

REFERENCES

1. Pungrassamee, P., Ikeda, M., Katemake, P., and Hansuebsai, A. Color appearance determined by recognition of space. J. Optical Review 12,3 (2005) : 211-218.
2. Ikeda, M., Shinoda, H., and Mizokami, Y. Three dimensionality of the recognized visual space of illumination proved by hidden illumination. J. Optical Review 5,3 (1998) : 200-205.
3. Ikeda, M., Shinoda, H., and Mizokami, Y. Phenomena of apparent lightness interpreted by the recognized visual space of illumination. J. Optical Review 5,6 (1998) : 380-386.
4. Ikeda, M., Mizokami, A., and Shinoda, H. Color appearance seen through a colored filter of various sizes. J. Optical Review 8,6 (2001) : 480-486.
5. Ikeda, M., Mizokami, Y., Nakane, S., and Shinoda, H. Color appearance of a patch explained by RVSI for the conditions of various colors of room illumination and of various luminance levels of the patch. J. Optical Review 9,3 (2002) : 132-139.
6. Ikeda, M. Color appearance explained, predicted and confirmed by the concept of recognized visual space of illumination. J. Optical Review 11,4 (2004) : 217-225.
7. CIE. International lighting vocabulary. (n.p.): Droits de reproduction reserves, 1987.
8. Thiangthangtum, Y., Ikeda, M., and Shinoda, H. Room illuminance rather than immediate surrounding luminance determines natural to unnatural color of an object border. J. Optical Review 11,4 (2004) : 235-239.
9. Wyszecki, G, and Stiles, W. S. Color science: Concept and methods. quantitative data and formulars. New York : John Wiley & Sons, 1967.

APPENDICES

APPENDIX A

Color appearance of illumination judged by 5 subjects

Illumination condition	Chr-Mean	White-Mean	Black-Mean	coordinate xMean	coordinate yMean
R5+W20	10	73.3	20	8.9	4.5
R12+W13	30	60	10	27.3	-12.2
R19+W6	50	50	0	41.8	27.2
R25+W0	56.7	43.3	0	53.9	17.5
Y5+W20	0	75	25	0.0	0.0
Y12+W13	3.7	78.3	18	0.0	3.7
Y19+W6	5	85	10	0.0	5.0
Y25+W0	10	13.3	76.7	0.0	10.0

Table A-1 Color appearance of colored illumination observed by subject PP

Illumination condition	Chr-Mean	White-Mean	Black-Mean	coordinate xMean	coordinate yMean
R5+W20	6.7	80	13.3	6.7	0.0
R12+W13	20	73.3	6.7	16.7	10.9
R19+W6	60	30	10	60.0	0.0
R25+W0	90	10	0	88.5	9.3
Y5+W20	10	50	40	0.0	10.0
Y12+W13	13.3	46.7	40	0.0	13.3
Y19+W6	30	40	30	0.0	30.0
Y25+W0	40	35	25	0.0	40.0

Table A-2 Color appearance of colored illumination observed by subject DH

Illumination condition	Chr-Mean	White-Mean	Black-Mean	coordinate xMean	coordinate yMean
R5+W20	0	70	30	0.0	0.0
R12+W13	20	70	10	9.9	17.1
R19+W6	40	40	20	23.5	32.4
R25+W0	60	40	0	59.5	6.3
Y5+W20	0	80	20	0.0	0.0
Y12+W13	0	60	40	0.0	0.0
Y19+W6	10	70	20	0.0	10.0
Y25+W0	20	60	20	0.0	20.0

Table A-3 Color appearance of colored illumination observed by subject JJ

Illumination condition	Chr-Mean	White-Mean	Black-Mean	coordinate xMean	coordinate yMean
R5+W20	5	50	45	5.0	0.0
R12+W13	40	46.7	13.3	40.0	0.0
R19+W6	60	30	10	59.3	9.4
R25+W0	85	15	0	85.0	0.0
Y5+W20	0	60	40	0.0	0.0
Y12+W13	0	60	40	0.0	0.0
Y19+W6	15	50	35	0.0	15.0
Y25+W0	35	40	25	-9.0	33.7

Table A-4 Color appearance of colored illumination observed by subject PH

Illumination condition	Chr-Mean	White-Mean	Black-Mean	coordinate xMean	coordinate yMean
R5+W20	40	35	25	39.2	-6.2
R12+W13	50	35	15	50.0	0.0
R19+W6	60	30	10	60.0	0.0
R25+W0	65	20	15	65.0	0.0
Y5+W20	0	55	45	0.0	0.0
Y12+W13	0	55	45	0.0	0.0
Y19+W6	45	30	25	0.0	45.0
Y25+W0	45	30	25	0.0	45.0

Table A-5 Color appearance of colored illumination observed by subject MW

APPENDIX B

Original color appearance of test patches judged by 5 subjects

Mean				coordinate xMean	coordinateyMean
5R5/3	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
W5	52	23	25	51.7	-5.6
5Y5/3	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
W5	26	38	36	0.0	26.0
5G5/3	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
W5	48	23	29	-46.8	-9.8
5B5/3	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
W5	52	20	28	0.0	-52.0
N5	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
W5	11	47	51	0.0	-11.0

Table B-1 Original color appearance of test patches observed by subject PP

Mean				coordinate xMean	coordinateyMean
5R5/3	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
W5	44	28	28	43.4	-6.1
5Y5/3	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
W5	44	28	28	0.0	44.0
5G5/3	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
W5	50	25	25	-49.4	4.7
5B5/3	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
W5	52	24	24	0.0	-52.0
N5	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
W5	1	50	49	0.0	-1.0

Table B-2 Original color appearance of test patches observed by subject DH

Mean				coordinate xMean	coordinateyMean
5R5/3	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
W5	68	10	22	68.0	0.0
5Y5/3	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
W5	56	22	22	0.0	56.0
5G5/3	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
W5	70	10	20	-70.0	0.0
5B5/3	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
W5	72	12	16	0.0	-72.0
N5	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
W5	2	30	68	0.0	-2.0

Table B-3 Original color appearance of test patches observed by subject JJ

Mean				coordinate xMean	coordinateyMean
5R5/3	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
W5	34	30	36	33.8	-3.3
5Y5/3	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
W5	31	31	38	-3.4	30.7
5G5/3	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
W5	36	30	34	-36.0	0.0
5B5/3	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
W5	40	30	30	0.0	-40.0
N5	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
W5	0	46	54	0.0	0.0

Table B-4 Original color appearance of test patches observed by subject PH

Mean				coordinate xMean	coordinateyMean
5R5/3	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
W5	32	29	39	32.0	0.0
5Y5/3	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
W5	21	32	47	0.0	21.0
5G5/3	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
W5	40	25	35	-36.4	-12.5
5B5/3	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
W5	45	25	30	0.0	-45.0
N5	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
W5	12	35	53	1.7	-11.9

