

test report

Robe Robin DL7F Wash



general

date: 05.07.16

tester: th

device: Asensetek

ambient light: 5lx distance: 10m

luminaire

name: Robin DL7F Wash

manufactor Robe type: LED Wash

power consumtion: 1000W

weight: 34kg

illuminant: 7 LED-colour mixing system

serial number: 1600523458 software version: Display System (3.0) 1.3

 Modul-M
 1.4

 Modul L-A
 1.2

 Modul L-B
 1.2

 Modul L-C
 1.2

 Modul-O
 1.1

 Modul-SC
 1.0

 Modul-BD
 1.0

settings: Fresnel-lens

DMX-Mode 3 Theater Mode off

Output Mode: CRI ☐ Output Uniformity on Output Mode: CRI ☐ CRI selection:90



checklist

- 1.0 output
 - 1.1 outputlevel
 - 1.2 light distribution
 - 1.3 dimmercurve
- 2.0 colour rendering
 - 2.1 basic measurement
 - 2.2 internal presets
 - 2.3 green correction
- 3.0 stability
 - 3.1 colortemperature while dimming
 - 3.2 colortemperature while zooming
 - 3.3 colortemperature within beam
 - 3.4 colortemperature within beam using "edge-control"
 - 3.5 illuminance wihle changing colortemperature
- 4.0 GrandMA fixture type check



test results

output

- The luminaire is applicable for use in small and medium sized locations (10m medium zoom 460lx).
- The light distribution shows main characteristic of a wash light.
- The dimming curves are not completely adjusted.

color rendering

- The LEDs are balanced for high CRI values. Since other color rendering indexes use similar methods they all show good to very good values.
- Apart from indexes the spectrum containes a gap in cyan and yellow and a big gap in deep red which is important for skin tones.
- The choosing of the 7 LEDs produces saturated colors (mainly RGB & UV). Since the wavelength are overlapping, the character of the spectrum is near to most white LEDs with the bad blue-peak.
- "Colortemperature correction" is accurate and works well together with "green correction".
- Using the luminaire as keylight, the "CRI-Mode" should necessarily be set.

stability

- CCT-shift while dimming/zooming and within the beam is in some parts very high for cold colors.
- Edge-control is reducing it but not bypassing.
- Edge-control could be automatically set in the CRI-Mode, depending on zoom by choosing a general distance. It should also be manual controlled when using the barndoors.

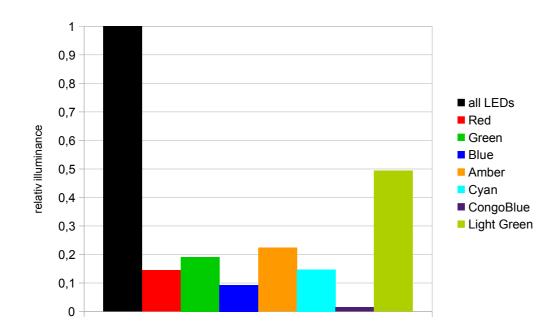
GrandMA fixture type

There are many mistakes in the fixture-library. Some of them are very bad, since they are confusing the operator or disabling him to use a functions.



1 Output

1.1 Output level - narrow zoom



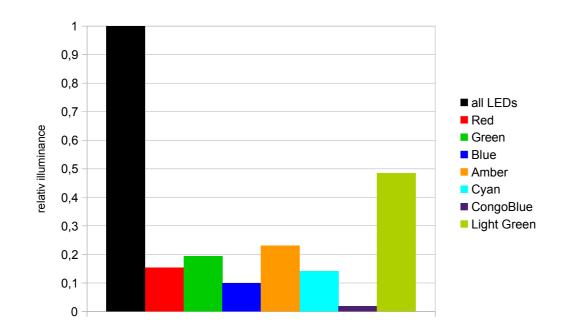
all LEDs	Red	Green	Blue
1.943 lx	282 lx	371 lx	181 lx
		•	

