ISLAND GOVERNORS

GOVERNOR OF OAHU
REGISTER OF BRANDS. 1888-1892

SERIES: 77

Register of Brands

Island of Oahu

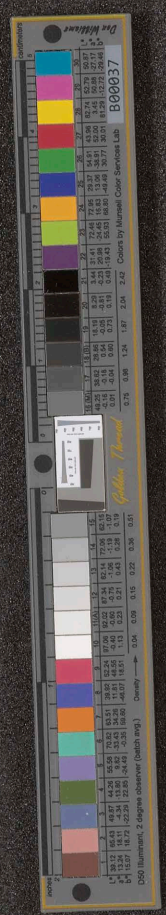
under
Section 19 Chapter 35
Laws of 1888

Laws of 1913

M000408

NI

$ 1.10



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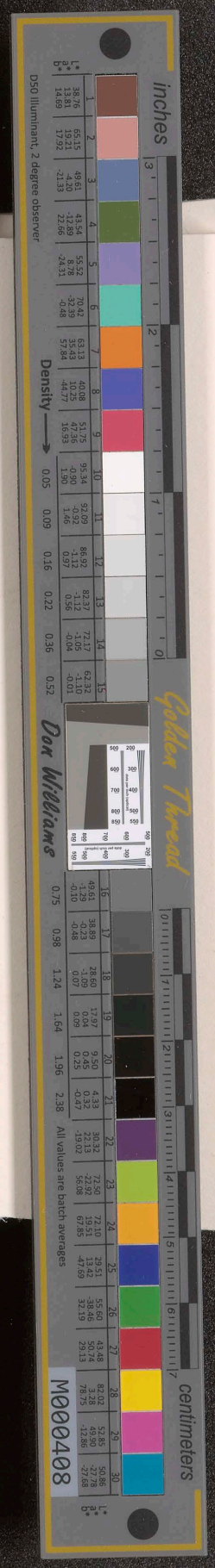
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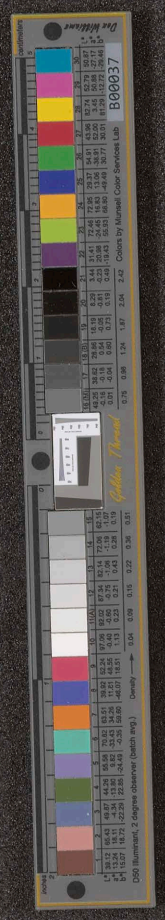
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408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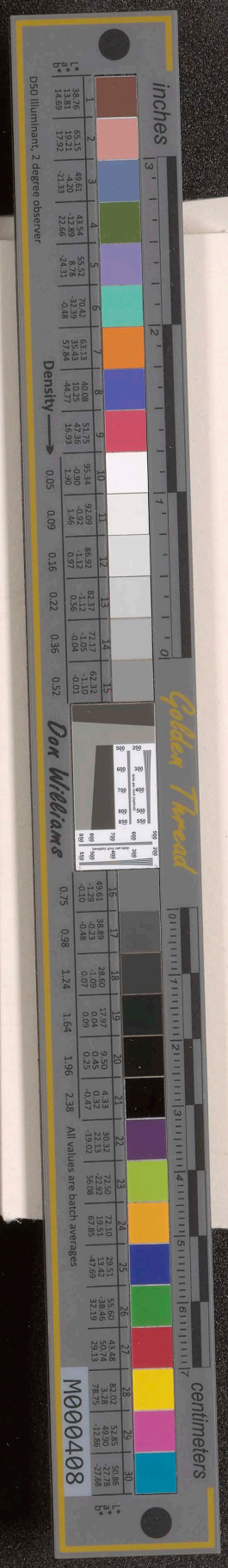
1/2


Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

Record of Brands Book 2.

See Session Laws. 1888. Chapt

No of Certificate	Date Recorded	Brand	Owner of Brand	Fee
	1888			
1	Sept 18	GR	George M. Rauph	$ 1.–
2	Oct 6	EP	Ephraim	1.–
3	Nov 17	32	Saml. S. Wilder	1.
4	" 22	2A.	Lilio	
– –	– – –	– – –	– – – – – – –	1.–
5	Dec 11.	H	Apolilii	1
6	" 13	C	Cecil Brown	1.
7	" 13	王	Wo Hong Wai & Co	1.
8	" 17	MSP	Saml. P. K. Nawaa	1.
~~9~~	~~" 17~~	~~2/3~~	~~Jno J. Campbell~~	1.
10	" 17	G.G.	J. Lucas	1.
11	" 18	✠	Manuel Veigua	1
12	" 25	TH	Hawaiian Tramway Co	1
13	1889 Jany 8	合	Kwong Sing Wai & Co	1
14	" 16	–|–	Fred Harrison	1
15	" 22	H 5	Kauahi (W)	1.
~~16~~	~~" 22~~	~~H.L.~~	~~J. Naholowa~~	0
17	" 17	WU	Wallace Jackson	1.
18	Feb 22	NFW	Ning Yong Wai Company	1.
19	Mar 1.	2/3	Jno J. Campbell	1
20	" 7	KH	Kwong Hing Wai. Co	1
21	" 27	A	Mrs S. E. Allen	1.
22	Apl 9	C	Joao de Castos	1.
23	" 10	AL	Manl. Rodrigues de Freitas	1.
24	May 13	HK	H. K. Kavelo	1

2. Island of Oahu.

Chapter XXXV. Section 19.

Fee	Location &c.
$ 1.–	Kona District
1.–	Waialua.
1.	Kona Dist. } Assigned from Est. of Saml. G. Wilder and Koolaupoko } See old Reg #1582. Page 104.
1.–	Waialua
1	Waianae
1.	All Districts
1.	Ewa.
1.	Ewa.
1.	Ewa (Cancelled Mar 1/89. new Brand See No 19)
1.	Honolulu.
1	Manoa.
1	Honolulu.
1	Keawanui, Mokoliea Waialua, Oahu.
1	Honolulu.
1.	For the Whole Island. Residence Waianae.
0	~~Koolaupoko~~ Not taken.
1.	Makaha, Waianae – for the Island
1.	Honolulu + Pawaa –
1	Ewa
1	Moanalua –
1.	Honolulu. $20.– See Cash Mar 30. 1889.
1.	Honolulu
1.	Apl 13. ~~H.~~ Assigned July 19. 1889. See No 30 Oahu, particularly Ewa District
1	Honolulu.

	1889			
25	May 13	UE	✓	Ulili Koleka
26	May 27	X	✓	S. M Damon
27	July 9	P	✓	Paul R. Isenberg
28	July 11	A	✓	A. David Pahuleele
29	July 12	O	✓	Joao de Oliveira
30	July 19	AN	✓	Silvano de Nobrega
31	July 25	2 2	✓	James H. Boyd
32	July 29	37	✓	Emily Pauahi Judd
33	Aug. 9	O C.	✓	J. O. Carter jr
34	Aug 16	小	✓	Ahai
35	Sept 30	3	✓	Lakapa Mauliawa
36	Oct 4	J F	✓	Joe Jogo
37	Oct 17	F	✓	Frederick Paul Johnson
38	Oct 28	IV	✓	Mauualua Ranch Co
39	Oct 28	?	✓	George J. Campbell
40	Oct 31	S V	✓	Eliza Neumann
41	Dec 23.	K N	✓	John Naaluulu
42	1890 Feb 25	R R	✓	Raymond Reys
43	Feb 26	P	✓	H. P. Puaahiwa
44	Mar 12	P	✓	Kahuku Plantation Co
45	April 5	E	✓	Ewa Plantation Co
46	April 7	XII	✓	Samuel Oneha
47	May 5	22	✓	Kauhane
48	May 14	● ●	✓	Henry F. Poor
49	May 19	85	✓	Nakaiewalu

forward

	1 ✓	Waianae
	1 ✓	Waialua & Kona. (See old Reg. #335. John Meek)
	1 ✓	Waialae
	1 ✓	Honolulu
	1 ✓	Paakea, Waikiki.
	1 ✓	Ewa. Assigned – See No 23.
	1 ✓	Honolulu.
	1 ✓	Kualoa, Koolaupoko.
	1 ✓	Honolulu.
	1 ✓	Punalua, Koolaupoko.
	1 ✓	Honolulu
15	1 ✓	Kailua Koolaupoko
	1 ✓	Honolulu.
	1 ✓	Maunalua
	1 ✓	Maunalua
	1 ✓	Honolulu.
	1 ✓	–do–
	1 ✓	–do–
	1 ✓	–do–
23	1 ✓	Koolauloa – Kahuku. $23.– See Cash Mar 31. 1890.
	1 ✓	Ewa.
	1 ✓	Koolaupoko
	1 ✓	Kahalua. Koolaupoko.
	1 ✓	Honolulu. Cancelled. See – #83.
	1 ✓	Waialua.
	5.–	

	1890				
50	May 27	OL	✓	Otto Ludloff	1. ✓
51	June 20	ENA	✓	Jno Ena	1. ✓
52	July 11	M 4	✓	Mariano J. Roche	1. ✓
53	July 14	W	✓	E. B. Mikalemi	1. ✓
54	July 23	W F	✓	Wong Fat	1. ✓
55	Aug 5	G	✓	Jose Maria Gomes	1 ✓
56	Aug 26	B	✓	C. A. Brown	1 ✓
57	Aug 26	J	✓	W. E. Rowell	1 ✓
58	Sept. 12	C	✓	Kaieve	1 ✓
59	Sept 12	F M	✓	D. W. Pauahi	1 ✓
60	Sept 12		✓	Antonio Rodrigues	1 ✓
61	Sept 17	V	✓	Victorino S. Vieira	1 ✓
62	Oct 3	S 生	✓	Sun Kwong Sung Co	1 ✓
63	Oct 3	J I	✓	C. A. Brown	1 ✓
64	Oct 10	L W	✓	W. L. Wilcox	1 ✓
65	Oct 23.	NE	✓	Jas K. Punee	1 ✓
66	1891 Jan. 15	D C	✓	W. H. Cummings	1 ✓
67	Feb 13	R X	✓	Geo H. Robertson	1 ✓
68	Feb 13	CB	✓	Wm C. Achi	1 ✓
69	Mar 9	G + R	✓	S. M. Kauff	1 ✓
70	April 2	J	✓	John J. Wright	1 ✓
71	April 2	C	✓	George J. Campbell	1 ✓
72	April 2	K + O	✓	Kohuole (W)	1 ✓
73	April 20	C	✓	Jas Cowan	1 ✓
74	April 28	+ S	✓	Joao D. Baptista	1 ✓

1. ✓ Manoa. Honolulu
1. ✓ Honolulu and Koolauloa.
1. ✓ Waikiki
1. ✓ Honolulu
1. ✓ Waialua.
1 ✓ Makiki.
1 ✓ Waipio, Ewa
1 ✓ Waialua.
1 ✓ Kahului, Koolaupoko.
1 ✓ Purchased from Est P. Milton. Old Series #2057. Page 131.
1 ✓ —do— —do— Joaquim Antonio. Old Series 3090. —do— 136.
1 ✓ Makiki. Honolulu
1 ✓ Pawaa.
1 ✓ Waipio Ewa from Emily C. Judd Old Series #1. Page 1.
1 ✓ Kalihi
1 ✓ Kahana, Koolaupoko
1 ✓ Honolulu
1 ✓ Honolulu
1 ✓ Honolulu
1 ✓ Waialua. $25.– See Cash March 31. 1891.
1 ✓
1 ✓
1 ✓ Wife of F. W. Wiley
1 ✓ Kahuku.
1 ✓ Purchased from J. S. Antone, Old Series #3018. Page 133

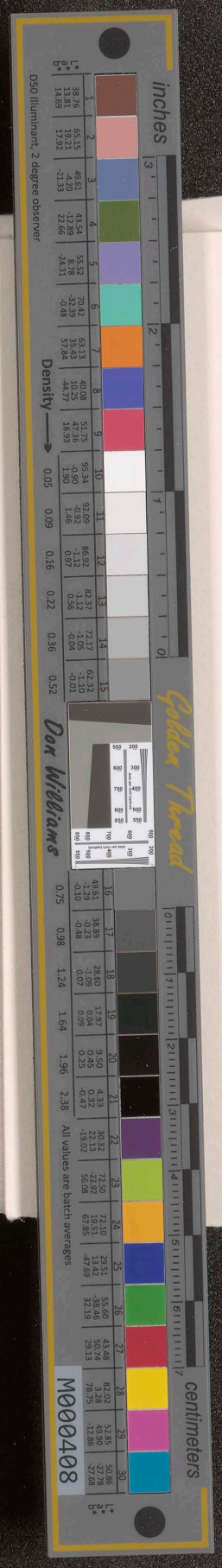
	1891			
75	April 28	G S	✓	Carolina Silva
76	May 8	JA	✓	J. H. Polihale
77	May 15	D	✓	D. A. Kaiole
78	July 8	(I)	✓	J. Haae
79	July 27	A G.	✓	Manuel Vetterino
80	August 11	E 5	✓	James K. Inoaole
81	September 9		✓	Joseph Keakahiwa
82	September 15	21 correct.	✓	Charles L. Carter
83	September 23		✓	Henry F. Poor.
84	November 18		✓	Leong Mew
85	November 18		✓	Ako
86	November 20		✓	A. J. Campbell
87	November 21	C 4.	✓	Frank Robeiro
88	December. 1		✓	M. J. Pereira
89	December 9	KF	✓	Kwong Fung Wai + Co
	1892			
90	January 6	O R	✓	Oahu Railway + Land Co
91	February 20	C H J	✓	Chas H. Judd
92	March 16	K	✓	Princess Kaiulani
93	April 7	Y E	✓	M. S. Pereira
94	April 25	H 6	✓	Henry Cox
95	April 25	D. 3.	✓	D. M. Kueva
96	June 16		✓	Hina
97	June 18	C N	✓	C. Nalu
98	July 1		✓	E. P. Aikue
99	August 17	B	✓	C. Bolte

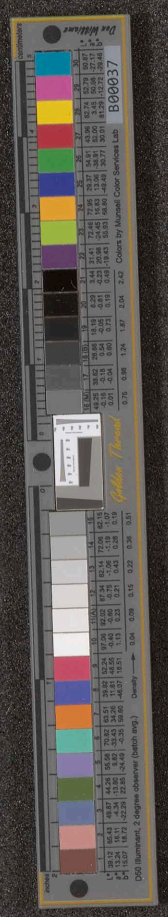
1 ✓ Waianae.
1 ✓ Honolulu + Waianae.
1 ✓ Waikikiwaena.
1 ✓ Kahalui, Koolaupoko.
1 ✓ Waialua. Transferred (See old Series #1950.)
1 ✓ Maunalua -
1 ✓ Honolulu
1 ✓ Honolulu
1 ✓ Honolulu
1 ✓ Waialua Chinese (Meaning One Knife)
1 ✓ Honolulu (" " "22")
1 ✓ Ewa.
1 ✓ Halihi.
1 ✓ Honolulu.
1 ✓ Waialua
1 ✓ Honouliuli, Halemano + Kahuku.
1 ✓ Kualoa.
1 ✓ Honolulu $23.- See Cash, March 31.1892.
1 ✓ Honolulu (See old Series #3069)
1 ✓ Waialua.
1 ✓ Waialua, + Waimea.
1 ✓ Kona -
1 ✓ Waialua
1 ✓ Koolaupoko.
1 ✓ Heeia. Koolaupoko.