Table B-5 Original color appearance of test patches observed by subject MW

APPENDIX C

Color appearance of test patches judged by 5 subjects

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	33	45	22	31.7	-0.9
2	33	39	37	24	37.6	-8.3
3	60	40	29	31	39.6	-3.1
4	220	40	30	30	39.7	-3.4
5	320	44	25	31	43.8	-2.5
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	24	51	25	20.8	8.6
2	33	26	45	29	23.7	9.0
3	60	26	29	45	6.0	25.0
4	220	32	26	42	6.7	31.2
5	320	29	30	41	5.0	28.4
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	0	34	66	0.0	0.0
2	33	1	36	63	0.3	-1.0
3	60	13	32	55	-8.7	-6.9
4	220	36	23	41	-30.1	-14.8
5	320	46	27	27	-45.1	-6.8
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	15	38	47	2.5	-14.6
2	33	18	35	47	2.4	-17.7
3	60	34	29	37	4.1	-33.7
4	220	42	24	34	3.9	-41.7
5	320	51	21	28	7.6	-50.1
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	24	44	32	20.4	-12.2
2	33	20	42	38	17.7	-8.0
3	60	13	30	57	13.0	-0.6
4	220	10	38	52	7.2	-3.8
5	320	7	38	55	7.0	-0.3

Table C-1 Color appearance of test patches under red illumination condition
R5+W20 observed by subject PP

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	70	30	0	60.9	29.1
2	33	67	32	1	63.5	18.3
3	60	48	24	28	47.7	-4.1
4	220	54	22	24	52.5	2.1
5	320	48	26	26	47.6	-2.5
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	55	38	7	50.3	20.2
2	33	56	33	11	52.2	17.0
3	60	34	31	35	25.5	18.3
4	220	37	27	36	25.1	24.7
5	320	34	24	42	13.9	29.9
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	31	28	41	27.9	-11.3
2	33	31	23	46	28.6	-8.2
3	60	18	31	51	9.3	-11.6
4	220	23	26	51	12.8	-16.7
5	320	35	21	44	16.3	-28.5
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	35	22	43	26.3	-22.4
2	33	46	24	30	37.4	-25.8
3	60	37	23	40	13.0	-31.7
4	220	36	25	39	13.4	-32.9
5	320	44	19	37	17.0	-39.1
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	48	41	11	44.1	-2.3
2	33	56	30	14	54.9	0.0
3	60	26	32	42	24.3	-8.2
4	220	31	28	41	21.1	-18.6
5	320	33	27	40	21.7	-20.9

Table C-2 Color appearance of test patches under red illumination condition
R12+W13 observed by subject PP

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	47	48	5	43.7	16.8
2	33	43	55	2	40.4	13.3
3	60	28	40	32	26.9	3.1
4	220	27	34	39	25.7	4.0
5	320	22	50	28	20.9	3.3
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	40	58	2	36.7	14.2
2	33	40	56	4	36.9	14.9
3	60	23	48	29	21.3	5.4
4	220	22	46	32	18.2	8.5
5	320	20	46	34	16.3	7.4
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	37	21	42	34.3	-2.9
2	33	32	20	48	30.9	-4.9
3	60	10	12	78	3.2	-5.6
4	220	13	11	76	-0.3	-10.0
5	320	16	12	72	0.1	-13.2
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	36	24	40	35.7	-3.4
2	33	36	20	44	32.7	-12.1
3	60	14	14	72	7.7	-10.3
4	220	20	16	64	7.6	-18.4
5	320	18	20	62	6.0	-16.9
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	42	53	5	36.7	19.4
2	33	42	47	11	40.1	4.9
3	60	22	28	50	19.3	-6.4
4	220	18	27	55	12.8	-12.4
5	320	19	33	48	12.0	-14.4

Table C-3 Color appearance of test patches under red illumination condition
R19+W6 observed by subject PP



Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	58	42	0	53.7	21.2
2	33	60	40	0	54.9	23.9
3	60	24	40	36	23.0	5.5
4	220	26	36	38	25.5	3.1
5	320	22	42	36	21.5	3.1
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	64	34	2	59.8	22.5
2	33	65	33	2	61.2	19.5
3	60	24	42	34	23.2	4.6
4	220	20	34	46	19.5	3.4
5	320	20	33	47	19.3	3.5
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	76	10	14	75.8	2.8
2	33	60	10	30	60.0	0.0
3	60	12	8	80	8.8	-6.6
4	220	12	12	76	6.8	-8.8
5	320	10	9	81	5.9	-7.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	81	6	13	81.0	0.0
2	33	69	9	22	68.7	-4.2
3	60	14	20	66	11.7	-6.0
4	220	14	17	69	9.7	-7.8
5	320	11	15	74	6.7	-8.4
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	72	28	0	68.0	21.5
2	33	66	30	4	64.3	13.3
3	60	23	27	50	21.8	-5.1
4	220	20	38	42	19.2	-4.5
5	320	18	28	54	16.9	-3.5

Table C-4 Color appearance of test patches under red illumination condition
R25+W0 observed by subject PP

Mean					coordinate	coordinate
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	27	42	31	23.6	-9.9
2	33	33	31	36	31.7	-3.4
3	60	46	28	26	45.5	-1.2
4	220	41	27	32	40.9	-1.1
5	320	43	29	28	43.0	0.5
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	7	45	48	-1.2	6.8
2	33	16	42	42	0.0	16.0
3	60	28	32	40	2.7	27.3
4	220	26	33	41	1.2	25.9
5	320	24	32	44	0.0	24.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	41	36	23	-32.8	-14.9
2	33	46	32	22	-35.5	-10.8
3	60	45	23	32	-32.3	-18.2
4	220	39	31	30	-29.2	-22.8
5	320	38	27	35	-18.2	-29.2
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	51	25	24	-2.8	-50.6
2	33	46	31	23	-3.1	-45.6
3	60	44	27	29	0.0	-44.0
4	220	46	29	25	0.0	-46.0
5	320	46	24	30	-1.9	-45.9
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	39	61	0.0	0.0
2	33	0	37	63	0.0	0.0
3	60	0	31	69	0.0	0.0
4	220	0	35	65	0.0	0.0
5	320	0	36	64	0.0	0.0

Table C-5 Color appearance of test patches under yellow illumination condition
Y5+W20 observed by subject PP

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	24	39	37	23.5	3.1
2	33	32	34	34	30.4	9.5
3	60	39	29	32	38.6	4.1
4	220	38	24	38	37.5	4.2
5	320	41	29	30	40.8	2.3
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	13	45	42	0.0	13.0
2	33	28	32	40	-5.0	27.4
3	60	27	29	44	0.0	27.0
4	220	32	26	42	2.7	31.3
5	320	27	29	44	3.4	26.5
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	44	40	16	-42.9	7.7
2	33	44	36	20	-40.3	-1.2
3	60	48	25	27	-46.5	8.0
4	220	42	24	34	-31.0	-13.6
5	320	39	26	35	-21.1	-27.6
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	42	36	22	-20.3	-28.9
2	33	43	29	28	-17.8	-30.1
3	60	42	26	32	-3.7	-41.6
4	220	47	24	29	-4.2	-46.4
5	320	42	26	32	-8.3	-40.5
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	2	37	61	0.0	2.0
2	33	9	40	51	-3.2	7.4
3	60	6	38	56	0.0	6.0
4	220	4	36	60	0.0	4.0
5	320	2	35	63	0.0	2.0

