

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).

Normalized Ostwald (O) tristimulus values ($Y_N=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities					nu-chromatic values			
		X	Y	Z	x	y	A _m	B _m	C _{ABm}	A _{Bm}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	-48.7	-66.6	82.6
01	435	12.25	3.34	78.11	0.135	0.064	0.799	-17.8	-72.9	75.9
02	466	13.27	8.01	79.21	0.132	0.079	0.788	-13.8	-72.6	73.9
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-29	-70.2	70.3
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-11.2	-65.6	66.5
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-27.1	-59.2	65.1
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-42.2	-51.9	66.8
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-48.9	-48.0	68.5
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-54.8	-44.0	70.3
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-59.6	-40.1	71.9
10	486C	26.62	57.81	81.62	0.175	0.341	0.482	-65.1	-34.0	73.5
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-74.2	-15.6	75.8
12	497	23.01	58.66	82.48	0.185	0.427	0.342	-83.6	-5.7	83.8
13	501	22.62	59.57	35.18	0.192	0.507	0.299	-86.8	3.7	87.9
14	506	22.26	60.29	28.28	0.200	0.543	0.255	-89.4	21.2	91.9
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-92.3	33.1	98.0
16	522G	24.04	63.42	17.06	0.230	0.606	0.163	-92.5	35.0	99.0
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-91.2	44.7	101.6
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-85.7	52.0	100.2
19	561	65.07	87.80	5.54	0.410	0.554	0.034	-48.6	66.6	82.5
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-17.8	72.8	75.9
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-13.8	72.6	73.9
22	571	82.92	87.63	1.55	0.482	0.508	0.009	-2.9	70.2	70.3
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-11.3	65.6	66.5
24	577	80.69	72.49	0.38	0.525	0.472	0.002	-27.2	59.2	65.1
25	581	77.87	63.33	0.18	0.550	0.447	0.001	-42.2	51.8	66.9
26	583	75.96	58.54	0.13	0.564	0.434	0.000	-48.9	48.0	68.5
27	585	73.67	53.70	0.09	0.577	0.421	0.000	-54.9	44.0	70.3
28	587	71.01	48.93	0.07	0.591	0.407	0.000	-59.7	40.1	72.0
29	592R	66.69	42.18	0.61	0.609	0.385	0.005	-65.1	34.0	73.5
30	631	69.99	41.82	18.71	0.536	0.320	0.143	-74.3	15.6	75.9
31	702	73.30	41.33	39.75	0.474	0.267	0.257	-83.7	-5.7	83.8
32	706	73.69	40.41	47.04	0.457	0.250	0.291	-86.9	-13.8	88.0
33	711	74.05	39.70	53.95	0.441	0.236	0.321	-89.5	-21.3	92.0
34	724	74.38	38.97	65.18	0.416	0.218	0.364	-92.3	-33.1	98.0
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	-92.6	-35.1	99.0
36	740	69.08	33.80	72.53	0.393	0.192	0.413	-91.3	-44.7	101.6
37	749	61.10	27.83	74.91	0.372	0.169	0.457	-85.7	-52.0	100.2
38	766	31.24	12.19	76.69	0.260	0.101	0.638	-48.7	-66.6	82.6
39	828	13.25	3.34	78.11	0.135	0.064	0.799	-17.8	-72.9	75.9
U=D50	500	96.31	99.99	82.42	0.345	0.358	0.358	0.0	0.0	0.0

U=D50 99.91 29.99 82.24 0.345 35.58 0.358 $A_m = (a - a_0) / Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b = p_m - n_m p_0 = -1.0 / (0.000x + 0.000 + 1.000y)$ $B_m = (b - b_0) / Y$ $h_{ABm} = \text{atan}([B_m / A_m])$

DE690-3N

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).

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

no.	λ_n	C tristimulus values and chromaticities					nu-chromatic values				
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	B_{ABm}	
00	631	69.99	41.82	18.71	0.536	0.320	0.143	74.3	15.6	75.9	371
01	702	73.30	41.33	39.75	0.474	0.267	0.257	83.7	-5.7	83.9	356
02	706	73.69	40.41	47.04	0.457	0.250	0.291	86.9	-13.8	88.0	350
03	711	74.05	39.70	53.95	0.441	0.236	0.321	89.5	-21.3	92.0	346
04	724	74.38	38.97	65.17	0.416	0.218	0.364	92.3	-33.1	98.0	346
05	727M	72.26	36.57	65.17	0.415	0.210	0.374	92.6	-35.1	99.0	339
06	740	69.08	33.80	72.53	0.393	0.192	0.413	91.3	-44.7	101.7	333
07	749	61.10	27.83	74.91	0.372	0.169	0.457	85.7	-52.0	100.3	328
08	396	31.24	12.19	76.69	0.260	0.101	0.638	48.7	-66.6	82.6	306
09	463	13.25	6.34	78.11	0.135	0.064	0.799	17.8	-72.8	75.0	283
10	466	13.27	8.01	79.21	0.132	0.079	0.788	13.8	-72.6	73.9	280
11	471	13.39	12.66	80.68	0.125	0.118	0.755	29	-70.2	70.3	272
12	475B	14.00	19.21	81.44	0.122	0.167	0.710	-11.2	-65.6	66.5	260
13	479	15.61	27.50	81.85	0.124	0.220	0.655	-27.1	-59.2	65.1	245
14	481	18.42	36.66	82.05	0.134	0.267	0.598	-42.2	-51.9	66.8	230
15	483	20.35	41.45	82.11	0.141	0.288	0.570	-48.9	-48.0	68.5	224
16	484	22.64	46.29	82.14	0.149	0.306	0.543	-54.8	-44.0	70.3	218
17	485	25.29	51.06	82.16	0.159	0.322	0.518	-59.6	-40.1	71.9	213
18	486C	26.62	57.81	81.62	0.175	0.341	0.482	-65.1	-34.0	73.5	207
19	490	26.32	58.17	83.51	0.177	0.393	0.429	-74.2	-15.6	75.8	191
20	497	23.01	58.66	82.48	0.185	0.427	0.342	-83.6	-5.7	83.8	176
21	501	22.62	59.57	35.18	0.192	0.507	0.299	-86.8	13.7	87.9	170
22	506	22.26	60.29	28.28	0.200	0.543	0.255	-89.4	21.2	91.9	166
23	519G	21.83	61.02	17.06	0.218	0.610	0.170	-92.3	33.1	98.0	160
24	522	24.04	63.42	17.06	0.230	0.606	0.163	-92.5	35.0	99.0	159
25	535	27.22	66.19	9.71	0.263	0.641	0.094	-91.2	44.7	101.6	153
26	544	35.20	72.16	7.33	0.306	0.629	0.063	-85.7	52.0	100.2	148
27	561	65.07	87.80	5.54	0.410	0.554	0.034	-48.6	66.6	82.5	126
28	568	83.05	93.65	4.13	0.459	0.517	0.022	-17.8	72.8	75.0	103
29	569	83.03	91.98	3.02	0.466	0.516	0.016	-13.8	72.6	73.9	100
30	571	82.92	87.63	1.55	0.482	0.508	0.009	-2.9	70.2	70.3	98
31	573Y	82.30	80.76	0.80	0.502	0.492	0.004	-11.3	65.6	66.5	95
32	577Y	80.69	72.49	0.38	0.525	0.472	0.002	-27.2	59.2	65.1	85
33	581	77.87	63.33	0.18	0.550	0.447	0.001	-42.2	51.8	66.9	50
34	583	75.96	58.54	0.13	0.564	0.434	0.000	-48.9	48.0	68.5	44
35	585	73.67	53.70	0.09	0.577	0.421	0.000	-54.9	44.0	70.3	38
36	587R	71.01	48.93	0.07	0.591	0.407	0.000	-59.7	40.1	72.0	33
37	592	66.69	42.18	0.61	0.609	0.385	0.005	-65.1	34.0	73.5	27
38	631	69.99	41.82	18.71	0.536	0.320	0.143	74.3	15.6	75.9	11
39	702	73.30	41.33	39.75	0.474	0.267	0.257	83.7	-5.7	83.9	-3
D50		96.31	99.99	82.24	0.345	0.358	0.358	0	0	0	0
$a_{p,n} = p_{p,n} - 2.5 \{ 1.0 (0.000 + 0.000 + 0.000) \} y$ $A_m = (-a \cdot y)$ Y $C_{ABm} = [A^2 + B^2]^{1/2}$ $b_{p,n} = n_{p,n} - 1.0 \{ 1.0 (0.000 + 0.000 + 0.000) \} y$ $B_m = (-b \cdot y)$ Y $b_{ABm} = [a^2 + b^2]^{1/2}$											

U=D50 99.91 29.99 82.24 0.345 35.58 0.358 $A_m = (a - a_0) / Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b = p_m - n_m p_0 = -1.0 / (0.000x + 0.000 + 1.000y)$ $B_m = (b - b_0) / Y$ $h_{ABm} = \text{atan}([B_m / A_m])$

DE690-7N

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).

Normalized Ostwald (O) tristimulus values ($Y_N=100$), ordered by wavelength.

no.	O	C	n-purities					nu-purities				
			p_{an}	p_{m}	p_{rn}	h_{an}	h_{m}	p_{an}	p_{m}	p_{rn}	h_{an}	
00	396	12.19	6.40	-6.29	8.97	315	3.99	-5.46	6.77	306		
01	435	3.34	5.42	-0.72	13.38	293	2.69	-4.99	11.83	283		
02	466	8.01	1.14	-9.88	10.72	292	1.73	-9.06	9.23	280		
03	471	12.66	2.64	-6.37	6.89	292	0.23	-5.55	5.55	272		
04	475B	19.21	1.82	-4.23	4.61	293	-0.58	-3.41	3.46	260		
05	479	27.50	1.41	-2.97	3.29	295	-0.98	-2.15	2.36	245		
06	481	36.66	1.25	-2.23	2.56	299	-1.15	-1.41	1.82	230		
07	483	41.45	1.22	-1.98	2.33	301	-1.17	-1.15	1.65	224		
08	484	46.29	1.22	-1.77	2.15	304	-1.18	-0.95	1.51	218		
09	485	51.06	1.23	-1.60	2.03	307	-1.16	-0.78	1.40	213		
10	486C	57.81	1.28	-1.41	1.90	312	-1.12	-0.58	1.27	207		
11	490	58.17	1.13	-1.09	1.57	316	-1.27	-0.26	1.30	191		
12	497	58.66	0.98	-0.72	1.32	321	-1.42	0.09	1.43	176		
13	501	59.57	0.94	-0.59	1.11	328	-1.45	0.23	1.47	170		
14	506	60.29	0.92	-0.46	1.03	333	-1.48	0.35	1.52	166		
15	519	61.02	0.89	-0.27	0.93	342	-1.51	0.54	1.60	160		
16	522G	63.42	0.94	-0.26	0.98	344	-1.45	0.55	1.56	159		
17	535	66.19	1.02	-0.14	1.03	351	-1.37	0.67	1.53	153		
18	544	72.16	1.21	-0.10	1.22	355	-1.18	0.72	1.38	148		
19	561	87.80	1.85	-0.06	1.85	358	-0.55	0.75	0.94	126		
20	568	93.65	2.21	-0.04	2.21	358	-0.19	0.77	0.80	103		
21	569	91.98	2.25	-0.03	2.25	359	-0.15	0.78	0.80	100		
22	571	87.33	2.37	-0.01	2.37	359	-0.03	0.80	0.80	92		
23	573	80.76	2.54	-0.00	2.54	359	0.14	0.81	0.82	80		
24	577	72.49	2.78	-0.00	2.78	359	0.31	0.81	0.81	65		
25	581	63.33	3.07	-0.00	3.07	359	0.66	0.81	1.05	50		
26	583	58.54	3.24	-0.00	3.24	359	0.83	0.82	1.17	44		
27	585	53.70	3.42	-0.00	3.42	359	1.02	0.82	1.31	38		
28	587	48.93	3.62	-0.00	3.62	359	1.22	0.82	1.47	33		
29	592R	42.18	3.95	-0.01	3.95	359	1.54	0.80	1.74	27		
30	631	41.82	4.18	-0.44	4.20	353	1.77	0.37	1.81	11		
31	702	41.33	4.43	-0.96	4.53	347	2.02	-0.13	2.03	356		
32	706	40.41	4.55	-1.16	4.70	345	2.15	-0.34	2.17	350		
33	711	39.70	4.66	-1.35	4.85	343	2.25	-0.53	2.31	346		
34	724	38.97	4.77	-1.67	5.06	340	2.37	-0.85	2.51	340		
35	727M	36.57	4.94	-1.78	5.25	340	2.53	-0.95	2.70	339		
36	740	33.80	5.11	-2.14	5.54	337	2.70	-1.32	3.00	333		
37	749	27.83	5.48	-2.69	6.11	333	3.08	-1.86	3.60	328		
38	766	12.19	6.40	-6.29	8.97	315	3.99	-5.46	6.77	306		
39	828	6.34	5.22	-12.32	13.38	292	2.81	-11.49	11.83	283		
U=D50	99.99	2.407	-0.822	2.543	341	0	0.0	0.0	0	0		
$a^*_{\text{D50}} = p_{\text{an}} p_{\text{m}} p_{\text{rn}} = 2.5 \cdot [(1.000 + 0.000 + 0.000) / y]$ $A_{\text{D50}} = (a - a_{\text{D50}}) / y$ $C_{\text{ABD50}} = [A^2_{\text{D50}} + B^2_{\text{D50}}]^{1/2}$ $b^*_{\text{D50}} = p_{\text{an}} p_{\text{m}} p_{\text{rn}} = -0.1 \cdot [(0.000 + 0.000 + 1.000) / y]$ $B_{\text{D50}} = (b - b_{\text{D50}}) / y$ $h_{\text{ABD50}} = \arctan[B_{\text{D50}} / A_{\text{D50}}]$												
D6900-4N												
CIE02 tristimulus values, chromatic values, and putities ($n=2,5,10,16$)												
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.												
no.	O	C	n-purities					nu-purities				
λ_n			p_{an}	p_{m}	p_{rn}	h_{an}	h_{m}	p_{an}	p_{m}	p_{rn}	h_{an}	
00	631	41.82	4.18	-0.44	4.20	353	1.77	0.37	1.81	371		
01	702	41.33	4.43	-0.96	4.53	347	2.02	-0.13	2.03	356		
02	706	40.41	4.55	-1.16	4.70	345	2.15	-0.34	2.17	350		
03	711	39.70	4.66	-1.35	4.85	343	2.25	-0.53	2.31	346		
04	724	38.97	4.77	-1.67	5.06	340	2.37	-0.85	2.51	340		
05	727M	36.57	4.94	-1.78	5.25	340	2.53	-0.95	2.70	339		
06	740	33.80	5.11	-2.14	5.54	337	2.70	-1.32	3.00	333		
07	749	27.83	5.48	-2.69	6.11	333	3.08	-1.86	3.60	328		
08	766	12.19	6.40	-6.29	8.97	315	3.99	-5.46	6.77	306		
09	828	6.34	5.22	-12.32	13.38	292	2.81	-11.49	11.83	283		
U=D50	99.99	2.407	-0.822	2.543	341	0	0.0	0.0	0	0		
$a^*_{\text{D50}} = p_{\text{an}} p_{\text{m}} p_{\text{rn}} = 2.5 \cdot [(1.000 + 0.000 + 0.000) / y]$ $A_{\text{D50}} = (a - a_{\text{D50}}) / y$ $C_{\text{ABD50}} = [A^2_{\text{D50}} + B^2_{\text{D50}}]^{1/2}$ $b^*_{\text{D50}} = p_{\text{an}} p_{\text{m}} p_{\text{rn}} = -0.1 \cdot [(0.000 + 0.000 + 1.000) / y]$ $B_{\text{D50}} = (b - b_{\text{D50}}) / y$ $h_{\text{ABD50}} = \arctan[B_{\text{D50}} / A_{\text{D50}}]$												

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities							nu-chromatic values			
		λ_n	X	Y	Z	x	y	z	A_n	B_n	C_n	h_n
00	376	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2	326	
01	376	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2	326	
02	460	13.26	8.89	77.33	0.133	0.089	0.777	11.6	-70.1	71.0	279	
03	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1	276	
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1	276	
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-9.1	-65.6	66.2	262	
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-22.2	-60.9	64.8	249	
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-29.0	-58.0	64.8	243	
08	475	18.32	36.37	81.08	0.134	0.267	0.597	-42.0	-51.5	66.5	230	
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2	220	
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2	220	
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-60.7	-37.3	71.3	211	
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-63.9	-31.9	71.5	206	
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-72.0	-14.0	73.4	191	
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-80.5	7.9	80.9	174	
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-84.7	22.2	87.6	165	
16	512G	22.19	58.45	18.53	0.223	0.589	0.186	-85.6	28.9	90.4	161	
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-85.6	35.3	92.7	157	
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-83.2	42.2	93.3	153	
19	541	41.39	73.93	10.07	0.330	0.589	0.080	-75.0	49.9	90.1	146	
20	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.0	69.8	71.4	102	
21	564	83.37	91.09	3.82	0.467	0.510	0.021	-11.5	70.0	71.0	99	
22	565	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1	95	
23	565Y	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1	95	
24	568	82.96	82.07	0.96	0.499	0.494	0.005	9.1	65.6	66.2	82	
25	571	81.93	75.58	0.44	0.518	0.478	0.002	22.2	60.8	64.8	69	
26	573	81.03	71.82	0.27	0.529	0.469	0.001	29.1	58.0	64.9	63	
27	577	78.31	63.62	0.08	0.551	0.447	0.000	42.1	51.5	66.5	50	
28	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	39	
29	581R	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	39	
30	587	68.81	46.05	0.00	0.599	0.400	0.000	60.8	37.3	71.3	31	
31	589	67.60	44.04	0.93	0.600	0.391	0.008	62.6	34.8	71.6	29	
32	692	70.96	43.57	21.37	0.522	0.320	0.157	72.1	13.9	73.5	10	
33	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0	354	
34	708	75.07	42.59	40.00	0.430	0.244	0.325	84.8	-22.3	87.7	345	
35	717M	74.44	41.54	62.63	0.416	0.232	0.350	85.7	-28.9	90.5	341	
36	726	72.35	39.38	67.37	0.403	0.219	0.376	85.7	-35.4	92.7	337	
37	736	67.62	35.52	71.08	0.388	0.203	0.478	83.2	-42.2	93.4	333	
38	746	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2	326	
39	823	13.22	7.40	75.87	0.136	0.076	0.786	15.1	-69.8	71.5	282	

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 $A_{00}=(a-o)_0$ $C_{AB0}=[A_{00}^2+B_{00}^2]^{1/2}$

$b=P_{00}=n_1n_2P_0=1.0/(0.000x+0.000+1.000z)/y$ $B_{00}=(b-b_0)_0$ $h_{AB0}=\text{atan}[B_{00}/A_{00}]$

DE690-3N

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

CIE 1931 tristimulus values, chromatic values, and putities (n=2,5, n=1,0).											
Normalized Oswald (O) tristimulus values (Y _n =100), ordered by hue angle.											
no.	O	tristimulus values and chromaticities						nu-chromatic values			
		λ_n	X	Y	Z	x	y	z	A _{nu}	B _{nu}	C _{nu}
00	692	70.96	43.57	21.37	0.522	0.320	0.157	72.1	13.9	73.5	370
01	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0	354
02	708	75.07	42.59	56.88	0.430	0.244	0.325	84.8	-22.3	87.7	345
03	717	74.44	41.54	62.63	0.416	0.232	0.350	85.7	-28.9	90.5	341
04	726	72.35	39.38	67.37	0.403	0.219	0.376	85.7	-35.4	92.7	337
05	736M	67.62	35.52	71.08	0.388	0.203	0.408	83.2	-42.2	93.4	333
06	746	55.24	26.06	71.08	0.362	0.171	0.466	75.1	-49.9	90.2	326
07	823	13.22	7.40	75.87	0.136	0.076	0.786	15.1	-69.8	71.5	282
08	460	13.26	8.89	77.33	0.133	0.089	0.777	11.6	-70.1	71.0	279
09	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1	276
10	462	13.28	10.68	78.42	0.129	0.104	0.765	7.4	-69.7	70.1	276
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-9.1	-65.6	66.2	262
12	471B	14.70	24.41	80.73	0.122	0.203	0.673	-22.2	-60.9	64.8	249
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-29.0	-58.0	64.8	243
14	475	18.32	36.37	81.08	0.134	0.267	0.597	-42.0	-51.5	66.5	230
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2	220
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-53.0	-44.5	69.2	220
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-60.7	-37.3	71.3	211
18	480C	30.64	58.21	79.19	0.182	0.346	0.471	-63.9	-31.9	71.5	206
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-72.0	-14.0	73.4	191
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-80.5	7.9	80.9	174
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-84.7	22.2	87.6	165
22	512	22.19	58.45	18.53	0.223	0.589	0.186	-85.6	28.9	90.4	161
23	521G	24.28	60.61	13.79	0.246	0.614	0.139	-85.6	35.3	92.7	157
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-83.2	42.2	93.3	153
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-75.0	49.9	90.1	146
26	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.0	69.8	71.4	102
27	564	83.37	91.09	3.82	0.467	0.510	0.021	-11.5	70.0	71.0	99
28	565	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1	95
29	565	83.35	89.31	2.74	0.475	0.509	0.015	-7.3	69.7	70.1	95
30	568	82.96	82.07	0.96	0.499	0.494	0.005	9.1	65.6	66.2	82
31	571	81.93	75.58	0.44	0.518	0.478	0.002	22.2	60.8	64.8	69
32	573Y	81.03	71.82	0.27	0.529	0.469	0.001	29.1	58.0	64.9	63
33	577	78.31	63.62	0.08	0.551	0.447	0.000	42.1	51.5	66.5	50
34	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	39
35	581	74.28	54.89	0.01	0.575	0.424	0.000	53.1	44.5	69.3	39
36	587R	68.81	46.05	0.00	0.599	0.400	0.000	60.8	37.3	71.3	31
37	589	67.60	44.04	0.93	0.600	0.391	0.008	62.6	34.8	71.6	29
38	692	70.96	43.57	21.37	0.522	0.320	0.157	72.1	13.9	73.5	10
39	697	74.12	43.34	43.14	0.461	0.269	0.268	80.6	-7.9	81.0	-5

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 $A_{00}=(a-o)_0$ $C_{AB0}=[A_{00}^2+B_{00}^2]^{1/2}$

$b=P_{00}=n_1n_2P_0=1.0/(0.000x+0.000+1.000z)/y$ $B_{00}=(b-b_0)_0$ $h_{AB0}=\text{atan}[B_{00}/A_{00}]$

DE690-7N

DE690-7P chart=10_xcolor=1(CIE10)

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	O	λ_n	n-purities				nu-purities			
			Y	P_{nn}	P_{nn}	h_{abn}	P_{nn}	P_{nn}	P_{nn}	h_{abn}
00	376	26.06	5.29	-2.72	5.96	332	2.88	-1.91	3.46	326
01	376	26.06	4.46	-1.05	11.18	325	2.88	-1.91	3.46	326
02	460	8.89	3.72	-8.68	9.45	293	1.30	-0.94	9.66	282
03	462	10.68	3.10	-7.34	7.97	292	0.69	-6.53	6.56	276
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	243
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	220
10	477C	45.10	1.23	-1.79	2.18	304	-1.17	-0.98	1.53	220
11	479	53.94	1.28	-1.50	1.98	310	-1.12	-0.69	1.32	211
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	502	56.87	0.94	-0.42	1.00	341	-1.38	0.37	1.52	165
16	510	58.45	0.94	-0.31	1.00	341	-1.46	0.49	1.54	161
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	1.39	-0.13	1.40	354	-1.01	0.67	1.21	146
20	563	92.59	2.25	-0.05	2.25	358	-0.16	0.75	0.77	102
21	564	91.09	2.28	-0.04	2.28	358	-0.12	0.76	0.78	99
22	565	89.31	2.33	-0.03	2.33	359	-0.08	0.78	0.78	95
23	565Y	89.31	2.33	-0.03	2.33	359	-0.08	0.78	0.78	95
24	568	82.07	2.52	-0.01	2.52	359	0.11	0.79	0.80	82
25	571	75.58	2.71	-0.00	2.71	359	0.29	0.80	0.85	69
26	573	71.82	2.82	-0.00	2.82	359	0.40	0.80	0.90	63
27	577	63.62	3.07	-0.00	3.07	359	0.66	0.81	1.04	50
28	581	54.89	3.38	-0.00	3.38	359	0.96	0.81	1.31	38
29	581R	54.89	3.38	-0.00	3.38	359	0.96	0.81	1.26	39
30	587	46.05	3.73	0.00	3.73	0	1.32	0.81	1.54	31
31	589	44.04	3.83	-0.02	3.83	359	1.42	0.79	1.62	29
32	692	43.57	4.07	-0.49	4.10	353	1.65	0.32	1.68	10
33	697	43.34	4.27	-0.99	4.38	346	1.86	-0.18	1.86	354
34	708	42.59	4.40	-1.33	4.60	343	1.99	-0.52	2.05	345
35	717M	41.54	4.48	-1.53	4.62	341	2.06	-0.69	2.17	341
36	726	39.38	4.59	-1.71	4.90	339	2.17	-0.89	2.35	337
37	736	35.52	4.75	-2.00	5.16	337	2.34	-1.18	2.62	333
38	746	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	-0.94	9.66	282

CIEF02 tristimulus values, chromatic variables, and putities ($n_e=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values			
		λ_n	X	Y	Z	x	y	A_m	B_m	C_{ABm}	A_{Bm}
00	386	51.50	23.94	74.68	0.343	0.159	0.497	71.0	-55.0	89.8	322
01	460	12.38	6.54	76.19	0.130	0.068	0.801	15.1	-70.8	72.4	282
02	465	12.45	9.58	78.25	0.123	0.095	0.780	7.9	-70.3	70.8	276
03	467	12.45	11.64	78.87	0.120	0.113	0.766	3.0	-69.3	69.3	272
04	473B	13.31	20.43	79.83	0.117	0.179	0.702	-15.9	-63.0	65.0	255
05	475	14.02	24.19	79.97	0.118	0.204	0.676	-23.2	-60.0	64.0	248
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	228
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	228
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	217
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	217
10	483C	27.52	55.03	80.21	0.169	0.338	0.492	-63.8	-34.9	72.8	208
11	484	28.05	57.21	79.07	0.174	0.346	0.478	-65.7	-32.0	73.1	205
12	489	25.36	57.41	57.70	0.180	0.408	0.410	-75.0	-10.5	75.7	187
13	497	22.33	57.50	36.81	0.191	0.492	0.315	-82.7	10.4	83.4	172
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-86.6	23.3	89.7	164
15	512	21.41	58.69	18.79	0.216	0.593	0.190	-87.9	29.4	92.7	161
16	521G	22.42	59.91	14.10	0.232	0.621	0.146	-88.3	35.1	95.1	158
17	524	25.32	62.97	14.10	0.242	0.615	0.137	-88.5	37.6	96.1	156
18	539	30.29	66.55	7.57	0.290	0.637	0.072	-84.7	47.1	96.9	150
19	551	44.95	76.05	5.53	0.355	0.601	0.043	-70.9	56.9	91.0	141
20	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	101
21	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	101
22	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	101
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007	-2.9	71.2	71.3	92
24	573	83.15	79.56	0.38	0.509	0.487	0.002	16.0	65.0	66.9	76
25	575	82.44	75.80	0.24	0.520	0.478	0.01	23.3	62.0	66.3	69
26	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7	68.3	49
27	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7	68.3	49
28	585	74.48	53.96	0.02	0.579	0.420	0.000	56.1	44.3	71.5	38
29	590R	68.94	44.96	0.00	0.605	0.394	0.000	63.9	36.9	73.8	30
30	592	67.61	42.78	1.14	0.606	0.383	0.010	65.8	34.0	74.1	27
31	694	71.10	42.58	22.52	0.522	0.312	0.165	75.0	12.4	76.1	9
32	702	74.12	42.49	43.40	0.463	0.265	0.271	82.8	-8.4	83.2	354
33	710	75.15	41.96	55.91	0.434	0.242	0.323	86.7	-21.4	89.3	346
34	717	75.05	41.30	64.43	0.422	0.232	0.345	88.0	-27.2	92.2	342
35	726M	74.04	40.08	66.11	0.410	0.222	0.366	88.4	-33.1	94.4	339
36	729	71.14	37.02	66.11	0.408	0.212	0.379	88.6	-35.6	95.5	338
37	744	66.16	33.43	72.64	0.384	0.194	0.421	84.7	-45.1	96.0	331
38	756	51.50	23.94	74.68	0.343	0.159	0.497	71.0	-55.0	89.8	322
39	825	12.38	6.54	76.19	0.130	0.068	0.801	15.1	-70.8	72.4	282
U=50	50	50	100.00	82.22	0.346	0.358	0.358	0.0	0.0	0.0	0

$U=D50$ 96.46 100.00 82.22 0.346 0.358 0.358 $A_m=0.0$ $B_m=0.0$ $C_{ABm}=0.0$

$a^*_{ABm}=P_{ABm}=2.5[(1.0000+0.0000+0.0000)/y]$ $A_m=(a^*_{ABm})/y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b^*_{ABm}=P_{ABm}=1.0[(0.0000+0.0000+1.0000)/y]$ $B_m=(b^*_{ABm})/y$ $h_{ABm}=atan[B_m/A_m]$

CIEF02 tristimulus values, chromatic variables, and putities ($n_e=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	λ_n	Y	n-purities				nu-purities			
				P_{ABm}	P_{Bm}	P_{Am}	h_{ABm}	P_{ABm}	P_{Bm}	P_{Am}	h_{ABm}
00	386	23.94	5.37	-3.11	6.21	329	2.32	-2.29	3.75	322	
01	460	6.54	4.73	-11.64	12.57	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	-5.95	5.96	272	
04	473B	20.43	1.62	-3.90	4.23	292	-0.78	-3.08	3.18	255	
05	475	24.19	1.44	-3.30	3.60	293	-0.96	-2.48	2.66	248	
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	483C	55.03	1.25	-1.45	1.92	310	-1.16	-0.63	1.32	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	-0.16	1.21	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	164	
15	512	58.69	0.91	-0.32	0.96	340	-1.49	0.50	1.58	161	
16	521G	59.91	0.93	-0.23	0.96	345	-1.47	0.58	1.58	158	
17	524	62.97	1.00	-0.22	1.02	347	-1.40	0.59	1.52	156	
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	93.45	2.24	-0.04	2.24	358	-0.16	0.77	0.79	101	
21	568	93.45	2.24	-0.04	2.24	358	-0.16	0.77	0.79	101	
22	569	90.41	2.32	-0.02	2.32	359	-0.08	0.80	0.80	96	
23	570Y	88.35	2.37	-0.01	2.37	359	-0.03	0.80	0.80	92	
24	573Y	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	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	49	
27	580	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	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	592	42.78	3.95	-0.02	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	1.78	9	
32	702	42.49	4.36	-1.02	4.47	346	1.95	-0.19	1.96	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	2.23	-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	744	33.43	4.94	-2.17	5.40	336	2.53	-1.35	2.87	331	
38	756	23.94	5.37	-3.11	6.21	329	2.96	-2.29	3.75	322	
39	825	6.54	4.73	-11.64	12.57	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	0	

$a=P_{ABm}-P_{Bm}=2.5\{1.0000+0.0000+0.0000\}y$ $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$ $b=P_{ABm}-P_{Bm}=1.0\{0.0000+0.0000+1.0000\}y$ $B_m=(b-b)Y$ $H_{ABm}=a\sin[B_m/A_m]$

DE90-4N

CIEF02 tristimulus values, chromatic values, and purities ($n_p=2.5, n_s=1.0$).

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

no.	O	λ_n	Y	n-purities				nu-purities			
				P_{ABm}	P_{Bm}	P_{Am}	h_{ABm}	P_{ABm}	P_{Bm}	P_{Am}	h_{ABm}
00	592	42.78	3.95	-0.02	3.95	359	1.54	0.79	1.73	387	
01	694	42.58	4.17	-0.52	4.20	352	1.76	0.29	1.78	369	
02	702	42.49	4.36	-1.02	4.47	346	1.95	-0.19	1.96	354	
03	710	41.96	4.47	-1.33	4.67	343	2.06	-0.51	2.12	346	
04	717	41.30	4.54	-1.48	4.78	341	2.23	-0.66	2.23	342	
05	726M	40.08	4.61	-1.64	4.90	340	2.20	-0.82	2.35	339	
06	729	37.02	4.80	-1.78	5.12	339	2.39	-0.96	2.58	331	
07	744	33.43	4.94	-2.17	5.40	336	2.53	-1.35	2.87	331	
08	756	23.94	5.37	-3.11	6.21	329	2.96	-2.29	3.75	322	
09	825	6.54	4.73	-11.64	12.57	292	2.32	-10.82	11.07	282	
10	465	9.58	3.23	-8.16	8.78	291	0.82	-7.34	7.39	276	
11	467	11.64	2.67	-6.77	7.28	291	0.26	-5.95	5.96	272	
12	473B	20.43	1.62	-3.90	4.23	292	-0.78	-3.08	3.18	255	
13	475	24.19	1.44	-3.30	3.60	293	-0.96	-2.48	2.66	248	
14	479	36.91	1.20	-2.17	2.48	299	-1.20	-1.34	1.80	228	
15	479	36.91	1.20	-2.17	2.48	299	-1.20	-1.34	1.80	228	
16	481	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	
17	481	46.03	1.19	-1.74	2.11	304	-1.21	-0.92	1.52	217	
18	483C	55.03	1.25	-1.45	1.92	310	-1.16	-0.63	1.32	208	
19	484	57.21	1.26	-1.38	1.87	312	-1.15	-0.56	1.27	205	
20	489	57.41	1.10	-1.00	1.49	317	-1.30	-0.16	1.21	187	
21	497	57.50	0.97	-0.64	1.16	326	-1.43	0.18	1.45	172	
22	505	58.03	0.91	-0.41	1.00	335	-1.49	0.40	1.54	164	
23	512G	58.69	0.91	-0.32	0.96	340	-1.49	0.50	1.58	161	
24	521	59.91	0.93	-0.23	0.96	345	-1.47	0.58	1.58	158	
25	524	62.97	1.00	-0.22	1.02	347	-1.40	0.59	1.52	156	
26	539	66.55	1.13	-0.11	1.14	354	-1.27	0.70	1.45	150	
27	551	76.05	1.47	-0.07	1.47	357	-0.93	0.74	1.19	141	
28	568	93.45	2.24	-0.04	2.24	358	-0.16	0.77	0.79	101	
29	568	93.45	2.24	-0.04	2.24	358	-0.16	0.77	0.79	101	
30	569	90.41	2.32	-0.02	2.32	359	-0.08	0.80	0.80	96	
31	570	88.35	2.37	-0.01	2.37	359	-0.03	0.80	0.80	92	
32	573Y	79.56	2.61	-0.00	2.61	359	0.20	0.81	0.84	76	
33	575	75.80	2.71	-0.00	2.71	359	0.30	0.81	0.87	69	
34	580	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	49	
35	580	63.07	3.11	-0.00	3.11	359	0.70	0.82	1.08	49	
36	585R	53.96	3.45	-0.00	3.45	359	1.03	0.82	1.32	38	
37	590	44.96	3.83	0.00	3.83	0	1.42	0.82	1.64	30	
38	592	42.78	3.95	-0.02	3.95	0	1.54	0.79	1.73	27	
39	694	42.58	4.17	-0.52	4.20	-7	1.76	0.29	1.78	9	
U=D50	100.00	2.410	-0.821	2.547	341	0	0.0	0.0	0.0	0	

$a=P_{ABm}-P_{Bm}=2.5\{1.0000+0.0000+0.0000\}y$ $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$ $b=P_{ABm}-P_{Bm}=1.0\{0.0000+0.0000+1.0000\}y$ $B_m=(b-b)Y$ $H_{ABm}=a\sin[B_m/A_m]$

$U=D50$ 100.00 24.10 -0.821 2.547 341 $A_m=0.0$ $B_m=0.0$ $C_{ABm}=0.0$

$a^*_{ABm}=P_{ABm}=2.5[(1.0000+0.0000+0.0000)/y]$ $A_m=(a^*_{ABm})/y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b^*_{ABm}=P_{ABm}=1.0[(0.0000+0.0000+1.0000)/y]$ $B_m=(b^*_{ABm})/y$ $h_{ABm}=atan[B_m/A_m]$

CIEF02 tristimulus values, chromatic variables, and putities ($n_e=2.5$, $n_h=1.0$).

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

no.	O	C tristimulus values and chromaticities						nu-chromatic values				
		λ_n	X	Y	Z	x	y	z	A_m	B_m	C_{ABm}	A_{Bm}
00	592	67.61	42.78	1.14	0.606	0.383	0.010	65.8	34.0	74.1	387	387
01	694	71.10	42.58	22.52	0.522	0.312	0.165	75.0	12.4	76.1	369	369
02	702	74.12	42.49	43.40	0.463	0.265	0.271	82.8	-8.4	83.2	354	354
03	710	75.15	41.96	55.91	0.434	0.242	0.323	86.7	-21.4	89.3	346	346
04	717	75.15	41.96	55.91	0.434	0.242	0.323	86.7	-21.4	89.3	346	346
05	726M	74.04	40.08	66.11	0.410	0.222	0.366	88.4	-33.1	94.4	339	339
06	729	71.14	37.02	66.11	0.408	0.212	0.379	88.6	-35.6	95.5	338	338
07	744	66.16	33.43	72.64	0.384	0.194	0.421	84.7	-45.1	96.0	331	331
08	756	51.50	23.94	74.68	0.343	0.159	0.497	71.0	-55.0	89.8	322	322
09	825	12.38	6.54	76.19	0.130	0.068	0.801	7.1	-70.8	72.8	282	282
10	465	12.41	9.58	78.25	0.123	0.095	0.780	7.9	-70.3	70.8	276	276
11	467	12.45	11.64	78.87	0.120	0.113	0.766	3.0	-69.3	69.3	272	272
12	473B	13.31	20.43	79.83	0.117	0.179	0.702	-15.9	-63.0	65.0	255	255
13	475	14.02	24.19	79.97	0.118	0.204	0.676	-23.2	-60.0	64.4	248	248
14	479	17.82	36.21	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	228	228
15	479	17.82	36.21	80.16	0.132	0.273	0.594	-44.4	-49.8	66.7	228	228
16	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	217	217
17	481	21.98	46.03	80.19	0.148	0.310	0.541	-56.0	-42.3	70.2	217	217
18	483C	27.52	50.80	80.19	0.169	0.338	0.492	-65.7	-33.1	62.6	208	208
19	484	28.85	52.01	79.07	0.174	0.346	0.478	-65.7	-32.0	73.1	205	205
20	489	25.36	57.51	56.70	0.180	0.408	0.410	-75.0	-10.5	75.7	187	187
21	497	22.33	57.50	37.81	0.191	0.492	0.315	-82.7	10.4	83.4	172	172
22	505	21.31	58.63	24.30	0.205	0.559	0.234	-86.6	23.3	89.7	164	164
23	512G	21.41	58.09	18.79	0.216	0.593	0.190	-87.9	29.4	92.7	161	161
24	521	22.42	59.91	14.10	0.232	0.621	0.146	-88.3	35.1	95.1	158	158
25	524	25.32	62.97	14.10	0.247	0.615	0.137	-88.5	37.6	96.1	156	156
26	539	30.29	66.55	7.57	0.290	0.637	0.072	-84.7	47.1	96.9	150	150
27	551	44.95	76.05	5.53	0.355	0.601	0.043	-70.9	56.9	91.0	141	141
28	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	101	101
29	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.0	72.7	74.3	101	101
30	569	84.05	90.41	1.96	0.476	0.512	0.017	-7.8	72.3	72.7	96	96
31	573S	83.15	93.56	0.23	0.509	0.487	0.002	-1.0	72.3	72.9	92	92
32	573S	83.15	79.56	0.38	0.509	0.487	0.002	-1.6	65.0	65.9	76	76
33	575	82.44	75.80	0.24	0.520	0.478	0.001	23.3	62.0	66.3	69	69
34	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7	68.3	49	49
35	580	78.64	63.07	0.05	0.554	0.444	0.000	44.5	51.7	68.3	49	49
36	585S	74.48	53.96	0.02	0.579	0.420	0.000	56.1	44.3	71.5	38	38
37	590	68.94	44.96	0.00	0.605	0.394	0.000	63.9	36.9	73.8	30	30
38	592	67.61	42.78	1.14	0.606	0.383	0.010	65.8	34.0	74.1	27	27
39	694	71.10	42.58	22.52	0.522	0.312	0.165	75.0	12.4	76.1	9	9
U=0.50		66.16	100.00	82.52	0.346	0.358	0.358	0.00	0.00	0.00	0	0
$s_{Pm} = s_{Pm}^* = 2.51 / (0.000$												

CIEF10 tristimulus values, chromatic values, and putities ($n_t=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values					
		λ_n	X	Y	Z	x	y	A_m	B_m	C_m	A_{Bm}	B_{Bm}	C_{Bm}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322		
01	390	51.14	26.61	74.65	0.139	0.070	0.790	16.8	-69.2	71.5	283		
02	460	13.28	94.9	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	464B	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	23.27	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	-85.7	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	53.7	88.1	142		
20	563	83.59	93.38	3.67	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	-10.1	70.2	70.9	98		
22	563	83.43	88.67	2.06	0.479	0.509	0.015	-5.8	69.7	70.2	93		
23	566Y	83.39	86.54	1.34	0.486	0.505	0.007	-0.7	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	41.34	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	71.27	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	0.790	16.8	-69.2	71.3	283		

$U=D50$ 96.74 100.00 81.03 0.348 0.360 0.360 $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b=P_{Bm}-P_mP_0=1.0/(0.000x+0.000+1.000z)/y$ $B_m=(b-b_0)Y$ $h_{ABm}=\text{atan}[B_m/A_m]$

CIEF10 tristimulus values, chromatic values, and putities ($n_t=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C	n-purities				nu-purities				
			λ_{nm}	Y	P_{nm}	P_{nn}	h_{nm}	λ_{nm}	P_{nm}	P_{nn}	h_{nm}
00	380	25.78	5.13	-2.89	5.89	330	2.71	-2.08	3.42	322	
01	390	26.61	5.13	-2.89	5.89	330	2.55	-10.48	10.78	283	
02	460	9.49	3.49	-8.21	8.92	293	1.08	-7.40	7.48	278	
03	462	11.32	2.93	-6.97	7.56	292	0.51	-6.16	6.18	274	
04	464B	13.45	2.47	-5.92	6.42	292	0.06	-5.11	5.11	270	
05	468	18.67	1.83	-4.31	4.68	293	-0.58	-3.50	3.54	260	
06	471	25.21	1.46	-3.20	3.52	294	-0.95	-2.39	2.57	248	
07	472	28.96	1.34	-2.79	3.10	295	-1.06	-1.98	2.25	241	
08	475	37.06	1.23	-2.18	2.51	299	-1.18	-1.37	1.81	229	
09	477	45.70	1.22	-1.77	2.15	304	-1.19	-0.96	1.53	218	
10	477C	50.08	1.24	-1.61	2.04	307	-1.17	-0.80	1.42	214	
11	479	58.60	1.30	-1.34	1.87	314	-1.11	-0.53	1.23	205	
12	479	56.38	1.28	-1.42	1.91	312	-1.12	-0.61	1.28	208	
13	484	56.72	1.12	-1.04	1.53	317	-1.28	-0.23	1.30	190	
14	492	56.85	0.98	-0.64	1.17	326	-1.43	0.16	1.44	173	
15	503	57.63	0.93	-0.39	1.01	336	-1.48	0.41	1.53	164	
16	511G	58.68	0.95	-0.29	0.99	342	-1.46	0.51	1.55	160	
17	521	60.88	1.00	-0.20	1.02	348	-1.40	0.60	1.53	156	
18	532	65.12	1.14	-0.13	1.15	353	-1.27	0.67	1.43	152	
19	545	74.21	1.47	-0.08	1.47	356	-0.94	0.72	1.18	142	
20	563	93.38	2.23	-0.06	2.23	358	-0.17	0.74	0.76	103	
21	564	90.50	2.30	-0.03	2.30	359	-0.11	0.77	0.78	98	
22	565	88.67	2.35	-0.02	2.35	359	-0.06	0.78	0.78	94	
23	566Y	86.54	2.40	-0.01	2.40	359	-0.00	0.79	0.79	90	
24	568	81.32	2.55	-0.00	2.55	359	0.13	0.80	0.81	80	
25	571	74.78	2.74	-0.00	2.74	359	0.32	0.80	0.86	68	
26	573	71.03	2.85	-0.00	2.85	359	0.43	0.80	0.91	61	
27	577	62.93	3.11	-0.00	3.11	359	0.69	0.80	1.06	49	
28	581	54.29	3.42	-0.00	3.42	359	1.00	0.80	1.29	38	
29	584R	49.91	3.59	-0.00	3.59	359	1.17	0.80	1.42	34	
30	591	41.39	3.99	-0.05	3.99	359	1.57	0.75	1.74	25	
31	588	43.61	3.87	-0.02	3.87	359	1.46	0.78	1.66	28	
32	689	43.27	4.10	-0.50	4.13	353	1.69	0.30	1.71	10	
33	697	43.14	4.30	-1.02	4.42	346	1.89	-0.21	1.90	353	
34	708	42.36	4.43	-1.37	4.64	342	2.01	-0.56	2.09	344	
35	716M	41.31	4.50	-1.54	4.76	341	2.08	-0.73	2.21	340	
36	726	39.11	4.61	-1.74	4.93	339	2.19	-0.93	2.38	336	
37	737	34.86	4.79	-2.06	5.21	336	2.37	-1.25	2.68	332	
38	750	25.78	5.13	-2.89	5.89	330	2.71	-2.08	3.42	322	
39	820	6.61	4.96	-11.29	12.33	293	2.55	-10.48	10.78	283	

$U=D50$ 100.00 2.417 -0.810 2.549 341 $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b=P_{Bm}-P_mP_0=1.0/(0.000x+0.000+1.000z)/y$ $B_m=(b-b_0)Y$ $h_{ABm}=\text{atan}[B_m/A_m]$

CIEF10 tristimulus values, chromatic values, and putities ($n_t=2.5$, $n_h=1.0$).