No of Certificate	Date Recorded	Brand	Owner of Brand	Fee
100	1892 August 17	B	J. Buchholtz	1 ✓
101	August 29	(E)	John Emmeluth	1 ✓
102	August 29	49	John S. Andrade	1 ✓
103	November 10	C	Waimanalo Sugar Co	1 ✓
104	November 10	C	Waimanalo Sugar Co	1 ✓
105	November 15	(Y)	Chew Yee.	1 ✓
106	November 15	L	R. L. Gilliland	1 ✓

Brand to new Record

Fee	Location &c.
1 ✓	Heeia. Koolaupoko.
1 ✓	Honolulu.
1 ✓	Hoaeae Ranch – $10. to Cash Book Apl 7. 1893.
1 ✓	Waimanalo Plantation. (Transferred see old Series # 921)
1 ✓	Waimanalo Plantation. (Transferred, See Old Series # 3142)
1 ✓	Koolaupoko ~~(Transferred See Old Series #137)~~
1 ✓	Waianae. (Transferred, See Old Series #137.


Golden Thread
Dan Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M0000408


Dex Williams
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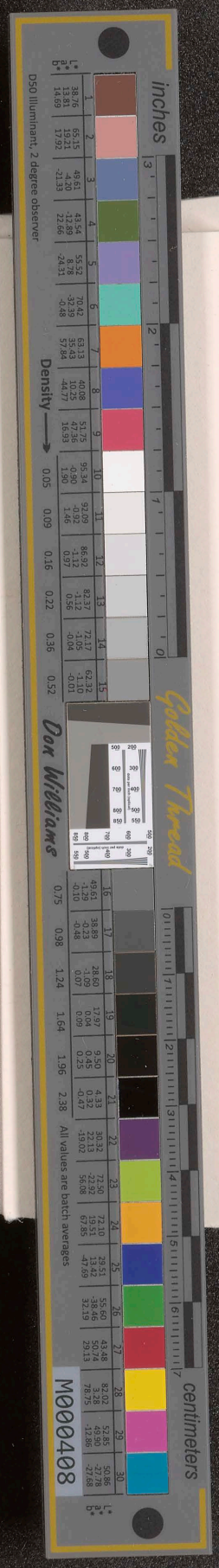
Colors by Munsell Color Services Lab
Golden Thread
D50 Illuminant, 2 degree observer (batch avg.)
Density


Golden Thread
Don Williams
inches
centimeters
Density
0.05 0.09 0.16 0.22 0.36 0.52 0.75 0.98 1.24 1.64 1.96 2.38
All values are batch averages
D50 Illuminant, 2 degree observer
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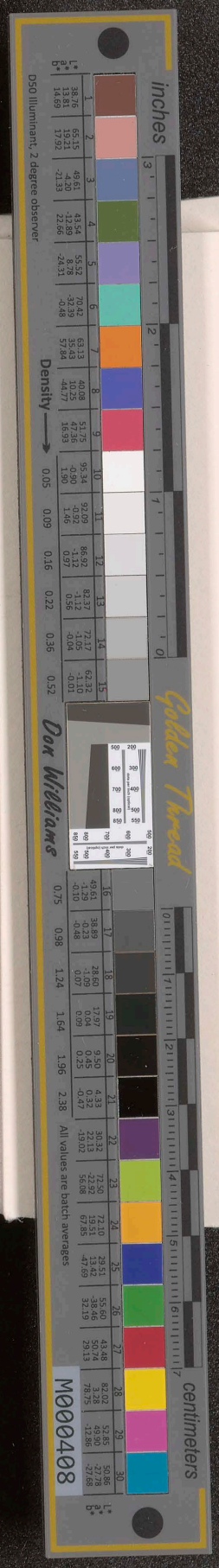
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Dor Williams
inches
centimeters
Density
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All values are batch averages
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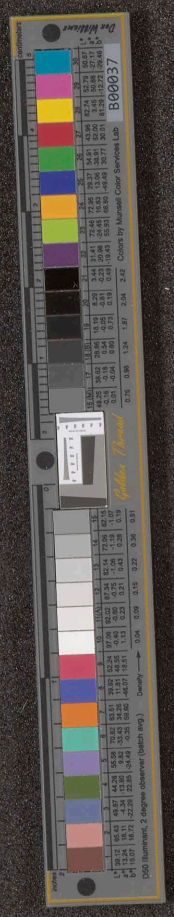
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Calibration Board
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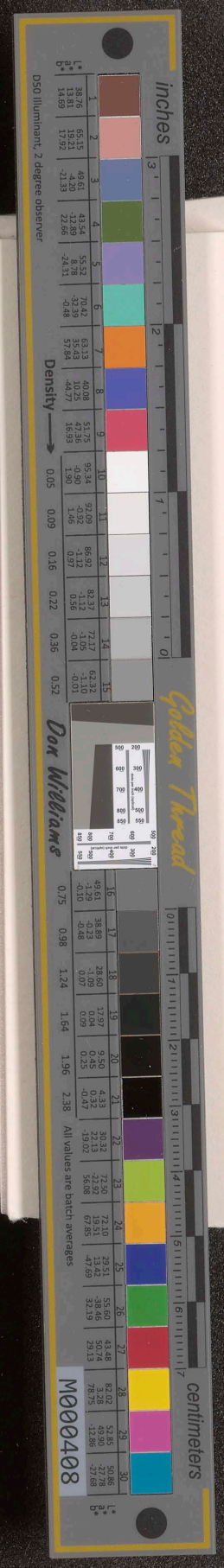
Colors by Munsell Color Services Lab
D50 Illuminant, 2 degree observer (batch avg.)
Density
Delta E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centimeters
Golden Thread
Don Williams
Density
D50 illuminant, 2 degree observer
All values are batch averages
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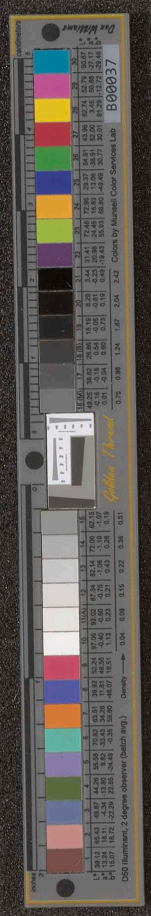
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Colors by Munsell Color Services Lab
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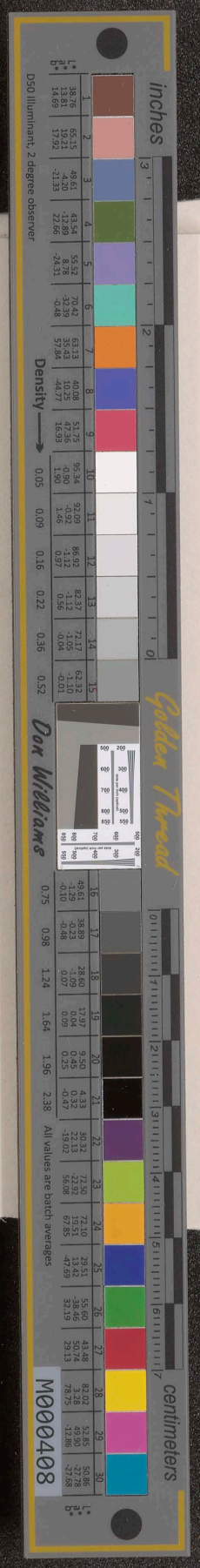
inches
centimeters
Golden Thread
Don Williams
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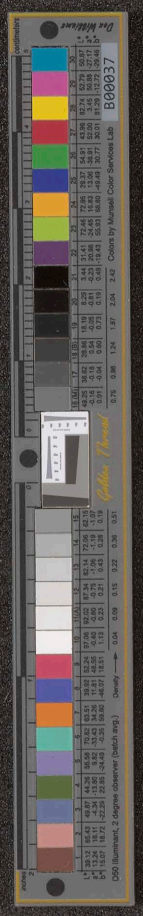
D50 Illuminant, 2 degree observer
Density
All values are batch averages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Colors by Munsell Color Services Lab
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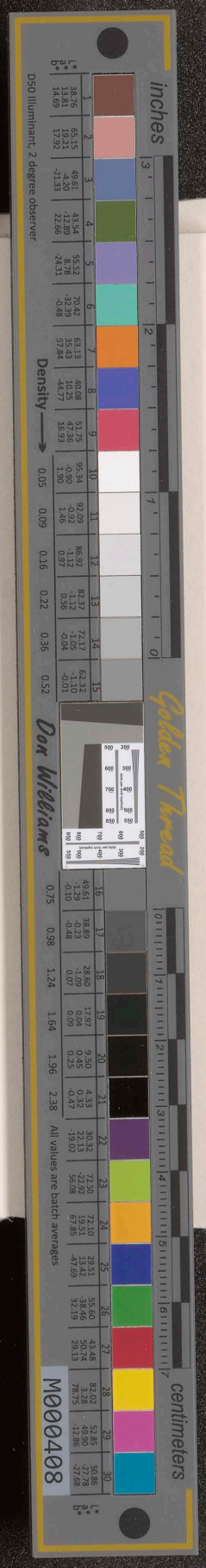
D50 Illuminant, 2 degree observer (batch avg.)


Golden Thread
Box Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
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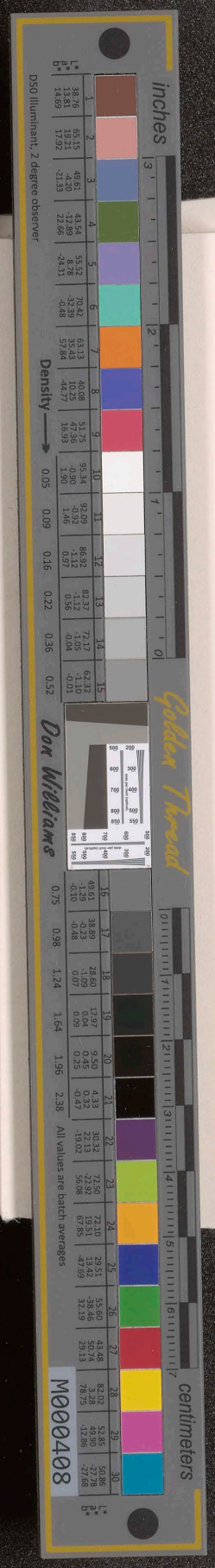
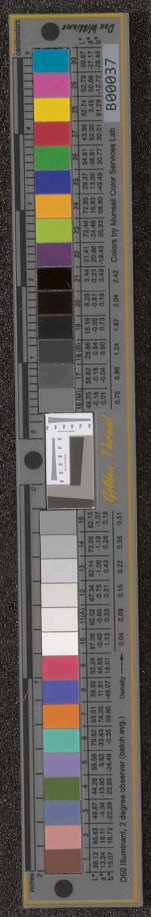


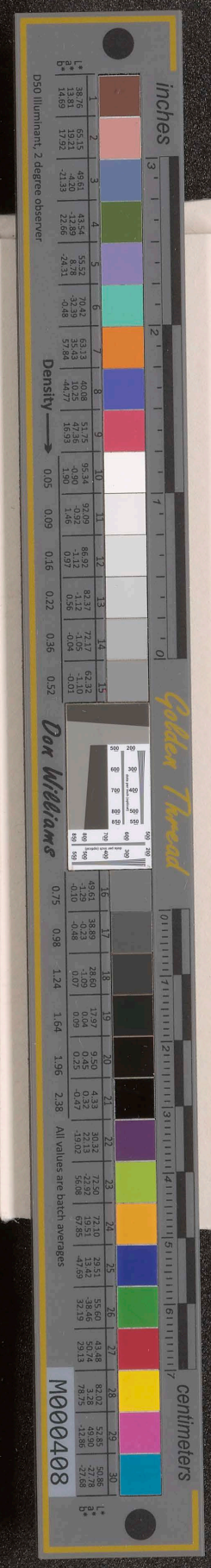
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	77.02	62.32
a*	13.61	19.21	-4.20	-12.89	8.78	-32.39	35.43	10.35	42.36	-0.90	-0.06	-1.37	-1.15	-0.04	-0.01
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.37	0.56	-0.04	-0.01
Density →		0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38		

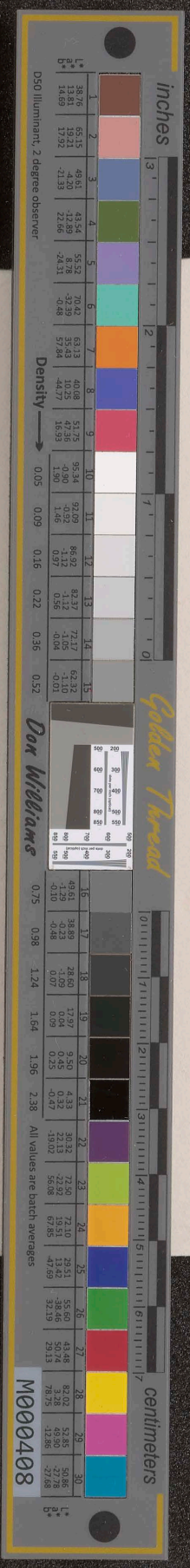
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.50	72.10	23.51	55.40	43.48	82.02	52.85	50.86
a*	-1.29	-0.23	-1.09	0.04	0.45	0.37	2.59	27.59	37.37	13.21	38.40	50.44	3.28	49.90	-27.78
b*	-0.10	-0.48	0.07	0.09	0.23	-0.47	15.02	56.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-27.68

