tristimulus values, chromatic values, and putities ($n=1.4$, $n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.									
no.	O	C	tristimulus values and chromaticities	nu-chromatic values					
			X Y Z	x y z	λ_{AB}	λ_{AB}	λ_{AB}	λ_{AB}	λ_{AB}
00	388	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1
01	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9
02	697	74.36	43.14	44.30	0.459	0.266	0.273	134.8	-17.9
03	708	75.16	42.36	58.08	0.428	0.241	0.300	139.3	-35.6
04	716	74.43	41.31	67.38	0.414	0.230	0.353	138.2	-51.2
05	726	72.17	39.11	68.41	0.401	0.217	0.380	132.2	-59.4
06	737	66.83	34.86	71.99	0.384	0.200	0.414	123.7	-67.3
07	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4
08	455	13.14	6.61	74.65	0.139	0.070	0.793	18.8	-84.7
09	460	13.28	9.49	77.94	0.131	0.094	0.773	7.6	-85.3
10	462	13.39	11.32	78.97	0.128	0.109	0.762	0.4	-84.4
11	464	13.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7
12	468	13.69	16.87	80.47	0.121	0.165	0.713	-27.0	-77.6
13	471	14.73	25.21	80.80	0.121	0.208	0.669	-48.4	-70.5
14	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4
15	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-57.6
16	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3
17	477C	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-43.7
18	479	30.58	58.60	80.80	0.182	0.349	0.468	-113.1	-32.1
19	479	30.58	58.60	80.12	0.175	0.340	0.483	-110.8	-36.1
20	484	25.63	56.72	79.92	0.180	0.400	0.418	-123.7	-10.0
21	492	22.37	56.85	76.73	0.192	0.490	0.316	-134.8	17.9
22	503	21.57	57.63	22.95	0.211	0.564	0.224	-139.3	35.6
23	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	43.5
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	51.2
25	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	59.4
26	545	43.62	74.21	6.37	0.352	0.596	0.051	-108.4	84.6
27	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	84.6
28	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	85.3
29	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	84.3
30	566Y	83.49	86.54	1.34	0.486	0.505	0.007	7.8	82.7
31	568	83.04	81.32	0.56	0.503	0.493	0.003	27.0	77.6
32	571	82.00	74.78	0.23	0.522	0.476	0.001	48.4	70.5
33	573	81.10	71.03	0.14	0.532	0.466	0.000	59.3	66.4
34	577	78.40	62.93	0.05	0.554	0.445	0.000	79.9	57.6
35	581	74.33	54.29	0.02	0.577	0.421	0.000	96.9	48.3
36	584R	71.79	49.91	0.01	0.589	0.410	0.000	103.4	43.7
37	591	66.15	41.39	2.33	0.602	0.376	0.021	113.1	32.1
38	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1
39	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9

