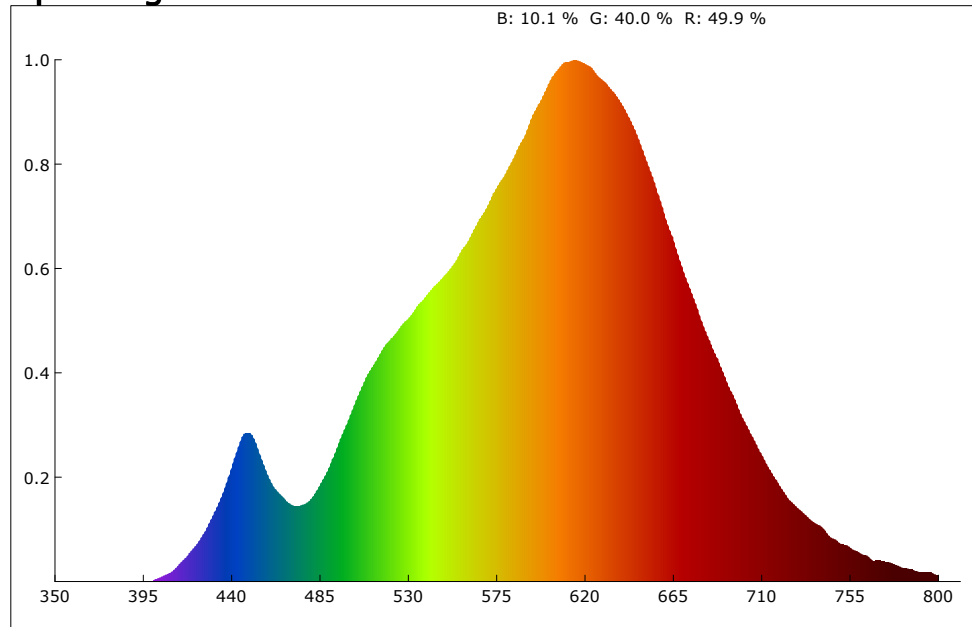
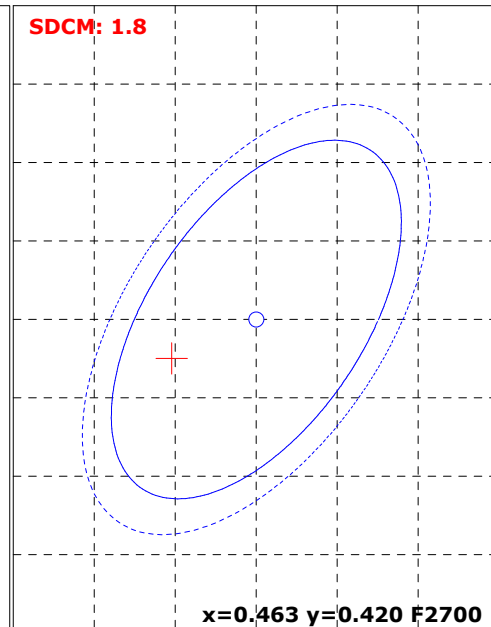


Spectrogram



SDCM



Color Parameter:

x: 0.4598 y: 0.4175 u: 0.2594 v: 0.3533 u': 0.2594 v': 0.5300
R_ratio: 49.9 % G_ratio: 40.0 % B_ratio: 10.1 % RedRatio: 24.6 % GreenRatio: 74.2 % BlueRatio: 1.2 %

Ra: 89.5 AvgR: 85.8
R1: 88.7 R2: 92.8 R3: 96.7 R4: 90.7 R5: 88.6 R6: 92.3 R7: 90.8 R8: 75.7
R9: 44.5 R10: 83.4 R11: 91.6 R12: 81.1 R13: 89.4 R14: 97.4 R15: 83.3

CCT: 2753 K Flux: 539.690 lm PeakWave: 615.6 nm SDCM: 1.8
S/P: 1.2 CentralWave: 604.3 nm DominantWave: 583.1 nm CentroidWave: 598.6 nm
HalfWidth: 148.7 nm duv: 0.00254 purity: 63.4 % CQS: 88.4
LER(TM-30): 292.8 Ep: 1843.1 mw Rg: 98.5 Rf: 89.8
Red Ep: 861.7 mw Near red Ep: 112.8 mw Near infrared Ep: 5.1 mw

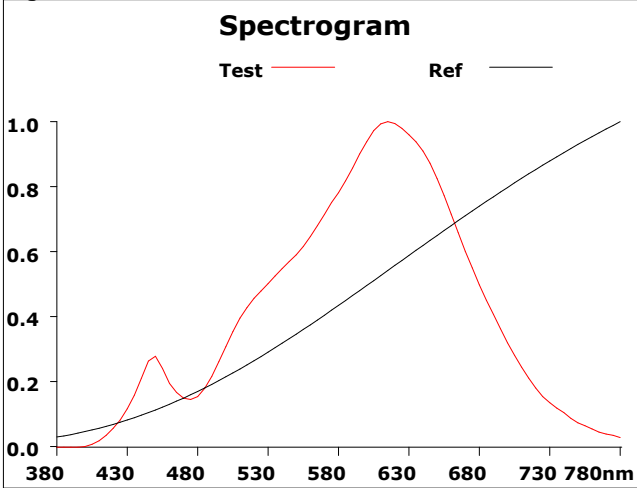
Electrical parameters:

Effic: 16.5 lm/W Energy: 18.0 Effi: G
U: 220.7 V I: 0.260 A P: 32.610 W Pf: 0.567

