

LED Test Report

Product Mark

Product Type : K52-30s-140H12 BIANCO

Manufacturer :

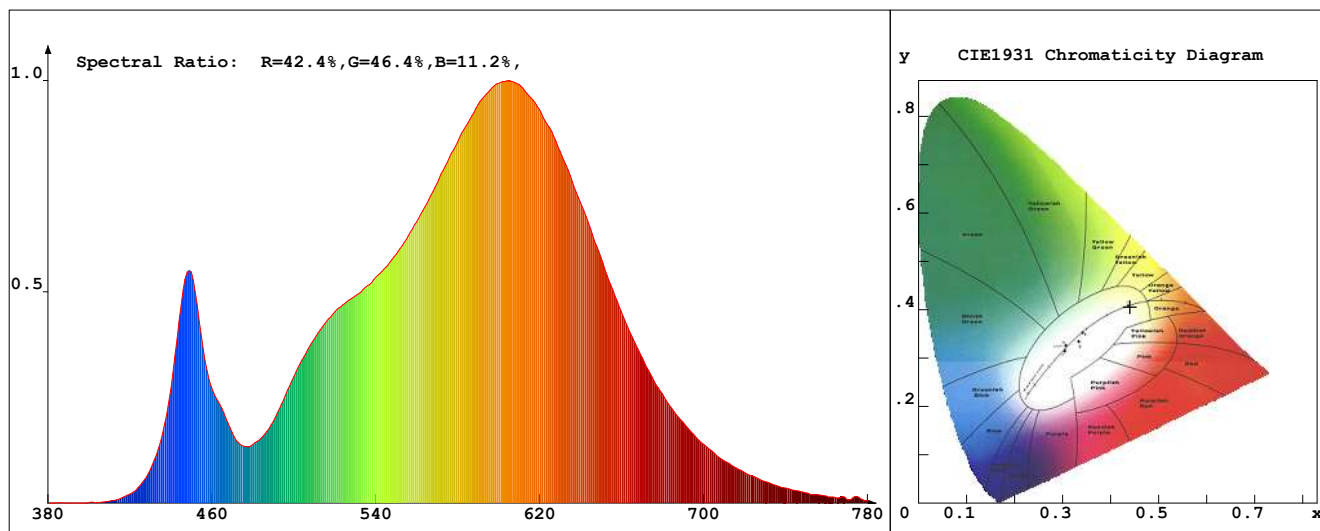
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:42:33

Remark: BIN R620 G520 B 465 3WS LOTTO 444



Chroma Parameters

Chro.Coord.: $x=0.4405$ $y=0.4054$ $u=0.2523$ $v=0.3483$ $duv=0.0000$

CCT: 2951K Dominant Wave.: 583.0nm Purity: 53.9% Centre Wave: 593.8nm

Flux RGB Ratio: $R=22.2\%$, $G=76.5\%$, $B=1.4\%$ Peak Wave: 604.8nm Half Width: 122.6nm

Rendering Index: $R_a=81.4$ CRI= 78.5

R1 =79	R2 =89	R3 =97	R4 =80	R5 =80	R6 =87	R7 =82	R8 =57
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R9 =2	R10=76	R11=80	R12=70	R13=81	R14=99	R15=71	
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PPF: 10.949 $\mu\text{mol/s}$ (400-700nm)

PRF: 2.3mW (400-700nm)

PAR: 2.0mW (400-700nm)

Photo Parameters

Flux: 811.88lm Effi.: 125.3lm/W Radiant: 2328.3mW Iv: 0.0mcd

Scotopic Flux: 1051.4Plm Effi.: 0.0Plm/W S/P: 1.3

Efficiency: 0.00

Effi Level: A++ (EU 874-2012) Photon Flux: 11309.600 $\mu\text{mol/s}$ (380-780nm)

Ele. Parameters

Forward Current: $I_f=272.0\text{mA}$ Reverse Voltage: $V_r=5.00\text{V}$ Forward Voltage: $V_f=23.82\text{V}$ Reverse Current: $I_r=0.00\mu\text{A}$ Power: $P=6.501\text{W}$

Instrument state

Instrument: Lisun

Integral Time: 179.796ms

VPeak: 14168

VDark: 1177

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 BIANCO

Manufacturer :

Temperature : °C

Humidity : %

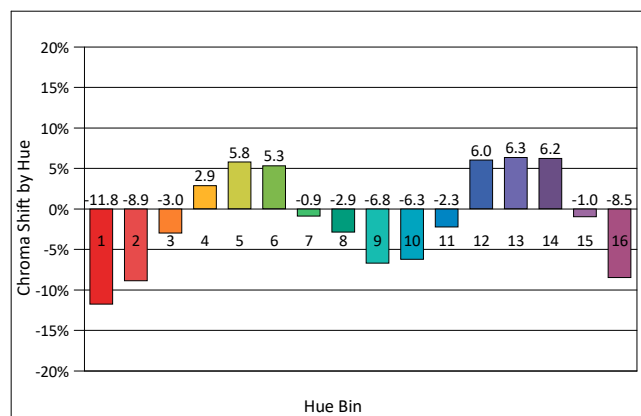
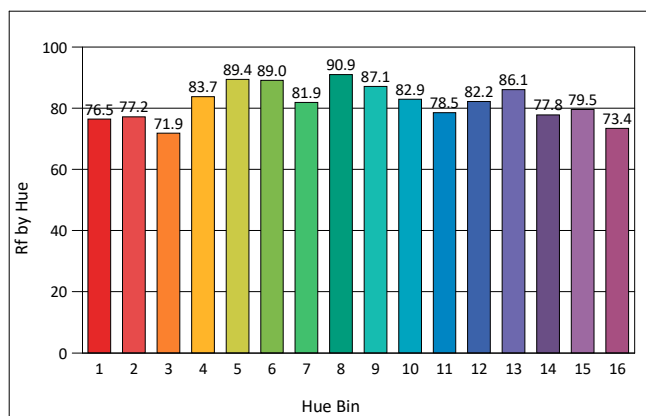
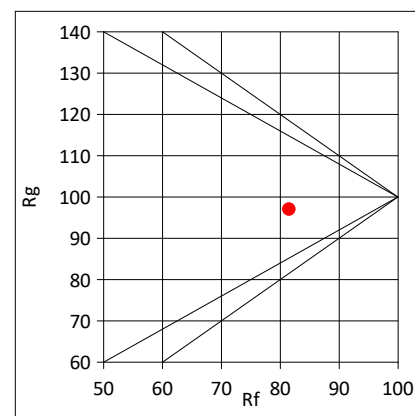
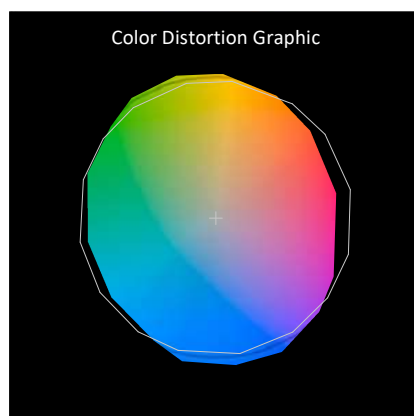
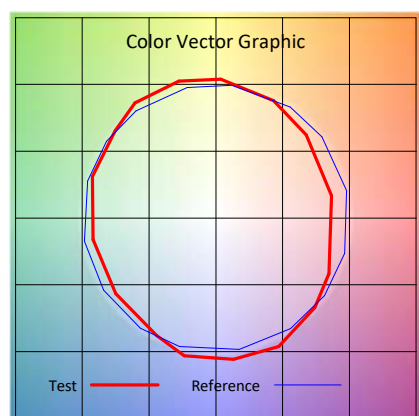
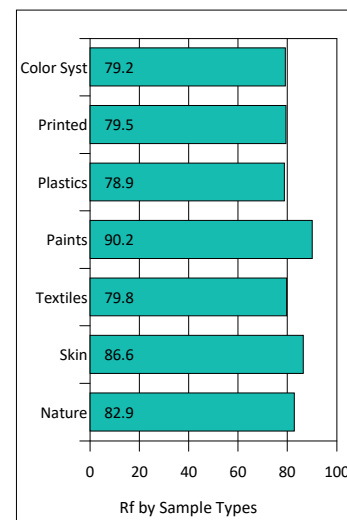
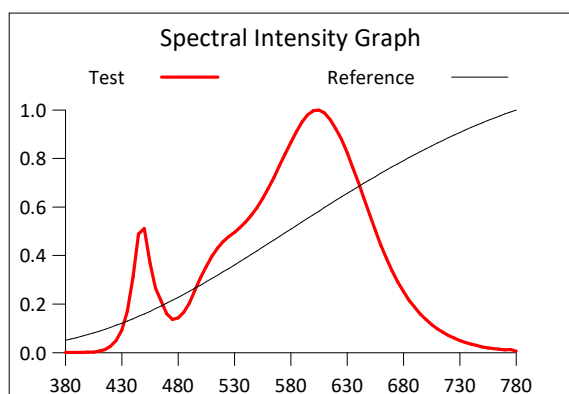
Operator :