Amber Cyan CongoBlue Light Green
435 lx 286 lx 4 lx 959 lx

*distance: 10m



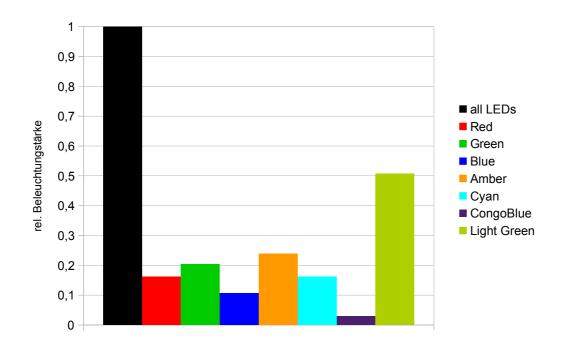
1.1 Output level – medium zoom



all LEDs	Red	Green	Blue
497 lx	76 lx	96 lx	49 lx
Amber	Cyan	CongoBlue	Light Green
114 lx	70 lx	9 lx	241 lx



1.1 Output level – wide zoom

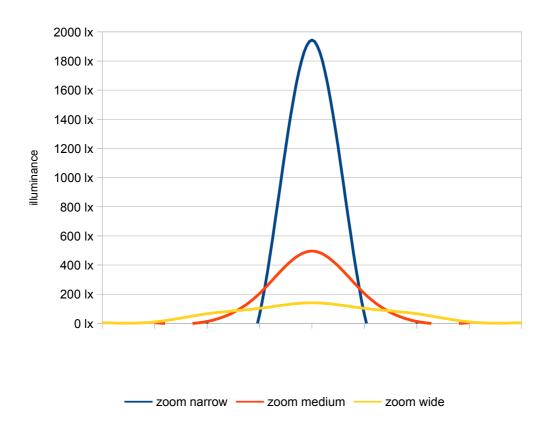


all LEDs	Red	Green	Blue
142 lx	23 lx	29 lx	15 lx

Amber	Amber Cyan		Light Green	
34 lx	23 lx	4 lx	72 lx	

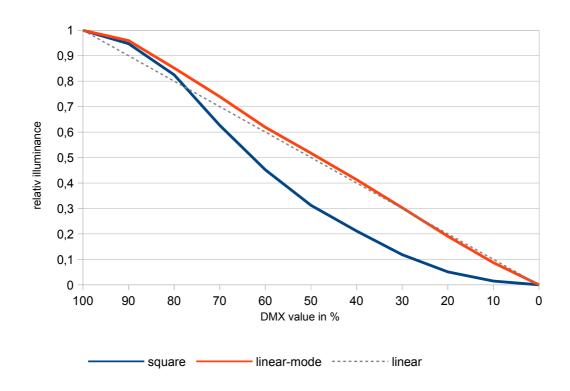


1.2 Output - distribution





1.3 Output - dimming curve

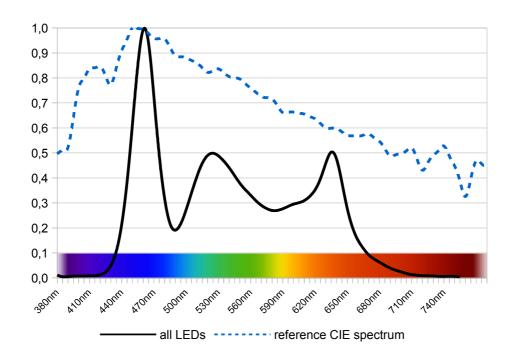




2 color rendering