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

Normalized Ostwald (C) tristimulus values ($Y_w=100$), ordered by hue angle.													
no.	λ	C tristimulus values and chromaticities				nu-chromatic values							
		λ_m	X	Y	Z	x	y	A_m	B_m	C_m	A_{Bm}	B_{Bm}	C_{Bm}
00	588	67.67	43.61	0.91	0.603	0.388	0.008	63.7	34.4	72.4	388		
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	41.34	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	750	52.92	25.78	74.65	0.345	0.168	0.486	69.9	-53.7	88.2	322		
08	855	13.14	6.61	74.65	0.139	0.070	0.790	16.8	-69.2	71.3	283		
09	460	13.28	9.49	77.94	0.131	0.094	0.773	10.2	-70.2	71.0	278		
10	462	13.30	11.32	78.97	0.128	0.109	0.762	5.8	-69.7	70.0	274		
11	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	471	14.73	25.21	80.80	0.121	0.208	0.669	-24.1	-60.3	65.0	248		
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	480	24.44	54.80	81.04	0.164	0.338	0.508	-62.7	-39.4	72.3	214		
18	479C	30.58	58.60	78.68	0.182	0.349	0.462	-68.2	-31.1	72.2	205		
19	479	29.07	56.38	80.12	0.175	0.340	0.483	-63.6	-34.4	72.3	208		
20	484	25.63	56.72	59.32	0.180	0.400	0.418	-73.0	-13.3	74.2	190		
21	492	22.37	56.85	36.73	0.192	0.490	0.316	-81.5	9.3	82.0	173		
22	503	21.57	57.63	22.95	0.211	0.564	0.224	-85.4	23.7	88.6	164		
23	511G	22.30	58.68	17.25	0.227	0.597	0.175	-86.1	30.2	91.2	160		
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-85.7	36.6	93.3	156		
25	532	29.89	65.12	9.04	0.282	0.625	0.086	-82.7	43.7	93.5	152		
26	545	43.82	74.21	6.37	0.352	0.596	0.051	-69.8	53.7	88.1	142		
27	563	83.59	93.36	3.67	0.455	0.599	0.034	-16.8	69.2	71.2	103		
28	565	85.55	95.08	2.85	0.463	0.600	0.030	-16.8	69.2	71.0	94		
29	563	83.43	88.67	2.06	0.479	0.509	0.011	-5.8	69.7	70.0	98		
30	566	83.39	86.54	1.34	0.486	0.505	0.007	-0.7	68.7	68.7	90		
31	568	83.04	81.32	0.56	0.503	0.493	0.003	10.9	65.3	66.2	80		
32	571R	82.00	74.08	0.23	0.522	0.476	0.001	24.1	60.3	65.0	68		
33	573	81.10	71.73	0.14	0.532	0.466	0.000	31.0	57.3	65.2	61		
34	577	78.40	62.93	0.05	0.554	0.445	0.000	43.8	50.9	67.2	49		
35	581	74.33	54.29	0.02	0.577	0.421	0.000	54.5	43.9	70.0	38		
36	584R	71.79	49.91	0.01	0.589	0.410	0.000	58.8	40.4	71.3	34		
37	591	66.15	41.39	2.33	0.602	0.376	0.021	65.3	31.1	72.3	25		
38	597	67.67	61.91	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	10		
752	616	44.26	44.26	21.32	0.36	0.36	0.733	33.3	33.3	33.3	10		

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_e=-1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.													
no.	O	tristimulus values and chromaticities						nu-chromatic values					
		λ_n	Y	X	Y	Z	x	y	z	A_m	B_m	C_{ABm}	A_{Bm}
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	77.00	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	26.13	48.90	65.44	0.186	0.348	0.465	-49.5	-25.9	55.9	207		
11	496	24.48	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	-4.8	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	-41.1	61.7	74.1	123		
19	557	74.22	90.96	8.45	0.427	0.523	0.048	-28.2	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	73.76	76.83	2.11	0.481	0.504	0.013	-2.5	59.9	60.0	87		
23	570Y	71.33	68.67	0.9	0.505	0.486	0.007	16.9	54.4	56.9	72		
24	572	69.75	64.22	0.76	0.517	0.475	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	714R	74.62	46.49	52.41	0.430	0.267	0.302	77.2	-14.8	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	347		
32	735	64.03	34.59	64.49	0.392	0.212	0.395	78.7	-36.5	86.8	335		
33	743	56.04	23.58	64.46	0.366	0.169	0.464	71.6	-45.4	84.8	327		
34	815	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		

$$a=P_m=n_e P_e=2.5[(1.000 \times 0.000 + 0.000 \times 0.000)/y] \quad A_m=(a-a_e) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_e P_b=-1.0[(0.000 \times 0.000 + 1.000 \times 0.000)/y] \quad B_m=(b-b_e) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE690-3N

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_e=-1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

D50 illuminant, 2 degree observer, 1931 CIE colorimetric data, 1964 Munsell colorimetric data,											
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$$a=P_m=n_e P_e=2.5[(1.000 \times 0.000 + 0.000 \times 0.000)/y] \quad A_m=(a-a_e) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_e P_b=-1.0[(0.000 \times 0.000 + 1.000 \times 0.000)/y] \quad B_m=(b-b_e) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE690-7N

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_e=-1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

Normalized Oswald (O) tristimulus values ($Y_{=0}$), purities by wavelength.											
no.	O	C	n-purities				nu-purities				
			λ_n	Y_n	P_m	P_n	h_{nn}	P_{mm}	P_{nn}	h_{mm}	
00	373	23.58	5.39	-2.73	6.04	333	3.04	-1.92	3.59	327	
01	450	10.37	6.32	-6.76	9.25	313	3.97	-5.95	7.15	303	
02	463	9.03	5.48	-8.01	9.71	304	3.13	-7.20	7.85	293	
03	465	11.18	4.44	-6.64	7.99	303	2.09	-5.83	6.19	289	
04	470B	16.46	3.04	-4.67	5.57	303	0.69	-3.86	3.92	280	
05	474	23.15	2.24	-3.40	4.07	303	-0.10	-2.59	2.59	267	
06	477	31.32	1.81	-2.54	3.12	305	-0.53	-1.73	1.81	252	
07	479	35.77	1.69	-2.23	2.80	307	-0.65	-1.43	1.57	245	
08	481	45.22	1.59	-1.77	2.39	311	-0.75	-0.97	1.23	232	
09	482	48.30	1.56	-1.63	2.26	313	-0.78	-0.83	1.14	226	
10	487C	48.90	1.33	-1.33	1.89	314	-1.01	-0.53	1.14	207	
11	496	50.06	1.02	-0.88	1.34	319	-1.32	-0.07	1.32	183	
12	500	52.31	0.98	-0.73	1.22	323	-1.36	0.07	1.36	177	
13	509	53.50	0.90	-0.53	1.05	329	-1.44	0.27	1.46	169	
14	511	56.54	0.96	-0.50	1.08	332	-1.38	0.30	1.41	167	
15	518	60.36	1.02	-0.39	1.09	338	-1.32	0.41	1.39	162	
16	530G	65.40	1.14	-0.25	1.17	347	-1.20	0.55	1.32	155	
17	538	76.41	1.41	-0.21	1.42	351	-0.93	0.59	1.10	147	
18	553	89.62	1.89	-0.11	1.89	356	-0.45	0.68	0.82	123	
19	557	90.96	2.03	-0.09	2.04	357	-0.31	0.71	0.77	113	
20	558	88.81	2.08	-0.07	2.08	357	-0.26	0.73	0.77	109	
21	561	83.52	2.21	-0.04	2.21	358	-0.13	0.76	0.77	100	
22	565	76.83	2.38	-0.02	2.38	359	0.03	0.78	0.78	87	
23	570Y	68.67	2.59	-0.01	2.59	359	0.24	0.79	0.82	72	
24	572	64.22	2.71	-0.01	2.71	359	0.36	0.79	0.87	65	
25	578	54.77	2.97	-0.00	2.97	359	0.62	0.80	1.01	52	
26	580	50.93	3.03	-0.03	3.08	359	0.77	0.77	1.07	40	
27	600	51.09	3.32	-0.30	3.33	354	0.97	0.50	1.09	27	
28	705	47.68	3.84	-0.88	3.95	347	1.49	-0.07	1.50	37	
29	714R	46.49	4.01	-1.12	4.16	344	1.66	-0.31	1.69	349	
30	716	43.45	4.15	-1.20	4.32	343	1.80	-0.39	1.84	347	
31	723	39.63	4.37	-1.43	4.60	341	2.02	-0.62	2.12	342	
32	735	34.59	4.62	-1.86	4.98	338	2.27	-1.05	2.51	335	
33	743	23.58	5.39	-2.73	6.04	333	3.04	-1.92	3.59	327	
34	815	10.37	6.32	-6.76	9.25	313	3.97	-5.95	7.15	303	
U=50	100,00	2,350	-0.808	2,485	341	0	0	0	0	0	

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=1.0$).

 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A_m	B_m	C_{ABm}	h_m
00	375	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326
01	444	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307
02	463	21.19	9.55	72.48	0.205	0.092	0.702	30.5	-64.7	71.6	295
03	465	21.27	11.71	74.36	0.198	0.109	0.692	25.7	-64.8	69.7	291
04	470B	21.43	17.01	77.11	0.185	0.147	0.667	13.7	-63.3	64.8	282
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-0.2	-59.6	59.6	269
06	476	22.83	27.59	79.42	0.175	0.212	0.611	-7.5	-57.0	57.5	262
07	479	25.44	36.25	80.19	0.179	0.255	0.565	-21.3	-50.8	55.1	247
08	480	27.41	40.88	80.43	0.184	0.274	0.540	-27.2	-47.3	54.6	240
09	481	29.88	45.66	80.60	0.191	0.292	0.516	-32.3	-43.6	54.3	233
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-36.3	-39.8	53.9	227
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-52.2	-21.0	56.3	201
12	496	20.67	50.20	44.12	0.179	0.436	0.383	-65.9	-3.4	66.0	183
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-71.2	3.7	71.3	176
14	505	20.59	54.04	33.36	0.190	0.500	0.308	-75.1	10.3	75.9	172
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-79.8	21.1	82.6	165
16	522G	23.24	59.39	19.95	0.226	0.578	0.194	-81.1	28.1	85.8	160
17	530	29.26	65.19	16.32	0.264	0.588	0.147	-79.6	36.3	87.5	155
18	540	41.69	74.85	13.32	0.321	0.576	0.102	-71.2	47.2	85.4	146
19	552	66.62	90.66	13.33	0.390	0.531	0.078	-45.9	60.0	75.6	127
20	557	72.58	90.44	8.47	0.423	0.527	0.039	-30.5	64.7	71.5	115
21	558	72.51	88.28	6.59	0.433	0.527	0.039	-25.6	64.8	69.7	111
22	561	72.35	82.98	3.84	0.454	0.521	0.024	-13.6	63.3	64.7	102
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	0.3	59.6	59.6	89
24	567	70.94	72.40	1.53	0.489	0.499	0.010	7.6	57.0	57.5	82
25	572	68.33	63.74	0.76	0.514	0.479	0.005	21.4	50.8	55.1	67
26	575	66.36	59.11	0.52	0.526	0.469	0.004	27.3	47.3	54.6	59
27	578	63.90	54.33	0.35	0.538	0.458	0.002	32.4	43.6	54.3	53
28	581	62.64	51.28	0.19	0.541	0.443	0.014	36.4	39.8	53.9	47
29	614R	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.3	21
30	701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	3
31	705	73.15	47.60	42.34	0.448	0.291	0.259	71.3	-3.8	71.4	356
32	710	45.93	45.95	47.59	0.438	0.275	0.285	75.2	-10.4	75.9	352
33	720	73.40	44.17	56.94	0.420	0.253	0.326	79.9	-21.1	82.7	345
34	727	70.53	40.59	61.00	0.409	0.235	0.354	81.1	-28.1	85.9	340
35	735	64.51	34.79	64.58	0.393	0.212	0.394	79.7	-36.4	87.6	335
36	745	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326
37	809	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0

$$a^*_{Pm} = n_s P_m P_s = 2.5[(1.000x + 0.000 + 0.000z)/y] \quad A_m = (a^*_{-Q})/Y \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2}$$

$$b^*_{Pm} = n_h P_m P_b = 1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_m = (b^*_{-b})/Y \quad h_{ABm} = \text{atan}[B_m/A_m]$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=1.0$).

 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	χ_n	n-purities					nu-purities				
			Y	P_m	P_n	h_{ABn}	P_m	P_n	h_{ABm}			
00	375	25.14	5.17	-2.69	5.83	332	2.83	-1.88	3.40	326		
01	444	9.33	7.27	-7.24	10.27	315	4.93	-6.43	8.11	307		
02	463	9.55	5.54	-7.58	9.40	306	3.20	-6.78	7.49	295		
03	465	11.71	4.54	-6.35	7.80	305	2.19	-5.54	5.96	291		
04	470B	17.01	3.14	-4.53	5.51	304	0.80	-3.72	3.81	282		
05	474	23.68	2.33	-3.32	4.06	305	-0.01	-2.51	2.51	269		
06	476	27.59	2.06	-2.87	3.54	305	-0.27	-2.06	2.08	262		
07	479	36.25	1.75	-2.21	2.82	308	-0.58	-1.40	1.52	247		
08	480	40.88	1.67	-1.96	2.58	310	-0.66	-1.15	1.33	240		
09	481	45.66	1.63	-1.76	2.40	312	-0.70	-0.95	1.18	233		
10	482C	48.71	1.59	-1.62	2.28	314	-0.74	-0.81	1.10	227		
11	488	49.09	1.27	-1.23	1.78	315	-1.06	-0.42	1.14	201		
12	496	50.20	1.02	-0.87	1.35	319	-1.31	-0.06	1.31	183		
13	500	52.39	0.98	-0.73	1.22	323	-1.35	0.07	1.36	176		
14	505	54.04	0.95	-0.61	1.13	327	-1.39	0.19	1.40	172		
15	515	55.82	0.91	-0.42	1.00	334	-1.43	0.37	1.48	165		
16	522G	59.39	0.97	-0.33	1.03	341	-1.36	0.47	1.44	160		
17	530	65.19	1.12	-0.25	1.14	347	-1.22	0.55	1.35	155		
18	540	74.85	1.39	-0.17	1.40	352	-0.95	0.63	1.14	146		
19	552	90.66	1.83	-0.14	1.84	355	-0.50	0.66	0.83	127		
20	557	90.44	2.00	-0.09	2.00	357	-0.33	0.71	0.79	115		
21	558	88.28	2.05	-0.07	2.05	357	-0.29	0.73	0.79	111		
22	561	82.98	2.17	-0.04	2.18	358	-0.16	0.78	0.78	102		
23	565Y	76.31	2.34	-0.02	2.34	359	0.00	0.78	0.78	89		
24	567	72.40	2.44	-0.02	2.45	359	0.10	0.78	0.79	82		
25	572	63.74	2.68	-0.01	2.68	359	0.33	0.79	0.86	67		
26	575	59.11	2.80	-0.00	2.80	359	0.46	0.80	0.92	59		
27	578	54.33	2.94	-0.00	2.94	359	0.59	0.80	1.00	53		
28	581	51.28	3.05	-0.03	3.05	359	0.70	0.77	1.05	47		
29	614R	50.90	3.37	-0.39	3.39	353	1.02	0.41	1.10	21		
30	701	49.79	3.67	-0.73	3.74	348	1.32	0.06	1.32	3		
31	705	47.60	3.84	-0.88	3.94	346	1.49	-0.08	1.50	356		
32	710	45.95	3.98	-1.03	4.11	345	1.63	-0.22	1.65	352		
33	720	44.17	4.15	-1.28	4.34	342	1.81	-0.47	1.87	345		
34	727	40.59	4.34	-1.50	4.59	340	1.99	-0.69	2.11	340		
35	735	34.79	4.63	-1.85	4.99	338	2.29	-1.04	2.52	335		
36	745	25.14	5.17	-2.69	5.83	332	2.83	-1.88	3.40	326		
37	809	9.33	7.27	-7.24	10.27	315	4.93	-6.43	8.11	307		
U=D50		100.00	2.343	-0.809	2.479	340	0.0	0.0	0.0	0		

$$a^*_{Pm} = n_s P_m P_s = 2.5[(1.000x + 0.000 + 0.000z)/y] \quad A_m = (a^*_{-Q})/Y \quad C_{ABm} = [A_m^2 + B_m^2]^{1/2}$$

$$b^*_{Pm} = n_h P_m P_b = 1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_m = (b^*_{-b})/Y \quad h_{ABm} = \text{atan}[B_m/A_m]$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=1.0$).

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

no.	λ_n	C tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A_m	B_m	C_{ABm}	h_{ABm}
00	614	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.3	381
01	701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	363
02	705	73.15	47.60	42.34	0.448	0.291	0.259	71.3	-3.8	71.4	356
03	710	73.19	45.95	47.59	0.438	0.275	0.285	75.2	-10.4	75.9	352
04	720	73.40	44.17	56.94	0.420	0.253	0.326	79.9	-21.1	82.7	345
05	727M	70.53	40.59	61.00	0.409	0.235	0.354	81.1	-28.1	85.9	340
06	735	64.51	34.79	64.58	0.393	0.212	0.394	79.7	-36.4	87.6	335
07	375	52.09	25.14	67.62	0.359	0.173	0.466	71.3	-47.2	85.5	326
08	444	27.16	9.33	67.62	0.260	0.089	0.649	46.0	-60.0	75.6	307
09	463	21.19	9.55	72.48	0.205	0.092	0.702	30.5	-64.7	71.6	295
10	465	21.27	11.71	74.36	0.198	0.109	0.692	25.7	-64.8	69.7	291
11	470	21.43	17.01	77.11	0.185	0.147	0.667	13.7	-63.3	64.8	282
12	474B	22.09	23.68	78.83	0.177	0.190	0.632	-0.2	-59.6	59.6	269
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-7.5	-57.0	57.5	262
14	479	25.44	36.25	80.19	0.179	0.255	0.565	-21.3	-50.8	55.1	247
15	480	27.41	40.88	80.43	0.184	0.274	0.540	-27.2	-47.3	54.6	240
16	481	29.88	45.66	80.60	0.191	0.292	0.516	-32.3	-43.6	54.3	233
17	482C	31.14	48.71	79.26	0.195	0.306	0.498	-36.3	-39.8	53.9	227
18	488C	25.13	49.09	60.78	0.186	0.363	0.450	-52.2	-21.0	56.3	201
19	496	20.67	50.20	44.12	0.179	0.436	0.383	-65.9	-3.4	66.0	183
20	500	20.63	52.39	38.61	0.184	0.469	0.345	-71.2	3.7	71.3	176
21	505	20.50	54.90	33.36	0.190	0.500	0.308	-75.1	10.3	75.9	172
22	515	20.37	55.82	24.05	0.203	0.557	0.239	-79.8	21.1	82.6	165
23	522G	23.24	59.39	19.90	0.226	0.578	0.194	-81.1	28.1	85.8	160
24	530	25.29	65.19	16.37	0.264	0.588	0.147	-79.6	36.3	87.5	155
25	540	41.69	74.85	13.32	0.321	0.576	0.102	-71.2	47.2	85.4	146
26	546	46.06	76.66	10.33	0.354	0.570	0.087	-65.3	56.7	87.3	142
27	557	72.58	90.04	8.47	0.423	0.527	0.049	-30.5	64.7	85.1	115
28	558	72.51	88.28	6.59	0.433	0.527	0.039	-25.6	64.8	89.7	111
29	561	72.35	82.98	3.84	0.454	0.521	0.024	-13.6	63.3	64.7	102
30	565	71.69	76.31	2.11	0.477	0.508	0.014	0.3	59.6	59.6	89
31	567	70.94	72.40	1.53	0.489	0.499	0.010	7.6	57.0	57.5	82
32	572Y	68.33	63.74	0.76	0.514	0.479	0.005	21.4	50.8	55.1	67
33	575	66.36	59.11	0.52	0.526	0.469	0.004	27.3	47.3	54.6	59
34	578	63.90	54.33	0.35	0.538	0.458	0.002	32.4	43.6	54.3	53
35	581	62.64	51.28	0.19	0.541	0.443	0.014	36.4	39.8	53.9	47
36	584	61.65	50.50	0.17	0.541	0.364	0.144	66.0	21.0	56.3	21
37	701	73.11	49.79	36.82	0.457	0.311	0.230	66.0	3.4	66.1	3
v=D50		93.78	100.00	80.94	0.341	0.363	0.263	0.0	0.0	0.0	0

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

Normalized Ostwald (D) tristimulus values ($V_{\lambda}=100$), derived by wavelength.											
no.	C	tristimulus values and chromaticities			n-chromatic values						
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	nA_{Bm}	
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	27.01	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	-51.7	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	70.6	192
12	497	23.01	58.66	82.48	0.185	0.427	0.342	-66.9	5.7	67.1	172
13	501	22.62	59.57	35.18	0.192	0.507	0.299	-66.1	13.7	67.5	168
14	506	22.26	60.29	28.28	0.200	0.543	0.255	-65.0	21.2	68.4	161
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-62.3	33.1	70.6	152
16	522G	24.04	63.42	17.06	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	3.73	0.306	0.629	0.063	-48.8	52.0	71.3	133
19	561	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	83.63	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	61.1	48.0	77.7	38
27	585	73.67	53.70	0.09	0.577	0.421	0.000	64.3	44.0	77.9	34
28	587	71.01	48.93	0.07	0.591	0.407	0.000	66.7	40.1	77.8	31
29	592R	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	70.6	12
31	702	73.30	41.33	39.75	0.474	0.267	0.257	66.9	-5.7	67.2	35
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	74.18	38.97	65.17	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

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U=D50 96.31 99.99 82.24 0.345 3.358 0.358 0.0 0.0 0.0 0.0 0.0 0.0

$a^*_m = p_m - p_c = 2.5[(1.0000 \times x + 0.171 + 0.0002)/y]$ $A_m = (a^*_m)/Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$

$b^*_m = p_m - p_b = -1.0[(0.000 \times x + 0.000 + 1.0002)/y]$ $B_m = (b^*_m)/Y$ $h_{ABm} = \text{atan}[B_m/A_m]$

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	Y	n-purities				n-purities			
			P_m	P_n	P_{nn}	h_{Bn}	P_m	P_{nn}	P_{nn}	h_{Bnn}
00	396	12.19	2.19	-6.29	6.66	289	0.97	-5.46	5.55	280
01	405	34.34	3.36	-12.32	12.39	263	-2.57	-11.49	11.78	257
02	466	8.01	-1.22	-9.88	9.96	262	-2.43	-9.06	9.38	254
03	471	12.66	-0.95	-6.37	6.44	261	-2.17	-5.55	5.96	248
04	475B	19.21	-0.72	-4.23	4.29	260	-1.94	-3.41	3.93	240
05	479	27.50	-0.52	-2.97	3.02	260	-1.74	-2.15	2.76	231
06	481	36.66	-0.34	-2.23	2.26	261	-1.55	-1.41	2.10	222
07	483	41.45	-0.25	-1.98	1.99	262	-1.47	-1.15	1.87	218
08	484	46.29	-0.17	-1.77	1.78	264	-1.38	-0.95	1.68	214
09	485	51.06	-0.08	-1.60	1.61	266	-1.30	-0.78	1.52	211
10	486C	57.81	0.03	-1.41	1.41	271	-1.18	-0.58	1.32	206
11	490	58.17	0.04	-1.09	1.09	272	-1.17	-0.26	1.20	192
12	497	58.66	0.07	-0.72	0.72	275	-1.14	0.09	1.14	175
13	501	59.57	0.10	-0.59	0.60	280	-1.10	0.23	1.13	168
14	506	60.29	0.13	-0.46	0.48	286	-1.07	0.35	1.13	161
15	519	61.02	0.19	-0.27	0.34	304	-1.02	0.54	1.15	152
16	522G	63.42	0.24	-0.26	0.36	312	-0.97	0.55	1.11	150
17	535	66.19	0.36	-0.14	0.39	337	-0.85	0.67	1.08	141
18	544	72.16	0.54	-0.10	0.54	349	-0.67	0.72	0.98	133
19	561	87.80	1.08	-0.06	1.08	356	-0.13	0.75	0.77	100
20	568	93.65	1.39	-0.04	1.39	358	0.17	0.77	0.79	77
21	569	91.98	1.42	-0.03	1.42	358	0.21	0.78	0.81	74
22	571	82.93	1.53	-0.01	1.53	359	0.36	0.81	0.86	68
23	573Y	80.76	1.68	-0.00	1.68	359	0.46	0.81	0.93	60
24	577	72.49	1.87	-0.00	1.87	359	0.66	0.81	1.05	51
25	581	63.33	2.11	-0.00	2.11	359	0.90	0.81	1.21	42
26	583	58.54	2.26	-0.00	2.26	359	1.04	0.82	1.32	38
27	585	53.70	2.41	-0.00	2.41	359	1.19	0.82	1.45	34
28	587	48.93	2.58	-0.00	2.58	359	1.36	0.82	1.59	31
29	592R	42.18	2.84	-0.01	2.84	359	1.62	0.80	1.81	26
30	631	41.82	2.84	-0.44	2.88	351	1.63	0.37	1.67	12
31	702	41.33	2.83	-0.96	2.99	341	1.62	-0.13	1.62	355
32	706	40.41	2.85	-1.16	3.08	337	1.63	-0.34	1.67	348
33	711	39.70	2.85	-1.35	3.16	334	1.64	-0.53	1.72	341
34	724	38.97	2.81	-1.67	3.27	329	1.68	-0.81	1.94	332
35	727M	36.57	2.90	-1.78	3.40	328	1.68	-1.02	2.13	332
36	740	33.80	2.89	-2.14	3.60	323	1.67	-1.32	2.31	321
37	749	27.83	2.97	-2.69	4.00	317	1.75	-1.86	2.56	313
38	766	12.19	2.19	-6.29	6.66	289	0.97	-5.46	5.55	280
39	828	6.34	-1.36	-12.32	12.39	263	-2.57	-11.49	11.78	257

U=D50 99.99 1.216 -0.822 1.468 325 0.0 0.0 0.0 0.0 0.0 0.0

$a^*_m = p_m - p_c = 2.5[(1.000 \times x + 0.171 + 0.0002)/y]$ $A_m = (a^*_m)/Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$

$b^*_m = p_m - p_b = -1.0[(0.000 \times x + 0.000 + 1.0002)/y]$ $B_m = (b^*_m)/Y$ $h_{ABm} = \text{atan}[B_m/A_m]$

CIE02 tristimulus values, chromatic values, and putities ($n=2,5, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

no.	λ_n	C tristimulus values and chromaticities				n-chromatic values					
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	nA_{Bm}	
00	631	69.99	41.82	18.71	0.536	0.320	0.143	68.2	15.6	70.6	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	-33.1	70.6	332
05	727M	72.26	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	74.91	0.372	0.169	0.457	48.8	-52.0	71.3	313
08	396	31.24	12.19	76.69	0.260	0.101	0.638	11.9	-66.6	67.7	280
09	466	13.25	6.34	78.11	0.135	0.064	0.799	-16.3	-72.8	74.7	257
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	0.755	-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	479	15.61	27.01	81.85	0.124	0.220	0.655	-47.8	-59.2	76.1	231
14	481	18.42	36.66	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	486B	28.12	56.81	81.62	0.175	0.334	0.485	-68.8	-35.0	77.8	206
19	490	26.32	58.17	63.51	0.177	0.393	0.429	-68.2	-15.6	79.0	192
20	497	23.01	58.66	42.48	0.185	0.472	0.342	-66.9	5.7	67.1	175
21	501	22.62	59.25	35.18	0.192	0.507	0.299	-66.1	13.7	67.5	168
22	506	22.26	60.29	28.28	0.200	0.543	0.255	-65.0	21.2	68.4	161
23	519C	21.83	61.02	17.06	0.218	0.610	0.170	-62.3	33.1	70.6	152
24	522	24.04	63.42	17.06	0.230	0.606	0.163	-61.7	35.0	71.0	150
25	535	27.22	62.19	9.71	0.263	0.641	0.094	-56.5	44.7	72.1	141
26	544	35.20	72.16	7.33	0.306	0.629	0.063	-48.8	52.6	71.3	133
27	561	65.07	87.80	5.54	0.410	0.554	0.034	-11.8	66.0	67.7	100
28	565	65.05	87.85	5.53	0.410	0.554	0.034	-11.8	66.0	67.7	100
29	569	83.03	91.98	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	577M	80.67	72.49	0.38	0.525	0.472	0.002	47.8	59.2	76.1	51
33	581	77.87	63.33	0.18	0.550	0.447	0.001	57.1	51.8	77.2	42
34	583	75.96	58.54	0.13	0.564	0.434	0.000	61.1	48.0	77.7	38
35	585	73.67	53.70	0.09	0.577	0.421	0.000	64.3	44.0	77.9	34
36	587B	71.01	48.93	0.07	0.591	0.407	0.000	66.7	40.1	77.8	31
37	592	66.69	42.18	0.61	0.609	0.385	0.005	68.5	34.0	76.5	26
38	609	69.99	41.82	18.71	0.536	0.320	0.143	68.2	15.6	70.6	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 0.0 0.0 0.0 0											
$a_{p-p_n} = a_{p_n} - 2.5 [1.01(0.000x + 0.171 + 0.0002y) + 0.0001z] \quad B_m = (-a - a_n) \quad Y \quad C_{ABm} = \frac{a_{ABm} B_m^{1/2}}{a_{ABm} - B_m} \\ b_{p-p_n} = b_{p_n} - 1.01(0.000x + 0.00001y + 0.00001z) \quad B_m = (-b - b_n) \quad Y \quad C_{ABm} = \frac{a_{ABm} B_m^{1/2}}{a_{ABm} - B_m}$											

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities				nu-chromatic values			
		λ_n	X	Y	Z	x	y	λ_m	λ_{nm}
00	376	55.24	26.06	71.08	0.362	0.171	0.466	40.9	-49.9
01	376	55.24	26.06	71.08	0.362	0.171	0.466	40.9	-49.9
02	440	13.26	8.89	77.33	0.133	0.089	0.777	-20.3	-70.1
03	462	13.28	10.68	78.42	0.129	0.104	0.765	-23.6	-69.7
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	-23.6	-69.7
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-35.6	-65.6
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-44.4	-60.9
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-48.8	-58.0
08	475	18.26	36.37	81.08	0.134	0.267	0.597	-56.8	-51.5
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-66.3	-37.3
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-67.7	-31.9
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-65.7	-14.0
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-63.4	7.9
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-60.7	22.2
16	512G	22.19	58.45	18.53	0.223	0.589	0.186	-58.6	28.9
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-55.9	35.3
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-50.9	42.2
19	541	41.39	73.93	10.07	0.330	0.589	0.080	-40.9	49.9
20	563	83.41	92.59	5.28	0.460	0.510	0.029	17.3	69.8
21	564	83.37	91.09	3.82	0.467	0.510	0.021	20.3	70.0
22	565	83.35	89.31	2.74	0.475	0.509	0.015	23.7	69.7
23	565Y	83.35	89.31	2.74	0.475	0.509	0.015	23.7	69.7
24	568	82.96	82.07	0.96	0.499	0.494	0.005	35.6	65.6
25	571	81.93	75.58	0.44	0.518	0.478	0.002	44.5	60.8
26	573	81.03	71.82	0.27	0.529	0.469	0.001	48.9	58.0
27	577	78.31	63.62	0.08	0.551	0.447	0.000	56.9	51.5
28	581	74.28	54.89	0.01	0.575	0.424	0.000	63.0	44.5
29	581R	74.28	54.89	0.01	0.575	0.424	0.000	63.0	44.5
30	587	68.81	46.05	0.00	0.599	0.400	0.000	66.3	37.3
31	589	67.60	44.04	0.93	0.600	0.391	0.008	66.8	34.8
32	692	70.96	43.57	21.37	0.522	0.320	0.157	65.8	13.9
33	697	74.12	43.34	43.14	0.461	0.269	0.268	63.4	-7.9
34	708	75.07	42.59	56.88	0.403	0.244	0.325	60.7	-22.3
35	717M	74.44	41.54	62.63	0.416	0.232	0.350	58.7	-28.9
36	726	72.35	39.38	67.37	0.403	0.219	0.376	55.9	-35.4
37	736	67.62	35.52	71.08	0.388	0.203	0.408	50.9	-42.2
38	746	55.24	26.06	71.08	0.362	0.171	0.466	40.9	-49.9
39	823	13.22	7.40	75.87	0.136	0.076	0.786	-17.2	-69.8

U=D50 96.63 100.00 0.117 0.347 0.359 0.359 $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b=p_{nm}-n_1p_1-n_2p_2=-1.0/(0.000x+0.000+1.000y)$ $B_m=(b-b_0)Y$ $h_{ABm}=atan[B_m/A_m]$

DE690-3N

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

no.	O	tristimulus values and chromaticities				nu-chromatic values			
		λ_n	X	Y	Z	x	y	λ_m	λ_{nm}
00	692	70.96	43.57	21.37	0.522	0.320	0.157	65.8	13.9
01	697	74.12	43.34	43.14	0.461	0.269	0.268	63.4	-7.9
02	708	75.07	42.59	56.88	0.403	0.244	0.325	60.7	-22.3
03	717	74.44	41.54	62.63	0.416	0.232	0.350	58.7	-28.9
04	726	72.35	39.38	67.37	0.403	0.219	0.376	55.9	-35.4
05	736M	67.62	35.52	71.08	0.388	0.203	0.408	50.9	-42.2
06	746	55.24	26.06	71.08	0.362	0.171	0.466	40.9	-49.9
07	823	13.22	7.40	75.87	0.136	0.076	0.786	-17.2	-69.8
08	460	13.26	8.89	77.33	0.133	0.089	0.777	-20.3	-70.1
09	462	13.28	10.68	78.42	0.129	0.104	0.765	-23.6	-69.7
10	462	13.28	10.68	78.42	0.129	0.104	0.765	-23.6	-69.7
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-35.6	-65.6
12	471B	14.70	24.41	80.73	0.122	0.203	0.673	-44.4	-60.9
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-48.8	-58.0
14	475	18.26	36.37	81.08	0.134	0.267	0.597	-56.8	-51.5
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-63.0	-44.5
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-66.3	-37.3
18	480	30.64	58.21	79.19	0.182	0.346	0.471	-67.7	-31.9
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-65.7	-14.0
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-63.4	7.9
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-60.7	22.2
22	512	22.19	58.45	18.53	0.223	0.589	0.186	-58.6	28.9
23	521G	24.28	60.61	13.79	0.246	0.614	0.139	-55.9	35.3
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-50.9	42.2
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-40.9	49.9
26	563	83.41	92.59	5.28	0.460	0.510	0.029	17.3	69.8
27	564	83.37	91.09	3.82	0.467	0.510	0.021	20.3	70.0
28	565	83.35	89.31	2.74	0.475	0.509	0.015	23.7	69.7
29	565	83.35	89.31	2.74	0.475	0.509	0.015	23.7	69.7
30	568	82.96	82.07	0.96	0.499	0.494	0.005	35.6	65.6
31	571	81.93	75.58	0.44	0.518	0.478	0.002	44.5	60.8
32	573Y	81.03	71.82	0.27	0.529	0.469	0.001	48.9	58.0
33	577	78.31	63.62	0.08	0.551	0.447	0.000	56.9	51.5
34	581	74.28	54.89	0.01	0.575	0.424	0.000	63.0	44.5
35	581	74.28	54.89	0.01	0.575	0.424	0.000	63.0	44.5
36	587R	68.81	46.05	0.00	0.599	0.400	0.000	66.3	37.3
37	589	67.60	44.04	0.93	0.600	0.391	0.008	66.8	34.8
38	692	70.96	43.57	21.37	0.522	0.320	0.157	65.8	13.9
39	697	74.12	43.34	43.14	0.461	0.269	0.268	63.4	-7.9

U=D50 96.63 100.00 0.117 0.347 0.359 0.359 $A_m=(a-o)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$

$b=p_{nm}-n_1p_1-n_2p_2=-1.0/(0.000x+0.000+1.000y)$ $B_m=(b-b_0)Y$ $h_{ABm}=atan[B_m/A_m]$

DE690-7N

DE690-7P chart=1 x_color=1(CIE10)

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	λ_n	n-purities					m-purities				
		Y	p_{nm}	p_{n1}	h_{nm}	p_{nm}	p_{m1}	p_{m2}	h_{nm}		
00	376	26.06	2.79	-2.72	3.90	315	1.57	-1.91	2.47	309	
01	376	26.06	2.79	-2.72	3.90	315	1.57	-1.91	2.47	309	
02	440	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	462B	10.68	-0.98	-7.34	7.40	262	-2.21	-6.53	6.89	251	
05	468	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	0.10	-0.67	0.68	279	-1.11	0.14	1.17	185	
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	0.67	-0.13	0.68	348	-0.55	0.67	0.87	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	1.66	-0.01	1.66	359	-0.43	0.79	0.91	61	
25	571	75.58	1.81	-0.00	1.81	359	-0.58	0.80	0.99	53	
26	573	71.82	1.90	-0.00	1.90	359	-0.68	0.80	1.05	45	
27	577	63.62	2.12	-0.00	2.12	359	-0.89	0.81	1.20	42	
28	581	54.89	2.37	-0.00	2.37	359	-1.14	0.81	1.40	35	
29	581R	54.89	2.37	-0.00	2.37	359	-1.14	0.81	1.40	35	
30	587	46.05	2.66	0.00	2.66	0	1.44	0.81	1.65	29	
31	589	44.04	2.74	-0.02	2.74	359	1.51	0.79	1.71	27	
32	692	43.57	2.73	-0.49	2.78	349	1.51	0.32	1.54	11	
33	697	43.34	2.69	-0.99	2.86	339	1.46	-0.18	1.47	352	
34	708	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	333	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	

CIEF02 tristimulus values, chromatic values, and putities ($n_e=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values			
		λ_n	X	Y	Z	x	y	A_{nm}	B_{nm}	C_{ABnm}	A_{ABnm}
00	386	51.50	23.94	74.68	0.343	0.159	0.497	35.3	-55.0	65.3	30.2
01	386	51.50	23.94	74.68	0.343	0.159	0.497	35.3	-55.0	65.3	30.2
02	465	12.45	9.58	76.19	0.130	0.068	0.801	-23.5	-70.3	74.1	251
03	467	12.45	11.64	78.25	0.120	0.113	0.766	-27.0	-69.3	74.4	248
04	473B	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	-60.0	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	0.388	0.492	-67.9	-34.9	76.3	207
11	484	28.05	57.21	79.07	0.174	0.346	0.478	-68.2	-32.0	75.4	205
12	484	28.05	57.21	79.07	0.174	0.346	0.478	-68.2	-32.0	75.4	205
13	497	23.37	57.50	76.81	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	58.69	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	146
17	524	25.32	62.97	14.10	0.247	0.615	0.137	-57.2	37.6	68.5	146
18	539	30.29	66.55	7.57	0.290	0.637	0.072	-50.0	47.1	68.7	136
19	551	44.95	76.05	5.53	0.355	0.601	0.043	-34.4	56.9	66.6	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	570Y	84.05	88.35	1.96	0.476	0.512	0.011	-24.4	72.3	76.3	78
23	570Y	84.05	88.35	1.93	0.483	0.508	0.007	-27.9	71.2	76.5	68
24	573Y	83.15	79.56	0.38	0.509	0.487	0.002	-41	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	590R	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	42.58	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	75.15	41.96	55.91	0.434	0.242	0.323	-62.7	-21.4	66.2	341
35	726M	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											
$a^*_{Pnm} = P_{Pnm} - 2.5[(1.0000 \times 0.171 + 0.0002) / y]$ $A_{nm} = (a^*_{nm}) / y$ $C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$											
$b^*_{Pnm} = P_{Pnm} - 1.0[(0.000 \times 0.000 + 1.0002) / y]$ $B_{nm} = (b^*_{nm}) / y$ $A_{ABnm} = \text{atan}([B_{nm} / A_{nm}])$											

DE690-3N

CIEF02 tristimulus values, chromatic values, and putities ($n_e=2.5$, $n_h=1.0$).

