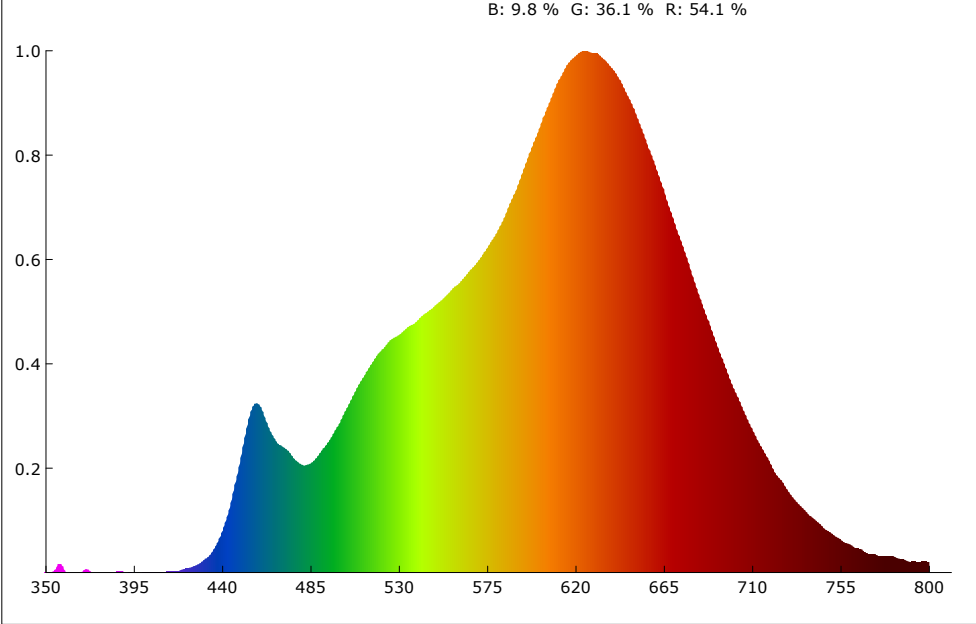
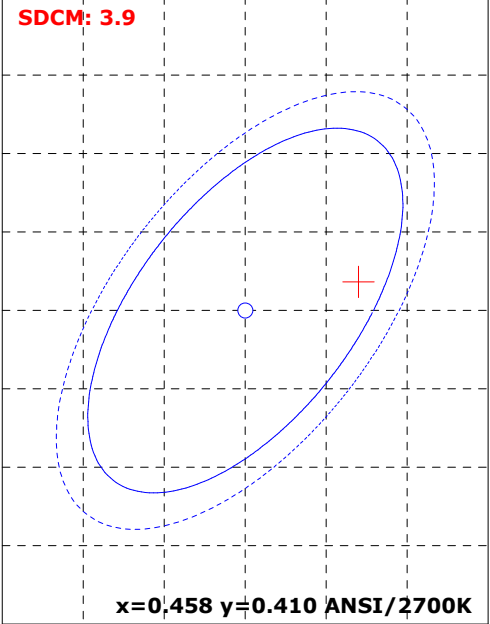


Spectrogram



SDCM



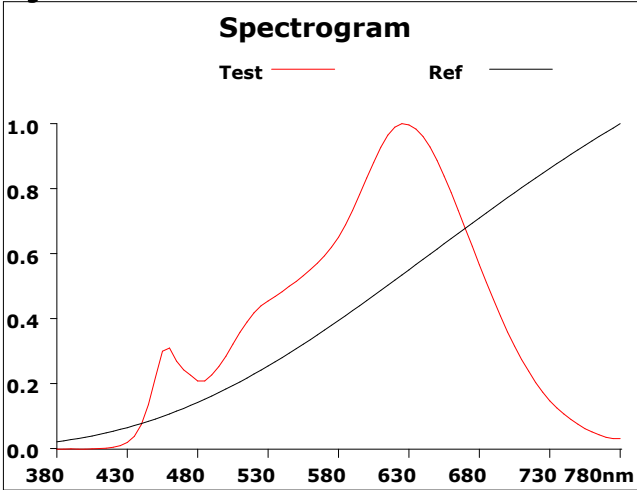
Color Parameter:

x: 0.4648	y: 0.4119	u: 0.2651	v: 0.3524	u': 0.2651	v': 0.5286
R_ratio: 54.1 %	G_ratio: 36.1 %	B_ratio: 9.8 %	RedRatio: 26.9 %	GreenRatio: 71.5 %	BlueRatio: 1.7 %
Ra: 96.4	AvgR: 94.9				
R1: 98.8	R2: 99.3	R3: 99.5	R4: 98.3	R5: 98.3	R6: 95.5
R7: 93.4	R8: 88.4				
R9: 75.9	R10: 99.5	R11: 97.8	R12: 86.6	R13: 99.7	R14: 98.7
R15: 94.5					
CCT: 2642 K	Flux: 3008.248 lm	PeakWave: 625.6 nm	SDCM: 3.9		
S/P: 1.3	CentralWave: 615.8 nm	DominantWave: 584.5 nm	CentroidWave: 604.3 nm		
HalfWidth: 139.0 nm	duv: 0.00010	purity: 63.2 %	CQS: 87.2		
LER(TM-30): 271.6	Ep: 11075.7 mw	Rg: 98.0	Rf: 91.5		
Red Ep: 5557.6 mw	Near red Ep: 755.4 mw	Near infrared Ep: 36.2 mw			