2.1 basic measurement - all LEDs

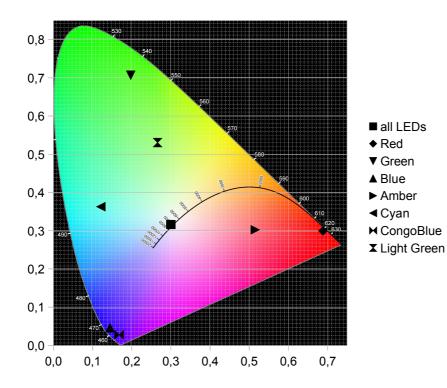
Dimmer @ 100% Zoom @ 50%



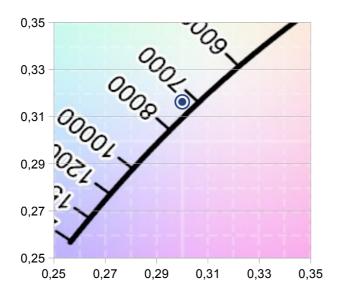
CCT	7419
Duv	0,0033

CRI Ra	91
CRI Re	86
TCLI	93
COS	92

TM 30-15 Rf	85
TM 30-15 Rg	99
GAI	106

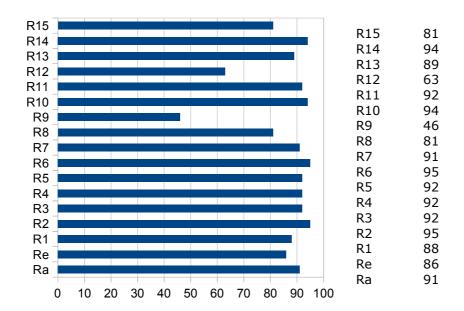






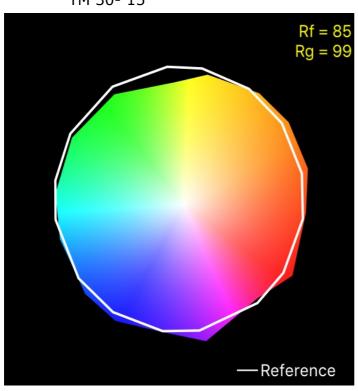
Duv: 0,0033

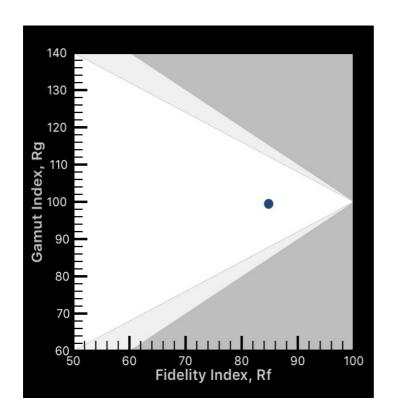
CRI - values





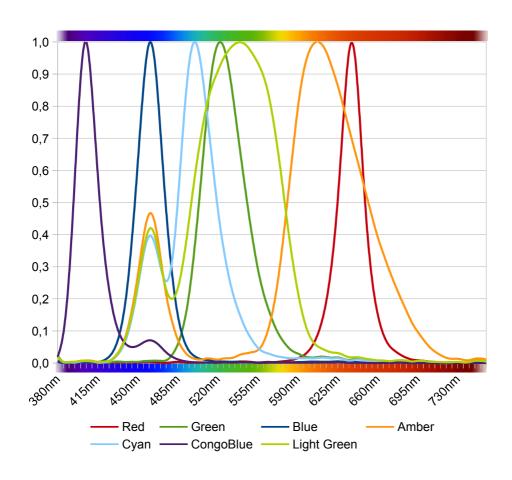
TM 30- 15





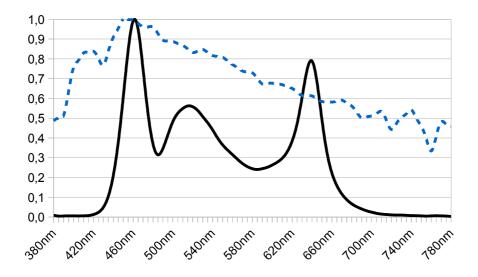


2.1 basic measurement – single LEDs





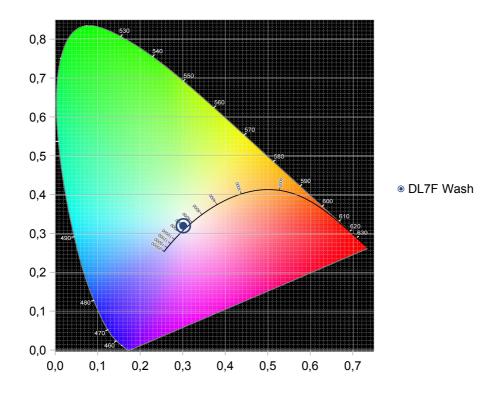
2.1 basic measurement - "output - mode"