D50 Illuminant, 2 degree observer

All values are batch averages


Dan Williams
B00037
Colors by Munsell Color Services Lab
D50 Illuminant, 2 degree observer (batch avg.)
Density


inches
Golden Thread
Don Williams
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
centimeters
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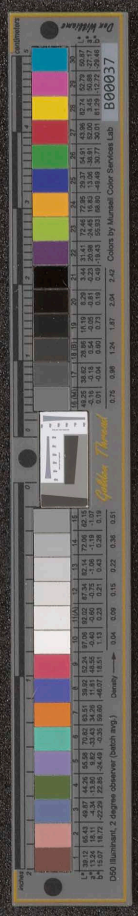
Munsell
Color
Neutral
Munsell
Color
Neutral
Munsell
Color
Neutral

Golden Thread
Dox Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
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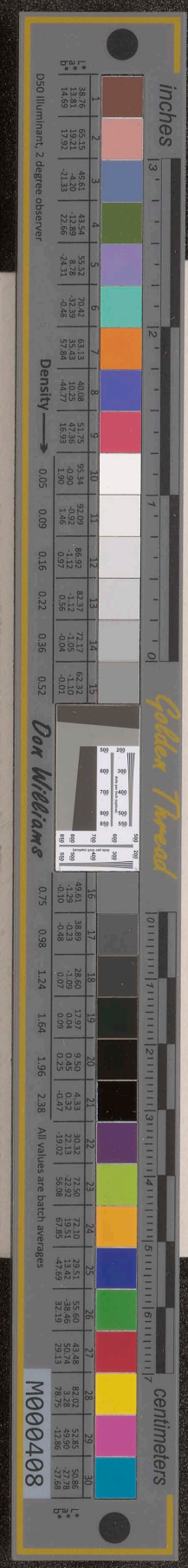
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inches
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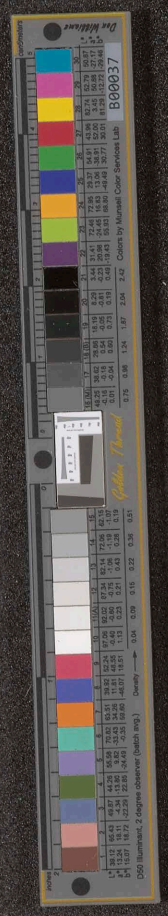
Gretag Macbeth
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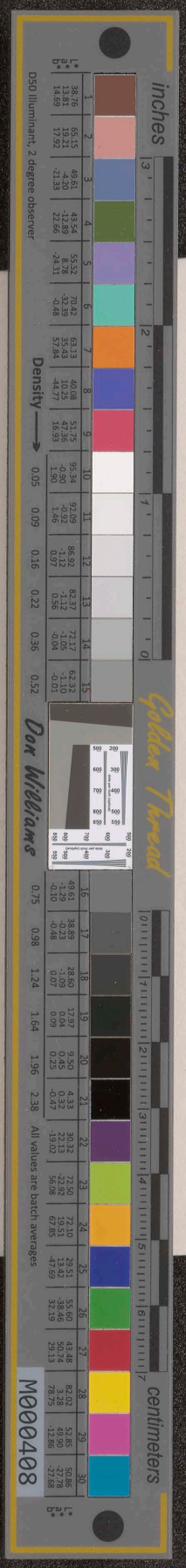
D50 Illuminant, 2 degree observer (batch avg.)
Delta E
Colors by Munsell Color Services Lab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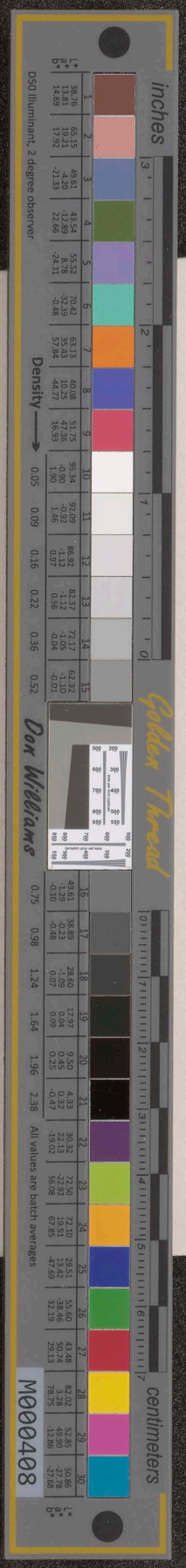
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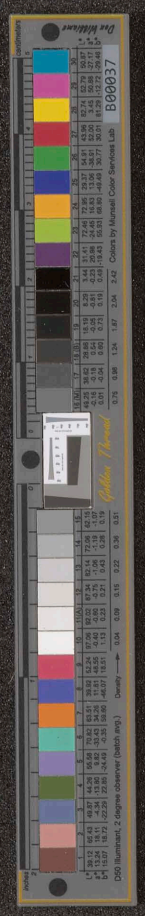
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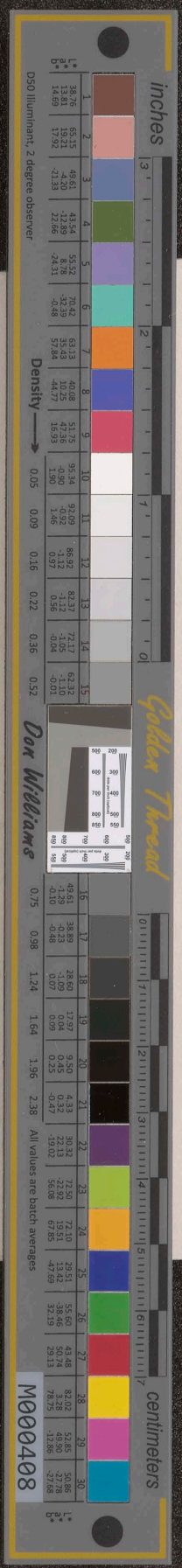
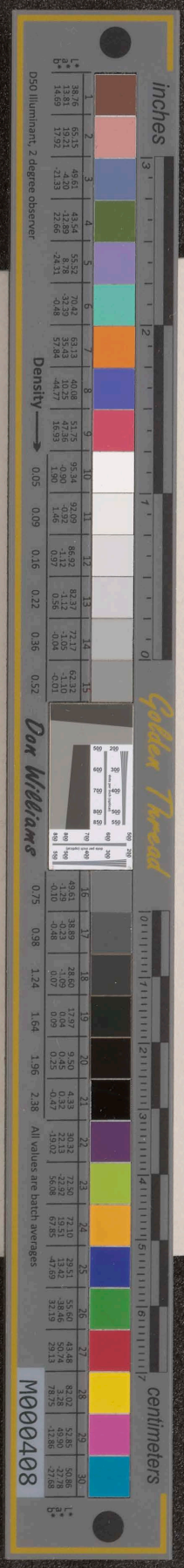
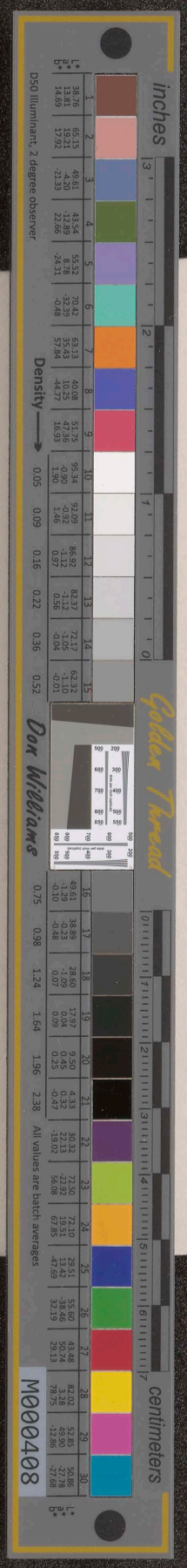
Gretag
Color Control Patches
Gray Balance
Gray Scale
Density
Color Bars


Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


inches
Golden Thread
Don Williams
Density
D50 illuminant, 2 degree observer
All values are batch averages
centimeters
M000408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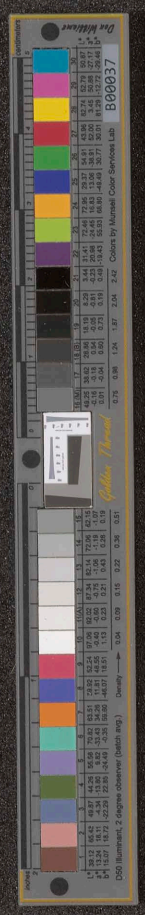
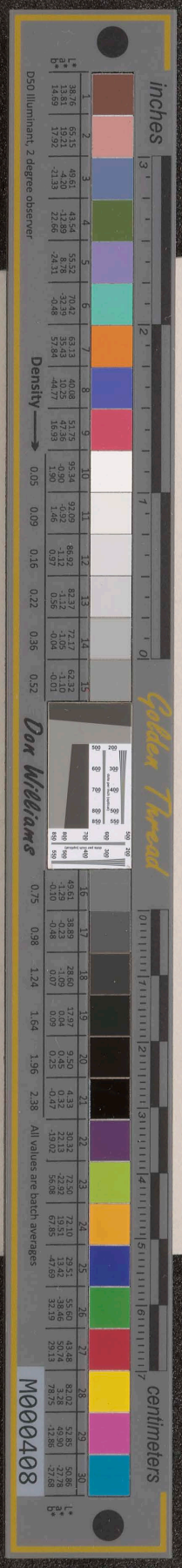
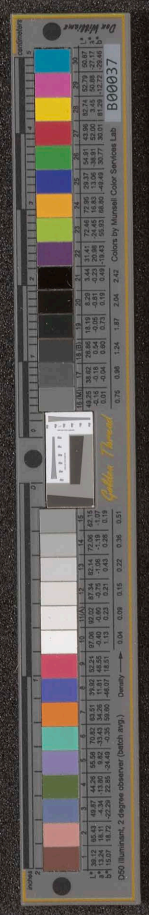
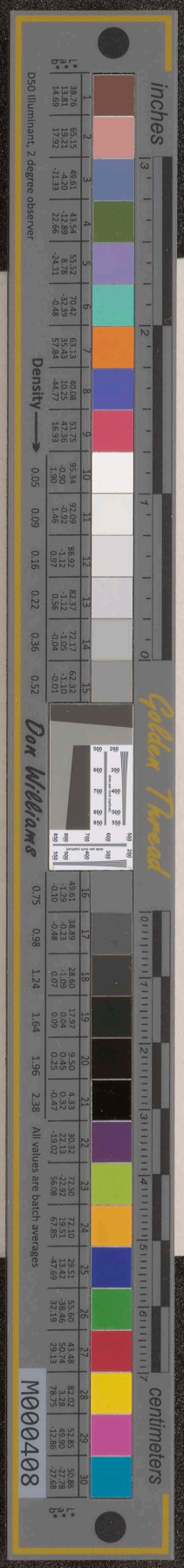
inches
centimeters
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Kodak
Gretag
Colorimetrics
Color Matrix
Gretag Thread
Colors by Munsell Color Services Lab
B00037
D50 Illuminant, 2 degree observer (batch avg.)
Density
0.04 0.09 0.15 0.22 0.36 0.51
0.32 0.36 0.51 0.75 0.96 1.24 1.57 2.04 2.42


Golden Thread
Dox Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


Kodak
Gretag Macbeth
Color Wizard
B00037
Colour by Munsell Colour Services Lab.
D50 Illuminant, 2 degree observer (bench dry)
Density → 0.04 0.09 0.15 0.22 0.36 0.51 0.75 0.86 1.24 1.47 2.04 2.42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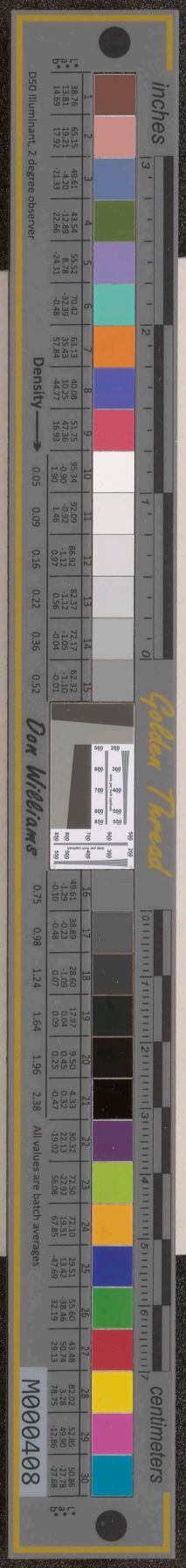
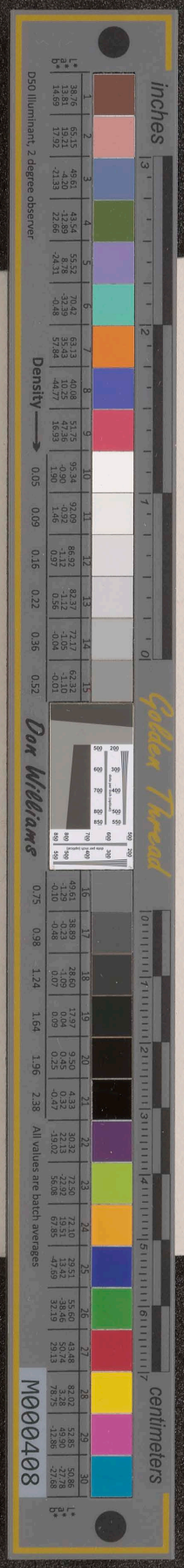
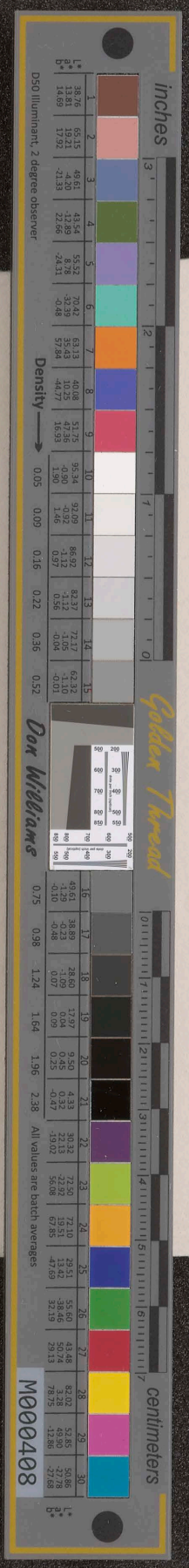
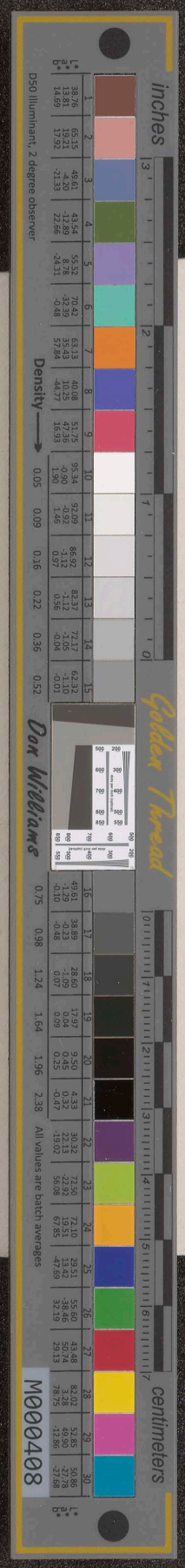
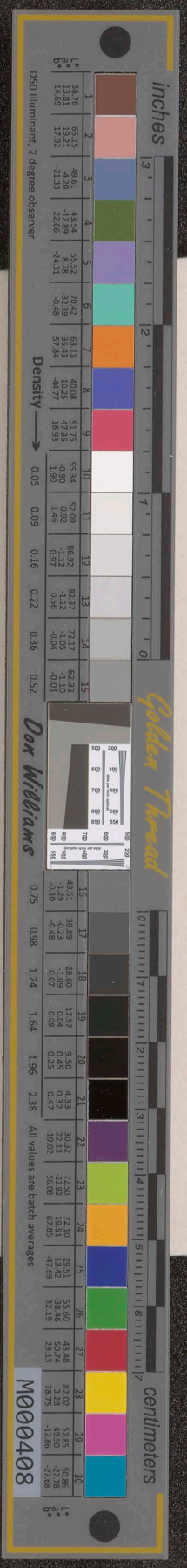
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