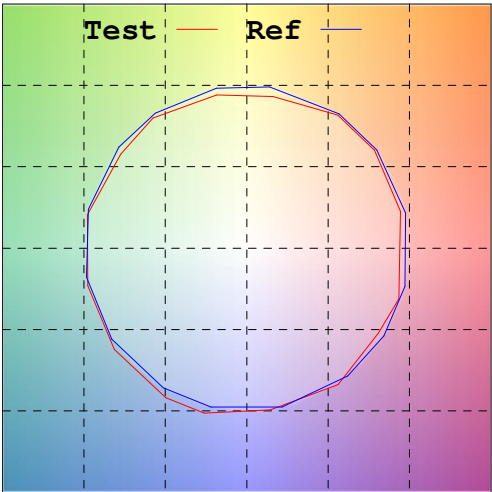
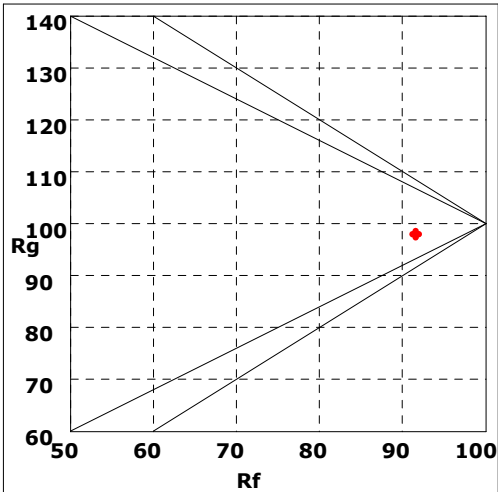
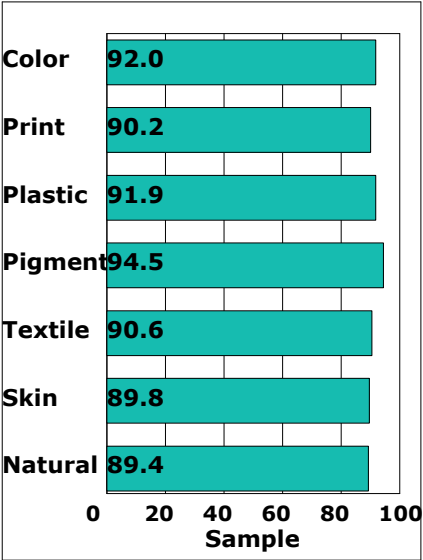
Electrical parameters:

Effic: 32.5 Lm/W	Energy: 35.4	Effi: G	
U: 220.8 V	I: 0.659 A	P: 92.670 W	Pf: 0.636

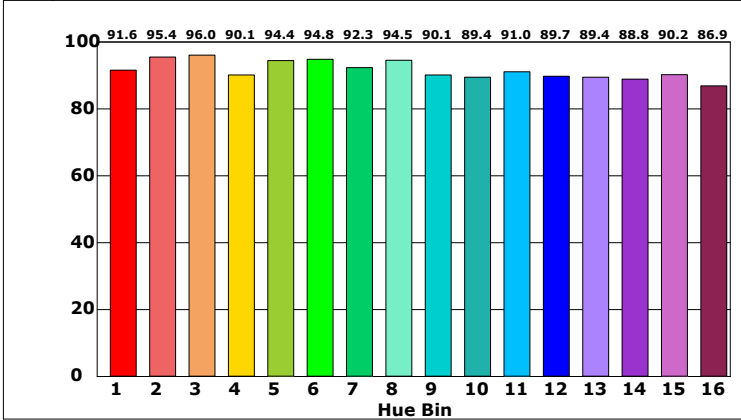
Rf: 91.5 CCT: 2642K u': 0.2651
Rg: 98.0 LER: 271.6 Duv: 0.00010 v': 0.5286



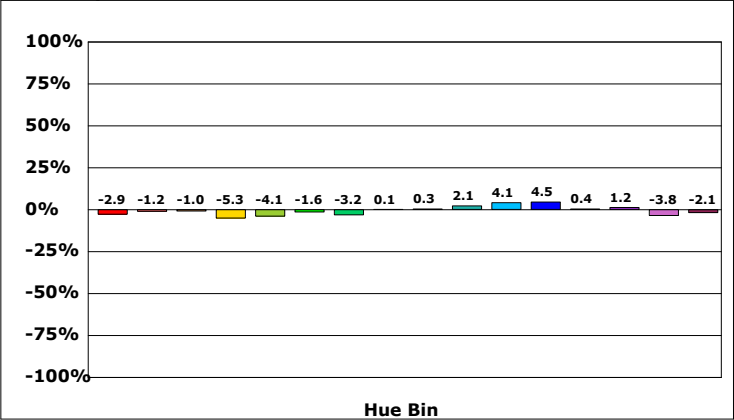
500			
Hue Bin	Rf	Chroma	Hue
1	91.6	-2.9%	1.6%
2	95.4	-1.2%	0.6%
3	96.0	-1.0%	0.1%
4	90.1	-5.3%	-3.3%
5	94.4	-4.1%	0.5%
6	94.8	-1.6%	2.7%
7	92.3	-3.2%	3.0%
8	94.5	0.1%	3.3%
9	90.1	0.3%	5.3%
10	89.4	2.1%	6.1%
11	91.0	4.1%	4.6%
12	89.7	4.5%	-3.4%
13	89.4	0.4%	-7.4%
14	88.8	1.2%	-7.9%
15	90.2	-3.8%	-0.3%
16	86.9	-2.1%	-8.2%