CCT	7279
Duv	0,0043

CRI Ra 78
CRI Re 68
TCLI 62
CQS 84

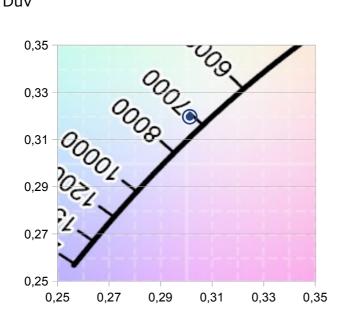
TM 30-15 Rf	77
TM 30-15 Rg	103
GAI	113



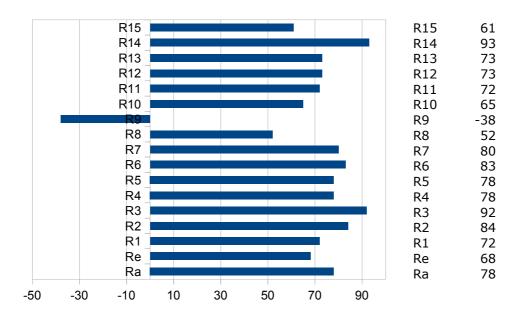


▶ 2.1 basic measurement – output mode

Duv

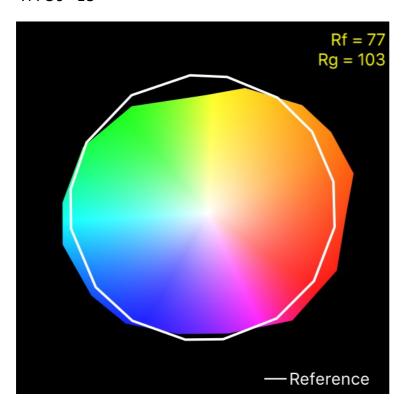


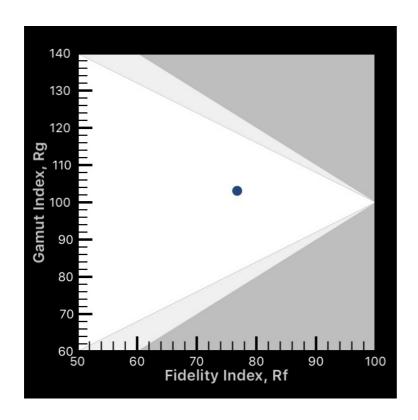
CRI





TM 30- 15







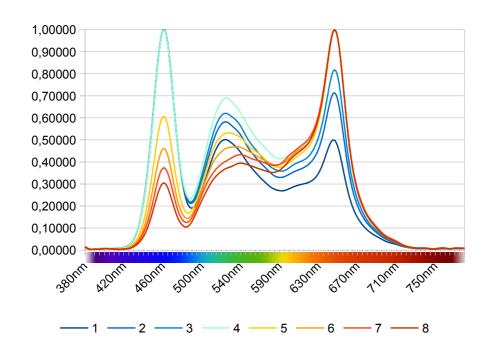
Setting: Dimmer

Zoom

CCT-Correction

1	2	3	4	5	6	/	8
50%	50%	50%	50%	50%	50%	50%	50%
50%	50%	50%	50%	50%	50%	50%	50%
0%	28%	39%	51%	73%	84%	90%	94%