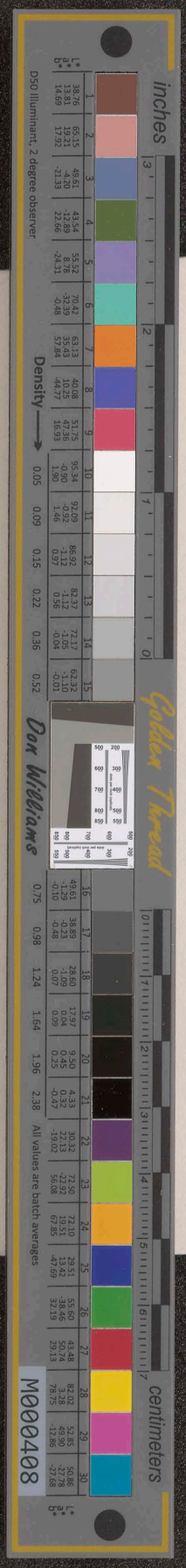

inches
Golden Thread
Dox Williams
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M0000408

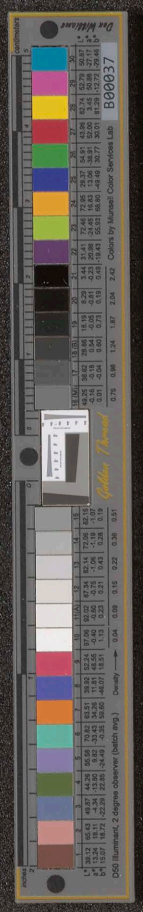

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

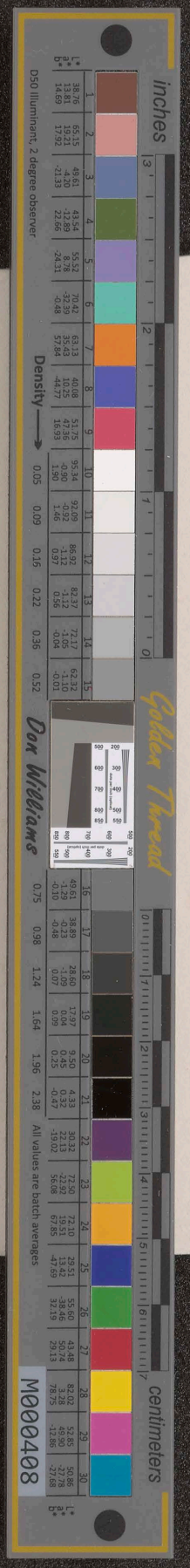

Golden Thread
Dax Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

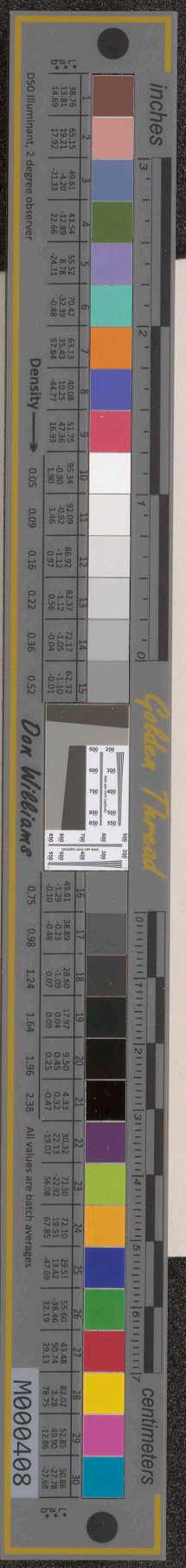

inches
Golden Thread
Don Williams
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Golden Thread
Dan Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


Kodak
Gray Balance
Gamma
Color Bars
Gamma
Gray Balance
Gamma
Color Bars
Gamma
Gray Balance
Gamma
Color Bars
Gamma


Gaddex Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408



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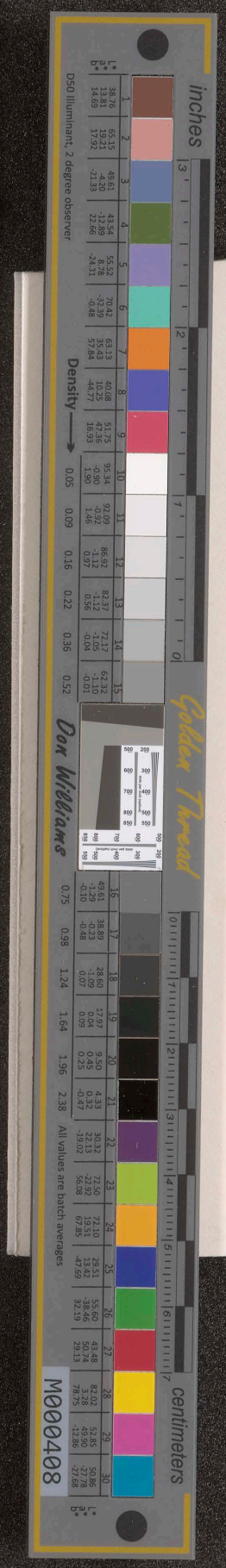
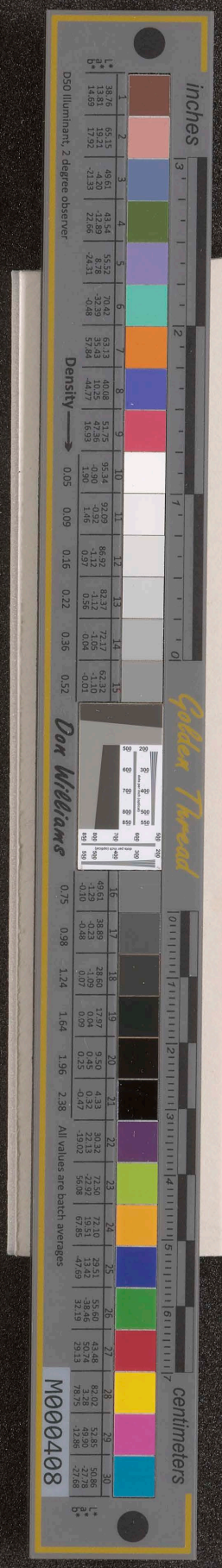
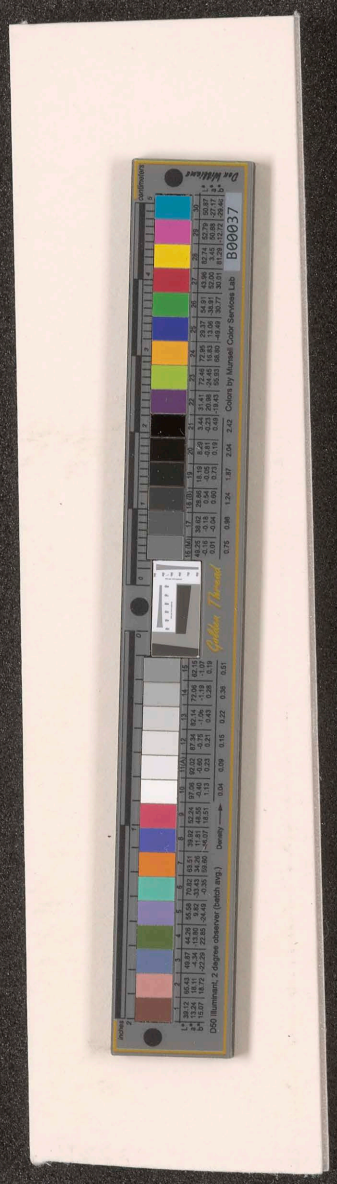
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.76	95.94	92.09	85.92	83.37	71.07	52.32
a*	13.81	19.21	-4.20	-12.89	8.78	-32.39	35.43	10.35	47.36	0.90	-0.92	1.17	4.12	-1.05	52.32
b*	14.69	17.92	-21.33	22.66	-24.11	-0.48	57.84	-44.77	16.93	1.90	1.46	0.37	0.56	-0.04	-0.01
Density	0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38			

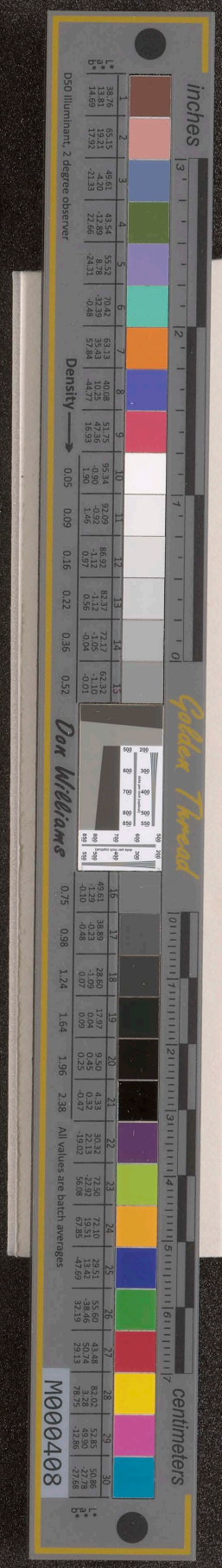
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.50	72.10	29.51	55.60	43.48	82.02	52.85	50.86
a*	1.37	2.12	-1.07	0.09	0.25	0.47	-12.13	52.92	19.91	13.42	38.46	50.74	3.28	49.90	-27.78
b*	-0.10	-0.48	0.07	0.09	0.25	0.47	-13.02	50.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-27.68

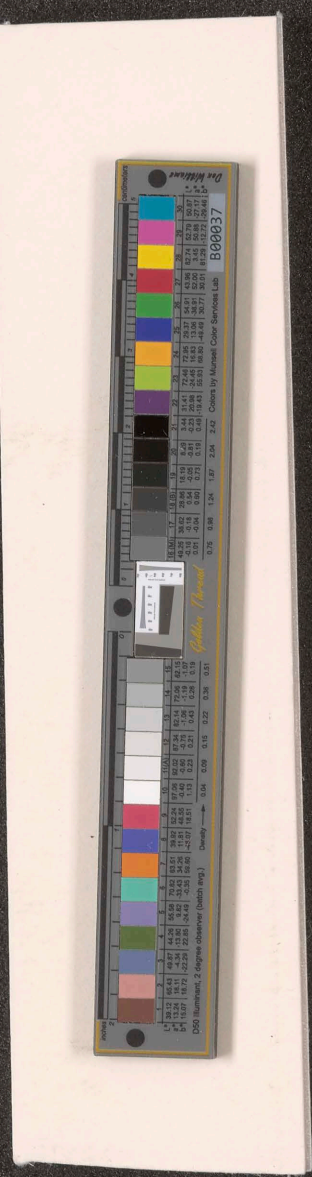

inches
centimeters
Golden Thread
Don Williams
M000408
Density
D50 Illuminant, 2 degree observer
All values are batch averages

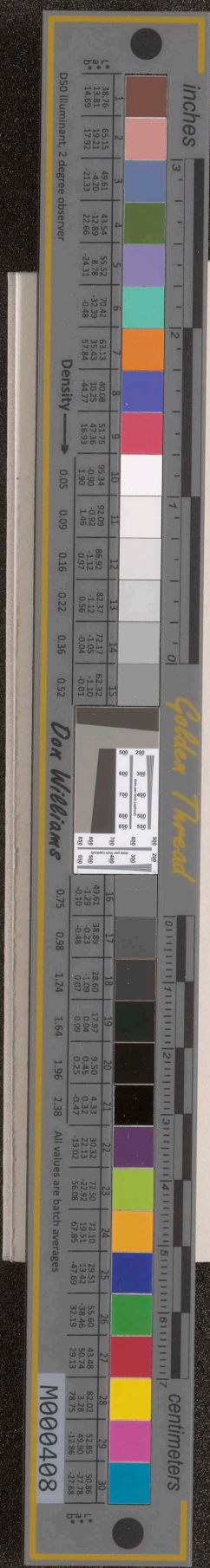
inches
centimeters
Golden Thread
Don Williams
D50 Illuminant, 2 degree observer
Density
All values are batch averages
M000408

