

LED Test Report

Product Mark

Product Type : F52-R400-140H12 WHITE

Manufacturer :

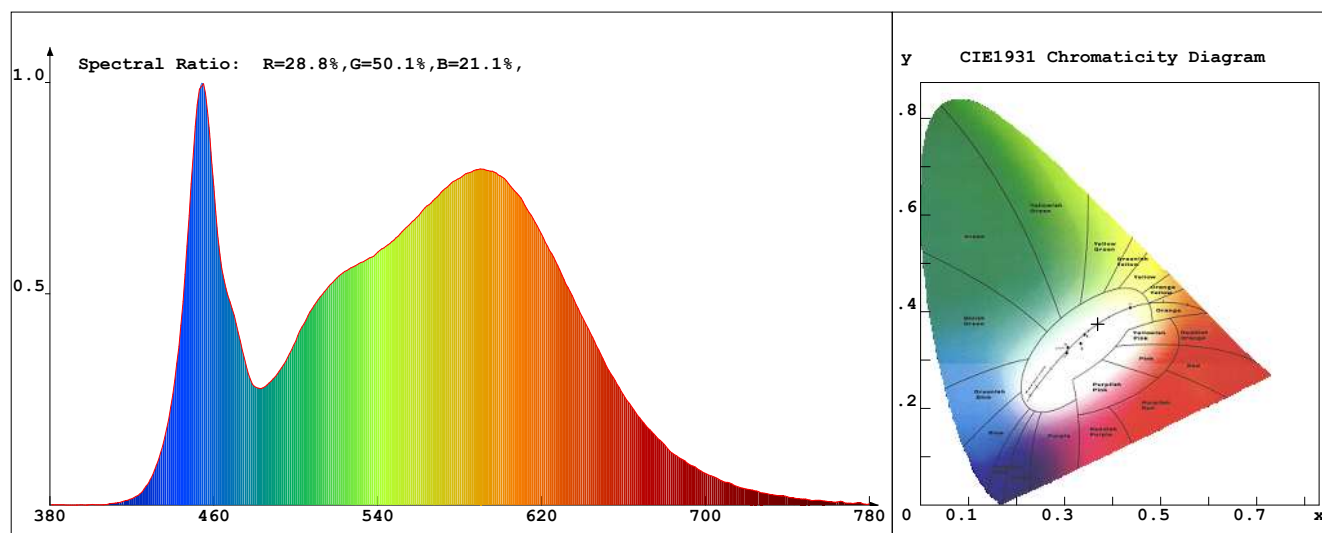
Temperature : 'C

Humidity : %

Operator :

Test Date : 15-04-21 14:35:28

Remark:



Chroma Parameters

Chro.Coord.: x=0.3692 y=0.3747 u=0.2186 v=0.3327 duv=0.0025

CCT: 4304K Dominant Wave.: 576.3nm Purity: 23.3% Centre Wave: 455.0nm

Flux RGB Ratio: R=16.2%, G=80.9%, B=2.9% Peak Wave: 453.8nm Half Width: 21.5nm

Rendering Index: Ra= 81.1 CRI= 77.2

R1 =79 R2 =89 R3 =95 R4 =78 R5 =79 R6 =85 R7 =84 R8 =59

R9 =-6 R10=75 R11=77 R12=57 R13=82 R14=98 R15=71

PPF: 24.632umol/s (400-700nm)

PRF: 5.3mW (400-700nm)

PAR: 4.6mW (400-700nm)

Photo Parameters

Flux: 1873.80lm Effi.: 144.0lm/W Radiant: 5389.4mW Iv: 0.0mcd

Scotopic Flux: 3343.7Plm Effi.: 0.0Plm/W S/P: 1.8

Efficiency: 0.00

Effi Level: A++ (EU 874-2012) Photon Flux: 25104.199umol/s (380-780nm)

Ele. Parameters

Forward Current: If=539.0mA

Reverse Voltage: Vr=5.00V

Forward Voltage: Vf=24.14V

Reverse Current: Ir=0.00uA

Power: P=13.031W

Instrument state

Instrument: Lisun

Integral Time: 73.020ms

VPeak: 15016

VDark: 1242

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 WHITE

Manufacturer :

Temperature : 'C

Humidity : %

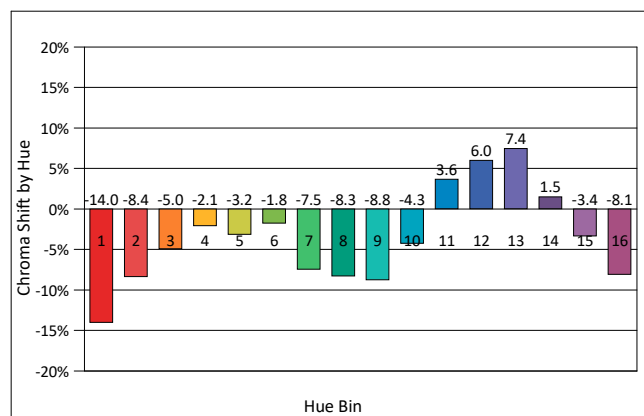
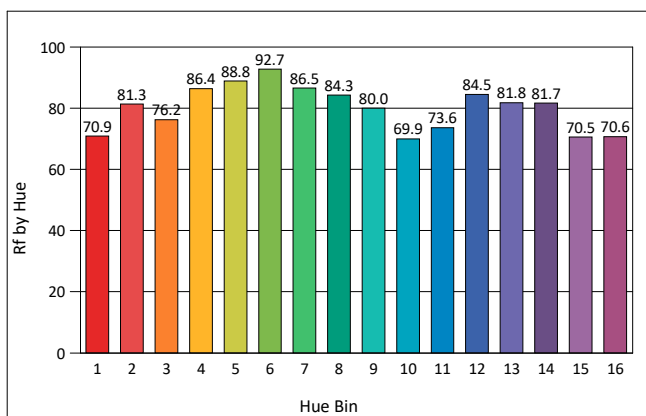
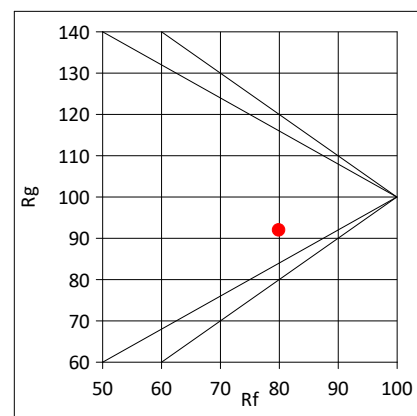
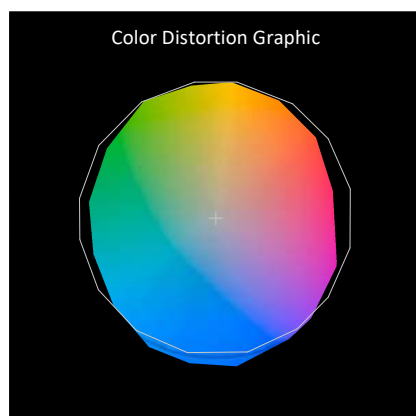
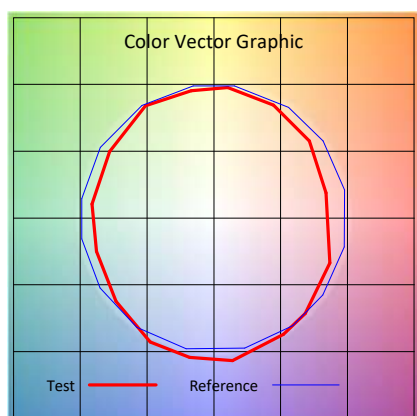
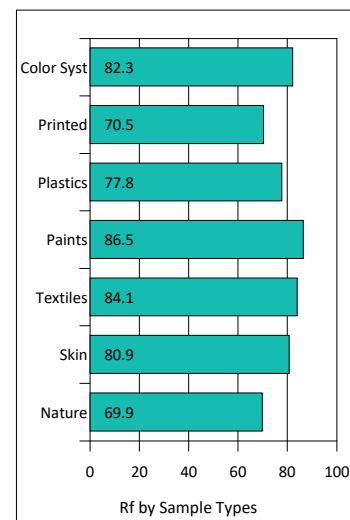
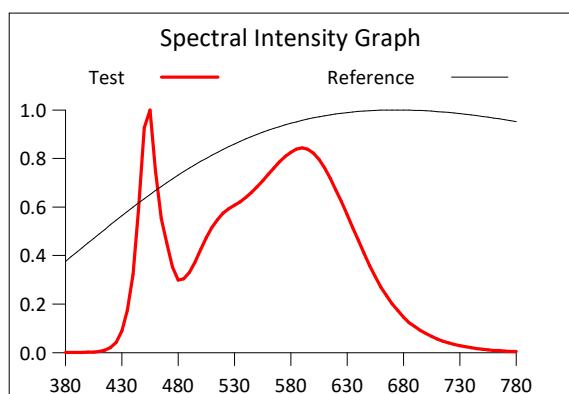
Operator :