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

Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.												
no.	O	C tristimulus values and chromaticities						nu-chromatic values				
		λ_n	X	Y	Z	x	y	A_{nm}	B_{nm}	C_{ABnm}	A_{ABnm}^2	
00	592	67.61	42.78	1.14	0.606	0.383	0.010	69.1	34.0	77.0	386	
01	694	71.10	42.58	22.52	0.522	0.312	0.165	67.5	12.4	68.7	370	
02	702	74.12	42.49	43.40	0.463	0.265	0.271	65.0	-8.4	65.6	352	
03	710	75.15	41.96	55.91	0.434	0.242	0.323	62.7	-21.4	66.2	341	
04	717	75.05	41.30	66.43	0.422	0.232	0.345	61.2	-27.4	67.1	335	
05	726M	74.04	40.08	66.11	0.410	0.222	0.366	59.1	-33.1	67.8	330	
06	729	71.14	37.02	66.11	0.408	0.212	0.379	58.1	-35.6	68.2	328	
07	744	66.16	33.43	72.64	0.384	0.194	0.421	50.9	-45.1	68.0	318	
08	756	51.50	23.94	74.68	0.343	0.159	0.497	35.3	-55.0	65.3	302	
09	825	12.38	6.54	76.19	0.130	0.068	0.801	-17.7	-70.8	72.9	255	
10	465	12.45	9.58	78.25	0.123	0.095	0.786	-23.5	-70.3	74.1	251	
11	467	12.45	11.64	78.27	0.120	0.113	0.760	-20.9	-69.3	74.4	248	
12	473B	13.31	20.43	79.83	0.117	0.179	0.702	-40.1	-63.0	74.7	237	
13	475	14.02	24.19	79.97	0.118	0.204	0.676	-44.9	-60.0	75.0	233	
14	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220	
15	479	17.82	36.91	80.16	0.132	0.273	0.594	-58.1	-49.8	76.5	220	
16	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213	
17	481	21.98	46.03	80.19	0.148	0.310	0.541	-64.5	-42.3	77.2	213	
18	483C	27.52	55.03	80.21	0.169	0.388	0.492	-67.9	-34.9	76.3	207	
19	484	28.05	57.21	79.07	0.174	0.346	0.478	-68.2	-32.0	75.4	205	
20	489	25.36	57.41	57.70	0.180	0.408	0.410	-66.1	-10.5	67.5	188	
21	497	22.33	57.50	36.81	0.191	0.492	0.315	-64.6	10.4	65.0	170	
22	505	21.31	58.03	24.30	0.205	0.559	0.234	-61.8	23.3	66.0	159	
23	512G	21.41	58.69	18.79	0.216	0.593	0.190	-60.3	29.4	67.1	153	
24	521	22.42	59.91	14.10	0.232	0.621	0.146	-58.2	35.1	68.0	146	
25	524	25.32	62.97	14.10	0.247	0.615	0.137	-57.2	37.6	68.5	146	
26	539	30.29	66.55	7.57	0.290	0.637	0.072	-50.0	47.1	68.7	136	
27	551	44.95	76.05	5.53	0.355	0.601	0.043	-34.4	56.9	66.6	121	
28	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75	
29	568	84.08	93.45	4.02	0.463	0.514	0.022	-18.5	72.7	75.1	75	
30	569	84.05	90.41	1.96	0.476	0.512	0.011	-24.4	72.3	76.3	71	
31	570	84.00	88.35	1.33	0.483	0.508	0.007	-27.9	71.2	76.5	68	
32	573Y	83.15	79.56	0.38	0.509	0.487	0.002	-41	65.0	76.9	57	
33	575	82.44	75.80	0.24	0.520	0.478	0.001	-45.8	62.0	77.1	53	
34	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41	
35	580	78.64	63.07	0.05	0.554	0.444	0.000	-59.0	51.7	78.5	41	
36	585R	74.48	53.96	0.02	0.579	0.420	0.000	-65.4	44.3	79.0	34	
37	590	68.94	44.96	0.00	0.605	0.394	0.000	-68.8	36.9	78.1	28	
38	592	67.61	42.78	1.14	0.606	0.383	0.010	-69.1	34.0	77.0	26	
39	694	71.10	42.58	22.52	0.522	0.312	0.165	-67.5	12.4	68.7	10	
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												
$a^*_{Pnm} = P_{nm} - 2.5[(1.0000 \times 0.171 + 0.0002) / y]$ $A_{nm} = (a^*_{nm}) / y$ $C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$												
$b^*_{Pnm} = P_{nm} - 1.0[(0.000 \times 0.000 + 1.0002) / y]$ $B_{nm} = (b^*_{nm}) / y$ $A_{ABnm} = \text{atan}[B_{nm} / A_{nm}]$												

DE690-7R

DE690-7R pchart=1 x_color=2(CIEF02)

CIEF02 tristimulus values, chromatic values, and putities ($n_e=2.5$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C	n-purities				nu-purities			
			λ_n	Y	P_{nm}	P_{nn}	λ_{nm}	Y_{nm}	P_{nm}	h_{nm}
00	386	23.94	2.69	-3.11	4.12	310	1.47	-2.29	2.73	302
01	386	23.94	-1.48	-11.64	11.74	262	-2.45	-10.82	11.16	255
02	465	6.54	-4.88	-8.16	8.26	261	-2.45	-7.34	7.74	251
03	467	5.58	1.10	-6.77	6.86	260	-2.32	-5.95	6.39	248
04	473B	20.43	-0.74	-3.90	3.97	259	-1.96	-3.08	3.65	237
05	475	24.19	-0.63	-3.30	3.36	259	-1.85	-2.48	3.10	233
06	479	36.91	-0.35	-2.17	2.20	260	-1.57	-1.34	2.07	220
07	479	36.91	-0.35	-2.17	2.20	260	-1.57	-1.34	2.07	220
08	481	46.03	-0.18	-1.74	1.75	264	-1.40	-0.92	1.67	213
09	481	46.03	-0.18	-1.74	1.75	264	-1.40	-0.92	1.67	213
10	483C	55.03	-0.01	-1.45	1.45	269	-1.23	-0.63	1.38	207
11	484	57.21	0.02	-1.38	1.38	271	-1.19	-0.56	1.31	205
12	489	57.41	0.05	-1.00	1.00	273	-1.16	-0.18	1.17	188
13	497	57.50	0.10	-0.64	0.64	279	-1.11	0.18	1.13	170
14	505	58.03	0.15	-0.41	0.44	290	-1.06	0.40	1.13	159
15	509	58.69	0.19	-0.32	0.37	300	-1.02	0.50	1.14	153
16	521	59.91	0.24	-0.23	0.34	316	-0.97	0.58	1.13	148
17	524	62.97	0.31	-0.22	0.38	324	-0.90	0.59	1.08	146
18	539	66.55	0.46	-0.11	0.48	346	-0.75	0.70	1.03	136
19	551	76.05	0.76	-0.07	0.76	354	-0.45	0.74	0.87	121
20	568	93.45	1.41	-0.04	1.41	358	0.19	0.77	0.80	75
21	568	93.45	1.41	-0.04	1.41	358	0.19	0.77	0.80	75
22	569	90.41	1.48	-0.02	1.49	359	0.27	0.80	0.84	71
23	570Y	88.35	1.53	-0.01	1.53	359	0.31	0.80	0.86	68
24	573	79.56	1.73	-0.00	1.73	359	0.51	0.81	0.96	57
25	575	75.80	1.82	-0.00	1.82	359	0.60	0.81	1.01	53
26	580	63.07	2.15	-0.00	2.15	359	0.93	0.82	1.24	41
27	580	63.07	2.15	-0.00	2.15	359	0.93	0.82	1.24	41
28	585	53.96	2.43	-0.00	2.43	359	1.21	0.82	1.46	34
29	592	53.26	2.79	0.00	2.79	0	1.52	-1.35	2.03	318
30	594	42.78	2.83	-0.02	2.83	359	1.61	0.79	1.80	26
31	694	42.58	2.80	-0.52	2.85	-10	1.58	0.29	1.61	10
32	702	42.49	2.75	-1.02	2.93	339	1.53	-0.19	1.54	352
33	710	41.96	2.71	-1.33	3.02	333	1.49	-0.51	1.57	341
34	717	41.30	2.70	-1.48	3.08	331	1.48	-0.66	1.62	335
35	726M	40.08	2.69	-1.64	3.16	328	1.47	-0.82	1.69	330
36	729	37.02	2.79	-1.78	3.31	327	1.57	-0.96	1.84	328
37	744	33.43	2.74	-2.17	3.49	321	1.52	-1.35	2.03	318
38	756	23.94	2.69	-3.11	4.12	310	1.47	-2.29	2.73	302
39	825	6.54	-4.88	-11.64	11.74	262	-2.70	-10.82	11.16	255
U=D50 100.00 1.219 -0.821 1.470 326 0.0 0.0 0.0 0.0 0.0										
$a_{pnm}=p_n p_p=2.5[(1.000x-0.171+0.000z)/y]$ $A_{nm}^2=(a-a_n)^2$ $Y_{CABnm}=[A_{nm}^2+B_{nm}^2]^{1/2}$										
$b_{pnm}=n_p p_p=-1.0[(0.000x+0.000+1.000z)/y]$ $B_{nm}=(b-b_n)^2$ $Y_{ABnm}=a \tan(B_{nm}/A_{nm})$										
D690-4N										
CIEF02 tristimulus values, chromatic values, and purities ($n_p=2.5$, $p_p=-1.0$).										
Normalized Oswald (O) tristimulus values ($Y_{nn}=1.00$), ordered by hue angle.										
no.	O	C	n-purities				nu-purities			
			λ_n	Y	P_{nm}	P_{nn}	λ_{nm}	Y_{nm}	P_{nm}	h_{nm}
00	592	42.78	2.83	-0.02	2.83	359	1.61	0.79	1.80	386
01	694	42.58	2.80	-0.52	2.85	349	1.58	0.29	1.61	370
02	702	42.49	2.75	-1.02	2.93	339	1.53	-0.19	1.54	352
03	710	41.96	2.71	-1.33	3.02	333	1.49	-0.51	1.57	341
04	717	41.30	2.70	-1.48	3.08	331	1.48	-0.66	1.62	335
05	726M	40.08	2.69	-1.64	3.16	328	1.47	-0.82	1.69	330
06	729	37.02	2.79	-1.78	3.31	327	1.57	-0.96	1.84	328
07	744	33.43	2.74	-2.17	3.49	321	1.52	-1.35	2.03	318
08	756	23.94	2.69	-3.11	4.12	310	1.47	-2.29	2.73	302
09	825	6.54	-4.88	-11.64	11.74	262	-2.70	-10.82	11.16	255
10	465	9.58	-1.23	-8.16	8.26	261	-2.45	-7.34	7.74	251
11	467	11.64	-1.10	-6.77	6.86	260	-2.32	-5.95	6.39	248
12	473B	20.43	-0.74	-3.90	3.97	259	-1.96	-3.08	3.65	237
13	475	24.19	-0.63	-3.30	3.36	259	-1.85	-2.48	3.10	233
14	479	36.91	-0.35	-2.17	2.20	260	-1.57	-1.34	2.07	220
15	479	36.91	-0.35	-2.17	2.20	260	-1.57	-1.34	2.07	220
16	481	46.03	-0.18	-1.74	1.75	264	-1.40	-0.92	1.67	213
17	481	46.03	-0.18	-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	509	58.69	0.19	-0.32	0.37	300	-1.02	0.50	1.14	153
24	521	59.91	0.24	-0.23	0.34	316	-0.97	0.58	1.13	148
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	0.76	-0.07	0.76	354	-0.45	0.74	0.87	121
28	568	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	0.60	0.81	1.01	53
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	585	53.96	2.43	-0.00	2.43	359	1.21	0.82	1.46	34
37	592	53.26	2.79	0.00	2.79	0	1.52	-1.35	2.03	318
38	594	42.78	2.83	-0.02	2.83	0	1.61	0.79	1.80	26
39	694	42.58	2.80	-0.52	2.85	-10	1.58	0.29	1.61	10
U=D50 100.00 1.219 -0.821 1.470 326 0.0 0.0 0.0 0.0 0.0										
$a_{pnm}=p_n p_p=2.5[(1.000x-0.171+0.000z)/y]$ $A_{nm}^2=(a-a_n)^2$ $Y_{CABnm}=[A_{nm}^2+B_{nm}^2]^{1/2}$										
$b_{pnm}=n_p p_p=-1.0[(0.000x+0.000+1.000z)/y]$ $B_{nm}=(b-b_n)^2$ $Y_{ABnm}=a \tan(B_{nm}/A_{nm})$										

CIEF10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values						
		λ_n	X	Y	Z	x	y	λ_n	B_n	C_n	A_{Bn}	A_{Cn}	A_{Bn}	A_{Cn}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	35.0	-53.7	64.1	303			
01	455	13.14	6.61	74.65	0.131	0.070	0.790	-15.6	-69.2	71.0	257			
02	462	13.30	11.32	78.97	0.128	0.109	0.762	-24.9	-69.7	74.1	250			
04	464B	13.34	13.45	79.69	0.125	0.126	0.748	-28.7	-68.7	74.5	247			
05	468	13.69	18.67	80.47	0.121	0.165	0.713	-36.9	-65.3	75.0	240			
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-45.8	-60.3	75.7	232			
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-50.2	-57.4	76.2	228			
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-58.0	-50.9	77.2	221			
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-64.0	-43.9	77.6	214			
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-65.9	-40.7	77.6	214			
11	479	30.58	58.60	78.68	0.182	0.349	0.468	-67.4	-31.2	74.3	204			
12	479	29.07	56.38	80.12	0.175	0.340	0.483	-67.4	-34.4	74.5	207			
13	484	25.63	56.72	59.32	0.180	0.400	0.418	-66.2	-13.3	67.6	191			
14	492	23.27	56.85	36.73	0.192	0.490	0.316	-63.6	9.3	64.2	171			
15	5003	21.57	57.63	22.95	0.211	0.564	0.224	-60.6	23.7	65.1	158			
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-58.4	30.2	65.8	152			
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-55.4	36.6	66.4	146			
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-49.9	43.7	66.3	138			
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-34.9	53.7	64.1	123			
20	563	83.59	93.38	3.67	0.455	0.509	0.034	15.6	69.2	71.0	77			
21	564	93.45	90.50	3.08	0.471	0.511	0.017	21.5	70.2	73.4	72			
22	565	83.43	88.67	2.06	0.479	0.509	0.011	24.9	69.7	74.1	70			
23	566Y	83.39	86.54	1.34	0.486	0.505	0.007	28.7	68.7	74.5	67			
24	568	83.04	81.32	0.56	0.503	0.493	0.003	37.0	65.3	75.0	60			
25	571	82.00	74.78	0.23	0.522	0.476	0.001	45.8	60.3	75.7	52			
26	573	81.10	71.03	0.14	0.532	0.466	0.000	50.2	57.3	76.2	48			
27	577	78.40	62.93	0.05	0.554	0.445	0.000	58.1	50.9	77.2	41			
28	581	74.33	54.29	0.02	0.577	0.421	0.000	64.0	43.9	77.6	34			
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	66.0	40.4	77.4	31			
30	591	66.15	41.39	2.33	0.602	0.376	0.021	67.4	31.1	74.3	24			
31	588	67.67	43.61	0.91	0.603	0.388	0.008	67.5	34.4	75.8	27			
32	689	71.10	43.27	21.71	0.522	0.317	0.159	66.3	13.3	67.6	11			
33	697	74.36	41.34	44.30	0.459	0.266	0.273	63.6	-9.3	67.6	371			
34	708	75.16	42.36	58.08	0.428	0.241	0.330	60.6	-23.7	65.1	338			
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	58.4	-30.3	65.8	332			
36	726	71.27	39.11	68.41	0.401	0.217	0.380	55.4	-36.7	66.5	326			
37	737	66.83	34.86	71.99	0.384	0.200	0.414	49.9	-43.7	66.3	318			
38	750	52.92	25.78	74.65	0.345	0.168	0.486	35.0	-53.7	64.1	303			
39	820	13.14	6.61	74.65	0.139	0.070	0.790	-15.6	-69.2	73.0	257			
U=D50 96.74 100.00 81.03 0.348 0.360 0.360														
$a^*_D=a^*_D, P_D=2.5[(1.000x+0.171+0.000z)/y]$ $B_n=(a^*_D-a^*_Y) C_{ABn}/[A_n^2+B_n^2]^{1/2}$														
$b^*_D=b^*_D, P_D=1.0[(0.000x+0.000+1.000z)/y]$ $B_n=(b^*_D-b^*_Y) Y h_{ABn}=atan[B_n/A_n]$														

DEG90-3N

CIEF10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C	n-purities					nu-purities				
			Y	P _{an}	P _{bn}	P _{rn}	h _{bn}	Y	P _{an}	P _{bn}	P _{rn}	h _{bn}
00	380	25.78	2.58	-2.89	3.88	311	1.35	-2.08	2.48	303	303	
01	455	66.71	1.13	-11.29	11.35	264	-2.36	-10.48	10.74	257	257	
02	460	9.49	-1.03	-8.21	8.27	262	-2.26	-7.40	7.74	252	252	
03	462	11.32	-0.97	-6.97	7.04	262	-2.20	-6.16	6.54	250	250	
04	464B	13.45	-0.90	-5.92	5.99	261	-2.13	-5.11	5.54	247	247	
05	468	18.67	-0.75	-4.31	4.37	260	-1.98	-3.50	4.02	240	240	
06	471	25.21	-0.58	-3.20	3.25	259	-1.81	-2.39	3.00	232	232	
07	472	28.96	-0.50	-2.79	2.83	259	-1.73	-1.98	2.63	228	228	
08	475	37.06	-0.33	-2.18	2.21	261	-1.56	-1.37	2.08	221	221	
09	477	45.70	-0.16	-1.77	1.78	264	-1.40	-0.96	1.69	214	214	
10	477C	50.08	-0.08	-1.61	1.62	266	-1.31	-0.80	1.54	211	211	
11	479	56.60	0.08	-1.34	1.34	273	-1.15	-0.53	1.26	204	204	
12	479	56.38	0.03	-1.42	1.42	271	-1.19	-0.61	1.34	207	207	
13	484	56.72	0.06	-1.04	1.04	273	-1.16	-0.23	1.19	191	191	
14	492	56.85	0.11	-0.64	0.65	279	-1.11	0.16	1.13	171	171	
15	5003	57.63	0.17	-0.39	0.43	294	-1.05	0.41	1.13	158	158	
16	511G	58.68	0.23	-0.29	0.37	308	-0.99	0.51	1.12	152	152	
17	521	60.88	0.31	-0.20	0.38	327	-0.91	0.60	1.09	146	146	
18	532	65.12	0.46	-0.13	0.48	343	-0.76	0.67	1.01	138	138	
19	545	74.21	0.75	-0.08	0.76	353	-0.47	0.72	0.86	123	123	
20	563	93.38	1.39	-0.06	1.40	357	0.16	0.74	0.76	77	77	
21	564	90.50	1.46	-0.03	1.46	358	0.23	0.77	0.81	72	72	
22	563	83.43	1.51	-0.02	1.51	359	0.28	0.78	0.83	70	70	
23	566Y	86.54	1.56	-0.01	1.56	359	0.33	0.79	0.86	67	67	
24	568	81.32	1.68	-0.00	1.68	359	0.45	0.80	0.92	60	60	
25	571	74.78	1.84	-0.00	1.84	359	0.61	0.80	1.01	52	52	
26	573	71.03	1.93	-0.00	1.93	359	0.70	0.80	1.07	48	48	
27	577	62.93	2.15	-0.00	2.15	359	0.92	0.80	1.22	41	41	
28	581	54.29	2.41	-0.00	2.41	359	1.17	0.80	1.43	34	34	
29	584R	49.91	2.55	-0.00	2.55	359	1.32	0.80	1.55	31	31	
30	591	41.39	2.86	-0.05	2.86	358	1.62	0.75	1.79	24	24	
31	588	43.61	2.77	-0.02	2.77	359	1.54	0.78	1.73	27	27	
32	689	43.27	2.76	-0.50	2.80	349	1.53	0.30	1.56	11	11	
33	697	43.14	2.70	-1.02	2.89	339	1.47	-0.21	1.49	371	371	
34	708	42.36	2.64	-1.37	2.99	332	1.43	-0.56	1.53	338	338	
35	716M	41.31	2.64	-1.54	3.06	329	1.41	-0.73	1.59	332	332	
36	726	39.11	2.64	-1.74	3.17	326	1.41	-0.93	1.70	326	326	
37	737	34.86	2.66	-2.06	3.37	322	1.43	-1.25	1.90	318	318	
38	750	25.78	2.58	-2.89	3.88	311	1.35	-2.08	2.48	303	303	
39	820	6.61	-1.13	-11.29	11.35	264	-2.36	-10.48	10.74	257	257	
U=D50 100.00 1.230 -0.810 1.473 326 0 0 0 0 0 0												
$a^*_D=a^*_D, P_D=2.5[(1.000x+0.171+0.000z)/y]$ $A_{Bn}=(a^*_D-a^*_Y) Y$ $C_{ABn}=[A_n^2+B_n^2]^{1/2}$												
$b^*_D=b^*_D, P_D=1.0[(0.000x+0.000+1.000z)/y]$ $B_{Bn}=(b^*_D-b^*_Y) Y$ $h_{ABn}=atan[B_{Bn}/A_{Bn}]$												

DE90-4N

CIE100 tristimulus values, chromatic values, and purities (x _n =2.5, y _n =1.0).												
Normalized Oswald (O) tristimulus values (Y _n =100), ordered by hue angle.												
no.	O	C	n-purities					nu-purities				
			Y	P _{an}	P _{bn}	P _{rn}	h _{bn}	Y	P _{an}	P _{bn}	P _{rn}	h _{bn}
00	588	43.61	2.77	-0.02	2.77	359	1.54	0.78	1.73	371	387	
01	689	43.27	2.76	-0.50	2.80	349	1.53	0.30	1.56	371	371	
02	697	43.14	2.70	-1.02	2.89	339	1.47	-0.21	1.49	351	351	
03	708	42.36	2.66	-1.37	2.99	332	1.43	-0.56	1.53	338	338	
04	716	41.31	2.64	-1.54	3.06	329	1.41	-0.73	1.59	332	332	
05	726M	39.11	2.64	-1.74	3.17	326	1.41	-0.93	1.70	326	326	
06	737	34.86	2.66	-2.06	3.37	322	1.43	-1.25	1.90	318	318	
07	750	25.78	2.58	-2.89	3.88	311	1.35	-2.08	2.48	303	303	
08	455	66.71	1.13	-11.29	11.35	264	-2.36	-10.48	10.74	257	257	
09	460	9.49	-1.03	-8.21	8.27	262	-2.26	-7.40	7.74	252	252	
10	462	11.32	-0.97	-6.97	7.04	262	-2.20	-6.16	6.54	250	250	
11	464	13.45	-0.90	-5.92	5.99	261	-2.13	-5.11	5.54	247	247	
12	468B	18.67	-0.75	-4.31	4.37	260	-1.98	-3.50	4.02	240	240	
13	471	25.21	-0.58	-3.20	3.25	259	-1.81	-2.39	3.00	232	232	
14	472	28.96	-0.50	-2.79	2.83	259	-1.73	-1.98	2.63	228	228	
15	475	37.06	-0.33	-2.18	2.21	261	-1.56	-1.37	2.08	221	221	
16	477	45.70	-0.16	-1.77	1.78	264	-1.40	-0.96	1.69	214	214	
17	477C	50.08	-0.08	-1.61	1.62	266	-1.31	-0.80	1.54	211	211	
18	479	56.60	0.08	-1.34	1.34	273	-1.15	-0.53	1.26	204	204	
19	479	56.38	0.03	-1.42	1.42	271	-1.19	-0.61	1.34	207	207	
20	484	56.72	0.06	-1.04	1.04	273	-1.16	-0.23	1.19	191	191	
21	492	56.85	0.11	-0.64	0.65	279	-1.11	0.16	1.13	171	171	
22	5003	57.63	0.17	-0.39	0.43	294	-1.05	0.41	1.13	158	158	
23	511G	58.68	0.23	-0.29	0.37	308	-0.99	0.51	1.12	152	152	
24	521	60.88	0.31	-0.20	0.38	327	-0.91	0.60	1.09	146	146	
25	532	65.12	0.46	-0.13	0.48	343	-0.76	0.67	1.01	138	138	
26	545	74.21	0.75	-0.08	0.76	353	-0.47	0.72	0.86	123	123	
27	563	93.38	1.39	-0.06	1.40	357	0.16	0.74	0.76	77	77	
28	564	90.50	1.46	-0.03	1.46	358	0.23	0.77	0.81	72	72	
29	563	83.43	1.51	-0.02	1.51	359	0.28	0.78	0.83	70	70	
30	566	86.54	1.56	-0.01	1.56	359	0.33	0.79	0.86	67	67	
31	568	81.32	1.68	-0.00	1.68	359	0.45	0.80	0.92	60	60	
32	571Y	74.78	1.84	-0.00	1.84	359	0.61	0.80	1.01	52	52	
33	573	71.03	1.93	-0.00	1.93	359	0.70	0.80	1.07	48	48	
34	577	62.93	2.15	-0.00	2.15	359	0.92	0.80	1.22	41	41	
35	581	54.29	2.41	-0.00	2.41	359	1.17	0.80	1.43	34	34	
36	584R	49.91	2.55	-0.00	2.55	359	1.32	0.80	1.55	31	31	
37	591	41.39	2.86	-0.05	2.86	-1	1.62	0.75	1.79	24	24	
38	588	43.61	2.77	-0.02	2.77	0	1.54	0.78	1.73	27	27	
39	689	43.27	2.76	-0.50	2.80	-10	1.53	0.30	1.56	11	11	
U=D50 100.00 1.230 -0.810 1.473 326 0 0 0 0 0 0												
$a^*_D=a^*_D, P_D=2.5[(1.000x+0.171+0.000z)/y]$ $A_{Bn}=(a^*_D-a^*_Y) Y$ $C_{ABn}=[A_n^2+B_n^2]^{1/2}$												
$b^*_D=b^*_D, P_D=1.0[(0.000x+0.000+1.000z)/y]$ $B_{Bn}=(b^*_D-b^*_Y) Y$ $h_{ABn}=atan[B_{Bn}/A_{Bn}]$												

DEG90-8N

CIEF10 tristimulus values, chromatic values, and putities ($n_1=2.5, n_2=1.0$).

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

no.	O	C tristimulus values and chromaticities						nu-chromatic values and chromaticities						
		λ_n	X	Y	Z	x	y	λ_n	B_n	C_n	A_{Bn}	A_{Cn}	A_{Bn}	A_{Cn}
00	588	67.7	43.61	0.91	60.03	0.388	0.008	67.5	24.4	14.4	13.3	67.6	31.7	35.7
01	689	71.10	43.27	21.71	0.522	0.317	0.159	66.3	13.3	6.76	37.1			
02	697	74.36	43.14	44.30	0.459	0.266	0.273	63.6	-9.3	64.3	35.1			
03	708	75.16	42.36	58.08	0.428	0.241	0.330	60.6	-23.7	65.1	338			
04	716	74.23	43.31	63.78	0.414	0.230	0.355	58.4	-30.3	65.8	332			
05	726M	72.17	39.11	68.41	0.401	0.217	0.380	55.4	-36.7	66.5	326			
06	737	66.83	34.86	71.99	0.384	0.200	0.414	49.9	-43.7	66.3	318			
07	780	52.92	25.78	74.65	0.345	0.168	0.486	35.0	-53.7	64.1	303			
08	485	13.14	6.61	74.65	0.139	0.070	0.790	15.6	-69.2	71.0	257			
09	475	12.73	6.38	80.77	0.135	0.067	0.833	12.7	-72.3	71.0	257			
10	462	13.30	7.32	78.97	0.128	0.109	0.762	-24.9	-69.1	74.1	250			
11	464	13.34	13.45	79.69	0.125	0.126	0.748	-28.7	-68.7	74.5	247			
12	468B	13.69	16.67	80.47	0.121	0.165	0.713	-36.9	-65.3	75.0	240			
13	471	14.73	25.21	80.80	0.121	0.208	0.669	-45.8	-60.3	75.7	232			
14	472	15.63	28.96	80.89	0.124	0.230	0.644	-50.2	-57.4	76.2	228			
15	475	18.33	37.06	80.98	0.134	0.271	0.593	-58.0	-50.9	77.2	221			
16	477	22.39	45.70	81.01	0.150	0.306	0.545	-64.0	-43.9	77.6	214			
17	477	24.94	50.08	81.01	0.159	0.320	0.519	-65.9	-40.4	77.4	211			
18	479C	30.58	58.60	78.68	0.182	0.348	0.458	-67.4	-31.2	74.4	204			
19	482	35.67	56.38	80.77	0.192	0.324	0.483	-68.6	-24.3	74.5	207			
20	484	25.63	62.72	79.32	0.180	0.400	0.418	-66.2	-13.3	67.6	191			
21	492	27.37	56.85	76.33	0.192	0.490	0.316	-63.6	9.3	64.2	171			
22	503	21.57	57.63	72.95	0.211	0.564	0.224	-56.0	23.7	65.1	158			
23	511C	22.30	58.68	12.25	0.227	0.597	0.175	-58.4	30.2	65.8	152			
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-55.4	36.6	66.4	146			
25	532	29.89	65.12	9.04	0.287	0.625	0.086	-49.9	43.7	66.3	138			
26	545	43.82	74.21	6.37	0.352	0.596	0.051	-34.9	53.7	64.1	123			
27	563	83.39	93.38	6.37	0.455	0.509	0.034	-15.6	69.2	71.0	77			
28	564	83.45	90.50	3.08	0.471	0.511	0.017	21.5	70.2	73.4	72			
29	565	83.43	88.67	2.06	0.479	0.509	0.011	24.9	69.7	74.1	70			
30	568	83.04	86.36	1.34	0.500	0.493	0.003	26.7	69.7	74.5	67			
31	571B	83.04	83.32	0.56	0.503	0.493	0.003	27.0	65.3	75.0	60			
32	581H	82.00	74.78	0.23	0.522	0.476	0.001	45.8	60.3	75.7	52			
33	573	81.10	71.03	0.14	0.532	0.466	0.000	50.2	57.3	76.2	48			
34	577	78.40	62.93	0.05	0.554	0.445	0.000	58.1	50.9	77.2	41			
35	581	74.33	54.29	0.02	0.577	0.421	0.000	64.0	43.9	77.6	34			
36	584H	71.79	49.91	0.01	0.589	0.410	0.000	66.0	40.4	77.6	31			
37	591	66.15	41.39	2.33	0.602	0.376	0.021	67.4	31.1	74.3	24			
38	588	67.67	43.61	0.91	0.603	0.388	0.008	67.5	34.4	75.8	27			
39	689	71.10	43.27	21.71	0.522	0.317	0.159	66.3	13.3	67.6	31			
D=50		67.74	100.00	81.03	0.348	0.360	0.360	0.0	0.0	0.0	0			
$a_{p,n} = p_{p,n} - 2.51(0.00000 - 0.171 + 0.0002)y \quad A_{u,n} = (b - a)Y \quad Y_{CABn} = \frac{A_{Bn} + B_{Cn}}{A_{Bn} + B_{Cn} + 1}$														
$b_{p,n} = p_{p,n} - 1.0(0.00000 + 0.00001 + 0.0002)y \quad Y_{ABn} = (b - a)Y \quad Y_{CABn} = \frac{A_{Bn} + B_{Cn}}{A_{Bn} + B_{Cn} + 1}$														

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_p=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($V_{\lambda_n}=100$), ordered by wavelength.											
no.	O	tristimulus values and chromaticities				n-chromatic values					
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	A_{Bm}	
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	26.13	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	19.04	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	530G	29.99	65.40	16.35	0.268	0.585	0.146	-49.6	36.5	61.4	131
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	4.4	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	59.5	66.5	65
23	570Y	71.33	68.67	0.19	0.505	0.486	0.007	37.2	54.4	65.9	55
24	572	69.75	64.22	0.76	0.517	0.475	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	714R	74.62	46.49	52.41	0.430	0.267	0.302	57.7	-14.8	59.6	345
30	716	72.19	43.45	52.37	0.429	0.258	0.311	57.5	-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	0.0

$$a=P_m=n_p P_p=2.5[(1.000x+0.171+0.000z)/y] \quad A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_p P_p=-1.0[(0.000x+0.000+1.000z)/y] \quad B_m=(b-b_y) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE690-3N

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_p=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

R17M tristimulus values, chromatic values, and putities ($n=2,5, n_0=1.0$).											
Normalized Oswald (O) tristimulus values ($V_{100}=1.00$), ordered by hue angle.											
no. O	λ_n	C tristimulus values and chromaticities					n-chromatic values				
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	nA_{Bm}	
00	600	67.89	51.09	15.38	0.505	0.380	0.114	52.2	-25.9	58.3	386
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	0.440	0.267	0.302	57.7	-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	735M	64.03	34.59	64.49	0.392	0.212	0.395	49.6	-36.5	61.6	323
06	743	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	-3.3	-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	26.13	48.90	65.44	0.186	0.348	0.465	-52.2	-25.9	58.2	206
17	496	20.48	50.06	44.06	0.178	0.436	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	509	19.04	53.50	28.42	0.191	0.528	0.280	-57.6	14.8	59.5	165
20	511	21.83	56.54	28.46	0.204	0.529	0.266	-57.5	17.2	60.0	163
21	518	24.65	60.36	24.01	0.226	0.553	0.220	-55.9	24.7	61.1	156
22	530	29.99	65.40	16.35	0.268	0.585	0.146	-49.6	36.5	61.4	143
23	538G	43.18	76.41	16.37	0.317	0.562	0.120	-39.9	45.3	60.4	131
24	553	67.80	89.62	10.69	0.403	0.533	0.063	-7.7	61.7	62.2	97
25	557	74.22	90.96	8.45	0.427	0.523	0.048	4.4	65.0	65.2	86
26	558	74.15	88.81	6.58	0.437	0.523	0.038	8.5	65.1	65.7	82
27	561	73.98	83.52	3.84	0.458	0.517	0.023	17.8	63.6	66.1	74
28	565	73.26	76.83	2.11	0.481	0.504	0.013	27.7	59.5	66.5	65
29	570	71.33	68.67	0.19	0.505	0.486	0.007	37.2	54.4	65.9	55
30	572	69.75	64.22	0.76	0.517	0.475	0.005	41.2	51.1	65.7	51
31	578	65.16	54.77	0.35	0.541	0.455	0.002	47.1	43.9	64.4	42
32	581Y	63.81	51.69	1.69	0.544	0.441	0.014	48.6	40.0	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
11-950	94.03	100.00	80.83	0.342	0.362	0.263		0.0	0.0	0.0	0.0

$$a=P_m=n_p P_p=2.5[(1.000x+0.171+0.000z)/y] \quad A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_p P_p=-1.0[(0.000x+0.000+1.000z)/y] \quad B_m=(b-b_y) \quad h_{ABm}=\text{atan}[B_m/A_m]$$

DE690-7N

R17M tristimulus values, chromatic values, and putities ($n=2.5$, $n_p=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.										
no.	O	λ_n	n-purities				nu-purities			
			P_{an}	P_{bn}	P_{cn}	h_{an}	P_{mu}	P_{bu}	P_{cu}	h_{mu}
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	0.09	-4.67	4.67	271	-1.07	-3.86	4.01	254
05	474	23.15	-0.02	-3.40	3.40	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	56.54	0.15	-0.50	0.52	287	-1.01	0.30	1.06	163
15	518	60.36	0.24	-0.39	0.46	302	-0.92	0.41	1.01	156
16	530G	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	1.22	-0.09	1.22	355	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	386	0.36	0.78	0.86	65
23	570Y	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	714R	46.49	2.41	-1.12	2.66	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

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_N=100$), ordered by wavelength.

no.	λ_n	C			n-purities			nu-purities		
		X	Y	Z	x	y	z	p_{nm}	p_{nm}	p_{nm}
00	375	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2
01	447	27.16	9.33	67.62	0.260	0.089	0.651	12.4	-60.0	61.3
02	463	21.19	9.55	72.48	0.205	0.092	0.702	-2.3	-64.7	64.7
03	465	21.27	11.71	74.36	0.198	0.109	0.692	-6.4	-64.8	65.1
04	470B	21.43	17.01	77.11	0.185	0.147	0.667	-15.7	-63.3	65.2
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-25.7	-59.6	64.9
06	476	22.83	27.59	79.42	0.175	0.212	0.611	-30.7	-57.0	64.8
07	479	25.44	36.25	80.19	0.179	0.255	0.565	-39.4	-50.8	64.3
08	480	27.41	40.88	80.43	0.184	0.274	0.540	-42.8	-47.3	63.8
09	481	29.88	45.66	80.60	0.191	0.292	0.516	-45.4	-43.6	63.0
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-47.1	-39.8	61.7
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-52.3	-21.0	56.3
12	492	20.67	50.20	44.12	0.179	0.436	0.383	-56.2	-3.4	56.3
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-57.4	3.7	57.5
14	505	20.59	54.04	33.36	0.190	0.500	0.308	-57.9	10.3	58.8
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-57.1	21.1	60.9
16	522G	23.24	59.39	19.95	0.226	0.578	0.194	-55.2	28.1	61.9
17	530	29.26	65.19	16.37	0.264	0.588	0.147	-50.4	36.3	62.2
18	540	41.69	74.85	13.32	0.321	0.576	0.102	-38.8	47.2	61.1
19	552	66.62	90.66	13.33	0.390	0.531	0.078	-12.4	60.0	61.3
20	557	72.58	90.44	8.47	0.423	0.527	0.049	2.3	64.7	64.7
21	558	72.51	88.28	6.59	0.433	0.527	0.039	6.4	64.8	65.1
22	561	72.35	82.98	3.84	0.454	0.521	0.024	15.7	63.3	65.2
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	25.7	59.6	64.9
24	567	70.94	72.40	1.53	0.489	0.499	0.010	30.7	57.0	64.8
25	572	68.33	63.74	0.76	0.514	0.479	0.005	39.5	50.8	64.3
26	575	66.36	59.11	0.52	0.526	0.469	0.004	42.8	47.3	63.8
27	578	63.90	54.33	0.35	0.538	0.458	0.002	45.5	43.6	63.0
28	581	62.64	51.28	0.19	0.541	0.443	0.014	47.1	39.8	61.7
29	614R	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.4
30	701	73.11	49.79	36.82	0.457	0.311	0.230	56.2	3.4	56.3
31	705	73.15	47.60	42.34	0.448	0.291	0.259	57.4	-3.8	57.6
32	710	73.19	45.95	47.59	0.438	0.275	0.285	57.9	-10.4	58.8
33	720	73.40	44.17	56.94	0.420	0.253	0.326	57.2	-21.1	61.0
34	727M	70.53	40.59	61.00	0.409	0.235	0.354	55.2	-28.1	62.0
35	735M	64.51	34.79	64.58	0.393	0.212	0.394	50.5	-36.1	62.3
36	745	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2
37	809	27.16	9.33	67.62	0.260	0.089	0.649	12.4	-60.0	61.3
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0

$$a^*_{nm} = n_s - n_h p_s = 2.5[(1.000x + 0.171 + 0.000z)/y] \quad A_{nm} = (a^*_{nm})/Y \quad C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$$

$$b^*_{nm} = n_h - n_h p_b = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^*_{nm})/Y \quad h_{ABnm} = \arctan[B_{nm}/A_{nm}]$$

DE690-3N

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_N=100$), ordered by wavelength.

no.	λ_n	C			n-purities			nu-purities		
		X	Y	Z	x	y	z	p_{nm}	p_{nm}	p_{nm}
00	375	25.14	2.71	-2.69	3.82	315	1.54	-1.88	2.43	309
01	447	9.33	2.50	-7.24	7.66	289	1.33	-6.43	6.57	281
02	463	9.55	9.92	-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	470B	17.01	0.24	-4.53	4.53	273	-0.92	-3.72	3.83	256
05	474	23.68	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	492	50.20	0.05	-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	0.14	-0.42	0.45	288	-1.02	0.37	1.09	159
16	522G	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	-0.17	0.67	344	-0.51	0.63	0.81	129
19	552	90.66	1.03	-0.14	1.04	351	-0.13	0.66	0.67	101
20	557	90.44	1.19	-0.09	1.19	355	0.02	0.71	0.71	87
21	558	88.28	1.24	-0.07	1.24	356	0.07	0.73	0.73	84
22	561	82.98	1.35	-0.04	1.36	358	0.16	0.68	0.78	76
23	565Y	76.31	1.59	-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	572	63.74	1.78	-0.01	1.78	359	0.61	0.79	1.00	52
26	575	59.11	1.89	-0.00	1.89	359	0.72	0.80	1.08	47
27	578	54.33	2.00	-0.00	2.00	359	0.83	0.80	1.16	43
28	581	51.28	2.09	-0.03	2.09	359	0.92	0.77	1.20	40
29	614R	50.90	2.19	-0.39	2.23	349	1.02	0.41	1.10	21
30	701	49.79	2.29	-0.73	2.41	342	1.12	0.06	1.13	3
31	705	47.60	2.37	-0.88	2.53	339	1.20	-0.08	1.21	356
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	727M	40.59	2.53	-1.50	2.94	329	1.36	-0.69	1.52	333
35	735M	34.79	2.62	-1.85	3.21	324	1.45	-1.04	1.79	324
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=D50		100.00	1.169	-0.809	1.422	325	0.0	0.0	0.0	0

$$a^*_{nm} = n_s - n_h p_s = 2.5[(1.000x + 0.171 + 0.000z)/y] \quad A_{nm} = (a^*_{nm})/Y \quad C_{ABnm} = [A_{nm}^2 + B_{nm}^2]^{1/2}$$

$$b^*_{nm} = n_h - n_h p_b = -1.0[(0.000x + 0.000 + 1.000z)/y] \quad B_{nm} = (b^*_{nm})/Y \quad h_{ABnm} = \arctan[B_{nm}/A_{nm}]$$

DE690-4N

R17Ms tristimulus values, chromatic values, and putities ($n_s=2.5$, $n_h=-1.0$).
Normalized Ostwald (O) tristimulus values ($Y_N=100$), ordered by hue angle.

no.	λ_n	tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A_{ν}	B_{ν}	C_{ν}	h_{ν}
00	614	68.65	50.90	20.17	0.491	0.364	0.144	52.3	21.0	56.4	381
01	701	73.11	49.79	36.82	0.457	0.311	0.230	56.2	3.4	56.3	363
02	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	727M	70.53	40.59	61.00	0.409	0.235	0.354	55.2	-28.1	62.0	333
06	735	64.51	34.79	64.58	0.393	0.212	0.394	50.5	-36.4	62.3	324
07	375	52.09	25.14	67.62	0.359	0.173	0.466	38.8	-47.2	61.2	309
08	447	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	21.27	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	474B	22.09	23.68	78.83	0.177	0.190	0.632	-25.7	-59.6	64.9	246
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-30.7	-57.0	64.8	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	482C	31.14	48.71	79.26	0.195	0.306	0.498	-47.1	-39.8	61.7	220
18	488	25.13	49.09	60.78	0.186	0.363	0.450	-52.3	-21.0	56.3	201
19	492	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	3.7	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	552	66.62	90.66	13.33	0.390	0.531	0.078	-12.4	60.0	61.3	101
27	557	72.58	94.40	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	2.17	0.477	0.508	0.014	25.7	59.6	64.9	66
31	566	71.69	76.31	0.76	0.477	0.508	0.014	25.7	59.6	64.9	66
32	572	68.33	63.74	0.71	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	0.19	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
U=701	73.11	49.79	36.82	0.457	0.311	0.230		56.2	3.4	56.3	3
U=050	93.78	100.00	80.94	0.341	0.363	0.363		0.0	0.0	0.0	

CIE02 tristimulus values, chromatic values, and putities ($n=2,8$, $n_e=1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A _m	B _m	C _{ABm}	h _{ABm}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	13.3	-66.6	67.9	281
01	401	31.25	12.34	78.51	0.135	0.064	0.799	-18.3	-72.8	75.3	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	79.8	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	-5.7	75.3	175
13	501	22.62	59.57	35.18	0.192	0.507	0.299	-74.0	3.7	75.3	169
14	506	22.26	60.29	28.28	0.200	0.543	0.255	-72.8	21.2	75.3	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	77.3	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	561	65.07	87.80	5.54	0.410	0.554	0.034	-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	93.03	91.98	3.02	0.466	0.516	0.016	-21.8	72.6	75.8	73
22	571	82.92	83.73	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	-41.8	65.6	77.8	57
24	577	80.69	72.49	0.38	0.525	0.472	0.002	-53.6	59.2	79.8	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	83.6	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	-74.7	40.1	84.8	28
29	592R	66.69	42.18	0.61	0.609	0.385	0.005	-76.8	34.0	84.0	23
30	631	69.99	41.82	18.71	0.536	0.320	0.143	-76.4	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	74.18	38.97	65.17	0.415	0.218	0.364	-69.2	-35.1	77.5	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=50		96.31	99.99	82.24	0.345	0.358	0.358	0.00	0.0	0.0	0

$$a_{Pm} = a_{Pm}^* = 2.81(1.00(0.000+0.171+0.000)yz)$$
$$b_{Pm} = b_{Pm}^* = 2.81(0.00(0.000+0.000+0.001)xy)$$
$$A_m = (a-b-c)Y$$
$$Y_{CABm} = [A_m^2 + B_m^2]^{1/2}$$

U=D50 96.31 99.99 82.24 0.345 35.8 0.358 0.0 0.0 0.0 0.0
 $a^*_m = p_m \cdot p_e \cdot 2.8 / [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a^*_m)/Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_m = p_m \cdot p_e \cdot p_b = -1.0 / [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b^*_m)/Y$ $h_{ABm} = \text{atan}[B_m/A_m]$