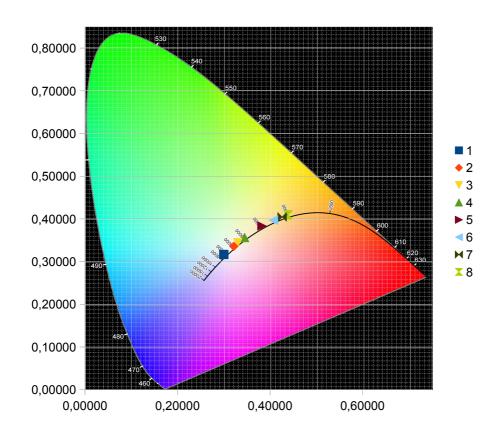
spektrum

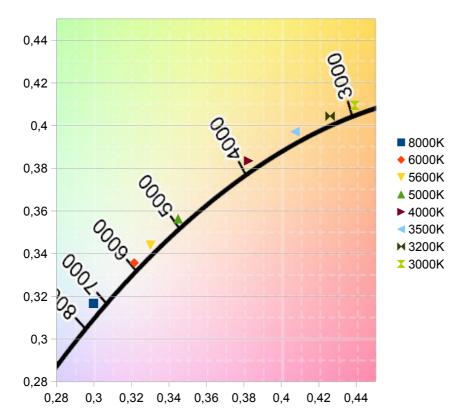


	1	2	3	4	5	6	7	8
CCT	7419	6015	5599	5024	3994	3507	3195	3005
Duv	0,0033	0,0023	0,0025	0,0024	0,0025	0,0023	0,0019	0,0018
CRI Ra	91	89	89	88	88	90	91	87
CRI Re	86	84	83	83	84	87	89	88
TCLI	93	93	93	93	93	94	94	93
CQS	92	92	92	93	92	93	94	93
TM 30-15 Rf	85	86	86	86	87	88	90	90
TM 30-15 Rg	99	102	103	103	102	102	102	102
GAI	105	103	100	96	82	71	63	58



colorspace CIE1931



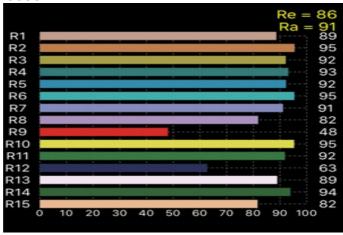




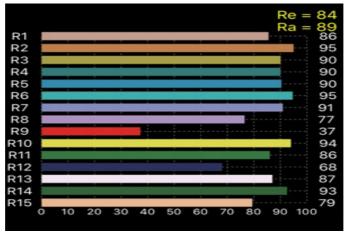
color rendering CRI

	8000K	6000K	5600K	5000K	4000K	3500K	3200K	3000 K
Ra	91	89	89	88	88	90	91	87
Re	86	84	83	83	84	87	89	88
R1	88	86	85	85	85	88	89	88
R2	95	95	95	95	96	97	97	97
R3	92	90	89	89	87	88	89	89
R4	93	90	89	87	86	87	88	86
R5	92	90	90	89	89	91	91	90
R6	95	95	95	95	95	96	95	93
R7	91	91	91	90	89	92	93	93
R8	81	77	75	74	74	80	84	83
R9	46	37	36	37	42	59	70	68
R10	95	94	94	94	96	98	98	96
R11	92	86	84	82	81	83	84	80
R12	63	68	70	73	73	77	80	83
R13	89	87	87	87	87	90	91	89
R14	94	93	92	92	91	92	92	92
R15	81	79	79	80	82	86	89	88