Test Date : 07-07-21 12:42:33

Remark: BIN R620 G520 B 465 3WS LOTTO 444

Rf: 81.5 CCT(K): 2951 u': 0.2523
 Rg: 97.0 LER: 334.9 Duv: 0.0000 v': 0.3483

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	76.5	-11.8%	-1.5%
2	77.2	-8.9%	7.6%
3	71.9	-3.0%	13.1%
4	83.7	2.9%	8.9%
5	89.4	5.8%	5.4%
6	89.0	5.3%	-2.9%
7	81.9	-0.9%	-10.1%
8	90.9	-2.9%	-3.8%
9	87.1	-6.8%	0.1%
10	82.9	-6.3%	7.2%
11	78.5	-2.3%	13.2%
12	82.2	6.0%	5.0%
13	86.1	6.3%	-5.6%
14	77.8	6.2%	-14.9%
15	79.5	-1.0%	-11.3%
16	73.4	-8.5%	-17.0%



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Product Mark

Product Type : K52-30s-140H12 BIANCO

Manufacturer :

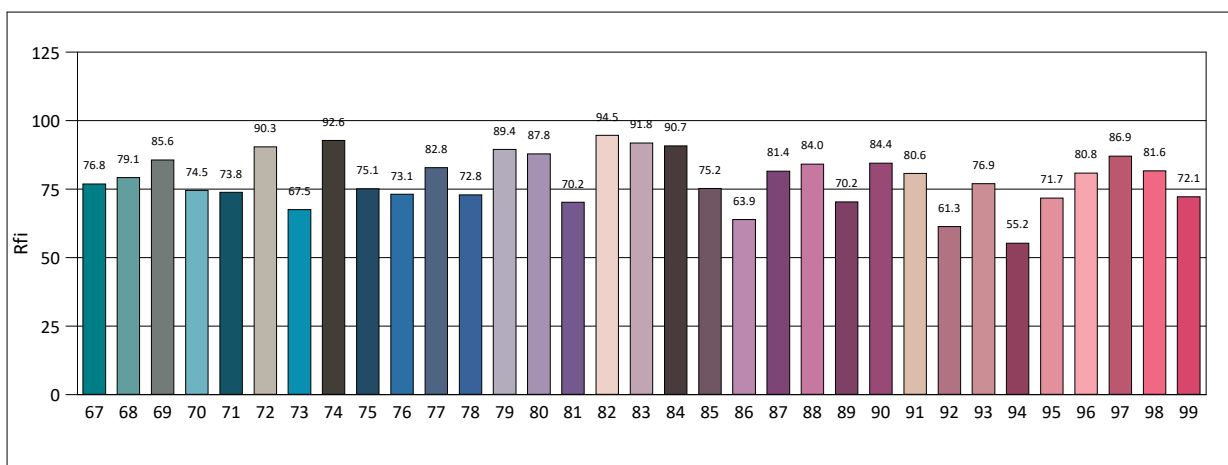
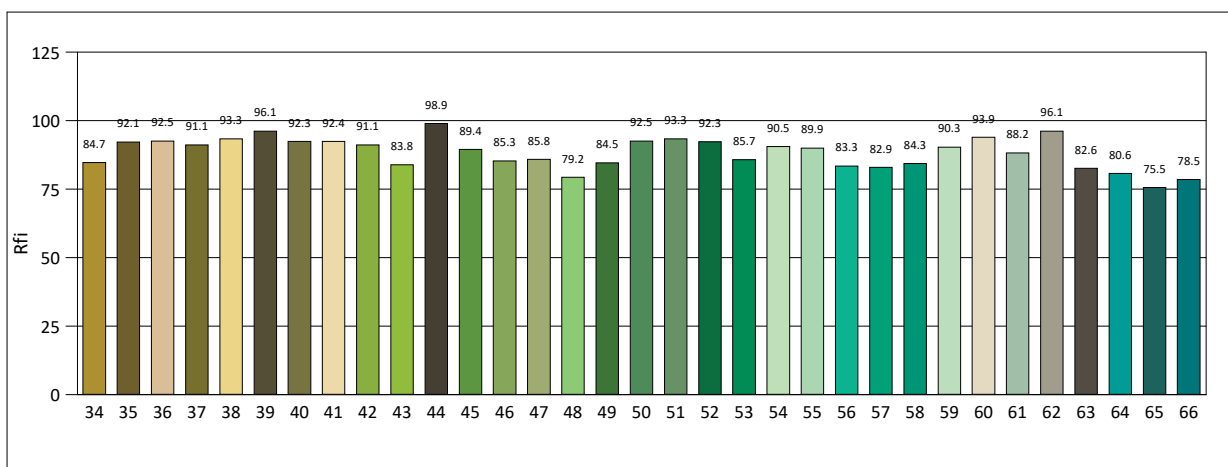
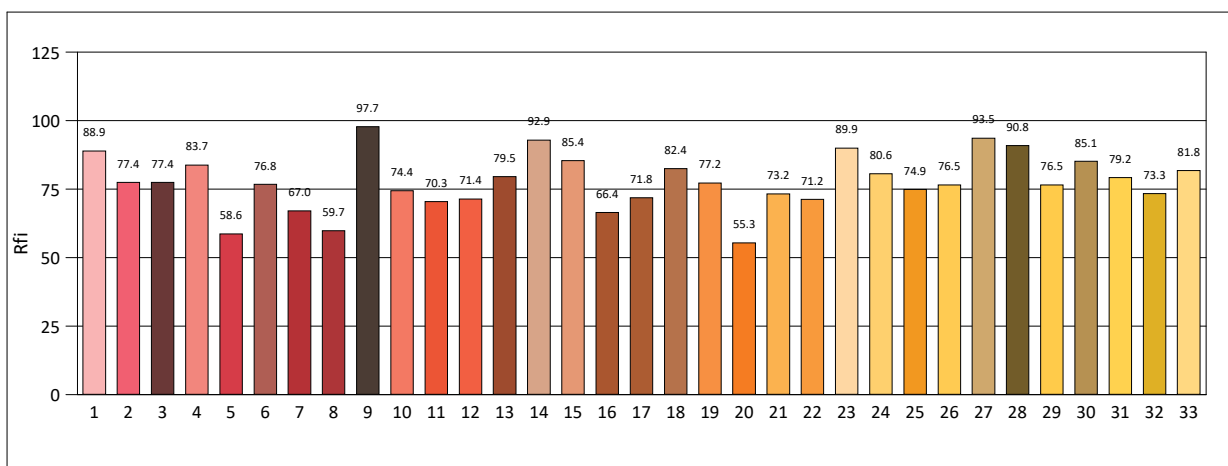
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:42:33

Remark: BIN R620 G520 B 465 3WS LOTTO 444



LED Test Report

Product Mark

Product Type : K52-30s-140H12 RGB

Manufacturer :

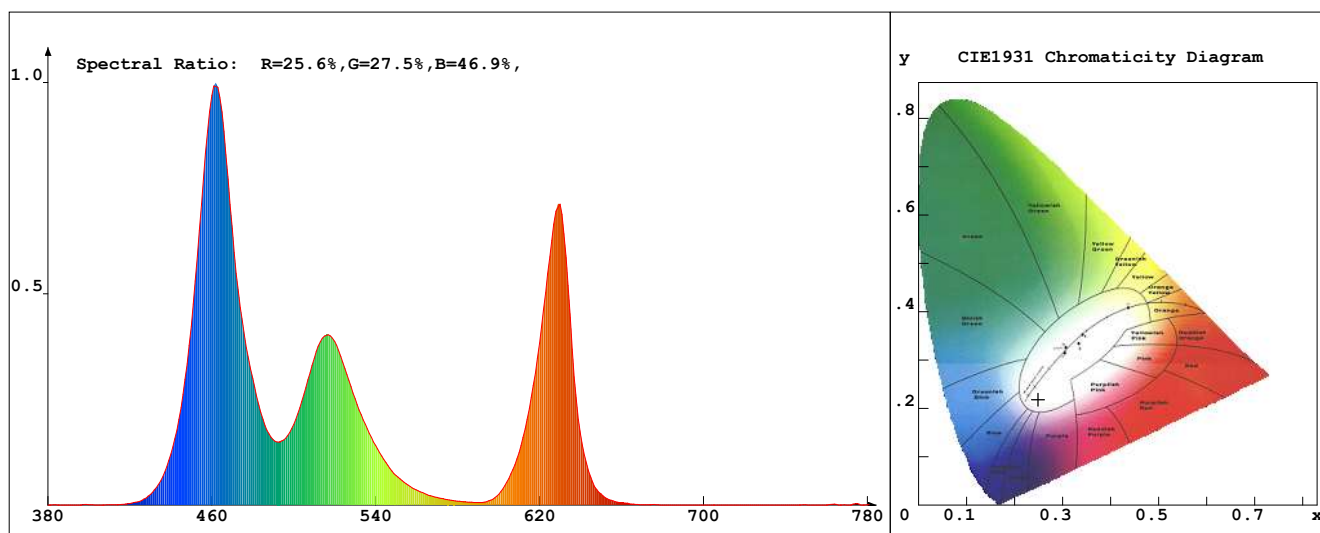
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:51:10