CIEF10 tristimulus values, chromatic values, and putities ($n=1.4$, $n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength!										
no.	O	C	n-purities					nu-purities		
			Y	P_{nm}	P_m	h_{nm}	P_{nm}	P_m	I	
00	380	52.92	25.78	4.44	-2.17	5.46	324	4.24	-7.73	0.05
01	455	6.61	3.04	-13.26	13.60	382	2.84	-12.81	13.12	
02	460	9.49	1.00	-9.43	9.48	276	0.80	-8.99	9.02	
03	462	11.32	0.23	-7.90	7.90	271	0.03	-7.45	7.45	
04	464	13.45	-0.39	-6.60	6.61	260	-0.58	-6.15	7.45	
05	468	16.87	-1.25	-6.00	6.00	254	-1.41	-5.60	6.00	
06	471	25.21	-1.72	-3.24	3.67	241	-1.91	-2.80	3.49	
07	472	28.96	-1.85	-2.74	3.31	235	-2.05	-2.29	3.07	
08	475	37.06	-1.96	-2.00	2.80	225	-2.15	-1.55	2.65	
09	477	45.70	-1.92	-1.50	2.44	216	-2.12	-1.05	2.37	
10	477C	50.08	-1.90	-1.20	2.19	209	-2.12	-0.80	2.14	
11	479	58.60	-1.73	-0.99	2.00	205	-1.93	-0.54	2.00	
12	479	56.38	-1.77	-1.08	2.07	211	-1.96	-0.64	2.08	
13	484	56.72	-1.98	-0.62	2.08	197	-2.18	-0.17	2.16	
14	492	56.85	-2.17	-0.12	2.18	183	-2.37	0.31	2.39	
15	503	57.63	-2.22	0.22	2.18	169	-2.41	0.31	2.39	
16	511G	58.68	-1.18	0.29	2.20	172	-2.38	0.74	2.49	
17	521	60.88	-2.07	0.39	2.11	169	-2.27	0.84	2.42	
18	532	65.12	-1.83	0.46	1.89	165	-2.03	0.91	2.22	
19	545	74.21	-1.28	0.50	1.37	158	-1.47	0.94	1.94	
20	563	93.38	-0.45	0.45	0.45	90	-1.44	0.94	0.92	
21	564	90.50	0.10	0.49	0.50	77	-0.08	0.94	0.94	
22	565	88.67	0.18	0.50	0.54	69	-0.00	0.95	0.95	
23	566Y	86.54	0.28	0.51	0.58	60	0.09	0.95	0.96	
24	568	81.32	0.52	0.50	0.50	44	0.33	0.95	1.01	
25	571	74.78	0.84	0.45	0.45	30	0.61	0.91	1.01	
26	573	71.03	1.03	0.48	0.44	25	0.83	0.93	1.14	
27	577	62.93	0.46	0.54	0.53	17	1.27	0.91	1.56	
28	581	54.29	1.97	0.44	2.02	12	1.78	0.89	1.99	
29	584R	49.91	2.26	0.43	2.30	10	1.07	0.87	2.25	
30	591	41.39	2.82	0.26	2.86	6	2.73	0.73	2.84	
31	594	43.61	2.73	0.38	2.76	7	2.55	0.82	2.67	
32	609	43.27	3.05	-0.21	3.06	355	2.86	0.23	2.86	
33	697	43.14	3.31	-0.86	3.43	345	3.12	-0.41	3.15	
34	708	42.36	3.48	-1.28	3.71	339	3.29	-0.84	3.39	
35	716M	41.31	3.57	-1.50	3.87	337	3.38	-1.05	3.54	
36	731	39.11	3.57	-1.50	3.87	332	3.53	-1.31	3.53	
37	737	34.86	3.98	-2.15	4.53	331	3.79	-1.70	3.51	
38	750	25.78	4.44	-3.17	5.46	324	4.24	-2.73	5.05	
39	820	6.61	3.04	-13.26	13.60	282	2.84	-12.81	13.12	
U=D50										
$u_p=0.00$	0.00	0.193	-0.445	0.486	0.283	0.0	0.0	0.0	0.0	
$a_{p=0} = p_{p=1} = 1.4(0.5845 - 2.666 + 2.570z)$ $A_{p=0} = (-a_{p=1})Y$ $A_{p=0}^{ASIM} = [A_{p=1}^2 + a_{p=1}^2]$										
$b_{p=0} = p_{p=1} = 1.4(0.571 + 1.457 - 3.861z)$ $B_{p=0} = (-b_{p=1})Y$ $B_{p=0}^{ASIM} = [B_{p=1}^2 + b_{p=1}^2]$										

see similar files: <http://farbe.li.tu-berlin.de/DE69/DE69L0NP.PDF> /
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmatrik>

R17M tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			n-chromatic values			n-purities			
			X	Y	Z	x	y	z	λ_B	λ_C	λ_M	λ_{Hm}
00	373		50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
01	450		26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
02	463		19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295
03	465		19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290
04	470B		20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	79.2	277
05	474		20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260
06	477		22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240
07	479		24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.7	75.2	232
08	481		28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218
09	482		30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213
10	487C		31.73	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197
11	496		20.48	50.06	44.06	0.178	0.436	0.384	-111.4	1.1	111.4	179
12	500		20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174
13	509		19.40	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169
14	511		21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168
15	518		24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164
16	530G		29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158
17	538		43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151
18	553		67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127
19	557		74.22	90.96	8.45	0.427	0.523	0.048	-59.9	80.5	89.3	115
20	558		74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110
21	561		73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97
22	565		73.26	76.83	2.11	0.481	0.504	0.013	12.3	71.9	72.9	80
23	570		71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60
24	572		69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.7	75.2	52
25	578		65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38
26	581		63.81	51.69	1.69	0.544	0.441	0.014	86.2	45.0	82.2	33
27	600		67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17
28	705		73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354
29	717		74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349
30	716		72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348
31	723		69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344
32	735		64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338
33	743		50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
34	705		26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
U=D50			94.03	100.00	80.83	0.342	0.363	0.363	0.0	0.0	0.0	0
DE690-3N												
$a^*_{nm} = n_a n_b n_c = 1.4 [(5.645x - 2.666 + 2.570z)/y]$ $A_{nm} = (a^*_{nm}) Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$ $b^*_{nm} = n_a n_b n_c = 0.5 [(-1.871x + 1.457 - 3.861z)/y]$ $B_{nm} = (b^*_{nm}) Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$												