Test Date : 15-04-21 14:35:28

Remark:

Rf: 79.9 CCT(K): 4304 u': 0.2186
 Rg: 92.0 LER: 337.7 Duv: 0.0025 v': 0.3327

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	70.9	-14.0%	0.6%
2	81.3	-8.4%	5.7%
3	76.2	-5.0%	10.1%
4	86.4	-2.1%	4.8%
5	88.8	-3.2%	2.1%
6	92.7	-1.8%	-2.1%
7	86.5	-7.5%	-1.4%
8	84.3	-8.3%	2.3%
9	80.0	-8.8%	11.3%
10	69.9	-4.3%	15.1%
11	73.6	3.6%	14.6%
12	84.5	6.0%	3.7%
13	81.8	7.4%	-10.7%
14	81.7	1.5%	-9.2%
15	70.5	-3.4%	-19.0%
16	70.6	-8.1%	-13.7%



IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 WHITE

Manufacturer :

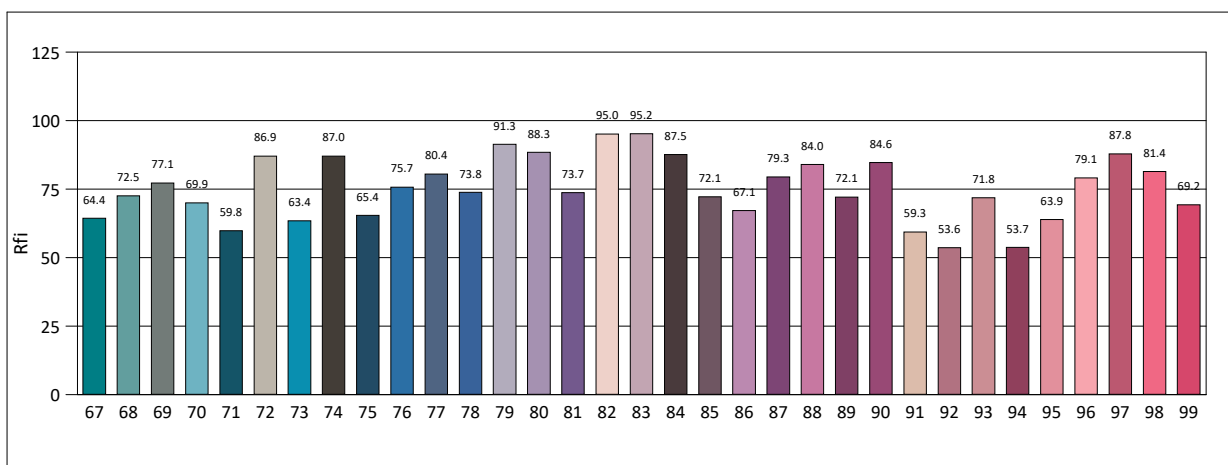
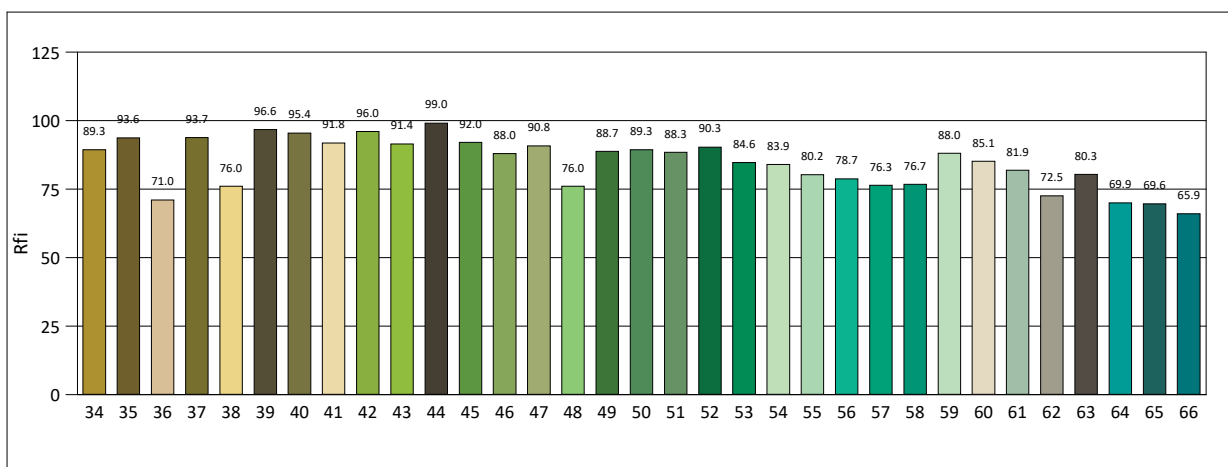
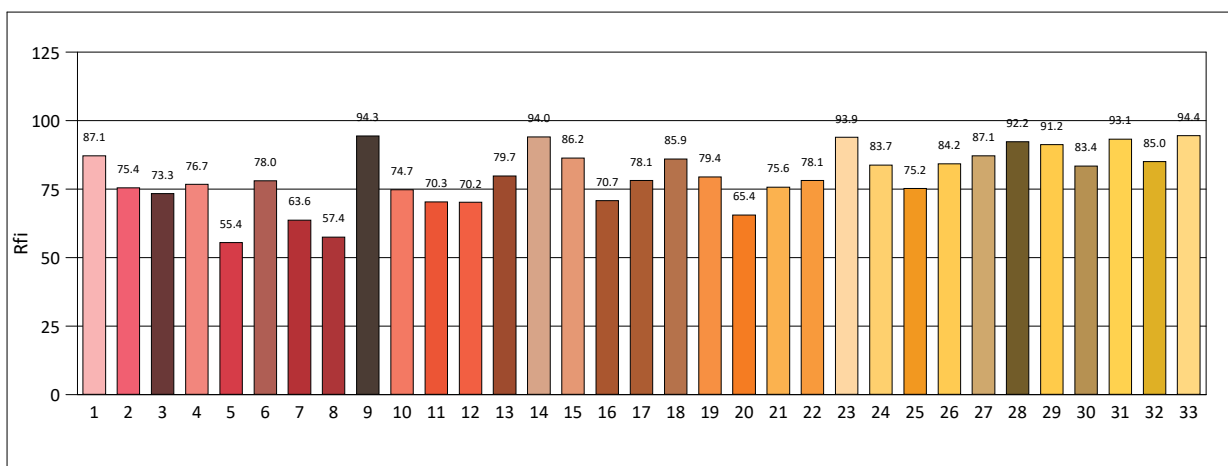
Temperature : 'C

Humidity : %

Operator :

Test Date : 15-04-21 14:35:28

Remark :



LED Test Report

Product Mark

Product Type : F52-R400-140H12 RGB

Manufacturer :

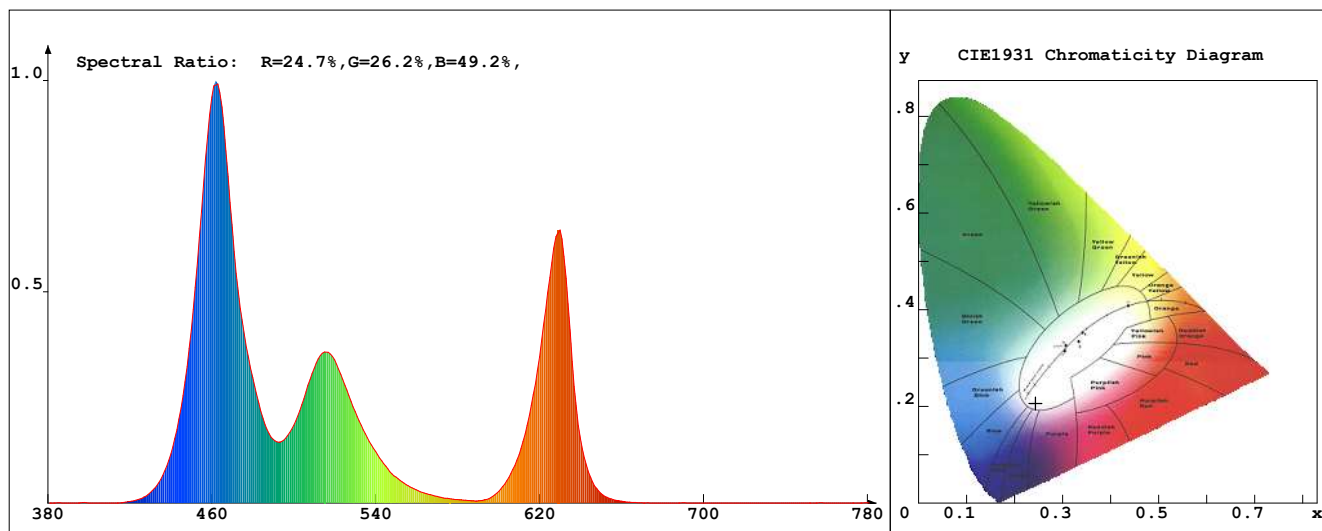
Temperature : 'C

Humidity : %

Operator :