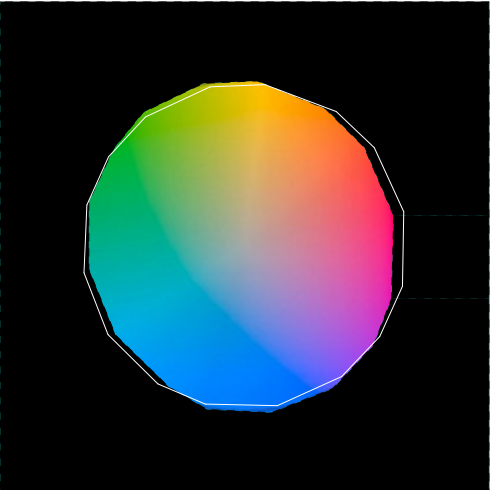
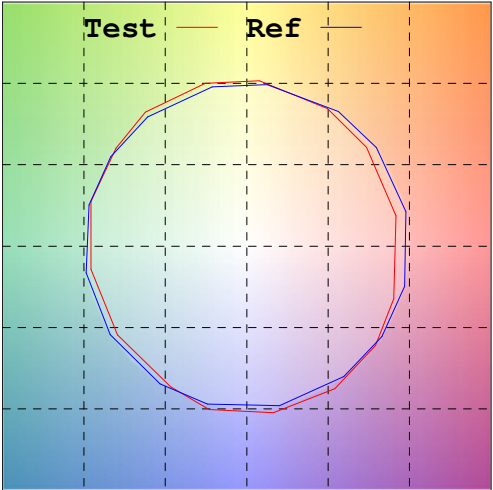
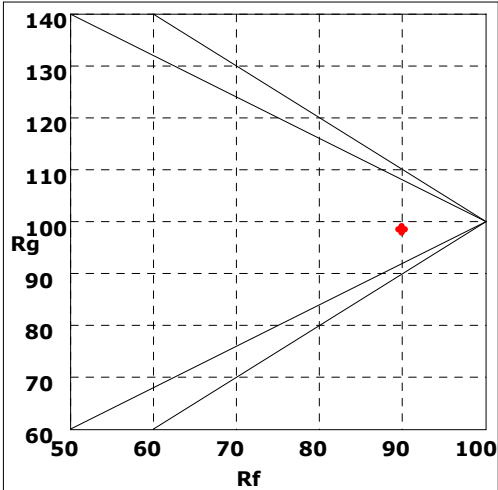
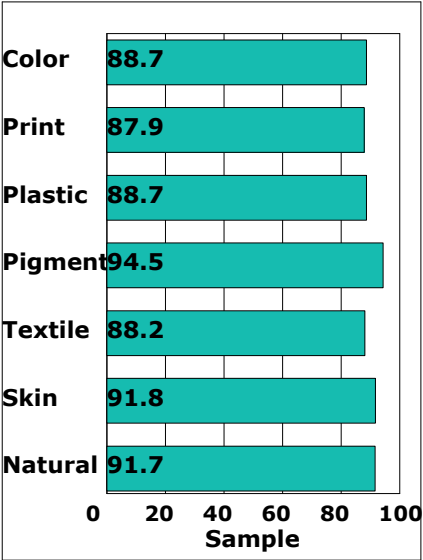
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23

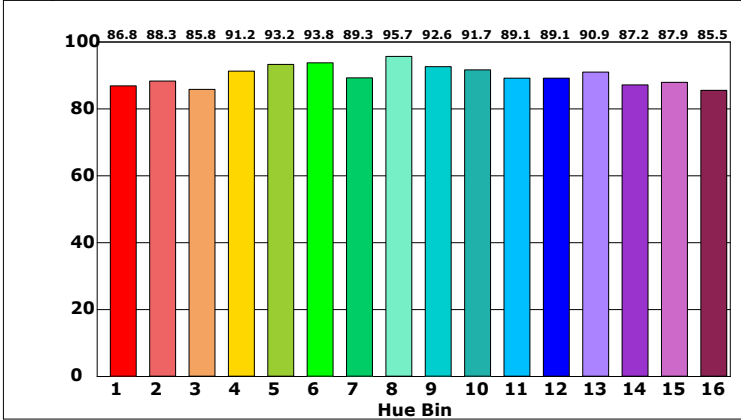
Rf: 89.8 CCT: 2753K u': 0.2594
Rg: 98.5 LER: 292.8 Duv: 0.00254 v': 0.5300



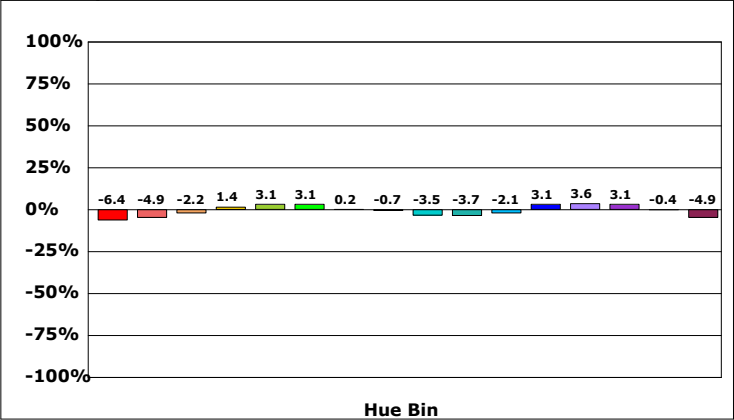
500			
Hue Bin	Rf	Chroma	Hue
1	86.8	-6.4%	-1.4%
2	88.3	-4.9%	3.4%
3	85.8	-2.2%	6.4%
4	91.2	1.4%	5.0%
5	93.2	3.1%	3.9%
6	93.8	3.1%	-0.6%
7	89.3	0.2%	-6.1%
8	95.7	-0.7%	-2.3%
9	92.6	-3.5%	-1.6%
10	91.7	-3.7%	2.5%
11	89.1	-2.1%	6.3%
12	89.1	3.1%	1.5%
13	90.9	3.6%	-4.5%
14	87.2	3.1%	-8.7%
15	87.9	-0.4%	-6.7%
16	85.5	-4.9%	-8.9%