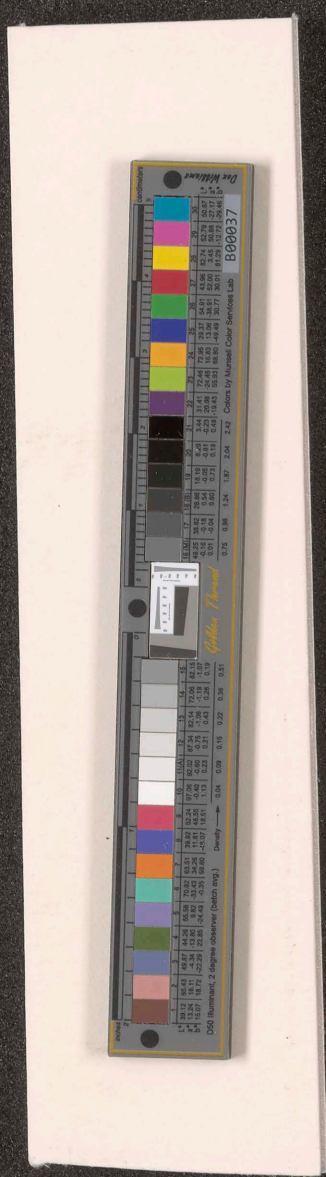

inches
centimeters
Golden Thread
Don Williams
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

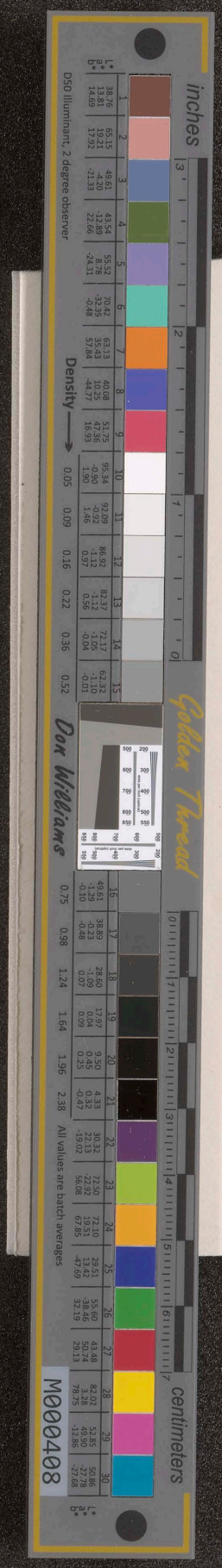

Colors by Munsell Color Services Lab
B00037

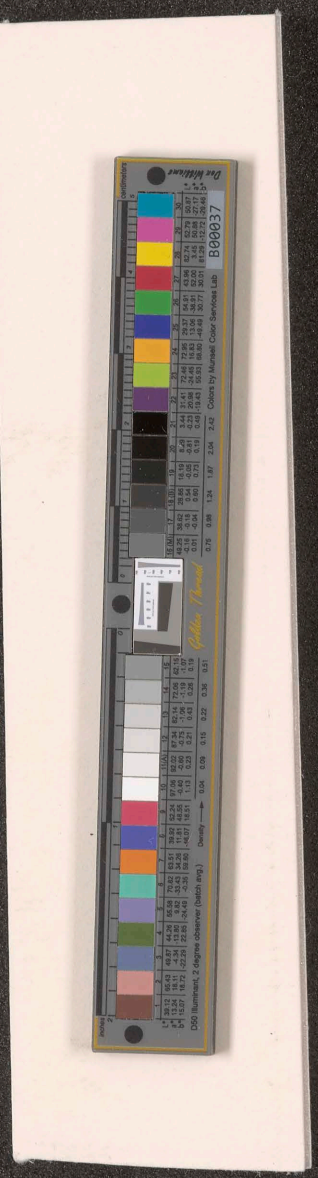

Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Don Hibbland
B00037
Golden Thread
D50 Illuminant, 2 degree observer (batch avg.)
Density
Colors by Munsell Color Services Lab


Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


Dex Williams
Golden Thread
B00037
D50 Illuminant, 2 degree observer (batch avg.)
Colors by Munsell Color Services Lab


inches
Golden Thread
Dax Williams
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M0000408


Colors by Munsell Color Services Lab
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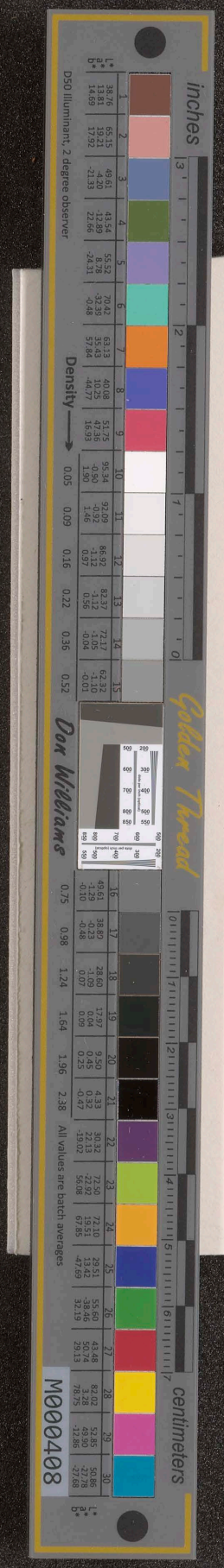
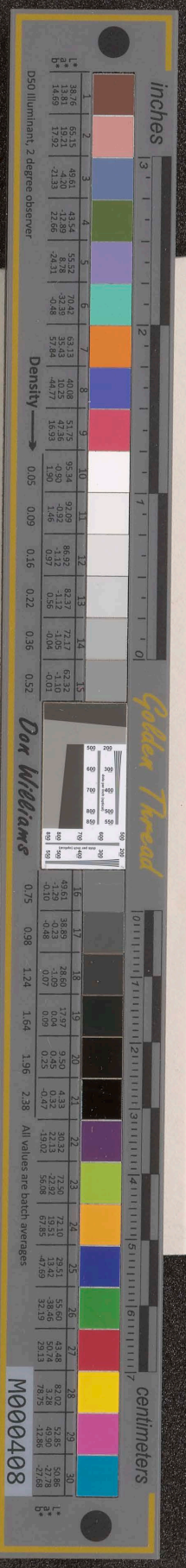
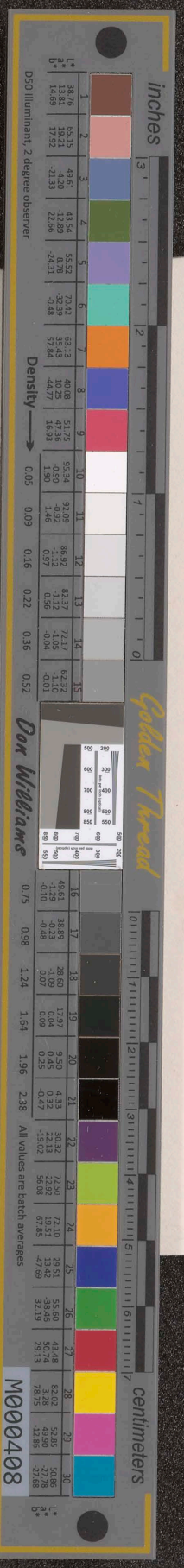
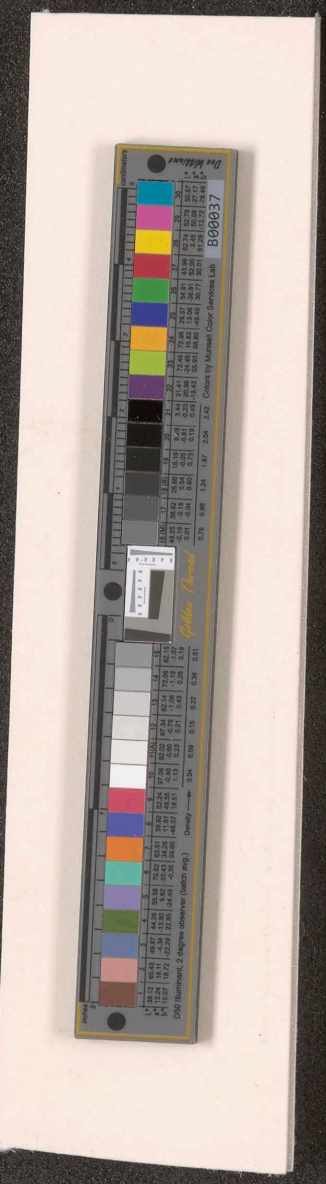
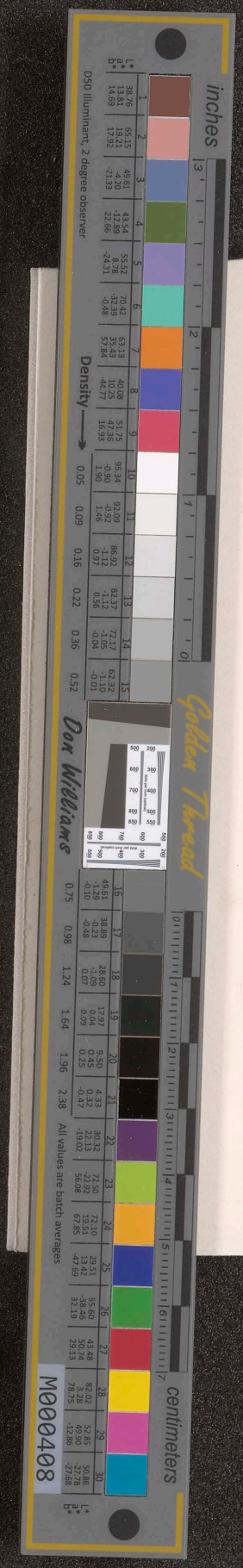
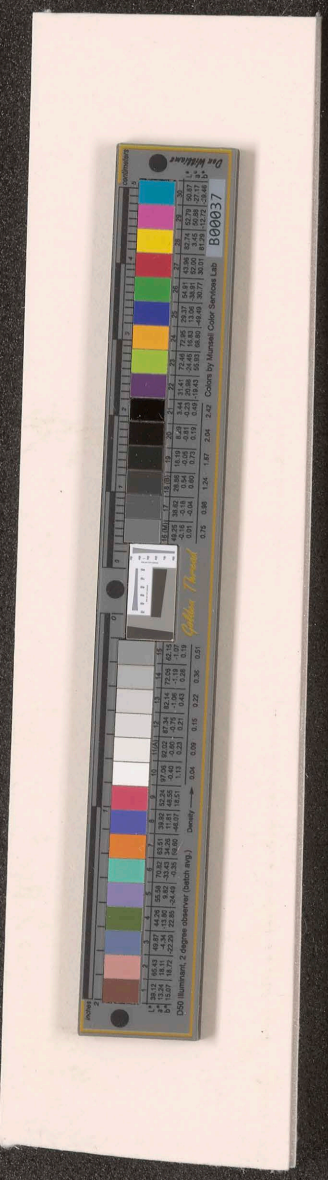

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

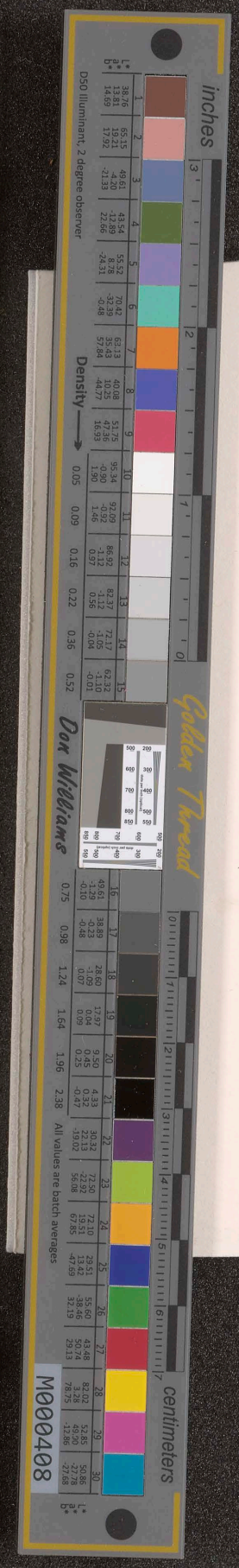

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

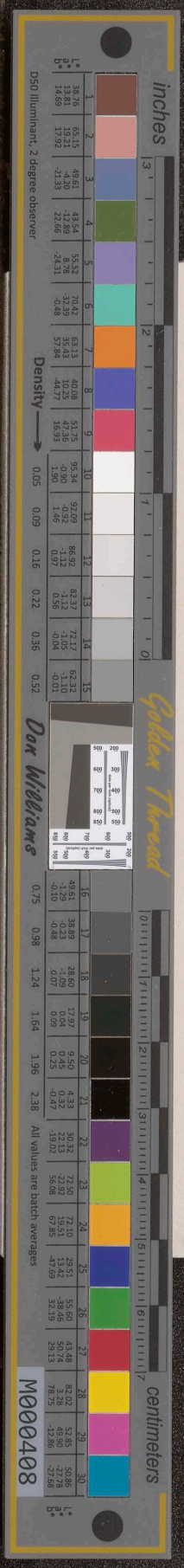

Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

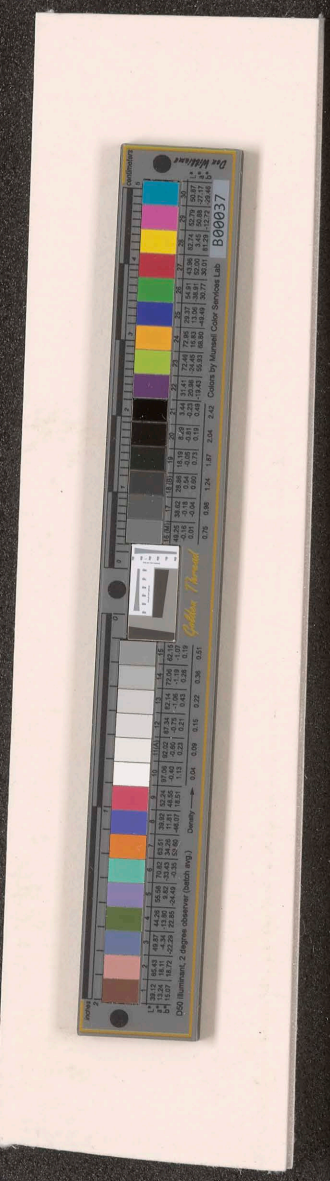

Gretag Macbeth
Colors by Munsell Color Services Lab
B00037


Gütermann Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Munsell
Color Services
Gretag Macbeth
B00037
Colors by Munsell Color Services Lab
D65 Illuminant, 2 degree observer (batch avg.)
Density
Gretag Macbeth


inches
centimeters
Golden Thread
Dax Williams
M000408
Density
D50 illuminant, 2 degree observer
All values are batch averages


Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M0004408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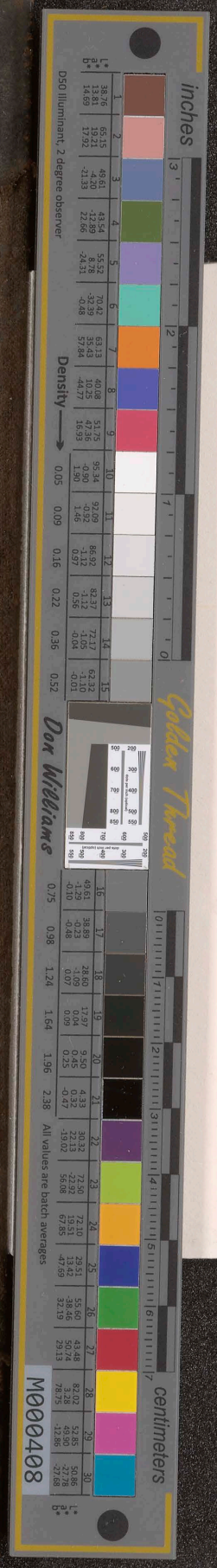
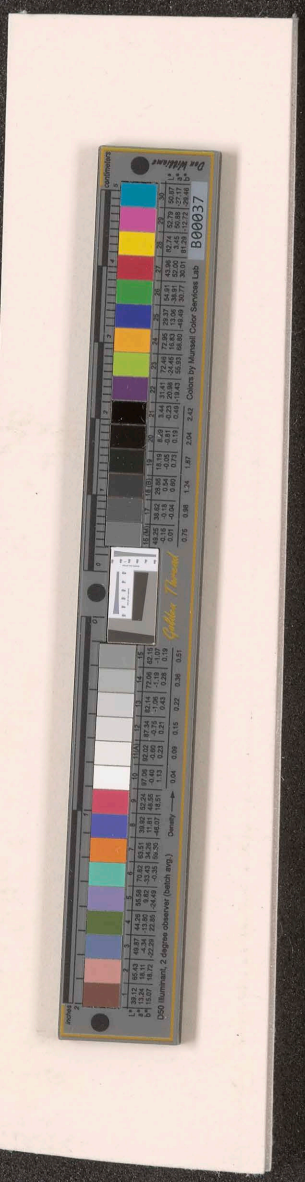
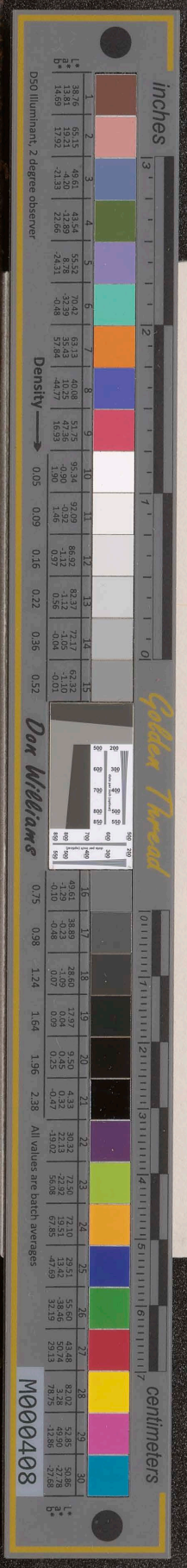
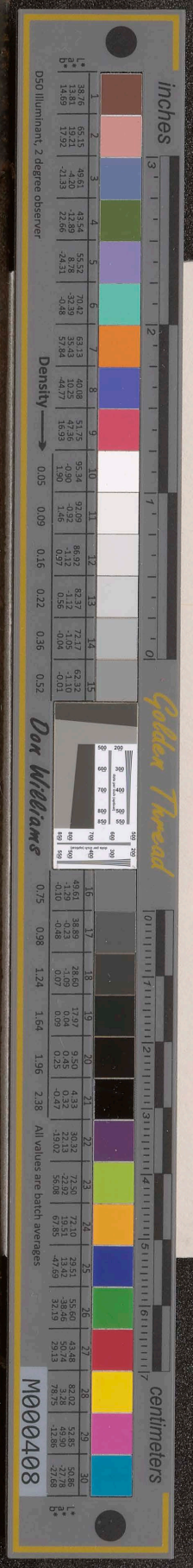
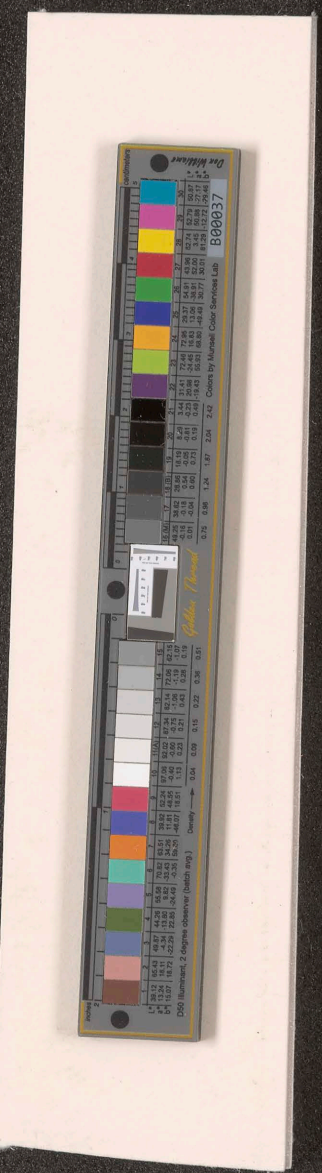
B00037
Colors by Munsell Color Services Lab
Color Thread

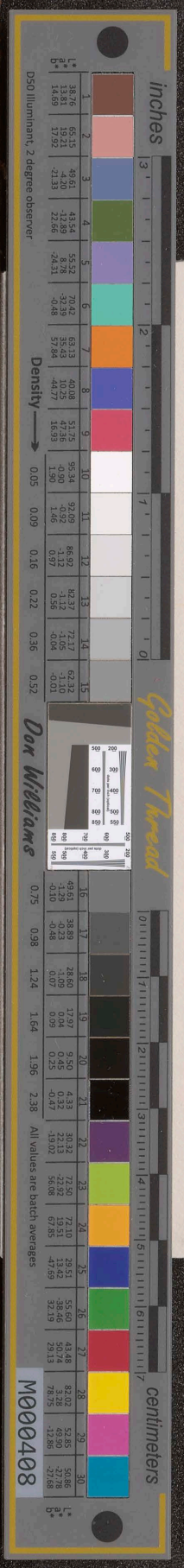

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

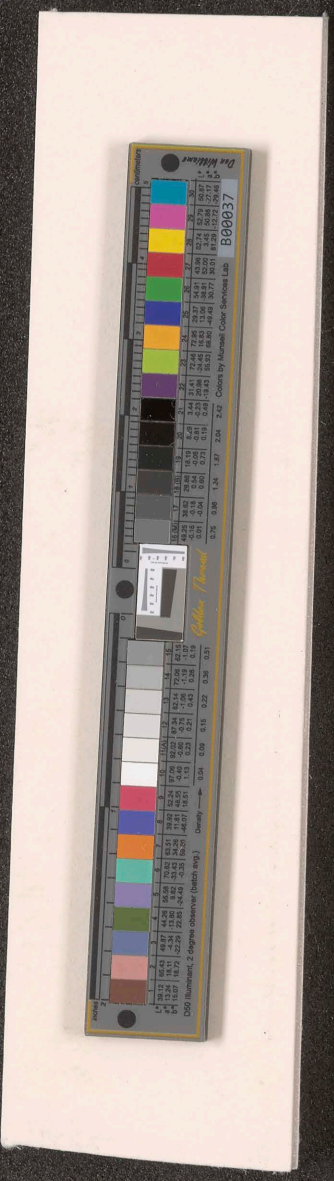

Don Williams
B00037
Colors by Munsell Color Services Lab
D50 Illuminant, 2 degree observer (batch avg.)
Density

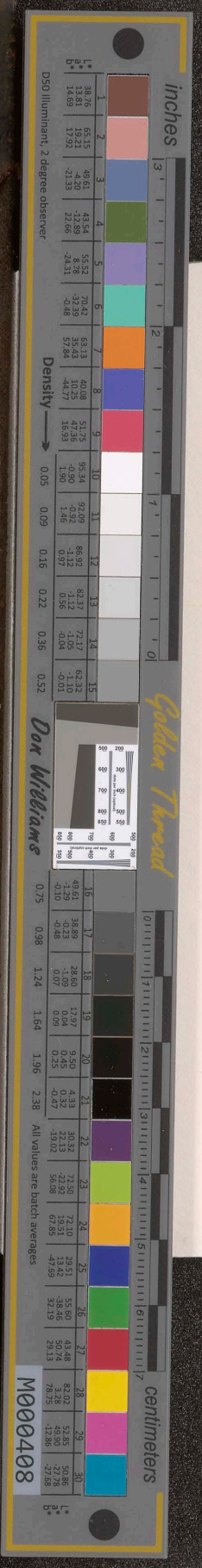

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
Golden Thread
Don Williams
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408




inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Colors by Munsell Color Services Lab
B00037


inches
centimeters
Golden Thread
Don Williams
M0004408
Density
D50 illuminant, 2 degree observer
All values are batch averages

inches
centimeters
Golden Thread
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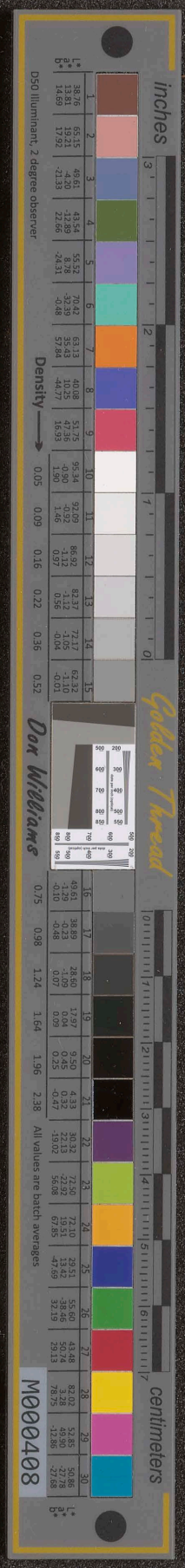
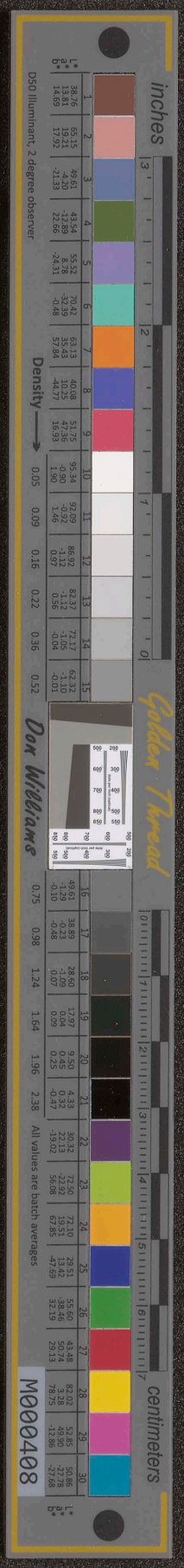
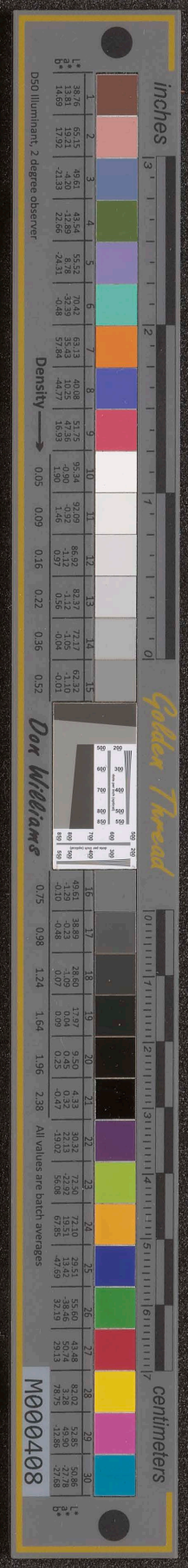
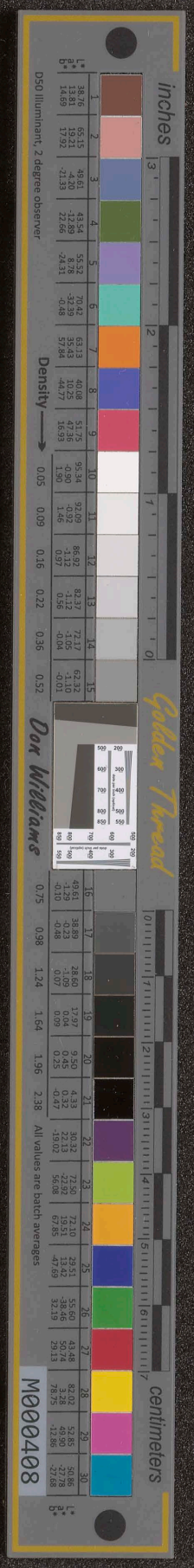
All values are batch averages
M000408

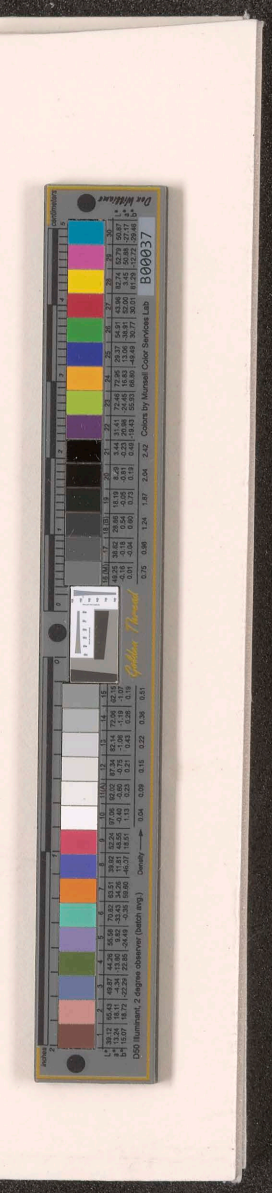

Golden Thread
inches
centimeters
Density
Don Williams
M000408
D50 illuminant, 2 degree observer
All values are batch averages