Test Date : 15-04-21 14:39:49

Remark:



Chroma Parameters

Chro.Coord.:x=0.2435 y=0.2065 u=0.1952 v=0.2483 duv=-0.0185

CCT:100000K Dominant Wave.:467.4nm Purity:44.3% Centre Wave:461.4nm

Flux RGB Ratio:R=27.5%,G=59.7%,B=12.8% Peak Wave:460.7nm Half Width:21.1nm

Rendering Index:Ra= 21.9 CRI= 85.2

R1 =-8 R2 =26 R3 =58 R4 =23 R5 =20 R6 =25 R7 =53 R8 =-22

R9 =-295 R10=-77 R11=3 R12=29 R13=-5 R14=72 R15=-28

PPF:11.289umol/s (400-700nm)

PRF:2.6mW (400-700nm)

PAR:2.1mW (400-700nm)

Photo Parameters

Flux:541.12lm Effi.:41.6lm/W Radiant:2609.4mW Iv:0.0mcd

Scotopic Flux:2447.7Plm Effi.:0.0Plm/W S/P:4.5

Efficiency:0.00

Effi Level:A++ (EU 874-2012) Photon Flux:11297.100umol/s (380-780nm)

Ele. Parameters

Forward Current:If=534.0mA

Reverse Voltage:Vr=5.00V

Forward Voltage:Vf=24.35V

Reverse Current:Ir=0.00uA

Power:P=13.020W

Instrument state

Instrument:Lisun

Integral Time: 68.126ms

VPeak: 15464

VDark: 1272

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 RGB

Temperature : 'C

Operator :

Remark :

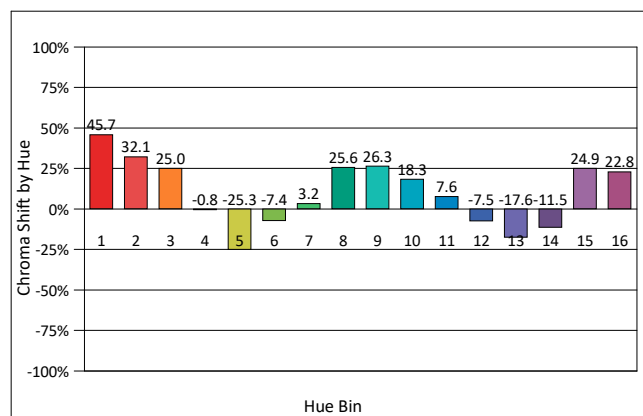
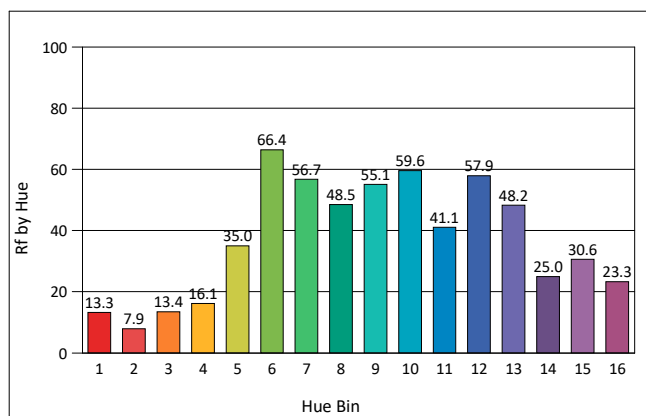
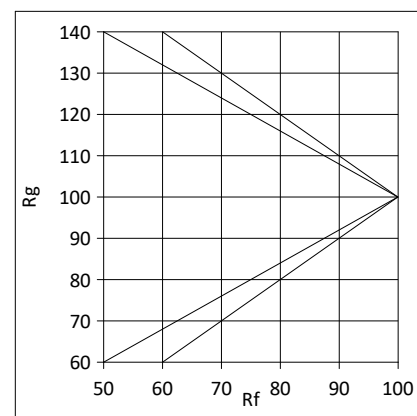
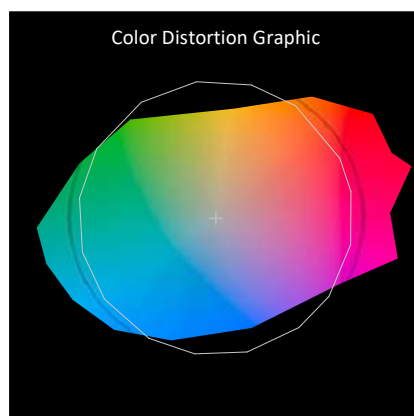
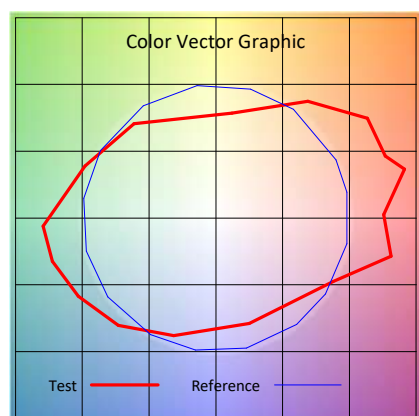
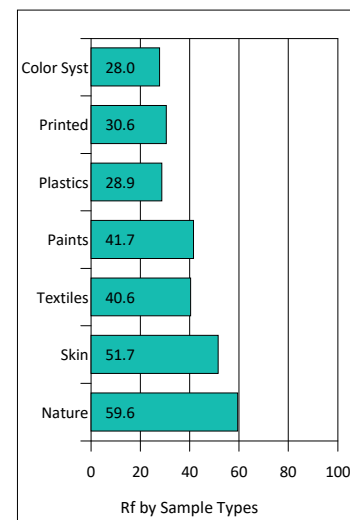
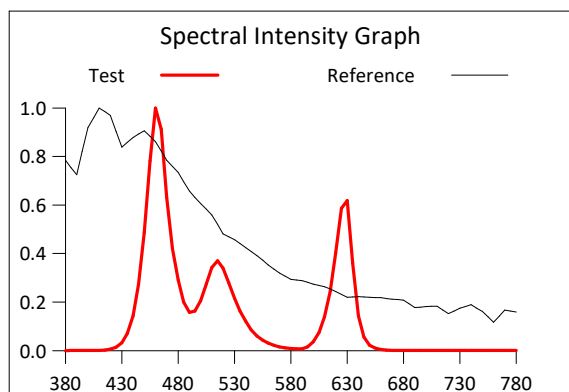
Manufacturer :

Humidity : %

Test Date : 15-04-21 14:39:49

Rf: 38.5 CCT(K): 100000 u': 0.1952
Rg: 109.6 LER: 193.6 Duv: -0.0185 v': 0.2483

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	13.3	45.7%	8.6%
2	7.9	32.1%	-18.0%
3	13.4	25.0%	-49.8%
4	16.1	-0.8%	-44.0%
5	35.0	-25.3%	-21.5%
6	66.4	-7.4%	13.3%
7	56.7	3.2%	15.8%
8	48.5	25.6%	26.3%
9	55.1	26.3%	2.4%
10	59.6	18.3%	-12.8%
11	41.1	7.6%	-23.9%
12	57.9	-7.5%	-17.9%
13	48.2	-17.6%	5.8%
14	25.0	-11.5%	40.7%
15	30.6	24.9%	50.9%
16	23.3	22.8%	26.9%



IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 RGB

Manufacturer :