Remark: BIN R620 G520 B 465 3WS LOTTO 444



Chroma Parameters

Chro.Coord.: $x=0.2488$ $y=0.2179$ $u=0.1945$ $v=0.2555$ $duv=-0.0160$

CCT:100000K Dominant Wave.:468.7nm Purity:41.1% Centre Wave:461.3nm

Flux RGB Ratio:R=27.3%,G=61.0%,B=11.7% Peak Wave:460.7nm Half Width:21.7nm

Rendering Index:Ra= 24.6 CRI= 84.4

R1 =-5 R2 =34 R3 =65 R4 =20 R5 =22 R6 =32 R7 =54 R8 =-23

R9 =-292 R10=-58 R11=-1 R12=39 R13=-0 R14=74 R15=-25

PPF:5.455umol/s (400-700nm)

PRF:1.3mW (400-700nm)

PAR:1.0mW (400-700nm)

Photo Parameters

Flux:266.14lm Effi.:41.0lm/W Radiant:1256.0mW Iv:0.0mcd

Scotopic Flux:1148.9Plm Effi.:0.0Plm/W S/P:4.3

Efficiency:0.00

Effi Level:A++ (EU 874-2012) Photon Flux:5463.690umol/s (380-780nm)

Ele. Parameters

Forward Current:If=269.0mA

Reverse Voltage:Vr=5.00V

Forward Voltage:Vf=24.12V

Reverse Current:Ir=0.00uA

Power:P=6.510W

Instrument state

Instrument:Lisun

Integral Time: 143.836ms

VPeak: 14952

VDark: 1279

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 RGB

Temperature : 'C

Operator :

Remark: BIN R620 G520 B 465 3WS LOTTO 444

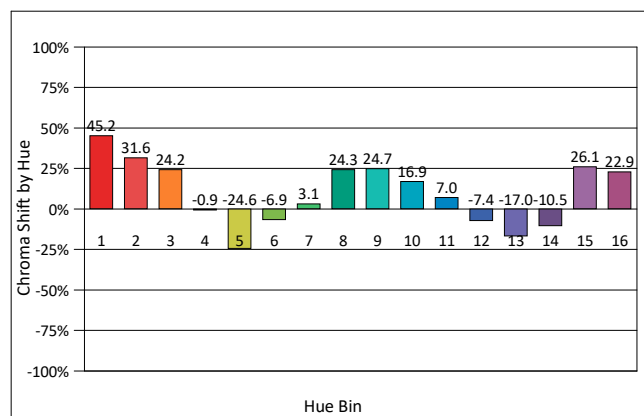
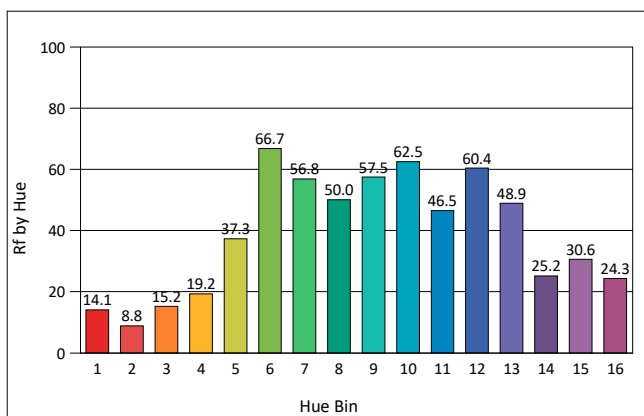
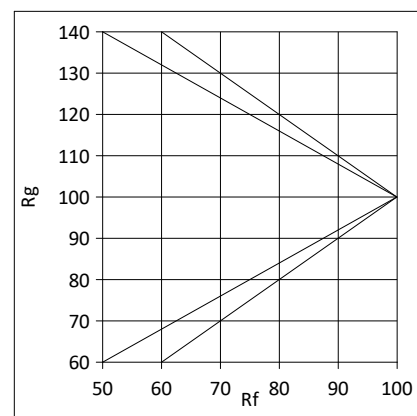
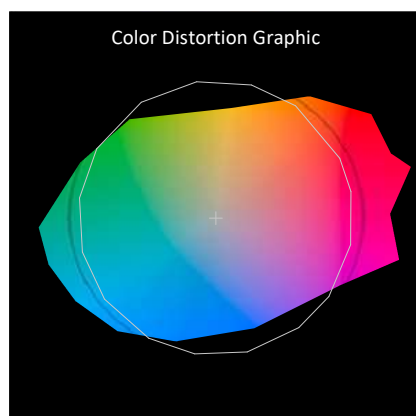
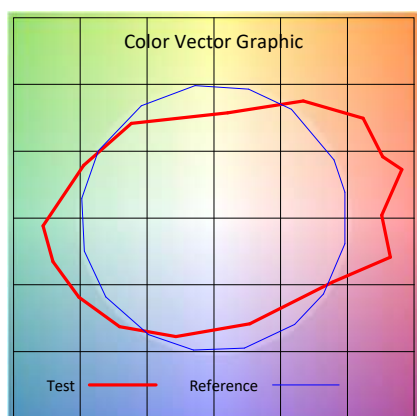
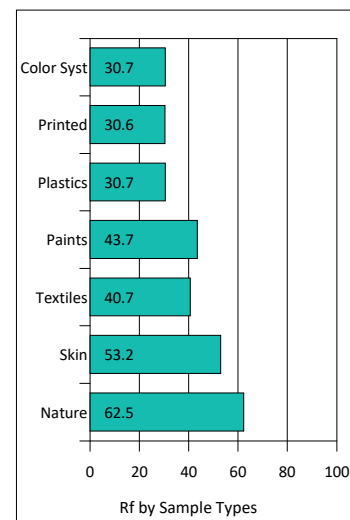
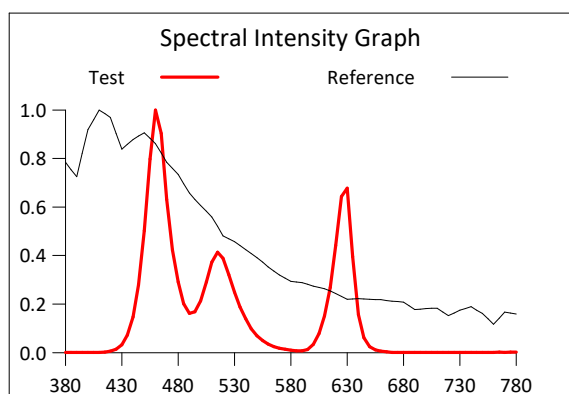
Manufacturer :

Humidity : %

Test Date : 07-07-21 12:51:10

Rf: 40.3 CCT(K): 100000 u': 0.1945
 Rg: 110.0 LER: 201.6 Duv: -0.0160 v': 0.2555

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	14.1	45.2%	8.4%
2	8.8	31.6%	-18.1%
3	15.2	24.2%	-48.5%
4	19.2	-0.9%	-42.0%
5	37.3	-24.6%	-19.9%
6	66.7	-6.9%	13.6%
7	56.8	3.1%	15.3%
8	50.0	24.3%	25.9%
9	57.5	24.7%	3.2%
10	62.5	16.9%	-10.9%
11	46.5	7.0%	-21.4%
12	60.4	-7.4%	-14.9%
13	48.9	-17.0%	7.6%
14	25.2	-10.5%	41.1%
15	30.6	26.1%	50.7%
16	24.3	22.9%	26.3%



IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 RGB

Manufacturer :

