

**Performance (STRESS values) for threshold colour difference data (TCD)**

data set	Calculations with data for grey surrounds (D65) and $0,1 < Y < 190$									
	Difference $\Delta E^*_{CIELAB}$					Colour difference formula and STRESS value				
Name	Pairs	$\Delta E^*_{ab}$ range	min	max	mean	CIELAB $\Delta E^*_{ab}$	CMC $\Delta E^*_{CMs}$	CIE94 $\Delta E^*_{94}$	CIEDE2000 $\Delta E^*_{00}$	LABJND $\Delta E^*_{85}$
WA_0100	100	0.0 to <99.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	890	0.0 to <99.0	0.1	4.87	1.09	55.2	47.3	44.9	46.0	55.8
2M_0399	399	0.0 to <99.0	0.09	2.74	0.7	55.2	47.6	46.2	45.8	57.5
2S_0446	446	0.0 to <99.0	0.07	4.28	1.08	51.8	49.7	46.4	48.7	51.2
2G_0379	379	0.0 to <99.0	0.08	2.61	0.81	55.6	50.7	48.6	50.3	50.9
WA_0100	99	0.0 to <1.0	0.19	0.94	0.54	30.8	21.5	31.1	18.3	45.7
1S_0890	513	0.0 to <1.0	0.1	0.99	0.63	37.7	43.2	41.5	41.5	51.9
2M_0399	316	0.0 to <1.0	0.09	0.99	0.53	47.4	42.3	42.8	40.7	55.4
2S_0446	255	0.0 to <1.0	0.07	0.99	0.51	42.2	40.7	42.8	41.4	51.4
2G_0379	276	0.0 to <1.0	0.08	0.99	0.57	53.9	53.3	50.2	52.2	48.1
WA_0100	100	0.0 to <2.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	795	0.0 to <2.0	0.1	1.98	0.89	42.2	42.9	42.5	42.6	53.6
2M_0399	394	0.0 to <2.0	0.09	1.97	0.68	52.9	46.5	45.3	45.0	56.7
2S_0446	380	0.0 to <2.0	0.07	1.99	0.81	45.6	41.8	43.0	43.0	51.2
2G_0379	369	0.0 to <2.0	0.08	1.99	0.77	55.4	50.9	48.9	50.6	51.0
WA_0100	46	0.0 to <0.5	0.19	0.49	0.39	18.6	24.6	22.6	17.3	49.8
1S_0890	157	0.0 to <0.5	0.1	0.49	0.35	36.8	43.9	41.0	44.6	48.6
2M_0399	143	0.0 to <0.5	0.09	0.49	0.3	44.4	46.4	43.1	41.7	48.7
2S_0446	133	0.0 to <0.5	0.07	0.49	0.32	36.2	39.9	39.4	40.5	47.6
2G_0379	106	0.0 to <0.5	0.08	0.49	0.34	50.5	52.9	49.5	50.4	50.5
WA_0100	53	0.5 to <1.0	0.5	0.94	0.66	17.1	18.2	31.9	18.7	41.4
1S_0890	356	0.5 to <1.0	0.5	0.99	0.75	29.2	36.5	34.2	34.0	47.4
2M_0399	173	0.5 to <1.0	0.5	0.99	0.72	33.2	34.2	34.7	32.4	51.5
2S_0446	122	0.5 to <1.0	0.5	0.99	0.72	36.9	40.3	41.6	40.6	52.3
2G_0379	170	0.5 to <1.0	0.5	0.99	0.71	46.8	48.2	44.5	47.0	43.6
WA_0100	1	1.0 to <1.5	1.35	1.35	1.35	0.1	0.1	0.1	0.1	0.1
1S_0890	198	1.0 to <1.5	1.0	1.49	1.23	26.2	35.1	35.1	36.9	47.3
2M_0399	66	1.0 to <1.5	1.02	1.49	1.21	34.5	37.3	36.0	36.6	53.7
2S_0446	76	1.0 to <1.5	1.0	1.49	1.2	32.9	38.2	42.6	42.1	53.8
2G_0379	64	1.0 to <1.5	1.0	1.49	1.23	31.7	33.3	33.6	33.7	50.3
WA_0100	0									
1S_0890	84	1.5 to <2.0	1.5	1.98	1.72	23.5	30.9	32.7	32.4	51.2
2M_0399	12	1.5 to <2.0	1.5	1.97	1.67	39.3	33.8	27.9	34.1	35.8
2S_0446	49	1.5 to <2.0	1.51	1.99	1.74	30.8	34.5	33.6	34.0	45.1
2G_0379	29	1.5 to <2.0	1.51	1.99	1.69	25.0	28.4	28.4	29.5	40.6