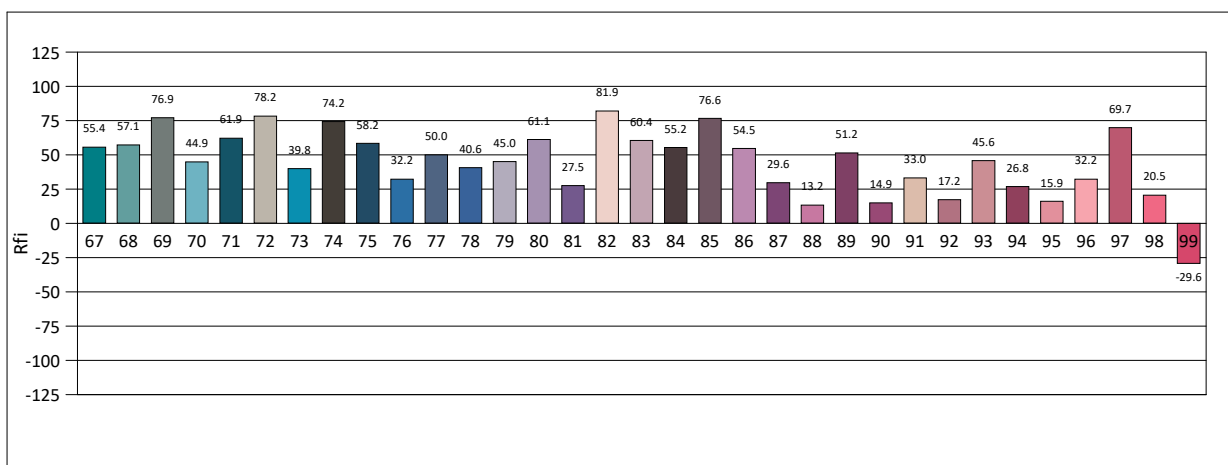
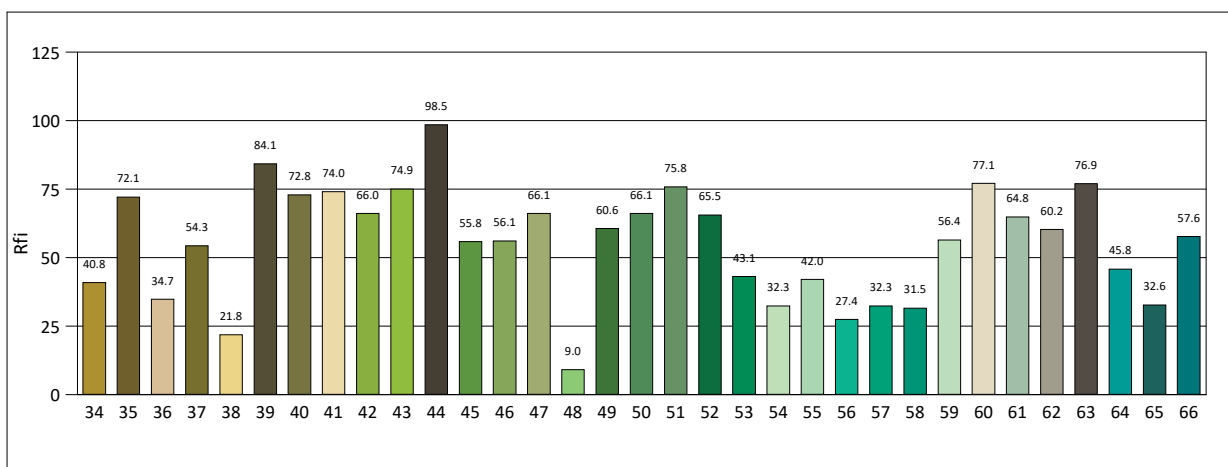
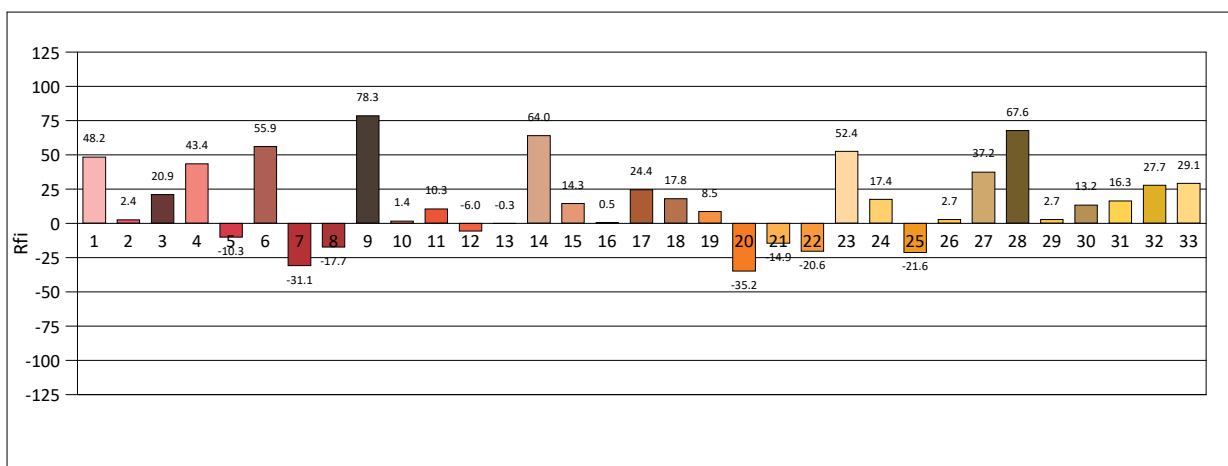
Temperature : 'C

Humidity : %

Operator :

Test Date : 15-04-21 14:39:49

Remark :



LED Test Report

Product Mark

Product Type : F52-R400-140H12 RED

Manufacturer :

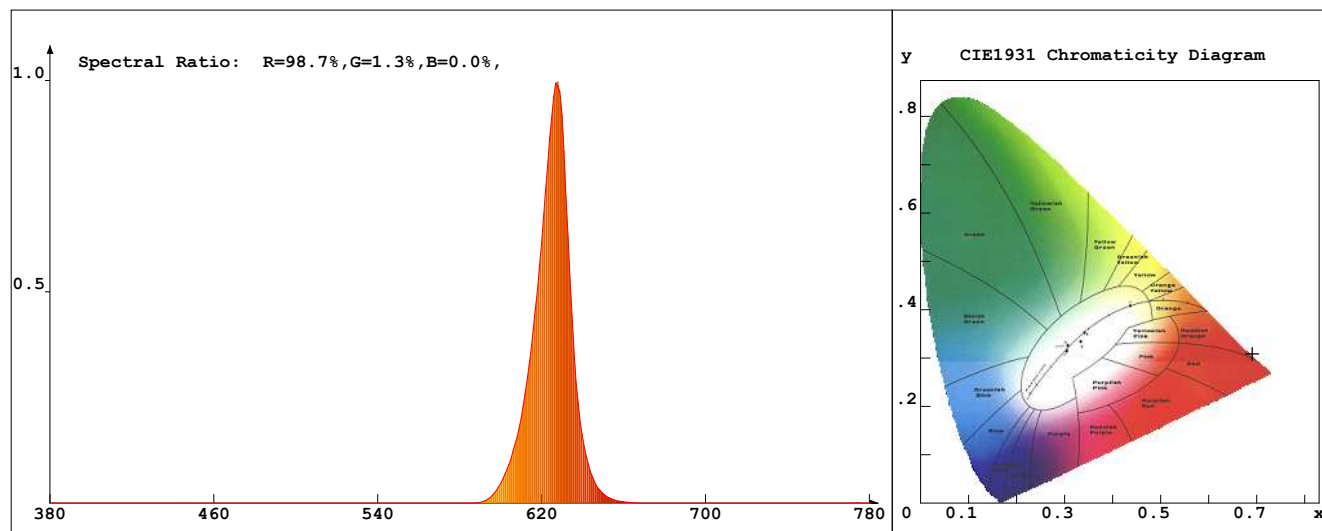
Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:42:06

Remark:



Chroma Parameters

Chro.Coord.: x=0.6908 y=0.3090 u=0.5188 v=0.3481 duv=-0.0005

CCT: 1312K Dominant Wave.: 619.7nm Purity:100.0% Centre Wave:625.1nm

Flux RGB Ratio:R=97.4%,G=2.6%,B=0.0% Peak Wave:626.5nm Half Width:16.3nm

Rendering Index:Ra=-20.3 CRI=104.3

R1 =-45 R2 =54 R3 =8 R4 =-75 R5 =-40 R6 =58 R7 =-11 R8 =-113

R9 =-341 R10=41 R11=-86 R12=27 R13=-18 R14=40 R15=-82

PPF:3.518umol/s (400-700nm)

PRF:0.7mW (400-700nm)

PAR:0.7mW (400-700nm)

Photo Parameters

Flux:150.00lm Effi.:34.7lm/W Radiant:674.6mW Iv:0.0mcd

Scotopic Flux:7.9Plm Effi.:0.0Plm/W S/P:0.1

Efficiency:0.00

Effi Level:A++ (EU 874-2012) Photon Flux:3518.790umol/s (380-780nm)

Ele. Parameters

Forward Current:If=178.0mA

Reverse Voltage:Vr=5.00V

Forward Voltage:Vf=24.27V

Reverse Current:Ir=0.00uA

Power:P=4.341W

Instrument state

Instrument:Lisun

Integral Time: 85.218ms

VPeak: 13944

VDark: 1141

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 RED

Temperature : 'C

Operator :

Remark :