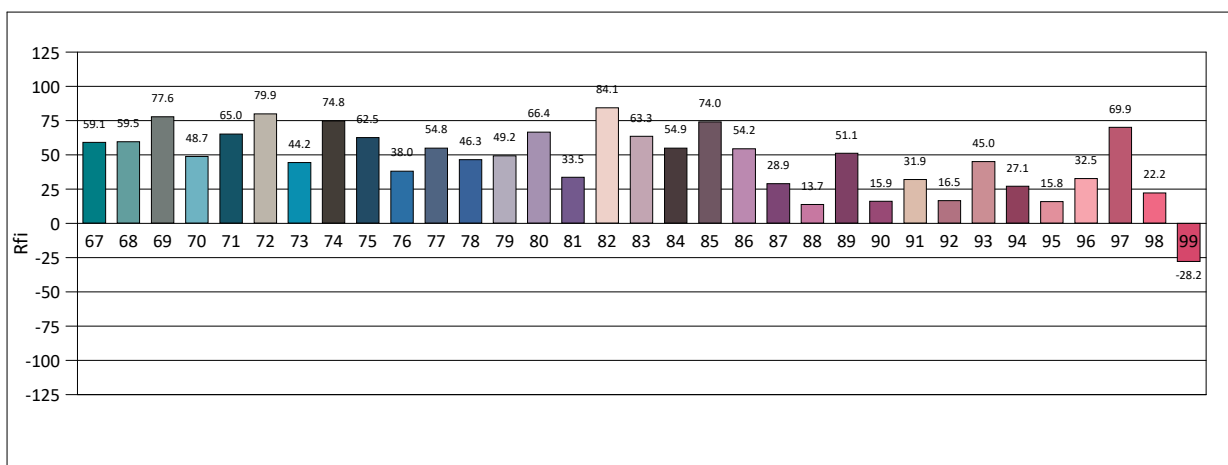
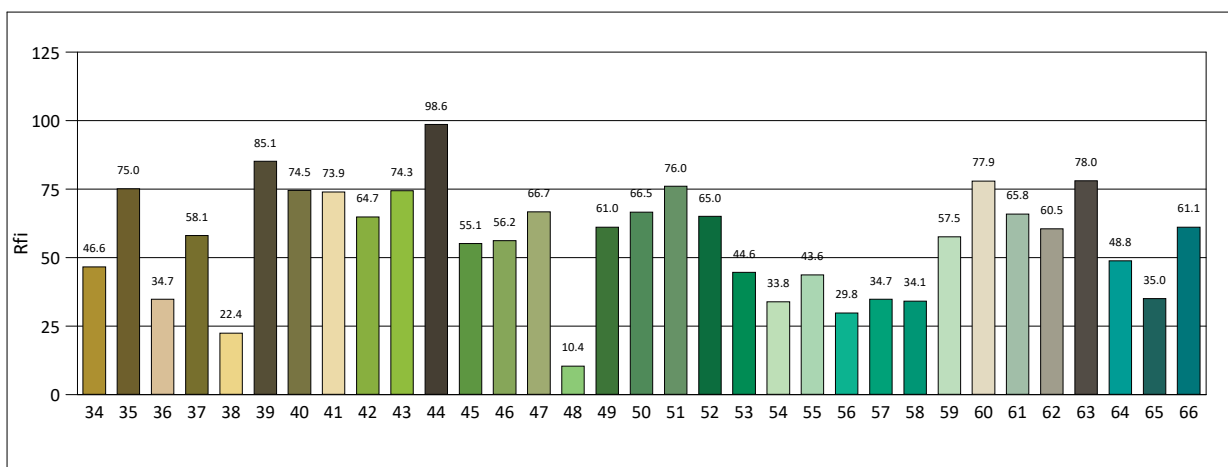
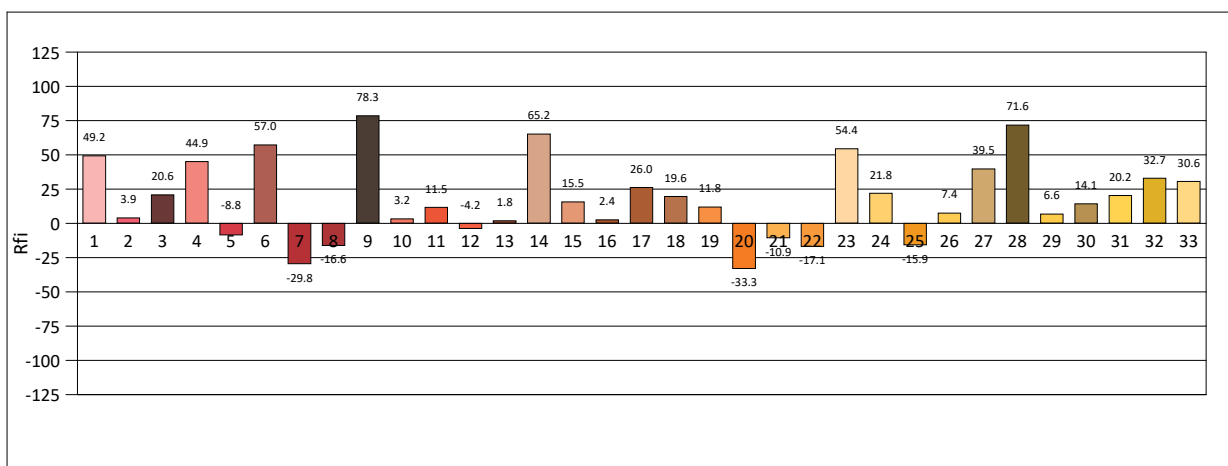
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:51:10

Remark: BIN R620 G520 B 465 3WS LOTTO 444



LED Test Report

Product Mark

Product Type : K52-30s-140H12 RED

Manufacturer :

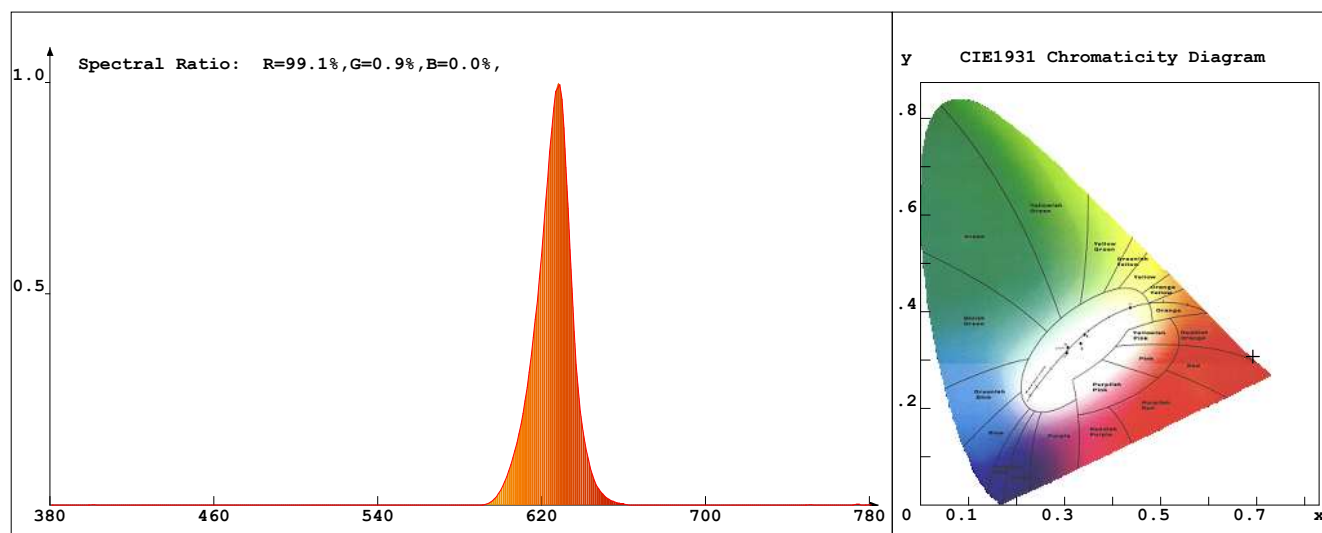
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:58:59

Remark: BIN R620 G520 B 465 3WS LOTTO 444



Chroma Parameters

Chro.Coord.: x=0.6922 y=0.3073 u=0.5221 v=0.3477 duv=-0.0006

CCT: 1326K Dominant Wave.: 620.5nm Purity: 99.9% Centre Wave: 625.5nm

Flux RGB Ratio: R=98.3%, G=1.7%, B=0.0% Peak Wave: 627.5nm Half Width: 16.8nm

Rendering Index: Ra=-22.3 CRI=107.1

R1 =-47 R2 =54 R3 =7 R4 =-78 R5 =-42 R6 =57 R7 =-13 R8 =-117

R9 =-350 R10=41 R11=-90 R12=27 R13=-19 R14=38 R15=-85

PPF: 1.669 $\mu\text{mol/s}$ (400-700nm)

PRF: 0.3mW (400-700nm)

PAR: 0.3mW (400-700nm)

Photo Parameters

Flux: 71.55lm Effi.: 33.2lm/W Radiant: 319.9mW Iv: 0.0mcd

Scotopic Flux: 3.6Plm Effi.: 0.0Plm/W S/P: 0.1

Efficiency: 0.00

Effi Level: A++ (EU 874-2012) Photon Flux: 1670.730 $\mu\text{mol/s}$ (380-780nm)

Ele. Parameters

Forward Current: If=89.0mA

Reverse Voltage: Vr=5.00V

Forward Voltage: Vf=24.19V

Reverse Current: Ir=0.00uA

Power: P=2.161W

Instrument state

Instrument: Lisun

Integral Time: 200.000ms

VPeak: 15416

VDark: 1192

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 RED

Temperature : 'C

Operator :