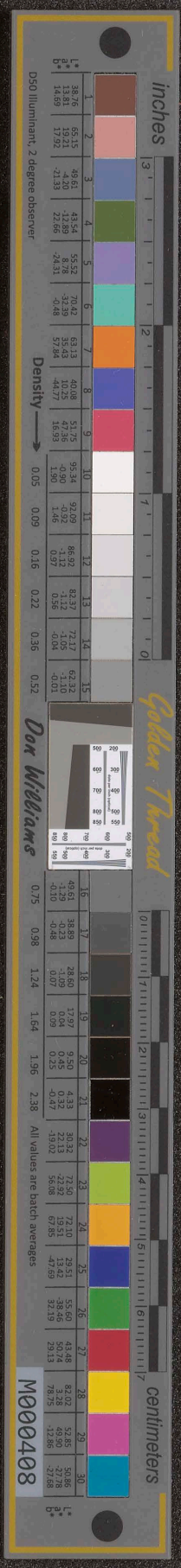

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

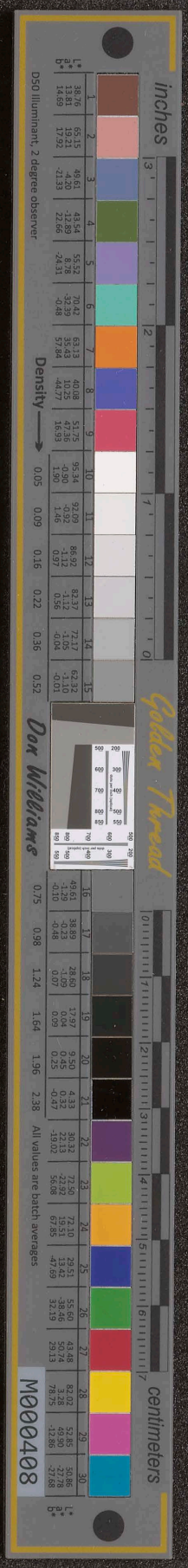
inches
Golden Thread
Don Williams
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

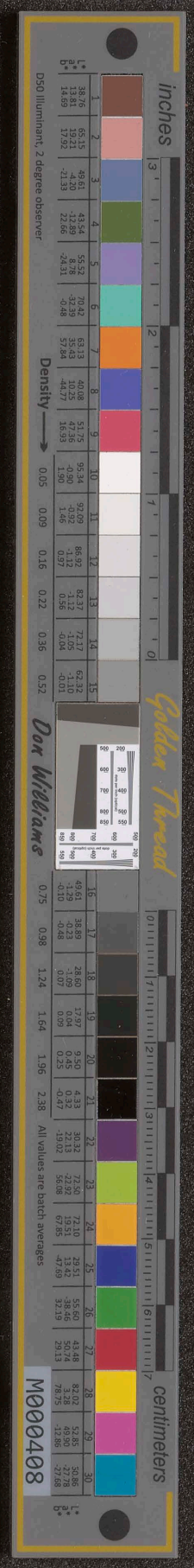

Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

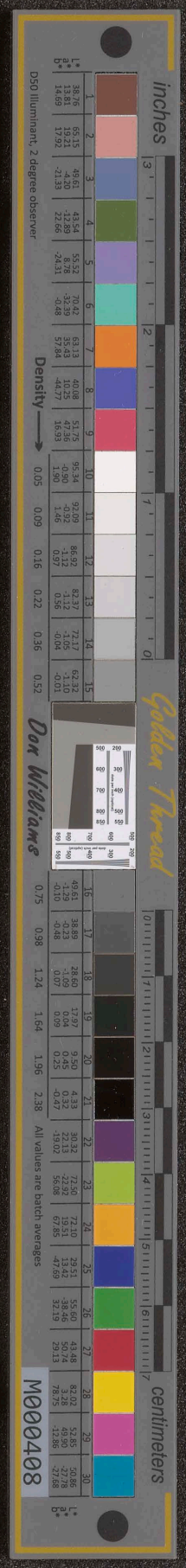

Golden Thread
inches
centimeters
Density
Don Williams
M000408
D50 Illuminant, 2 degree observer
All values are batch averages




inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

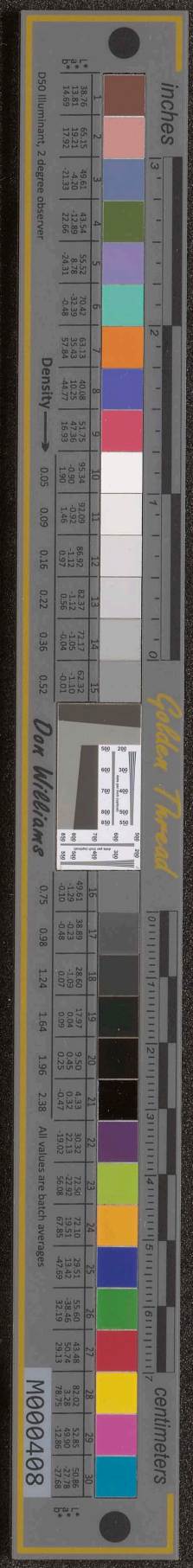

Golden Thread
inches
centimeters
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

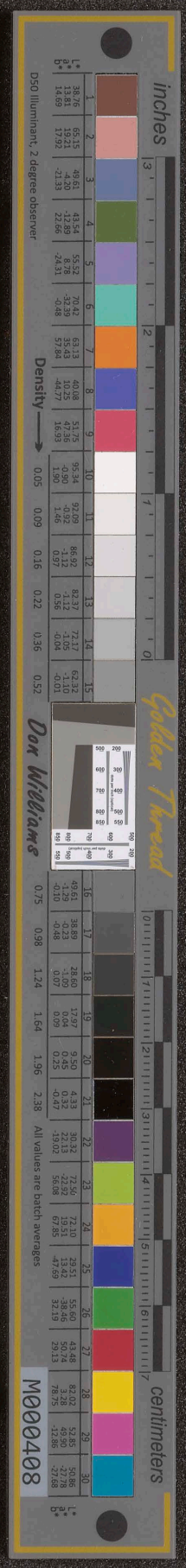

Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

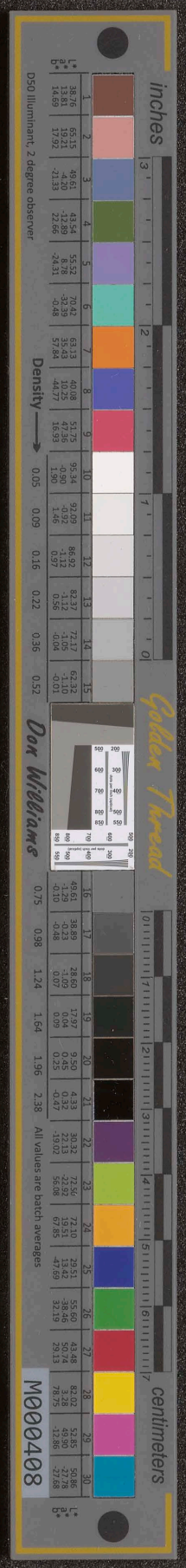


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	48.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	72.17	62.32
a*	13.81	19.21	-4.20	-12.89	8.76	-32.39	35.43	10.25	47.36	-0.90	-0.92	-1.12	-1.12	-1.05	-1.10
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.97	0.56	-0.04	-0.01
Density	0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38			

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.90	72.10	29.51	55.60	43.48	82.02	52.26	50.86
a*	-1.29	-0.23	-1.09	0.04	0.45	0.32	22.13	-22.92	19.51	13.42	-38.46	50.74	3.28	49.90	-37.78
b*	-0.10	-0.48	0.07	0.09	0.25	-0.47	-19.02	56.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-37.68

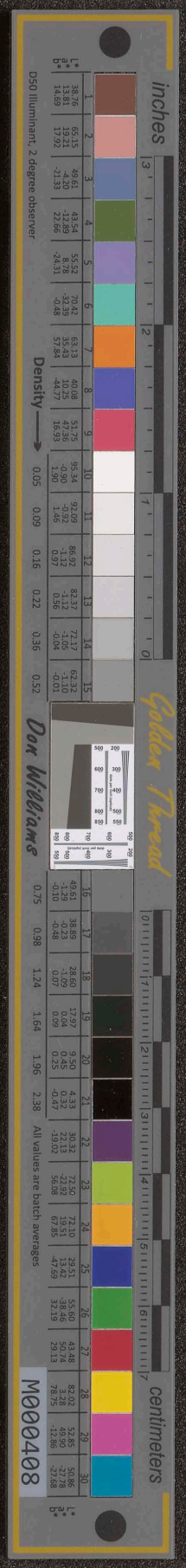

Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408

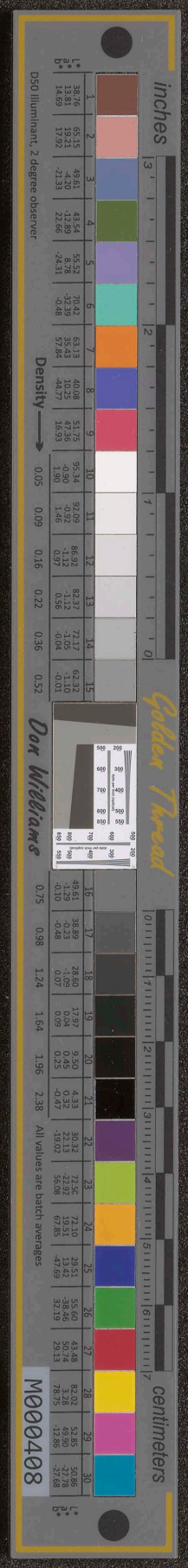

Golden Thread
Don Williams
inches
centimeters
M000408
D50 illuminant, 2 degree observer
Density
All values are batch averages



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	72.17	62.32
a*	13.81	19.21	-4.20	-12.89	8.76	-32.39	35.43	10.25	47.36	-0.90	-0.92	-1.12	-1.12	-1.05	-1.10
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.97	0.56	-0.04	-0.01
Density	0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38			

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.56	72.10	29.51	55.60	43.48	82.02	52.85	50.86
a*	-1.29	-0.23	-1.09	0.04	0.45	0.32	22.13	-22.92	19.51	13.42	-38.46	50.74	-3.28	49.90	-27.78
b*	-0.10	-0.48	0.07	0.09	0.25	-0.47	-19.02	56.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-27.68


Golden Thread
Don Williams
inches
centimeters
Density
D50 illuminant, 2 degrees observer
All values are batch averages
M000408

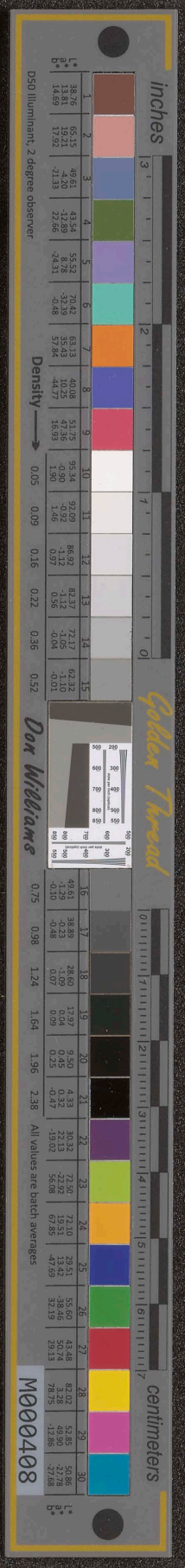


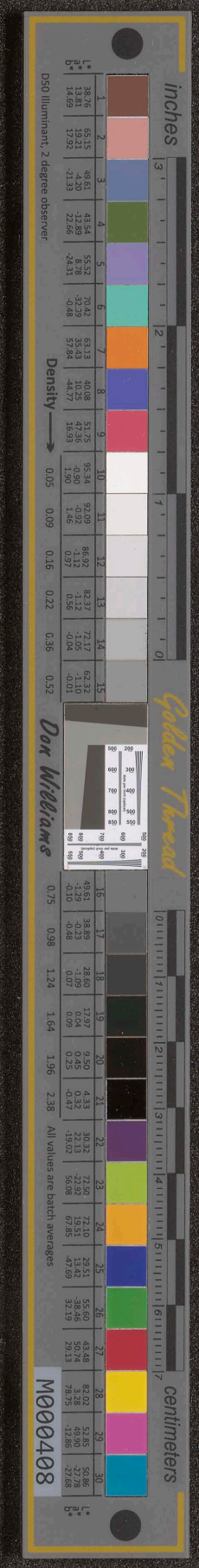
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	72.17	62.32
a*	13.81	19.21	-4.30	-12.89	8.78	-32.39	35.43	10.25	47.36	-0.90	-0.92	-1.12	-1.12	-1.05	-1.10
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.97	0.56	-0.04	-0.01
Density		0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38		

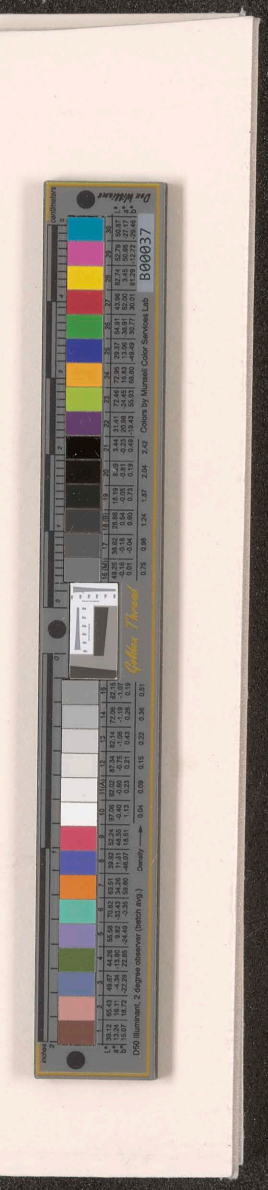
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	80.32	72.56	72.10	29.51	55.60	43.48	82.02	53.85	50.86
a*	-1.25	-0.23	-1.05	0.04	0.45	0.32	32.13	22.02	19.51	13.42	-38.46	50.74	3.28	49.90	-27.78
b*	-0.10	-0.48	0.07	0.09	0.25	-0.47	-19.02	56.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-27.68