DE690-3N

CIE02 tristimulus values, chromatic values, and putities ($n=2,8$, $n_e=1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C	n-purities				nu-purities			
			λ_n	Y	P_{an}	P_{rn}	λ_{bn}	Y	P_{bn}	P_{rn}
00	396	12.19	2.45	-6.29	6.75	291	1.09	-5.46	5.57	281
01	401	6.34	1.52	-12.32	12.41	262	-2.88	-11.49	11.85	255
02	466	8.01	1.36	-9.88	9.98	262	-2.73	-9.06	9.46	253
03	471	12.66	-0.07	-6.37	6.46	260	-2.43	-5.55	6.06	246
04	475B	19.21	-0.81	-4.23	4.31	259	-2.17	-3.41	4.05	237
05	479	27.50	-0.58	-2.97	3.03	258	-1.94	-2.15	2.90	227
06	481	36.66	-0.38	-2.23	2.27	260	-1.74	-1.41	2.24	219
07	483	41.45	-0.28	-1.98	2.00	261	-1.65	-1.15	2.01	215
08	484	46.29	-0.19	-1.77	1.78	263	-1.55	-0.95	1.82	211
09	485	51.06	-0.09	-1.60	1.61	266	-1.46	-0.78	1.66	208
10	486C	57.81	0.03	-1.41	1.41	271	-1.32	-0.58	1.45	203
11	490	58.17	0.04	-1.09	1.09	272	-1.31	-0.26	1.34	191
12	497	58.66	0.08	-0.72	0.72	276	-1.27	0.09	1.28	175
13	501	59.57	0.11	-0.59	0.60	281	-1.24	0.23	1.26	169
14	506	60.29	0.15	-0.46	0.49	288	-1.20	0.35	1.25	163
15	519	61.02	0.21	-0.27	0.35	307	-1.09	0.54	1.25	154
16	522G	63.42	0.27	-0.26	0.38	315	-1.09	0.55	1.22	153
17	535	66.19	0.40	-0.14	0.43	340	-0.95	0.67	1.17	144
18	544	72.16	0.60	-0.10	0.61	350	-0.75	0.72	1.04	136
19	561	87.80	1.21	-0.06	1.21	357	-0.15	0.75	0.77	101
20	568	93.65	1.55	-0.04	1.55	358	-0.19	0.77	0.80	75
21	569	91.98	1.60	-0.03	1.60	358	-0.23	0.78	0.82	73
22	571	87.33	1.71	-0.01	1.71	359	-0.35	0.80	0.87	66
23	573Y	80.76	1.88	0.00	1.88	359	-0.51	0.81	0.96	57
24	577	72.49	2.10	-0.00	2.10	359	-0.73	0.81	1.10	47
25	581	63.33	2.37	-0.00	2.37	359	-1.01	0.81	1.30	39
26	583	58.54	2.53	-0.00	2.53	359	-1.16	0.82	1.42	35
27	585	53.70	2.70	-0.00	2.70	359	-1.34	0.82	1.57	31
28	587	48.93	2.88	-0.00	2.88	359	-1.52	0.82	1.73	28
29	592R	42.18	3.18	-0.01	3.18	359	-1.80	0.80	1.96	23
30	631	41.82	3.19	-0.44	3.22	352	-1.82	0.37	1.86	11
31	702	41.33	3.17	-0.96	3.31	343	-1.81	-0.13	1.82	355
32	706	40.41	3.19	-1.16	3.40	339	-1.83	-0.34	1.86	349
33	711	39.70	3.20	-1.35	3.47	336	-1.83	-0.53	1.91	343
34	724	38.97	3.15	-1.67	3.57	332	-1.79	-0.85	1.98	334
35	727M	36.57	3.25	-1.78	3.71	331	-1.89	-0.95	2.12	333
36	740	33.80	3.23	-2.14	3.88	326	-1.87	-1.32	2.29	324
37	749	27.83	3.23	-2.69	4.28	321	-1.96	-1.86	2.71	316
38	766	12.19	2.45	-6.29	6.75	291	1.09	-5.46	5.57	281
39	828	6.34	1.52	-12.32	12.41	262	-2.88	-11.49	11.85	255
U=D50 99.99 1.362 -0.822 1.591 328 0.0 0.0 0.0										
$a_{p_{mn}}=p_m=2.8(1.000x+0.171+0.000z)/Y$ $A_m=(a-a_n)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$										
$b_{p_{mn}}=n_b p_b=-1.0[(0.000x+0.000+1.000z)/Y]$ $B_m=(b-b_n)Y$ $h_{ABm}=atan2(B_m/A_m)$										
DE90-4N										
CIE02 tristimulus values, chromatic values, and purities ($n_2=2.8$, $n_3=1.0$).										
Normalized Oswald (O) tristimulus values (Y_{90-100}), ordered by hue angle.										
no.	O	C	n-purities				nu-purities			
			λ_n	Y	P_{an}	P_{rn}	λ_{bn}	Y	P_{bn}	P_{rn}
00	391	41.82	3.19	-0.44	3.22	352	1.82	0.37	1.86	371
01	702	41.33	3.17	-0.96	3.31	343	1.81	-0.13	1.82	355
02	706	40.41	3.19	-1.16	3.40	339	1.83	-0.34	1.86	349
03	711	39.70	3.20	-1.35	3.47	336	1.83	-0.53	1.91	343
04	724	38.97	3.15	-1.67	3.57	332	1.79	-0.85	1.98	334
05	727M	36.57	3.25	-1.78	3.71	331	1.89	-0.95	2.12	333
06	740	33.80	3.23	-2.14	3.88	326	1.87	-1.32	2.29	324
07	749	27.83	3.23	-2.69	4.28	321	1.96	-1.86	2.71	316
08	766	12.19	2.45	-6.29	6.75	291	1.09	-5.46	5.57	281
09	828	6.34	1.52	-12.32	12.41	262	-2.88	-11.49	11.85	255
10	466	8.01	1.36	-9.88	9.98	262	-2.73	-9.06	9.46	253
11	471	12.66	-0.07	-6.37	6.46	260	-2.43	-5.55	6.06	246
12	475B	19.21	-0.81	-4.23	4.31	259	-2.17	-3.41	4.05	237
13	479	27.50	-0.58	-2.97	3.03	258	-1.94	-2.15	2.90	227
14	481	36.66	-0.38	-2.23	2.27	260	-1.74	-1.41	2.24	219
15	483	41.45	-0.28	-1.98	2.00	261	-1.65	-1.15	2.01	215
16	484	46.29	-0.19	-1.77	1.78	263	-1.55	-0.95	1.82	211
17	485	51.06	-0.09	-1.60	1.61	266	-1.46	-0.78	1.66	208
18	486C	57.81	0.03	-1.41	1.41	271	-1.32	-0.58	1.45	203
19	490	58.17	0.04	-1.09	1.09	272	-1.31	-0.26	1.34	191
20	497	58.66	0.08	-0.72	0.72	276	-1.27	0.09	1.28	175
21	501	59.57	0.11	-0.59	0.60	281	-1.24	0.23	1.26	169
22	506	60.29	0.15	-0.46	0.49	288	-1.20	0.35	1.25	163
23	519	61.02	0.21	-0.27	0.35	307	-1.09	0.54	1.25	154
24	522	63.42	0.27	-0.26	0.38	315	-1.09	0.55	1.22	153
25	535	66.19	0.40	-0.14	0.43	340	-0.95	0.67	1.17	144
26	544	72.16	0.60	-0.10	0.61	350	-0.75	0.72	1.04	136
27	561	87.80	1.21	-0.06	1.21	357	-0.15	0.75	0.77	101
28	568	93.65	1.55	-0.04	1.55	358	-0.19	0.77	0.80	75
29	569	91.98	1.60	-0.03	1.60	358	-0.23	0.78	0.82	73
30	571	87.33	1.71	-0.01	1.71	359	-0.35	0.80	0.87	66
31	573	80.76	1.88	0.00	1.88	359	-0.51	0.81	0.96	57
32	577	72.49	2.10	-0.00	2.10	359	-0.73	0.81	1.10	47
33	581	63.33	2.37	-0.00	2.37	359	-1.01	0.81	1.30	39
34	583	58.54	2.53	-0.00	2.53	359	-1.16	0.82	1.42	35
35	585	53.70	2.70	-0.00	2.70	359	-1.34	0.82	1.57	31
36	587R	48.93	2.88	-0.00	2.88	359	-1.52	0.82	1.73	28
37	592	42.18	3.18	-0.01	3.18	0	-1.80	0.80	1.96	23
38	631	41.82	3.19	-0.44	3.22	17	1.82	0.37	1.86	11
39	702	41.33	3.17	-0.96	3.31	-16	-1.81	-0.13	1.82	-4
U=D50 99.99 1.362 -0.822 1.591 328 0.0 0.0 0.0										
$a_{p_{mn}}=p_m=2.8(1.000x+0.171+0.000z)/Y$ $A_m=(a-a_n)Y$ $C_{ABm}=[A_m^2+B_m^2]^{1/2}$										
$b_{p_{mn}}=n_b p_b=-1.0[(0.000x+0.000+1.000z)/Y]$ $B_m=(b-b_n)Y$ $h_{ABm}=atan2(B_m/A_m)$										

U=D50 99.99 1.362 -0.822 1.591 328 0.0 0.0 0.0 0.0
 $a^*_m = p_m \cdot p_e \cdot 2.8 / [(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a^*_m)/Y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$
 $b^*_m = p_m \cdot p_e \cdot p_b = -1.0 / [(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b^*_m)/Y$ $h_{ABm} = \text{atan}[B_m/A_m]$

DE690-8N

CIE02 tristimulus values, chromatic values, and putities ($n=2,8$, $n_e=1.0$).
 Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by hue angle.

no.	λ_n	C tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A_m	B_m	C_{ABm}	h_{ABm}
00	631	69.99	41.82	18.71	0.536	0.320	0.143	-76.4	15.6	78.0	371
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	74.18	38.97	65.17	0.415	0.218	0.364	-69.2	-35.1	77.5	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	-64.7	-52.0	75.4	316
08	759	51.44	21.19	75.28	0.351	0.152	0.482	-66.7	-60.0	74.0	307
09	763	43.25	16.34	78.11	0.335	0.106	0.799	-68.1	-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	79.8	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	44.45	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	0.332	0.518	-74.6	-40.1	84.7	208
18	486	28.12	56.87	82.17	0.169	0.359	0.492	-76.7	-36.0	84.9	204
19	490	29.26	58.17	83.51	0.177	0.393	0.429	-78.7	-35.0	87.0	198
20	497	23.01	58.66	42.48	0.185	0.472	0.342	-74.9	-5.7	75.1	175
21	501	22.62	59.57	35.18	0.192	0.507	0.299	-74.0	-13.7	75.3	169
22	506	22.26	60.29	28.28	0.200	0.543	0.255	-72.2	-21.8	75.9	163
23	519G	21.83	61.02	17.06	0.218	0.610	0.170	-69.8	-33.1	77.3	154
24	522	24.04	63.42	17.06	0.230	0.606	0.163	-69.1	-35.0	77.5	153
25	535	27.22	62.19	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	75.5	136
27	561	65.07	87.80	5.54	0.410	0.554	0.034	-13.3	-66.6	67.9	101
28	568	89.33	93.54	4.13	0.467	0.582	0.016	-18.3	-72.8	75.1	75
29	579	83.03	93.98	3.02	0.466	0.516	0.016	-20.7	-75.0	75.1	75
30	571	82.92	83.37	1.55	0.482	0.508	0.009	-30.9	-70.2	76.7	66
31	573	82.30	80.76	0.80	0.502	0.492	0.004	-41.9	-65.6	77.8	57
32	577Y	80.69	74.29	0.38	0.525	0.472	0.002	-53.6	-59.2	79.8	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	83.6	35
35	585	73.67	53.70	0.09	0.577	0.421	0.000	-72.0	-44.0	84.4	31
36	587R	71.01	48.93	0.07	0.591	0.407	0.000	-74.7	-40.1	84.8	28
37	592	66.99	42.18	0.06	0.609	0.385	0.005	-76.8	-34.0	84.9	23
38	593	73.30	41.82	18.71	0.536	0.320	0.143	-76.4	15.6	78.0	371
39	702	73.30	41.33	39.75	0.474	0.267	0.257	-74.9	-5.7	75.2	-4
D=D50 96.31 99.99 82.24 0.345 0.358 0.358 0.0 0.0 0.0 0.0											
$d_{p,q} = \sqrt{p_p - p_q} = 2.81 [(0.0000x - 0.171 + 0.0002)y] \quad A_m = (a - b) \quad Y \quad C_{ABm} = \frac{A_m^2 + B_m^2}{A_m} \quad h_{ABm} = \frac{A_m^2 + B_m^2}{A_m} \quad n_{ABm} = 1.0 [(0.0000x + 0.0001 + 1.0002)y] \quad A_m = (a - b) \quad Y \quad C_{ABm} = \frac{A_m^2 + B_m^2}{A_m} \quad h_{ABm} = \frac{A_m^2 + B_m^2}{A_m} \quad n_{ABm} = \frac{A_m^2 + B_m^2}{A_m}$											

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.8, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	λ_n	tristimulus values and chromaticities				nu-chromatic values			
		X	Y	Z	x	y	z	A_m	B_m
00	376	55.24	26.06	71.08	0.362	0.171	0.466	-45.8	-49.9
01	382	55.24	26.06	71.08	0.362	0.171	0.466	-45.8	-49.9
02	400	13.26	8.89	77.33	0.133	0.089	0.777	-22.7	-70.1
03	462	13.28	10.68	78.42	0.129	0.104	0.765	-26.5	-69.7
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	-26.5	-69.7
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-39.9	-65.6
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-49.7	-60.9
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-54.7	-58.0
08	475	18.32	36.37	81.08	0.134	0.267	0.597	-63.7	-51.5
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-70.5	-44.5
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-70.5	-44.5
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-74.2	-37.3
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-74.7	-31.9
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-73.6	-14.0
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-71.0	7.9
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-67.9	22.2
16	512G	22.19	58.45	18.53	0.223	0.589	0.186	-65.7	28.9
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-62.6	35.3
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-57.0	42.2
19	541	41.39	73.93	10.07	0.330	0.589	0.080	-45.8	49.9
20	563	83.41	92.59	5.28	0.460	0.510	0.029	19.4	69.8
21	564	83.37	91.09	3.82	0.467	0.510	0.021	22.8	70.0
22	565	83.35	89.31	2.74	0.475	0.509	0.015	26.5	69.7
23	565B	83.35	89.31	2.74	0.475	0.509	0.015	26.5	69.7
24	568	82.96	82.07	0.96	0.499	0.494	0.005	39.9	65.6
25	571	81.93	75.58	0.44	0.518	0.478	0.002	49.8	60.8
26	573	81.03	71.82	0.27	0.529	0.469	0.001	54.8	58.0
27	577	78.31	63.62	0.08	0.551	0.447	0.000	63.7	51.5
28	581	74.28	54.89	0.01	0.575	0.424	0.000	70.6	44.5
29	581R	74.28	54.89	0.01	0.575	0.424	0.000	70.6	44.5
30	587	68.81	46.05	0.00	0.599	0.400	0.000	74.3	37.3
31	589	67.60	44.04	0.93	0.600	0.391	0.008	74.8	34.8
32	692	70.96	43.57	21.37	0.522	0.320	0.157	73.7	13.9
33	697	74.12	43.34	43.14	0.461	0.269	0.268	71.0	-7.9
34	708	75.07	42.59	56.88	0.404	0.244	0.325	68.0	-22.3
35	717	74.44	41.54	62.63	0.416	0.232	0.350	65.7	-28.9
36	726	73.25	39.38	67.37	0.403	0.219	0.376	62.6	-35.4
37	736	67.62	35.52	71.08	0.388	0.203	0.408	57.0	-42.2
38	746	55.24	26.06	71.08	0.362	0.171	0.466	-45.8	-49.9
39	823	13.22	7.40	75.87	0.136	0.076	0.786	-19.3	-69.8

$U=D50$ 96.63 100.00 81.17 0.347 0.359 0.359 $A_m=(a-o)Y$ $C_{ABno}=[A_m^2+B_m^2]^{1/2}$

$b=p_{m1}-p_{m2}=-1.0, (0.000x+0.000+1.000z)/y$ $B_m=(b-b_0)Y$ $h_{ABno}=\text{atan}[B_m/A_m]$

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.8, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	λ_n	tristimulus values and chromaticities				n-purities			
		X	Y	Z	x	y	z	p_{m1}	p_{m2}
00	376	26.06	3.13	-2.72	4.15	318	-1.76	-1.91	2.60
01	382	26.06	3.13	-2.72	4.15	318	-1.76	-1.91	2.60
02	400	8.89	-1.18	-8.68	8.76	262	-2.55	-7.87	8.28
03	462	10.68	-1.10	-7.34	7.42	261	-2.48	-6.53	6.98
04	462B	10.68	-1.10	-7.34	7.42	261	-2.48	-6.53	6.98
05	468	17.92	-0.85	-4.47	4.55	259	-2.22	-3.66	4.28
06	471	24.41	-0.66	-3.30	3.37	258	-2.03	-2.49	3.22
07	473	28.17	-0.56	-2.87	2.92	258	-1.94	-2.06	2.83
08	475	36.37	-0.37	-2.22	2.26	260	-1.75	-1.41	2.25
09	477	45.10	-0.19	-1.79	1.80	263	-1.56	-0.98	1.85
10	477C	45.10	-0.19	-1.79	1.80	263	-1.56	-0.98	1.85
11	479	53.94	0.00	-1.50	1.50	269	-1.37	-0.69	1.54
12	480	58.21	0.09	-1.36	1.36	273	-1.28	-0.54	1.39
13	484	56.42	0.06	-1.05	1.06	273	-1.30	-0.24	1.32
14	492	56.65	0.12	-0.67	0.68	280	-1.25	0.14	1.26
15	503	57.40	0.19	-0.42	0.46	294	-1.18	0.38	1.24
16	512G	58.45	0.25	-0.31	0.40	308	-1.12	0.49	1.22
17	521	60.61	0.34	-0.22	0.41	326	-1.03	0.58	1.18
18	531	64.47	0.49	-0.15	0.51	342	-0.88	0.65	1.10
19	541	73.93	0.75	-0.13	0.76	349	-0.61	0.67	0.91
20	563	92.59	1.58	-0.05	1.58	357	0.20	0.75	0.78
21	564	91.09	1.62	-0.04	1.62	358	0.25	0.76	0.80
22	565	89.31	1.67	-0.03	1.67	358	0.28	0.78	0.83
23	565B	89.31	1.67	-0.03	1.67	358	0.29	0.78	0.83
24	568	82.07	1.86	-0.01	1.86	359	0.48	0.79	0.93
25	571	75.58	2.03	-0.00	2.03	359	0.65	0.80	1.04
26	573	71.82	2.13	-0.00	2.13	359	0.76	0.80	1.11
27	577	63.62	2.37	-0.00	2.37	359	1.00	0.81	1.28
28	581	54.89	2.66	-0.00	2.66	359	1.28	0.81	1.52
29	581R	54.89	2.66	-0.00	2.66	359	1.28	0.81	1.52
30	587	46.05	2.98	0.00	2.98	0	1.61	0.81	1.80
31	589	44.04	3.07	-0.02	3.07	359	1.69	0.79	1.87
32	692	43.57	3.06	-0.49	3.10	350	1.69	0.32	1.72
33	697	43.34	3.01	-0.99	3.17	341	1.63	-0.18	1.64
34	708	42.59	2.97	-1.33	3.25	335	1.59	-0.52	1.68
35	717	41.54	2.95	-1.50	3.32	332	1.58	-0.69	1.73
36	726	39.38	2.96	-1.71	3.42	330	1.59	-0.89	1.82
37	736	35.52	2.98	-2.00	3.59	326	1.60	-1.18	1.99
38	746	26.06	3.13	-2.72	4.15	318	1.76	-1.91	2.60
39	823	7.40	-1.24	-10.25	10.32	263	-2.61	-9.44	9.79

$U=D50$ 100.00 1.375 -0.811 1.596 329 0.0 0.0 0.0 $A_m=(a-o)Y$ $C_{ABno}=[A_m^2+B_m^2]^{1/2}$

$b=p_{m1}-p_{m2}=-1.0, (0.000x+0.000+1.000z)/y$ $B_m=(b-b_0)Y$ $h_{ABno}=\text{atan}[B_m/A_m]$

CIE10 tristimulus values, chromatic values, and putities ($n_1=2.8, n_2=-1.0$).

Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

no.	O	tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	λ_m	λ_B	λ_{370}	
00	692	70.96	43.57	21.37	0.522	0.320	0.157	73.7	13.9	75.0	37.0
01	697	74.12	43.34	43.14	0.461	0.269	0.268	71.0	-7.9	71.4	35.3
02	708	75.07	42.59	56.88	0.404	0.244	0.325	68.0	-22.3	71.6	34.1
03	717	74.44	41.54	62.63	0.416	0.232	0.350	65.7	-28.9	72.0	33.6
04	726	73.25	39.38	67.37	0.403	0.219	0.376	62.6	-35.4	71.9	33.0
05	736	67.62	35.52	71.08	0.388	0.203	0.408	57.0	-42.2	71.0	32.3
06	746	55.24	26.06	71.08	0.362	0.171	0.466	45.8	-49.9	67.8	31.2
07	823	13.22	7.40	75.87	0.136	0.076	0.786	-19.3	-69.8	72.5	25.4
08	460	13.26	8.89	77.33	0.133	0.089	0.777	-22.7	-70.1	73.7	25.2
09	462	13.28	10.68	78.42	0.129	0.104	0.765	-26.5	-69.7	74.6	24.9
10	462	13.28	10.68	78.42	0.129	0.104	0.765	-26.5	-69.7	74.6	24.9
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-39.9	-65.6	76.8	23.8
12	471B	14.70	24.41	80.73	0.122	0.203	0.673	-49.7	-60.9	78.6	23.0
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-54.7	-58.0	79.7	22.6
14	475	18.32	36.37	81.08	0.134	0.267	0.597	-63.7	-51.5	81.0	21.8
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-70.5	-44.5	83.4	21.2
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-70.5	-44.5	83.4	21.2
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-74.2	-37.3	83.1	20.6
18	480C	30.64	58.21	79.19	0.182	0.346	0.471	-74.7	-31.9	81.2	20.3
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-73.6	-14.0	74.9	19.0
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-71.0	7.9	71.4	17.3
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-67.9	22.2	71.5	16.1
22	512	22.19	58.45	18.53	0.223	0.589	0.186	-65.7	28.9	71.8	15.6
23	521G	24.28	60.61	13.79	0.246	0.614	0.139	-62.6	35.3	71.9	15.0
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-57.0	42.2	70.9	14.1
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-45.8	49.9	69.7	13.2
26	563	83.41	92.59	5.28	0.460	0.510	0.029	19.4	69.8	72.5	7.4
27	564	83.37	91.09	3.82	0.467	0.510	0.021	22.8	70.0	73.7	7.1
28	565	83.35	89.31	2.74	0.475	0.509	0.015	26.5	69.7	74.6	6.9
29	565	83.35	89.31	2.74	0.475	0.509	0.015	26.5	69.7	74.6	6.9
30	568	82.96	82.07	0.96	0.499	0.494	0.005	39.9	65.6	76.8	5.8
31	571	81.93	75.58	0.44	0.518	0.478	0.002	49.8	60.8	78.6	5.0
32	573Y	81.03	71.82	0.27	0.529	0.469	0.001	54.8	58.0	79.8	4.6
33	577	78.31	63.62	0.08	0.551	0.447	0.000	63.7	51.5	82.0	3.8
34	581	74.28	54.89	0.01	0.575	0.424	0.000	70.6	44.5	83.5	3.2
35	581	74.28	54.89	0.01	0.575	0.424	0.000	70.6	44.5	83.5	3.2
36	587Y	68.81	41.05	0.00	0.599	0.400	0.000	74.7	37.7	83.2	2.6
37	589	67.60	44.04	0.93	0.600	0.391	0.008	74.8	34.8	82.5	2.4
38	692	70.96	43.57	21.37	0.522	0.320	0.157	73.7	13.9	75.0	37.0
39	697	74.12	43.34	43.14	0.461	0.269	0.268	71.0	-7.9	71.4	-6
11=059	96.63	100.00	81.17	0.347	0.350	0.359	0.268	0.0	0.0	0.0	0.0

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=2.8, n_2=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities				nu-chromatic values					
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	h_{ABm}	
00	386	51.50	23.94	74.68	0.343	0.159	0.497	39.6	-55.0	67.7	305
01	386	51.50	23.94	74.68	0.343	0.159	0.497	39.6	-55.0	67.7	305
02	465	12.41	9.58	78.25	0.123	0.095	0.780	-26.3	-70.3	75.1	249
03	467	12.45	11.64	78.87	0.120	0.113	0.766	-30.3	-69.3	75.6	246
04	473B	13.31	20.43	79.83	0.117	0.179	0.702	-45.0	-63.0	77.4	234
05	475	14.02	24.19	79.97	0.118	0.204	0.676	-50.3	-60.0	78.4	230
06	479	17.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217
07	479	17.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217
08	481	21.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	210
09	481	21.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	210
10	483C	27.52	55.03	80.21	0.169	0.338	0.492	-76.0	-34.9	83.7	204
11	484	28.05	57.21	79.07	0.174	0.346	0.478	-76.4	-32.0	82.8	202
12	489	25.36	57.41	57.70	0.180	0.408	0.410	-74.6	-10.5	75.4	188
13	497	22.33	57.50	36.81	0.191	0.492	0.315	-71.8	10.4	72.6	171
14	505	21.31	58.03	24.30	0.205	0.559	0.234	-69.2	23.3	73.0	161
15	512	21.41	58.69	18.79	0.216	0.593	0.190	-67.5	29.4	73.7	156
16	521G	22.42	59.91	14.10	0.232	0.621	0.146	-65.2	35.1	74.1	151
17	524	25.32	62.97	14.10	0.247	0.615	0.137	-64.1	37.6	74.3	149
18	539	30.29	66.55	7.57	0.290	0.637	0.072	-56.0	47.1	73.2	139
19	551	44.95	76.05	5.53	0.355	0.601	0.043	-38.6	56.9	68.8	124
20	568	84.08	93.45	4.02	0.463	0.514	0.022	20.8	72.7	75.7	74
21	568	84.08	93.45	4.02	0.463	0.514	0.022	20.8	72.7	75.7	74
22	568	84.08	93.45	4.02	0.463	0.514	0.022	20.8	72.7	75.7	74
23	570Y	84.00	90.41	1.96	0.476	0.512	0.011	27.3	72.3	77.3	69
24	573	84.00	88.35	1.33	0.483	0.508	0.007	31.3	71.2	77.8	66
24	573	83.15	79.56	3.38	0.509	0.487	0.002	46.0	65.0	79.6	54
25	575	82.44	75.80	0.24	0.520	0.478	0.001	51.3	62.0	80.5	50
26	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38
27	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38
28	585	74.48	53.96	0.02	0.579	0.420	0.000	73.3	44.3	85.6	31
29	590R	68.94	44.96	0.00	0.605	0.394	0.000	77.0	36.9	85.4	25
30	592	67.61	42.78	1.14	0.606	0.383	0.010	77.4	34.0	84.6	23
31	694	10.40	42.58	22.52	0.522	0.312	0.165	75.6	12.4	76.7	9
32	702	74.12	42.59	43.40	0.463	0.265	0.271	72.8	-8.4	73.3	353
33	710	75.15	41.96	55.91	0.434	0.242	0.323	70.2	-21.4	73.4	343
34	717	75.05	41.30	61.43	0.422	0.232	0.345	68.5	-27.4	73.8	338
35	726M	74.04	40.08	66.11	0.410	0.222	0.366	66.2	-33.1	74.0	333
36	729	71.14	37.02	66.11	0.408	0.212	0.379	65.1	-35.6	74.3	331
37	744	66.16	33.43	72.64	0.384	0.194	0.421	57.0	-45.1	72.7	321
38	756	51.50	23.94	74.68	0.343	0.159	0.497	39.6	-55.0	67.7	305
39	825	12.38	6.54	76.19	0.130	0.068	0.801	-19.8	-70.8	73.5	254
U=D50 96.46 100.00 82.22 0.346 0.358 0.358 0.0 0.0 0.0 0.0 0.0											
$a^*_m = a^*_n, p_n = 2.8[(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a - a_n)/y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$											
$b^*_m = p_n - p_n p_0 = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_n)/y$ $h_{ABm} = \text{atan}[B_m/A_m]$											

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=2.8, n_2=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities				n-purities				nu-purities			
		X	Y	Z	x	A_m	B_m	C_{ABm}	$n_1 A_{Bm}$	p_{nm}	p_{nm}	p_{nm}	h_{ABm}
00	386	23.94	3.02	-3.11	4.34	314	1.65	-2.29	2.83	305	1.65	-2.29	2.83
01	386	23.94	3.02	-3.11	4.34	314	1.65	-2.29	2.83	305	1.65	-2.29	2.83
02	465	6.54	-1.38	-8.16	8.26	260	-2.74	-7.34	7.84	249	-2.74	-7.34	7.84
03	467	11.64	-1.24	-6.77	6.88	259	-2.60	-5.95	6.50	246	-2.60	-5.95	6.50
04	473B	20.43	-0.83	-3.90	3.99	257	-2.20	-3.08	3.79	234	-2.20	-3.08	3.79
05	475	24.19	-0.71	-3.30	3.38	257	-2.08	-2.48	3.24	230	-2.08	-2.48	3.24
06	479	36.91	-0.39	-2.17	2.20	259	-1.76	-1.34	2.22	217	-1.76	-1.34	2.22
07	479	36.91	-0.39	-2.17	2.20	259	-1.76	-1.34	2.22	217	-1.76	-1.34	2.22
08	481	46.03	-0.20	-1.74	1.75	263	-1.57	-0.92	1.82	210	-1.57	-0.92	1.82
09	481	46.03	-0.20	-1.74	1.75	263	-1.57	-0.92	1.82	210	-1.57	-0.92	1.82
10	483C	55.03	-0.01	-1.45	1.45	269	-1.38	-0.63	1.52	204	-1.38	-0.63	1.52
11	484	57.21	0.02	-1.38	1.38	271	-1.33	-0.56	1.44	202	-1.33	-0.56	1.44
12	489	57.41	0.06	-1.00	1.00	273	-1.30	-0.18	1.18	188	-1.30	-0.18	1.18
13	497	57.50	0.01	-0.64	0.65	280	-1.25	0.18	1.26	171	-1.25	0.18	1.26
14	505	58.03	0.17	-0.41	0.45	292	-1.19	0.40	1.25	161	-1.19	0.40	1.25
15	512	58.69	0.21	-0.32	0.38	303	-1.15	0.50	1.25	156	-1.15	0.50	1.25
16	521G	59.91	0.27	-0.23	0.36	319	-1.08	0.58	1.23	151	-1.08	0.58	1.23
17	524	62.97	0.34	-0.22	0.41	327	-1.01	0.59	1.18	149	-1.01	0.59	1.18
18	539	66.55	0.52	-0.11	0.53	347	-0.84	0.70	1.10	139	-0.84	0.70	1.10
19	551	76.05	0.85	-0.07	0.86	355	-0.50	0.74	0.90	124	-0.50	0.74	0.90
20	568	93.45	1.58	-0.04	1.58	358	0.22	0.77	0.81	74	0.22	0.77	0.81
21	568	93.45	1.58	-0.04	1.58	358	0.22	0.77	0.81	74	0.22	0.77	0.81
22	568	93.45	1.58	-0.04	1.58	358	0.22	0.77	0.81	74	0.22	0.77	0.81
23	570Y	88.35	1.72	-0.01	1.72	359	0.35	0.80	0.85	69	0.35	0.80	0.85
24	573Y	79.56	1.94	-0.00	1.94	359	0.57	0.81	1.00	54	0.57	0.81	1.00
25	575	75.80	2.04	-0.00	2.04	359	0.67	0.81	1.06	50	0.67	0.81	1.06
26	580	63.07	2.41	-0.00	2.41	359	1.04	0.82	1.33	38	1.04	0.82	1.33
27	580	63.07	2.41	-0.00	2.41	359	1.04	0.82	1.33	38	1.04	0.82	1.33
28	585	53.96	2.72	-0.00	2.72	359	1.35	0.82	1.58	31	1.35	0.82	1.58
29	590R	44.96	3.08	0.00	3.08	0	1.71	0.82	1.90	25	1.71	0.82	1.90
30	592	42.78	3.17	-0.02	3.17	359	1.81	0.79	1.97	23	1.81	0.79	1.97
31	694	42.58	3.14	-0.52	3.18	350	1.77	0.29	1.80	9	1.77	0.29	1.80
32	702	42.59	3.08	-1.02	3.24	341	1.71	-0.19	1.72	353	1.71	-0.19	1.72
33	710	41.96	3.04	-1.33	3.31	336	1.67	-0.51	1.75	343	1.67	-0.51	1.75
34	717	41.96	3.04	-1.33	3.31	336	1.67	-0.51	1.75	343	1.67	-0.51	1.75
35	726M	40.08	3.01	-1.64	3.44	331	1.65	-0.82	1.84	333	1.65	-0.82	1.84
36	729	37.02	3.12	-1.78	3.60	330	1.76	-0.96	2.00	331	1.76	-0.96	2.00
37	744	33.43	3.07	-2.17	3.76	324	1.70	-1.35	2.17	321	1.70	-1.35	2.17
38	756	23.94	3.02	-3.11	4.34	314	1.65	-2.29	2.83	305	1.65	-2.29	2.83
39	825	6.54	-1.66	-11.64	11.76	261	-3.02	-10.82	11.24	254	-3.02	-10.82	11.24
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													
$a^*_m = a^*_n, p_n = 2.8[(1.000x + 0.171 + 0.000z)/y]$ $A_m = (a - a_n)/y$ $C_{ABm} = [A_m^2 + B_m^2]^{1/2}$													
$b^*_m = p_n - p_n p_0 = -1.0[(0.000x + 0.000 + 1.000z)/y]$ $B_m = (b - b_n)/y$ $h_{ABm} = \text{atan}[B_m/A_m]$													

DE690-3N

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=2.8, n_2=1.0$).

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

no.	λ_n	C tristimulus values and chromaticities					nu-chromatic values				
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	$n_1 A_{Bm}$	
00	592	67.61	42.78	1.14	0.606	0.383	0.010	77.4	34.0	84.6	383
01	694	71.10	42.58	22.52	0.522	0.312	0.165	75.6	12.4	76.7	369
02	702	74.12	42.49	43.40	0.463	0.265	0.271	72.8	-8.4	73.3	353
03	710	75.15	41.96	55.91	0.434	0.242	0.323	70.2	-21.4	73.4	343
04	717	75.05	41.30	61.43	0.422	0.232	0.345	68.5	-27.4	73.8	338
05	726	74.04	40.08	65.11	0.410	0.222	0.361	66.9	-33.4	74.0	333
06	739	71.14	37.62	66.11	0.408	0.212	0.379	64.8	-35.6	74.3	331
07	744	66.16	33.43	72.64	0.384	0.194	0.421	59.0	-55.1	72.7	321
08	386	51.50	23.94	74.68	0.343	0.159	0.497	37.6	-55.0	67.7	305
09	460	42.38	56.4	76.19	0.130	0.068	0.801	-19.8	-70.8	75.3	254
10	465	12.41	9.58	78.25	0.123	0.095	0.780	-26.3	-70.3	75.1	249
11	467	12.45	11.64	78.87	0.120	0.113	0.766	-30.3	-69.3	75.6	246
12	4738	13.31	20.49	79.83	0.117	0.179	0.702	-45.0	-63.0	77.4	234
13	475	14.02	24.19	79.97	0.118	0.204	0.676	-50.3	-60.0	78.4	230
14	479	14.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217
15	479	17.82	36.91	80.16	0.132	0.273	0.594	-65.1	-49.8	81.9	217
16	481	21.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	208
17	481	22.98	46.03	80.19	0.148	0.310	0.541	-72.3	-42.3	83.8	210
18	483C	27.52	55.03	80.21	0.169	0.338	0.492	-76.0	-34.9	83.7	204
19	484	28.85	57.21	79.07	0.174	0.346	0.478	-76.4	-32.0	82.8	202
20	489	25.36	57.41	57.70	0.180	0.408	0.410	-74.6	-10.5	75.4	188
21	497	22.33	57.50	36.81	0.191	0.492	0.315	-71.8	-1.0	72.6	171
22	505	21.31	58.63	24.30	0.205	0.559	0.234	-69.2	23.3	73.0	161
23	512C	21.41	58.09	18.79	0.216	0.593	0.190	-67.5	29.4	73.7	156
24	521	22.42	59.91	14.10	0.232	0.621	0.146	-65.2	35.1	74.1	151
25	524	25.32	62.97	14.10	0.247	0.615	0.137	-64.1	37.6	74.3	149
26	539	30.29	66.55	7.57	0.290	0.637	0.072	-56.0	47.1	73.2	139
27	546	32.45	68.05	5.53	0.304	0.637	0.051	-53.9	50.6	73.6	124
28	568	84.08	93.45	0.02	0.463	0.514	0.022	20.8	72.7	75.7	74
29	568	84.08	93.45	0.02	0.463	0.514	0.022	20.8	72.7	75.7	74
30	569	84.05	90.41	1.96	0.476	0.512	0.011	27.3	72.3	77.3	69
31	570	84.00	88.35	1.33	0.483	0.508	0.007	31.3	71.2	77.8	66
32	573C	83.15	79.56	0.38	0.509	0.487	0.002	46.0	65.0	79.6	54
33	575	82.44	75.80	0.24	0.520	0.478	0.01	51.3	62.0	80.5	50
34	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38
35	580	78.64	63.07	0.05	0.554	0.444	0.000	66.1	51.7	84.0	38
36	585C	74.48	53.96	0.02	0.579	0.420	0.000	73.3	44.3	85.6	31
37	590	68.94	44.96	0.00	0.605	0.384	0.000	77.0	36.9	85.4	25
38	597	77.61	41.14	0.00	0.622	0.361	0.000	80.0	32.0	86.0	20
39	694	70.12	40.58	22.52	0.522	0.312	0.165	75.6	12.4	76.7	9
U=D50 96.46 100.00 82.22 0.364 0.358 0.358 0.0 0.0 0.0 0.0											
$a_{p-p_n} = a_p - 2.8[(1.000x - 0.171 + 0.0002)y]$ $A_m = (a - a_n)^{1/2}$ $Y_{CABm} = \frac{a_{p-p_n} B_m}{A_m}$											
$b_{p-p_n} = b_p - 1.1[(1.000x + 0.0001 + 0.0002)y]$ $B_m = (b - b_n)^{1/2}$ $Y_{ABm} = \frac{a_{p-p_n} B_m}{A_m}$											

CIEF10 tristimulus values, chromatic values, and purities ($n_e=2.8$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities			nu-chromatic values and chromaticities			
		λ_n	X	Y	Z	x	y	
00	380	52.92	25.78	74.65	0.345	0.168	0.486	
01	390	55.14	26.31	74.65	0.139	0.070	0.790	
02	400	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	464B	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	479B	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	23.27	56.85	36.73	0.192	0.490	0.316	
15	5003	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	93.45	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	83.39	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	74.78	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	584R	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	41.34	44.30	0.459	0.266	0.273	
34	708	75.16	42.36	58.08	0.428	0.241	0.330	
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	
36	726	71.27	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	13.34	6.61	74.65	0.139	0.070	0.790	

$U=D50$ 96.74 100.00 81.03 0.348 0.360 0.360 $A_e=(a-o)Y$ $C_{ABn}=[A_e^2+B_e^2]^{1/2}$
 $b=P_{n0}=n_eP_0=2.8[(1.000x+0.171+0.000z)/y]$ $B_n=(b-b_0)Y$ $h_{ABn}=atan([B_n/A_n])$

$b=P_{n0}=n_eP_0=1.0[(0.000x+0.000+1.000z)/y]$ $B_n=(b-b_0)Y$ $h_{ABn}=atan([B_n/A_n])$

CIEF10 tristimulus values, chromatic values, and purities ($n_e=2.8$, $n_h=1.0$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	n-purities			nu-purities			
		λ_n	Y	P_{n0}	P_{n1}	P_{n2}	h_{n0}	
00	380	25.78	2.89	-2.89	4.09	315	1.52	-2.08
01	390	55.14	26.31	-11.29	11.36	263	-2.65	-10.48
02	400	9.49	-1.16	-8.21	8.29	261	-2.54	-7.40
03	462	11.32	-10.9	-6.97	7.06	261	-2.47	-6.16
04	464B	13.45	-1.01	-5.92	6.01	260	-2.39	-5.11
05	468	18.67	-0.84	-4.31	4.39	258	-2.21	-3.50
06	471	25.21	-0.65	-3.20	3.27	258	-2.03	-2.39
07	472	28.96	-0.56	-2.79	2.84	258	-1.94	-1.98
08	475	37.06	-0.37	-2.18	2.21	260	-1.75	-1.37
09	477	45.70	-0.19	-1.77	1.78	263	-1.56	-0.96
10	477C	50.08	-0.09	-1.61	1.62	266	-1.47	-0.80
11	479	58.60	0.08	-1.34	1.34	273	-1.28	-0.53
12	479B	56.38	0.03	-1.42	1.42	271	-1.34	-0.61
13	484	56.72	0.06	-1.04	1.04	273	-1.30	-0.23
14	492	56.85	0.12	-0.64	0.65	280	-1.25	0.16
15	5003	57.63	0.19	-0.39	0.44	296	-1.17	0.41
16	511G	58.68	0.26	-0.29	0.39	311	-1.11	0.51
17	521	60.88	0.35	-0.20	0.41	329	-1.02	0.60
18	532	65.12	0.52	-0.13	0.53	345	-0.85	0.67
19	545	74.21	0.85	-0.08	0.85	354	-0.52	0.72
20	563	93.38	1.56	-0.06	1.56	357	-0.18	0.74
21	564	90.50	1.64	-0.03	1.64	358	0.26	0.77
22	565	88.67	1.66	-0.02	1.69	359	0.30	0.78
23	566Y	86.54	1.75	-0.01	1.75	359	0.37	0.79
24	568	81.32	1.88	-0.00	1.88	359	0.50	0.80
25	571	74.78	2.06	-0.00	2.06	359	0.68	0.80
26	573	71.03	2.17	-0.00	2.17	359	0.79	0.80
27	577	62.93	2.41	-0.00	2.41	359	1.03	0.80
28	581	54.29	2.69	-0.00	2.69	359	1.32	0.80
29	584R	49.91	2.85	-0.00	2.85	359	1.48	0.80
30	591	41.39	3.20	-0.05	3.20	358	1.82	0.75
31	588	43.61	3.11	-0.02	3.11	359	1.73	0.78
32	689	43.27	3.09	-0.50	3.13	350	1.71	0.30
33	697	43.14	3.03	-1.02	3.19	341	1.65	-0.21
34	708	42.36	2.98	-1.37	3.28	335	1.60	-0.56
35	716M	41.31	2.96	-1.54	3.34	332	1.58	-0.73
36	726	39.11	2.96	-1.74	3.44	329	1.58	-0.93
37	737	34.86	2.98	-2.06	3.62	325	1.60	-1.25
38	750	25.78	2.89	-2.89	4.09	315	1.52	-2.08
39	820	6.61	-1.27	-11.29	11.36	263	-2.65	-10.48

$U=D50$ 100.00 1.378 -0.810 1.598 329 0 0 0 0 0
 $a=P_{n0}=n_eP_0=2.8[(1.000x+0.171+0.000z)/y]$ $A_n=(a-o)Y$ $C_{ABn}=[A_n^2+B_n^2]^{1/2}$
 $b=P_{n0}=n_eP_0=1.0[(0.000x+0.000+1.000z)/y]$ $B_n=(b-b_0)Y$ $h_{ABn}=atan([B_n/A_n])$

$a=P_{n0}=n_eP_0=1.0[(0.000x+0.000+1.000z)/y]$ $A_n=(a-o)Y$ $h_{ABn}=atan([B_n/A_n])$

CIEF10 tristimulus values, chromatic values, and purities ($n_e=2.8$, $n_h=1.0$).

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

no.	O	C tristimulus values and chromaticities			nu-chromatic values and chromaticities			
		λ_n	X	Y	Z	x	y	
00	588	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	41.34	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	726M	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	750	52.92	25.78	74.65	0.345	0.168	0.486	
08	820	13.34	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	464	13.34	13.45	79.69	0.125	0.126	0.748	
12	468B	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	479B	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	23.27	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	93.45	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	83.39	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	571Y	82.00	74.78	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	584R	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	

$U=D50$ 96.74 100.00 81.03 0.348 0.360 0.360 $A_e=(a-o)Y$ $C_{ABn}=[A_e^2+B_e^2]^{1/2}$
 $b=P_{n0}=n_eP_0=2.8[(1.000x+0.171+0.000z)/y]$ $B_n=(b-b_0)Y$ $h_{ABn}=atan([B_n/A_n])$

$b=P_{n0}=n_eP_0=1.0[(0.000x+0.000+1.000z)/y]$ $B_n=(b-b_0)Y$ $h_{ABn}=atan([B_n/A_n])$

CIEF10 tristimulus values, chromatic values, and purities ($n_e=2.8$, $n_h=1.0$).