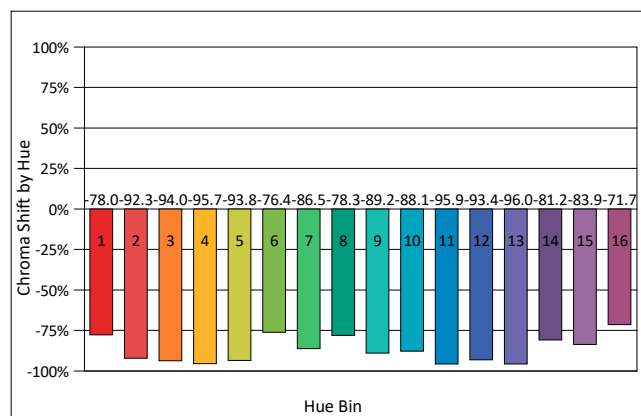
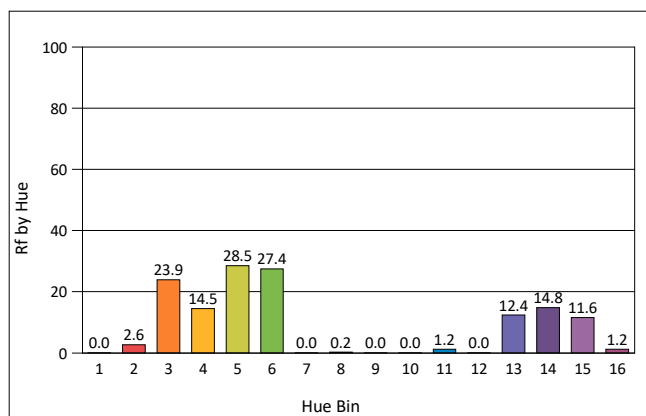
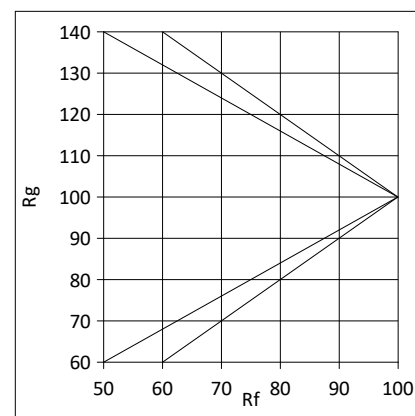
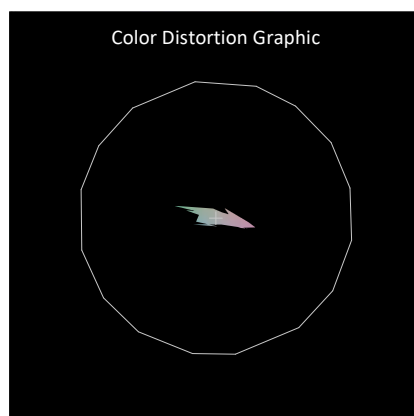
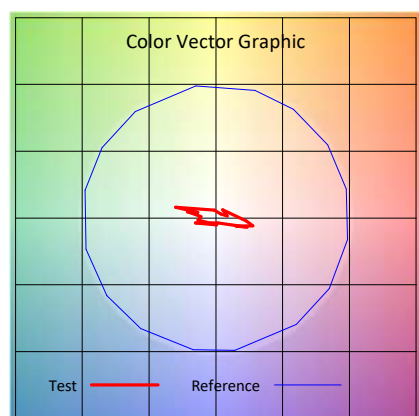
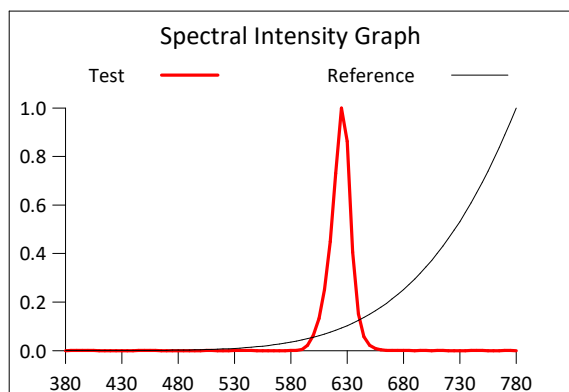
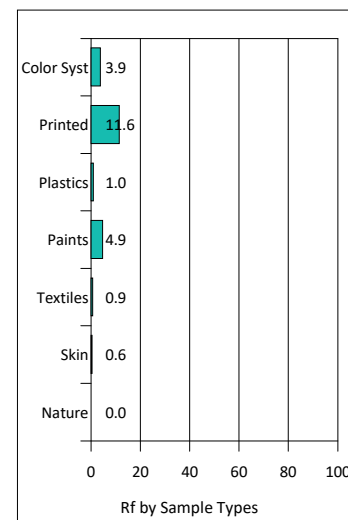
Manufacturer :

Humidity : %

Test Date : 2011-01-01 14:42:06

Rf: 0.5 CCT(K): 1312 u': 0.5188
 Rg: 0.8 LER: 231.2 Duv: -0.0005 v': 0.3481

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-78.0%	-8.9%
2	2.6	-92.3%	3.4%
3	23.9	-94.0%	-3.0%
4	14.5	-95.7%	7.2%
5	28.5	-93.8%	4.4%
6	27.4	-76.4%	14.8%
7	0.0	-86.5%	0.4%
8	0.2	-78.3%	0.6%
9	0.0	-89.2%	-7.2%
10	0.0	-88.1%	-8.9%
11	1.2	-95.9%	4.1%
12	0.0	-93.4%	-16.9%
13	12.4	-96.0%	6.0%
14	14.8	-81.2%	9.6%
15	11.6	-83.9%	0.2%
16	1.2	-71.7%	-3.8%



IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 RED

Manufacturer :

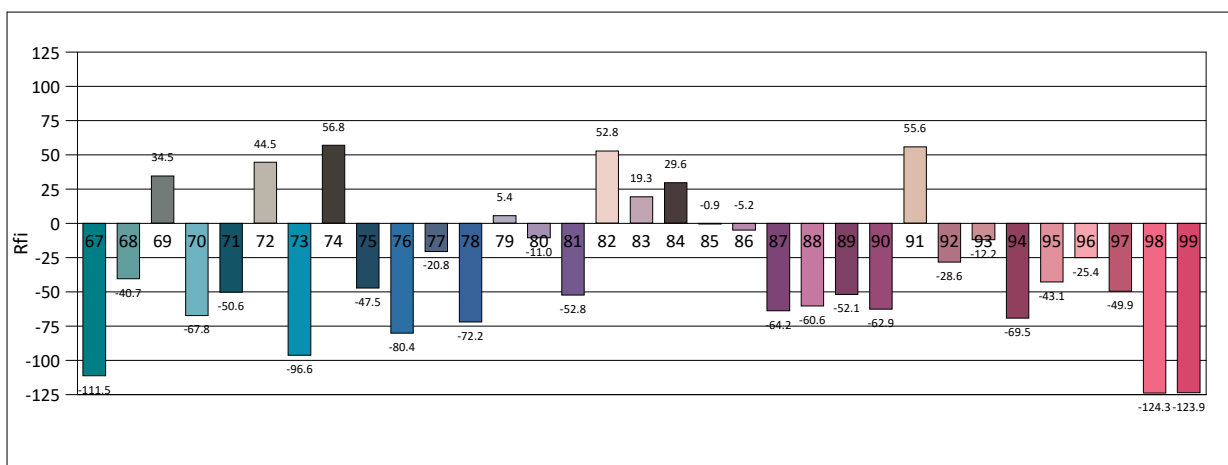
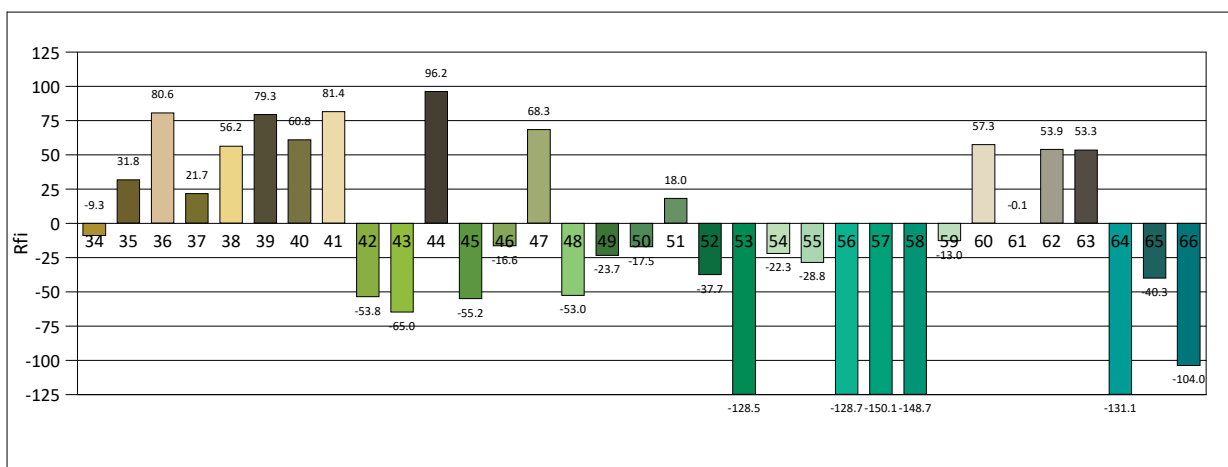
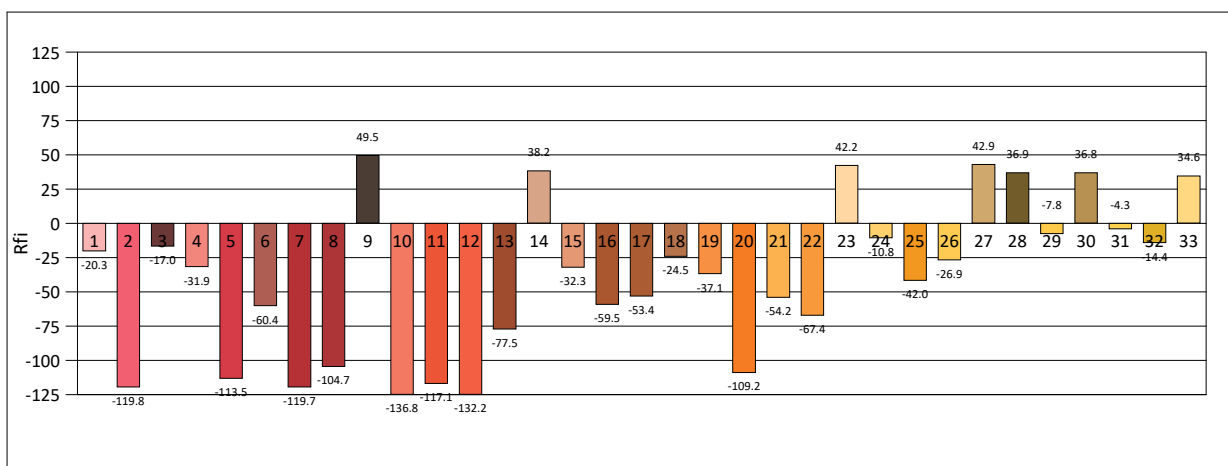
Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:42:06