D50 Illuminant, 2 degree observer

All values are batch averages


Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
centimeters
Golden Thread
Dox Williams
M000408
Density
D50 Illuminant, 2 degree observer
All values are batch averages


Gretag Macbeth
Colors by Munsell Color Services Lab
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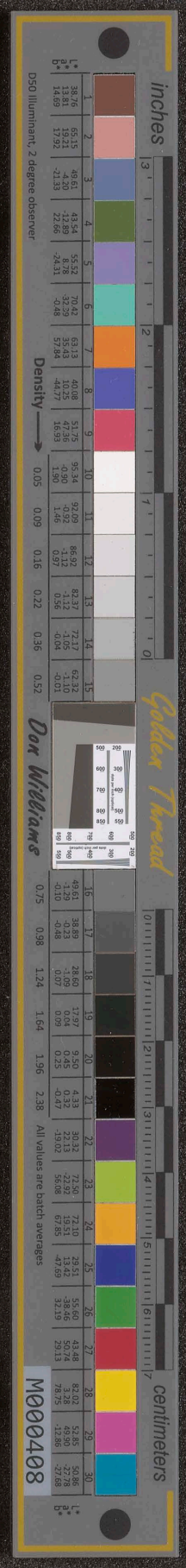
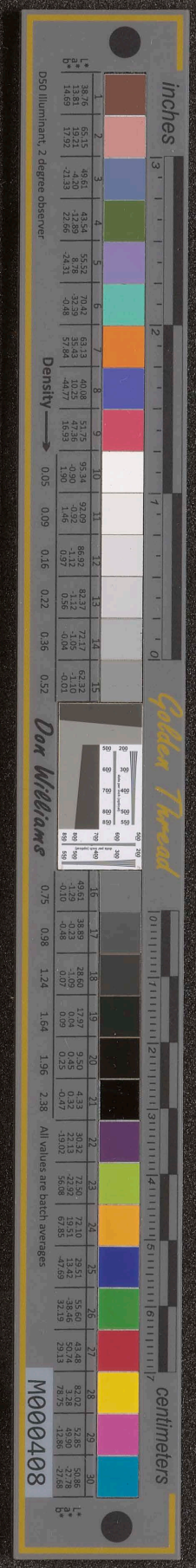
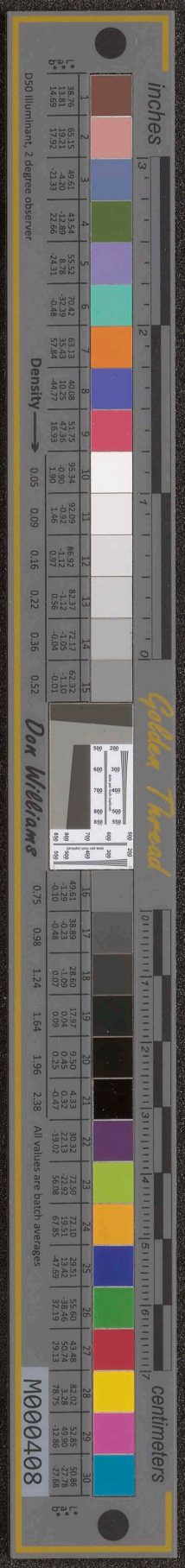
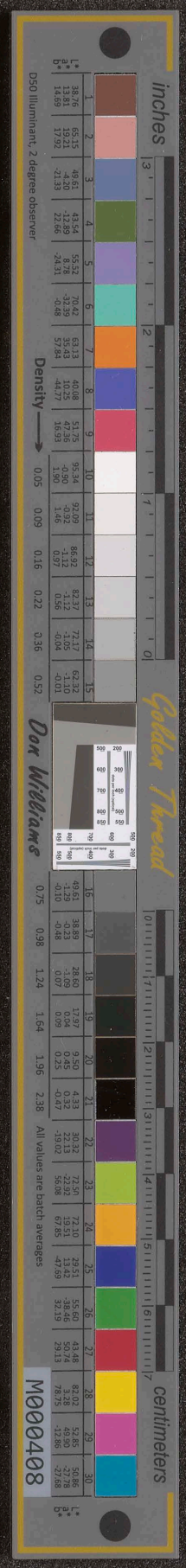

inches
centimeters
Golden Thread
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
centimeters
Golden Thread
Don Williams
M000408
Density
D50 Illuminant, 2 degree observer
All values are batch averages



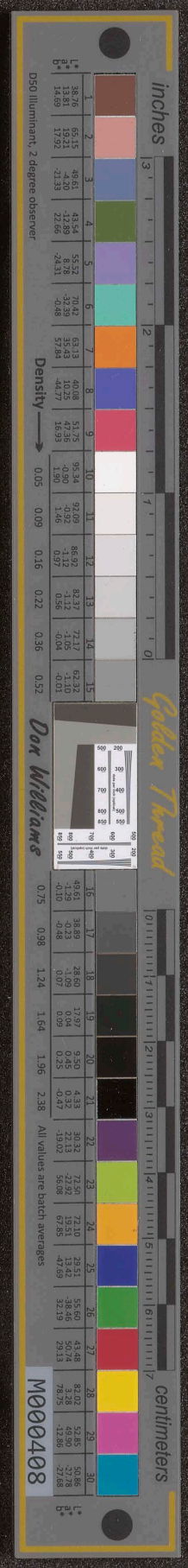
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	72.17	62.32
a*	13.81	19.31	-4.20	-12.89	8.78	-32.29	35.43	10.25	47.36	-0.90	-0.92	-1.12	-1.12	-1.05	-1.10
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.97	0.56	-0.04	-0.01
Density	0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38			

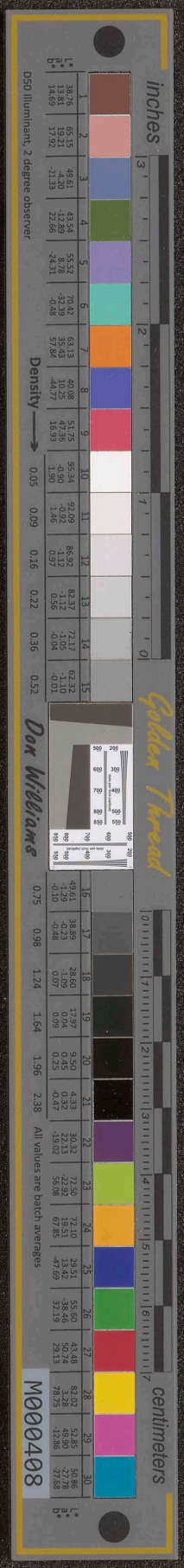
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.90	72.10	29.51	55.60	43.48	82.02	52.85	50.86
a*	-1.29	-0.23	-1.09	0.04	0.45	0.32	22.13	22.92	19.51	13.42	-38.46	50.74	-3.28	49.90	-27.78
b*	-0.10	-0.48	0.07	0.09	0.25	-0.47	-19.02	56.08	67.85	47.69	32.19	29.13	78.75	12.86	-27.58

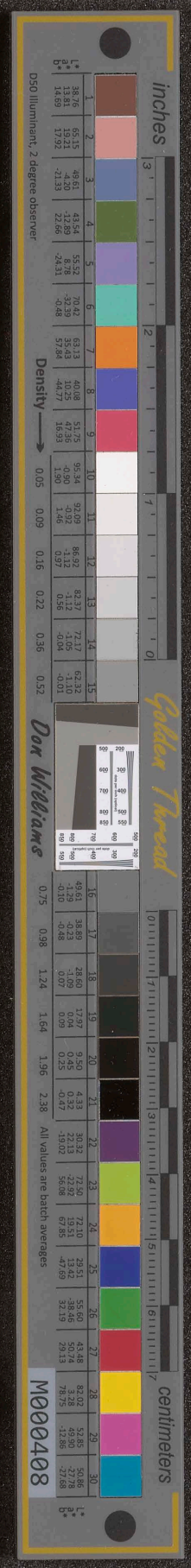


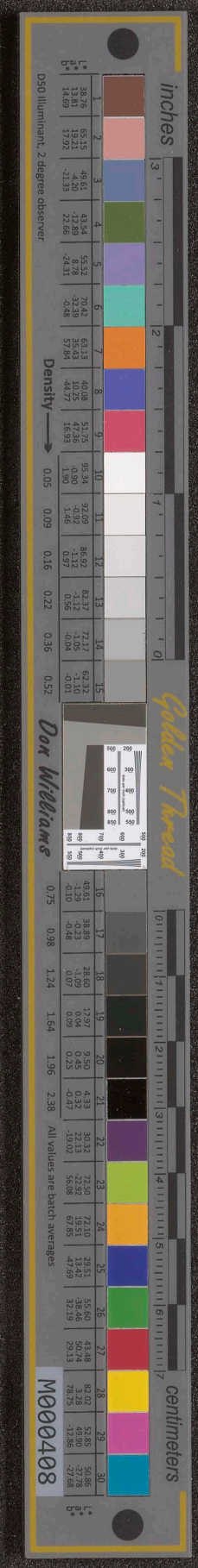
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L*	38.76	65.15	49.61	43.54	55.52	70.42	63.13	40.08	51.75	95.34	92.09	86.92	82.37	72.17	62.32
a*	13.81	19.11	-4.20	-12.89	8.78	-32.39	35.43	10.25	47.36	-0.90	-0.32	-1.12	-1.12	-1.05	-1.10
b*	14.69	17.92	-21.33	22.66	-24.31	-0.48	57.84	-44.77	16.93	1.90	1.46	0.97	0.56	-0.04	-0.01
Density	0.05	0.09	0.16	0.22	0.36	0.52	0.75	0.98	1.24	1.64	1.96	2.38			

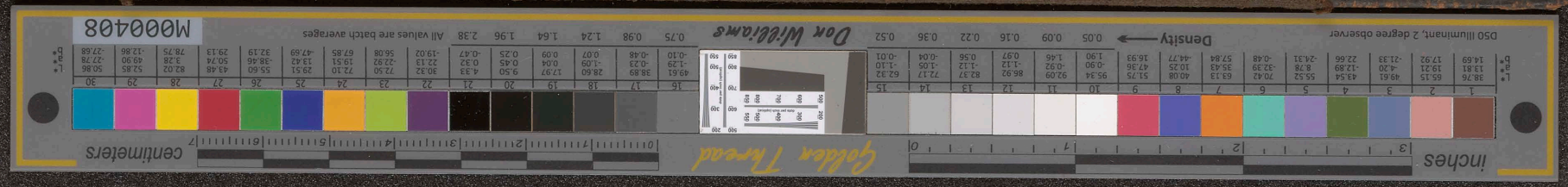
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
L*	49.61	38.89	28.60	17.97	9.50	4.33	30.32	72.50	72.10	29.51	55.60	43.48	82.02	52.85	50.86
a*	-1.29	-0.23	-1.09	0.04	0.45	0.32	22.13	-22.92	19.51	13.42	-38.46	50.74	3.28	49.00	-27.78
b*	-0.10	-0.48	0.07	0.09	0.25	-0.47	-19.02	56.08	67.85	-47.69	32.19	29.13	78.75	-12.86	-27.68

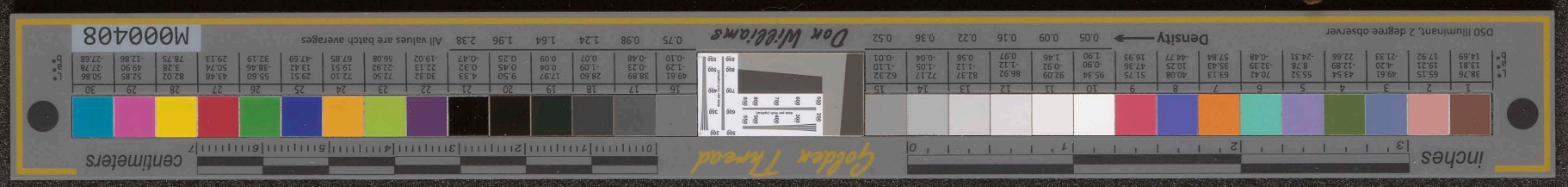

inches
centimeters
Golden Thread
Don Williams
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408

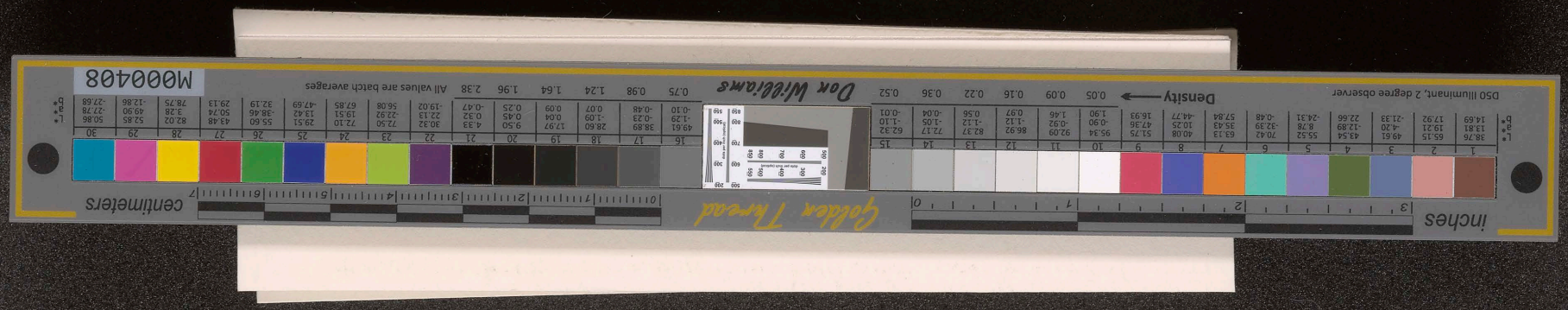

Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


Golden Thread
Don Williams
inches
centimeters
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
centimeters
Golden Thread
Don Williams
Density
D50 illuminant, 2 degree observer
All values are batch averages
M000408


inches
Golden Thread
centimeters
Don Williams
Density
D50 Illuminant, 2 degree observer
All values are batch averages
M000408


inches
Golden Thread
centimeters
Don Williams
Density
D50 Illuminant, 2 degree observer
M000408


inches
Golden Thread
centimeters
Density
Don Williams
D50 Illuminant, 2 degree observer
All values are batch averages
M000408