Table C-6 Color appearance of test patches under yellow illumination condition
Y12+W13 observed by subject PP

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	25	44	31	21.0	12.7
2	33	40	28	32	34.9	18.9
3	60	42	29	29	39.8	12.9
4	220	45	27	28	44.0	9.0
5	320	42	25	33	41.1	8.4
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	22	50	28	-6.6	20.2
2	33	35	36	29	-10.9	30.6
3	60	33	26	41	8.3	29.4
4	220	31	35	34	10.3	24.8
5	320	26	31	43	3.2	24.4
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	54	32	14	-52.1	13.9
2	33	44	38	18	-42.1	12.0
3	60	47	22	31	-43.8	5.6
4	220	49	20	31	-45.8	-9.8
5	320	44	27	29	-33.1	-17.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	48	34	18	-46.0	12.7
2	33	39	38	23	-36.6	13.0
3	60	34	26	40	-30.2	0.7
4	220	37	25	38	-31.8	-15.4
5	320	39	26	35	-22.5	-28.1
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	22	42	36	-13.6	14.0
2	33	27	36	37	-18.3	17.6
3	60	16	29	55	0.0	16.0
4	220	15	32	53	0.0	15.0
5	320	11	38	51	0.0	11.0

Table C-7 Color appearance of test patches under yellow illumination condition
Y19+W6 observed by subject PP

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	40	40	20	28.0	26.5
2	33	49	24	27	38.5	29.0
3	60	48	24	28	42.1	22.7
4	220	42	25	33	39.5	13.8
5	320	47	27	26	44.4	14.7
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	37	39	24	-11.7	34.5
2	33	41	32	27	-11.6	38.4
3	60	44	25	31	13.5	38.9
4	220	40	24	36	7.3	37.1
5	320	28	29	43	10.1	24.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	59	26	15	-57.2	14.1
2	33	62	24	14	-57.8	20.4
3	60	59	23	18	-55.1	19.7
4	220	54	20	26	-49.3	21.4
5	320	52	19	29	-48.6	10.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	54	28	18	-51.2	16.2
2	33	56	28	16	-53.5	15.4
3	60	50	18	32	-46.0	19.2
4	220	52	21	27	-44.6	12.6
5	320	52	22	26	-49.0	10.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	33	45	22	-16.6	24.9
2	33	40	31	29	-29.0	22.6
3	60	40	20	40	-11.7	35.7
4	220	25	31	44	-4.9	22.5
5	320	23	31	46	-5.7	20.1

Table C-8 Color appearance of test patches under yellow illumination condition
Y25+W0 observed by subject PP

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	58	21	21	56.2	-11.1
2	33	54	23	23	50.4	-12.0
3	60	50	26	24	48.2	-8.1
4	220	50	25	25	49.4	-4.7
5	320	46	27	27	46.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	52	24	24	42.5	29.0
2	33	52	24	24	44.1	24.9
3	60	46	27	27	6.1	44.8
4	220	40	30	30	0.0	40.0
5	320	38	32	30	0.0	38.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	2	49	49	-2.0	0.0
2	33	2	48	50	-2.0	0.0
3	60	46	27	27	-46.0	0.0
4	220	50	25	25	-50.0	0.0
5	320	52	24	24	-52.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	20	40	40	14.7	-13.4
2	33	18	41	41	11.8	-13.5
3	60	52	24	24	1.6	-51.9
4	220	52	24	24	0.0	-52.0
5	320	50	25	25	0.0	-50.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	36	33	31	27.5	-22.3
2	33	36	32	32	30.5	-18.3
3	60	17	42	41	16.2	-2.4
4	220	0	50	50	0.0	0.0
5	320	0	50	50	0.0	0.0

Table C-9 Color appearance of test patches under red illumination condition
R5+W20 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	66	17	17	66.0	0.0
2	33	64	18	18	64.0	0.0
3	60	62	19	19	62.0	0.0
4	220	54	23	23	54.0	0.0
5	320	48	26	26	48.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	60	20	20	53.7	21.3
2	33	60	20	20	52.4	26.7
3	60	52	24	24	28.7	33.2
4	220	52	24	24	4.7	51.4
5	320	44	28	28	1.6	43.9
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	44	28	28	43.5	-3.7
2	33	46	27	27	45.4	-4.3
3	60	44	27	29	24.0	0.0
4	220	50	25	25	-50.0	0.0
5	320	50	25	25	-50.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	52	24	24	43.1	-27.9
2	33	52	24	24	46.1	-22.1
3	60	50	25	25	33.4	-35.4
4	220	50	23	27	4.7	-49.4
5	320	42	29	29	0.0	-42.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	56	22	22	54.0	-7.4
2	33	56	22	22	55.7	-3.4
3	60	54	23	23	53.3	-5.3
4	220	18	41	41	18.0	0.0
5	320	13	44	43	13.0	0.0

Table C-10 Color appearance of test patches under red illumination condition
R12+W13 observed by subject DH

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	72	17	11	72.0	0.0
2	33	70	15	15	70.0	0.0
3	60	62	20	18	62.0	0.0
4	220	44	29	27	44.0	0.0
5	320	26	41	33	26.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	72	15	13	72.0	0.0
2	33	68	18	14	65.1	7.1
3	60	52	26	22	48.6	10.6
4	220	48	27	25	23.4	32.4
5	320	34	36	30	0.0	34.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	52	24	24	51.9	-1.9
2	33	52	22	26	51.4	-1.5
3	60	32	33	35	29.7	7.1
4	220	38	30	32	-38.0	0.0
5	320	32	34	34	-32.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	54	22	24	52.3	-9.2
2	33	56	19	25	53.9	-7.8
3	60	28	33	39	26.5	-4.7
4	220	40	30	30	2.8	-38.8
5	320	34	33	33	0.0	-34.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	68	16	16	68.0	0.0
2	33	66	16	18	66.0	0.0
3	60	48	25	27	48.0	0.0
4	220	20	40	40	20.0	0.0
5	320	8	46	46	8.0	0.0