Remark: BIN R620 G520 B 465 3WS LOTTO 444

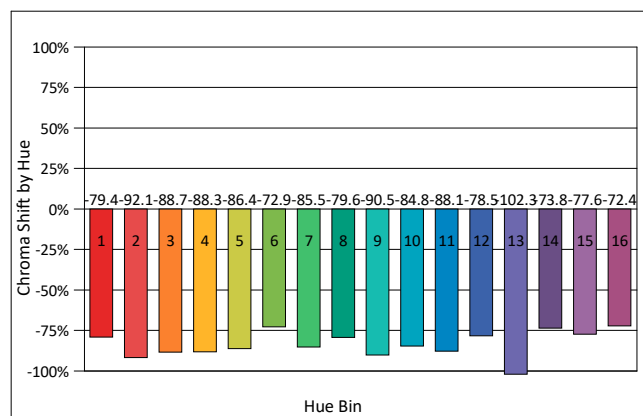
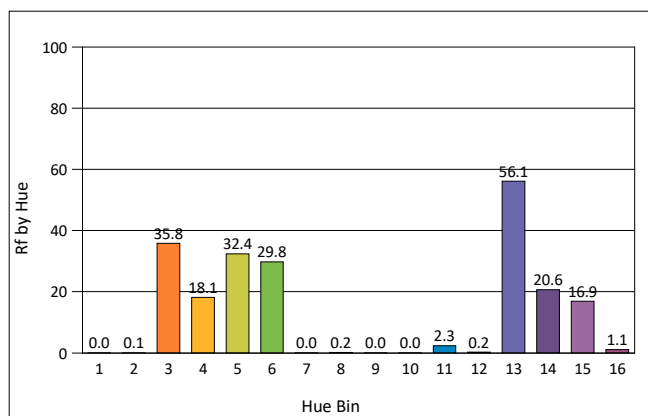
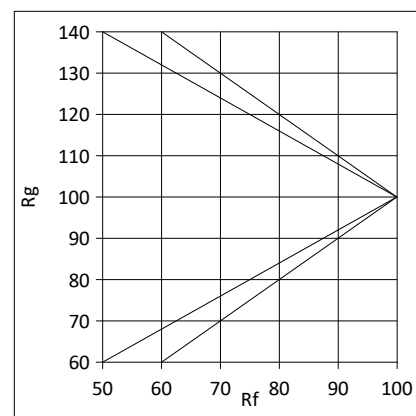
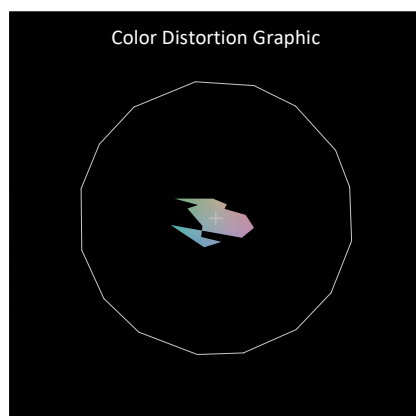
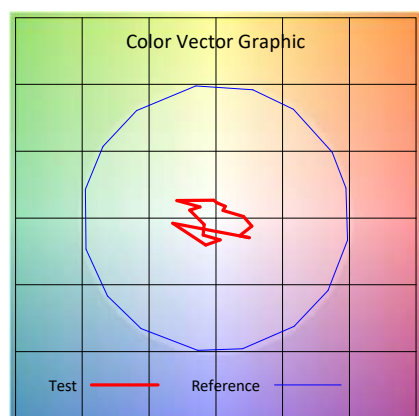
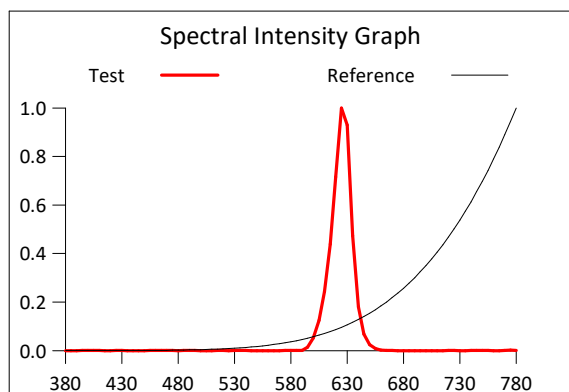
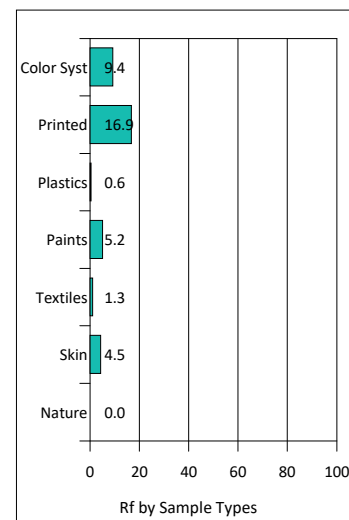
Manufacturer :

Humidity : %

Test Date : 07-07-21 12:58:59

Rf: 0.6 CCT(K): 1326 u': 0.5221
 Rg: 2.0 LER: 225.8 Duv: -0.0006 v': 0.3477

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-79.4%	-6.0%
2	0.1	-92.1%	9.2%
3	35.8	-88.7%	2.1%
4	18.1	-88.3%	9.7%
5	32.4	-86.4%	3.6%
6	29.8	-72.9%	12.4%
7	0.0	-85.5%	-2.7%
8	0.2	-79.6%	-0.0%
9	0.0	-90.5%	-0.8%
10	0.0	-84.8%	2.0%
11	2.3	-88.1%	12.3%
12	0.2	-78.5%	-9.6%
13	56.1	-102.3%	-32.9%
14	20.6	-73.8%	9.1%
15	16.9	-77.6%	-2.6%
16	1.1	-72.4%	-3.6%



IES TM-30-2015 Test Report

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Manufacturer :

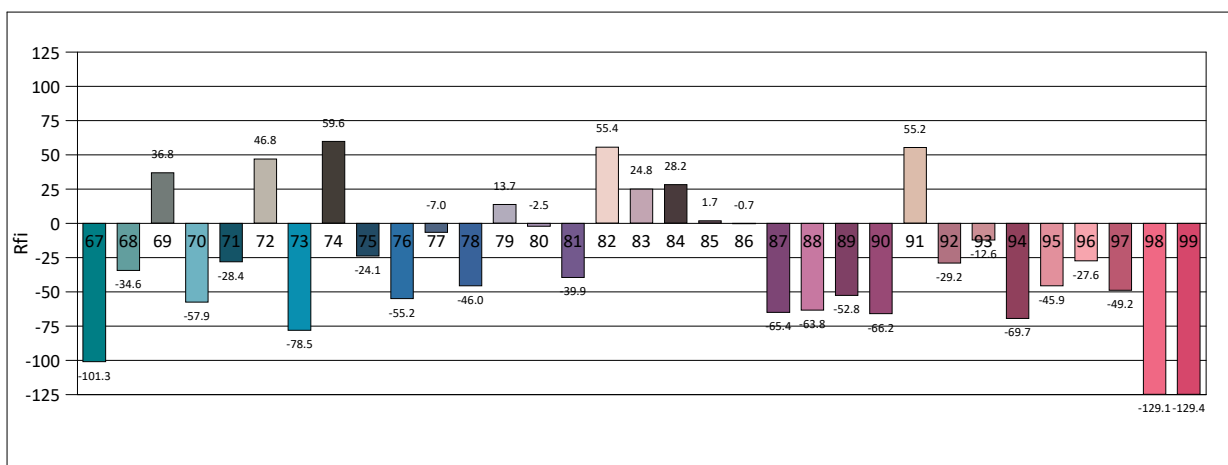
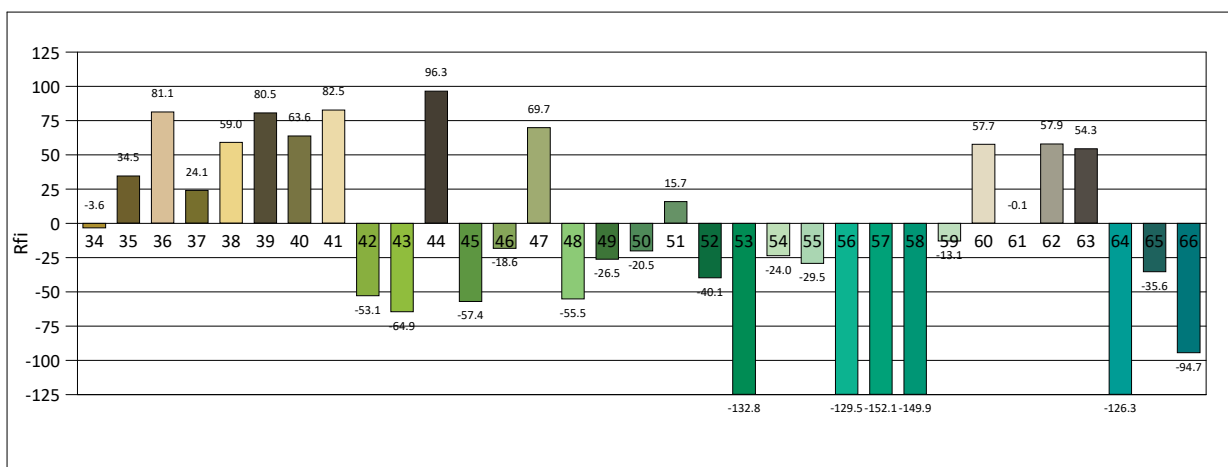
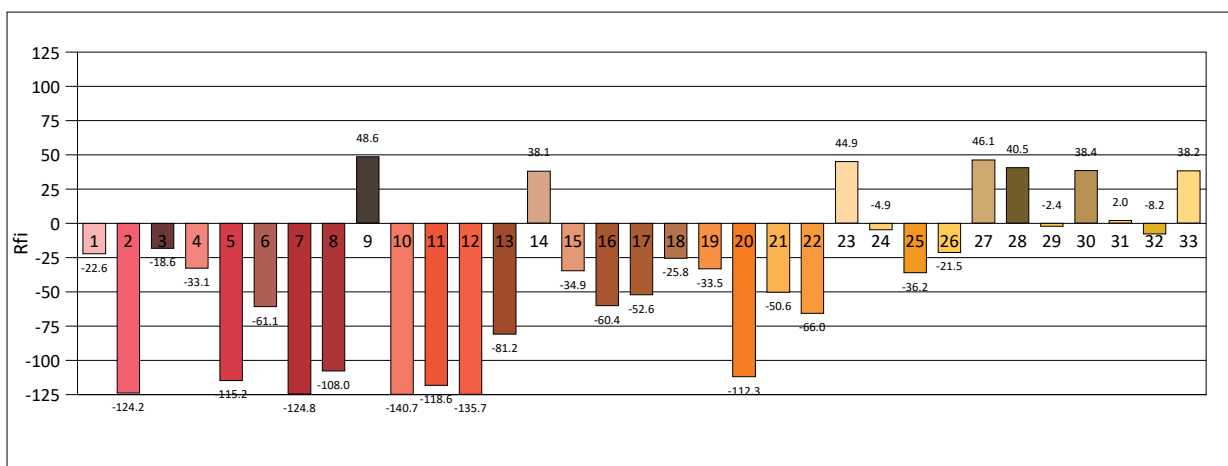
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:58:59