Rf by Bue

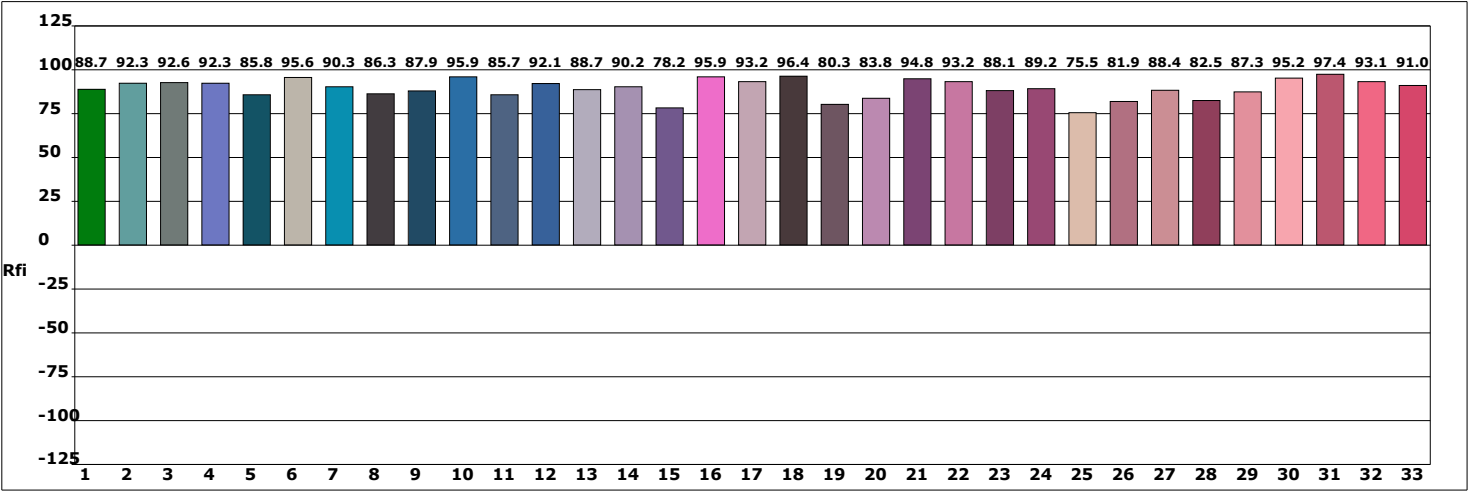
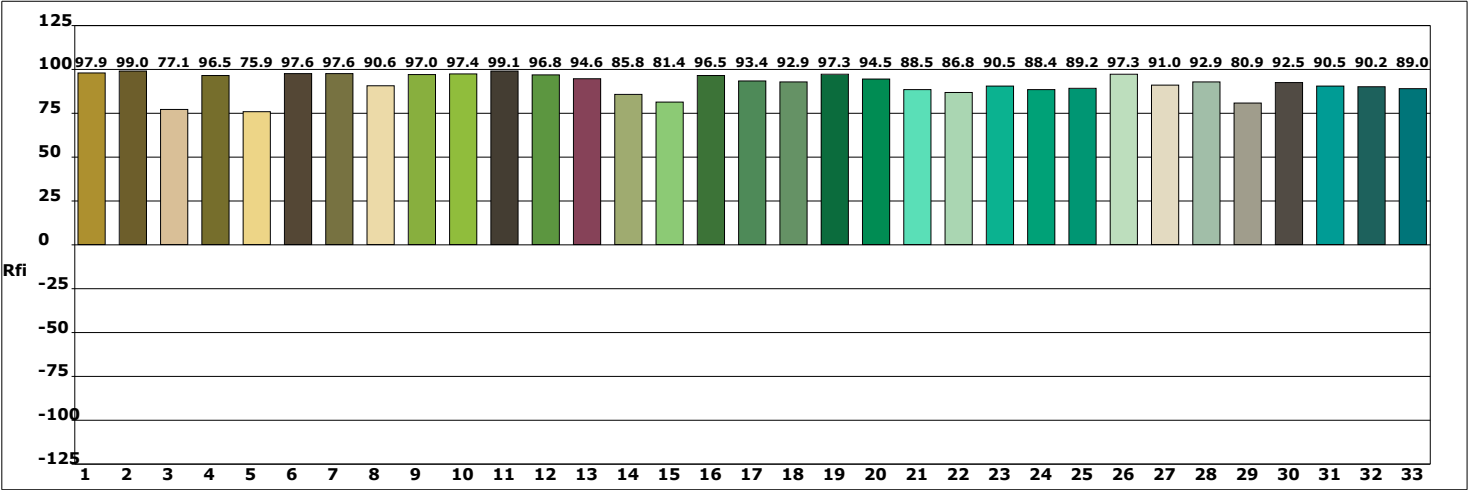
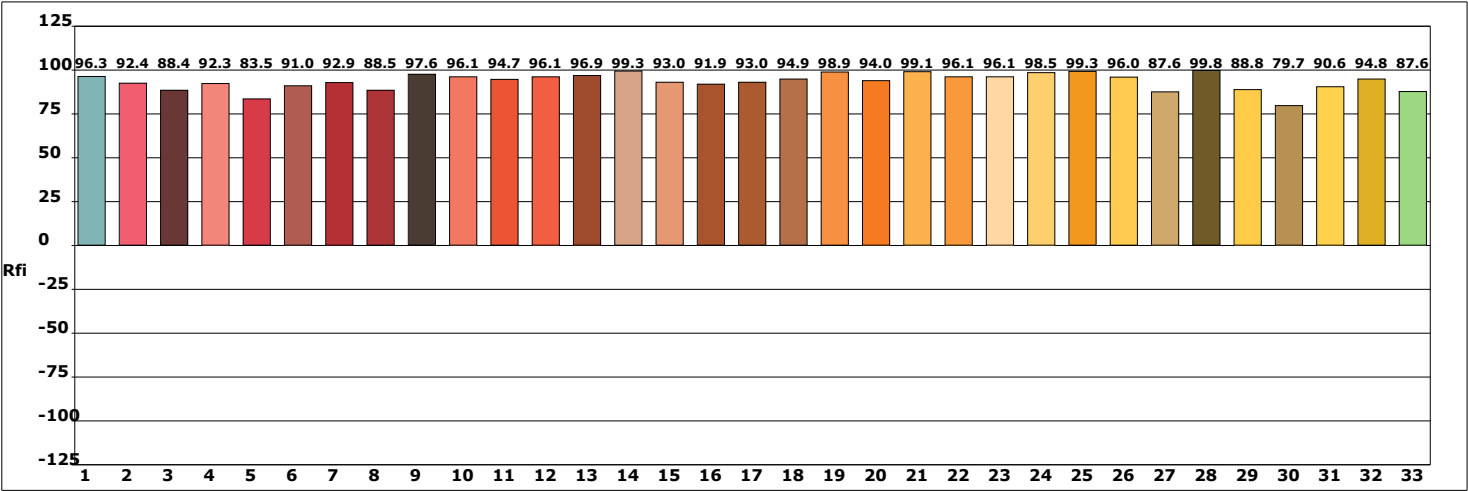


Chroma by Bue



Product model: P19
Product number:
Tester:
Remarks:

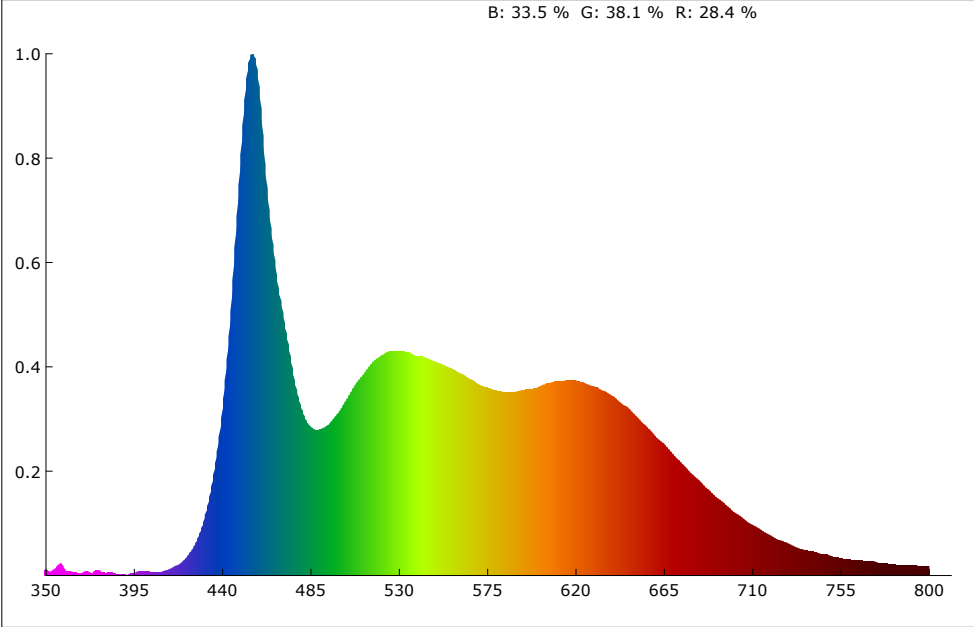
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 08/11/12



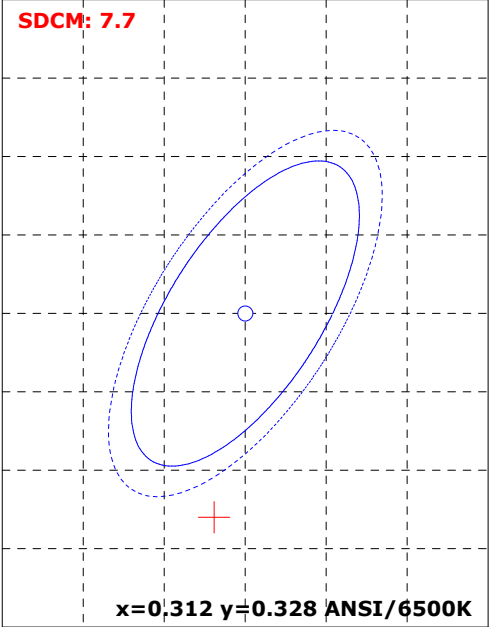
Product model: P19
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 08/11/12

Spectrogram



SDCM



Color Parameter:

x: 0.3104 y: 0.3152 u: 0.2015 v: 0.3069 u': 0.2015 v': 0.4603
R_ratio: 28.4 % G_ratio: 38.1 % B_ratio: 33.5 % RedRatio: 15.8 % GreenRatio: 79.0 % BlueRatio: 5.2 %

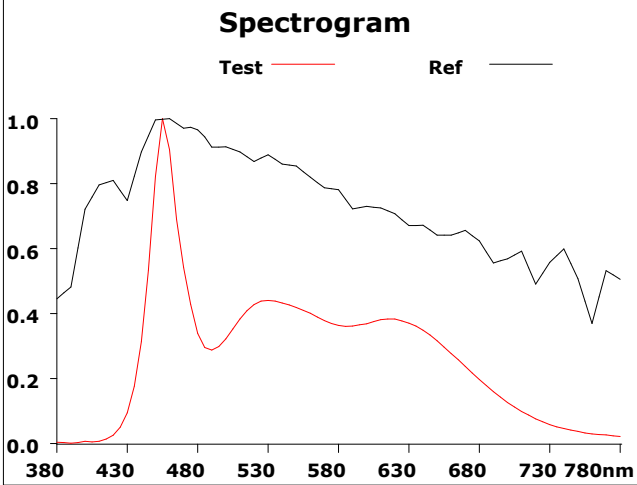
Ra: 94.9 AvgR: 92.7
R1: 93.7 R2: 96.7 R3: 94.7 R4: 96.6 R5: 94.3 R6: 93.1 R7: 96.1 R8: 94.4
R9: 86.4 R10: 96.7 R11: 97.5 R12: 67.8 R13: 94.6 R14: 96.3 R15: 91.1

CCT: 6769 K Flux: 3812.727 lm PeakWave: 455.4 nm SDCM: 7.7
S/P: 2.4 CentralWave: 458.0 nm DominantWave: 480.6 nm CentroidWave: 554.0 nm
HalfWidth: 26.5 nm duv: -0.00288 purity: 9.4 % CQS: 88.1
LER(TM-30): 262.7 Ep: 14514.5 mw Rg: 100.1 Rf: 88.5
Red Ep: 3924.6 mw Near red Ep: 604.6 mw Near infrared Ep: 58.2 mw