Remark :



LED Test Report

Product Mark

Product Type : F52-R400-140H12 GREEN

Manufacturer :

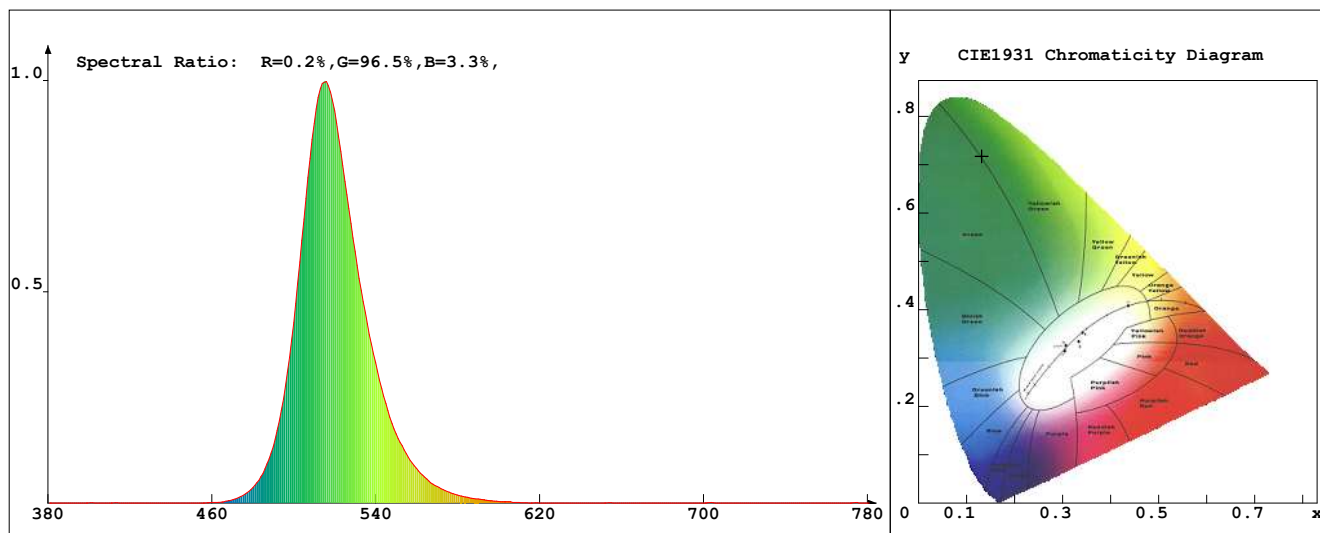
Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:47:15

Remark:



Chroma Parameters

Chro.Coord.: x=0.1316 y=0.7173 u=0.0464 v=0.3794 duv=0.1674

CCT: 8596K Dominant Wave.: 519.5nm Purity: 76.8% Centre Wave: 516.3nm

Flux RGB Ratio: R=0.1%, G=99.1%, B=0.8% Peak Wave: 514.6nm Half Width: 31.3nm

Rendering Index: Ra=-28.0 CRI=105.2

R1 =-36 R2 =-12 R3 =-32 R4 =-70 R5 =-11 R6 =-20 R7 =-11 R8 =-32

R9 =-359 R10=-114 R11=-97 R12=-35 R13=-44 R14=34 R15=-32

PPF: 2.931umol/s (400-700nm)

PRF: 0.7mW (400-700nm)

PAR: 0.5mW (400-700nm)

Photo Parameters

Flux: 328.82lm Effi.: 76.1lm/W Radiant: 675.4mW Iv: 0.0mcd

Scotopic Flux: 1097.7Plm Effi.: 0.0Plm/W S/P: 3.3

Efficiency: 0.00

Effi Level: A++ (EU 874-2012) Photon Flux: 2933.530umol/s (380-780nm)

Ele. Parameters

Forward Current: If=174.0mA

Reverse Voltage: Vr=5.00V

Forward Voltage: Vf=24.82V

Reverse Current: Ir=0.00uA

Power: P=4.330W

Instrument state

Instrument: Lisun

Integral Time: 163.496ms

VPeak: 15704

VDark: 1296

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 GREEN

Manufacturer :

Temperature : 'C

Humidity : %

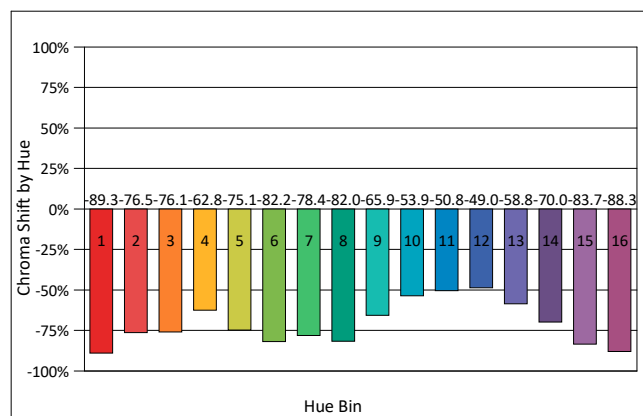
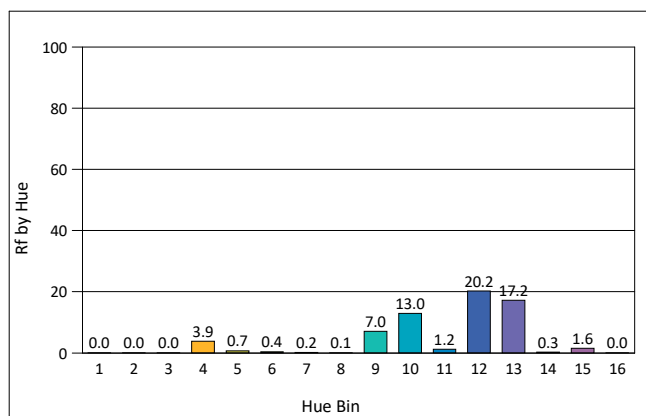
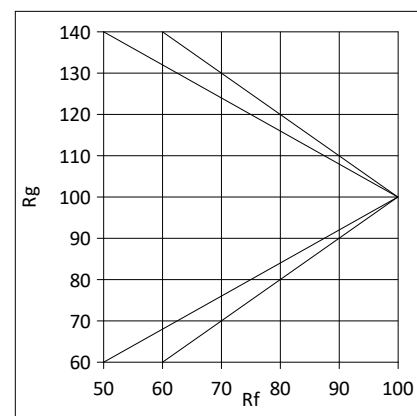
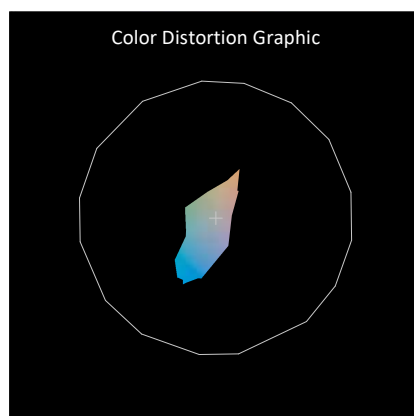
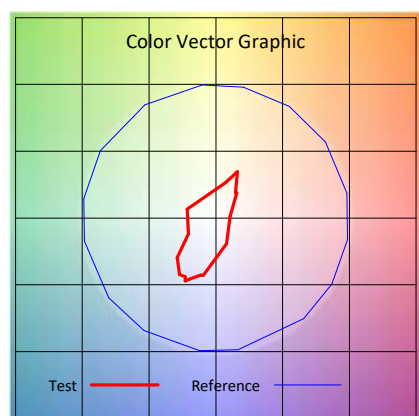
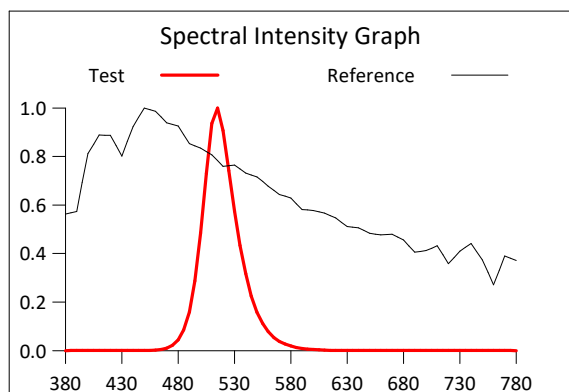
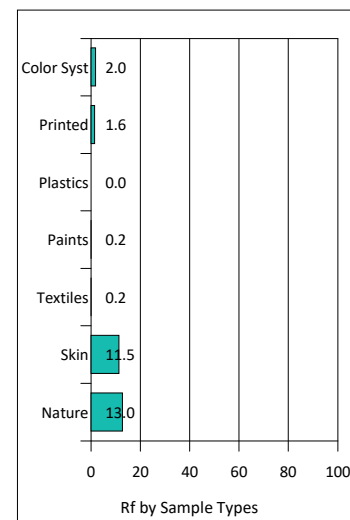
Operator :