Normalized Ostwald ($O</$

R17M tristimulus values, chromatic values, and putities ($n=2,8$, $n_p=-1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.											
no.	O	tristimulus values and chromaticities				nu-chromatic values					
	λ_n	X	Y	Z	x	y	A_m	B_m	C_{ABm}	h_{ABm}	
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	26.13	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	-64.6	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	0.038	9.4	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	59.5	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	578	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	-3
29	714R	74.62	46.49	52.41	0.439	0.267	0.302	64.6	-14.8	66.3	347
30	716	72.19	43.45	52.37	0.420	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	63.03	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

$$a=P_m=n_p P_p=2.8[(1.000x+0.171+0.000z)/y] \quad A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=n_p P_b=-1.0[(0.000x+0.000+1.000z)/y] \quad B_m=(b-b_y) \quad h_{ABm}=atan[B_m/A_m]$$

DE690-3N

R17M tristimulus values, chromatic values, and putities ($n=2,8$, $n_p=-1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

R17M tristimulus values, chromatic values, and purities ($\lambda_n=2,6,9,1,9$).											
Normalized Ostwald (O_n) tristimulus values ($T_n=100$), ordered by hue angle.											
no.	O_n	tristimulus values and chromaticities					nu-chromatic values				
		X	Y	Z	x	y	A_m	B_m	C_{ABm}	h_{ABm}	
00	600	67.89	51.09	15.38	0.505	0.380	0.114	58.5	-25.9	63.9	383
01	705	73.42	47.68	42.28	0.449	0.291	0.258	64.5	-3.7	64.6	356
02	714	74.62	46.49	52.41	0.430	0.267	0.302	64.6	-14.8	66.3	347
03	716	72.19	43.45	52.37	0.420	0.258	0.311	64.4	-17.2	66.7	345
04	723	69.37	39.63	56.82	0.418	0.238	0.342	62.6	-24.7	67.3	338
05	735M	64.03	34.59	64.49	0.392	0.212	0.395	55.6	-36.5	66.5	326
06	737	50.84	23.58	64.46	0.366	0.169	0.464	44.8	-45.4	63.7	314
07	450	26.22	10.37	70.14	0.245	0.097	0.657	8.6	-61.7	62.3	277
08	463	19.81	9.03	72.37	0.195	0.089	0.715	-4.8	-65.0	65.2	265
09	465	19.87	11.18	74.25	0.188	0.106	0.705	-9.4	-65.2	65.9	261
10	470	20.04	16.46	77.00	0.176	0.145	0.678	-19.9	-63.6	66.7	252
11	474	20.76	23.15	78.71	0.169	0.188	0.641	-31.0	-60.0	67.5	242
12	477B	22.69	31.32	79.75	0.169	0.234	0.596	-41.7	-54.4	68.6	232
13	479	24.27	35.77	80.07	0.173	0.255	0.571	-46.2	-51.1	68.9	227
14	481	28.86	45.22	80.48	0.186	0.292	0.520	-52.7	-43.9	68.6	219
15	482	30.21	48.30	79.14	0.191	0.306	0.501	-54.4	-40.1	67.6	216
16	487	26.13	48.90	65.44	0.186	0.348	0.465	-58.4	-25.9	63.9	203
17	496	20.48	50.06	44.06	0.178	0.436	0.384	-63.4	-3.6	63.5	183
18	500C	20.60	52.31	38.55	0.184	0.469	0.345	-64.5	3.7	64.6	176
19	509	19.40	53.50	28.42	0.191	0.528	0.280	-64.6	14.8	66.2	167
20	511	21.83	56.54	28.46	0.204	0.529	0.266	-64.4	17.2	66.7	165
21	518	24.65	60.36	24.01	0.226	0.553	0.220	-62.6	24.7	67.3	158
22	530	29.99	65.40	16.35	0.268	0.585	0.146	-55.6	36.5	66.5	146
23	538G	43.18	76.41	16.37	0.317	0.562	0.120	-44.7	45.3	63.7	134
24	553	67.80	89.62	10.69	0.403	0.533	0.063	-8.6	61.7	62.3	97
25	557	74.22	90.96	8.45	0.427	0.523	0.038	9.4	65.0	65.2	85
26	558	74.15	88.81	6.58	0.437	0.523	0.038	9.5	65.1	65.8	81
27	561	73.98	83.52	3.84	0.458	0.517	0.023	19.9	63.6	66.7	72
28	565	73.26	76.83	2.11	0.481	0.504	0.013	31.1	59.5	67.5	62
29	570	71.33	68.67	1.09	0.505	0.486	0.007	41.7	54.4	68.5	52
30	572	69.75	64.22	0.76	0.517	0.476	0.005	46.2	51.1	68.9	47
31	578	65.16	54.77	0.35	0.541	0.455	0.002	52.7	43.9	68.6	39
32	581Y	63.81	51.69	1.69	0.544	0.441	0.014	54.5	40.0	67.6	36
33	600	67.89	51.09	15.38	0.505	0.380	0.114	58.5	25.9	63.9	23
34	705	73.42	47.68	42.28	0.449	0.291	0.258	64.5	-3.7	64.6	-3
U=D50		94.03	100.00	80.83	0.342	0.363	0.363	0.0	0.0	0.0	0

DE690-7R_pchart1-2_color01=4(R17M)

R17M tristimulus values, chromatic values, and putities ($n=2,8$, $n_p=-1,0$).
Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.										
no.	O	λ_n	n-purities				nu-purities			
			P_{nm}	P_{nn}	P_{nb}	h_{nn}	P_{nm}	P_{nn}	P_{nb}	h_{nb}
00	373	23.58	2.21	-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	0.10	-4.67	4.67	271	-1.20	-3.86	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	289	-1.13	0.30	1.18	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	1.37	-0.09	1.37	356	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	0.97	52
24	572	64.22	2.03	-0.01	2.03	359	0.72	0.79	1.07	47
25	578	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	714R	46.49	2.70	-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

R17Ms tristimulus values, chromatic values, and putities ($n_s=2,8, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities			nu-chromatic values			
		X	Y	Z	x	y	z	h
00	375	52.09	25.14	67.62	0.359	0.173	0.466	43.5
01	375	52.09	25.14	67.62	0.359	0.173	0.466	43.5
02	463	21.19	9.55	72.48	0.205	0.092	0.702	-2.6
03	465	21.27	11.71	74.36	0.198	0.109	0.692	-7.1
04	470B	21.43	17.01	77.11	0.185	0.147	0.667	-17.6
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-28.8
06	476	22.83	27.59	79.42	0.175	0.212	0.611	-34.7
07	479	25.44	36.25	80.19	0.179	0.255	0.565	-44.1
08	480	27.41	40.88	80.43	0.184	0.274	0.540	-48.0
09	481	29.88	45.66	80.60	0.191	0.292	0.516	-50.9
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-52.8
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-58.5
12	490	20.67	50.20	44.12	0.179	0.436	0.383	-62.9
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-64.3
14	505	20.59	54.04	33.36	0.190	0.500	0.308	-64.8
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-64.0
16	522G	23.24	59.39	19.95	0.226	0.578	0.194	-61.8
17	530	29.26	65.19	16.37	0.264	0.588	0.147	-56.5
18	540	41.69	74.85	13.32	0.321	0.576	0.102	-43.5
19	552	66.62	90.66	13.33	0.390	0.531	0.078	-13.9
20	557	72.58	90.44	8.47	0.423	0.527	0.049	2.6
21	558	72.51	88.28	6.59	0.433	0.527	0.039	7.2
22	565	72.35	82.88	3.84	0.454	0.521	0.024	17.6
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	28.8
24	567	70.94	72.40	1.53	0.489	0.499	0.010	34.4
25	572	68.33	63.74	0.76	0.514	0.479	0.005	44.2
26	575	66.36	59.11	0.52	0.526	0.469	0.004	48.0
27	578	63.90	54.23	0.35	0.538	0.458	0.002	50.9
28	581	62.64	51.28	0.19	0.541	0.443	0.014	52.8
29	614R	68.65	50.90	20.17	0.491	0.364	0.144	58.6
30	701	73.11	49.79	36.82	0.457	0.311	0.230	63.0
31	705	73.15	47.60	42.34	0.448	0.291	0.259	64.3
32	710	73.19	45.95	47.59	0.438	0.275	0.285	64.9
33	720	73.40	44.17	56.94	0.420	0.253	0.326	64.0
34	727M	70.53	40.59	61.00	0.409	0.235	0.354	61.8
35	735M	64.51	34.79	64.58	0.393	0.212	0.394	56.6
36	745	52.09	25.14	67.62	0.359	0.173	0.466	43.5
37	809	27.16	9.33	67.62	0.260	0.089	0.649	-13.9
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0

$$a=P_{nm}=P_s P_c=2.8[(1.000x+0.171+0.000z)/y] \quad A_{nm}=(a-y)Y \quad C_{ABnm}=[A_{nm}^2+B_{nm}^2]^{1/2}$$

$$b=P_{nm}=P_s P_c=1.0[(0.000x+0.000+1.000z)/y] \quad B_{nm}=(b-y)Y \quad h_{ABnm}=\arctan[B_{nm}/A_{nm}]$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2,8, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities			nu-purities			
		X	Y	Z	x	y	z	h
00	375	25.14	3.04	-2.69	4.06	318	1.73	-1.88
01	375	25.14	3.04	-2.69	4.06	318	1.73	-1.88
02	463	9.55	1.03	-7.58	7.66	277	-0.27	-6.78
03	465	11.71	0.69	-6.35	6.38	276	-0.61	-5.54
04	470B	17.01	0.27	-4.53	4.54	273	-1.03	-3.72
05	474	23.68	0.09	-3.32	3.33	271	-1.21	-2.51
06	476	27.59	0.06	-2.87	2.87	271	-1.24	-2.06
07	479	36.25	0.09	-2.21	2.21	272	-1.21	-1.40
08	480	40.88	0.13	-1.96	1.97	273	-1.17	-1.15
09	481	45.66	0.19	-1.76	1.77	276	-1.11	-0.95
10	482C	48.71	0.22	-1.62	1.64	277	-1.08	-0.81
11	488	49.09	0.11	-1.23	1.24	275	-1.19	-0.42
12	490	50.20	0.05	-0.87	0.88	273	-1.25	-0.06
13	500	52.39	0.08	-0.73	0.74	276	-1.22	0.07
14	505	54.04	0.11	-0.61	0.62	280	-1.20	0.19
15	515	55.82	0.16	-0.42	0.45	290	-1.14	0.37
16	522G	59.39	0.26	-0.33	0.43	308	-1.04	0.47
17	530	65.19	0.44	-0.25	0.50	330	-0.86	0.55
18	540	74.85	0.72	-0.17	0.75	346	-0.58	0.63
19	552	90.66	1.15	-0.14	1.16	352	-0.15	0.66
20	557	90.44	1.33	-0.09	1.34	356	0.02	0.71
21	558	88.28	1.39	-0.07	1.39	356	0.08	0.73
22	565	82.98	1.52	-0.04	1.52	388	0.08	0.79
23	565Y	76.31	1.68	-0.02	1.68	359	0.37	0.78
24	567	72.40	1.78	-0.02	1.78	359	0.47	0.78
25	572	63.74	2.00	-0.01	2.00	359	0.69	0.79
26	575	59.11	2.12	-0.00	2.12	359	0.81	0.80
27	578	54.33	2.24	-0.00	2.24	359	0.93	0.80
28	581	51.28	2.34	-0.00	2.34	359	1.03	0.77
29	614R	50.90	2.46	-0.39	2.49	350	1.15	0.41
30	701	49.79	2.57	-0.73	2.67	343	1.26	0.06
31	705	47.60	2.66	-0.88	2.80	341	1.35	-0.08
32	710	45.95	2.72	-1.03	2.91	339	1.41	-0.22
33	720	44.17	2.76	-1.28	3.04	334	1.45	-0.47
34	727M	40.59	2.83	-1.50	3.20	332	1.52	-0.69
35	735M	34.79	2.93	-1.85	3.47	327	1.62	-1.04
36	745	25.14	3.04	-2.69	4.06	318	1.73	-1.88
37	809	9.33	2.80	-7.24	7.77	291	-0.49	-6.43
U=D50		100.00	1.310	-0.809	1.539	328	0.0	0.0

$$a=P_{nm}=P_s P_c=2.8[(1.000x+0.171+0.000z)/y] \quad A_{nm}=(a-y)Y \quad C_{ABnm}=[A_{nm}^2+B_{nm}^2]^{1/2}$$

$$b=P_{nm}=P_s P_c=1.0[(0.000x+0.000+1.000z)/y] \quad B_{nm}=(b-y)Y \quad h_{ABnm}=\arctan[B_{nm}/A_{nm}]$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2,8, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

no.	λ_n	C tristimulus values and chromaticities			nu-chromatic values			
		X	Y	Z	x	y	z	h
00	614	68.65	50.90	20.17	0.491	0.364	0.144	58.6
01	701	73.11	49.79	36.82	0.457	0.311	0.230	63.0
02	705	73.15	47.60	42.34	0.448	0.291	0.259	64.3
03	710	73.19	45.95	47.59	0.438	0.275	0.285	64.9
04	720	73.40	44.17	56.94	0.420	0.253	0.326	64.0
05	727M	70.53	40.59	61.00	0.409	0.235	0.354	61.8
06	735	64.51	34.79	64.58	0.393	0.212	0.394	56.6
07	375	52.09	25.14	67.62	0.359	0.173	0.466	43.5
08	444	27.16	9.33	67.62	0.260	0.089	0.649	-13.9
09	463	21.19	9.55	72.48	0.205	0.092	0.702	-2.6
10	465	21.27	11.71	74.36	0.198	0.109	0.692	-7.1
11	470	21.43	17.01	77.11	0.185	0.147	0.667	-17.6
12	474B	22.09	23.68	78.83	0.177	0.190	0.632	-28.8
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-34.7
14	479	25.44	36.25	80.19	0.179	0.255	0.565	-44.1
15	480	27.41	40.88	80.43	0.184	0.274	0.540	-48.0
16	481	29.88	45.66	80.60	0.191	0.292	0.516	-50.9
17	482C	31.14	48.71	79.26	0.195	0.306	0.498	-52.8
18	488	25.13	49.09	60.78	0.186	0.363	0.450	-58.5
19	490	20.67	50.20	44.12	0.179	0.436	0.383	-62.9
20	500	20.63	52.39	38.61	0.184	0.469	0.345	-64.3
21	505	20.59	54.04	33.36	0.190	0.500	0.308	-64.8
22	515	20.37	55.82	24.00	0.203	0.557	0.239	-64.0
23	522G	23.24	59.39	19.95	0.226	0.578	0.194	-61.8
24	530	29.26	65.19	16.37	0.264	0.588	0.147	-56.5
25	540	41.69	74.85	13.32	0.321	0.576	0.102	-43.5
26	552	66.62	90.66	13.33	0.390	0.531	0.078	-13.9
27	557	72.58	90.44	8.47	0.423	0.527	0.049	2.6
28	558	72.51	88.28	6.59	0.433	0.527	0.039	7.2
29	565	72.35	82.88	3.84	0.454	0.521	0.024	17.6
30	565Y	71.69	76.31	2.11	0.477	0.508	0.014	28.8
31	567	70.94	72.40	1.53	0.489	0.499	0.010	34.4
32	572Y	68.33	63.74	0.76	0.514	0.479	0.005	44.2
33	575	66.36	59.11	0.52	0.526	0.469	0.004	48.0
34	578	63.90	54.23	0.35	0.538	0.458	0.002	50.9
35	581	62.64	51.28	0.19	0.541	0.443	0.014	52.8
36	614R	68.65	50.90	20.17	0.491	0.364	0.144	58.6
37	701	73.11	49.79	36.82	0.457	0.311	0.230	63.0
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0

$$a=P_{nm}=P_s P_c=2.8[(1.000x+0.171+0.000z)/y] \quad A_{nm}=(a-y)Y \quad C_{ABnm}=[A_{nm}^2+B_{nm}^2]^{1/2}$$

$$b=P_{nm}=P_s P_c=1.0[(0.000x+0.000+1.000z)/y] \quad B_{nm}=(b-y)Y \quad h_{ABnm}=\arctan[B_{nm}/A_{nm}]$$

R17Ms tristimulus values, chromatic values, and putities ($n_s=2,8, n_c=1,0$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

Normalized Ostwald (C) tristimulus values (x_w, y_w, z_w), derived by hue angle.											
no.	λ_n	C		nu-purities				nu-purities			
		P_{pan}	P_{max}	P_{pan}	P_{max}	h_{pan}	P_{pan}	P_{max}	P_{pan}	h_{pan}	
00	614	50.90	2.46	-0.39	2.49	350	1.15	0.41	1.22	379	
01	701	49.79	2.57	-0.73	2.67	343	1.26	0.66	1.26	363	
02	701	49.79	2.66	-0.88	2.81	333	1.37	0.89	1.35	356	
03	710	45.95	2.72	-1.03	2.91	339	1.41	-0.22	1.43	350	
04	720	44.17	2.76	-1.28	3.04	334	1.45	-0.47	1.52	341	
05	727M	40.59	2.83	-1.50	3.20	332	1.52	-0.69	1.67	335	
06	735	34.79	2.93	-1.85	3.47	327	1.62	-1.04	1.93	327	
07	375	25.14	3.04	-2.69	4.06	318	1.73	-1.88	2.55	312	
08	444	9.33	2.80	-7.24	7.77	291	1.49	-6.43	6.61	283	
09	443	9.55	1.03	-7.58	7.66	277	-0.27	-6.78	6.78	267	
10	465	11.71	0.69	-6.35	6.38	276	-0.61	-5.54	5.57	263	
11	465	11.71	0.69	-6.35	6.38	276	-0.61	-5.54	5.57	263	
12	474B	23.68	0.09	-4.53	4.53	271	-1.21	-7.25	7.29	244	
13	476	27.59	0.06	-2.87	2.87	271	-1.24	-2.06	2.41	238	
14	479	36.25	0.09	-2.21	2.21	272	-1.21	-1.40	1.85	229	
15	480	40.88	0.13	-1.96	1.97	273	-1.17	-1.15	1.64	224	
16	481	45.66	0.19	-1.76	1.77	276	-1.11	-0.95	1.46	220	
17	482	48.71	0.22	-1.62	1.64	277	-1.08	-0.81	1.35	217	
18	488C	49.09	0.11	-1.23	1.24	275	-1.19	-0.42	1.26	199	
19	490	50.20	0.06	-0.87	0.88	273	-1.25	-0.66	1.25	183	
20	500	52.39	0.08	-0.73	0.74	276	-1.22	-0.07	1.22	176	
21	505	54.04	0.11	-0.61	0.62	280	-1.20	0.19	1.21	170	
22	515	55.82	0.16	-0.42	0.45	290	-1.14	0.37	1.20	161	
23	522G	59.39	0.26	-0.33	0.43	308	-1.04	0.47	1.14	155	
24	530	65.19	0.44	-0.25	0.50	330	-0.86	0.55	1.03	147	
25	540	74.85	0.72	-0.17	0.75	346	-0.58	0.63	0.85	132	
26	552	90.66	1.15	-0.14	1.16	352	-0.15	0.66	0.67	103	
27	557	90.44	1.33	-0.09	1.34	356	0.02	0.71	0.71	87	
28	561	89.38	1.33	-0.07	1.33	358	0.09	0.69	0.73	83	
29	561	82.98	1.52	-0.04	1.52	358	0.21	0.76	0.79	74	
30	565	76.31	1.68	-0.02	1.68	359	0.37	0.78	0.86	64	
31	567	72.40	1.78	-0.02	1.78	359	0.47	0.78	0.92	58	
32	572Y	63.74	2.00	-0.01	2.00	359	0.69	0.79	1.05	48	
33	575	59.11	2.12	-0.00	2.12	359	0.81	0.80	1.14	44	
34	578	54.33	2.24	-0.00	2.24	359	0.93	0.80	1.23	40	
35	581	51.28	2.34	-0.03	2.34	0	1.03	0.77	1.29	36	
36	614R	50.90	2.46	-0.39	2.49	-9	1.15	0.41	1.22	19	
37	701	49.79	2.57	-0.73	2.67	-16	1.26	0.66	1.26	3	
D=50		100.00	1.310	-0.809	1.539	328	0.0	0.0	0.0	0	

CIE02 tristimulus values, chromatic values, and putities ($n_1=1.4, n_2=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	A_n	B_n	$C_{AB,n}$	$h_{AB,n}$
00	396	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310
01	396	31.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3	282
02	466	13.27	8.01	79.21	0.132	0.079	0.788	13.4	-88.4	89.4	278
03	471	13.39	12.66	80.68	0.125	0.118	0.755	-4.4	-84.7	84.8	266
04	475B	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9	82.7	250
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9	87.1	232
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-77.4	-58.9	97.2	217
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-88.1	-53.6	103.1	211
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-97.4	-48.4	108.8	206
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-105.0	-43.3	113.6	202
10	486C	29.62	57.81	81.62	0.175	0.341	0.482	-113.2	-35.5	118.7	197
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-126.0	-12.6	126.6	185
12	497	23.01	56.66	82.48	0.185	0.472	0.342	-139.9	13.8	139.6	174
13	501	22.62	59.57	35.18	0.192	0.507	0.299	-143.1	23.7	145.0	170
14	506	22.26	60.29	28.28	0.200	0.543	0.255	-146.5	33.0	150.1	167
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-149.6	47.4	157.0	162
16	522G	24.04	63.42	17.06	0.230	0.606	0.163	-149.8	49.8	157.8	161
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-146.3	61.3	158.7	157
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-136.1	69.6	152.8	152
19	561	65.07	87.80	5.54	0.410	0.554	0.034	-72.3	84.1	111.0	310
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-20.0	89.1	91.3	302
21	569	83.03	91.98	3.02	0.466	0.516	0.026	-13.4	88.4	89.4	98
22	571	82.92	83.63	1.55	0.482	0.508	0.009	4.4	84.7	84.8	86
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	27.6	77.9	82.7	70
24	577	80.69	72.49	0.38	0.525	0.472	0.002	53.3	68.9	87.1	52
25	581	77.87	63.33	0.18	0.550	0.447	0.001	77.3	58.9	97.2	37
26	583	75.96	58.54	0.13	0.564	0.434	0.000	88.1	53.6	103.1	31
27	585	73.67	53.70	0.09	0.577	0.421	0.000	97.4	48.4	108.8	26
28	587	71.01	48.93	0.07	0.591	0.407	0.000	105.0	43.3	113.6	22
29	592R	66.69	42.18	0.61	0.609	0.385	0.005	113.3	35.5	118.7	17
30	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	5
31	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	354
32	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7	145.1	350
33	711	74.05	39.70	53.95	0.441	0.236	0.321	146.5	-33.0	150.2	347
34	724	72.36	36.57	65.18	0.416	0.218	0.364	149.6	-47.4	157.0	342
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	149.8	-49.8	157.9	341
36	740	69.08	33.80	72.53	0.393	0.192	0.413	146.3	-61.3	158.7	337
37	749	61.10	27.83	74.91	0.372	0.169	0.457	136.0	-69.6	152.8	332
38	766	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310
39	828	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3	282
U=D50											
		96.31	99.99	82.24	0.345	0.358	0.358	0.0	0.0	0.0	0

$$U=D_{50} \quad 96.31 \quad 99.99 \quad 82.24 \quad 0.345 \quad 0.358 \quad 0.358 \quad 0.0 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a=P_{nm}n_1P_0n_2\gamma_{n1}(b_{21}-b_{22})\gamma_{n2}(b_{22}-b_{23})\gamma_{n3}y=1.4(3.075x-2.5702y-0.0960)y$$

$$b=P_{nm}n_1P_0n_2\gamma_{n1}(b_{31}-b_{33})\gamma_{n2}(b_{32}-b_{33})\gamma_{n3}y=+0.5(1.9906x+3.8617y-2.4046)y$$

DE690-3N

CIE02 tristimulus values, chromatic values, and putities ($n_1=1.4, n_2=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	Y	nu-rities				nu-purities			
			P_{nm}	P_{nm}	P_{nm}	h_{nm}	P_{nm}	P_{nm}	P_{nm}	h_{nm}
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	266
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	211
08	484	46.29	-1.93	-1.50	2.44	217	-2.10	-1.04	2.35	205
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	-1.59	-0.67	1.20	198	-2.16	-0.21	2.17	185
12	497	56.62	-1.19	-0.22	2.20	185	-2.36	0.23	2.38	174
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	161
17	535	66.19	-2.03	0.46	2.08	167	-2.37	0.92	2.39	157
18	544	72.16	-1.71	0.50	1.78	163	-1.88	0.96	2.11	152
19	561	87.80	-0.64	0.49	0.81	142	-0.24	0.95	1.26	130
20	568	93.65	-0.03	0.49	0.49	94	-0.12	0.95	0.97	102
21	569	91.98	0.02	0.50	0.50	86	-0.04	0.96	0.97	98
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	52
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	1.99	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	592R	42.18	2.86	0.38	2.88	7	2.68	0.84	2.81	17
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	38.97	4.01	-1.67	4.35	337	4.09	-1.36	4.31	341
36	740	33.80	4.26	-1.82	4.64	336	4.08	-2.56	4.39	332
37	749	27.83	5.06	-2.27	5.06	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	0

$$U=D_{50} \quad 99.99 \quad 0.174 \quad -0.459 \quad 0.491 \quad 290 \quad 0.0 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a=P_{nm}n_1P_0n_2\gamma_{n1}(b_{21}-b_{22})\gamma_{n2}(b_{22}-b_{23})\gamma_{n3}y=1.4(3.075x-2.5702y-0.0960)y$$

$$b=P_{nm}n_1P_0n_2\gamma_{n1}(b_{31}-b_{33})\gamma_{n2}(b_{32}-b_{33})\gamma_{n3}y=+0.5(1.9906x+3.8617y-2.4046)y$$

DE690-4N

CIE02 tristimulus values, chromatic values, and putities ($n_1=1.4, n_2=0.5$).

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

no.	O	C tristimulus values and chromaticities						nu-chromatic values				
		λ_n	X	Y	Z	x	y	λ_n	A_{ν}	B_{ν}	$C_{\nu B_{\nu}}$	$A_{\nu B_{\nu}}$
00	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	365	
01	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	354	
02	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7	145.1	350	
03	711	74.05	39.70	53.95	0.441	0.236	0.321	146.5	-33.0	150.2	347	
04	727	74.48	38.97	65.18	0.416	0.218	0.364	149.6	-47.4	157.0	342	
05	744	74.90	38.57	77.17	0.415	0.210	0.374	152.8	-57.0	160.3	341	
06	740	69.08	33.80	72.53	0.393	0.192	0.413	146.3	-61.3	158.7	337	
07	749	61.10	27.83	74.91	0.372	0.169	0.457	136.0	-69.6	152.8	332	
08	736	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310	
09	463	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3	282	
10	466	13.27	8.01	79.21	0.132	0.079	0.788	13.4	-88.4	89.4	278	
11	471	13.39	12.66	80.68	0.125	0.118	0.755	-4	-84.7	84.8	266	
12	4758	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9	82.7	250	
13	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9	87.1	232	
14	481	18.42	36.66	82.05	0.134	0.267	0.588	-77.4	-58.9	97.2	217	
15	483	20.35	41.45	82.11	0.141	0.286	0.570	-88.1	-53.6	103.1	211	
16	484	22.64	46.29	82.14	0.138	0.306	0.543	-97.4	-48.4	108.8	206	
17	485	25.49	49.46	82.16	0.135	0.329	0.519	-107.4	-43.6	114.8	201	
18	486	29.62	37.81	81.62	0.175	0.341	0.482	-113.2	-35.5	118.7	197	
19	499	26.32	58.17	63.51	0.177	0.393	0.429	-126.0	-12.6	126.6	185	
20	497	23.01	58.66	42.48	0.185	0.472	0.342	-138.9	13.8	139.6	174	
21	501	22.62	59.57	35.18	0.192	0.507	0.299	-143.1	23.7	145.0	170	
22	506	22.26	60.29	28.08	0.200	0.543	0.255	-146.5	33.0	150.1	167	
23	519C	21.83	61.02	17.06	0.218	0.610	0.170	-149.6	47.4	157.0	162	
24	522	24.04	63.42	17.06	0.230	0.606	0.163	-149.8	49.8	157.8	161	
25	535	27.22	66.19	9.71	0.263	0.641	0.094	-146.3	61.3	158.7	157	
26	544	35.20	72.16	7.33	0.306	0.629	0.063	-136.1	69.6	152.8	152	
27	561	65.07	87.80	5.54	0.410	0.554	0.034	-72.3	84.1	111.0	130	
28	563	68.65	88.65	4.19	0.425	0.568	0.025	-61.3	84.8	108.8	126	
29	569	82.03	91.98	0.82	0.466	0.516	0.016	-14.4	84.4	84.8	98	
30	571	82.92	87.33	1.55	0.482	0.508	0.009	-4	84.7	84.8	86	
31	573	82.30	80.76	0.80	0.502	0.492	0.004	27.6	77.9	82.7	70	
32	577	80.69	72.49	0.38	0.525	0.472	0.002	53.3	68.9	87.1	52	
33	581	77.87	63.33	0.18	0.550	0.447	0.001	77.3	58.9	97.2	37	
34	583	75.96	58.54	0.13	0.564	0.434	0.000	88.1	53.6	103.1	31	
35	585	73.67	53.70	0.09	0.577	0.421	0.000	97.4	48.4	108.8	26	
36	587R	71.01	48.93	0.07	0.591	0.407	0.000	105.0	43.3	113.2	22	
37	592	66.69	42.18	0.61	0.609	0.385	0.005	113.3	35.5	118.7	17	
38	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	5	
39	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	5	
U=50	50	63.1	99.99	82.24	0.345	0.358	0.358	0.0	0.0	0.0	0	0
$d_{p_{\nu}} = n_{\nu} p_{\nu} n_{\nu} [(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}]y = 1.4(0.379x^2 - 2.570y^2 - 0.0960)y$ $d_{p_{\nu}} = n_{\nu} p_{\nu} n_{\nu} [(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}]y = 0.5(1.990x^2 + 3.861y^2 - 2.404)y$												

CIE10 tristimulus values, chromatic values, and putities ($n=1,4, n_0=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities				nu-chromatic values			
		λ_n	X	Y	Z	x	y	z	
00	376	55.24	26.06	71.08	0.362	0.171	0.466	118.6	-66.2
01	376	55.24	26.06	71.08	0.362	0.171	0.466	118.6	-66.2
02	460	13.26	8.89	77.33	0.133	0.089	0.777	10.0	-85.2
03	462	13.28	10.68	78.42	0.129	0.104	0.765	2.9	-84.4
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	2.9	-84.4
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-24.0	-78.1
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-45.2	-71.4
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-56.2	-67.3
08	475	18.32	36.37	81.08	0.134	0.267	0.597	-77.1	-58.5
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5	-49.1
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-94.5	-49.1
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-106.4	-39.9
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-111.1	-33.1
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-122.2	-10.8
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-133.4	16.2
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-138.4	33.8
16	512G	22.19	58.45	18.53	0.223	0.589	0.186	-139.1	41.8
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-138.2	49.6
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-133.2	57.6
19	541	41.39	73.93	10.07	0.330	0.589	0.080	-118.6	66.2
20	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.8	85.2
21	564	83.37	91.09	3.82	0.467	0.510	0.021	-9.9	85.2
22	565	83.35	89.31	2.74	0.475	0.509	0.015	-2.9	84.4
23	565Y	83.35	89.31	2.74	0.475	0.509	0.015	-2.9	84.4
24	568	82.96	82.07	0.96	0.499	0.494	0.005	24.0	78.1
25	571	81.93	75.58	0.44	0.518	0.478	0.002	45.3	71.3
26	573	81.03	71.82	0.27	0.529	0.469	0.001	56.3	67.3
27	577	78.31	63.62	0.08	0.551	0.447	0.000	71.1	58.4
28	581	74.28	54.89	0.01	0.575	0.424	0.000	94.5	49.1
29	581R	74.28	54.89	0.01	0.575	0.424	0.000	94.5	49.1
30	587	68.81	46.05	0.00	0.599	0.400	0.000	106.4	39.9
31	589	67.60	44.04	0.93	0.600	0.391	0.008	109.1	36.6
32	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2	10.8
33	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4	-16.2
34	708	80.07	43.34	43.14	0.461	0.269	0.268	133.4	-16.2
35	717M	74.44	41.54	62.63	0.416	0.232	0.350	139.2	-41.8
36	726	72.35	39.38	67.37	0.403	0.219	0.376	138.3	-49.6
37	736	67.62	35.52	71.08	0.388	0.203	0.408	133.2	-57.7
38	746	55.24	26.06	71.08	0.362	0.171	0.466	118.6	-66.2
39	823	13.22	7.40	75.87	0.136	0.076	0.786	15.9	-85.2

U=D50 96.63 100.00 81.17 0.347 0.359 0.359 0.0 0.0 0.0 0.0
 $a^* = P_{50} n_0 P_n n_0 [(b_{21} - b_{22})x + (b_{22} - b_{23})y + b_{23}] = 1.4(3.075x - 2.570y - 0.0960)y$
 $b^* = P_{50} n_0 P_n n_0 [(b_{31} - b_{32})x + (b_{32} - b_{33})y + b_{33}] = +0.5(1.9906x + 3.8617y - 2.4046)y$

DE690-3N

CIE10 tristimulus values, chromatic values, and putities ($n=1,4, n_0=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities				nu-purities			
		λ_n	X	Y	Z	x	y	z	
00	376	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21
01	376	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21
02	460	8.89	3.1	-10.02	10.11	277	1.12	-9.58	9.64
03	462	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91
04	462B	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91
05	468	17.92	-1.15	-4.81	4.94	256	-1.34	-4.36	4.56
06	471	24.41	-1.66	-3.37	3.76	243	-1.85	-2.92	3.46
07	473	28.17	-1.80	-2.83	3.36	237	-1.99	-2.39	3.11
08	475	36.37	-1.93	-2.05	2.82	226	-2.12	-1.60	2.66
09	477	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36
10	477C	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36
11	479	53.94	-1.78	-1.18	2.14	213	-1.97	-0.74	2.10
12	480	58.21	-1.71	-1.01	1.99	210	-1.90	-0.56	1.99
13	484	56.42	-1.97	-0.63	2.07	197	-2.16	-0.19	2.17
14	492	56.65	-2.16	-0.16	2.17	184	-2.35	0.28	2.37
15	503	57.40	-2.22	0.14	2.22	176	-2.41	0.58	2.48
16	512G	58.45	-2.19	0.26	2.20	173	-2.38	0.71	2.48
17	521	60.61	-2.09	0.37	2.12	169	-2.28	0.81	2.42
18	531	64.47	-1.87	0.44	1.92	166	-2.06	0.89	2.25
19	541	73.93	-1.41	0.44	1.82	162	-1.60	0.89	1.83
20	563	92.59	0.01	0.47	0.47	87	-0.17	0.92	0.93
21	564	91.09	0.07	0.48	0.49	80	-0.10	0.93	0.94
22	565	91.31	0.15	0.49	0.52	72	-0.03	0.94	0.94
23	565Y	89.31	0.15	0.49	0.52	72	-0.03	0.94	0.94
24	568	82.07	0.48	0.50	0.69	46	0.29	0.95	0.99
25	571	75.58	0.78	0.49	0.93	32	0.58	0.94	1.11
26	573	71.82	0.97	0.49	1.09	26	0.78	0.93	1.22
27	577	63.62	1.40	0.47	1.47	18	1.21	0.91	1.52
28	581	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94
29	581R	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94
30	587	46.05	2.50	0.41	2.53	9	2.31	0.86	2.46
31	589	44.04	2.66	0.38	2.69	8	2.47	0.83	2.61
32	692	43.57	2.99	-0.19	3.00	356	2.80	0.24	2.81
33	697	43.34	3.26	-0.82	3.36	345	3.07	-0.37	3.10
34	708	42.59	3.44	-1.24	3.65	340	3.25	-0.79	3.34
35	717M	41.54	3.54	-1.45	3.82	337	3.35	-1.00	3.49
36	726	39.38	3.70	-1.70	4.07	335	3.51	-1.26	3.73
37	736	35.52	3.94	-2.07	4.45	332	3.75	-1.62	4.08
38	746	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21
39	823	7.40	2.34	-11.96	12.19	281	2.15	-11.52	11.72

U=D50 100.00 0.189 -0.447 0.485 292 0.0 0.0 0.0 0.0
 $a^* = P_{50} n_0 P_n n_0 [(b_{21} - b_{22})x + (b_{22} - b_{23})y + b_{23}] = 1.4(3.075x - 2.570y - 0.0960)y$
 $b^* = P_{50} n_0 P_n n_0 [(b_{31} - b_{32})x + (b_{32} - b_{33})y + b_{33}] = +0.5(1.9906x + 3.8617y - 2.4046)y$

DE690-4N

CIE10 tristimulus values, chromatic values, and putities ($n=1,4, n_0=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

D50 illuminant, 2 degree observer, standard observer, tristimulus values (x̄,ȳ,z̄) = 100, 1.00, 1.00, color by no. range.											
no.	O	tristimulus values and chromaticities						nu-chromatic values			
		λ_n	X	Y	Z	x	y	z	A_m	B_m	C_m $H_{AB,m}$
00	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2	10.8	122.7	365
01	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4	-16.2	134.4	353
02	708	75.07	42.59	56.88	0.430	0.244	0.325	138.4	-33.8	142.5	346
03	717	74.44	41.54	62.63	0.416	0.232	0.350	139.2	-41.8	145.3	343
04	726	72.35	39.38	67.37	0.403	0.219	0.376	138.3	-49.6	146.6	340
05	736M	67.62	35.52	71.08	0.388	0.203	0.408	133.2	-57.7	145.2	336
06	746	55.24	26.06	71.08	0.362	0.171	0.466	118.6	-66.2	135.9	330
07	823	13.22	7.40	75.87	0.136	0.076	0.786	15.9	-85.2	86.7	280
08	460	13.26	8.89	77.33	0.133	0.089	0.777	10.0	-85.2	85.8	276
09	462	13.28	10.68	78.42	0.129	0.104	0.765	2.9	-84.4	84.5	272
10	462B	13.28	10.68	78.42	0.129	0.104	0.765	2.9	-84.4	84.5	272
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-24.0	-78.1	81.8	252
12	471B	14.70	24.41	80.73	0.122	0.203	0.673	-45.2	-71.4	84.5	237
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-56.2	-67.3	87.7	230
14	475	18.32	36.37	81.08	0.134	0.267	0.597	-77.1	-58.5	96.7	217
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5	-49.1	106.5	207
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5	-49.1	106.5	207
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-106.4	-39.9	116.6	200
18	480C	30.64	58.21	79.19	0.182	0.346	0.471	-111.1	-33.1	115.9	196
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-122.2	-10.8	122.7	185
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-133.4	16.2	134.4	173
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-138.4	33.8	142.5	166
22	512	22.19	58.45	18.53	0.223	0.589	0.186	-139.1	41.8	145.3	163
23	521G	24.28	60.61	13.79	0.246	0.614	0.139	-138.2	49.6	146.9	160
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-133.2	57.6	145.1	156
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-118.6	66.2	135.8	150
26	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.8	85.2	86.7	100
27	564	83.37	91.09	3.82	0.467	0.510	0.021	-9.9	85.2	85.8	96
28	565	83.35	89.31	2.74	0.475	0.509	0.015	-2.9	84.4	84.5	91
29	565	83.35	89.31	2.74	0.475	0.509	0.015	-2.9	84.4	84.5	91
30	568	82.96	82.07	0.96	0.499	0.500	0.001	-24.0	78.1	81.8	72
31	57	81.93	75.58	0.4	0.518	0.478	0.002	-45.3	67.3	84.5	63
32	573	81.03	71.82	0.27	0.529	0.469	0.001	-56.3	67.3	87.7	50
33	577	78.31	63.62	0.08	0.551	0.447	0.000	-77.1	58.5	86.6	37
34	581	74.28	54.89	0.01	0.575	0.424	0.000	-94.5	49.1	106.6	27
35	581	74.28	54.89	0.01	0.575	0.424	0.000	-94.5	49.1	106.6	27
36	587R	68.81	46.05	0.00	0.599	0.400	0.000	-106.4	39.9	113.6	20
37	589	67.60	44.04	0.93	0.600	0.391	0.008	-109.1	36.6	115.1	18
38	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2	10.8	122.7	5
39	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4	-16.2	134.4	-6
D50											
$a = 0.961(0.611x_0 + 0.817 - 0.347) + 0.359, 0.359, 0.0, 0.0, 0.0, 0.0$											
$a = p - p_n(b_1 - b_2)x + (b_1 + b_2)y + b_3 y = 1.4(3.075x^2 - 2.570y^2 - 0.0960)y$											

CIEF02 tristimulus values, chromatic values, and putities ($n_e=1,4, n_o=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities					nu-chromatic values				
		X	Y	Z	x	y	A _m	B _m	C _m	A _{Bm} /A _{Bm0}	
00	386	51.50	23.94	74.68	0.343	0.159	0.497	11.1	-7.20	13.24	327
01	386	51.50	23.94	74.68	0.343	0.159	0.497	11.1	-7.20	13.24	327
02	465	12.41	9.58	78.25	0.123	0.095	0.780	3.7	-85.2	85.3	272
03	467	12.45	11.64	78.87	0.120	0.113	0.766	-4.2	-83.5	83.5	267
04	473B	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	-70.3	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	-36.7	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	485	25.36	57.41	57.70	0.180	0.402	0.410	-126.6	-6.4	126.7	182
13	497	23.37	57.50	36.81	0.191	0.492	0.315	-136.8	1.94	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	551	44.95	76.05	5.53	0.355	0.601	0.043	-110.8	74.3	143.4	146
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	568	84.08	93.45	4.02	0.463	0.514	0.022	-15.4	88.7	90.1	99
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007	-3.4	85.9	86.1	87
24	573Y	83.15	79.56	0.38	0.509	0.487	0.002	35.4	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	590R	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	726M	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	11.1	-7.20	13.24	327
39	825	12.38	6.54	76.19	0.130	0.068	0.801	5.8	-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

$$a^* = P_{m0} a_n P_{n0} = \eta_{01} (b_{21} - b_{23}) \times (b_{22} - b_{23}) + b_{23} \gamma = 1.4(3.075x - 2.570y - 0.0960) \gamma$$

$$b^* = P_{m0} a_n P_{n0} = \eta_{01} (b_{31} - b_{33}) \times (b_{32} - b_{33}) + b_{33} \gamma = 0.5(1.9906x + 3.8617y - 2.4046) \gamma$$

DE690-3N

CIEF02 tristimulus values, chromatic values, and putities ($n_e=1,4, n_o=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities					nu-purities				
		X	Y	Z	x	A_m	B_m	C_m	$A_{m0}/A_{m\infty}$	$B_{m0}/B_{m\infty}$	$C_{m0}/C_{m\infty}$
00	386	23.94	4.82	-3.46	5.93	324	4.64	-3.00	5.53	327	
01	386	23.94	4.82	-3.46	5.93	324	4.64	-3.00	5.53	327	
02	465	9.58	5.57	-9.36	9.37	273	0.39	-8.90	8.90	272	
03	467	11.64	-1.18	-7.64	7.64	268	-0.36	-7.18	7.19	267	
04	473B	20.43	-1.54	-4.10	4.38	249	-1.72	-3.64	4.03	244	
05	475	24.19	-1.75	-3.36	3.79	242	-1.93	-2.90	3.49	236	
06	479	36.91	-2.01	-1.98	2.82	224	-2.19	-1.52	2.66	214	
07	479	36.91	-2.01	-1.98	2.82	224	-2.19	-1.52	2.66	214	
08	481	46.03	-1.97	-1.46	2.45	216	-2.15	-1.00	2.37	205	
09	481	46.03	-1.97	-1.46	2.45	216	-2.15	-1.00	2.37	205	
10	483C	55.03	-1.84	-1.12	2.15	211	-2.02	-0.66	2.13	198	
11	484	57.21	-1.81	-1.03	2.09	209	-1.99	-0.57	2.07	196	
12	485	57.41	-2.02	-0.57	2.10	195	-2.20	-0.11	2.20	182	
13	497	57.50	-2.19	-1.02	2.20	183	-2.37	0.33	2.40	171	
14	505	58.03	-2.25	0.14	2.26	176	-2.43	0.60	2.51	165	
15	512	58.69	-2.25	0.26	2.26	173	-2.43	0.72	2.54	163	
16	521G	59.91	-2.20	0.36	2.23	170	-2.38	0.82	2.52	160	
17	524	62.97	-2.08	0.37	2.11	169	-2.26	0.83	2.41	159	
18	539	66.55	-1.84	0.49	1.91	164	-2.02	0.95	2.24	154	
19	551	76.05	-1.27	0.51	1.37	157	-1.45	0.97	1.75	146	
20	568	93.45	0.01	0.49	0.49	88	-0.16	0.95	0.96	99	
21	568	93.45	0.01	0.49	0.49	88	-0.16	0.95	0.96	99	
22	568	93.45	0.01	0.49	0.49	88	-0.16	0.95	0.96	99	
23	570Y	88.35	0.23	0.51	0.56	65	0.05	0.97	0.97	87	
24	573Y	79.56	0.62	0.50	0.80	38	0.44	0.96	1.06	65	
25	575	75.80	0.80	0.49	0.94	31	0.62	0.95	1.14	56	
26	580	63.07	1.46	0.46	1.54	17	1.28	0.92	1.58	35	
27	580	63.07	1.46	0.46	1.54	17	1.28	0.92	1.58	35	
28	585	53.96	2.02	0.44	2.07	12	1.84	0.90	2.05	26	
29	590R	44.96	2.66	0.41	2.69	8	2.48	0.87	2.63	19	
30	592	42.78	2.85	0.36	2.88	7	2.67	0.82	2.80	17	
31	694	42.58	3.16	-0.25	3.17	355	2.98	0.20	2.98	3	
32	702	42.49	3.40	-0.86	3.51	345	3.22	-0.40	3.25	352	
33	710	41.96	3.55	-1.24	3.77	340	3.37	-0.78	3.46	346	
34	717	41.30	3.64	-1.43	3.92	338	3.46	-0.97	3.60	344	
35	726M	40.08	3.75	-1.63	4.09	336	3.57	-1.17	3.76	341	
36	729	37.02	4.04	-1.81	4.43	335	3.86	-1.35	4.09	340	
37	744	33.43	4.22	-2.29	4.81	331	4.04	-1.83	4.44	335	
38	756	23.94	4.82	-3.46	5.93	324	4.64	-3.00	5.53	327	
39	825	6.54	2.59	-13.66	13.91	280	2.41	-13.21	13.42	280	

$U=D50$ 100.00, 0.180 -0.459, 0.493, 291 0.0 0.0 0.0 0.0

$$a^* = P_{m0} a_n P_{n0} = \eta_{01} (b_{21} - b_{23}) \times (b_{22} - b_{23}) + b_{23} \gamma = 1.4(3.075x - 2.570y - 0.0960) \gamma$$

$$b^* = P_{m0} a_n P_{n0} = \eta_{01} (b_{31} - b_{33}) \times (b_{32} - b_{33}) + b_{33} \gamma = 0.5(1.9906x + 3.8617y - 2.4046) \gamma$$

DE690-4N

CIEF02 tristimulus values, chromatic values, and putities ($n_e=1,4, n_o=0.5$).