Rf by Bue

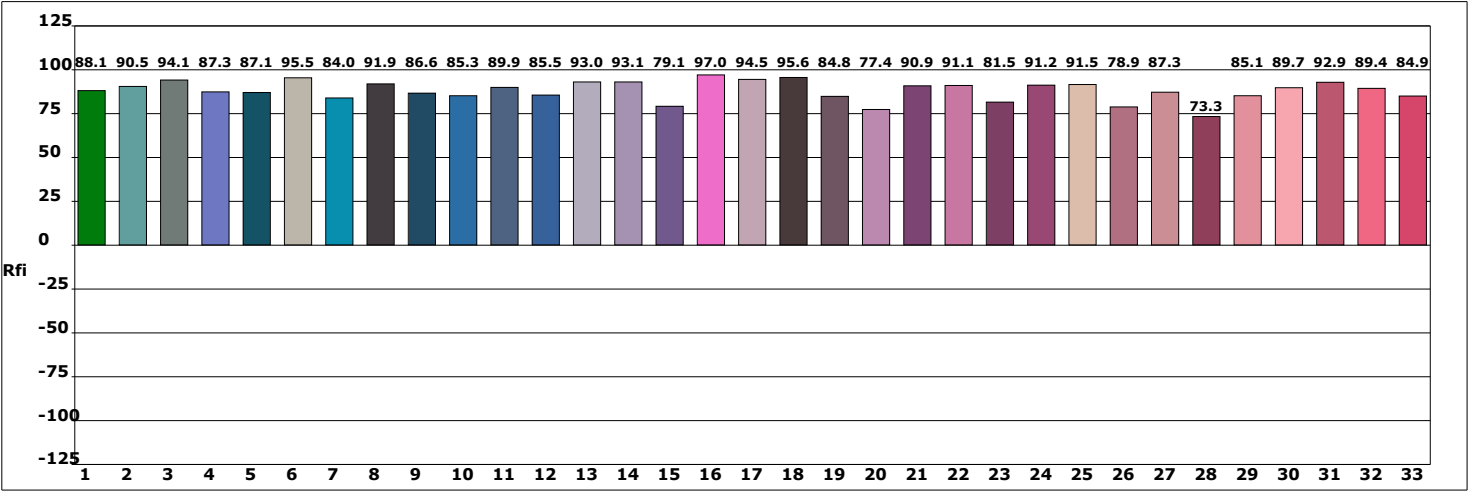
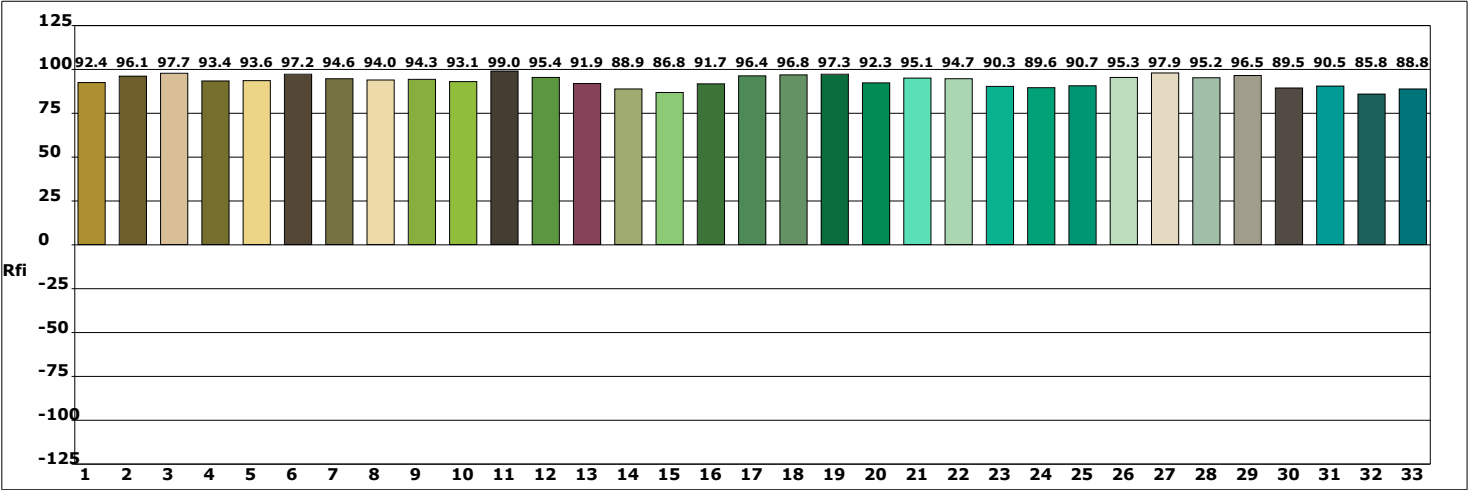
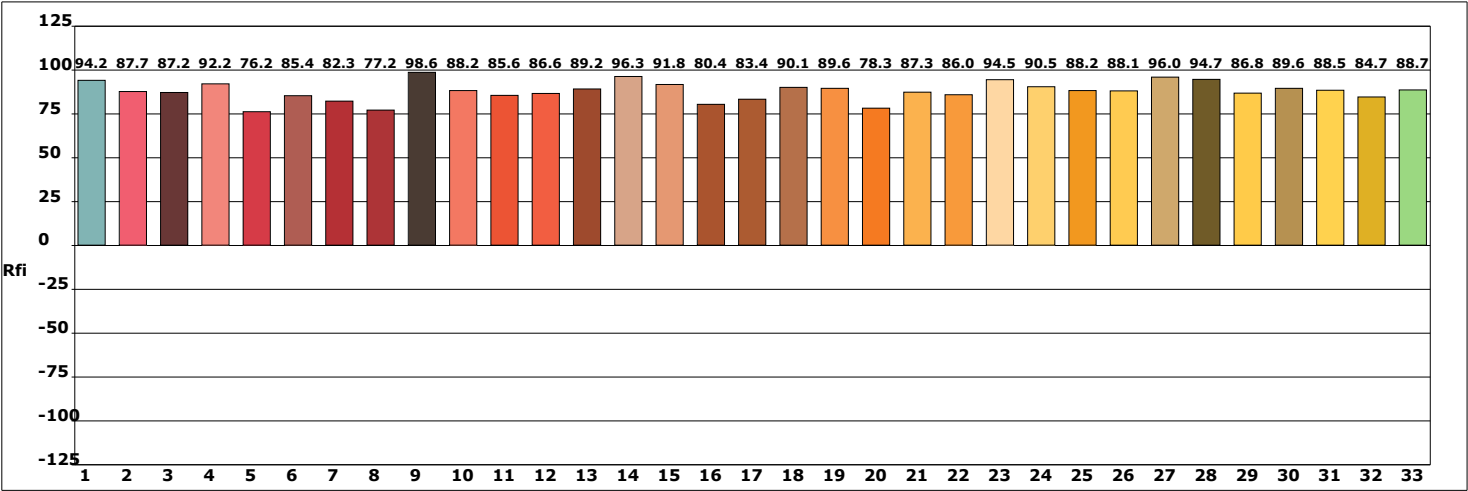


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

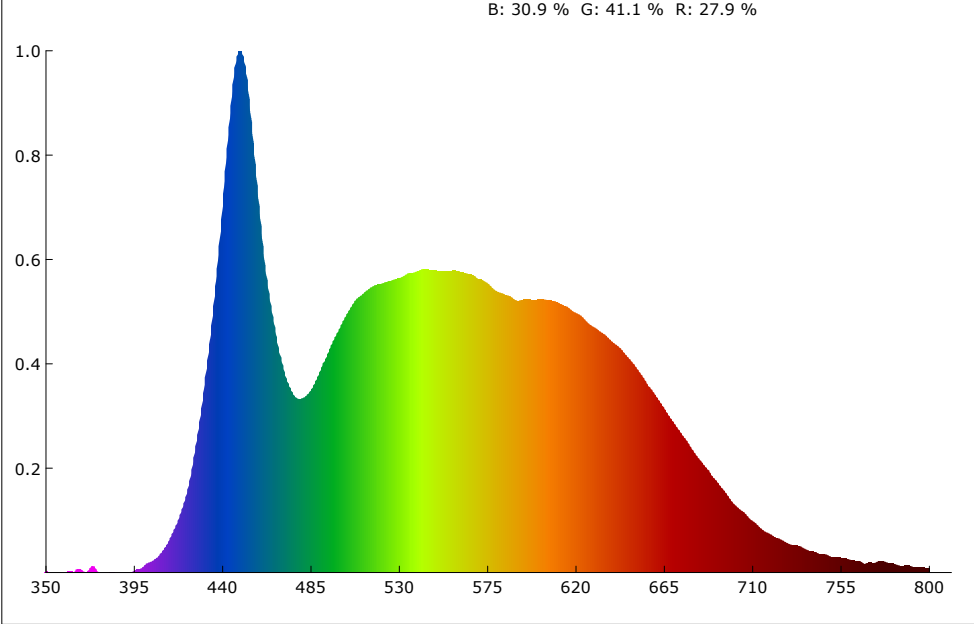
Manufacturer:
Test unit:
Date of observation: 10/12/23