CCT: 8000K

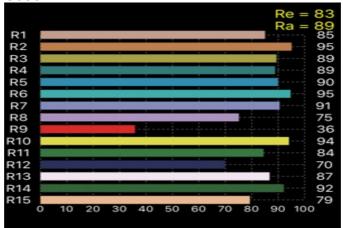


CCT: 6000K

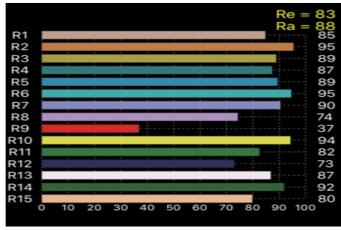




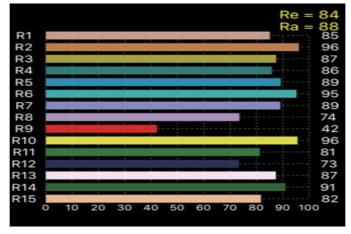
CCT: 5600K



CCT: 5000K

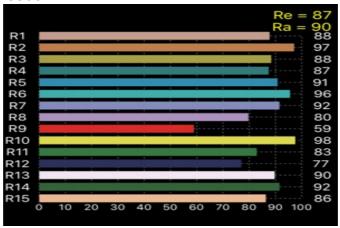


CCT: 4000K

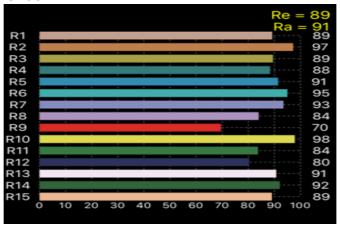




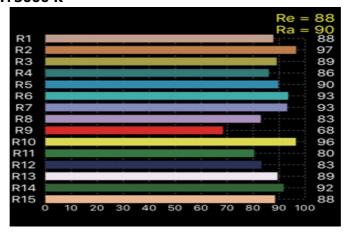
CCT: 3500K



CCT: 3200K

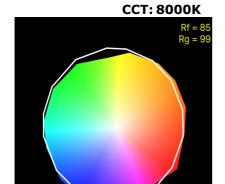


CCT: 3000 K

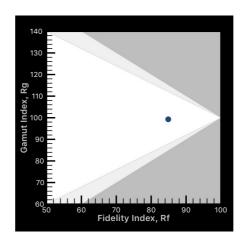


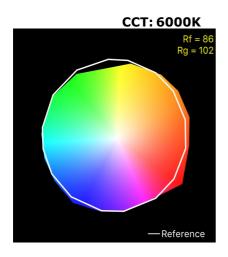


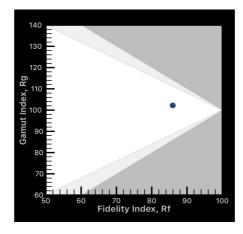
color rendering TM 30- 15

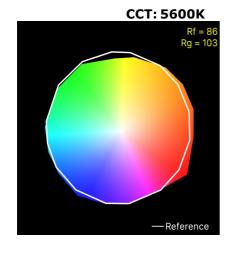


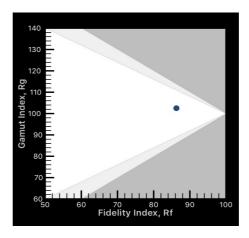
-Reference



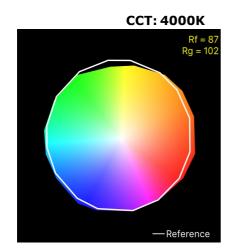


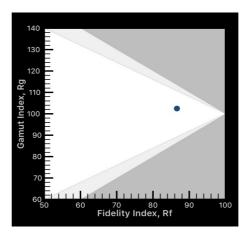


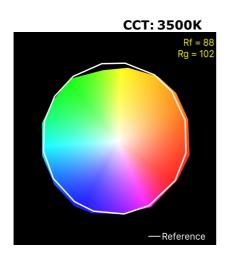


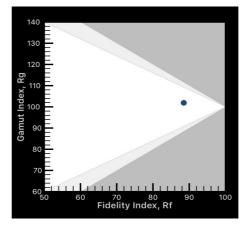


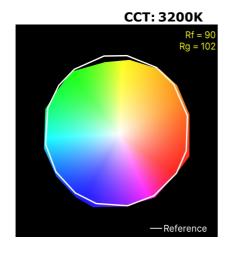