Remark: BIN R620 G520 B 465 3WS LOTTO 444



LED Test Report

Product Mark

Product Type : K52-30s-140H12 GREEN

Manufacturer :

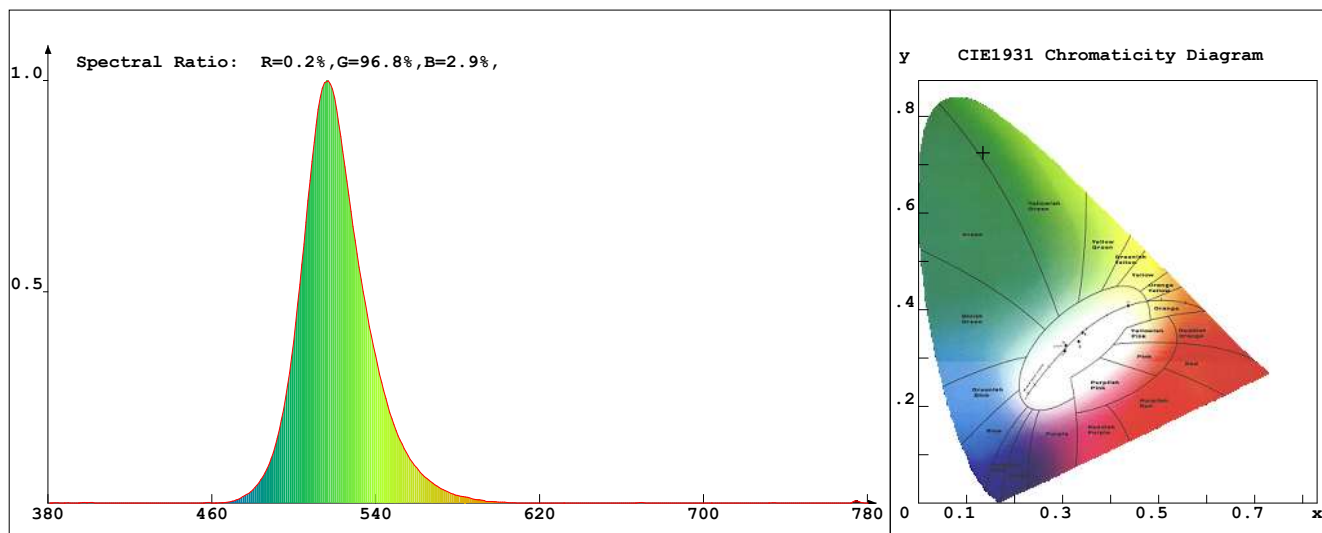
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 13:00:42

Remark: BIN R620 G520 B 465 3WS LOTTO 444



Chroma Parameters

Chro.Coord.: $x=0.1340$ $y=0.7248$ $u=0.0469$ $v=0.3805$ $duv=0.1675$

CCT: 8436K Dominant Wave.: 520.5nm Purity: 78.2% Centre Wave: 517.3nm

Flux RGB Ratio: $R=0.1\%$, $G=99.2\%$, $B=0.7\%$ Peak Wave: 515.6nm Half Width: 31.3nm

Rendering Index: $R_a=-29.0$ CRI=106.4

R1 = -38 R2 = -13 R3 = -33 R4 = -71 R5 = -12 R6 = -21 R7 = -12 R8 = -33

R9 = -362 R10 = -116 R11 = -100 R12 = -37 R13 = -45 R14 = 34 R15 = -33

PPF: 1.398 $\mu\text{mol/s}$ (400-700nm)

PRF: 0.3mW (400-700nm)

PAR: 0.2mW (400-700nm)

Photo Parameters

Flux: 159.96lm Effi.: 74.2lm/W Radiant: 321.9mW Iv: 0.0mcd

Scotopic Flux: 521.1Plm Effi.: 0.0Plm/W S/P: 3.3

Efficiency: 0.00

Effi Level: A++ (EU 874-2012) Photon Flux: 1400.490 $\mu\text{mol/s}$ (380-780nm)

Ele. Parameters

Forward Current: $I_f=89.0\text{mA}$ Reverse Voltage: $V_r=5.00\text{V}$ Forward Voltage: $V_f=24.23\text{V}$ Reverse Current: $I_r=0.00\mu\text{A}$ Power: $P=2.161\text{W}$

Instrument state

Instrument: Lisun

Integral Time: 282.942ms

VPeak: 13656

VDark: 1331

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 GREEN

Manufacturer :

Temperature : 'C

Humidity : %

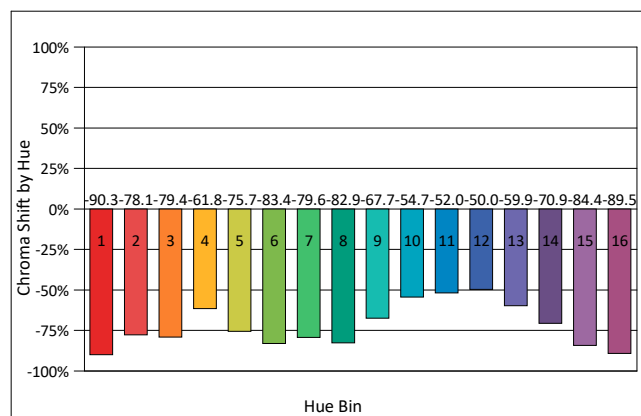
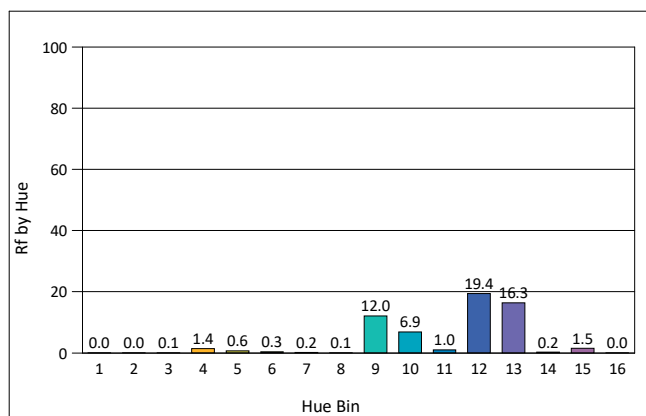
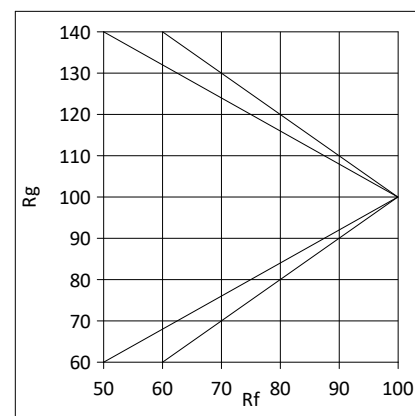
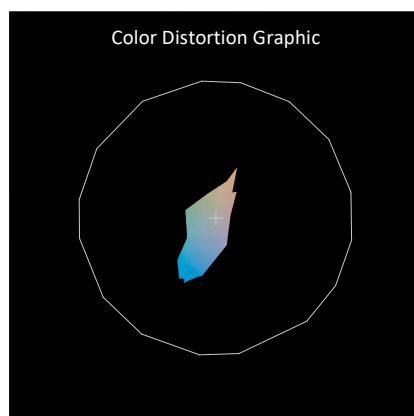
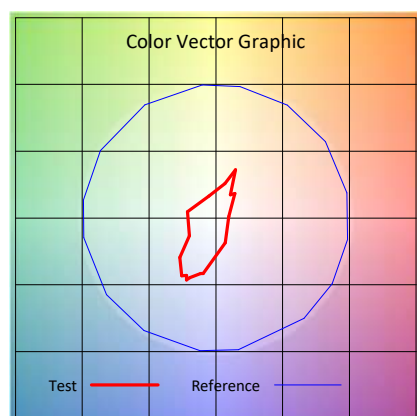
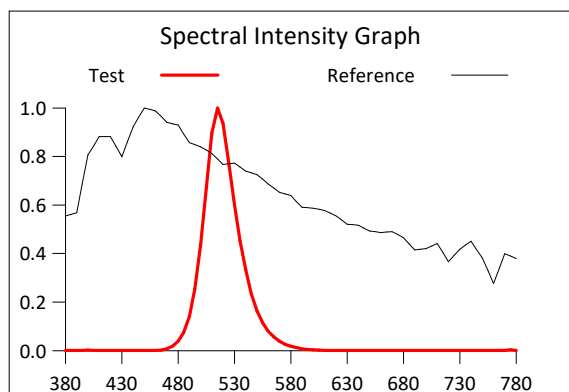
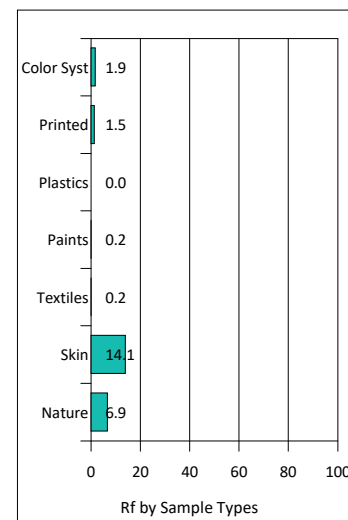
Operator :