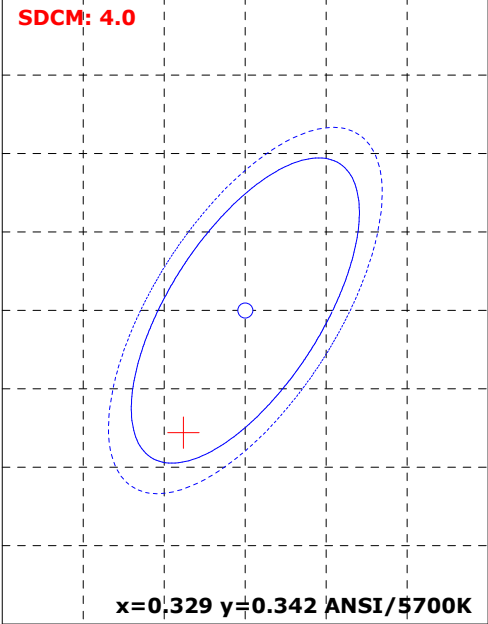
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23

Spectrogram



SDCM



Color Parameter:

x: 0.3249 y: 0.3339 u: 0.2044 v: 0.3151 u': 0.2044 v': 0.4727
R_ratio: 27.9 % G_ratio: 41.1 % B_ratio: 30.9 % RedRatio: 15.3 % GreenRatio: 80.9 % BlueRatio: 3.8 %

Ra: 92.1 AvgR: 89.2
R1: 93.3 R2: 92.9 R3: 90.8 R4: 92.7 R5: 93.2 R6: 89.6 R7: 94.1 R8: 90.2
R9: 69.6 R10: 82.3 R11: 92.9 R12: 76.2 R13: 93.1 R14: 94.7 R15: 93.1

CCT: 5861 K Flux: 673.185 lm PeakWave: 449.6 nm SDCM: 4.0
S/P: 2.2 CentralWave: 450.6 nm DominantWave: 492.6 nm CentroidWave: 552.2 nm
HalfWidth: 29.8 nm duv: -0.00025 purity: 2.8 % CQS: 88.0
LER(TM-30): 282.4 Ep: 2384.1 mw Rg: 101.0 Rf: 89.2
Red Ep: 644.5 mw Near red Ep: 71.5 mw Near infrared Ep: 4.7 mw

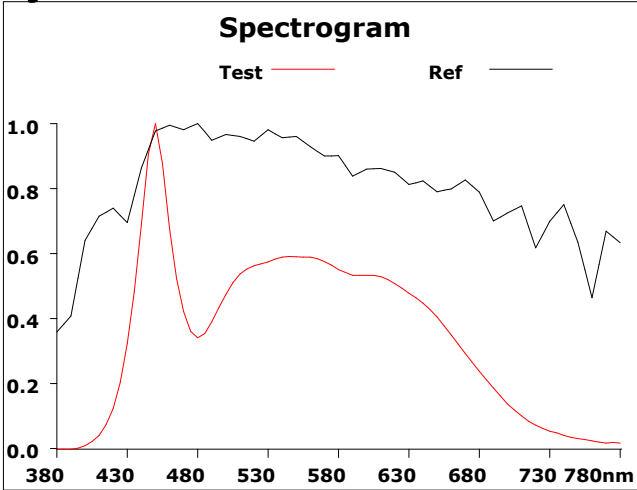
Electrical parameters:

Effic: 20.8 Lm/W Energy: 22.6 Effi: G
U: 220.8 V I: 0.258 A P: 32.430 W Pf: 0.568

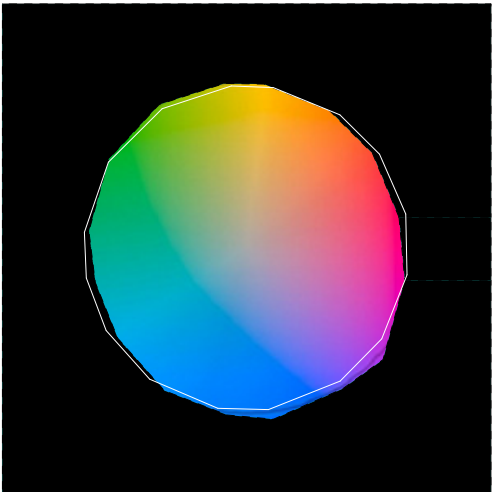
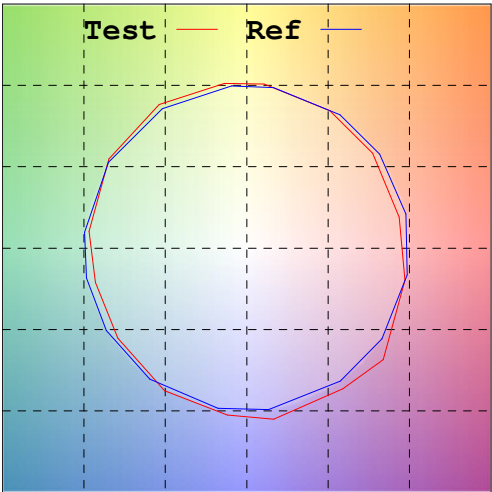
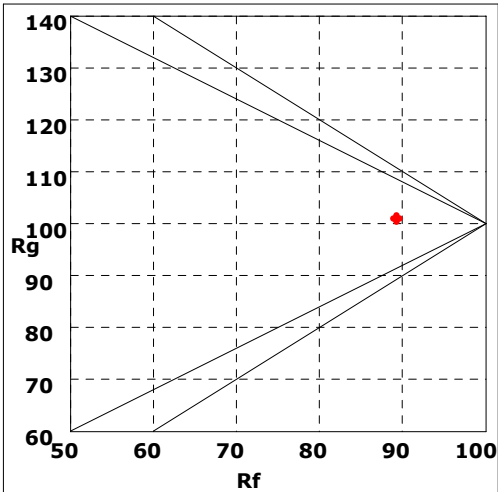
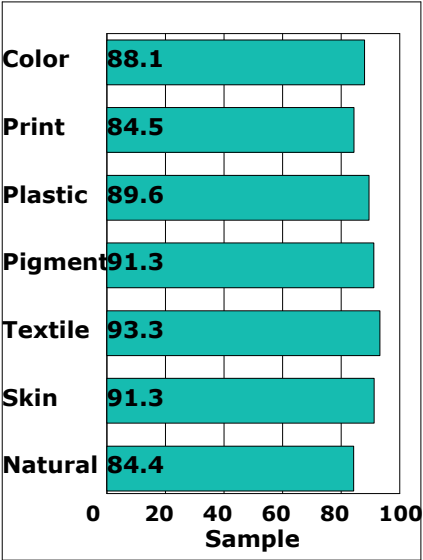
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23