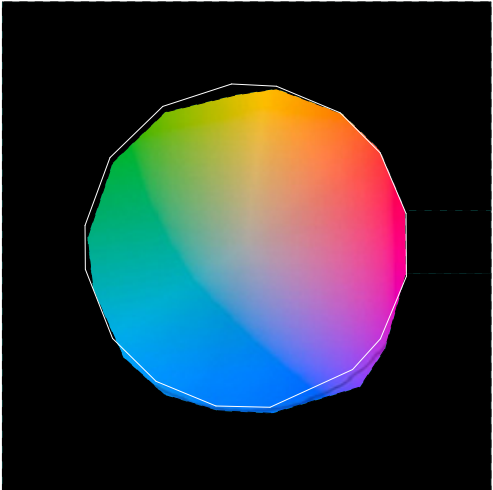
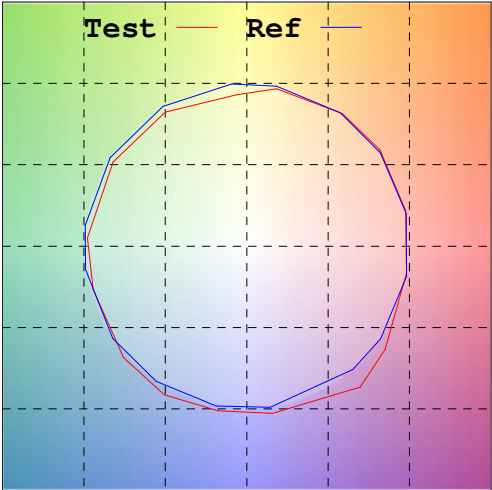
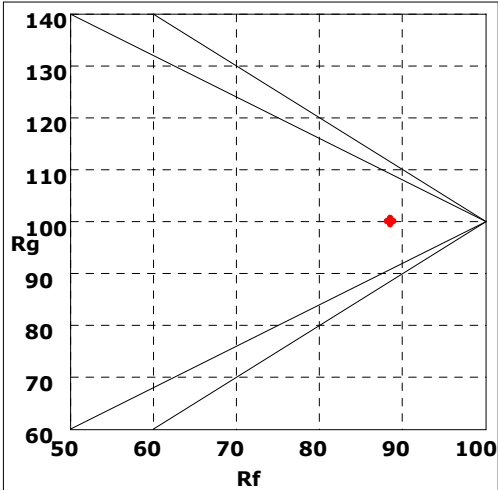
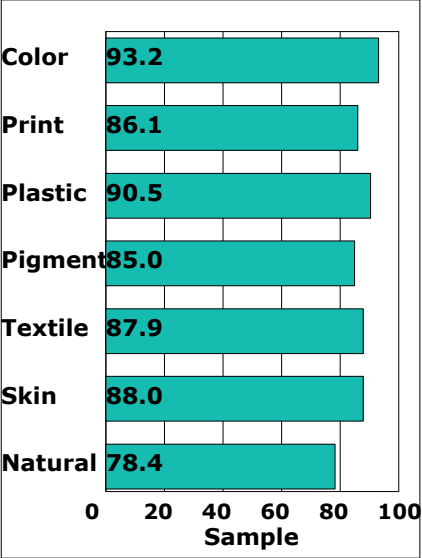
Electrical parameters:

Effic: 40.4 Lm/W Energy: 44.0 Effi: G
U: 220.8 V I: 0.666 A P: 94.380 W Pf: 0.641

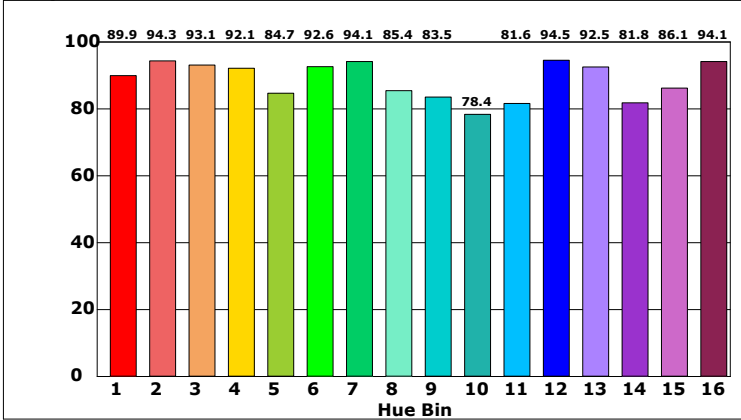
Rf: 88.5 CCT: 6769K u': 0.2015
Rg: 100.1 LER: 262.7 Duv: -0.00288 v': 0.4603



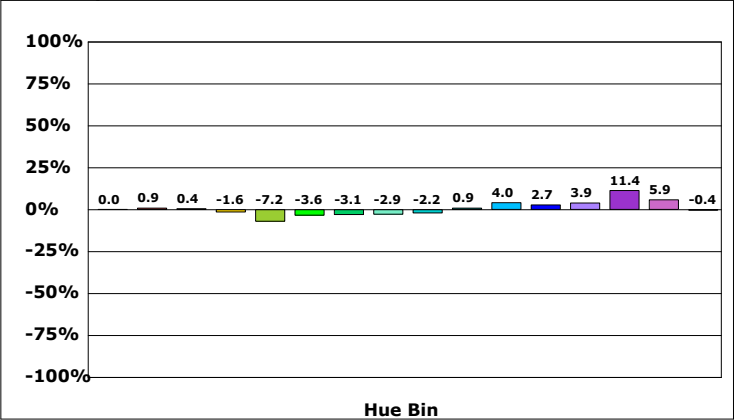
500			
Hue Bin	Rf	Chroma	Hue
1	89.9	0.0%	2.0%
2	94.3	0.9%	1.7%
3	93.1	0.4%	-1.4%
4	92.1	-1.6%	-0.2%
5	84.7	-7.2%	-1.4%
6	92.6	-3.6%	0.7%
7	94.1	-3.1%	1.3%
8	85.4	-2.9%	7.3%
9	83.5	-2.2%	13.3%
10	78.4	0.9%	13.5%
11	81.6	4.0%	8.6%
12	94.5	2.7%	1.8%
13	92.5	3.9%	0.5%
14	81.8	11.4%	-2.2%
15	86.1	5.9%	-3.9%
16	94.1	-0.4%	1.9%