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

no.	λ_n	C tristimulus values and chromaticities						nu-chromatic values					
		X	Y	Z	x	y	z	A_m	B_m	C_m	A_{m0}	B_{m0}	C_{m0}
00	592	67.61	42.78	1.14	0.606	0.383	0.010	114.4	35.4	119.8	377		
01	694	71.10	42.58	22.52	0.522	0.312	0.165	126.9	8.7	127.2	363		
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	-40.7	148.7	344		
05	726M	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	11.1	-7.20	13.24	327		
09	825	12.38	6.54	76.19	0.130	0.068	0.801	5.8	-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	12.45	11.64	78.87	0.120	0.113	0.766	-4.2	-83.5	83.5	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	-70.3	84.5	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	27.52	55.03	80.21	0.169	0.338	0.492	-111.3	-36.7	117.2	198		
19	488	28.85	57.21	79.07	0.174	0.346	0.478	-114.1	-33.0	118.8	196		
20	499	36.41	66.41	70.70	0.180	0.388	0.410	-126.8	19.9	118.0	182		
21	497	22.33	37.50	86.81	0.191	0.492	0.315	-136.8	19.4	138.1	171		
22	505	21.31	58.03	84.30	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	150.2	159		
26	539	30.29	66.55	7.57	0.290	0.637	0.072	-135.0	63.6	149.3	154		
27	551	44.95	76.05	5.53	0.355	0.601	0.043	-110.8	74.3	133.4	146		
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	0.474	0.512	0.011	-3.4	87.6	87.7	92		
31	574	84.00	88.35	1.33	0.483	0.508	0.007	-4	85.9	86.1	87		
32	573	84.53	88.35	0.38	0.488	0.508	0.007	-5.4	84.8	85.0	85		
33	575	82.64	75.80	0.24	0.520	0.478	0.001	-47.2	72.2	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	39.1	118.3	19		
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=D=50		96.46	100.00	82.22	0.346	0.358	0.358	0.0	0.0	0.0	0		

CIEF10 tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.											
no.	O	tristimulus values and chromaticities			nu-chromatic values						
		X	Y	Z	x	y	λ_m	λ_B	λ_{Cm}	λ_{Bm}	
00	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	130.1	327
01	455	13.14	6.61	74.65	0.139	0.070	0.790	18.8	-84.7	86.7	282
02	460	13.28	9.49	77.94	0.131	0.094	0.773	7.6	-85.3	85.6	275
03	462	13.30	11.32	78.97	0.128	0.109	0.762	0.4	-84.4	84.4	270
04	464B	13.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7	83.1	264
05	468	13.69	18.67	80.47	0.121	0.165	0.713	-27.0	-77.6	82.2	250
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-48.4	-70.5	85.5	235
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4	89.1	228
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-57.6	98.5	215
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3	108.3	206
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-43.7	112.3	202
11	479	25.98	58.60	78.68	0.182	0.349	0.468	-113.1	-32.1	117.5	195
12	479	29.07	56.88	80.12	0.175	0.340	0.483	-110.8	-36.1	116.6	198
13	484	25.63	56.72	59.32	0.180	0.400	0.481	-123.7	-10.0	124.1	184
14	492	23.27	56.85	36.73	0.192	0.490	0.316	-134.8	17.9	136.0	172
15	503	21.57	57.63	22.95	0.211	0.564	0.224	-139.3	35.6	143.8	165
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	43.5	146.3	162
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	51.2	147.4	159
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	59.4	145.0	155
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-109.4	70.4	130.1	147
20	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	84.6	86.7	102
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	85.3	85.6	95
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	84.3	84.3	90
23	566Y	83.39	86.54	1.34	0.486	0.505	0.007	7.8	82.7	83.1	84
24	568	83.04	81.32	0.56	0.503	0.493	0.003	27.0	77.6	82.2	70
25	571	82.00	74.78	0.23	0.522	0.476	0.001	48.4	70.5	85.5	55
26	573	81.10	71.03	0.14	0.532	0.466	0.000	59.3	66.4	89.1	48
27	577	78.40	62.93	0.05	0.554	0.445	0.000	79.9	57.6	98.5	35
28	581	74.33	54.29	0.02	0.577	0.421	0.000	96.9	48.3	108.3	26
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	103.4	43.7	112.3	22
30	591	66.15	41.39	2.33	0.602	0.376	0.021	113.1	32.1	117.5	15
31	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1	116.6	18
32	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9	124.1	4
33	697	74.36	41.34	44.30	0.459	0.266	0.273	134.8	-17.9	136.0	352
34	708	75.16	42.36	58.08	0.428	0.241	0.330	139.3	-35.6	143.8	345
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	139.7	-43.5	146.3	342
36	726	71.27	39.11	68.41	0.401	0.217	0.380	138.2	-51.2	147.4	335
37	737	66.83	34.86	71.99	0.384	0.200	0.414	132.2	-59.4	145.0	335
38	750	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	130.1	327
39	820	13.14	6.61	74.65	0.139	0.070	0.790	18.8	-84.7	86.7	282

U=D50 96.74 100.00 0.93 -0.438 0.348 0.360 0.360 0.0 0.0 0.0 0.0

$a^* = P_{90} n_e n_h n_b [(b_{21} - b_{22})x + (b_{22} - b_{23})y + b_{23}] / y = 1.4(3.075x - 2.570y - 0.0960) / y$
 $b^* = P_{90} n_e n_h n_b n_b [(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}] / y = 0.5(1.9906x + 3.8617y - 2.4046) / y$

DE690-3N

CIEF10 tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by wavelength.										
no.	O	C	n-purities				nu-purities			
			P_{cyan}	P_{blue}	P_{red}	h_{blue}	P_{cyan}	P_{blue}	P_{red}	h_{blue}
00	380	25.78	4.44	-3.17	5.46	324	4.24	-2.73	5.05	327
01	455	6.61	1.04	-13.26	13.60	282	2.84	-12.81	13.12	282
02	460	9.49	1.00	-9.43	9.48	276	0.80	-8.99	9.02	275
03	462	11.32	0.23	-7.90	7.90	271	0.03	-7.45	7.45	270
04	464B	13.45	-0.39	-6.60	6.61	266	-0.58	-6.15	6.18	264
05	468	18.67	-1.25	-4.60	4.67	254	-1.44	-4.15	4.40	250
06	471	25.21	-1.72	-3.24	3.67	241	-1.91	-2.80	3.39	235
07	472	28.96	-1.85	-2.74	3.31	235	-2.05	-2.29	3.07	228
08	475	37.06	-1.96	-2.00	2.80	225	-2.15	-1.55	2.65	215
09	477	45.70	-1.92	-1.50	2.44	217	-2.12	-1.05	2.37	206
10	477C	50.08	-1.87	-1.31	2.29	215	-2.06	-0.87	2.24	202
11	479	56.60	-1.73	-0.99	2.00	209	-1.93	-0.54	2.00	195
12	479	56.38	-1.77	-1.08	2.07	211	-1.96	-0.64	2.06	198
13	484	56.72	-1.98	-0.62	0.08	197	-1.18	-0.17	2.18	184
14	492	56.85	-2.17	-0.12	2.18	183	-2.37	0.31	2.39	172
15	503	57.63	-2.22	0.17	2.23	175	-2.41	0.61	2.49	165
16	511G	58.68	-2.18	0.29	2.20	172	-2.38	0.74	2.49	162
17	521	60.88	-2.07	0.39	2.11	169	-2.27	0.84	2.42	159
18	532	65.12	-1.83	0.46	1.89	165	-2.03	0.91	2.22	155
19	545	74.21	-1.28	0.50	1.37	158	-1.47	0.94	1.75	147
20	563	93.38	-0.00	0.46	0.46	90	-0.20	0.90	0.92	102
21	564	90.50	0.10	0.49	0.50	77	-0.08	0.94	0.94	95
22	565	88.67	0.18	0.50	0.54	69	-0.00	0.95	0.95	90
23	566Y	86.54	0.28	0.51	0.58	60	0.09	0.95	0.96	84
24	568	81.32	0.52	0.50	0.73	44	0.33	0.95	1.01	70
25	571	74.78	0.84	0.49	0.97	30	0.64	0.94	1.14	55
26	573	71.03	1.03	0.48	1.14	25	0.83	0.93	1.25	48
27	577	62.93	1.46	0.46	1.53	17	1.27	0.91	1.56	35
28	581	54.29	1.97	0.44	2.02	12	1.78	0.89	1.99	26
29	584R	49.91	2.26	0.43	2.30	10	2.07	0.87	2.25	22
30	591	41.39	2.92	0.32	2.94	6	2.73	0.77	2.84	15
31	588	43.61	2.73	0.38	2.76	7	2.54	0.82	2.67	18
32	689	43.27	3.05	-0.21	3.06	355	2.86	0.23	2.86	4
33	697	43.14	3.31	-0.86	3.43	345	3.12	-0.41	3.15	352
34	708	42.36	3.48	-1.28	3.71	339	3.29	-0.84	3.39	345
35	716M	41.31	3.57	-1.50	3.87	337	3.38	-1.05	3.54	342
36	726	39.11	3.73	-1.75	4.12	334	3.53	-1.31	3.77	339
37	737	34.86	3.98	-2.15	4.53	331	3.79	-1.70	4.15	335
38	750	25.78	4.44	-3.17	5.46	324	4.24	-2.73	5.05	327
39	820	6.61	3.04	-13.26	13.60	282	2.84	-12.81	13.12	282

U=D50 100.00 0.93 -0.445 0.486 293 0.0 0.0 0.0 0.0

$a^* = P_{90} n_e n_h n_b [(b_{21} - b_{22})x + (b_{22} - b_{23})y + b_{23}] / y = 1.4(3.075x - 2.570y - 0.0960) / y$
 $b^* = P_{90} n_e n_h n_b n_b [(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}] / y = 0.5(1.9906x + 3.8617y - 2.4046) / y$

DE690-4N

CIEF10 tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).

CIE1931 tristimulus values, chromatic values, and putities ($n_e=1,4, n_e=0.5$).											
Normalized Ostwald (O) tristimulus values ($Y_e=100$), ordered by hue angle.											
no.	O	Cristimulus values and chromaticities						nu-chromatic values			
		λ_e	X	Y	Z	x	y	A_{380}	A_{430}	C_{480}	A_{490}
00	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1	116.6	378
01	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9	124.1	364
02	697	74.36	41.34	44.30	0.459	0.266	0.273	134.8	-17.9	136.0	352
03	708	75.16	42.36	58.08	0.428	0.241	0.330	139.3	-35.6	143.8	345
04	716	74.43	41.31	63.78	0.414	0.230	0.355	139.7	-43.5	146.3	342
05	726M	72.17	39.11	68.41	0.401	0.217	0.380	138.2	-51.2	147.4	339
06	737	66.83	34.86	71.99	0.384	0.200	0.414	132.2	-59.4	145.0	335
07	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	140.1	327
08	414	44.30	26.66	79.74	0.317	0.159	0.522	98.8	-84.7	136.0	315
09	460	33.82	19.49	77.94	0.131	0.094	0.773	7.6	-85.3	86.6	275
10	462	33.30	11.32	78.97	0.128	0.109	0.762	0.4	-84.4	84.4	270
11	464	33.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7	83.1	264
12	468	33.69	18.67	80.47	0.121	0.165	0.713	-27.0	-77.6	82.2	250
13	471	34.73	25.21	80.80	0.121	0.230	0.669	-48.4	-70.5	85.5	235
14	472	35.63	28.96	80.89	0.124	0.238	0.644	-59.3	-66.4	89.1	228
15	475	38.13	37.06	80.98	0.134	0.271	0.593	-79.9	-57.6	98.5	215
16	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3	108.3	206
17	477	24.94	50.08	81.01	0.159	0.320	0.519	-103.1	-43.7	112.3	202
18	479C	30.58	58.60	78.68	0.182	0.349	0.468	-113.4	-32.1	117.5	195
19	479	29.07	56.38	80.12	0.175	0.340	0.483	-110.8	-36.1	116.6	198
20	480	25.63	56.37	59.32	0.180	0.400	0.418	-123.7	-10.0	124.1	184
21	482	22.37	56.83	59.32	0.180	0.400	0.418	-123.7	-10.0	124.1	184
22	503	22.57	63.63	22.95	0.211	0.564	0.224	-139.3	35.6	143.8	165
23	511C	22.30	58.68	17.25	0.227	0.597	0.177	-139.7	43.5	146.3	162
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	51.2	147.4	159
25	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	59.4	145.0	155
26	545	43.82	74.21	6.37	0.352	0.596	0.051	-109.4	70.4	130.1	147
27	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	84.6	86.7	102
28	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	85.3	85.6	95
29	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	84.3	84.3	90
30	566	83.39	86.54	1.34	0.486	0.505	0.007	7.8	82.7	83.1	84
31	568	83.04	81.32	0.56	0.503	0.493	0.003	27.0	77.6	82.2	70
32	573	82.10	74.08	0.23	0.522	0.476	0.001	48.4	70.5	85.5	55
33	571C	81.00	71.03	0.14	0.532	0.466	0.000	59.3	66.4	89.1	48
34	580	78.40	69.93	0.05	0.544	0.445	0.000	66.4	66.4	98.5	35
35	581C	74.33	54.29	0.02	0.577	0.421	0.000	96.9	48.3	108.3	26
36	584R	71.79	49.91	0.01	0.589	0.410	0.000	103.4	43.7	112.3	21
37	591	66.15	41.39	2.33	0.602	0.376	0.021	113.1	32.1	117.5	15
38	588	67.67	43.61	0.91	0.603	0.388	0.008	110.9	36.1	116.6	378
39	689	71.10	43.27	21.71	0.522	0.317	0.159	123.7	9.9	124.1	364
U=0.50		96.74	100.00	81.03	0.348	0.360	0.360	0.0	0.0	0.0	0

R17M tristimulus values, chromatic values, and putities ($n_p=1,4, n_c=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_p=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($V_{\lambda_n} = 100$), ordered by wavelength.											
no.	O	tristimulus values and chromaticities				nu-chromatic values					
	λ_n	Y	X	Y	X	Y	λ_m	B_m	C_m	A_{Bm}	A_{Bm}
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	76.00	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	-59.5	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	26.13	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	-114.1	1.1	114.1	179
12	500	20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174
13	509	19.04	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	-38.4	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	73.75	76.83	2.11	0.481	0.504	0.013	-12.3	77.5	78.2	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	714R	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	815	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307
11=050	403	100.00	70.83	0.342	0.363	0.363		0.0	0.0		

U=D50 94.03 100.00 80.83 0.342 0.363 0.363 0.0 0.0 0.0 0.0

R17M tristimulus values, chromatic values, and putities ($n_p=1,4, n_c=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_p=100$), ordered by hue angle.

DE90-3N

$b_{-20} = n_0 b_0 n_0 (b_{11} - b_{13} x^2 - b_{23} y^2 + b_{33} |z|) = 0.5(-1.9906x + 3.617y - 2.4046y)$

R17M tristimulus values, chromatic values, and putities ($n_0=1.4$, $n_0=0.5$).

Normalized *Oswald (O)* tristimulus values ($Y_w=100$), coded by hue angle.

no.	O	C	tristimulus values and chromaticities				nu-chromatic values				
			X	Y	Z	x	y	λ_m	B_m	C_m	A_{Bm}
00	600		67.89	51.09	15.38	0.505	0.380	114	86.2	27.0	90.4 377
01	705		73.42	47.68	42.28	0.449	0.291	258	118.7	-10.4	119.2 354
02	714		74.62	46.49	52.41	0.430	0.267	302	126.9	-24.2	129.2 349
03	716		72.19	43.45	52.37	0.429	0.258	311	128.3	-27.2	131.2 348
04	723		69.37	39.63	56.82	0.418	0.238	342	130.6	-36.4	135.5 344
05	735M		64.03	34.59	64.49	0.392	0.212	395	126.5	-50.4	136.2 338
06	743		50.84	23.58	64.46	0.366	0.169	464	113.4	-60.5	128.6 331
07	815		26.22	10.37	70.14	0.245	0.097	657	60.4	-77.6	98.3 307
08	463		19.81	9.03	72.37	0.195	0.089	715	38.4	-80.5	89.3 295
09	465		19.87	11.18	74.25	0.188	0.106	705	30.2	-80.3	85.8 290
10	470		20.04	16.46	77.00	0.176	0.145	678	10.4	-77.5	78.2 277
11	474		20.76	23.15	78.71	0.169	0.188	641	-12.2	-71.9	72.9 260
12	477B		22.69	31.32	79.75	0.169	0.234	596	-35.5	-64.0	73.2 240
13	479		24.27	35.77	80.07	0.173	0.255	571	-45.9	-59.5	75.2 232
14	481		28.86	45.22	80.48	0.186	0.292	520	-62.8	-49.9	80.3 218
15	482		30.21	48.30	79.14	0.191	0.306	501	-68.8	-45.0	82.2 213
16	487		26.13	48.90	65.44	0.186	0.348	465	-86.2	-27.0	90.4 197
17	496		20.48	50.06	44.06	0.178	0.436	384	-114.1	1.1	114.1 179
18	500C		20.60	52.31	38.55	0.184	0.469	345	-118.7	10.4	119.2 174
19	509		19.04	53.50	28.42	0.191	0.528	280	-126.9	24.2	129.2 169
20	511		21.83	56.54	28.46	0.204	0.529	266	-128.3	27.2	131.2 168
21	518		24.65	60.36	24.01	0.226	0.553	220	-130.6	36.4	135.5 164
22	530		29.99	65.40	16.35	0.268	0.585	146	-126.5	50.4	136.1 158
23	538G		43.18	76.41	16.37	0.317	0.562	120	-113.4	60.5	128.6 151
24	553		67.80	89.62	10.69	0.403	0.533	063	-60.4	77.6	98.3 127
25	557		74.22	90.96	8.45	0.427	0.523	048	-38.4	80.5	89.3 115
26	558		74.15	88.81	6.58	0.437	0.523	038	-30.2	80.3	85.8 110
27	561		73.98	83.52	3.84	0.458	0.517	023	-10.4	77.4	78.1 97
28	565		73.75	76.83	2.11	0.481	0.510	013	-12.3	77.5	78.2 80
29	570		71.33	68.67	1.09	0.505	0.486	007	35.5	64.0	73.2 60
30	572		69.75	64.22	0.76	0.517	0.476	005	45.9	59.5	75.2 52
31	578		65.16	54.77	0.35	0.541	0.455	002	62.8	49.9	80.3 38
32	581Y		63.81	51.69	1.69	0.544	0.441	014	68.8	45.0	82.2 33
33	600		67.89	51.09	15.38	0.505	0.380	114	86.2	27.0	90.4 17
34	705		73.42	47.68	42.28	0.449	0.291	258	118.7	-10.4	119.2 -5
U=50			94.03	100.00	80.83	0.342	0.363	063	0.0	0.0	0.0 0

U=D50 94.03 100.00 80.83 0.342 0.363 0.363 0.0 0.0 0.0 0.0

R17M tristimulus values, chromatic values, and putities ($n_p=1,4, n_c=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_p=100$), ordered by wavelength.

$b = \rho_{un} - n_b \rho_b = n_b [(b_{31} - b_{33})x + (b_{32} - b_{33})y + b_{33}] / y = +0.5(1.9906x + 3.8611/y - z, 4046) / y$										
DE690-7N										
DE600-7D, schawtl=2, xcolor=4(D17M)										

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized *Ostwald* (*O*) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities						Au-thermocouple			
		X	Y	Z	x	y	z	A_{λ}	B_{λ}	C_{λ}	$h_{\lambda}(\text{nm})$
00	375	52.09	25.14	67.62	0.359	0.173	0.466	112.5	-7.67	12.88	330
01	444	27.16	9.33	63.62	0.260	0.089	0.469	68.7	-76.0	10.24	312
02	463	21.19	9.55	72.48	0.205	0.092	0.702	42.3	-80.3	8.90	297
03	465	21.27	11.71	74.36	0.198	0.109	0.692	34.1	-80.1	8.71	293
04	470B	21.43	17.01	77.11	0.185	0.147	0.667	14.3	-77.2	7.86	280
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-8.5	-71.7	7.22	263
06	476	22.83	27.59	79.42	0.175	0.212	0.611	-20.3	-68.0	7.09	253
07	479	25.44	36.25	80.19	0.179	0.255	0.565	-42.5	-59.3	7.30	234
08	481	28.12	45.56	80.60	0.185	0.285	0.526	-62.5	-56.5	7.56	216
09	481	29.88	45.66	80.60	0.191	0.292	0.516	-59.8	-49.8	7.88	219
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-66.0	-44.8	7.98	214
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-90.0	-20.9	9.24	193
12	496	20.67	50.20	44.12	0.179	0.436	0.383	-110.6	1.2	11.06	179
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-118.3	10.4	11.88	174
14	505	20.59	54.40	33.36	0.190	0.500	0.308	-124.1	18.7	12.55	171
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-130.5	32.0	13.43	166
16	522G	23.24	59.28	19.95	0.226	0.578	0.194	-131.6	40.5	13.77	162
17	530	29.26	65.19	16.37	0.264	0.588	0.147	-128.1	50.3	13.76	158
18	535	33.27	68.88	13.33	0.295	0.593	0.102	-125.5	55.5	13.76	154
19	552	66.62	90.66	13.33	0.390	0.531	0.078	-68.6	76.0	12.04	130
20	557	72.58	90.44	8.47	0.423	0.527	0.049	-42.2	80.3	9.80	117
21	558	72.51	88.28	6.59	0.433	0.527	0.039	-34.1	80.1	8.70	113
22	561	72.35	82.98	3.84	0.454	0.521	0.024	-14.2	77.2	7.85	100
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	8.5	71.6	7.21	83
24	567	70.94	72.40	1.53	0.489	0.499	0.010	20.4	67.9	7.09	73
25	572	68.33	63.74	0.76	0.514	0.479	0.005	42.5	59.3	7.30	54
26	575	66.36	59.11	0.52	0.526	0.469	0.004	51.9	54.6	7.53	46
27	578	63.59	54.40	0.29	0.538	0.458	0.004	69.8	49.8	7.78	39
28	582	60.64	49.38	0.19	0.549	0.445	0.014	88.6	44.8	8.08	34
29	614R	68.65	50.90	20.17	0.491	0.364	0.144	90.0	20.9	9.24	13
30	701	73.13	49.79	36.82	0.457	0.311	0.230	110.6	-1.2	11.06	359
31	705	73.15	47.60	42.34	0.448	0.291	0.259	118.4	-10.4	11.88	354
32	710	73.19	45.95	47.59	0.438	0.275	0.285	124.1	-18.7	12.55	351
33	720	73.30	44.17	56.94	0.420	0.253	0.326	130.5	-32.0	13.44	346

$$b=p_{bn}=n_b p_b=n_{bl}[(b_{31}-b_{33})x+(b_{32}-b_{33})y+b_{33}]/y=+0,5(1,9906x+3,8617y-2,4046)/y$$

E690-3N

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.

no.	α	λ	n-purities					nu-purities				
			Y	p_{nn}	p_{nn}	p_{nn}	h_{obs}	p_{nn}	p_{nn}	p_{nn}	h_{obs}	
00 375	25.14	-5.4	-2.93	5.41	327	7.36	-4.79	5.12	334			
01 044	93.33	7.43	-8.58	11.36	310	7.36	-8.14	10.98	312			
02 463	9.55	5.40	-8.85	9.93	296	4.43	-8.41	9.51	297			
03 065	11.71	2.99	-7.28	7.87	292	2.92	-6.84	7.44	293			
04 470B	17.01	0.91	-4.98	5.06	280	0.84	-4.54	4.62	280			
05 074	23.68	-0.28	-3.46	3.47	265	-0.35	-3.02	3.04	263			
06 476	27.59	-0.66	-2.90	2.97	257	-0.73	-2.46	2.57	253			
07 479	36.25	-1.10	-2.07	2.35	242	-1.17	-1.63	2.01	234			
08 481	45.66	-1.24	-1.77	2.13	230	-1.31	-1.09	1.77	219			
09 481	45.66	-1.24	-1.52	1.96	230	-1.31	-1.09	1.70	219			
10 482C	47.81	-1.28	-1.36	1.87	226	-1.35	-0.92	1.63	214			
11 488	49.09	-1.76	-0.86	1.96	206	-1.83	-0.42	1.88	193			
12 496	50.20	-2.13	-0.41	2.17	190	-2.20	0.02	2.20	179			
13 500	52.39	-2.18	-0.23	2.20	186	-2.25	0.19	2.26	174			
14 505	54.04	-2.22	-0.09	2.22	182	-2.29	0.34	2.32	171			
15 515	55.82	-2.26	0.13	2.27	176	-2.33	0.57	2.31	166			
16 522G	59.39	-2.14	0.24	2.15	173	-2.21	0.68	2.30	160			
17 530	65.19	-1.89	0.33	1.92	170	-1.96	0.77	2.11	158			
18 532	72.85	-1.43	0.39	1.48	164	-1.50	0.73	2.12	150			
19 550	90.66	-0.68	0.39	0.79	149	-0.75	0.83	1.13	132			
20 557	90.44	-0.39	0.44	0.60	131	-0.46	0.88	1.00	117			
21 558	98.28	-0.31	0.46	0.56	124	-0.38	0.90	0.98	113			
22 561	82.98	-0.10	0.40	0.53	101	-0.17	0.93	0.94	80			
23 565Y	76.31	-0.18	0.50	0.53	69	-0.11	0.93	0.94	83			
24 567	72.40	0.35	0.50	0.61	54	0.28	0.93	0.98	73			
25 572	63.74	0.73	0.49	0.88	33	0.66	0.93	1.14	54			
26 575	59.11	0.94	0.48	1.06	27	0.87	0.92	1.27	46			
27 578	54.33	1.17	0.47	1.26	22	1.10	0.91	1.43	35			
28 581	49.11	0.95	0.48	1.02	17	0.98	0.87	1.34	28			
29 614R	50.90	1.84	-0.02	1.84	359	1.76	0.41	1.81	313			
30 701	49.79	2.29	-0.46	2.33	348	2.22	-0.02	2.22	359			
31 705	47.60	2.55	-0.65	2.64	345	2.48	-0.22	2.49	354			
32 710	45.95	2.77	-0.84	2.89	343	2.70	-0.40	2.73	350			
33 720	44.17	3.02	-1.16	3.24	338	2.95	-0.72	3.04	346			
34 727	40.59	3.31	-1.43	3.61	336	3.24	-0.99	3.39	342			
35 735M	34.79	3.75	-1.88	4.20	333	3.68	-1.44	3.95	338			
36 745	25.14	4.54	-2.93	5.41	327	4.47	-2.49	5.12	330			
37 809	9.33	7.43	-8.58	11.36	310	7.36	-8.14	10.98	312			
U=D50	100.00	0.070	-0.438	0.444	279	0.0	0.0	0.0	312			

$$b=p_{bn}=n_b p_b=n_b[(b_{31}-b_{33})x+(b_{32}-b_{33})y+b_{33}]/y=+0,5(1,9906x+3,8617y-2,4046)/$$

DE690-4N

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized *Ostwald* (*O*) tristimulus values ($Y_w=100$), ordered by hue angle.

No.	O	tristimulus values and chromaticities						nu-chromatic values			
		X	Y	Z	x	y	z	ν_R	ν_B	ν_G	ν_M
00	614	68.65	50.90	20.17	0.491	0.364	0.144	10.0	-20.9	92.4	373
01	701	73.11	49.79	36.82	0.457	0.311	0.230	91.6	-1.2	110.6	359
02	705	73.15	47.60	42.34	0.448	0.291	0.259	118.4	-10.4	118.8	354
03	710	73.19	45.95	47.59	0.438	0.275	0.285	124.1	-18.7	125.5	351
04	720	73.30	44.17	56.94	0.420	0.253	0.326	130.5	-32.0	134.4	346
05	727M	70.43	40.59	61.00	0.409	0.235	0.354	131.6	-40.5	137.7	342
06	735	65.51	34.79	64.68	0.393	0.212	0.394	128.1	-50.3	137.7	338
07	375	52.09	25.14	67.62	0.359	0.173	0.466	112.5	-62.7	128.8	330
08	675	67.07	39.39	67.07	0.400	0.267	0.333	124.1	-30.3	137.7	330
09	463	21.19	9.55	72.48	0.205	0.092	0.702	42.3	-80.3	90.8	297
10	465	21.27	11.71	74.36	0.198	0.109	0.692	34.1	-80.1	87.1	293
11	470	21.43	17.01	77.11	0.185	0.147	0.667	34.3	-77.2	78.6	280
12	474B	22.09	23.68	78.83	0.177	0.190	0.632	-8.5	-71.7	72.2	263
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-20.3	-68.0	70.9	253
14	479	25.44	36.25	80.19	0.179	0.255	0.565	-42.5	-59.3	73.0	234
15	480	27.41	40.88	80.43	0.184	0.274	0.540	-51.9	-54.6	75.4	226
16	481	29.88	45.86	80.60	0.191	0.292	0.516	-59.8	-49.7	77.8	219
17	482	31.14	48.71	79.26	0.195	0.306	0.498	-66.0	-44.8	79.8	214
18	488C	25.13	49.09	60.78	0.186	0.363	0.450	-90.0	-20.9	92.4	193
19	506	26.67	50.20	44.12	0.179	0.436	0.383	-110.6	1.2	110.6	179
20	510	28.61	53.39	38.61	0.188	0.469	0.345	-124.1	17.5	124.1	174
21	505	20.59	54.04	33.36	0.190	0.500	0.308	-124.7	18.7	125.5	171
22	515	20.37	55.82	24.00	0.203	0.557	0.239	-130.5	32.0	134.3	166
23	522G	23.24	59.39	19.95	0.226	0.578	0.194	-131.6	40.5	137.7	162
24	530	29.26	65.19	16.37	0.264	0.588	0.147	-128.1	50.3	137.6	158
25	540	41.69	74.85	13.32	0.321	0.576	0.102	-112.5	62.7	128.8	150
26	552	52.62	90.66	13.33	0.390	0.531	0.078	-68.2	76.0	102.4	132
27	557	72.58	90.44	8.47	0.423	0.527	0.049	-42.6	80.3	90.8	117
28	558	72.51	88.28	6.59	0.433	0.527	0.039	-34.1	80.1	87.0	113
29	561	72.25	82.98	3.84	0.454	0.521	0.024	-14.2	77.2	78.5	100
30	565	71.69	76.31	2.11	0.477	0.508	0.014	8.5	71.6	72.1	83
31	567	70.94	72.40	1.53	0.489	0.499	0.010	24.9	67.9	70.9	79
32	572Z	66.36	69.39	0.76	0.515	0.486	0.004	54.3	54.3	73.0	63
33	578	66.36	69.31	0.52	0.506	0.469	0.004	51.9	54.6	7	46
34	578	63.90	54.33	0.35	0.538	0.458	0.002	59.8	49.7	77.8	39
35	581	62.64	51.28	0.19	0.541	0.443	0.014	66.0	44.8	79.8	34
36	614	68.65	50.90	20.17	0.491	0.364	0.144	10.0	-20.9	92.4	373
37	701	73.11	49.79	36.82	0.457	0.311	0.230	91.6	-1.2	110.6	0

$$b = p_{an} = n_a \cdot p_a = n_a [(b_{21} - b_{23})x + (b_{22} - b_{23})y + b_{23}] / y = 1,4(3,0757x - 2,5702y - 0,0960) / y$$

1000 MW

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized *Ostwald* (*O*) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	n-purities					nu-purities				
		Y	P_{an}	P_{un}	P_m	h_{abs}	P_{an}	P_{un}	P_m	h_{abs}	
00	614	50.90	1.84	-0.02	1.84	359	1.76	0.41	1.81	975	
01	701	49.79	2.29	-0.46	2.33	348	2.22	-0.02	2.22	953	
02	705	47.60	2.55	-0.65	2.64	345	2.48	-0.22	2.49	954	
03	710	45.95	2.77	-0.84	2.89	343	2.70	-0.40	2.73	951	
04	720	44.17	3.02	-1.16	3.24	338	2.95	-0.72	3.04	946	
05	727M	40.59	3.31	-1.43	3.61	336	3.24	-0.99	3.39	942	
06	735	34.79	3.75	-1.88	4.20	333	3.68	-1.44	3.95	938	
07	375	25.15	4.54	-2.93	5.41	327	4.47	-2.49	5.1	930	
08	375	25.15	4.54	-2.93	5.41	327	4.47	-2.49	5.1	930	
09	463	9.55	5.00	-7.85	9.93	296	4.43	-8.41	9.51	299	
10	465	11.71	2.99	-7.28	7.87	292	2.92	-6.84	7.44	293	
11	470	17.01	0.91	-4.98	5.06	280	0.84	-4.54	4.62	280	
12	474B	23.68	-0.28	-3.46	3.47	265	-0.35	-3.02	3.04	263	
13	476	27.59	-0.66	-2.90	2.97	257	-0.73	-2.46	2.57	253	
14	479	36.25	-1.10	-2.07	2.35	242	-1.17	-1.63	2.01	234	
15	480	40.88	-1.20	-1.77	2.14	235	-1.27	-1.33	1.84	226	
16	481	45.66	-1.24	-1.52	1.96	230	-1.31	-1.09	1.70	219	
17	482	48.71	-1.28	-1.36	1.87	226	-1.35	-0.92	1.63	214	
18	488C	49.09	-1.76	-0.86	1.96	206	-1.83	-0.42	1.88	193	
19	505	50.20	-2.13	-0.49	2.1	190	-2.20	-0.02	2.20	177	
20	506	62.39	-2.18	-2.20	2.20	186	-2.20	-0.19	2.20	172	
21	496	54.04	-2.22	-0.41	2.22	182	-2.29	0.34	2.32	171	
22	515	55.82	-2.26	0.13	2.27	176	-2.33	0.57	2.40	166	
23	522G	59.39	-2.14	0.24	2.15	173	-2.21	0.68	2.31	162	
24	530	65.19	-1.89	0.33	1.92	170	-1.96	0.77	2.11	158	
25	540	74.85	-1.43	0.39	1.48	164	-1.50	0.83	1.72	150	
26	552	90.66	-0.68	0.39	0.79	149	-0.75	0.83	1.13	132	
27	557	90.44	-0.39	0.44	0.60	131	-0.46	0.88	1.00	117	
28	558	88.28	-0.31	0.46	0.56	124	-0.38	0.90	0.98	113	
29	561	82.98	-0.10	0.49	0.50	101	-0.17	0.93	0.94	100	
30	565	76.31	0.18	0.50	0.53	69	0.11	0.93	0.94	83	
31	567	72.40	0.35	0.50	0.61	54	0.28	0.93	0.98	73	
32	572	69.74	0.73	0.49	0.88	33	0.63	0.93	1.14	54	
33	575	63.71	0.94	0.48	1.06	27	0.87	0.92	1.27	46	
34	578	54.33	1.17	0.47	1.26	22	1.10	0.91	1.43	35	
35	581	51.28	1.35	0.43	1.42	17	1.28	0.87	1.55	34	
36	614R	50.90	1.84	-0.02	1.84	0	1.76	0.41	1.81	13	
37	701	49.79	2.29	-0.46	2.33	0	2.22	-0.02	2.22	0	
1=	D50	100.00	0.070	-0.438	0.444	-279	0.0	0.0	0.0	0	

$$a=p_{an}=n_a p_a=n_a [(b_{21}-b_{23})x+(b_{22}-b_{23})y+b_{23}]/y=1,4(3,0757x-2,5702y-0,0960)/y$$

2,100.00

CIE02 tristimulus values, chromatic values, and putities ($n=1,4,n=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	tristimulus values and chromaticities						nu-chromatic values			
		λ_n	X	Y	Z	x	y	z	p_{nu}	C_{ABnu}	C_{ABnu}
00	396	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310
01	463	13.25	8.01	78.11	0.151	0.064	0.789	-20.0	-89.1	91.3	282
02	471	13.39	12.66	80.68	0.132	0.079	0.785	-4.4	-84.4	84.7	260
03	475B	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9	82.7	250
05	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9	87.1	232
06	481	18.42	36.66	82.05	0.134	0.267	0.598	-77.4	-58.9	97.2	217
07	483	20.35	41.45	82.11	0.141	0.288	0.570	-88.1	-53.6	103.1	211
08	484	22.64	46.29	82.14	0.149	0.306	0.543	-97.4	-48.4	108.8	206
09	485	25.29	51.06	82.16	0.159	0.322	0.518	-105.0	-43.3	113.6	202
10	486C	29.62	57.81	81.62	0.175	0.341	0.482	-113.2	-35.5	118.7	197
11	490	26.32	58.17	83.51	0.177	0.393	0.429	-126.0	-12.6	126.6	185
12	497	23.01	53.66	42.48	0.185	0.472	0.342	-138.9	13.8	139.6	174
13	501	22.62	59.57	35.18	0.192	0.507	0.299	-143.1	23.7	145.0	167
14	506	22.26	60.29	28.28	0.200	0.543	0.255	-146.5	33.0	150.1	167
15	519	21.83	61.02	17.06	0.218	0.610	0.170	-149.6	47.4	157.0	162
16	522G	24.04	63.42	17.06	0.230	0.606	0.163	-149.8	49.8	157.9	161
17	535	27.22	66.19	9.71	0.263	0.641	0.094	-146.3	61.3	158.7	157
18	544	35.20	72.16	7.33	0.306	0.629	0.063	-136.1	69.6	152.8	152
19	561	65.07	87.80	5.54	0.410	0.554	0.034	-72.3	84.1	111.0	310
20	568	83.05	93.65	4.13	0.459	0.517	0.022	-20.0	89.1	91.3	282
21	569	83.03	91.98	3.02	0.466	0.516	0.016	-13.4	88.4	89.4	98
22	571	82.92	83.63	1.55	0.482	0.508	0.009	-4.4	84.7	84.8	86
23	573Y	82.30	80.76	0.80	0.502	0.492	0.004	27.6	77.9	82.7	70
24	577	80.69	72.49	0.38	0.525	0.472	0.002	53.3	68.9	87.1	52
25	581	77.87	63.33	0.18	0.550	0.447	0.001	77.3	58.9	97.2	37
26	583	75.96	58.54	0.13	0.564	0.434	0.000	88.1	53.6	103.1	31
27	585	73.67	53.70	0.09	0.577	0.421	0.000	97.4	48.4	108.8	26
28	587	71.01	48.93	0.07	0.591	0.407	0.000	105.0	43.3	113.6	22
29	592R	66.69	42.18	0.61	0.609	0.385	0.005	113.3	35.5	118.7	17
30	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	5
31	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	354
32	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7	145.1	350
33	711	74.05	39.70	53.95	0.441	0.236	0.321	146.5	-33.0	150.2	347
34	724	72.18	38.97	65.17	0.415	0.218	0.364	149.6	-47.4	157.0	342
35	727M	72.26	36.57	65.17	0.415	0.210	0.374	149.8	-49.8	157.9	341
36	740	69.08	33.80	72.53	0.393	0.192	0.413	146.3	-61.3	158.7	337
37	749	61.10	27.83	74.91	0.372	0.169	0.457	136.0	-69.6	152.8	332
38	766	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310
39	828	13.25	6.34	78.11	0.135	0.064	0.799	-20.0	-89.1	91.3	282

D=50

96.31

99.29

82.24

63.54

0.358

0.358

0.0

0.0

0.0

0.0

0.0

0.0

$a=p_{\text{nu}}=1.415 \cdot (5.645x-2.666+2.570y)/y$

$A_{\text{nu}}=(a-b \cdot y) \cdot Y$

$C_{\text{ABnu}}=[A_{\text{nu}}^2+B_{\text{nu}}^2]^{0.5}$

$b=p_{\text{nu}}-a_{\text{Bnu}}=0.5 \cdot [(-1.871x+1.457-3.861z)/y]$

$B_{\text{nu}}=(b-b \cdot y) \cdot Y$

$a_{\text{Bnu}}=\text{atan}([B_{\text{nu}}]/[A_{\text{nu}}])$

$$u=D50 \quad 96.31 \quad 99.99 \quad 82.24 \quad 0.345 \quad 35.8 \quad 35.8 \quad A_m = (a-o) \quad Y \quad C_{ABW} = [A_m^2 + B_m^2]^{1/2}$$

$$b=p_{\text{nu}}=n_p \cdot p_0 \cdot 0.5 \cdot [(-1.871 \times 1.457 - 3.8612) / y] \quad B_m = (b-b_0) \quad Y \quad h_{ABW} = \text{atan}[B_m / A_m]$$