Test Date : 2011-01-01 14:47:15

Remark :

Rf: 0.4 CCT(K): 8596 u': 0.0464
 Rg: 6.0 LER: 439.0 Duv: 0.1674 v': 0.3794

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-89.3%	-0.2%
2	0.0	-76.5%	5.1%
3	0.0	-76.1%	-2.4%
4	3.9	-62.8%	-8.0%
5	0.7	-75.1%	-2.9%
6	0.4	-82.2%	-2.6%
7	0.2	-78.4%	0.6%
8	0.1	-82.0%	10.6%
9	7.0	-65.9%	25.6%
10	13.0	-53.9%	14.9%
11	1.2	-50.8%	3.4%
12	20.2	-49.0%	-20.7%
13	17.2	-58.8%	-25.6%
14	0.3	-70.0%	-46.2%
15	1.6	-83.7%	-48.2%
16	0.0	-88.3%	-20.6%



IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 GREEN

Manufacturer :

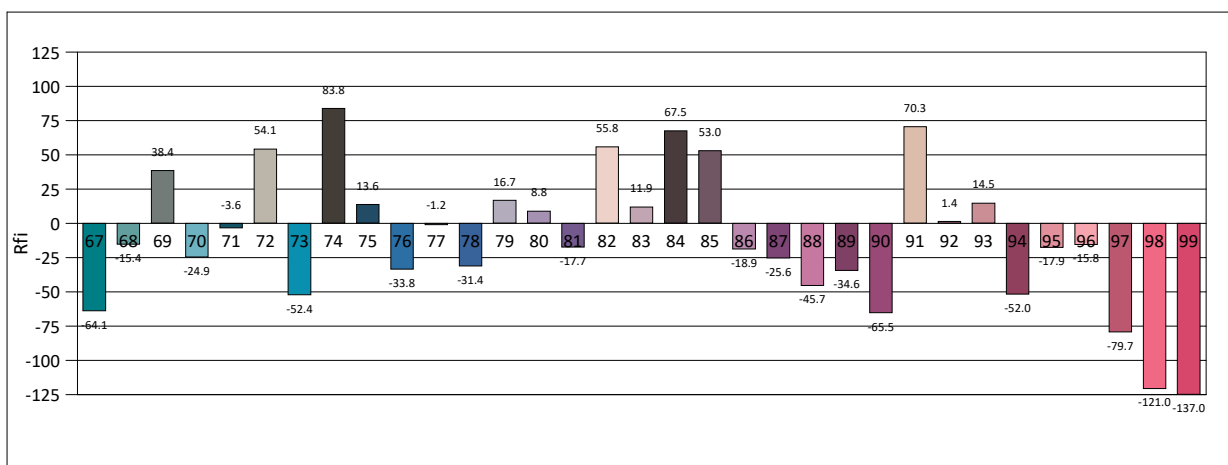
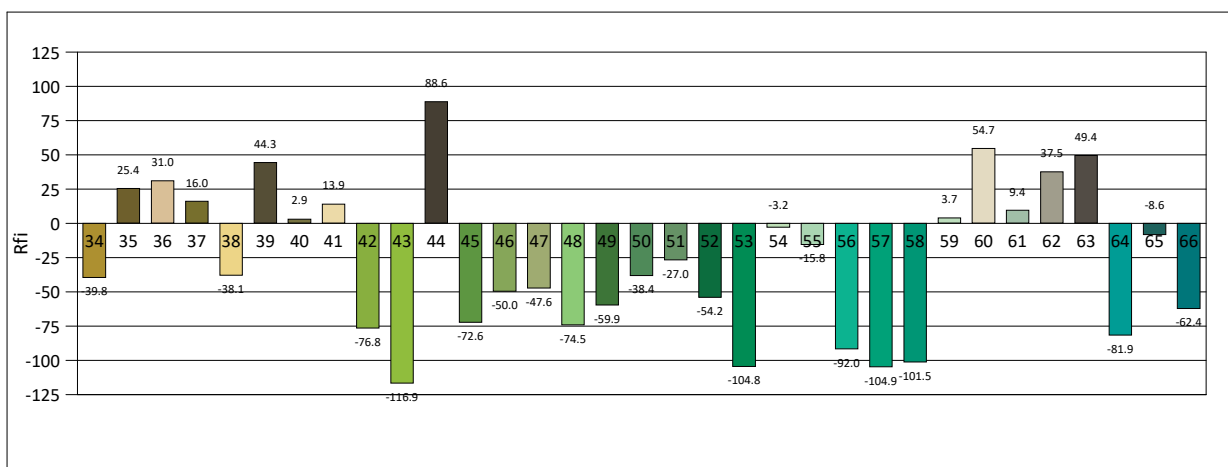
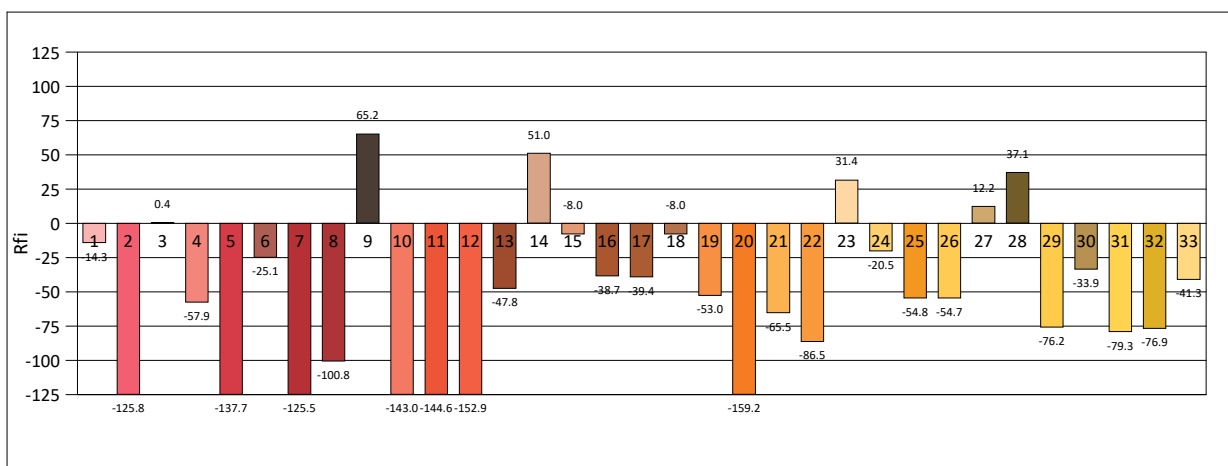
Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:47:15

Remark :



LED Test Report

Product Mark

Product Type : F52-R400-140H12 BLUE

Manufacturer :