Table C-11 Color appearance of test patches under red illumination condition
R19+W6 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	82	12	6	82.0	0.0
2	33	82	14	4	82.0	0.0
3	60	70	19	11	70.0	0.0
4	220	62	24	14	62.0	0.0
5	320	26	42	32	26.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	82	14	4	82.0	0.0
2	33	80	13	7	80.0	0.0
3	60	66	18	16	66.0	0.0
4	220	58	25	17	52.0	6.0
5	320	26	43	31	9.2	17.8
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	68	14	18	68.0	0.0
2	33	68	14	18	68.0	0.0
3	60	58	15	28	58.0	0.0
4	220	48	22	30	48.0	0.0
5	320	8	41	51	8.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	70	13	17	70.0	0.0
2	33	62	19	19	62.0	0.0
3	60	64	13	23	64.0	0.0
4	220	60	17	23	60.0	0.0
5	320	24	36	40	24.0	0.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	78	14	8	78.0	0.0
2	33	76	12	12	76.0	0.0
3	60	66	19	15	66.0	0.0
4	220	58	23	19	58.0	0.0
5	320	26	40	34	26.0	0.0

Table C-12 Color appearance of test patches under red illumination condition
R25+W0 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	46	27	27	45.4	-4.7
2	33	46	27	27	45.4	-4.7
3	60	46	27	27	45.4	-4.7
4	220	44	28	28	43.5	-3.1
5	320	42	29	29	41.5	-3.1
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	38	29	33	0.0	38.0
2	33	36	32	32	0.0	36.0
3	60	36	32	32	0.0	36.0
4	220	36	32	32	0.0	36.0
5	320	34	33	33	0.0	34.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	48	27	25	-41.1	-9.5
2	33	48	26	26	-48.0	0.0
3	60	48	26	26	-48.0	0.0
4	220	48	26	26	-48.0	0.0
5	320	48	26	26	-48.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	48	27	25	0.0	-48.0
2	33	48	27	25	0.0	-48.0
3	60	48	26	26	0.0	-48.0
4	220	48	26	26	0.0	-48.0
5	320	48	26	26	0.0	-48.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	50	50	0.0	0.0
2	33	0	50	50	0.0	0.0
3	60	0	50	50	0.0	0.0
4	220	0	50	50	0.0	0.0
5	320	0	50	50	0.0	0.0

Table C-13 Color appearance of test patches under yellow illumination condition
Y5+W20 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	48	26	26	46.1	5.9
2	33	48	26	26	44.6	10.2
3	60	48	26	26	47.9	1.6
4	220	48	26	26	47.8	3.1
5	320	46	27	27	45.8	3.1
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	46	27	27	0.0	46.0
2	33	46	27	27	0.0	46.0
3	60	42	29	29	0.0	42.0
4	220	40	30	30	0.0	40.0
5	320	30	35	35	0.0	30.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	50	25	25	-48.7	7.7
2	33	50	25	25	-46.1	13.3
3	60	50	25	25	-49.6	4.7
4	220	50	25	25	-47.8	9.0
5	320	48	26	26	-47.8	3.1
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	48	26	26	-39.5	-14.4
2	33	48	26	26	-47.5	-3.1
3	60	48	26	26	-20.4	-35.0
4	220	48	26	26	-3.1	-47.5
5	320	48	26	26	-1.6	-47.9
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	8	46	46	0.0	8.0
2	33	8	46	46	0.0	8.0
3	60	5	47	48	0.0	5.0
4	220	3	48	49	0.0	3.0
5	320	3	49	48	0.0	3.0

Table C-14 Color appearance of test patches under yellow illumination condition
Y12+W13 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	52	24	24	49.0	12.3
2	33	52	24	24	44.8	24.4
3	60	52	24	24	45.9	22.7
4	220	50	25	25	43.3	23.2
5	320	44	29	27	41.3	10.8
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	48	26	26	0.0	48.0
2	33	46	27	27	0.0	46.0
3	60	46	27	27	0.0	46.0
4	220	40	31	29	0.0	40.0
5	320	30	34	36	0.0	30.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	52	24	24	-38.6	34.6
2	33	52	24	24	-41.0	31.0
3	60	54	23	23	-44.1	29.0
4	220	52	24	24	-45.6	23.9
5	320	48	26	26	-46.3	12.1
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	52	24	24	-45.7	20.7
2	33	54	23	23	-49.2	20.6
3	60	54	23	23	-45.3	10.6
4	220	52	24	24	-42.9	7.4
5	320	46	27	27	-11.5	-43.5
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	32	34	34	0.0	32.0
2	33	32	34	34	0.0	32.0
3	60	32	34	34	0.0	32.0
4	220	24	38	38	0.0	24.0
5	320	14	43	43	0.0	14.0

Table C-15 Color appearance of test patches under yellow illumination condition
Y19+W6 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	20	20	42.2	42.2
2	33	60	20	20	41.0	43.6
3	60	58	21	21	34.2	45.9
4	220	54	23	23	38.2	37.4
5	320	48	26	26	38.8	27.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	58	20	22	0.0	58.0
2	33	58	20	22	0.0	58.0
3	60	56	22	22	0.0	56.0
4	220	50	25	25	0.0	50.0
5	320	32	35	33	0.0	32.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	58	21	21	-40.6	41.0
2	33	58	21	21	-41.0	41.0
3	60	58	21	21	-39.6	42.2
4	220	54	23	23	-42.3	33.0
5	320	50	25	25	-43.3	18.8
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	56	22	22	-35.5	43.1
2	33	56	22	22	-37.0	41.8
3	60	54	23	23	-36.6	39.2
4	220	52	24	24	-40.9	28.3
5	320	52	24	24	-43.4	24.3
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	48	26	26	-3.6	47.1
2	33	48	26	26	0.0	48.0
3	60	44	28	28	0.0	44.0
4	220	30	35	35	0.0	30.0
5	320	22	40	38	0.0	22.0

Table C-16 Color appearance of test patches under yellow illumination condition
Y25+W0 observed by subject DH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	62	22	16	62.0	0.0
2	33	64	20	16	64.0	0.0
3	60	60	20	20	60.0	0.0
4	220	60	20	20	60.0	0.0
5	320	52	30	18	52.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	54	24	22	47.3	20.3
2	33	50	28	22	22.2	41.5
3	60	52	24	24	0.0	52.0
4	220	50	24	26	0.0	50.0
5	320	44	30	26	0.0	44.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	0	34	66	0.0	0.0
2	33	8	36	56	-8.0	0.0
3	60	60	18	22	-60.0	0.0
4	220	60	20	20	-60.0	0.0
5	320	60	20	20	-60.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	42	24	34	4.9	-41.2
2	33	52	24	24	3.8	-51.7
3	60	60	20	20	0.0	-60.0
4	220	60	20	20	0.0	-60.0
5	320	60	20	20	0.0	-60.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	50	24	26	42.9	-18.1
2	33	44	30	26	32.7	-20.8
3	60	4	40	56	4.0	0.0
4	220	0	40	60	0.0	0.0
5	320	0	38	62	0.0	0.0

Table C-17 Color appearance of test patches under red illumination condition
R5+W20 observed by subject JJ