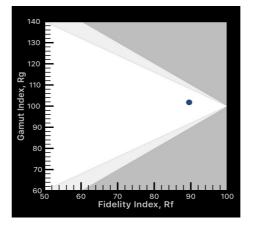






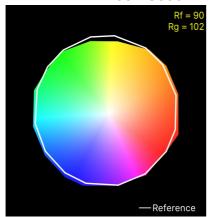


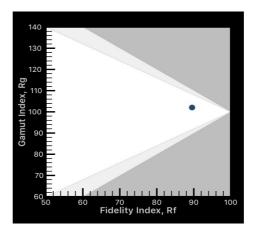






CCT: 3000K







2.3 color rendering - green correction

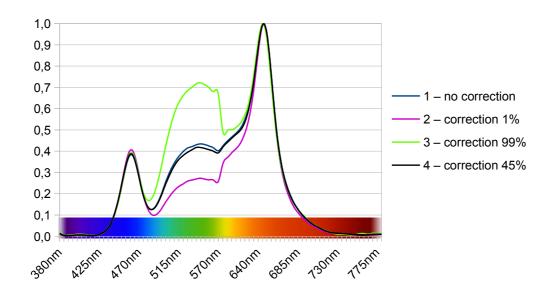
Setting: Dimmer

Zoom

CCT correction green correction

1	2	3	4
100%	100%	100%	100%
50%	50%	50%	50%
90%	90%	90%	90%
0%	1%	99%	45%

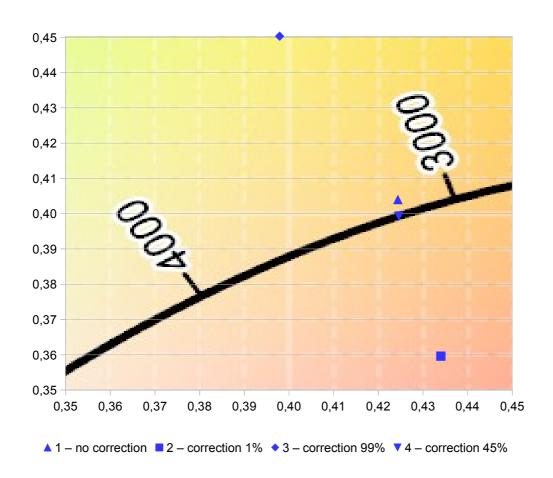
spektrum



CCT	
Duv	
CRI Ra	
CRI Re	
Beleuchtungsstärke	2

1	2	3	4
3222	2657	4048	3179
0,00191	-0,01810	0,02609	-0,00006
88	74	83	88
91	81	87	90
374	259	234	359

colorspace CIE1931

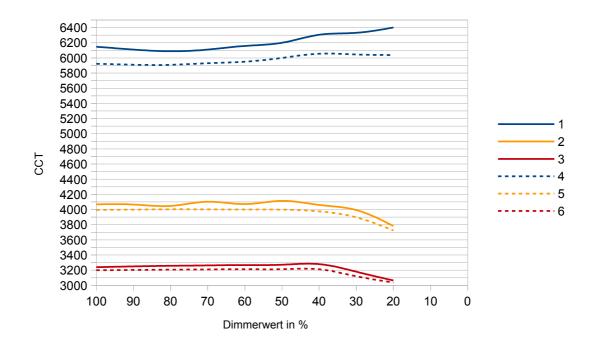




3 stability

3.1 stability / colortemperature while dimming

Setting:		1	2	3	4	5	6
	Dimmer	100%	100%	100%	100%	100%	100%
	Zoom	50%	50%	50%	25%	25%	25%
	CCT-Correction	28%	73%	90%	28%	73%	90%