Rf by Bue

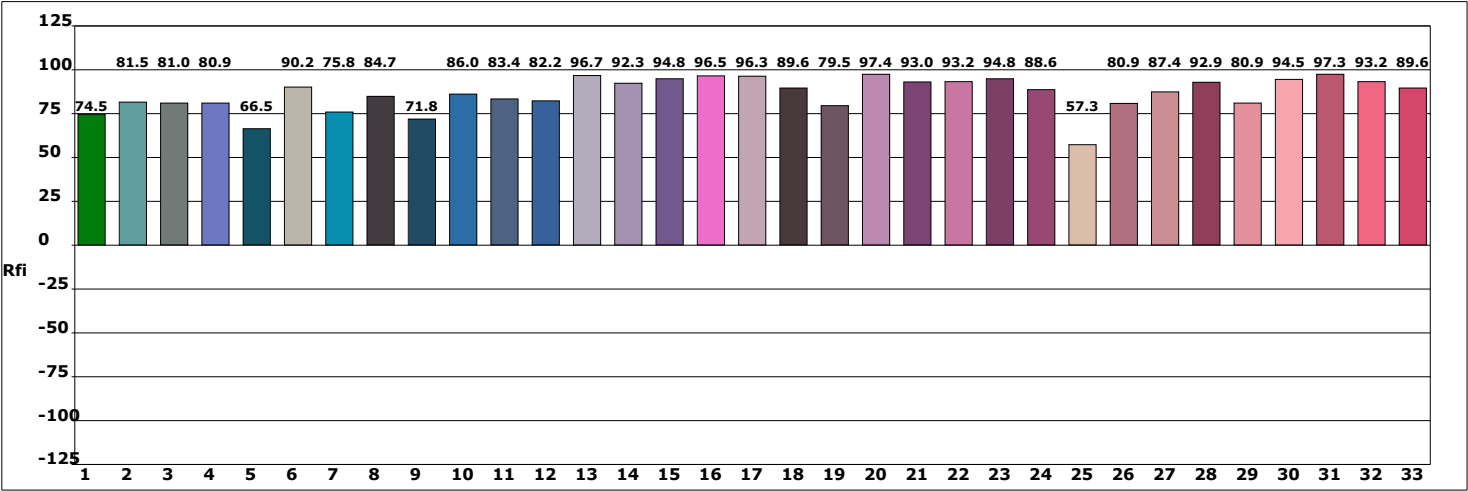
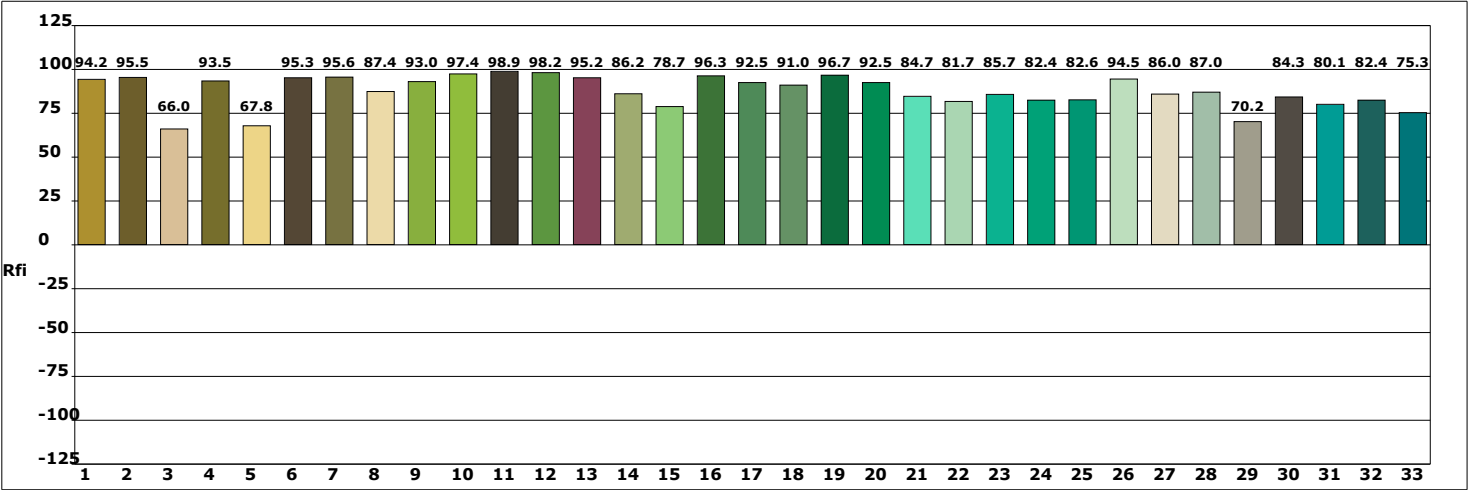
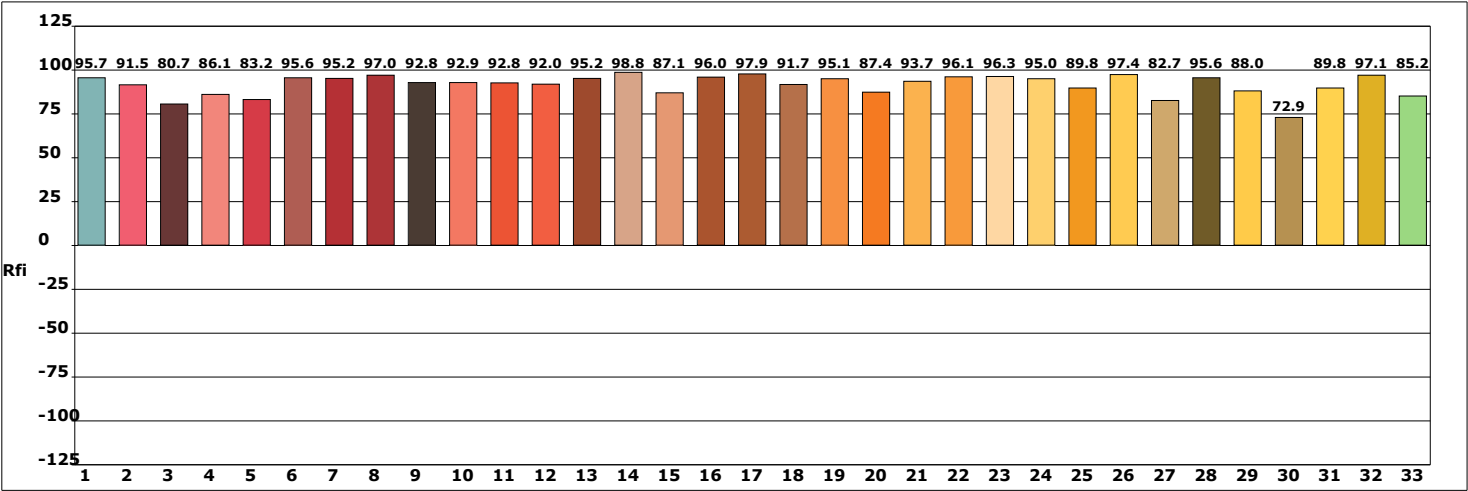