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	30	10	60.0	0.0
2	33	60	28	12	60.0	0.0
3	60	60	22	18	60.0	0.0
4	220	60	20	20	58.8	7.4
5	320	48	28	24	48.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	60	24	16	59.4	3.7
2	33	60	28	12	59.3	5.6
3	60	56	22	22	3.7	55.4
4	220	52	26	22	0.0	52.0
5	320	48	26	26	0.0	48.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	24	30	46	24.0	0.0
2	33	40	26	34	37.1	-9.4
3	60	44	28	28	-44.0	0.0
4	220	60	18	22	-60.0	0.0
5	320	60	18	22	-60.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	44	28	28	40.7	-15.8
2	33	56	22	22	51.3	-19.2
3	60	40	30	30	0.0	-40.0
4	220	48	22	30	0.0	-48.0
5	320	56	18	26	0.0	-56.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	60	28	12	60.0	0.0
2	33	60	28	12	60.0	0.0
3	60	40	26	34	30.8	-15.0
4	220	0	42	58	0.0	0.0
5	320	0	44	56	0.0	0.0

Table C-18 Color appearance of test patches under red illumination condition
R12+W13 observed by subject JJ

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	74	26	0	73.2	4.9
2	33	68	30	2	68.0	0.0
3	60	40	42	18	34.6	14.9
4	220	38	36	26	33.0	15.3
5	320	24	48	28	21.7	7.1
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	66	32	2	66.0	0.0
2	33	70	30	0	70.0	0.0
3	60	26	50	24	15.9	19.0
4	220	18	44	38	9.1	14.4
5	320	18	50	32	2.4	17.2
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	66	18	16	66.0	0.0
2	33	60	20	20	60.0	0.0
3	60	0	32	68	0.0	0.0
4	220	32	24	44	-32.0	0.0
5	320	34	28	38	-34.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	64	24	12	64.0	0.0
2	33	58	26	16	58.0	0.0
3	60	0	24	76	0.0	0.0
4	220	2	26	72	0.0	-2.0
5	320	24	28	48	0.0	-24.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	72	28	0	72.0	0.0
2	33	66	34	0	66.0	0.0
3	60	16	40	44	15.2	2.4
4	220	0	38	62	0.0	0.0
5	320	0	38	62	0.0	0.0

Table C-19 Color appearance of test patches under red illumination condition
R19+W6 observed by subject JJ

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	62	38	0	62.0	0.0
2	33	62	38	0	62.0	0.0
3	60	24	52	28	23.6	2.5
4	220	24	52	24	22.8	4.8
5	320	8	62	30	7.6	1.5
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	64	36	0	64.0	0.0
2	33	62	38	0	62.0	0.0
3	60	20	58	22	19.0	3.6
4	220	20	52	28	18.2	6.6
5	320	8	50	42	7.6	2.5
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	60	30	10	60.0	0.0
2	33	62	28	10	62.0	0.0
3	60	0	24	76	0.0	0.0
4	220	0	24	76	0.0	0.0
5	320	4	24	72	-4.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	64	28	8	64.0	0.0
2	33	60	28	12	60.0	0.0
3	60	0	24	76	0.0	0.0
4	220	0	30	70	0.0	0.0
5	320	6	18	76	-6.0	0.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	62	36	2	62.0	0.0
2	33	64	36	0	64.0	0.0
3	60	24	52	24	22.8	4.8
4	220	12	44	44	11.8	1.2
5	320	0	40	60	0.0	0.0

Table C-20 Color appearance of test patches under red illumination condition
R25+W0 observed by subject JJ

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	22	18	60.0	0.0
2	33	58	20	22	58.0	0.0
3	60	56	26	18	56.0	0.0
4	220	56	24	20	56.0	0.0
5	320	56	24	20	56.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	54	24	22	0.0	54.0
2	33	54	24	22	0.0	54.0
3	60	54	22	24	0.0	54.0
4	220	48	24	28	0.0	48.0
5	320	40	30	30	0.0	40.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	62	22	16	-62.0	0.0
2	33	60	20	20	-60.0	0.0
3	60	60	22	18	-60.0	0.0
4	220	58	23	19	-58.0	0.0
5	320	56	24	20	-56.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	60	18	22	-11.4	-51.7
2	33	58	24	18	0.0	-58.0
3	60	58	23	19	0.0	-58.0
4	220	60	22	18	0.0	-60.0
5	320	62	20	18	0.0	-62.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	40	60	0.0	0.0
2	33	0	40	60	0.0	0.0
3	60	0	42	58	0.0	0.0
4	220	0	42	58	0.0	0.0
5	320	0	42	58	0.0	0.0

Table C-21 Color appearance of test patches under yellow illumination condition
Y5+W20 observed by subject JJ

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	20	20	60.0	0.0
2	33	60	22	18	59.9	1.9
3	60	60	21	19	60.0	0.0
4	220	60	20	20	60.0	0.0
5	320	56	24	20	56.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	56	22	22	0.0	56.0
2	33	56	22	22	0.0	56.0
3	60	58	20	22	0.0	58.0
4	220	50	24	26	0.0	50.0
5	320	46	26	28	0.0	46.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	62	20	18	-62.0	0.0
2	33	60	18	22	-59.9	1.9
3	60	60	20	20	-60.0	0.0
4	220	60	20	20	-60.0	0.0
5	320	60	22	18	-60.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	60	20	20	-12.0	-48.0
2	33	60	22	18	-12.0	-48.0
3	60	60	20	20	0.0	-60.0
4	220	60	22	18	0.0	-60.0
5	320	60	20	20	0.0	-60.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	40	60	0.0	0.0
2	33	0	40	60	0.0	0.0
3	60	0	40	60	0.0	0.0
4	220	0	40	60	0.0	0.0
5	320	0	40	60	0.0	0.0

Table C-22 Color appearance of test patches under yellow illumination condition
Y12+W13 observed by subject JJ

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	22	18	54.5	13.4
2	33	60	20	20	54.2	15.5
3	60	62	19	19	62.0	0.0
4	220	60	20	20	60.0	0.0
5	320	60	22	18	60.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	60	22	18	0.0	60.0
2	33	60	22	18	0.0	60.0
3	60	52	26	22	0.0	52.0
4	220	48	28	24	0.0	48.0
5	320	40	32	28	0.0	40.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	60	24	16	-60.0	0.0
2	33	60	22	18	-60.0	0.0
3	60	60	18	22	-59.4	3.7
4	220	60	20	20	-60.0	0.0
5	320	60	20	20	-60.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	60	20	20	-60.0	0.0
2	33	60	22	18	-60.0	0.0
3	60	60	20	20	-48.0	-12.0
4	220	60	20	20	0.0	-60.0
5	320	60	20	20	0.0	-60.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	32	32	36	0.0	32.0
2	33	28	34	38	0.0	28.0
3	60	10	40	50	0.0	10.0
4	220	0	40	60	0.0	0.0
5	320	0	42	58	0.0	0.0

Table C-23 Color appearance of test patches under yellow illumination condition
Y19+W6 observed by subject JJ