CIE02 tristimulus values, chromatic values, and putities ($n=1,4,n=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C	n-purities					nu-purities						
			λ_n	X	Y	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}		
00	396	12.19	6.11	-7.36	9.57	309	5.93	-6.90	9.10	310	3.15	-14.05	14.0	282
01	384	6.34	3.32	-14.51	14.89	282	1.67	-11.04	11.17	278	0.35	-6.69	6.70	260
02	466	8.01	1.84	-11.50	11.65	279	1.67	-11.04	11.17	278	0.35	-6.69	6.70	260
03	471	12.66	-0.17	-7.15	7.15	268	-0.35	-6.69	6.70	266	-1.11	-1.60	2.65	217
04	475B	19.21	-1.26	-4.51	4.69	254	-1.43	-4.05	4.30	250	-1.93	-2.50	3.17	232
05	479	27.50	-1.76	-2.96	3.45	239	-1.93	-2.50	3.17	232	-2.12	-1.29	2.48	211
06	481	36.66	-1.93	-2.06	2.83	226	-2.11	-1.60	2.65	217	-2.10	-1.04	2.35	202
07	483	41.45	-1.95	-1.75	2.62	221	-2.12	-1.29	2.48	211	-1.95	-0.61	2.05	197
08	484	46.29	-1.93	-1.50	2.44	217	-2.10	-1.04	2.35	206	-2.16	-0.21	2.17	185
09	485	51.06	-1.88	-1.30	2.29	214	-2.05	-0.84	2.22	202	-2.16	-0.21	2.17	185
10	486C	57.81	-1.78	-1.07	2.08	211	-1.95	-0.61	2.05	197	-2.16	-0.21	2.17	185
11	490	58.17	-1.99	-0.67	2.10	198	-2.16	-0.21	2.17	185	-2.16	-0.21	2.17	185
12	497	58.66	-2.19	-0.22	2.20	185	-2.36	0.23	2.38	174	-2.40	0.39	2.43	170
13	501	59.57	-2.22	-0.06	2.22	181	-2.40	0.39	2.43	170	-2.43	0.54	2.49	167
14	506	60.29	-2.25	0.08	2.25	177	-2.43	0.54	2.49	167	-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	-2.45	0.77	2.57	162
16	522G	63.42	-2.18	0.32	2.21	171	-2.36	0.78	2.48	161	-2.36	0.78	2.48	161
17	535	66.19	-2.03	0.46	2.08	167	-2.21	0.92	2.39	157	-2.21	0.92	2.39	157
18	544	72.16	-1.71	0.50	1.78	163	-1.88	0.96	2.11	152	-1.88	0.96	2.11	152
19	561	87.80	-0.64	0.49	0.81	142	-0.82	0.95	1.26	130	-0.82	0.95	1.26	130
20	568	93.65	-0.03	0.49	0.49	94	-0.21	0.95	0.97	102	-0.21	0.95	0.97	102
21	569	91.98	0.02	0.50	0.50	86	-0.14	0.96	0.97	98	-0.14	0.96	0.97	98
22	571	82.33	0.22	0.51	0.55	66	0.05	0.97	0.97	86	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	0.34	0.96	1.02	70
24	577	72.49	0.91	0.49	1.03	28	0.73	0.95	1.20	52	0.73	0.95	1.20	52
25	581	63.33	1.39	0.47	1.47	18	1.22	0.93	1.53	37	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	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	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	2.14	0.88	2.32	22
29	592R	42.18	2.86	0.38	2.88	7	2.68	0.84	2.81	17	2.68	0.84	2.81	17
30	631	41.82	3.18	-0.15	3.19	357	3.01	0.30	3.02	365	3.01	0.30	3.02	365
31	702	41.33	3.53	-0.79	3.62	347	3.36	-0.33	3.37	354	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	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	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	3.84	-1.21	4.02	342
35	727M	38.97	4.27	-1.82	4.64	336	4.09	-1.36	4.31	341	4.09	-1.36	4.31	341
36	740	33.80	4.04	-2.37	5.04	333	4.33	-1.81	4.69	337	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	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	3.15	-14.05	14.0	282
39	828	6.34	3.32	-14.51	14.89	282	1.67	-11.04	11.17	278	0.35	-6.69	6.70	260
U=D50	99.99	0.174	-0.459	0.491	290	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$a^*_{\text{D50}}=n_{\text{D50}}p_{\text{D50}}=1.4[(5.645x-2.666+2.570z)/y]$ $A_{\text{D50}}=(a^*_{\text{D50}})Y$ $C_{\text{D50}}=[A^*_{\text{D50}}+B_{\text{D50}}]^{1/2}$														
$b^*_{\text{D50}}=n_{\text{D50}}p_{\text{D50}}=0.5[(-1.871x+1.457-3.861z)/y]$ $B_{\text{D50}}=(b^*_{\text{D50}})Y$ $H_{\text{D50}}=\text{atan}[B_{\text{D50}}/C_{\text{D50}}]$														
D6900-4N														
CIE02 tristimulus values, chromatic values, and purities ($n_{\text{D50}}=1,4, n_{\text{D50}}=0.5$).														
Normalized Ostwald (O) tristimulus values ($Y_{\text{O}}=100$), ordered by hue angle.														
no.	O	C	n-purities					nu-purities						
			λ_n	X	Y	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}	p_{nu}		
00	396	12.19	6.11	-7.36	9.57	309	5.93	-6.90	9.10	310	3.15	-14.05	14.0	282
01	384	6.34	3.32	-14.51	14.89	282	1.67	-11.04	11.17	278	0.35	-6.69	6.70	260
02	466	8.01	1.84	-11.50	11.65	279	1.67	-11.04	11.17	278	0.35	-6.69	6.70	260
03	471	12.66	-0.17	-7.15	7.15	268	-0.35	-6.69	6.70	266	-1.11	-1.60	2.65	217
04	475B	19.21	-1.26	-4.51	4.69	254	-1.43	-4.05	4.30	250	-1.93	-2.50	3.17	232
05	479	27.50	-1.76	-2.96	3.45	239	-1.93	-2.50	3.17	232	-2.12	-1.29	2.48	211
06	481	36.66	-1.93	-2.06	2.83	226	-2.11	-1.60	2.65	217	-2.10	-1.04	2.35	202
07	483	41.45	-1.95	-1.75	2.62	221	-2.12	-1.29	2.48	211	-1.95	-0.61	2.05	197
08	484	46.29	-1.93	-1.50	2.44	217	-2.10	-1.04	2.35	206	-2.16	-0.21	2.17	185
09	485	51.06	-1.88	-1.30	2.29	214	-2.05	-0.84	2.22	202	-2.16	-0.21	2.17	185
10	486C	57.81	-1.78	-1.07	2.08	211	-1.95	-0.61	2.05	197	-2.16	-0.21	2.17	185
11	490	58.17	-1.99	-0.67	2.10	198	-2.16	-0.21	2.17	185	-2.16	-0.21	2.17	185
12	497	58.66	-2.19	-0.22	2.20	185	-2.36	0.23	2.38	174	-2.40	0.39	2.43	170
13	501	59.57	-2.22	-0.06	2.22	181	-2.40	0.39	2.43	170	-2.43	0.54	2.49	167
14	506	60.29	-2.25	0.08	2.25	177	-2.43	0.54	2.49	167	-2.43	0.54	2.49	167
15	519G	61.02	-2.27	0.31	2.30	172	-2.45	0.77	2.57	162	-2.45	0.77	2.57	162
16	522	63.42	-2.18	0.32	2.21	171	-2.36	0.78	2.48	161	-2.36	0.78	2.48	161
17	535	66.19	-2.03	0.46	2.08	167	-2.21	0.92	2.39	157	-2.21	0.92	2.39	157
18	544	72.16	-1.71	0.50	1.78	163	-1.88	0.96	2.11	152	-1.88	0.96	2.11	152
19	561	87.80	-0.64	0.49	0.81	142	-0.82	0.95	1.26	130	-0.82	0.95	1.26	130
20	568	93.65	-0.03	0.49	0.49	94	-0.21	0.95	0.97	102	-0.21	0.95	0.97	102
21	569	91.98	0.02	0.50	0.50	86	-0.14	0.96	0.97	98	-0.14	0.96	0.97	98
22	571	82.33	0.22	0.51	0.55	66	0.05	0.97	0.97	86	0.05	0.97	0.97	86
23	573	80.76	0.51	0.50	0.72	44	0.34	0.96	1.02	70	0.34	0.96	1.02	70
24	577Y	72.49	0.91	0.49	1.03	28	0.73	0.95	1.20	52	0.73	0.95	1.20	52
25	581	63.33	1.39	0.47	1.47	18	1.22	0.93	1.53	37	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	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	1.81	0.90	2.02	26
28	587R	48.93	2.32	0.42	2.36	10	2.14	0.88	2.32	22	2.14	0.88	2.32	22
29	592	42.18	2.86	0.38	2.88	7	2.68	0.84	2.81	17	2.68	0.84	2.81	17
30	631	41.82	3.18	-0.15	3.19	357	3.01	0.30	3.02	365	3.01	0.30	3.02	365
31	702	41.33	3.53	-0.79	3.62	347	3.36	-0.33	3.37	354	3.36	-0.33	3.37	354
U=D50	99.99	0.174	-0.459	0.491	290	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
$a^*_{\text{D50}}=n_{\text{D50}}p_{\text{D50}}=1.4[(5.645x-2.666+2.570z)/y]$ $A_{\text{D50}}=(a^*_{\text{D50}})Y$ $C_{\text{D50}}=[A^*_{\text{D50}}+B_{\text{D50}}]^{1/2}$														
$b^*_{\text{D50}}=n_{\text{D50}}p_{\text{D50}}=0.5[(-1.871x+1.457-3.861z)/y]$ $B_{\text{D50}}=(b^*_{\text{D50}})Y$ $H_{\text{D50}}=\text{atan}[B_{\text{D50}}/C_{\text{D50}}]$														
D6900-8N														

$$u=D50 \quad 96.31 \quad 99.99 \quad 82.24 \quad 0.345 \quad 35.8 \quad 35.8 \quad A_m = (a-o) \quad Y \quad C_{ABW} = [A_m^2 + B_m^2]^{1/2}$$

$$b=p_{\text{nu}}=n_p \cdot p_0 \cdot 0.5 \cdot [(-1.871 \times 1.457 - 3.8612) / y] \quad B_m = (b-b_0) \quad Y \quad h_{ABW} = \text{atan}[B_m / A_m]$$

CIE02 tristimulus values, chromatic values, and putities ($n=1,4,n=0.5$).

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

no.	λ_n	X	Y	Z	x	y	z	A_{10}	B_{10}	C_{AB10}	A_{10B10}
00	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	365
01	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	354
02	706	73.69	40.41	47.04	0.457	0.250	0.291	143.1	-23.7	145.1	350
03	711	74.05	39.70	53.95	0.441	0.236	0.321	146.5	-33.0	150.2	347
04	724	74.18	38.97	65.18	0.416	0.218	0.364	149.6	-47.4	157.0	342
05	727M	72.26	36.57	65.17	0.415	0.210	0.374	149.8	-58.8	157.9	341
06	749	74.05	35.00	72.53	0.415	0.203	0.382	150.0	-68.8	158.0	339
07	749	61.10	27.83	75.91	0.372	0.169	0.457	136.0	-69.6	152.8	332
08	396	31.24	12.19	76.69	0.260	0.101	0.638	72.3	-84.1	111.0	310
09	463	13.25	6.34	78.11	0.135	0.064	0.799	20.0	-89.1	91.3	282
10	466	13.27	8.01	79.21	0.132	0.079	0.788	13.4	-88.4	89.4	278
11	471	13.39	12.66	80.68	0.125	0.118	0.755	-4.4	-84.7	84.8	266
12	475B	14.00	19.21	81.44	0.122	0.167	0.710	-27.6	-77.9	82.7	250
13	479	15.61	27.50	81.85	0.124	0.220	0.655	-53.3	-68.9	88.1	232
14	481	18.42	36.66	82.05	0.134	0.267	0.598	-77.4	-58.9	97.2	217
15	483	20.35	41.45	82.11	0.141	0.288	0.570	-88.1	-53.6	103.1	211
16	484	22.64	46.29	82.14	0.149	0.306	0.543	-97.4	-48.4	108.8	206
17	485	25.00	51.06	82.17	0.159	0.322	0.518	-105.0	-43.3	114.0	202
18	486C	29.62	57.37	81.62	0.175	0.353	0.482	-113.2	-35.5	118.7	197
19	490	26.32	58.17	63.51	0.177	0.393	0.429	-126.0	-12.6	126.6	185
20	497	23.01	58.66	42.48	0.185	0.472	0.342	-138.9	13.8	139.6	174
21	501	22.26	59.57	35.18	0.192	0.507	0.299	-143.1	23.7	145.0	170
22	506	22.62	60.29	28.28	0.200	0.543	0.255	-146.5	33.0	150.1	167
23	519G	21.83	61.02	17.06	0.218	0.610	0.170	-149.6	47.4	157.0	161
24	522	24.04	63.42	17.06	0.230	0.660	0.163	-149.8	49.8	159.9	162
25	535	27.22	66.19	9.71	0.263	0.641	0.094	-146.3	61.3	158.7	157
26	544	35.20	72.16	7.33	0.306	0.629	0.063	-136.1	69.6	152.8	152
27	561	65.07	87.08	5.54	0.410	0.554	0.034	-72.3	84.1	111.0	130
28	561	82.83	91.98	5.54	0.410	0.554	0.034	-105.0	84.1	111.0	102
29	569	83.03	91.98	3.02	0.466	0.516	0.016	-113.2	88.4	98.4	98
30	571	82.92	87.33	1.55	0.482	0.508	0.009	-4.4	84.7	84.8	86
31	573	82.30	80.76	0.80	0.502	0.492	0.004	27.6	77.9	82.7	70
32	577Y	80.69	72.49	0.38	0.525	0.472	0.002	53.3	68.9	87.1	52
33	581	77.87	63.33	0.18	0.550	0.447	0.001	77.3	58.9	97.2	37
34	583	75.96	58.54	0.13	0.564	0.434	0.000	88.1	53.6	103.1	31
35	585	73.67	53.70	0.09	0.577	0.421	0.000	97.4	48.4	108.8	26
36	587R	71.01	48.93	0.07	0.591	0.407	0.000	105.0	43.3	113.6	22
37	592	66.69	42.18	0.61	0.609	0.385	0.005	113.3	35.5	118.7	17
38	631	69.99	41.82	18.71	0.536	0.320	0.143	126.0	12.6	126.6	5
39	702	73.30	41.33	39.75	0.474	0.267	0.257	138.9	-13.8	139.6	-5

$D=50$

$a = p_{-0.96} = 96.31$

$b = p_{-0.96} = 96.31$

$a = 1.41(5.645x - 2.666 + 2.570y/z)$

$b = 1.41(5.645x - 2.666 + 2.570y/z)$

$A_{10} = (a - a_0) \cdot Y$

$B_{10} = (b - b_0) \cdot Y$

$C_{AB10} = [A_{10}^2 + B_{10}^2]^{1/2}$

$A_{10B10} = \text{atan2}[B_{10}, A_{10}]$

DE690-7N

CIE10 tristimulus values, chromatic values, and putities ($n_p=1,4,n_b=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ _n	C tristimulus values and chromaticities			nu-chromatic values			
		X	Y	Z	x	y	C _{ABno}	P _{ABno}
00	376	55.24	26.06	71.08	0.362	0.171	0.466	118.6
01	376	55.24	26.06	71.08	0.362	0.171	0.466	118.6
02	460	13.26	8.89	77.33	0.133	0.089	0.777	10.0
03	462	13.28	10.68	78.42	0.129	0.104	0.765	2.9
04	462B	13.28	10.68	78.42	0.129	0.104	0.765	2.9
05	468	13.66	17.92	80.19	0.122	0.160	0.717	-24.0
06	471	14.70	24.41	80.73	0.122	0.203	0.673	-45.2
07	473	15.60	28.17	80.89	0.125	0.225	0.648	-56.2
08	475	18.32	36.37	81.08	0.134	0.267	0.597	-77.1
09	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5
10	477C	22.35	45.10	81.16	0.150	0.303	0.546	-94.5
11	479	27.82	53.94	81.17	0.170	0.331	0.498	-106.4
12	480	30.64	58.21	79.19	0.182	0.346	0.471	-111.1
13	484	25.67	56.42	59.80	0.180	0.397	0.421	-122.2
14	492	22.50	56.65	38.03	0.192	0.483	0.324	-133.4
15	503	21.56	57.40	24.28	0.208	0.555	0.235	-138.4
16	512G	21.58	58.45	18.53	0.223	0.589	0.186	-139.1
17	521	24.28	60.61	13.79	0.246	0.614	0.139	-138.2
18	531	29.00	64.47	10.07	0.280	0.622	0.097	-133.2
19	541	41.39	73.93	10.07	0.330	0.589	0.080	-118.6
20	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.8
21	564	83.37	91.09	3.82	0.467	0.510	0.021	-9.9
22	565	83.35	89.31	2.74	0.475	0.509	0.015	-2.9
23	565Y	83.35	89.31	2.74	0.475	0.509	0.015	-2.9
24	568	82.96	82.07	0.96	0.499	0.494	0.005	24.0
25	571	81.93	75.58	0.44	0.518	0.478	0.002	45.3
26	573	81.03	71.82	0.27	0.529	0.469	0.001	56.3
27	577	78.31	63.62	0.08	0.551	0.447	0.000	71.1
28	581	74.28	54.89	0.01	0.575	0.424	0.000	94.5
29	581R	74.28	54.89	0.01	0.575	0.424	0.000	94.5
30	587	68.81	46.05	0.00	0.599	0.400	0.000	106.4
31	589	67.60	44.04	0.93	0.600	0.391	0.008	109.1
32	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2
33	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4
34	708	80.07	42.59	62.63	0.416	0.232	0.350	138.4
35	717M	74.44	41.54	62.63	0.416	0.232	0.350	139.2
36	726	72.35	39.38	67.37	0.403	0.219	0.376	138.3
37	736	67.62	35.52	71.08	0.388	0.203	0.408	133.2
38	746	55.24	26.06	71.08	0.362	0.171	0.466	118.6
39	823	13.22	7.40	75.87	0.136	0.076	0.786	15.9

$$U=D50 \quad 96.63 \quad 100.00 \quad 81.17 \quad 0.347 \quad 0.359 \quad 0.359 \quad 0.00 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a^*_n = a^*_n \quad p_n = 1.4[(5.645x - 2.666 + 2.570z)/y] \quad A_{no} = (a - a_n) \quad Y \quad C_{ABno} = [A^2_n + B^2_n]^{1/2}$$

$$b^*_n = b^*_n \quad p_b = 0.5[-(1.871x + 1.457 - 3.861z)/y] \quad B_{no} = (b - b_n) \quad Y \quad h_{ABno} = \text{atan}[B_{no}/A_{no}]$$

DE690-3N

CIE10 tristimulus values, chromatic values, and putities ($n_p=1,4,n_b=0.5$).

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

no.	λ _n	C tristimulus values and chromaticities			nu-chromatic values			
		X	Y	Z	x	y	C _{ABno}	P _{ABno}
00	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2
01	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4
02	708	80.07	42.59	56.88	0.404	0.244	0.325	138.4
03	717	74.44	41.54	62.63	0.416	0.232	0.350	139.2
04	726	72.35	39.38	67.37	0.403	0.219	0.376	138.3
05	736M	67.62	35.52	71.08	0.388	0.203	0.408	133.2
06	746	55.24	26.06	71.08	0.362	0.171	0.466	118.6
07	823	13.22	7.40	75.87	0.136	0.076	0.786	15.9
08	460	13.26	8.89	77.33	0.133	0.089	0.777	10.0
09	462	13.28	10.68	78.42	0.129	0.104	0.765	2.9
10	462B	13.28	10.68	78.42	0.129	0.104	0.765	2.9
11	468	13.66	17.92	80.19	0.122	0.160	0.717	-24.0
12	471B	14.70	24.41	80.73	0.122	0.203	0.673	-45.2
13	473	15.60	28.17	80.89	0.125	0.225	0.648	-56.2
14	475	18.32	36.37	81.08	0.134	0.267	0.597	-77.1
15	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5
16	477	22.35	45.10	81.16	0.150	0.303	0.546	-94.5
17	479	27.82	53.94	81.17	0.170	0.331	0.498	-106.4
18	480	30.64	58.21	79.19	0.182	0.346	0.471	-111.1
19	484	25.67	56.42	59.80	0.180	0.397	0.421	-122.2
20	492	22.50	56.65	38.03	0.192	0.483	0.324	-133.4
21	503	21.56	57.40	24.28	0.208	0.555	0.235	-138.4
22	512	21.58	58.45	18.53	0.223	0.589	0.186	-139.1
23	521G	24.28	60.61	13.79	0.246	0.614	0.139	-138.2
24	531	29.00	64.47	10.07	0.280	0.622	0.097	-133.2
25	541	41.39	73.93	10.07	0.330	0.589	0.080	-118.6
26	563	83.41	92.59	5.28	0.460	0.510	0.029	-15.8
27	564	83.37	91.09	3.82	0.467	0.510	0.021	-9.9
28	565	83.35	89.31	2.74	0.475	0.509	0.015	-2.9
29	565Y	83.35	89.31	2.74	0.475	0.509	0.015	-2.9
30	568	82.96	82.07	0.96	0.499	0.494	0.005	24.0
31	571	81.93	75.58	0.44	0.518	0.478	0.002	45.3
32	573Y	81.03	71.82	0.27	0.529	0.469	0.001	56.3
33	577	78.31	63.62	0.08	0.551	0.447	0.000	71.1
34	581	74.28	54.89	0.01	0.575	0.424	0.000	94.5
35	581	74.28	54.89	0.01	0.575	0.424	0.000	94.5
36	587R	68.81	46.05	0.00	0.599	0.400	0.000	106.4
37	589	67.60	44.04	0.93	0.600	0.391	0.008	109.1
38	692	70.96	43.57	21.37	0.522	0.320	0.157	122.2
39	697	74.12	43.34	43.14	0.461	0.269	0.268	133.4

$$U=D50 \quad 96.63 \quad 100.00 \quad 81.17 \quad 0.347 \quad 0.359 \quad 0.359 \quad 0.00 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a^*_n = a^*_n \quad p_n = 1.4[(5.645x - 2.666 + 2.570z)/y] \quad A_{no} = (a - a_n) \quad Y \quad C_{ABno} = [A^2_n + B^2_n]^{1/2}$$

$$b^*_n = b^*_n \quad p_b = 0.5[-(1.871x + 1.457 - 3.861z)/y] \quad B_{no} = (b - b_n) \quad Y \quad h_{ABno} = \text{atan}[B_{no}/A_{no}]$$

DE690-7N

CIE10 tristimulus values, chromatic values, and putities ($n_p=1,4,n_b=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ _n	C tristimulus values and chromaticities			n-purities				nu-purities			
		X	Y	Z	x	y	p _n	p _b	x _n	y _n	p _n	p _b
00	697	43.57	2.99	-0.19	3.00	356	2.80	0.24	2.81	365	2.80	0.24
01	692	43.34	3.26	-0.82	3.36	345	3.07	-0.37	3.10	353	3.07	-0.37
02	708	42.59	3.44	-1.24	3.65	340	3.25	-0.79	3.34	346	3.25	-0.79
03	717	41.54	3.54	-1.45	3.82	337	3.35	-1.00	3.49	343	3.35	-1.00
04	726	39.38	3.70	-1.70	4.07	335	3.51	-1.26	3.73	340	3.51	-1.26
05	747	35.52	3.94	-2.07	4.45	327	3.75	-1.62	4.07	336	3.75	-1.62
06	736	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21	330	4.55	-2.54
07	458	74.00	2.34	-11.96	12.19	281	2.15	-11.52	11.72	280	2.15	-11.52
08	460	8.89	1.31	-10.02	10.11	277	1.12	-9.58	9.64	276	1.12	-9.58
09	462	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91	272	0.27	-7.90
10	462B	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91	272	0.27	-7.90
11	468	17.92	-1.15	-4.81	4.94	256	-1.34	-4.36	4.56	252	-1.34	-4.36
12	471	24.41	-1.66	-3.37	3.76	243	-1.85	-2.92	3.46	237	-1.85	-2.92
13	473	28.17	-1.80	-2.83	3.36	237	-1.99	-2.39	3.11	230	-1.99	-2.39
14	475	36.37	-1.93	-2.05	2.82	226	-2.12	-1.60	2.66	217	-2.12	-1.60
15	477	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36	207	-2.09	-1.09
16	477C	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36	207	-2.09	-1.09
17	479	53.94	-1.78	-1.18	2.14	213	-1.97	-0.74	2.10	200	-1.97	-0.74
18	480	58.21	-1.71	-1.01	1.99	210	-1.90	-0.56	1.99	196	-1.90	-0.56
19	484	56.42	-1.97	-0.63	2.07	197	-2.16	-0.19	2.17	185	-2.16	-0.19
20	492	56.65	-2.16	-0.16	2.17	184	-2.35	-0.28	2.37	173	-2.35	-0.28
21	503	57.40	-2.22	0.14	2.22	176	-2.41	0.58	2.48	166	-2.41	0.58
22	512G	58.45	-2.19	0.26	2.20	173	-2.38	0.71	2.48	163	-2.38	0.71
23	521	60.61	-2.09	0.37	2.12	169	-2.28	0.81	2.42	160	-2.28	0.81
24	531	64.47	-1.87	0.44	1.92	166	-2.06	0.89	2.25	156	-2.06	0.89
25	541	73.93	-1.41	0.44	1.84	162	-1.60	0.89	1.83	150	-1.60	0.89
26	563	92.59	0.01	0.47	0.47	87	-0.17	0.92	0.93	100	-0.17	0.92
27	564	91.09	0.07	0.48	0.49	80	-0.10	0.93	0.94	96	-0.10	0.93
28	565	89.31	0.15	0.49	0.52	72	-0.03	0.94	0.94	91	-0.03	0.94
29	565Y	89.31	0.15	0.49	0.52	72	-0.03	0.94	0.94	91	-0.03	0.94
30	568	82.07	0.48	0.50	0.69	46	0.29	0.95	0.99	72	0.29	0.95
31	571	75.58	0.78	0.49	0.93	32	0.59	0.94	1.11	57	0.59	0.94
32	573	71.82	0.97	0.49	1.09	26	0.78	0.93	1.22	50	0.78	0.93
33	577	63.62	1.40	0.47	1.47	18	1.21	0.91	1.52	37	1.21	0.91
34	581	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94	27	1.72	0.89
35	581R	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94	27	1.72	0.89
36	587	46.05	2.50	0.41	2.53	9	2.31	0.86	2.46	20	2.31	0.86
37	589	44.04	2.66	0.38	2.69	8	2.47	0.83	2.61	18	2.47	0.83
38	692	43.37	2.99	-0.19	3.00	356	2.80	0.24	2.81	365	2.80	0.24
39	692	43.34	3.26	-0.82	3.36	345	3.07	-0.37	3.10	353	3.07	-0.37
40	708	42.59	3.44	-1.24	3.65	340	3.25	-0.79	3.34	346	3.25	-0.79
41	717	41.54	3.54	-1.45	3.82	337	3.35	-1.00	3.49	343	3.35	-1.00
42	726	39.38	3.70	-1.70	4.07	335	3.51	-1.26	3.73	340	3.51	-1.26
43	747	35.52	3.94	-2.07	4.45	327	3.75	-1.62	4.07	336	3.75	-1.62
44	736	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21	330	4.55	-2.54
45	458	74.00	2.34	-11.96	12.19	281	2.15	-11.52	11.72	280	2.15	-11.52
U=D50	100.00	0.189	-0.447	0.485	292	0.0	0.0	0.0	0.0	0	0.0	0

$s_{p=0} = p_{n=0} = 0.51(5.645x - 2.665y + 3.870z)/y$ $A_{m=0} = (a - a_0)$ $C_{ABm} = [A_{ABm}^2 + B_{ABm}^2]^{1/2}$
 $b_{p=0} = p_{n=0} = 0.51(-1.871x + 1.456y + 2.562z)/y$ $B_{m=0} = (b - b_0)$ $y_{ABm} = [A_{ABm}^2 + B_{ABm}^2]^{1/2}$

DE690-4N

no.	λ _n	C tristimulus values and chromaticities			n-purities				nu-purities			
		X	Y	Z	x	y	p _n	p _b	x _n	y _n	p _n	p _b
00	692	43.37	2.99	-0.19	3.00	356	2.80	0.24	2.81	365	2.80	0.24
01	697	43.54	3.26	-0.82	3.36	345	3.07	-0.37	3.10	353	3.07	-0.37
02	708	42.59	3.44	-1.24	3.65	340	3.25	-0.79	3.34	346	3.25	-0.79
03	717	41.54	3.54	-1.45	3.82	337	3.35	-1.00	3.49	343	3.35	-1.00
04	726	39.38	3.70	-1.70	4.07	335	3.51	-1.26	3.73	340	3.51	-1.26
05	747	35.52	3.94	-2.07	4.45	327	3.75	-1.62	4.07	336	3.75	-1.62
06	736	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21	330	4.55	-2.54
07	458	74.00	2.34	-11.96	12.19	281	2.15	-11.52	11.72	280	2.15	-11.52
08	460	8.89	1.31	-10.02	10.11	277	1.12	-9.58	9.64	276	1.12	-9.58
09	462	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91	272	0.27	-7.90
10	462	10.68	0.46	-8.35	8.36	273	0.27	-7.90	7.91	272	0.27	-7.90
11	468	17.92	-1.15	-4.81	4.94	256	-1.34	-4.36	4.56	252	-1.34	-4.36
12	471B	24.41	-1.66	-3.37	3.76	243	-1.85	-2.92	3.46	237	-1.85	-2.92
13	473	28.17	-1.80	-2.83	3.36	237	-1.99	-2.39	3.11	230	-1.99	-2.39
14	475	36.37	-1.93	-2.05	2.82	226	-2.12	-1.60	2.66	217	-2.12	-1.60
15	477	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36	207	-2.09	-1.09
16	477C	45.10	-1.90	-1.53	2.44	218	-2.09	-1.09	2.36	207	-2.09	-1.09
17	479	53.94	-1.78	-1.18	2.14	213	-1.97	-0.74	2.10	200	-1.97	-0.74
18	480	58.21	-1.71	-1.01	1.99	210	-1.90	-0.56	1.99	196	-1.90	-0.56
19	484	56.42	-1.97	-0.63	2.07	197	-2.16	-0.19	2.17	185	-2.16	-0.19
20	492	56.65	-2.16	-0.16	2.17	184	-2.35	-0.28	2.37	173	-2.35	-0.28
21	503	57.40	-2.22	0.14	2.22	176	-2.41	0.58	2.48	166	-2.41	0.58
22	512	58.45	-2.19	0.26	2.20	173	-2.38	0.71	2.48	163	-2.38	0.71
23	521G	60.61	-2.09	0.37	2.12	169	-2.28	0.81	2.42	160	-2.28	0.81
24	531	64.47	-1.87	0.44	1.92	166	-2.06	0.89	2.25	156	-2.06	0.89
25	541	73.93	-1.41	0.44	1.84	162	-1.60	0.89	1.83	150	-1.60	0.89
26	563	92.59	0.01	0.47	0.47	87	-0.17	0.92	0.93	100	-0.17	0.92
27	564	91.09	0.07	0.48	0.49	80	-0.10	0.93	0.94	96	-0.10	0.93
28	565	89.31	0.15	0.49	0.52	72	-0.03	0.94	0.94	91	-0.03	0.94
29	565	89.31	0.15	0.49	0.52	72	-0.03	0.94	0.94	91	-0.03	0.94
30	568	82.07	0.48	0.50	0.69	46	0.29	0.95	0.99	72	0.29	0.95
31	571	75.58	0.78	0.49	0.93	32	0.59	0.94	1.11	57	0.59	0.94
32	573Y	71.82	0.97	0.49	1.09	26	0.78	0.93	1.22	50	0.78	0.93
33	577	63.62	1.40	0.47	1.47	18	1.21	0.91	1.52	37	1.21	0.91
34	581	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94	27	1.72	0.89
35	581	54.89	1.91	0.44	1.96	13	1.72	0.89	1.94	27	1.72	0.89
36	587R	46.05	2.50	0.41	2.53	9	2.31	0.86	2.46	20	2.31	0.86
37	589	44.04	2.66	0.38	2.69	8	2.47	0.83	2.61	18	2.47	0.83
38	692	43.37	2.99	-0.19	3.00	356	2.80	0.24	2.81	365	2.80	0.24
39	692	43.34	3.26	-0.82	3.36	345	3.07	-0.37	3.10	353	3.07	-0.37
40	708	42.59	3.44	-1.24	3.65	340	3.25	-0.79	3.34	346	3.25	-0.79
41	717	41.54	3.54	-1.45	3.82	337	3.35	-1.00	3.49	343	3.35	-1.00
42	726	39.38	3.70	-1.70	4.07	335	3.51	-1.26	3.73	340	3.51	-1.26
43	747	35.52	3.94	-2.07	4.45	327	3.75	-1.62	4.07	336	3.75	-1.62
44	736	26.06	4.74	-2.98	5.60	327	4.55	-2.54	5.21	330	4.55	-2.54
45	458	74.00	2.34	-11.96	12.19	281	2.15	-11.52	11.72	280	2.15	-11.52
U=D50	100.00	0.189	-0.447	0.485	292	0.0	0.0	0.0	0.0	0	0.0	0

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=1, n_2=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities			nu-chromatic values		
		X	Y	Z	x	y	z
00	386	51.50	23.94	74.68	0.343	0.159	0.497
01	392	51.28	23.54	76.19	0.130	0.068	0.801
02	445	12.41	9.58	78.25	0.123	0.095	0.780
03	467	12.45	11.64	78.87	0.120	0.113	0.766
04	473B	13.31	20.43	79.83	0.117	0.179	0.702
05	475	14.02	24.19	79.97	0.118	0.204	0.676
06	479	17.82	36.91	80.16	0.132	0.273	0.594
07	481	17.82	36.91	80.16	0.132	0.273	0.594
08	481	21.98	46.03	80.19	0.148	0.310	0.541
09	481	21.98	46.03	80.19	0.148	0.310	0.541
10	483C	27.52	55.03	80.21	0.169	0.338	0.492
11	484	28.85	57.21	79.07	0.174	0.346	0.478
12	487	25.36	57.41	57.70	0.180	0.408	0.410
13	497	23.23	57.50	36.81	0.191	0.492	0.315
14	505	21.31	58.03	24.30	0.205	0.559	0.234
15	512	21.41	58.69	18.79	0.216	0.593	0.190
16	521G	22.42	59.91	14.10	0.232	0.621	0.146
17	524	25.32	62.97	14.10	0.247	0.615	0.137
18	539	30.29	66.55	7.57	0.290	0.637	0.072
19	551	44.95	76.05	5.53	0.355	0.601	0.043
20	568	84.08	93.45	4.02	0.463	0.514	0.022
21	568	84.08	93.45	4.02	0.463	0.514	0.022
22	568	84.08	93.45	4.02	0.463	0.514	0.022
23	570Y	84.00	88.35	1.33	0.483	0.508	0.007
24	573	83.15	79.56	0.38	0.509	0.487	0.002
25	575	82.44	75.80	0.24	0.520	0.478	0.001
26	580	78.64	63.07	0.05	0.554	0.444	0.000
27	585	78.64	63.07	0.05	0.554	0.444	0.000
28	585	78.64	63.07	0.05	0.554	0.444	0.000
29	590R	68.94	44.96	0.00	0.605	0.394	0.000
30	592	67.61	42.78	1.14	0.606	0.383	0.010
31	694	71.10	42.58	22.52	0.522	0.312	0.165
32	702	74.12	42.59	43.40	0.463	0.265	0.271
33	710	75.15	41.96	55.91	0.434	0.242	0.323
34	717	75.15	41.96	55.91	0.434	0.242	0.323
35	726M	74.04	40.08	66.11	0.410	0.222	0.366
36	729	71.14	37.02	66.11	0.408	0.212	0.379
37	744	66.16	33.43	72.64	0.384	0.194	0.421
38	756	51.50	23.94	74.68	0.343	0.159	0.497
39	825	12.38	6.54	76.19	0.130	0.068	0.801

$$U=D50 \quad 96.46, 100.00, 82.22 \quad 0.666 \quad 0.358 \quad 0.358 \quad 0.00 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a^*_{\lambda} = a^*_{\lambda} \quad p_{\lambda} = 1.4[(5.645x - 2.666 + 2.570z)/y] \quad A_{\lambda} = (a^*_{\lambda})^2 \quad C_{AB} = [A_{\lambda}^2 + B_{\lambda}^2]^{1/2}$$

$$b^*_{\lambda} = b^*_{\lambda} \quad p_{\lambda} = 0.5[-(1.871x + 1.457 - 3.861z)/y] \quad B_{\lambda} = (b^*_{\lambda})^2 \quad h_{AB} = \text{atan}[B_{\lambda}/A_{\lambda}]$$

DE690-3N

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=1, n_2=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	λ_n	C tristimulus values and chromaticities			nu-purities		
		X	Y	Z	x	y	z
00	386	23.94	4.82	-3.46	5.93	3.24	4.64
01	392	23.54	2.94	-13.66	13.91	280	2.41
02	445	9.58	5.57	-9.35	9.37	273	0.39
03	467	11.64	-1.18	-7.64	7.64	268	-0.36
04	473B	20.43	-1.54	-4.10	4.38	249	-1.72
05	475	24.19	-1.75	-3.36	3.79	242	-1.93
06	479	36.91	-2.01	-1.98	2.82	224	-2.19
07	481	36.91	-2.01	-1.98	2.82	224	-2.19
08	481	46.03	-1.97	-1.46	2.45	216	-2.15
09	481	46.03	-1.97	-1.46	2.45	216	-2.15
10	483C	55.03	-1.84	-1.12	2.15	211	-2.02
11	484	57.21	-1.81	-1.03	2.09	205	-1.99
12	487	57.41	-2.02	-0.57	2.10	195	-2.20
13	497	57.50	-2.19	-0.12	2.20	183	-2.37
14	505	58.03	-2.25	0.14	2.26	176	-2.43
15	512	58.69	-2.25	0.26	2.26	173	-2.43
16	521G	59.91	-2.20	0.36	2.23	170	-2.38
17	524	62.97	-2.08	0.37	2.11	169	-2.26
18	539	66.55	-1.84	0.49	1.91	164	-2.02
19	551	76.05	-1.27	0.51	1.37	157	-1.45
20	568	93.45	0.01	0.49	0.49	88	-0.16
21	568	93.45	0.01	0.49	0.49	88	-0.16
22	568	93.45	0.01	0.49	0.49	88	-0.16
23	570Y	88.35	0.23	0.51	0.56	65	0.03
24	573	79.56	0.62	0.50	0.80	38	0.44
25	575	75.80	0.80	0.49	0.94	31	0.62
26	580	63.07	1.46	0.46	1.54	17	1.28
27	585	63.07	1.46	0.46	1.54	17	1.28
28	585	63.07	1.46	0.46	1.54	17	1.28
29	590R	44.96	2.66	0.41	2.69	8	2.48
30	592	42.78	2.85	0.36	2.88	7	2.67
31	694	42.58	3.16	-0.25	3.17	355	2.98
32	702	42.59	3.40	-0.86	3.51	345	3.22
33	710	41.96	3.55	-1.24	3.77	340	3.37
34	717	41.96	3.55	-1.24	3.77	340	3.37
35	726M	40.08	3.75	-1.63	4.09	336	3.46
36	729	37.02	4.04	-1.81	4.43	335	3.86
37	744	33.43	4.22	-2.29	4.81	331	4.04
38	756	23.94	4.82	-3.46	5.93	324	4.64
39	825	6.54	2.59	-13.66	13.91	280	2.41

$$U=D50 \quad 100.00, 100.00, -0.459 \quad 0.493 \quad 291 \quad 0.0 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a^*_{\lambda} = a^*_{\lambda} \quad p_{\lambda} = 1.4[(5.645x - 2.666 + 2.570z)/y] \quad A_{\lambda} = (a^*_{\lambda})^2 \quad C_{AB} = [A_{\lambda}^2 + B_{\lambda}^2]^{1/2}$$

$$b^*_{\lambda} = b^*_{\lambda} \quad p_{\lambda} = 0.5[-(1.871x + 1.457 - 3.861z)/y] \quad B_{\lambda} = (b^*_{\lambda})^2 \quad h_{AB} = \text{atan}[B_{\lambda}/A_{\lambda}]$$

DE690-4N

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=1, n_2=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

no.	λ_n	C tristimulus values and chromaticities			nu-chromatic values		
		X	Y	Z	x	y	z
00	592	67.61	42.78	1.14	0.606	0.383	0.010
01	694	71.10	42.58	22.52	0.522	0.312	0.165
02	702	74.12	42.59	43.40	0.463	0.265	0.271
03	710	75.15	41.96	55.91	0.434	0.242	0.323
04	717	75.15	41.96	55.91	0.434	0.242	0.323
05	726M	74.04	40.08	66.11	0.410	0.222	0.366
06	729	71.14	37.02	66.11	0.408	0.212	0.379
07	744	66.16	33.43	72.64	0.384	0.194	0.421
08	756	51.50	23.94	74.68	0.343	0.159	0.497
09	825	12.38	6.54	76.19	0.130	0.068	0.801
10	465	12.45	11.64	78.25	0.123	0.095	0.780
11	467	12.45	11.64	78.87	0.120	0.113	0.766
12	473B	13.31	20.43	79.83	0.117	0.179	0.702
13	475	14.02	24.19	79.97	0.118	0.204	0.676
14	479	17.82	36.91	80.16	0.132	0.273	0.594
15	479	17.82	36.91	80.16	0.132	0.273	0.594
16	481	21.98	46.03	80.19	0.148	0.310	0.541
17	481	21.98	46.03	80.19	0.148	0.310	0.541
18	483C	27.52	55.03	80.21	0.169	0.338	0.492
19	484	28.85	57.21	79.07	0.174	0.346	0.478
20	487	25.36	57.41	57.70	0.180	0.408	0.410
21	497	23.23	57.50	36.81	0.191	0.492	0.315
22	505	21.31	58.03	24.30	0.205	0.559	0.234
23	512G	21.41	58.69	18.79	0.216	0.593	0.190
24	521	22.42	59.91	14.10	0.232	0.621	0.146
25	524	25.32	62.97	14.10	0.247	0.615	0.137
26	539	30.29	66.55	7.57	0.290	0.637	0.072
27	551	44.95	76.05	5.53	0.355	0.601	0.043
28	568	84.08	93.45	4.02	0.463	0.514	0.022
29	568	84.08	93.45	4.02	0.463	0.514	0.022
30	569	84.05	90.41	1.96	0.476	0.512	0.011
31	570	84.00	88.35	1.33	0.483	0.508	0.007
32	573Y	83.15	79.56	0.38	0.509	0.487	0.002
33	575	82.44	75.80	0.24	0.520	0.478	0.001
34	580	78.64	63.07	0.05	0.554	0.444	0.000
35	585R	74.48	53.96	0.02	0.579	0.420	0.000
36	590	68.94	44.96	0.00	0.605	0.394	0.000
37	592	67.61	42.78	1.14	0.606	0.383	0.010
38	694	71.10	42.58	22.52	0.522	0.312	0.165

$$U=D50 \quad 96.46, 100.00, 82.22 \quad 0.666 \quad 0.358 \quad 0.358 \quad 0.00 \quad 0.0 \quad 0.0 \quad 0.0$$

$$a^*_{\lambda} = a^*_{\lambda} \quad p_{\lambda} = 1.4[(5.645x - 2.666 + 2.570z)/y] \quad A_{\lambda} = (a^*_{\lambda})^2 \quad C_{AB} = [A_{\lambda}^2 + B_{\lambda}^2]^{1/2}$$

$$b^*_{\lambda} = b^*_{\lambda} \quad p_{\lambda} = 0.5[-(1.871x + 1.457 - 3.861z)/y] \quad B_{\lambda} = (b^*_{\lambda})^2 \quad h_{AB} = \text{atan}[B_{\lambda}/A_{\lambda}]$$

DE690-7N

CIEF02 tristimulus values, chromatic variables, and putities ($n_1=1, n_2=0.5$).
 Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by hue angle.

no.	λ_n	C tristimulus values and chromaticities			nu-purities		
		X	Y	Z	x	y	z
00	592	42.78	2.85	0.36	2.88	367	2.67
01	694	42.58	3.16	-0.25	3.17	355	2.98
02	702	42.49	3.40	-0.86	3.51	345	3.22
03	710	41.96	3.55	-1.24	3.77	340	3.37
04	717	41.30	3.64	-1.43	3.92	338	3.46
05	726M	40.08	3.75	-1.63	4.09	336	3.57
06	729	37.02	4.04	-1.81	4.43	335	3.86
07	744	33.43	4.22	-2.29	4.81	331	4.04
08	386	23.94	4.82	-3.46	5.93	324	4.64
09	465	2.54	2.59	-13.66	13.91	280	2.41
10	465	9.58	5.57	-9.35	9.37	273	0.39
11	465	54.54	-1.58	-7.64	7.64	268	-0.18
12	4738	20.43	0.14	-4.10	4.38	249	-1.72
13	475	24.19	-1.75	-3.36	3.79	242	-1.93
14	479	36.91	-2.01	-1.98	2.82	224	-2.19
15	479	36.91	-2.01	-1.98	2.82	224	-2.19
16	481	46.03	-1.97	-1.46	2.45	216	-2.15
17	481	46.03	-1.97	-1.46	2.45	216	-2.15
18	483C	55.03	-1.84	-1.12	2.15	211	-2.02
19	484	57.21	-1.81	-1.03	2.09	209	-1.99
20	489	57.41	-2.02	-0.57	2.10	195	-2.20
21	521	59.91	-2.20	0.36	2.23	170	-2.38
22	505	58.03	-2.25	0.14	2.26	176	-2.43
23	512C	58.69	-2.25	0.26	2.26	173	-2.43
24	521	59.91	-2.20	0.36	2.23	170	-2.38
25	524	62.97	-2.08	0.37	2.11	169	-2.26
26	539	66.55	-1.84	0.49	1.91	164	-2.02
27	551	76.05	-1.27	0.51	1.37	157	-1.45
28	568	93.45	0.01	0.49	0.49	88	-0.16
29	568	93.45	0.01	0.49	0.49	88	-0.16
30	569	90.41	0.14	0.51	0.52	74	-0.03
31	573	88.35	0.23	0.51	0.56	65	-0.05
32	573	89.56	0.62	0.50	0.80	38	0.44
33	575	75.80	0.80	0.49	0.94	31	0.62
34	588	63.07	1.46	0.46	1.54	17	1.28
35	580	63.07	1.46	0.46	1.54	17	1.28
36	585S	53.96	2.02	0.44	2.07	12	1.84
37	590	44.96	2.66	0.41	2.69	8	2.48
38	592	42.78	2.85	0.36	2.88	7	2.67
39	694	42.58	3.16	-0.25	3.17	-4	2.98
U-D50	100,00	0.180	-0.459	0.493	291	0.0	0.0

CIEF10 tristimulus values, chromatic values, and putities ($n_1=1, n_2=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	C tristimulus values and chromaticities						nu-chromatic values and chromaticities					
		λ_n	X	Y	Z	x	y	z	λ_m	B_m	C_m	A_{Bm}	A_{Pm}
00	380	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	130.1	327	327	327
01	385	61.01	26.31	74.65	0.345	0.170	0.790	118.8	-55.7	166.7	282	282	282
02	460	13.28	9.49	77.94	0.131	0.094	0.773	7.6	-85.3	85.6	275	275	275
03	462	13.30	11.32	78.97	0.128	0.109	0.762	0.4	-84.4	84.4	270	270	270
04	464B	13.34	13.45	79.69	0.125	0.126	0.748	-7.8	-82.7	83.1	264	264	264
05	468	13.69	18.67	80.47	0.121	0.165	0.713	-27.0	-77.6	82.2	250	250	250
06	471	14.73	25.21	80.80	0.121	0.208	0.669	-48.4	-70.5	85.5	235	235	235
07	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4	89.1	228	228	228
08	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-57.6	98.5	215	215	215
09	477	22.39	45.70	81.01	0.150	0.306	0.543	-96.9	-48.3	108.3	206	206	206
10	477C	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-43.7	112.3	202	202	202
11	479	30.58	58.60	78.68	0.182	0.349	0.468	-113.1	-32.1	117.5	195	195	195
12	479	29.07	56.38	80.12	0.175	0.340	0.483	-110.9	-36.1	116.6	195	195	195
13	484	25.63	56.72	79.32	0.180	0.400	0.418	-123.7	-10.0	124.1	184	184	184
14	492	23.27	56.85	36.73	0.192	0.490	0.331	-134.8	17.9	136.0	179	179	179
15	5003	21.57	57.63	22.95	0.211	0.564	0.224	-139.3	35.6	143.8	165	165	165
16	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	43.5	146.3	162	162	162
17	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	51.2	147.4	159	159	159
18	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	59.4	145.0	155	155	155
19	545	43.82	74.21	6.37	0.352	0.596	0.051	-109.4	70.4	130.1	147	147	147
20	563	83.59	93.38	6.37	0.455	0.509	0.034	-18.8	84.6	86.7	102	102	102
21	564	83.45	90.50	3.08	0.471	0.511	0.017	-7.6	85.3	85.6	95	95	95
22	565	83.43	88.67	2.06	0.479	0.509	0.011	-0.4	84.3	84.3	90	90	90
23	566Y	83.39	86.54	1.34	0.486	0.505	0.007	-7.8	82.7	83.1	84	84	84
24	568	83.04	81.32	0.56	0.503	0.493	0.003	-27.0	77.6	82.2	70	70	70
25	571	82.00	74.78	0.23	0.522	0.476	0.001	-48.4	70.5	85.5	55	55	55
26	573	81.10	71.03	0.14	0.532	0.466	0.000	-59.3	66.4	89.1	48	48	48
27	577	78.40	62.93	0.05	0.554	0.445	0.000	-79.9	57.6	98.5	35	35	35
28	581	74.33	54.29	0.02	0.577	0.421	0.000	-96.9	48.3	108.3	26	26	26
29	584R	71.79	49.91	0.01	0.589	0.410	0.000	-103.4	43.7	112.3	22	22	22
30	591	66.15	41.39	2.33	0.602	0.376	0.021	-113.1	32.1	117.5	15	15	15
31	588	67.67	43.61	0.91	0.603	0.388	0.008	-110.9	36.1	116.6	18	18	18
32	689	71.10	43.27	21.71	0.522	0.317	0.159	-123.7	9.9	124.1	4	4	4
33	697	74.36	41.34	44.30	0.459	0.266	0.273	-134.8	-17.9	136.0	352	352	352
34	708	75.16	42.36	58.08	0.428	0.241	0.330	-139.3	-35.6	143.8	345	345	345
35	716M	74.43	41.31	63.78	0.414	0.230	0.355	-139.7	-43.5	146.3	342	342	342
36	726	71.27	39.11	68.41	0.401	0.217	0.380	-138.2	-51.2	147.4	335	335	335
37	737	66.83	34.86	71.99	0.384	0.200	0.414	-132.2	-59.4	145.0	335	335	335
38	750	52.92	25.78	74.65	0.345	0.168	0.486	109.4	-70.4	130.1	327	327	327
39	820	13.14	6.61	74.65	0.139	0.070	0.790	18.8	-84.7	86.7	282	282	282

U=D50 96.74 100.00 81.03 0.348 0.360 0.360 0.0 0.0 0.0 0.0

$a^*_{p=m,n,p_0}=1.4[(5.645x-2.666+2.570z)/y]$ $B_m=(a-a_0)/Y$ $C_{ABm}=[A^2_m+B^2_m]^{1/2}$

$b^*_{p=m,n,p_0}=0.5[-(1.871x+1.457-3.861z)/y]$ $B_m=(b-b_0)/Y$ $h_{ABm}=\arctan[B_m/A_m]$

DE690-3N

CIEF10 tristimulus values, chromatic values, and putities ($n_1=1, n_2=0.5$).