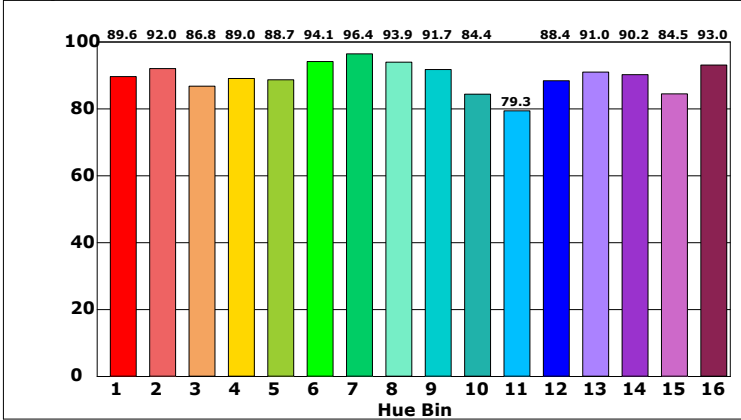
Rf: 89.2 CCT: 5861K u': 0.2044
Rg: 101.0 LER: 282.4 Duv: -0.00025 v': 0.4727



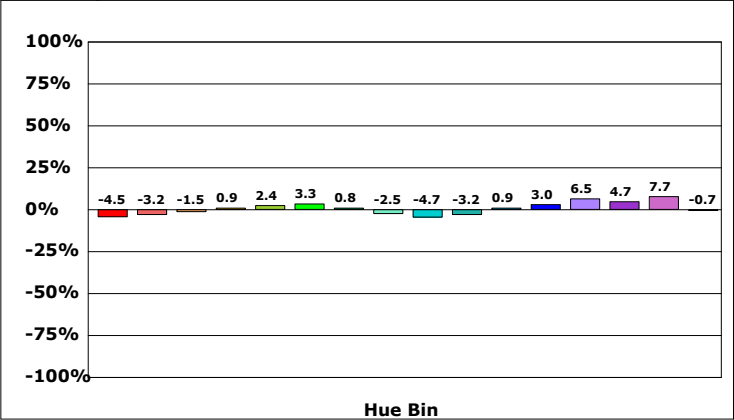
500			
Hue Bin	Rf	Chroma	Hue
1	89.6	-4.5%	-1.1%
2	92.0	-3.2%	2.9%
3	86.8	-1.5%	6.5%
4	89.0	0.9%	5.9%
5	88.7	2.4%	4.0%
6	94.1	3.3%	0.2%
7	96.4	0.8%	-1.7%
8	93.9	-2.5%	-1.0%
9	91.7	-4.7%	3.8%
10	84.4	-3.2%	7.9%
11	79.3	0.9%	11.5%
12	88.4	3.0%	6.3%
13	91.0	6.5%	1.9%
14	90.2	4.7%	-1.4%
15	84.5	7.7%	-10.3%
16	93.0	-0.7%	-3.6%



Rf by Bue

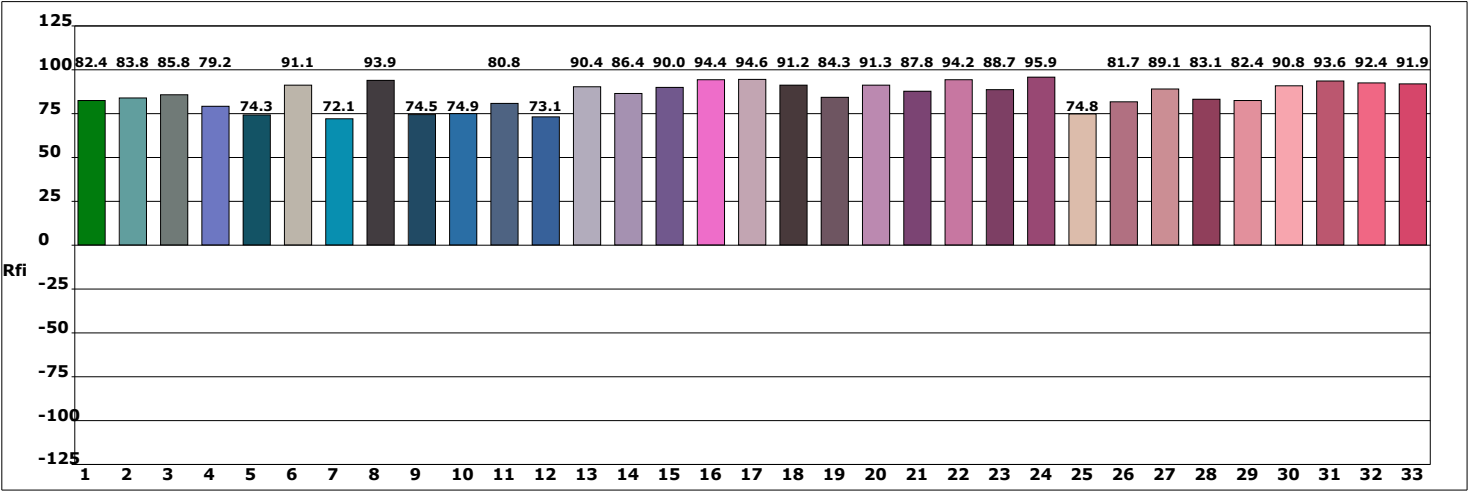
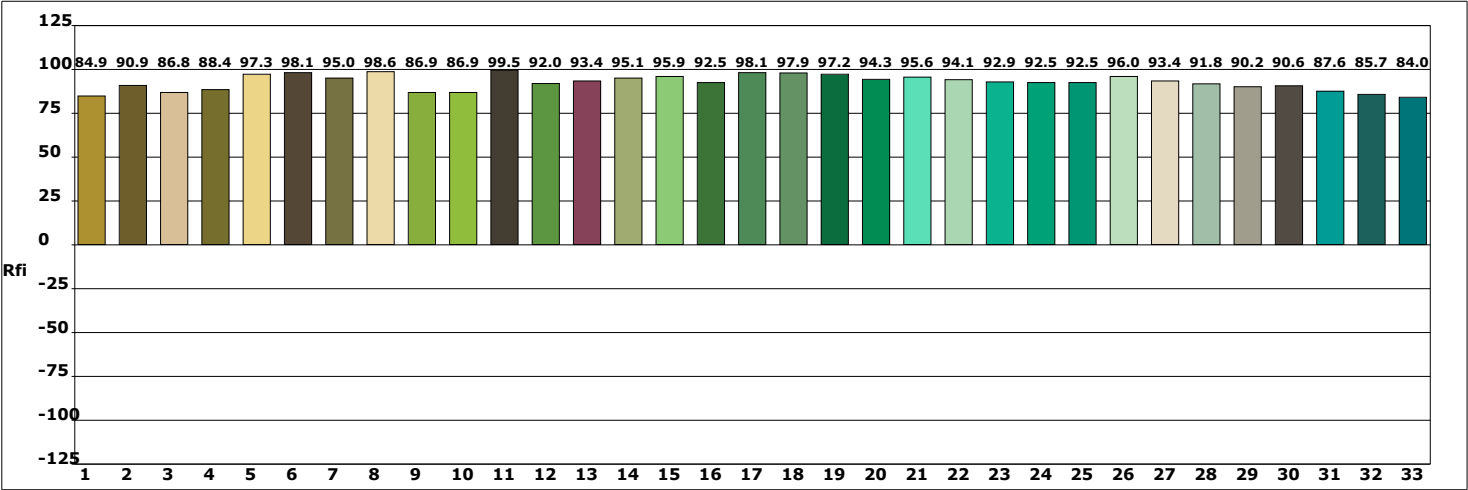
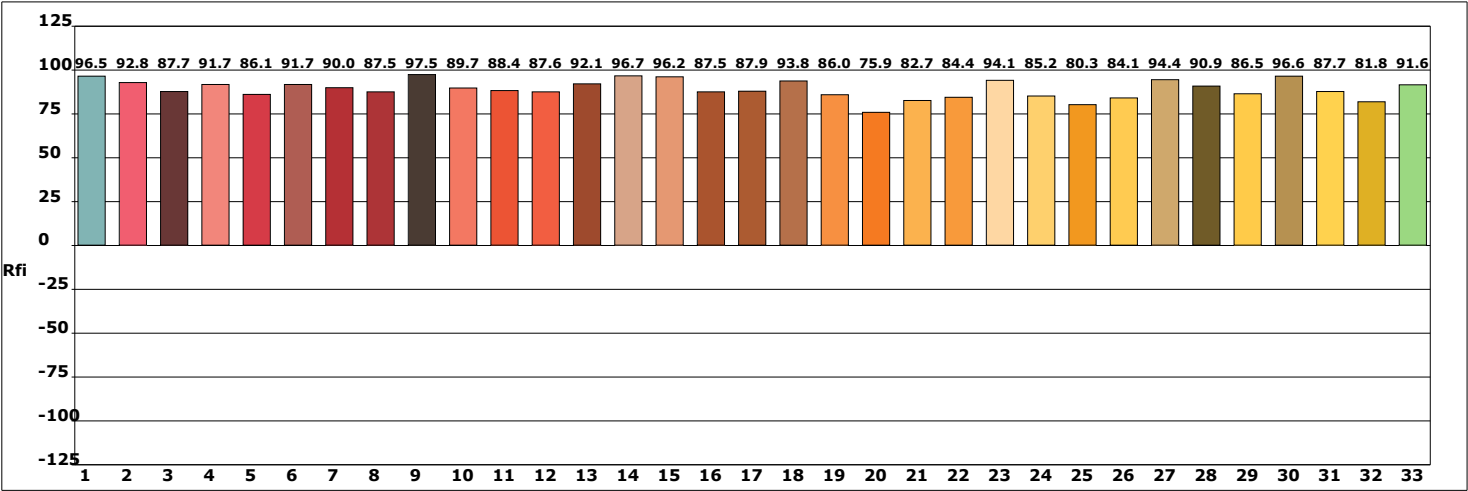