Chroma by Bue



Product model: P19
Product number:
Tester:
Remarks:

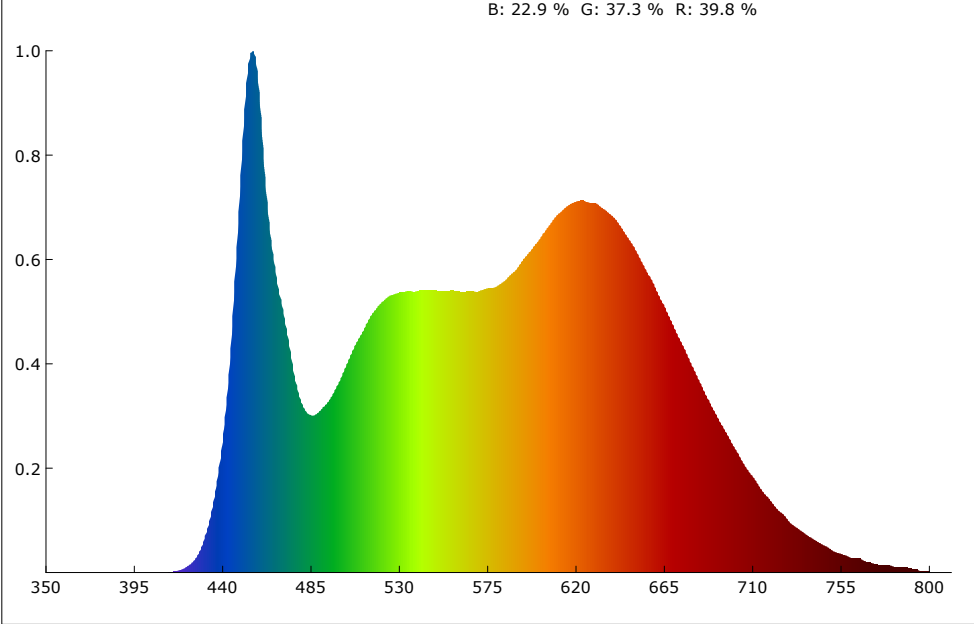
Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 08/11/12



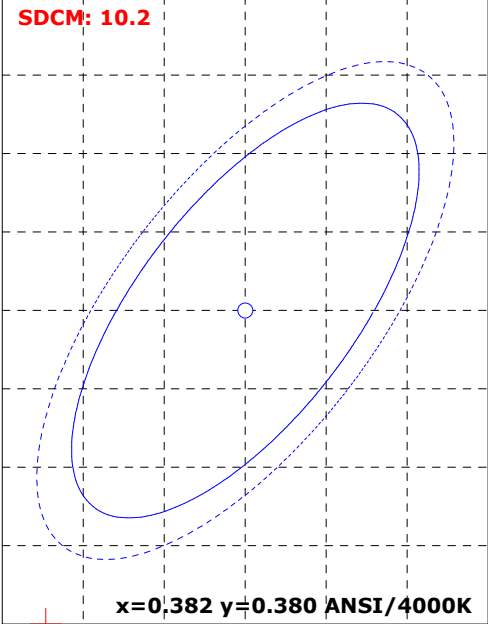
Product model: P19
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 08/11/12

Spectrogram



SDCM



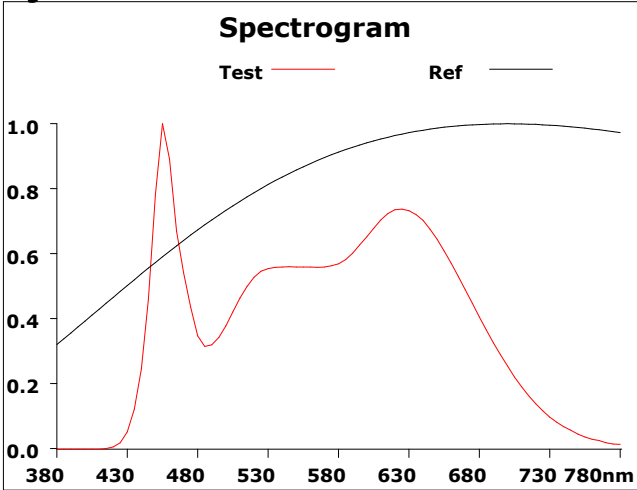
Color Parameter:

x: 0.3695	y: 0.3529	u: 0.2275	v: 0.3260	u': 0.2275	v': 0.4890		
R_ratio: 39.8 %	G_ratio: 37.3 %	B_ratio: 22.9 %	RedRatio: 20.7 %	GreenRatio: 75.6 %	BlueRatio: 3.6 %		
Ra: 94.6		AvgR: 92.2					
R1: 92.1	R2: 94.5	R3: 97.4	R4: 96.8	R5: 93.6	R6: 91.8	R7: 96.2	R8: 94.8
R9: 86.3	R10: 92.4	R11: 94.4	R12: 73.2	R13: 92.0	R14: 97.5	R15: 90.5	
CCT: 4141 K		Flux: 2604.686 lm	PeakWave: 455.4 nm	SDCM: 10.2			
S/P: 1.9		CentralWave: 458.6 nm	DominantWave: 585.7 nm	CentroidWave: 575.4 nm			
HalfWidth: 25.1 nm		duv: -0.00823	purity: 16.8 %	CQS: 85.9			
LER(TM-30): 270.5		Ep: 9628.7 mw	Rg: 101.4	Rf: 89.8			
Red Ep: 3647.8 mw		Near red Ep: 448.2 mw	Near infrared Ep: 11.3 mw				