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	62	19	19	45.8	30.8
2	33	62	20	18	51.7	27.7
3	60	60	20	20	58.8	7.4
4	220	60	22	18	51.1	15.1
5	320	60	20	20	56.5	8.5
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	60	20	20	3.7	59.4
2	33	58	20	22	1.6	57.9
3	60	60	20	20	0.0	60.0
4	220	56	20	24	0.0	56.0
5	320	34	32	34	0.0	34.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	62	18	20	-61.3	4.3
2	33	62	18	20	-60.8	7.4
3	60	62	19	19	-62.0	0.0
4	220	62	20	18	-62.0	0.0
5	320	62	18	20	-62.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	60	20	20	-59.4	-3.7
2	33	60	20	20	-60.0	0.0
3	60	62	19	19	-62.0	0.0
4	220	62	18	20	-14.0	-48.0
5	320	62	20	18	-14.0	-48.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	48	24	28	-1.9	47.9
2	33	42	28	30	-1.6	41.9
3	60	24	36	40	-0.6	24.0
4	220	14	38	48	0.0	14.0
5	320	2	40	58	0.0	2.0

Table C-24 Color appearance of test patches under yellow illumination condition
Y25+W0 observed by subject JJ

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	50	25	25	50.0	0.0
2	33	47	27	26	47.0	0.0
3	60	35	33	32	35.0	0.0
4	220	35	31	34	35.0	0.0
5	320	35	31	34	35.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	40	35	25	38.0	10.9
2	33	41	32	27	13.2	33.3
3	60	35	31	34	0.0	35.0
4	220	34	32	34	0.0	34.0
5	320	33	32	35	0.0	33.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	0	47	53	0.0	0.0
2	33	0	46	54	0.0	0.0
3	60	36	29	35	-36.0	0.0
4	220	35	30	35	-35.0	0.0
5	320	35	30	35	-35.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	41	27	32	8.3	-40.1
2	33	40	27	33	6.9	-39.4
3	60	35	32	33	0.0	-35.0
4	220	35	32	33	0.0	-35.0
5	320	35	32	33	0.0	-35.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	21	43	36	21.0	0.0
2	33	21	40	39	21.0	0.0
3	60	6	48	46	6.0	0.0
4	220	0	50	50	0.0	0.0
5	320	0	50	50	0.0	0.0

Table C-25 Color appearance of test patches under red illumination condition
R5+W20 observed by subject PH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	88	12	0	88.0	0.0
2	33	88	12	0	88.0	0.0
3	60	44	30	26	44.0	0.0
4	220	38	32	30	38.0	0.0
5	320	37	32	31	37.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	86	14	0	85.3	8.3
2	33	84	14	2	82.0	15.4
3	60	46	30	24	2.6	45.8
4	220	40	28	32	0.0	40.0
5	320	36	29	35	0.0	36.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	13	39	48	13.0	0.0
2	33	20	35	43	20.0	0.0
3	60	44	24	32	-44.0	0.0
4	220	38	27	35	-38.0	0.0
5	320	35	30	35	-35.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	68	14	18	64.6	-19.0
2	33	55	21	24	47.3	-27.9
3	60	44	28	28	1.9	-43.9
4	220	38	31	31	0.0	-38.0
5	320	34	30	34	0.0	-34.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	87	12	1	87.0	0.0
2	33	70	24	6	70.0	0.0
3	60	29	35	36	29.0	0.0
4	220	15	41	44	15.0	0.0
5	320	7	47	46	7.0	0.0

Table C-26 Color appearance of test patches under red illumination condition
R12+W13 observed by subject PH

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	83.75	17	0	83.0	0.0
2	33	82.5	17	0	83.0	0.0
3	60	51	29	20	51.0	0.0
4	220	35	32	33	35.0	0.0
5	320	29	37	34	29.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	81	18	1	80.8	3.8
2	33	80	17	3	79.4	6.2
3	60	45	24	31	24.2	37.4
4	220	40	25	35	1.9	39.9
5	320	30	31	39	0.5	30.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	57	18	25	55.3	-13.1
2	33	54	19	27	51.1	-17.3
3	60	40	25	35	-39.8	-2.5
4	220	34	28	38	-33.9	-1.3
5	320	29	32	39	-29.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	59	17	24	57.6	-11.8
2	33	59	18	23	57.2	-13.7
3	60	43	25	32	7.0	-42.2
4	220	40	29	31	1.3	-40.0
5	320	31	32	36	0.0	-31.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	79	17	4	79.0	-1.2
2	33	80	19	1	80.0	-1.3
3	60	46	24	30	44.6	-6.7
4	220	27	34	39	27.0	0.0
5	320	18	38	44	18.0	0.0

Table C-27 Color appearance of test patches under red illumination condition
R19+W6 observed by subject PH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	86	14	0	86.0	0.0
2	33	87	13	0	87.0	0.0
3	60	30	43	27	30.0	0.0
4	220	12	57	31	12.0	0.0
5	320	9	63	28	9.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	85	14	1	85.0	0.0
2	33	83	16	1	82.9	1.3
3	60	29	32	39	29.0	0.3
4	220	18	36	46	16.5	6.7
5	320	12	39	49	10.9	4.1
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	72	10	18	70.3	-15.6
2	33	70	10	20	66.6	-21.6
3	60	28	28	44	11.5	-9.7
4	220	6	33	61	2.1	-0.6
5	320	2	30	68	-1.9	-0.6
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	76	11	13	74.3	-15.3
2	33	76	10	14	74.4	-15.4
3	60	31	29	40	30.9	-1.1
4	220	11	34	55	11.0	0.0
5	320	6	35	59	6.0	0.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	82	17	1	82.0	0.0
2	33	83	17	0	83.0	0.0
3	60	35	34	31	35.0	0.0
4	220	17	39	44	17.0	0.0
5	320	11	44	45	11.0	0.0

Table C-28 Color appearance of test patches under red illumination condition
R25+W0 observed by subject PH

Mean					coordinate xMean	coordinate yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	41	25	34	41.0	0.0
2	33	36	29	35	36.0	0.0
3	60	35	30	35	35.0	0.0
4	220	34	29	37	34.0	0.0
5	320	32	29	39	32.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	40	25	35	0.0	-40.0
2	33	37	28	35	0.0	-37.0
3	60	35	29	36	0.0	-35.0
4	220	35	29	36	0.0	-35.0
5	320	35	29	36	0.0	-35.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	41	29	29	-41.0	0.0
2	33	41	29	30	-41.0	0.0
3	60	37	29	34	-37.0	0.0
4	220	34	30	36	-34.0	0.0
5	320	34	30	36	-34.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	43	31	26	0.0	-43.0
2	33	40	31	29	0.0	-40.0
3	60	37	29	34	0.0	-37.0
4	220	35	30	35	0.0	-35.0
5	320	34	31	35	0.0	-34.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	51	49	0.0	0.0
2	33	0	50	50	0.0	0.0
3	60	0	50	50	0.0	0.0
4	220	0	50	50	0.0	0.0
5	320	0	50	50	0.0	0.0