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

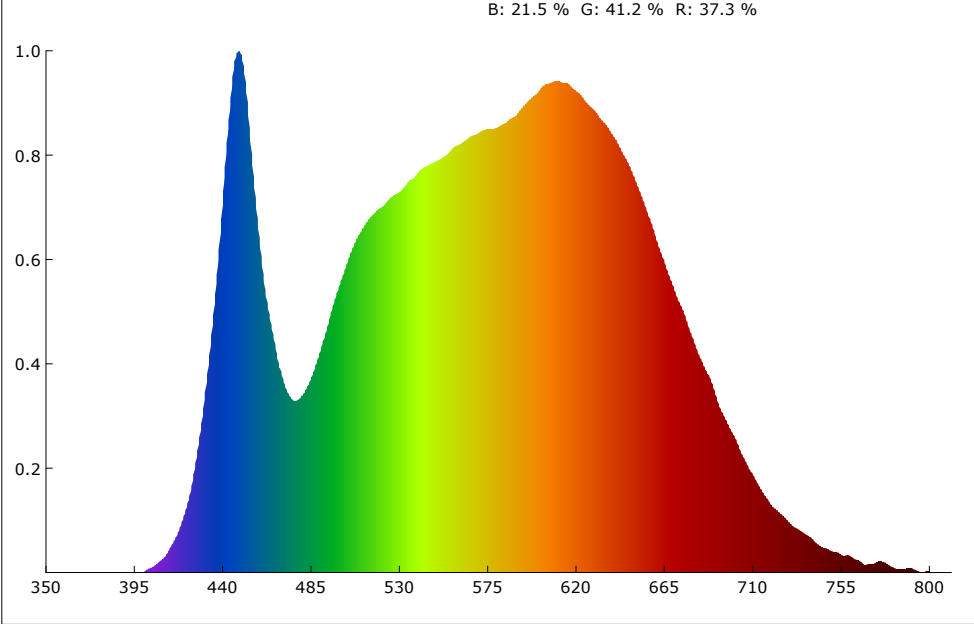
Manufacturer:
Test unit:
Date of observation: 10/12/23



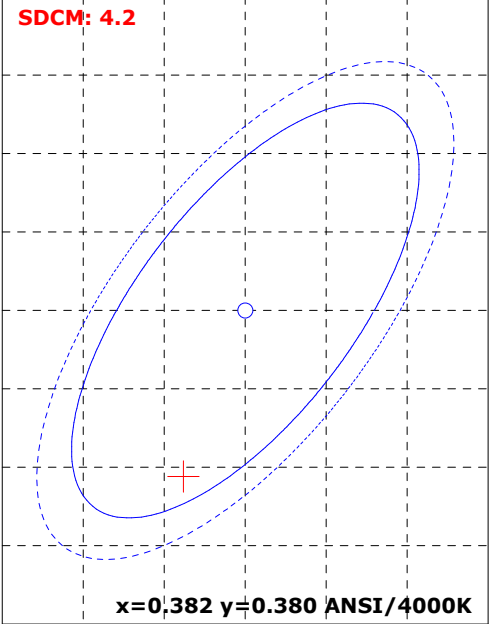
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23

Spectrogram



SDCM



Color Parameter:

x: 0.3780	y: 0.3691	u: 0.2266	v: 0.3319	u': 0.2266	v': 0.4979
R_ratio: 37.3 %	G_ratio: 41.2 %	B_ratio: 21.5 %	RedRatio: 19.3 %	GreenRatio: 78.1 %	BlueRatio: 2.6 %
Ra: 92.6	AvgR: 89.9				
R1: 93.8	R2: 94.5	R3: 93.6	R4: 93.3	R5: 93.5	R6: 91.8
R7: 93.5	R8: 87.2	R9: 66.9	R10: 86.1	R11: 93.5	R12: 78.8
R13: 93.9	R14: 96.0	R15: 92.1			
CCT: 4009 K	Flux: 558.787 lm	PeakWave: 448.6 nm	SDCM: 4.2		
S/P: 1.7	CentralWave: 449.8 nm	DominantWave: 580.8 nm	CentroidWave: 571.2 nm		
HalfWidth: 27.4 nm	duv: -0.00290	purity: 24.2 %	CQS: 85.4		
LER(TM-30): 292.9	Ep: 1908.0 mw	Rg: 101.4	Rf: 89.9		
Red Ep: 685.9 mw	Near red Ep: 67.8 mw	Near infrared Ep: 1.3 mw			