Test Date : 07-07-21 13:00:42

Remark: BIN R620 G520 B 465 3WS LOTTO 444

Rf: 0.3 CCT(K): 8436 u': 0.0469
 Rg: 5.3 LER: 447.4 Duv: 0.1675 v': 0.3805

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-90.3%	0.0%
2	0.0	-78.1%	5.6%
3	0.1	-79.4%	-1.9%
4	1.4	-61.8%	-8.7%
5	0.6	-75.7%	-2.3%
6	0.3	-83.4%	-2.0%
7	0.2	-79.6%	1.9%
8	0.1	-82.9%	10.8%
9	12.0	-67.7%	28.7%
10	6.9	-54.7%	19.4%
11	1.0	-52.0%	3.5%
12	19.4	-50.0%	-20.2%
13	16.3	-59.9%	-25.0%
14	0.2	-70.9%	-45.7%
15	1.5	-84.4%	-47.2%
16	0.0	-89.5%	-20.4%



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Manufacturer :

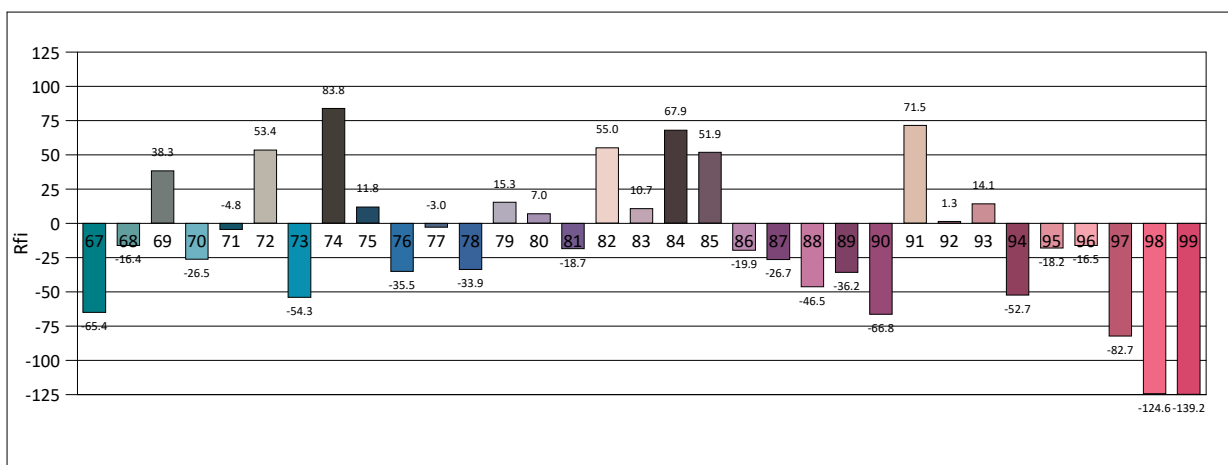
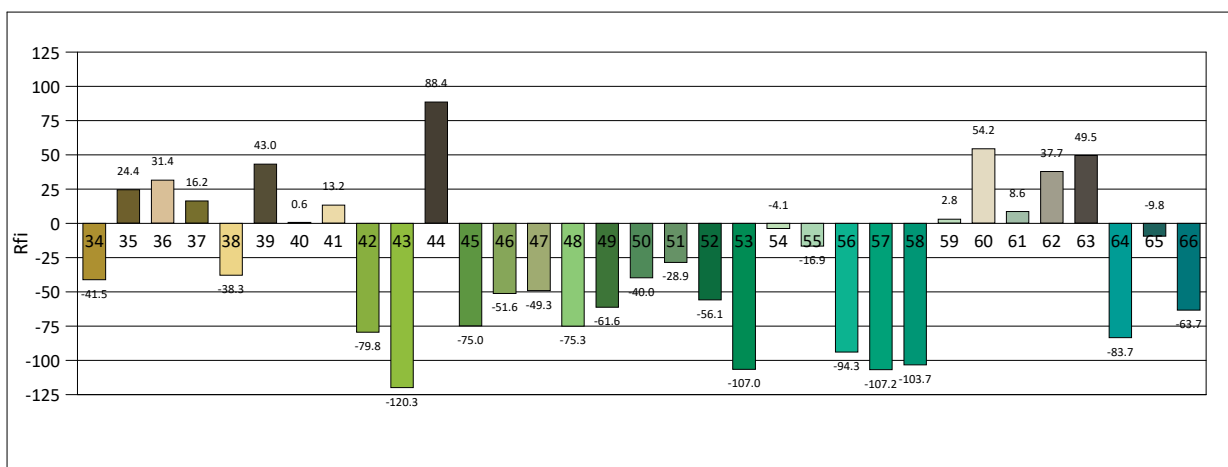
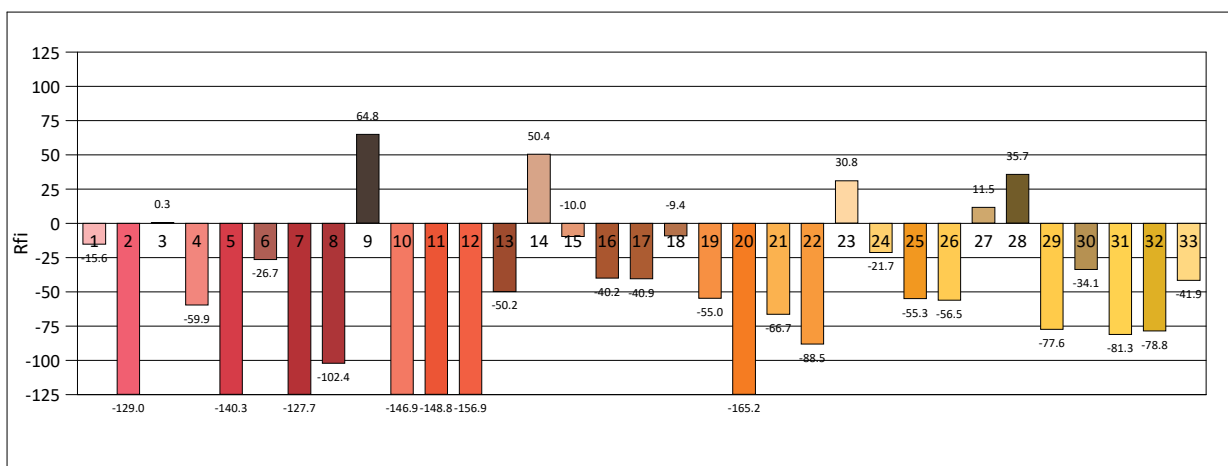
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 13:00:42

Remark: BIN R620 G520 B 465 3WS LOTTO 444



LED Test Report

Product Mark

Product Type : K52-30s-140H12 BLU

Manufacturer :