data sets: WA=WANG, 1S=BIGC\_T1\_SG, 2M=BIGC\_T2\_M, 2S=BIGC\_T2\_SG, 2G=BIGC\_T2\_G

Performance (STRESS values) for threshold colour difference data (TCD)										
data set	Calculations with data for grey surrounds (D65) and $0,1 < Y < 190$									
	Pairs	Difference $\Delta E^*_{CIEDE2000}$				Colour difference formula and STRESS value				
Name			$\Delta E^*_{C00}$ range	min	max	mean	CIELAB $\Delta E^*$	CMC $\Delta E^*$	CIE94 $\Delta E^*$	CIEDE2000 $\Delta E^*$
WA_0100	100	0.0 to <99.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	890	0.0 to <99.0	0.1	4.87	1.09	55.2	47.3	44.9	46.0	55.8
2M_0399	399	0.0 to <99.0	0.09	2.74	0.7	55.2	47.6	46.2	45.8	57.5
2S_0446	446	0.0 to <99.0	0.07	4.28	1.08	51.8	49.7	46.4	48.7	51.2
2G_0379	379	0.0 to <99.0	0.08	2.61	0.81	55.6	50.7	48.6	50.3	50.9
WA_0100	100	0.0 to <1.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	772	0.0 to <1.0	0.1	3.52	0.93	50.7	40.8	39.2	38.9	49.3
2M_0399	395	0.0 to <1.0	0.09	2.21	0.69	54.9	46.7	45.0	45.0	55.2
2S_0446	380	0.0 to <1.0	0.07	2.84	0.86	48.5	39.6	40.8	40.0	50.1
2G_0379	357	0.0 to <1.0	0.08	2.26	0.75	57.1	50.6	48.3	49.9	48.3
WA_0100	100	0.0 to <2.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	883	0.0 to <2.0	0.1	4.87	1.08	55.4	46.8	43.5	44.5	53.5
2M_0399	399	0.0 to <2.0	0.09	2.74	0.7	55.2	47.6	46.2	45.8	57.5
2S_0446	443	0.0 to <2.0	0.07	4.28	1.06	51.1	47.7	44.9	46.9	50.8
2G_0379	379	0.0 to <2.0	0.08	2.61	0.81	55.6	50.7	48.6	50.3	50.9
WA_0100	98	0.0 to <0.5	0.19	1.35	0.55	32.8	21.7	31.1	18.3	45.0
1S_0890	339	0.0 to <0.5	0.1	1.71	0.59	47.7	38.7	37.3	38.6	46.6
2M_0399	280	0.0 to <0.5	0.09	1.35	0.49	51.1	42.0	41.6	40.2	52.2
2S_0446	229	0.0 to <0.5	0.07	1.51	0.52	47.1	39.8	43.0	39.6	52.3
2G_0379	234	0.0 to <0.5	0.08	1.49	0.59	61.6	49.0	47.9	48.9	45.0
WA_0100	2	0.5 to <1.0	0.36	0.44	0.4	9.9	9.9	10.1	0.2	28.0
1S_0890	433	0.5 to <1.0	0.44	3.52	1.2	45.6	31.3	28.8	27.7	42.2
2M_0399	115	0.5 to <1.0	0.64	2.21	1.15	44.0	37.7	34.9	34.5	48.9
2S_0446	151	0.5 to <1.0	0.44	2.84	1.36	40.2	33.6	34.4	33.8	47.2
2G_0379	123	0.5 to <1.0	0.47	2.26	1.07	44.4	39.4	36.4	38.2	40.6
WA_0100	0									
1S_0890	92	1.0 to <1.5	0.74	4.85	1.93	47.5	27.9	24.1	23.0	43.6
2M_0399	4	1.0 to <1.5	1.44	2.74	1.92	33.2	7.4	13.1	13.0	31.2
2S_0446	53	1.0 to <1.5	1.1	3.61	2.17	36.7	32.9	29.4	30.0	39.8
2G_0379	21	1.0 to <1.5	1.17	2.61	1.73	26.7	20.7	17.3	18.5	27.6
WA_0100	0									
1S_0890	19	1.5 to <2.0	1.57	4.87	2.91	47.2	33.1	19.9	22.9	42.3
2M_0399	0									
2S_0446	10	1.5 to <2.0	2.37	4.28	2.97	44.0	43.7	39.9	40.9	39.5
2G_0379	1	1.5 to <2.0	2.07	2.07	2.07	0.1	0.1	0.1	0.1	0.1