Electrical parameters:

Effic: 20.4 Lm/W	Energy: 22.2	Effi: G	
U: 220.7 V	I: 0.222 A	P: 27.380 W	Pf: 0.559

Product model:

Product number:

Tester:

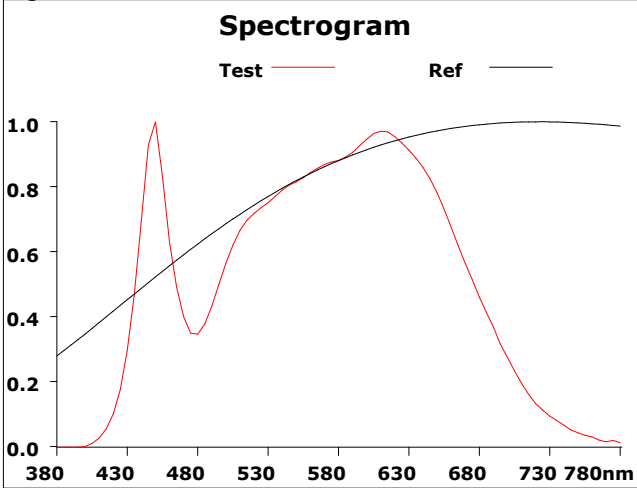
Remarks:

Manufacturer:

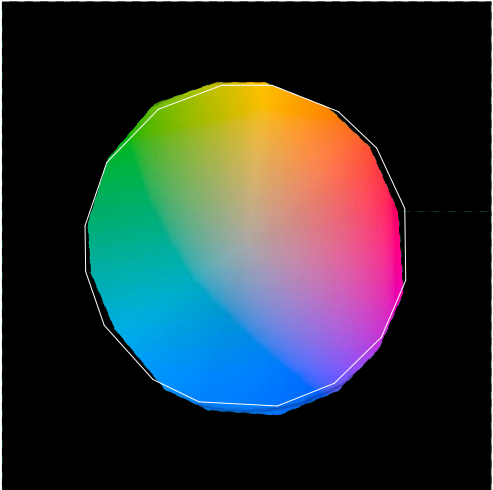
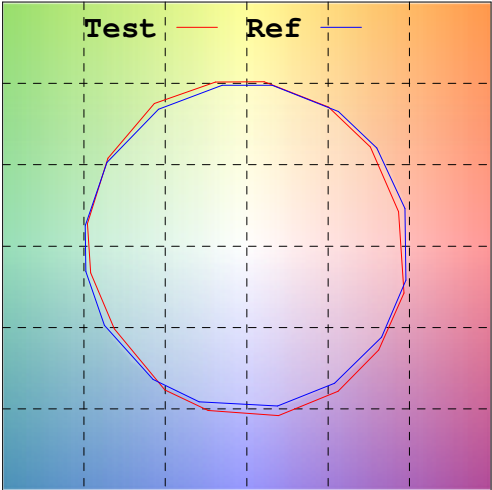
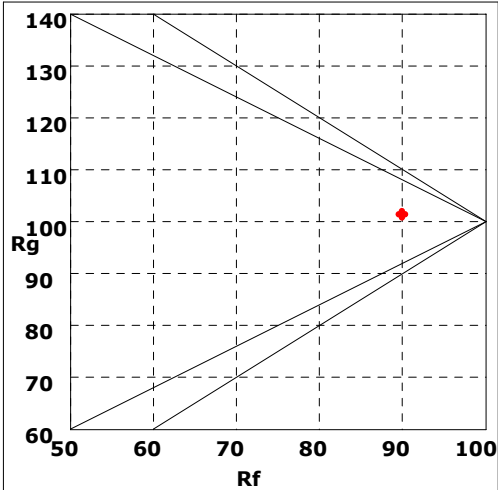
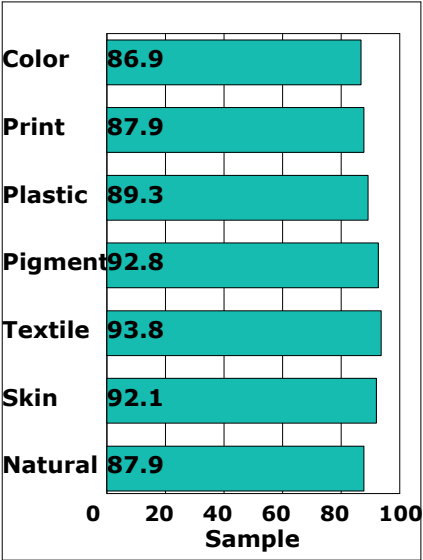
Test unit:

Date of observation: 10/12/23

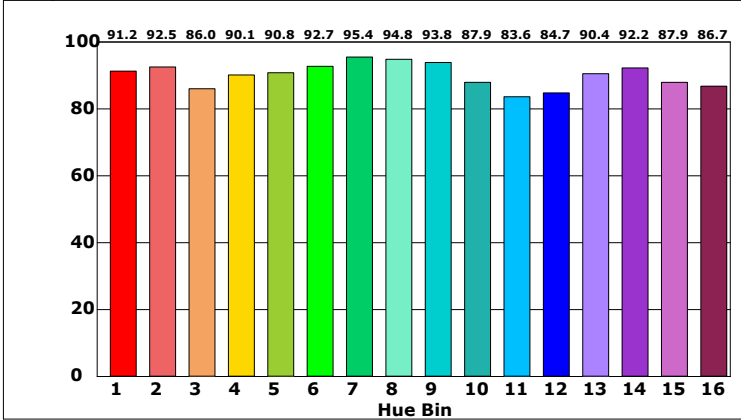
Rf: 89.9 CCT: 4009K u': 0.2266
Rg: 101.4 LER: 292.9 Duv: -0.00290 v': 0.4979



500			
Hue Bin	Rf	Chroma	Hue
1	91.2	-4.3%	-1.2%
2	92.5	-2.9%	2.6%
3	86.0	-1.1%	6.6%
4	90.1	1.1%	5.2%
5	90.8	2.7%	3.7%
6	92.7	4.4%	0.1%
7	95.4	1.0%	-2.4%
8	94.8	-1.1%	-1.6%
9	93.8	-2.7%	1.3%
10	87.9	-3.8%	5.1%
11	83.6	1.4%	9.8%
12	84.7	4.1%	6.5%
13	90.4	5.8%	-0.6%
14	92.2	5.4%	-0.9%
15	87.9	2.9%	-7.7%
16	86.7	0.3%	-7.8%