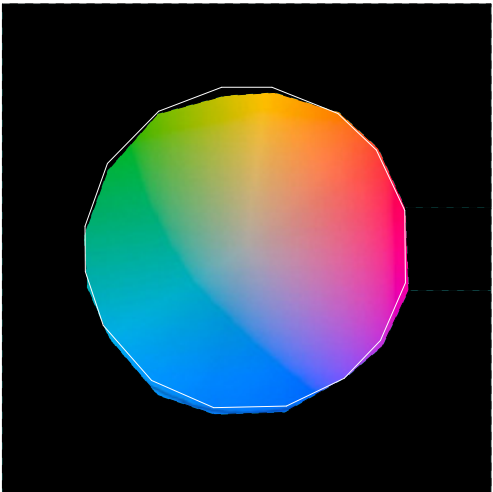
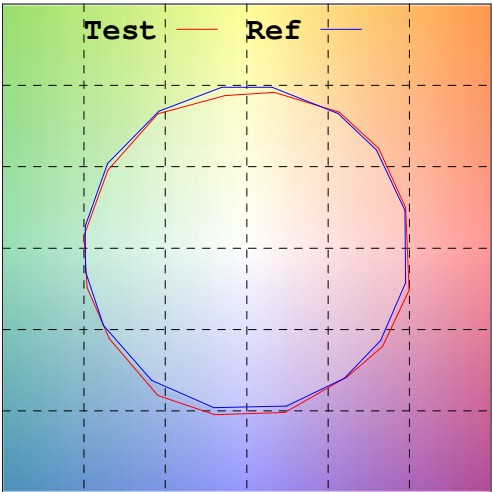
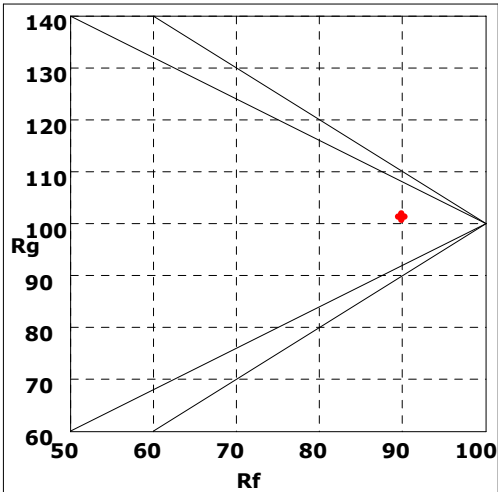
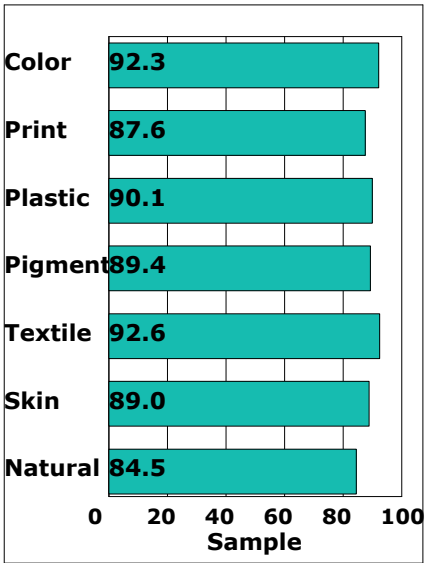
Electrical parameters:

Effic: 44.3 Lm/W	Energy: 48.2	Effi: G	
U: 220.8 V	I: 0.439 A	P: 58.840 W	Pf: 0.607

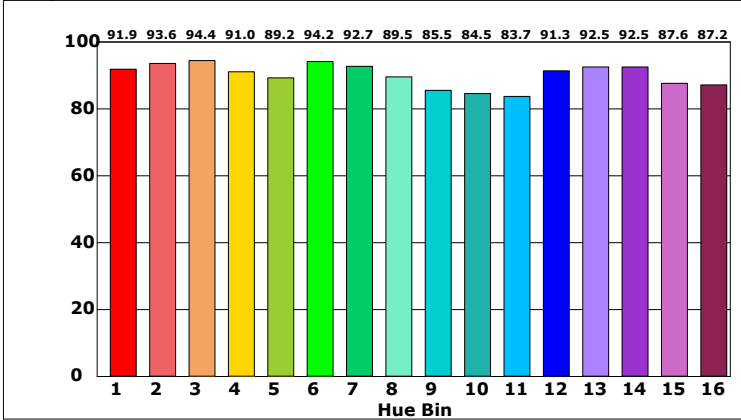
Rf: 89.8 CCT: 4141K u': 0.2275
Rg: 101.4 LER: 270.5 Duv: -0.00823 v': 0.4890



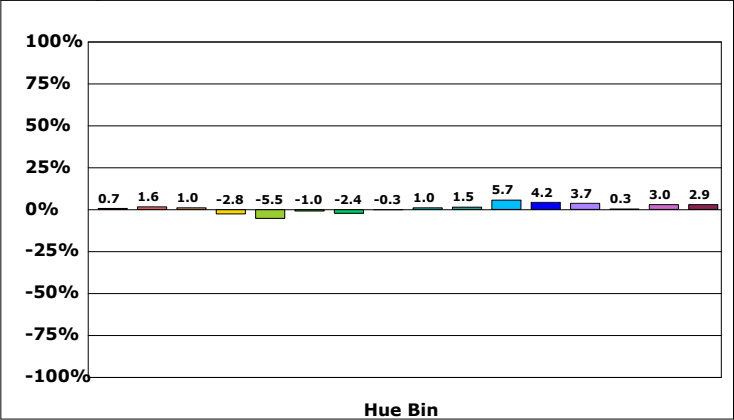
500			
Hue Bin	Rf	Chroma	Hue
1	91.9	0.7%	1.7%
2	93.6	1.6%	0.0%
3	94.4	1.0%	-0.3%
4	91.0	-2.8%	-2.1%
5	89.2	-5.5%	-0.9%
6	94.2	-1.0%	1.4%
7	92.7	-2.4%	3.4%
8	89.5	-0.3%	5.8%
9	85.5	1.0%	9.7%
10	84.5	1.5%	8.6%
11	83.7	5.7%	8.4%
12	91.3	4.2%	1.3%
13	92.5	3.7%	-1.6%
14	92.5	0.3%	1.8%
15	87.6	3.0%	-2.6%
16	87.2	2.9%	-4.1%



Rf by Bue



Chroma by Bue



Product model: P19
Product number:
Tester:
Remarks:

Manufacturer: Guangzhou Hotion Technology Co.,
Test unit:
Date of observation: 08/11/12