Table C-29 Color appearance of test patches under yellow illumination condition

Y5+W20 observed by subject PH



Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	40	28	32	39.9	1.9
2	33	36	31	33	35.9	1.3
3	60	36	29	35	36.0	0.5
4	220	35	30	35	35.0	0.0
5	320	32	31	37	32.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	42	31	29	0.0	42.0
2	33	36	29	35	0.0	36.0
3	60	34	30	36	0.0	34.0
4	220	35	29	36	0.0	35.0
5	320	31	31	38	0.0	31.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	42	32	28	-41.9	2.0
2	33	40	30	30	-39.9	1.9
3	60	36	31	33	-36.0	0.0
4	220	34	32	34	-34.0	0.0
5	320	33	32	34	-33.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	39	29	32	-38.8	3.8
2	33	39	28	33	-38.8	3.1
3	60	39	29	32	0.0	-39.0
4	220	36	31	33	0.0	-36.0
5	320	35	31	34	0.0	-35.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	2	48	50	0.0	2.0
2	33	2	48	50	0.0	2.0
3	60	0	50	50	0.0	0.0
4	220	0	50	50	0.0	0.0
5	320	0	50	50	0.0	0.0

Table C-30 Color appearance of test patches under yellow illumination condition
Y12+W13 observed by subject PH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	60	22	18	51.6	29.4
2	33	57	20	23	52.1	22.5
3	60	51	22	27	49.9	9.3
4	220	41	27	32	40.8	3.0
5	320	39	27	34	38.9	1.7
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	62	18	20	0.0	62.0
2	33	57	17	26	0.0	57.0
3	60	47	23	30	0.0	47.0
4	220	41	26	33	0.0	41.0
5	320	40	26	34	0.0	40.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	63	18	19	-52.6	34.4
2	33	59	19	22	-52.1	27.6
3	60	47	26	27	-45.1	11.9
4	220	43	25	32	-42.1	7.5
5	320	41	29	30	-40.7	4.3
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	58	22	20	-50.3	27.7
2	33	54	22	24	-50.3	19.1
3	60	49	23	28	-47.6	10.6
4	220	39	27	34	0.0	-39.0
5	320	40	28	32	0.0	-40.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	41	27	32	0.0	41.0
2	33	34	30	36	0.0	34.0
3	60	22	36	42	0.0	22.0
4	220	13	41	46	0.0	13.0
5	320	10	43	47	0.0	10.0

Table C-31 Color appearance of test patches under yellow illumination condition
Y19+W6 observed by subject PH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	68	20	12	56.7	37.2
2	33	62	21	17	53.8	29.8
3	60	49	23	28	45.5	17.5
4	220	45	24	31	44.2	7.6
5	320	40	27	33	39.9	3.1
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	68	15	17	0.0	68.0
2	33	60	18	22	0.0	60.0
3	60	47	22	31	0.0	47.0
4	220	41	27	32	0.0	41.0
5	320	39	28	33	0.0	39.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	64	19	17	-51.6	37.4
2	33	59	19	22	-52.3	26.5
3	60	48	22	30	-44.6	17.2
4	220	41	28	31	-39.9	8.6
5	320	39	27	34	-38.2	7.1
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	63	16	21	-54.0	31.5
2	33	54	20	26	-46.9	26.6
3	60	46	22	32	-42.3	17.7
4	220	41	25	34	-32.8	1.7
5	320	40	27	33	-32.2	-0.2
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	69	18	13	0.0	69.0
2	33	55	20	25	0.0	55.0
3	60	43	25	32	0.0	43.0
4	220	38	28	34	0.0	38.0
5	320	30	32	38	0.0	30.0

Table C-32 Color appearance of test patches under yellow illumination condition Y25+W0 observed by subject PH

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	53	26	21	53.0	0.0
2	33	50	30	20	50.0	0.0
3	60	49	26	25	49.0	0.0
4	220	44	30	26	43.1	-3.6
5	320	41	30	29	40.7	-1.9
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	44	29	27	41.8	8.1
2	33	41	26	33	36.3	18.8
3	60	28	32	40	12.8	23.8
4	220	28	32	40	5.1	27.1
5	320	25	33	42	0.0	25.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	0	43	57	0.0	0.0
2	33	1	42	58	1.0	0.0
3	60	13	39	48	-13.0	0.0
4	220	30	33	37	-29.6	-2.5
5	320	37	29	34	-37.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	48	25	27	12.1	-46.3
2	33	46	26	28	12.1	-44.0
3	60	44	27	29	4.2	-43.4
4	220	42	27	31	0.0	-42.0
5	320	41	27	32	0.0	-41.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	41	28	31	37.0	-14.8
2	33	38	27	35	32.8	-14.5
3	60	39	28	33	27.3	-26.8
4	220	33	32	35	21.5	-24.6
5	320	26	36	38	14.7	-21.2

Table C-33 Color appearance of test patches under red illumination condition
R5+W20 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	63	26	11	63.0	0.0
2	33	59	25	16	59.0	0.0
3	60	49	26	25	48.6	-2.8
4	220	46	27	27	46.0	0.0
5	320	40	31	29	39.7	-2.2
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	61	23	16	59.8	5.0
2	33	55	25	20	55.0	0.0
3	60	31	31	38	17.1	22.1
4	220	29	32	39	8.3	26.8
5	320	21	34	45	2.3	20.5
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	37	26	37	30.1	-15.2
2	33	35	28	37	31.6	-8.8
3	60	17	30	53	1.3	-9.9
4	220	8	35	57	-4.6	-4.6
5	320	9	37	54	-7.7	-4.1
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	47	22	31	39.4	-25.0
2	33	44	24	32	36.2	-20.8
3	60	42	26	32	20.2	-36.0
4	220	38	25	37	10.7	-35.8
5	320	32	29	39	2.0	-31.8
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	54	25	21	54.0	0.0
2	33	53	30	17	53.0	-0.8
3	60	43	25	32	38.6	-13.5
4	220	37	29	34	26.8	-24.0
5	320	27	39	34	14.6	-22.5

Table C-34 Color appearance of test patches under red illumination condition
R12+W13 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	64	24	12	64.0	0.0
2	33	63	24	13	63.0	0.0
3	60	55	21	24	55.0	0.0
4	220	44	25	31	43.3	-2.7
5	320	38	27	35	37.3	-2.7
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	63	21	16	63.0	0.0
2	33	62	25	13	62.0	0.0
3	60	42	27	31	39.6	7.0
4	220	39	25	36	30.6	14.3
5	320	24	31	45	9.1	20.4
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	51	22	27	51.0	0.0
2	33	50	22	28	47.1	-7.1
3	60	26	28	46	24.1	-3.4
4	220	14	28	58	8.2	-3.6
5	320	4	34	62	-1.2	-3.8
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	53	20	27	53.0	0.0
2	33	54	20	26	54.0	0.0
3	60	29	29	42	24.8	-11.1
4	220	31	27	42	21.3	-21.9
5	320	27	27	46	11.6	-24.1
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	58	25	17	58.0	0.0
2	33	57	25	18	57.0	0.0
3	60	41	26	33	39.6	-5.8
4	220	41	25	34	38.0	-8.4
5	320	24	28	48	21.2	-8.8