Rf by Bue

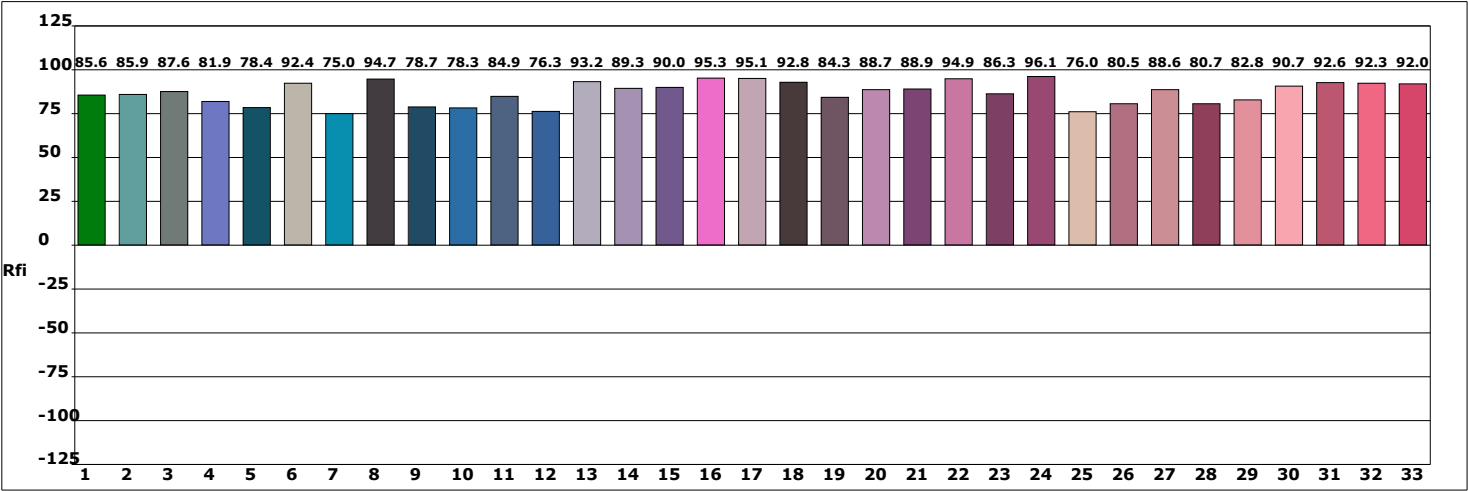
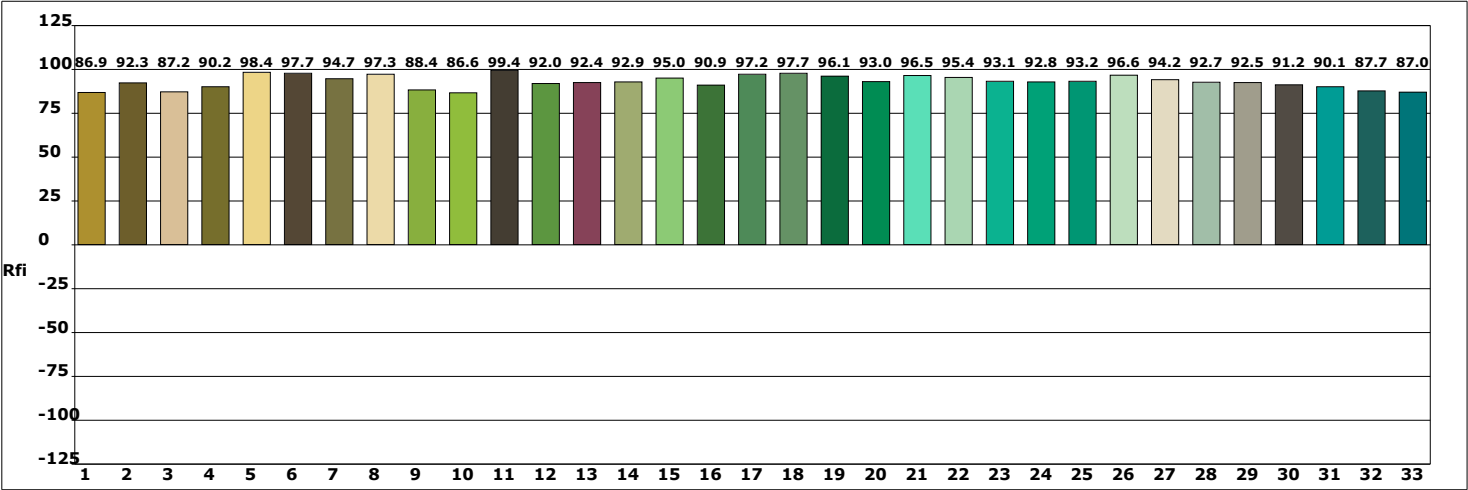
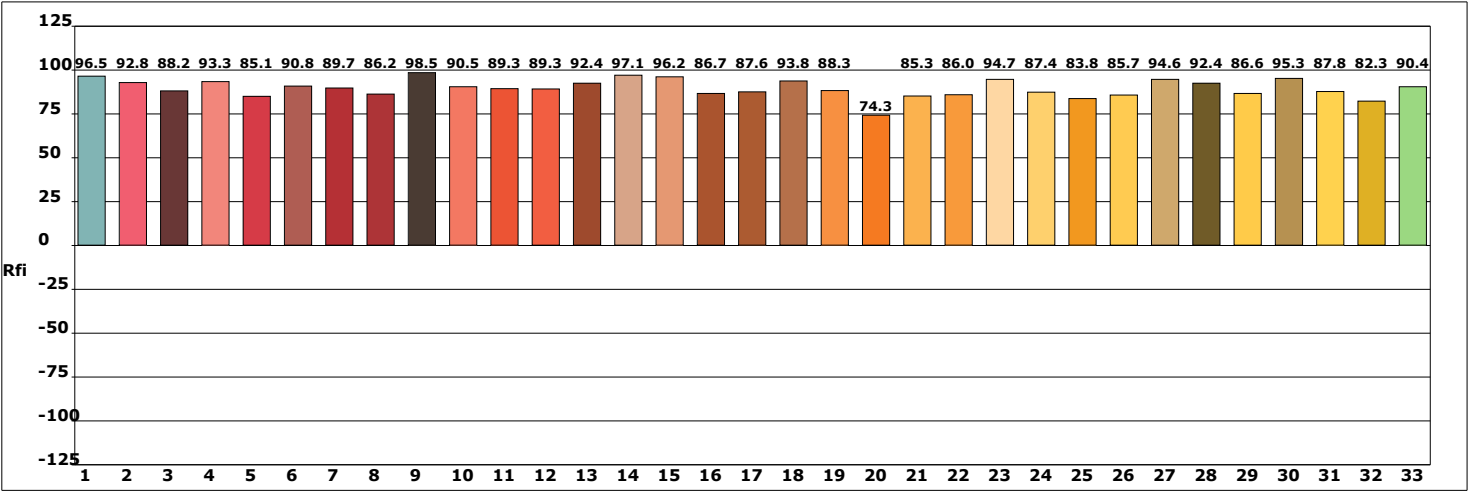


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/12/23