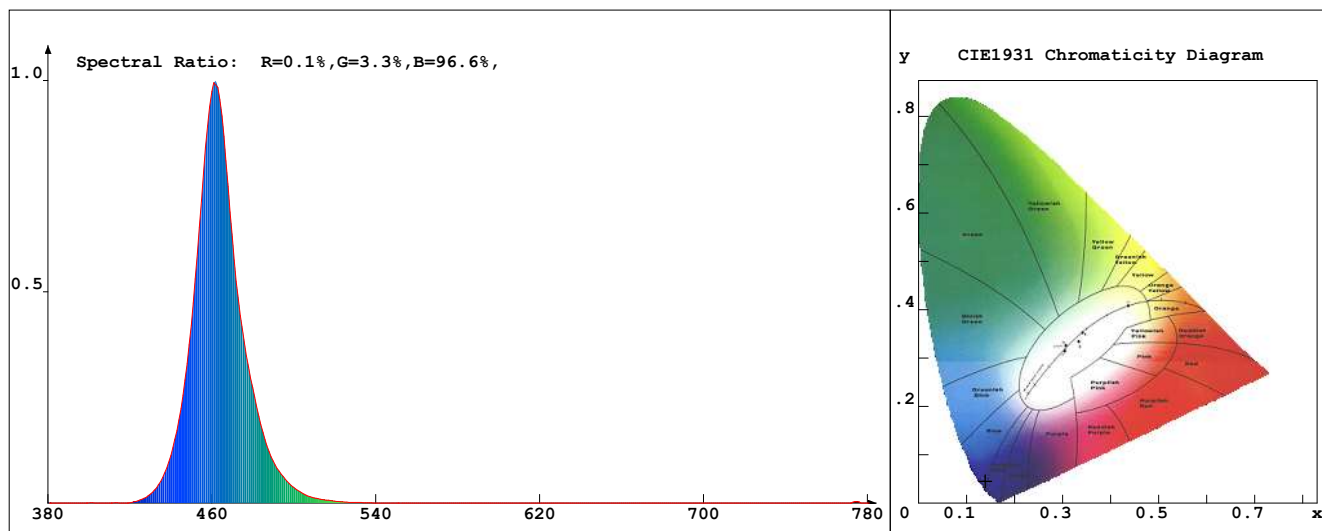
Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:56:39

Remark: BIN R620 G520 B 465 3WS LOTTO 444



Chroma Parameters

Chro.Coord.: x=0.1392 y=0.0454 u=0.1705 v=0.0834 duv=-0.0354

CCT:100000K Dominant Wave.:465.0nm Purity:98.1% Centre Wave:461.1nm

Flux RGB Ratio:R=0.0%,G=14.5%,B=85.5% Peak Wave:460.7nm Half Width:21.3nm

Rendering Index:Ra=-60.2 CRI=125.6

R1 =-22 R2 =-58 R3 =-150 R4 =-87 R5 =-7 R6 =-68 R7 =-52 R8 =-37

R9 =-298 R10=-267 R11=-119 R12=-128 R13=-45 R14=-36 R15=-4

PPF:2.243umol/s (400-700nm)

PRF:0.6mW (400-700nm)

PAR:0.4mW (400-700nm)

Photo Parameters

Flux:39.08lm Effi.:18.2lm/W Radiant:580.1mW Iv:0.0mcd

Scotopic Flux:717.9Plm Effi.:0.0Plm/W S/P:18.4

Efficiency:0.00

Effi Level:A++ (EU 874-2012) Photon Flux:2246.060umol/s (380-780nm)

Ele. Parameters

Forward Current:If=89.0mA

Reverse Voltage:Vr=5.00V

Forward Voltage:Vf=24.07V

Reverse Current:Ir=0.00uA

Power:P=2.161W

Instrument state

Instrument:Lisun

Integral Time: 143.836ms

VPeak: 14840

VDark: 1286

Scan Range: 380-780nm

Product ID: 201508924

IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 BLU

Manufacturer :

Temperature : 'C

Humidity : %

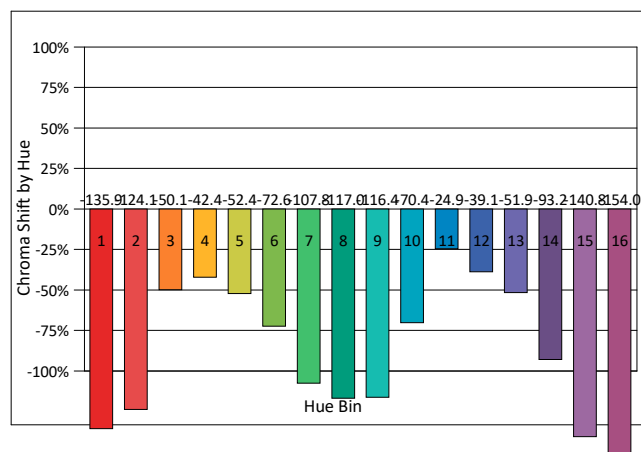
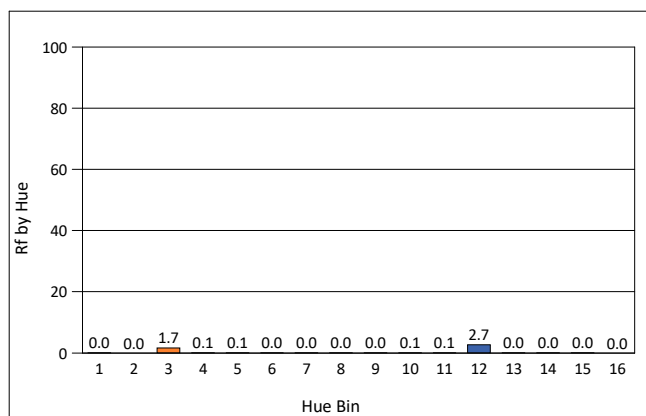
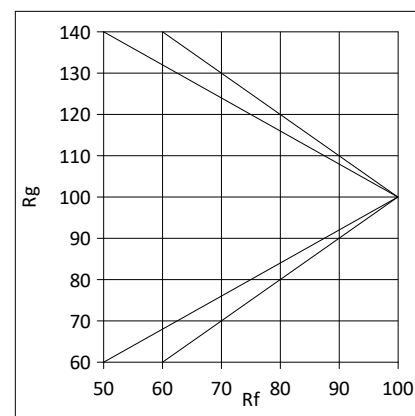
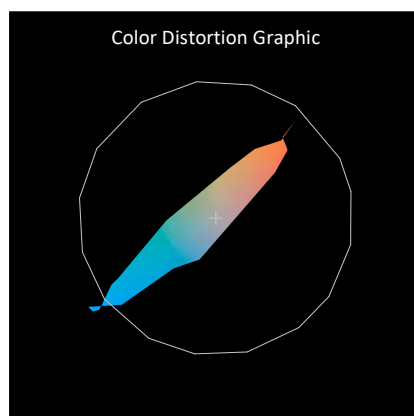
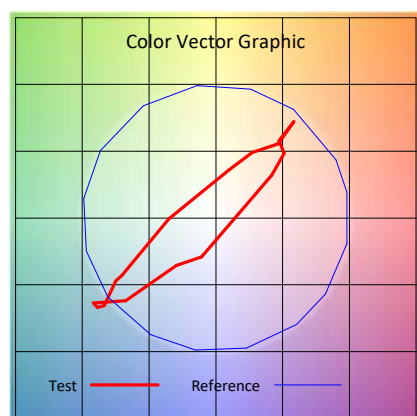
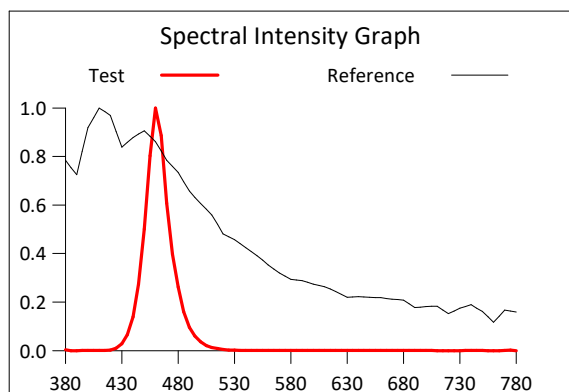
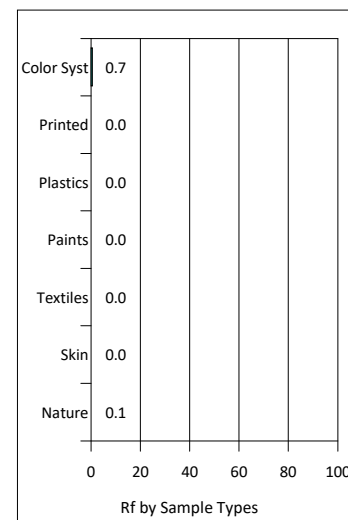
Operator :

Test Date : 07-07-21 12:56:39

Remark: BIN R620 G520 B 465 3WS LOTTO 444

Rf: 0.0 CCT(K): 100000 u': 0.1705
 Rg: 14.6 LER: 55.1 Duv: -0.0354 v': 0.0834

Hue Bin	Rf	Graphic Shifts (%)	
		Chroma	Hue
1	0.0	-135.9%	-28.9%
2	0.0	-124.1%	-4.3%
3	1.7	-50.1%	-14.0%
4	0.1	-42.4%	-34.0%
5	0.1	-52.4%	-52.2%
6	0.0	-72.6%	-86.9%
7	0.0	-107.8%	-78.2%
8	0.0	-117.0%	-58.4%
9	0.0	-116.4%	-38.7%
10	0.1	-70.4%	-23.0%
11	0.1	-24.9%	-42.6%
12	2.7	-39.1%	-68.4%
13	0.0	-51.9%	-98.1%
14	0.0	-93.2%	-116.7%
15	0.0	-140.8%	-102.0%
16	0.0	-154.0%	-74.1%



IES TM-30-2015 Test Report

Product Mark

Product Type : K52-30s-140H12 BLU

Manufacturer :

Temperature : 'C

Humidity : %

Operator :

Test Date : 07-07-21 12:56:39

Remark: BIN R620 G520 B 465 3WS LOTTO 444