data sets: WA=WANG, 1S=BIGC\_T1\_SG, 2M=BIGC\_T2\_M, 2S=BIGC\_T2\_SG, 2G=BIGC\_T2\_G

Performance (STRESS values) for threshold colour difference data (TCD)										
data set	Calculations with data for grey surrounds (D65) and $0,1 < Y < 190$									
	Difference $\Delta E^*_{LABJND}$					Colour difference formula and STRESS value				
Name	Pairs	$\Delta E^*_{C85}$ range	min	max	mean	CIELAB $\Delta E^*$	CMC $\Delta E^*$	CIE94 $\Delta E^*$	CIEDE2000 $\Delta E^*$	LABJND $\Delta E^*$
WA_0100	100	0.0 to <99.0	0.19	1.35	0.54	33.2	21.6	30.9	18.2	45.7
1S_0890	890	0.0 to <99.0	0.1	4.87	1.09	55.2	47.3	44.9	46.0	55.8
2M_0399	399	0.0 to <99.0	0.09	2.74	0.7	55.2	47.6	46.2	45.8	57.5
2S_0446	446	0.0 to <99.0	0.07	4.28	1.08	51.8	49.7	46.4	48.7	51.2
2G_0379	379	0.0 to <99.0	0.08	2.61	0.81	55.6	50.7	48.6	50.3	50.9
WA_0100	9	0.0 to <1.0	0.19	0.67	0.38	36.9	14.2	17.8	12.5	10.3
1S_0890	30	0.0 to <1.0	0.1	0.52	0.27	47.5	52.3	44.0	48.7	36.0
2M_0399	23	0.0 to <1.0	0.1	0.6	0.23	57.7	40.4	41.5	43.4	36.9
2S_0446	12	0.0 to <1.0	0.07	0.3	0.15	47.7	61.7	57.7	60.9	47.9
2G_0379	26	0.0 to <1.0	0.08	0.72	0.34	55.1	51.2	50.3	51.9	42.9
WA_0100	38	0.0 to <2.0	0.19	1.35	0.53	40.5	21.2	18.2	15.6	28.4
1S_0890	142	0.0 to <2.0	0.1	2.1	0.52	53.5	51.9	43.1	48.2	35.2
2M_0399	143	0.0 to <2.0	0.09	1.39	0.46	61.7	47.0	45.9	48.1	35.0
2S_0446	64	0.0 to <2.0	0.07	1.06	0.37	49.9	46.1	43.0	46.7	42.7
2G_0379	107	0.0 to <2.0	0.08	1.46	0.55	63.4	57.1	54.3	54.1	46.3
WA_0100	0									
1S_0890	4	0.0 to <0.5	0.16	0.35	0.22	33.5	31.0	22.5	30.4	17.3
2M_0399	4	0.0 to <0.5	0.1	0.12	0.11	28.9	18.7	19.7	9.7	42.5
2S_0446	2	0.0 to <0.5	0.07	0.1	0.08	3.0	24.6	21.7	28.0	23.8
2G_0379	6	0.0 to <0.5	0.08	0.3	0.18	40.9	40.3	42.6	44.0	47.4
WA_0100	9	0.5 to <1.0	0.19	0.67	0.38	36.9	14.2	17.8	12.5	10.3
1S_0890	26	0.5 to <1.0	0.1	0.52	0.27	48.5	51.7	44.2	48.5	32.8
2M_0399	19	0.5 to <1.0	0.11	0.6	0.25	53.4	37.4	36.7	40.4	25.8
2S_0446	10	0.5 to <1.0	0.11	0.3	0.17	44.3	56.8	52.6	55.5	42.4
2G_0379	20	0.5 to <1.0	0.12	0.72	0.39	53.8	49.0	47.4	49.0	38.3
WA_0100	12	1.0 to <1.5	0.29	0.74	0.49	32.7	15.0	11.8	16.4	18.5
1S_0890	37	1.0 to <1.5	0.16	1.31	0.55	48.7	47.7	37.8	44.0	23.3
2M_0399	63	1.0 to <1.5	0.09	1.06	0.42	63.1	48.0	46.7	49.6	29.0
2S_0446	23	1.0 to <1.5	0.12	0.88	0.34	52.9	52.1	48.4	53.4	41.9
2G_0379	29	1.0 to <1.5	0.11	1.01	0.57	68.9	61.1	58.4	57.7	46.2
WA_0100	17	1.5 to <2.0	0.34	1.35	0.63	37.5	20.6	15.2	15.7	9.1
1S_0890	75	1.5 to <2.0	0.18	2.1	0.61	50.7	48.9	38.8	44.7	25.4
2M_0399	57	1.5 to <2.0	0.18	1.39	0.6	54.9	42.6	39.4	42.9	23.7
2S_0446	29	1.5 to <2.0	0.16	1.06	0.48	42.4	37.6	34.1	38.3	39.0
2G_0379	52	1.5 to <2.0	0.18	1.46	0.65	59.0	50.0	46.5	46.6	34.1

data sets: WA=WANG, 1S=BIGC\_T1\_SG, 2M=BIGC\_T2\_M, 2S=BIGC\_T2\_SG, 2G=BIGC\_T2\_G