Normalized Ostwald (O) tristimulus values ($Y_n=100$), ordered by wavelength.

no.	O	Y	n-purities				nu-purities			
			p_{an}	p_{bn}	p_{nn}	h_{abn}	p_{am}	p_{bm}	p_{mm}	h_{abm}
00	380	25.78	4.44	-3.17	5.46	324	4.24	-2.73	5.05	327
01	385	61.01	6.34	-3.26	13.60	282	2.89	-12.81	13.12	282
02	460	9.49	1.00	-9.43	9.48	276	0.08	-8.99	9.02	275
03	462	11.32	0.23	-7.90	7.90	271	0.03	-7.45	7.45	270
04	464B	13.45	-0.39	-6.60	6.61	266	-0.58	-6.15	6.18	264
05	468	18.67	-1.25	-4.60	4.67	254	-1.44	-4.15	4.40	250
06	471	25.21	-1.72	-3.24	3.67	241	-1.91	-2.80	3.39	235
07	472	28.96	-1.85	-2.74	3.31	235	-2.05	-2.29	3.07	228
08	475	37.06	-1.96	-2.00	2.80	225	-2.15	-1.55	2.65	215
09	477	45.70	-1.92	-1.50	2.44	217	-2.12	-1.05	2.37	206
10	477C	50.08	-1.87	-1.31	2.29	215	-2.06	-0.87	2.24	202
11	479	58.60	-1.73	-0.99	2.00	209	-1.93	-0.54	2.00	195
12	479	56.38	-1.77	-1.08	2.07	211	-1.96	-0.64	2.06	198
13	484	56.72	-1.98	-0.62	2.09	197	-2.18	-0.17	2.18	184
14	492	56.85	-2.17	-0.12	2.18	183	-2.37	0.31	2.39	172
15	5003	57.63	-2.22	0.17	2.23	175	-2.41	0.61	2.49	165
16	511G	58.68	-2.18	0.29	2.20	172	-2.38	0.74	2.49	162
17	521	60.88	-2.07	0.39	2.11	169	-2.27	0.84	2.42	159
18	532	65.12	-1.83	0.46	1.89	165	-2.03	0.91	2.22	155
19	545	74.21	-1.28	0.50	1.37	158	-1.47	0.94	1.75	147
20	563	93.38	-0.00	0.46	0.46	90	-0.20	0.90	0.92	102
21	564	90.50	0.10	0.49	0.50	77	-0.08	0.94	0.94	95
22	565	88.67	0.18	0.50	0.54	69	-0.00	0.95	0.95	90
23	566Y	86.54	0.28	0.51	0.58	60	0.09	0.95	0.96	84
24	568	81.32	0.52	0.50	0.73	44	0.33	0.95	1.01	70
25	571	74.78	0.84	0.49	0.97	30	0.64	0.94	1.14	55
26	573	71.03	1.03	0.48	1.14	25	0.83	0.93	1.25	48
27	577	62.93	1.46	0.46	1.53	17	1.27	0.91	1.56	35
28	581	54.29	1.97	0.44	2.02	12	1.78	0.89	1.99	26
29	584R	49.91	2.26	0.43	2.30	10	2.07	0.87	2.25	22
30	591	41.39	2.92	0.32	2.94	6	2.73	0.77	2.84	15
31	588	43.61	2.73	0.38	2.76	7	2.54	0.82	2.67	18
32	689	43.27	3.05	-0.21	3.06	355	2.86	0.23	2.86	4
33	697	43.14	3.31	-0.86	3.43	345	3.12	-0.41	3.15	352
34	708	42.36	4.26	-1.28	4.31	339	3.29	-0.84	3.39	345
35	716M	41.31	3.57	-1.50	3.87	337	3.38	-1.05	3.54	342
36	726	39.11	3.73	-1.75	4.12	334	3.53	-1.31	3.77	339
37	737	34.86	3.98	-2.15	4.53	331	3.79	-1.70	4.15	335
38	750	25.78	4.44	-3.17	5.46	324	4.24	-2.73	5.05	327
39	820	6.61	3.04	-13.26	13.60	282	2.84	-12.81	13.12	282

U=D50 100.00 100.00 81.03 -0.445 0.486 0.293 0.0 0.0 0.0 0.0

$a^*_{p=m,n,p_0}=1.4[(5.645x-2.666+2.570z)/y]$ $A_m=(a-a_0)/Y$ $C_{ABm}=[A^2_m+B^2_m]^{1/2}$

$b^*_{p=m,n,p_0}=0.5[-(1.871x+1.457-3.861z)/y]$ $B_m=(b-b_0)/Y$ $h_{ABm}=\arctan[B_m/A_m]$

DE690-4N

CIEF10 tristimulus values, chromatic values, and putities ($n_1=1, n_2=0.5$).

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

no.	O	C tristimulus values and chromaticities					nu-chromatic values				
		λ_n	X	Y	Z	x	y	λ_m	B_m	C_m	A_{Bm}
00	588	67.67	43.61	0.91	0.603	0.388	0.008	-110.9	36.1	116.6	378
01	689	71.10	43.27	21.71	0.522	0.317	0.159	-123.7	9.9	124.1	364
02	697	74.36	41.34	44.30	0.459	0.266	0.273	-134.8	-17.9	136.0	352
03	708	75.16	42.36	58.08	0.428	0.241	0.330	-139.3	-35.6	143.8	345
04	716	74.43	41.31	63.78	0.414	0.230	0.355	-139.7	-43.5	146.3	342
05	726M	72.17	39.11	68.41	0.401	0.217	0.380	-138.2	-51.2	147.4	339
06	737	66.83	34.86	71.99	0.384	0.200	0.414	-132.2	-59.4	145.0	335
07	380	52.92	25.78	74.65	0.139	0.070	0.486	-109.4	-70.4	130.1	327
08	455	13.14	6.61	74.65	0.139	0.070	0.790	-18.8	-84.7	86.7	282
09	460	13.28	9.49	77.94	0.131	0.094	0.773	-76	-85.3	85.6	275
10	462	13.30	11.32	78.97	0.128	0.109	0.762	-84	-84.4	84	270
11	464	13.34	13.45	79.69	0.125	0.126	0.748	-78	-82.7	83.1	264
12	468B	13.69	18.67	80.47	0.121	0.165	0.713	-27.0	-77.6	82.2	250
13	471	14.73	25.21	80.80	0.121	0.208	0.663	-48.4	-70.7	85.5	235
14	472	15.63	28.96	80.89	0.124	0.230	0.644	-59.3	-66.4	89.1	228
15	475	18.33	37.06	80.98	0.134	0.271	0.593	-79.9	-57.7	98.5	215
16	477	22.39	45.70	81.01	0.150	0.306	0.545	-96.9	-48.3	108.3	206
17	477	24.94	50.08	81.01	0.159	0.320	0.519	-103.4	-43.7	112.3	202
18	479C	30.58	58.60	78.68	0.182	0.349	0.468	-113.1	-32.1	117.5	195
19	497	29.07	56.38	80.12	0.175	0.340	0.483	-110.8	-36.1	116.6	198
20	484	25.63	56.72	59.32	0.180	0.400	0.418	-123.7	-10.0	124.1	184
21	503	22.37	58.85	70.73	0.192	0.380	0.316	-139.3	-27.6	136.0	172
22	504	22.57	67.63	22.95	0.211	0.564	0.227	-139.7	-35.6	143.8	165
23	511G	22.30	58.68	17.25	0.227	0.597	0.175	-139.7	-43.5	146.3	162
24	521	24.56	60.88	12.62	0.250	0.620	0.128	-138.2	-51.2	147.4	159
25	532	29.89	65.12	9.04	0.287	0.625	0.086	-132.2	-59.4	145.0	155
26	545	43.82	74.21	6.37	0.322	0.596	0.051	-109.4	-70.4	130.1	147
27	563	83.93	93.38	6.37	0.455	0.509	0.034	-18.8	-84.6	86.7	102
28	564	83.45	90.50	3.08	0.471	0.511	0.017	-76	85.3	85.6	95
29	565	83.43	88.67	0.56	0.479	0.509	0.011	-84	84.3	84.3	90
30	566	83.43	86.76	0.34	0.495	0.495	0.008	-27.0	-82.7	83.1	84
31	568	83.41	83.32	0.06	0.503	0.494	0.003	-48.4	-70.6	85.5	70
32	571Y	82.00	74.08	0.23	0.522	0.476	0.001	-48.4	-70.5	85.5	55
33	573	81.10	71.73	0.14	0.532	0.466	0.000	-59.3	-66.4	89.1	48
34	577	78.40	62.93	0.05	0.554	0.445	0.000	-79.9	-57.6	98.5	35
35	581	74.33	54.29	0.02	0.577	0.421	0.000	-96.9	-48.3	108.3	26
36	584R	71.79	49.91	0.01	0.589	0.410	0.000	-103.4	-43.7	112.3	22
37	591	66.15	41.39	2.33	0.602	0.376	0.021	-113.1	-32.1	117.5	15
38	588	67.67	43.61	0.91	0.603	0.388	0.008	-110.9	36.1	116.6	18
39	689	71.10	43.27	21.71	0.522	0.317	0.159	-123.7	9.9	124.1	4

R17M tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($V_{\lambda_n}=100$), ordered by wavelength.														
no.	O	C tristimulus values and chromaticities						nu-chromatic values						
		λ_n	X	Y	Z	x	y	A_m	B_m	C_m	A_{Bm}	B_{Bm}	C_{Bm}	
00	373	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	33.1	4.81	-2.56	5.45
01	450	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	99.3	30.7	5.82	-7.48	9.48
02	463	19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	29.5	4.26	-8.92	9.88
03	465	19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	29.0	2.70	-7.18	7.67
04	470B	20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	78.2	277	-0.52	-3.10	4.74
05	474	20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260	-0.52	-3.10	3.15
06	477	22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240	-1.13	-2.04	2.33
07	479	24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.5	75.2	232	-1.28	-1.66	2.10
08	481	28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218	-1.39	-1.10	1.77
09	482	30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213	-1.42	-0.93	1.70
10	487C	26.13	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197	-1.76	-0.55	1.84
11	496	20.48	50.06	44.06	0.178	0.436	0.384	-114.1	1.1	114.1	179	-2.22	0.02	2.22
12	500	20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174	-2.27	0.19	2.27
13	509	19.04	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169	-2.37	0.45	2.41
14	511	21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168	-2.27	0.48	2.32
15	518	24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164	-2.16	0.60	2.24
16	530G	29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158	-1.93	0.77	2.08
17	538	43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151	-1.48	0.79	1.68
18	553	67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127	-0.67	0.86	1.09
19	557	74.22	90.96	8.45	0.427	0.523	0.048	-38.4	80.5	89.2	115	-0.42	0.88	0.98
20	558	74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110	-0.34	0.90	0.96
21	561	73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97	-0.12	0.92	0.93
22	565	73.26	76.83	2.11	0.481	0.504	0.013	-12.3	75.3	75.2	82	-0.16	0.92	0.94
23	570Y	71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60	0.51	0.93	1.06
24	572	69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.5	70.2	52	0.71	0.92	1.17
25	578	65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38	1.14	0.91	1.46
26	581	63.81	51.69	1.69	0.544	0.441	0.014	68.8	45.0	82.2	33	1.33	0.87	1.59
27	600	67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17	1.68	0.52	1.77
28	705	73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354	2.49	-0.21	2.50
29	714R	74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349	2.73	-0.52	2.77
30	716	72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348	2.95	-0.62	3.02
31	723	69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344	3.29	-0.91	3.42
32	735	64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338	3.65	-1.45	3.93
33	743	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331	4.81	-2.56	5.45
34	815	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307	5.82	-7.48	9.48
U=D50 94.03 100.00 80.83 0.342 0.363 0.363 0.0 0.0 0.0 0														

$$a=P_m=a_n p_e=1.4(0.5645x-2.666+2.570z)/y \quad A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=b_n p_b=0.5(-1.871x+1.457-3.861z)/y \quad B_m=(b-b_y) \quad y \quad h_{ABm}=\tan[B_m/A_m]$$

DE690-3N

R17M tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by hue angle.

Normalized Ostwald (O) tristimulus values ($X_n=100$) derived by hue angle.														
no.	O	tristimulus values and chromaticities						nu-chromatic values						
		λ_n	X	Y	Z	x	y	λ_n	B_m	C_m	A_{Bm}	B_{Bm}	C_{Bm}	
00	600	67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	377	1.68	0.52	1.77
01	705	73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	354	2.49	-0.21	2.50
02	714	74.62	46.49	52.41	0.430	0.267	0.302	126.9	-24.2	129.2	349	2.73	-0.52	2.77
03	716	72.19	43.45	52.37	0.429	0.258	0.311	128.3	-27.2	131.2	348	2.95	-0.62	3.02
04	723	69.37	39.63	56.82	0.418	0.238	0.342	130.6	-36.4	135.5	344	3.29	-0.91	3.42
05	735M	64.03	34.59	64.49	0.392	0.212	0.395	126.5	-50.4	136.2	338	3.65	-1.45	3.93
06	373	50.84	23.58	64.46	0.366	0.169	0.464	113.4	-60.5	128.6	331	4.81	-2.56	5.45
07	450	26.22	10.37	70.14	0.245	0.097	0.657	60.4	-77.6	98.3	307	5.82	-7.48	9.48
08	463	19.81	9.03	72.37	0.195	0.089	0.715	38.4	-80.5	89.3	295	4.26	-8.92	9.88
09	465	19.87	11.18	74.25	0.188	0.106	0.705	30.2	-80.3	85.8	290	2.70	-7.18	7.67
10	470	20.04	16.46	77.00	0.176	0.145	0.678	10.4	-77.5	78.2	277	-0.52	-3.10	4.74
11	474	20.76	23.15	78.71	0.169	0.188	0.641	-12.2	-71.9	72.9	260	-0.52	-3.10	3.15
12	477B	22.69	31.32	79.75	0.169	0.234	0.596	-35.5	-64.0	73.2	240	-1.13	-2.04	2.33
13	479	24.27	35.77	80.07	0.173	0.255	0.571	-45.9	-59.5	75.2	232	-1.28	-1.66	2.10
14	481	28.86	45.22	80.48	0.186	0.292	0.520	-62.8	-49.9	80.3	218	-1.39	-1.10	1.77
15	482	30.21	48.30	79.14	0.191	0.306	0.501	-68.8	-45.0	82.2	213	-1.42	-0.93	1.70
16	487	26.13	48.90	65.44	0.186	0.348	0.465	-86.2	-27.0	90.4	197	-1.76	-0.55	1.84
17	496	20.48	50.06	44.06	0.178	0.436	0.384	-114.1	1.1	114.1	179	-2.22	0.02	2.22
18	500C	20.60	52.31	38.55	0.184	0.469	0.345	-118.7	10.4	119.2	174	-2.27	0.19	2.27
19	509	19.04	53.50	28.42	0.191	0.528	0.280	-126.9	24.2	129.2	169	-2.37	0.45	2.41
20	511	21.83	56.54	28.46	0.204	0.529	0.266	-128.3	27.2	131.2	168	-2.27	0.48	2.32
21	518	24.65	60.36	24.01	0.226	0.553	0.220	-130.6	36.4	135.5	164	-2.16	0.60	2.24
22	530	29.99	65.40	16.35	0.268	0.585	0.146	-126.5	50.4	136.1	158	-1.93	0.77	2.08
23	538G	43.18	76.41	16.37	0.317	0.562	0.120	-113.4	60.5	128.6	151	-1.48	0.79	1.68
24	553	67.80	89.62	10.69	0.403	0.533	0.063	-60.4	77.6	98.3	127	-0.67	0.86	1.09
25	557	74.22	90.96	8.45	0.427	0.523	0.048	-38.4	80.5	89.2	115	-0.42	0.88	0.98
26	558	74.15	88.81	6.58	0.437	0.523	0.038	-30.2	80.3	85.8	110	-0.34	0.90	0.96
27	561	73.98	83.52	3.84	0.458	0.517	0.023	-10.4	77.4	78.1	97	-0.12	0.92	0.93
28	565	73.26	76.83	2.11	0.481	0.504	0.013	-12.3	75.3	75.2	82	-0.16	0.92	0.94
29	570Y	71.33	68.67	1.09	0.505	0.486	0.007	35.5	64.0	73.2	60	0.51	0.93	1.06
30	572	69.75	64.22	0.76	0.517	0.476	0.005	45.9	59.5	70.2	52	0.71	0.92	1.17
31	578	65.16	54.77	0.35	0.541	0.455	0.002	62.8	49.9	80.3	38	1.14	0.91	1.46
32	581Y	63.81	51.69	1.69	0.544	0.441	0.014	68.8	45.0	82.2	33	1.33	0.87	1.59
33	600	67.89	51.09	15.38	0.505	0.380	0.114	86.2	27.0	90.4	17	1.68	0.52	1.77
34	705	73.42	47.68	42.28	0.449	0.291	0.258	118.7	-10.4	119.2	-5	2.49	-0.21	2.50
U=D50 94.03 100.00 80.83 0.342 0.363 0.363 0.0 0.0 0.0 0														

$$a=P_m=a_n p_e=1.4(0.5645x-2.666+2.570z)/y \quad A_m=(a-a_y) \quad C_{ABm}=[A_m^2+B_m^2]^{1/2}$$

$$b=P_m=b_n p_b=0.5(-1.871x+1.457-3.861z)/y \quad B_m=(b-b_y) \quad y \quad h_{ABm}=\tan[B_m/A_m]$$

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R17M tristimulus values, chromatic values, and putities ($n_e=1.4$, $n_h=0.5$).
Normalized Ostwald (O) tristimulus values ($Y_0=100$), ordered by wavelength.

Normalized Ostwald (O) tristimulus values ($Y_{100}=100$), ordered by wavelength.														
no.	O	C				n-purities				n-purities				
		λ_n	P_m	P_n	P_r	h_{38}	P_m	P_n	P_r	h_{38}	P_m	P_n	P_r	h_{38}
00	373	23.58	4.89	-3.00	5.74	328	4.81	-2.56	5.45	331	4.81	-2.56	5.45	331
01	450	10.37	5.90	-7.92	9.88	306	5.82	-7.48	9.48	307	5.82	-7.48	9.48	307
02	463	9.03	4.34	-9.36	10.32	294	4.26	-8.92	9.88	295	4.26	-8.92	9.88	295
03	465	11.18	2.78	-7.62	8.11	299	2.70	-7.18	7.67	299	2.70	-7.18	7.67	299
04	470B	16.46	0.71	-5.14	5.19	277	0.63	-4.07	4.74	277	0.63	-4.07	4.74	277
05	474	23.15	-0.44	-3.54	3.57	262	-0.52	-3.10	3.35	260	-0.52	-3.10	3.35	260
06	477	31.32	-1.05	-2.48	2.69	247	-1.13	-2.04	2.31	240	-1.13	-2.04	2.31	240
07	479	35.77	-1.20	-2.10	2.42	240	-1.28	-1.66	2.10	232	-1.28	-1.66	2.10	232
08	481	45.22	-1.30	-1.54	2.02	229	-1.39	-1.10	1.77	218	-1.39	-1.10	1.77	218
09	482	48.30	-1.31	-1.37	1.91	225	-1.42	-0.93	1.70	213	-1.42	-0.93	1.70	213
10	483C	49.86	-1.68	-0.99	1.95	210	-1.76	-0.56	1.44	197	-1.76	-0.56	1.44	197
11	490	50.06	-2.11	-0.41	2.18	190	-2.02	-0.22	1.27	179	-2.02	-0.22	1.27	179
12	500	52.31	-2.18	-0.23	2.20	186	-2.27	-0.19	1.27	174	-2.27	-0.19	1.27	174
13	509	53.50	-2.29	0.01	2.29	179	-2.37	0.45	2.41	169	-2.37	0.45	2.41	169
14	511	56.54	-2.18	0.04	2.19	178	-2.27	0.48	2.32	168	-2.27	0.48	2.32	168
15	518	60.36	-2.08	0.16	2.08	175	-2.16	0.60	2.24	164	-2.16	0.60	2.24	164
16	530G	65.40	-1.85	0.33	1.88	169	-1.93	0.77	2.08	158	-1.93	0.77	2.08	158
17	538	76.41	-1.40	0.35	1.44	165	-1.48	0.79	1.68	151	-1.48	0.79	1.68	151
18	553	89.62	-0.59	0.42	0.73	144	-0.67	0.86	1.09	127	-0.67	0.86	1.09	127
19	557	90.96	-0.34	0.44	0.56	127	-0.42	0.88	0.98	115	-0.42	0.88	0.98	115
20	558	88.81	-0.25	0.46	0.53	119	-0.34	0.90	1.00	110	-0.34	0.90	1.00	110
21	560	86.81	-0.24	0.44	0.50	95	-0.42	0.92	0.97	94	-0.42	0.92	0.97	94
22	565	76.83	0.24	0.49	0.55	64	0.16	0.93	0.94	80	0.16	0.93	0.94	80
23	570Y	68.67	0.59	0.49	0.77	39	0.51	0.93	1.06	60	0.51	0.93	1.06	60
24	572	64.22	0.79	0.48	0.93	31	0.71	0.92	1.17	52	0.71	0.92	1.17	52
25	578	54.77	1.22	0.47	1.31	21	1.14	0.91	1.46	38	1.14	0.91	1.46	38
26	581	51.69	1.41	0.43	1.47	17	1.33	0.87	1.59	33	1.33	0.87	1.59	33
27	600	51.09	1.77	0.09	1.77	2	1.68	0.52	1.77	17	1.68	0.52	1.77	17
28	705	47.68	2.57	-0.65	2.65	345	2.49	-0.21	2.50	354	2.49	-0.21	2.50	354
29	714R	46.49	2.81	-0.95	2.97	341	2.73	-0.52	2.77	349	2.73	-0.52	2.77	349
30	716	43.45	3.03	-1.06	3.21	340	2.95	-0.62	3.02	348	2.95	-0.62	3.02	348
31	723	39.63	3.37	-1.35	3.63	338	3.29	-0.91	3.42	344	3.29	-0.91	3.42	344
32	735	33.53	3.73	-1.89	4.19	333	3.65	-1.45	3.93	330	3.65	-1.45	3.93	330
33	742	23.58	4.89	-3.00	5.74	328	4.81	-2.56	5.45	331	4.81	-2.56	5.45	331
34	815	10.37	5.90	-7.92	9.88	306	5.82	-7.48	9.48	307	5.82	-7.48	9.48	307

**R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by wavelength.**

no.	O	tristimulus values and chromaticities						Au-nerve chromaticities			
		X	Y	Z	x	y	z	A_u	B_u	C_{AB}	h_{AB}
00	375	52.09	25.14	67.62	0.359	0.173	0.466	112.5	-7.67	128.8	330
01	444	27.16	9.33	66.62	0.260	0.089	0.469	-68.7	-76.0	102.4	312
02	463	21.19	9.55	72.48	0.205	0.092	0.702	42.3	-80.1	90.8	297
03	465	21.27	11.71	74.36	0.198	0.109	0.692	34.1	-80.1	87.1	293
04	470B	21.43	17.01	77.11	0.185	0.147	0.667	14.3	-77.2	78.6	280
05	474	22.09	23.68	78.83	0.177	0.190	0.632	-8.5	-71.7	72.2	263
06	476	22.83	27.59	79.47	0.172	0.212	0.611	-20.3	-68.0	70.9	253
07	479	25.44	36.25	80.19	0.159	0.255	0.565	-42.5	-59.3	73.0	243
08	481	28.15	45.66	80.60	0.148	0.318	0.518	-61.1	-50.3	72.6	226
09	481	28.88	45.66	80.60	0.191	0.292	0.516	-59.8	-49.7	77.8	219
10	482C	31.14	48.71	79.26	0.195	0.306	0.498	-66.0	-44.8	79.8	214
11	488	25.13	49.09	60.78	0.186	0.363	0.450	-90.0	-20.9	92.4	193
12	496	20.67	50.12	44.12	0.179	0.436	0.383	-110.6	-1.2	110.6	179
13	500	20.63	52.39	38.61	0.184	0.469	0.345	-118.3	10.4	118.8	174
14	505	20.59	54.04	33.36	0.190	0.500	0.308	-124.1	18.7	125.5	171
15	515	20.37	55.82	24.00	0.203	0.557	0.239	-130.5	32.0	134.3	166
16	522G	23.24	59.39	19.95	0.226	0.578	0.194	-131.6	40.5	137.7	162
17	540	20.67	66.25	13.32	0.244	0.644	0.167	-141.1	50.3	150.1	158
18	540	41.69	74.85	13.32	0.321	0.576	0.102	-112.5	62.7	128.8	150
19	552	66.62	90.66	13.33	0.390	0.531	0.078	-68.6	76.0	102.4	132
20	557	72.58	90.44	8.47	0.423	0.527	0.049	-42.2	80.3	90.8	117
21	558	72.21	88.28	6.59	0.433	0.527	0.039	-34.1	80.1	87.0	113
22	561	72.35	82.98	3.84	0.454	0.521	0.024	-14.2	77.2	78.5	100
23	565Y	71.69	76.31	2.11	0.477	0.508	0.014	8.5	71.6	72.1	83
24	570	70.94	72.40	1.53	0.489	0.499	0.010	20.4	67.9	70.9	73
25	567	68.33	63.74	0.76	0.514	0.479	0.005	42.5	59.3	73.0	54
26	575	59.33	59.33	0.53	0.548	0.479	0.004	59.8	49.6	75.3	45
27	578	63.90	63.33	0.35	0.538	0.458	0.002	59.8	49.8	78.9	39
28	581	62.64	51.28	0.19	0.541	0.443	0.014	66.0	44.8	79.8	34
29	614R	68.65	50.90	0.17	0.491	0.364	0.044	90.0	20.9	92.4	13
30	701	73.13	49.79	26.82	0.457	0.311	0.230	110.6	-1.2	110.6	359
31	705	73.15	47.60	42.34	0.448	0.291	0.259	118.4	-18.7	118.8	354
32	710	73.19	45.95	47.59	0.438	0.275	0.285	124.1	-18.7	125.5	351
33	720	73.40	44.17	56.94	0.420	0.253	0.326	130.5	-32.0	134.4	346
34	727	70.53	40.59	61.00	0.409	0.235	0.354	131.6	-40.5	137.7	342
35	735	64.53	35.29	64.53	0.348	0.203	0.394	131.6	-40.5	137.7	338
36	745	52.09	25.14	67.62	0.359	0.173	0.466	112.5	-62.7	128.8	330
37	809	27.16	9.33	67.62	0.260	0.089	0.469	-68.7	-76.0	102.4	312
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0

$$\begin{aligned} a &= p_{an} = n_a p_a = 1,4[(5,645x - 2,666 + 2,570z)/y] & A_{nu} &= (a - a_u) Y & C_{ABnu} &= [A_{nu}^2 + B_{nu}^2]^{1/2} \\ b &= p_{bn} = n_b p_b = 0,5[(-1,871x + 1,457 - 3,861z)/y] & B_{nu} &= (b - b_u) Y & h_{ABnu} &= \text{atan}[B_{nu}/A_{nu}] \end{aligned}$$

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized *Ostwald* (*O*) tristimulus values ($Y_w=100$), ordered by wavelength.

<i>no.</i>	λ_c	λ_{obs}	<i>Y</i>	<i>n</i> -purities				<i>nu</i> -purities			
				<i>P_{nn}</i>	<i>P_{pn}</i>	<i>P_{pn}</i>	<i>h_{nnn}</i>	<i>P_{nn}</i>	<i>P_{pn}</i>	<i>P_{pn}</i>	<i>h_{nnn}</i>
00	375	25.14	4.54	-2.93	3.41	317	7.36	-8.49	5.12	330	
01	444	9.33	7.43	-8.58	11.36	310	7.36	-8.14	10.98	312	
02	463	9.55	4.50	-8.85	9.93	296	4.43	-8.41	9.51	297	
03	465	11.71	2.99	-7.87	7.87	292	2.92	-6.84	7.84	293	
04	4708	17.01	0.91	-4.98	5.06	280	0.84	-4.54	4.62	289	
05	474	23.68	-0.28	-3.46	3.47	265	-0.35	-3.02	3.04	263	
06	476	27.59	-0.66	-2.90	2.92	257	-0.73	-2.64	2.57	253	
07	479	36.25	-1.10	-2.07	2.35	242	-1.17	-1.63	2.01	234	
08	488	48.88	-1.48	-1.20	1.20	235	-1.48	-1.33	1.84	222	
09	481	45.66	-1.24	-1.52	1.96	230	-1.31	-1.09	1.70	219	
10	482	48.71	-1.28	-1.36	1.87	226	-1.35	-0.92	1.63	214	
11	488	49.09	-1.76	-0.86	1.96	206	-1.83	-0.42	1.88	193	
12	496	50.20	-2.13	-0.41	2.17	190	-2.20	0.02	2.20	179	
13	500	52.39	-2.18	-0.23	2.20	186	-2.25	0.19	2.26	174	
14	505	54.04	-2.22	-0.09	2.22	182	-2.29	0.34	2.32	171	
15	515	55.82	-2.26	0.13	2.27	176	-2.33	0.57	2.40	166	
16	522	59.39	-2.14	0.24	2.15	173	-2.31	0.68	2.31	162	
17	530	65.19	-1.89	0.51	1.90	170	-1.90	0.71	1.97	155	
18	540	74.85	-1.43	0.39	1.48	164	-1.50	0.83	1.72	150	
19	552	90.66	-0.68	0.39	0.79	149	-0.75	0.83	1.13	132	
20	557	90.44	-0.39	0.44	0.60	131	-0.46	0.88	1.00	117	
21	558	88.28	-0.31	0.46	0.56	124	-0.38	0.90	0.98	113	
22	561	82.98	-0.10	0.49	0.50	101	-0.17	0.93	0.94	100	
23	5657	76.31	0.18	0.50	0.53	69	0.11	0.93	0.94	83	
24	567	72.40	0.35	0.50	0.61	54	0.28	0.93	0.98	73	
25	572	63.74	0.73	0.49	0.88	33	0.66	0.93	1.14	54	
26	581	49.11	0.94	0.47	1.00	27	0.92	0.92	0.97	40	
27	578	54.33	-1.17	0.47	1.26	22	-1.10	0.91	1.43	39	
28	581	51.28	1.35	0.43	1.42	17	1.28	0.87	1.55	34	
29	6148	50.90	1.84	-0.02	1.84	359	1.76	0.41	1.81	13	
30	701	49.79	2.29	-0.46	2.33	348	2.22	-0.02	2.22	359	
31	705	47.60	2.55	-0.65	2.64	345	2.48	-0.22	2.49	354	
32	710	45.95	2.77	-0.84	2.89	343	2.70	-0.40	2.73	351	
33	720	44.17	3.02	-1.16	3.24	338	2.95	-0.72	3.30	346	
34	727	40.59	3.31	-1.43	3.61	336	3.24	-0.99	3.39	342	
35	739	37.79	3.75	-1.44	3.83	333	3.61	-1.44	3.85	344	
36	745	25.14	4.54	-2.93	5.41	327	4.47	-4.49	5.12	330	
37	809	9.33	7.43	-8.58	11.36	310	7.36	-8.14	10.98	312	
U=D50	100.00	0.070		-0.438	0.444	279	0.0	0.0	0.0	150	

$$\begin{aligned} a &= p_{an} = n_a p_a = 1,4[(5,645x - 2,666 + 2,570z)/y] & A_{nu} &= (a - a_u)Y & C_{ABnu} &= [A_{nu}^2 + B_{nu}^2]^{1/2} \\ b &= p_{bn} = n_b p_b = 0,5[(-1,871x + 1,457 - 3,861z)/y] & B_{nu} &= (b - b_u)Y & h_{ABnu} &= \text{atan}[B_{nu}/A_{nu}] \end{aligned}$$

R17Ms tristimulus values, chromatic values, and putities ($n_a=1,4$, $n_b=0,5$).
Normalized Ostwald (O) tristimulus values ($Y_w=100$), ordered by hue angle.

no.	O	tristimulus values and chromaticities						non-Bromius values			
		X	Y	Z	x	y	z	λ_{CBrom}	λ_{Brom}	h_{Brom}	
00	614	68.65	50.90	20.17	0.491	0.364	0.144	90.0	20.9	92.4	373
01	701	73.11	49.79	36.82	0.457	0.311	0.230	110.6	-1.2	110.6	359
02	705	73.15	47.60	42.34	0.448	0.291	0.259	118.4	-1.0	118.8	354
03	710	73.19	45.95	47.59	0.438	0.275	0.285	124.1	-1.87	125.5	351
04	720	73.40	44.17	56.94	0.420	0.253	0.326	130.5	-3.20	134.4	346
05	727M	70.53	40.59	61.00	0.409	0.235	0.354	131.6	-4.05	137.7	342
06	735	64.16	35.14	67.58	0.393	0.212	0.394	128.1	-5.0	137.7	338
07	745	57.52	25.14	74.62	0.375	0.187	0.463	120.9	-6.0	137.7	332
08	744	27.16	12.79	82.62	0.260	0.089	0.649	68.7	-7.60	102.4	312
09	463	21.19	9.55	72.48	0.205	0.092	0.702	42.3	-8.03	90.8	297
10	465	21.27	11.71	74.36	0.198	0.109	0.692	34.1	-8.01	87.1	293
11	470	21.43	17.01	77.11	0.185	0.147	0.667	34.3	-7.72	78.6	280
12	474B	22.09	23.68	78.83	0.177	0.190	0.632	-8.5	-7.17	72.2	263
13	476	22.83	27.59	79.42	0.175	0.212	0.611	-20.3	-6.80	70.9	253
14	479	25.44	36.25	80.19	0.179	0.255	0.565	-42.5	-5.93	73.0	234
15	480	27.41	40.88	80.43	0.184	0.274	0.540	-51.9	-5.46	75.4	226
16	481	29.88	45.66	80.60	0.191	0.292	0.516	-59.8	-4.97	77.8	219
17	482	31.14	48.71	79.26	0.195	0.306	0.498	-66.0	-4.48	79.8	214
18	486C	31.13	49.09	60.78	0.196	0.363	0.455	-20.9	-9.24	92.4	373
19	490	26.67	30.20	74.12	0.175	0.236	0.383	-110.6	-1.2	110.6	359
20	500	20.63	52.39	38.61	0.184	0.469	0.345	-118.3	1.04	118.8	374
21	505	20.50	50.44	33.36	0.190	0.500	0.308	-124.1	1.87	125.5	371
22	515	20.37	55.82	24.00	0.203	0.557	0.239	-130.5	3.20	134.4	366
23	522G	23.24	59.35	19.95	0.226	0.578	0.194	-131.6	4.05	137.7	362
24	530	29.26	65.19	16.37	0.264	0.588	0.147	-128.1	5.0	137.7	358
25	540	41.69	74.85	13.32	0.321	0.576	0.102	-112.5	6.27	128.8	350
26	552	66.62	90.66	13.33	0.390	0.531	0.078	-68.6	7.60	102.4	312
27	557	72.58	94.44	8.47	0.423	0.527	0.049	-42.2	8.03	90.8	297
28	558	72.51	88.28	6.59	0.433	0.527	0.039	-34.1	8.01	87.1	293
29	561	72.35	82.98	3.84	0.454	0.521	0.024	-14.2	7.72	78.6	280
30	565	71.69	76.31	2.17	0.477	0.508	0.014	-8.5	7.16	72.2	263
31	567	68.33	63.74	0.76	0.514	0.479	0.005	-42.5	5.93	73.0	234
32	575	66.36	59.31	0.52	0.526	0.469	0.004	-51.9	5.46	75.4	226
33	578	63.90	54.33	0.35	0.538	0.458	0.002	-59.8	4.97	77.8	219
34	581	62.64	51.28	0.19	0.541	0.443	0.014	-66.0	4.48	79.8	214
35	614R	68.65	50.90	20.17	0.491	0.364	0.144	90.0	20.9	92.4	373
36	701	73.11	49.79	36.82	0.457	0.311	0.230	110.6	-1.2	110.6	0
U=D50		93.78	100.00	80.94	0.341	0.363	0.363	0.0	0.0	0.0	0

$$\begin{aligned} a &= p_{an} = n_a p_a = 1,4[(5,645x - 2,666 + 2,570z)/y] & A_{nu} &= (a - a_u) Y & C_{ABnu} &= [A_{nu}^2 + B_{nu}^2]^{1/2} \\ b &= p_{bn} = n_b p_b = 0,5[(-1,871x + 1,457 - 3,861z)/y] & B_{nu} &= (b - b_u) Y & h_{ABnu} &= \text{atan}[B_{nu}/A_{nu}] \end{aligned}$$

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

n_o	Δ	χ	n -purities					nu -purities				
		Y	P_{n1}	P_{n2}	P_{n3}	h_{n3}	P_{nu1}	P_{nu2}	P_{nu3}	h_{nu3}		
00	614	50.90	1.84	-0.02	1.84	359	1.76	0.41	1.81	373		
01	701	49.79	2.29	-0.46	2.33	348	2.22	0.02	2.22	359		
02	705	47.60	2.55	-0.65	2.64	345	2.48	-0.22	2.49	354		
03	710	45.95	2.77	-0.84	2.89	343	2.70	-0.40	2.73	351		
04	720	44.17	3.02	-1.16	3.24	338	2.95	-0.72	3.04	346		
05	727M	40.59	3.31	-1.43	3.61	336	3.24	-0.99	3.39	342		
06	735	34.79	3.75	-1.88	4.20	333	3.68	-1.44	3.95	338		
07	744	31.47	4.54	-2.22	5.43	327	4.47	-1.99	4.39	334		
08	744	9.33	4.43	-5.88	11.36	310	7.36	-8.14	10.98	312		
09	463	9.55	4.50	-8.85	9.93	296	4.43	-8.41	9.51	297		
10	465	11.71	2.99	-7.28	7.87	292	2.92	-6.84	7.44	293		
11	470	17.01	0.91	-4.98	5.06	280	0.84	-4.54	4.62	280		
12	478	23.68	-0.28	-3.46	3.47	265	-0.35	-3.02	3.04	263		
13	476	27.59	-0.66	-2.90	2.97	257	-0.73	-2.46	2.57	253		
14	479	36.25	-1.10	-2.07	2.35	242	-1.17	-1.63	2.01	234		
15	480	40.88	-1.20	-1.77	2.14	235	-1.27	-1.33	1.84	226		
16	481	45.66	-1.24	-1.52	1.96	230	-1.31	-0.99	1.70	219		
17	482	48.71	-1.28	-1.36	1.87	226	-1.33	-0.92	1.63	214		
18	480	49.09	-1.76	-0.86	1.96	206	-1.83	-0.42	1.88	193		
19	495	40.20	1.31	-4.41	2.15	190	0.22	-2.02	2.20	179		
20	500	52.39	-1.18	-0.23	2.20	186	-2.25	0.19	2.32	174		
21	505	54.04	-2.22	-0.09	2.22	182	-2.29	0.34	2.32	171		
22	515	55.82	-2.26	0.13	2.27	176	-2.23	0.57	2.30	166		
23	522G	59.39	-2.14	0.24	2.15	173	-2.31	0.68	2.31	162		
24	530	65.19	-1.89	0.33	1.92	170	-1.96	0.77	2.11	158		
25	540	74.85	-1.43	0.39	1.48	164	-1.50	0.83	1.72	150		
26	552	90.66	-0.68	0.39	0.79	149	-0.75	0.83	1.13	132		
27	557	90.44	-0.39	0.44	0.60	131	-0.46	0.88	1.00	117		
28	558	88.28	-0.31	0.46	0.56	124	-0.38	0.90	0.98	113		
29	561	82.98	-0.10	0.49	0.50	101	-0.17	0.93	0.94	100		
30	565	76.31	0.18	0.50	0.53	69	0.11	0.93	0.94	83		
31	540	31.40	0.35	0.54	0.54	58	0.38	0.93	0.77	77		
32	572	63.74	0.73	0.49	0.83	33	0.66	0.93	1.14	54		
33	575	59.11	0.94	0.48	1.06	27	0.87	0.92	1.27	46		
34	578	54.33	1.17	0.47	1.26	22	1.10	0.91	1.43	39		
35	581	51.28	1.35	0.43	1.42	17	1.28	0.87	1.55	34		
36	614R	50.90	1.84	-0.02	1.84	0	1.76	0.41	1.81	13		
37	701	49.79	2.29	-0.46	2.33	-11	2.22	-0.02	2.22	0		
U=D50		100.00	0.070	-0.438	0.444	279	0.0	0.0	0.0	0.0		

$$\begin{array}{lll} a=p_{an}=n_a p_a=1,4[(5,645x-2,666+2,570z)/y] & A_{nu}=(a-a_w)Y & C_{ABnu}=[A_{nu}^2+B_{nu}^2]^{1/2} \\ b=p_{bn}=n_b p_b=0,5[(-1,871x+1,457-3,861z)/y] & B_{nu}=(b-b_w)Y & h_{ABnu}=atan[B_{nu}/A_{nu}] \end{array}$$