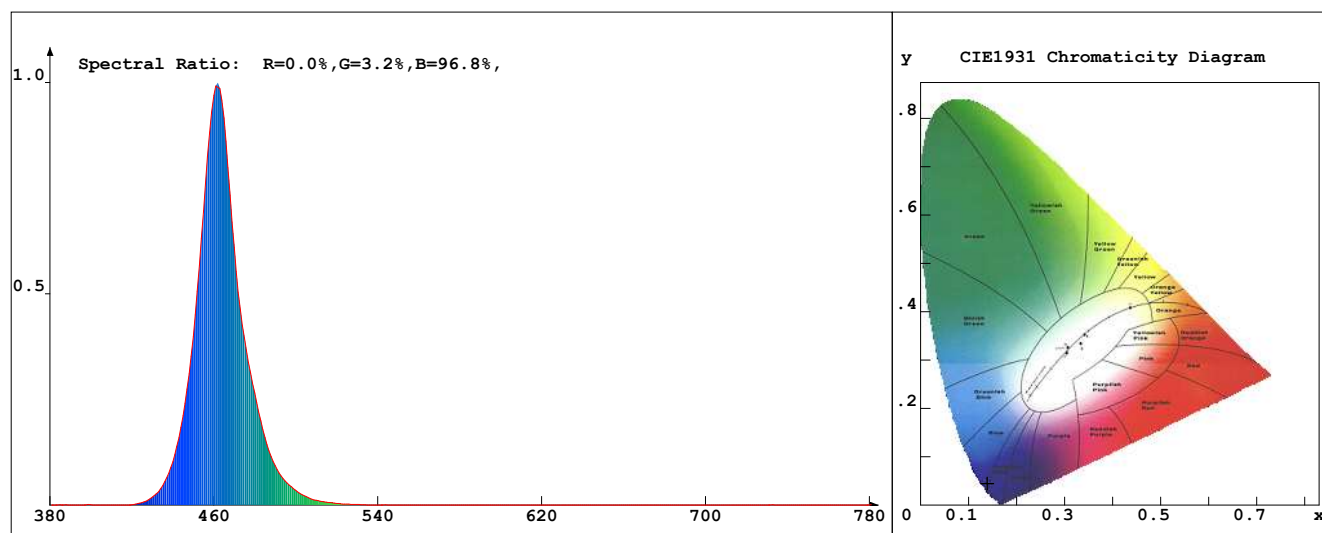
Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:44:13

Remark:



Chroma Parameters

Chro.Coord.:x=0.1391 y=0.0450 u=0.1706 v=0.0827 duv=-0.0357

CCT:100000K Dominant Wave.:465.0nm Purity:98.2% Centre Wave:461.0nm

Flux RGB Ratio:R=0.0%,G=13.5%,B=86.4% Peak Wave:460.7nm Half Width:20.3nm

Rendering Index:Ra=-61.2 CRI=127.1

R1 =-23 R2 =-60 R3 =-152 R4 =-88 R5 =-7 R6 =-69 R7 =-53 R8 =-37

R9 =-299 R10=-272 R11=-119 R12=-129 R13=-46 R14=-37 R15=-5

PPF:4.934umol/s (400-700nm)

PRF:1.3mW (400-700nm)

PAR:0.9mW (400-700nm)

Photo Parameters

Flux:86.18lm Effi.:19.9lm/W Radiant:1275.8mW Iv:0.0mcd

Scotopic Flux:1596.8Plm Effi.:0.0Plm/W S/P:18.5

Efficiency:0.00

Effi Level:A++ (EU 874-2012) Photon Flux:4938.650umol/s (380-780nm)

Ele. Parameters

Forward Current:If=180.0mA

Reverse Voltage:Vr=5.00V

Forward Voltage:Vf=24.07V

Reverse Current:Ir=0.00uA

Power:P=4.330W

Instrument state

Instrument:Lisun

Integral Time: 66.860ms

VPeak: 15544

VDark: 1270

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 BLUE

Temperature : 'C

Operator :

Remark :

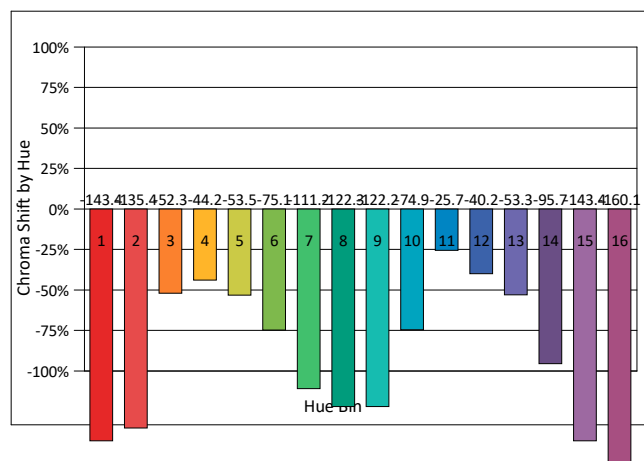
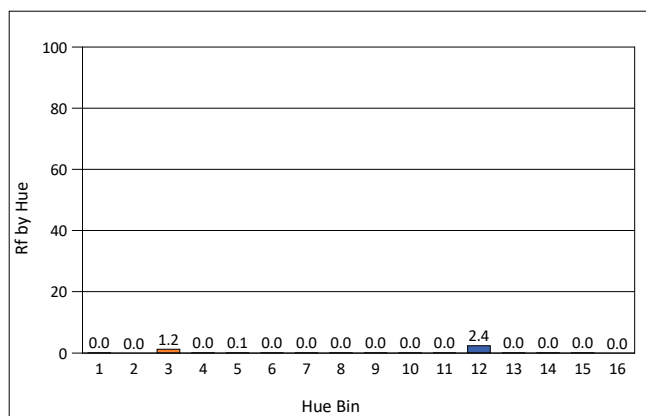
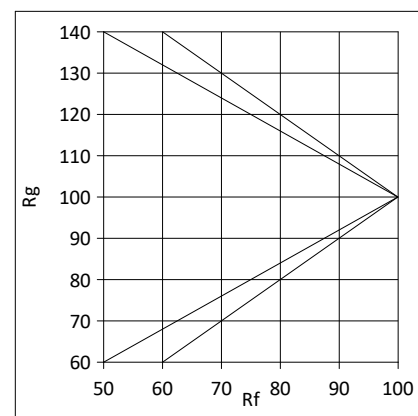
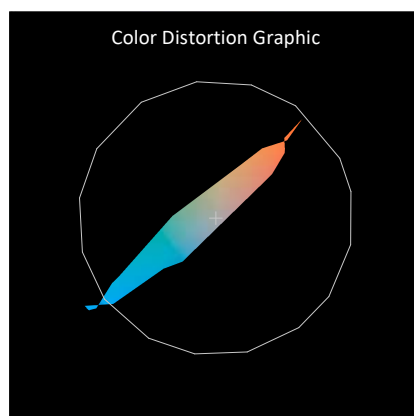
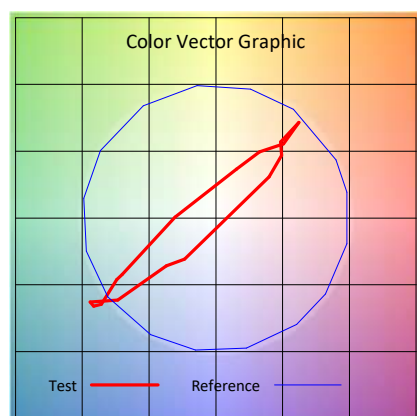
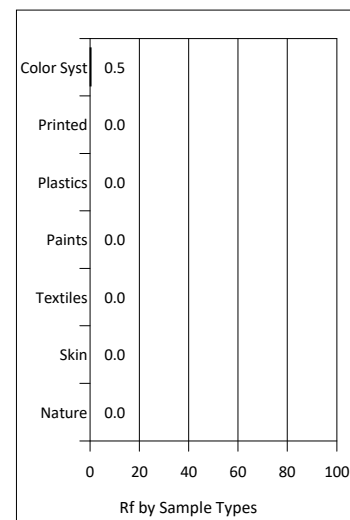
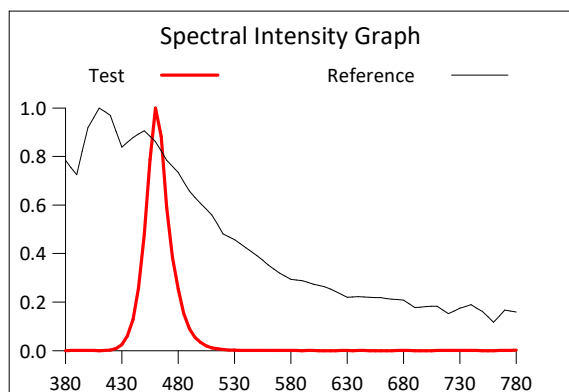
Manufacturer :

Humidity : %

Test Date : 2011-01-01 14:44:13

Rf: 0.0 CCT(K): 100000 u': 0.1706
 Rg: 11.1 LER: 54.7 Duv: -0.0357 v': 0.0827

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-143.4%	-27.7%
2	0.0	-135.4%	1.3%
3	1.2	-52.3%	-13.0%
4	0.0	-44.2%	-32.6%
5	0.1	-53.5%	-53.1%
6	0.0	-75.1%	-89.9%
7	0.0	-111.2%	-80.3%
8	0.0	-122.3%	-59.9%
9	0.0	-122.2%	-38.3%
10	0.0	-74.9%	-21.5%
11	0.0	-25.7%	-42.7%
12	2.4	-40.2%	-68.1%
13	0.0	-53.3%	-100.2%
14	0.0	-95.7%	-118.7%
15	0.0	-143.4%	-102.8%
16	0.0	-160.1%	-74.6%



IES TM-30-2015 Test Report

Product Mark

Product Type : F52-R400-140H12 BLUE

Manufacturer :

Temperature : 'C

Humidity : %

Operator :

Test Date : 2011-01-01 14:44:13

Remark :