Table C-35 Color appearance of test patches under red illumination condition
R19+W6 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	61	25	14	61.0	0.0
2	33	60	22	18	60.0	0.0
3	60	53	25	22	53.0	0.0
4	220	45	27	28	45.0	0.0
5	320	29	34	37	26.7	5.7
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	62	21	17	62.0	0.0
2	33	63	19	18	63.0	0.0
3	60	48	22	30	48.0	0.0
4	220	44	25	31	44.0	0.0
5	320	26	30	44	26.0	0.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	51	20	29	51.0	0.0
2	33	54	19	27	54.0	0.0
3	60	35	25	40	35.0	0.0
4	220	21	28	51	21.0	0.0
5	320	5	34	61	5.0	0.0
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	53	21	26	53.0	0.0
2	33	54	21	25	54.0	0.0
3	60	34	26	40	34.0	0.0
4	220	29	25	46	26.7	-2.9
5	320	10	35	55	7.3	-4.4
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	59	25	16	51.0	2.0
2	33	63	22	15	63.0	0.0
3	60	46	22	32	46.0	0.0
4	220	37	25	38	37.0	0.0
5	320	16	36	48	16.0	0.0

Table C-36 Color appearance of test patches under red illumination condition
R25+W0 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	44	26	30	44.0	0.0
2	33	44	26	30	44.0	0.0
3	60	41	27	32	41.0	0.0
4	220	39	27	34	39.0	0.0
5	320	40	27	33	40.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	30	32	38	-2.4	29.2
2	33	30	31	38	0.0	30.0
3	60	24	32	44	0.0	24.0
4	220	18	35	47	0.0	18.0
5	320	17	33	50	0.0	17.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	48	28	24	-44.0	-12.3
2	33	45	28	27	-42.4	-9.3
3	60	43	27	30	-40.4	-8.9
4	220	42	28	30	-40.5	-4.7
5	320	42	28	30	-39.5	-8.8
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	47	27	26	0.0	-47.0
2	33	46	29	25	0.0	-46.0
3	60	45	26	29	0.0	-45.0
4	220	45	25	30	0.0	-45.0
5	320	44	27	29	0.0	-44.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	0	48	52	0.0	0.0
2	33	0	47	53	0.0	0.0
3	60	0	41	59	0.0	0.0
4	220	0	42	58	0.0	0.0
5	320	0	43	57	0.0	0.0

Table C-37 Color appearance of test patches under yellow illumination condition
Y5+W20 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	44	27	29	44.0	0.0
2	33	43	27	30	43.0	0.0
3	60	43	25	32	43.0	0.0
4	220	40	27	33	40.0	0.0
5	320	39	27	34	39.0	0.0
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	36	27	35	-2.7	37.5
2	33	38	28	34	0.0	38.0
3	60	35	29	36	0.0	35.0
4	220	32	30	38	0.0	32.0
5	320	22	33	45	0.0	22.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	50	25	25	-50.0	0.0
2	33	50	23	27	-49.5	-3.1
3	60	46	26	28	-45.8	-2.1
4	220	45	27	28	-43.0	-7.4
5	320	44	26	30	-41.8	-8.3
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	47	26	27	-33.4	-31.3
2	33	47	26	27	-30.1	-30.0
3	60	45	26	29	0.0	-45.0
4	220	44	25	31	0.0	-44.0
5	320	43	25	32	0.0	-43.0
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	6	41	53	0.0	6.0
2	33	5	42	53	0.0	5.0
3	60	3	40	57	0.0	3.0
4	220	0	42	58	0.0	0.0
5	320	0	43	57	0.0	0.0

Table C-38 Color appearance of test patches under yellow illumination condition
Y12+W13 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	45	26	29	40.8	16.6
2	33	46	26	28	41.0	18.5
3	60	43	27	30	40.4	11.2
4	220	40	26	34	38.5	8.7
5	320	38	27	35	37.0	5.8
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	40	28	32	0.0	40.0
2	33	40	27	33	0.0	40.0
3	60	35	27	38	0.0	35.0
4	220	33	28	39	0.0	33.0
5	320	24	31	45	0.0	24.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	53	27	20	-51.8	6.5
2	33	53	23	24	-52.5	4.4
3	60	46	25	29	-43.9	2.1
4	220	46	25	29	-42.4	-0.8
5	320	45	25	30	-44.6	2.8
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	48	25	27	-47.7	-2.3
2	33	49	27	24	-49.0	0.0
3	60	45	26	29	-41.0	-12.8
4	220	43	26	31	-31.6	-25.2
5	320	42	27	31	-2.5	-41.6
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	33	31	36	-6.3	30.5
2	33	29	30	41	-5.7	25.9
3	60	16	34	50	0.0	16.0
4	220	16	33	51	-3.2	14.4
5	320	4	43	53	0.0	4.0

Table C-39 Color appearance of test patches under yellow illumination condition
Y19+W6 observed by subject MW

Mean					coordinate	coordinate
					xMean	yMean
5R5/3	Width	ChrR-Mean	WhiteR-M	BlackR-M	xR	yR
1	19	49	24	27	38.2	29.0
2	33	49	24	27	35.7	32.8
3	60	46	25	29	40.0	21.2
4	220	44	25	31	38.3	19.4
5	320	41	26	33	35.9	17.7
5Y5/3	Width	ChrY-Mean	WhiteY-M	BlackY-M	xY	yY
1	19	45	24	31	2.5	44.6
2	33	47	25	28	2.8	46.6
3	60	40	25	35	0.0	40.0
4	220	38	26	36	0.0	38.0
5	320	33	29	38	0.0	33.0
5G5/3	Width	ChrG-Mean	WhiteG-M	BlackG-M	xG	yG
1	19	57	24	19	-55.0	8.6
2	33	56	22	22	-52.3	14.4
3	60	53	23	24	-50.9	11.0
4	220	48	25	27	-46.0	10.1
5	320	46	26	28	-45.9	1.6
5B5/3	Width	ChrB-Mean	WhiteB-M	BlackB-M	xB	yB
1	19	58	22	20	-55.1	14.5
2	33	58	22	20	-55.8	11.6
3	60	48	24	28	-46.4	8.6
4	220	48	24	28	-46.1	9.3
5	320	45	26	29	-42.4	-6.4
N5	Width	ChrN-Mean	WhiteN-M	BlackN-M	xN	yN
1	19	46	25	29	-12.8	40.6
2	33	45	25	30	-7.3	41.3
3	60	37	26	37	-3.6	36.1
4	220	31	29	40	-7.7	29.2
5	320	21	36	43	-4.7	19.8

Table C-40 Color appearance of test patches under yellow illumination condition
Y25+W0 observed by subject MW

VITA

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