R17M tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.												
no.	O	C	tristimulus values and chromaticities			n-chromatic values			n-purities			
			X	Y	Z	x	y	z	λ_B	λ_C	λ_M	λ_{Hm}
00	373		50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
01	450		26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
02	463		19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295
03	465		19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290
04	470B		20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	79.2	277
05	474		20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260
06	477		22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240
07	479		24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.7	75.2	232
08	481		28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218
09	482		30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213
10	487C		31.73	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197
11	496		20.48	50.06	44.06	0.178	0.436	0.384	-111.4	1.1	111.4	179
12	500		20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174
13	509		19.40	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169
14	511		21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168
15	518		24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164
16	530G		29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158
17	538		43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151
18	553		67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127
19	557		74.22	90.96	8.45	0.427	0.523	0.048	-59.9	80.5	89.3	115
20	558		74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110
21	561		73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97
22	565		73.26	76.83	2.11	0.481	0.504	0.013	12.3	71.9	72.9	80
23	570		71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60
24	572		69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.7	75.2	52
25	578		65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38
26	581		63.81	51.69	1.69	0.544	0.441	0.014	86.2	45.0	82.2	33
27	600		67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17
28	705		73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354
29	717		74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349
30	716		72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348
31	723		69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344
32	735		64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338
33	743		50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
34	705		26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
U=D50			100.00	0.081	-0.437	0.445	280	0.0	0.0	0.0	0.0	0
DE690-4N												
$a^*_{nm} = n_a n_b n_c = 1.4 [(5.645x - 2.666 + 2.570z)/y]$ $A_{nm} = (a^*_{nm}) Y$ $C_{ABnm} = [A^2_{nm} + B^2_{nm}]^{1/2}$ $b^*_{nm} = n_a n_b n_c = 0.5 [(-1.871x + 1.457 - 3.861z)/y]$ $B_{nm} = (b^*_{nm}) Y$ $h_{ABnm} = \text{atan2}[B_{nm}/A_{nm}]$												

R17M tristimulus values, chromatic values, and putities ($n=1.4, n_0=0.5$). Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C	tristimulus values and chromaticities						n-chromatic values			
			X	Y	Z	x	y	z	λ_B	λ_C	λ_M	λ_{Hm}
00	600		67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	377
01	705		73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354
02	714		74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349
03	716		72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348
04	723		69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344
05	735G		64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338
06	373		50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331
07	450		26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
08	463		19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295
09	465		19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290
10	470		20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	79.2	277
11	474		20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260
12	478B		22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240
13	487		24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.5	75.2	223
14	488		28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218
15	482		30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213
16	487		26.13	48.90	65.44	0.186	0.348	0.465	-68.2	-27.0	90.4	197
17	496		20.48	50.06	44.06	0.178	0.436	0.384	-111.1	-1.4	114.2	179
18	500C		16.00	52.31	38.55	0.184	0.469	0.345	-118.7	-10.4	119.2	164
19	509		19.40	53.50	28.42	0.191	0.528	0.280	-126.9	-24.2	129.2	169
20	511		21.83	56.54	28.46	0.204	0.529	0.266	-128.3	-27.2	131.2	168
21	518		24.65	60.36	24.01	0.226	0.553	0.220	-130.6	-36.4	135.5	164
22	530		29.99	65.40	16.35	0.268	0.585	0.146	-126.5	-50.4	136.2	158
23	538E		43.18	76.41	16.37	0.317	0.562	0.120	-113.4	-60.5	128.6	151
24	553		60.80	89.62	10.69	0.403	0.533	0.063	-60.4	-77.6	98.3	127
25	557		74.22	90.96	8.45	0.427	0.523	0.048	-38.4	-80.5	89.3	115
26	558		74.15	88.81	6.38	0.437	0.523	0.038	-30.2	-80.3	85.8	110
27	568		73.98	83.52	3.88	0.437	0.504	0.058	-10.4	-77.5	79.2	101
28	565		73.25	78.83	1.81	0.481	0.504	0.013	12.2	-71.9	72.9	80
29	570		73.13	68.67	1.09	0.505	0.486	0.007	35.5	-64.0	73.2	68
30	572		69.75	64.77	0.76	0.517	0.476	0.005	45.9	-59.5	75.2	52
31	578		65.16	54.22	0.35	0.541	0.455	0.002	62.8	-49.9	80.3	40
32	585		63.81	51.69	1.05	0.544	0.441	0.014	86.2	-45.0	82.2	33
33	600		73.89	51.09	15.38	0.505	0.380	0.114	86.2	-45.0	82.2	33
34	605		73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	-5
D50	94.03	100.00	80.03	84.32	36.33	0.263	0.363	0.250	0.0	0.0	0.0	0

$d = \sqrt{m^2 + n^2}$
 $m = \frac{1}{\sqrt{2}} \sqrt{0.5(5.645x + 2.666z - 2.570y)}$
 $n = \frac{1}{\sqrt{2}} \sqrt{0.5(-1.871x + 1.457 - 3.861y)}$
 $C = (a-y) Y$
 $b = (b-y) Y$
 $C_{ABM} = \frac{A_{ABM}^2 + B_{ABM}^2}{A_{ABM} + B_{ABM}}$
 $C_{Hm} = \frac{H_{Hm}^2}{A_{Hm} + B_{Hm}}$
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