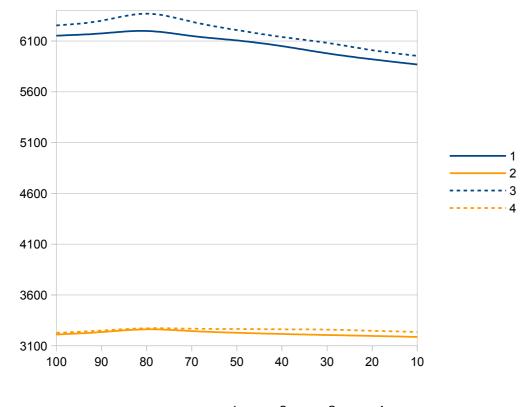
	1	2	3	4	5	6
min. CCT	6088	3782	3064	5909	3724	3038
max. CCT	6402	4114	3280	6055	4003	3213
shift CCT	314	332	216	146	279	175
shift CRI	3	1	2	4	2	2



3.2 stability / colortemperature while zooming

Setting:
Dimmer
CCT-Correction

1	2	3	4
100%	100%	50	50%
28%	90%	28%	90%



	1	2	3	4
min. CCT	5823	3187	5954	3227
max. CCT	6199	3262	6369	3272
shift CCT	376	75	415	45
shift CRI	1	1	2	1

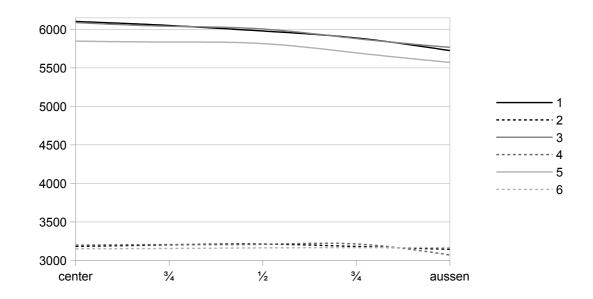


3.3 stability / colortemperature within beam

Setting:

Dimmer Zoom CCT-Correction

1	2	3	4	5	6
100%	100%	100%	100%	100%	100%
narrow	narrow	medium	medium	wide	wide
28%	90%	28%	90%	28%	90%



	1	2	3	4	5	6
min. CCT	5724	3144	5766	3071	5570	3151
max. CCT	6102	3212	6088	3213	5847	3167
shift CCT	378	68	322	142	277	16
shift CRI	0	0	0	0	1	0



3.4 stability /colortemperature within beam using "edge-control"

Setting: Dimmer

Zoom

CCT-Correction Edge Correction

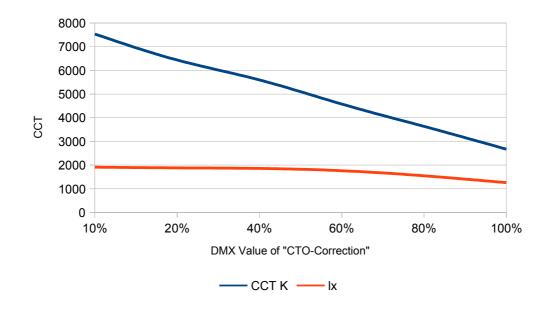
1	2	3	4	5	6
100%	100%	100%	100%	100%	100%
narrow	narrow	medium	medium	wide	wide
28%	90%	28%	90%	28%	90%
100%	100%	100%	100%	100%	100%

CCT shift without edge-control CCT shift with edge-control

H	114	30	268	83	112	24
Г	378	68	322	142	277	16



3.5 stability / illuminance while changing colortemperature





GrandMA fixture type check

Compares the DMX-Chart from the manual with the origin fixture-library file downloaded from the Robe website.

Checked with Mode 3 - 42 channels

channel	DMX Value	DMX Chart manual	Robe fixtury type	MA fixture type
			#h	
4		PAN	there should be presets for "real world values"	
1		PAN		
2		TILT	there should be presets for "real world values"	
3				
6	60.60	Power/Special functions	Lamp Control	
	60-69	reserved	Gobo in dark	
	120 120	Fixture reset (except	Pan/Tilt snaps to a	
	130-139	Pan/Tilt)	certain position	
	180-189	Zoom/Frost Reset	Zoom reset	
	190-199	Barndoors/Scrim reset	Iris reset	
7		Color functions	C2	
8		Virtual color wheel	color mixer	
		66 LEE Colors (f.e. LEE 4		
		(Medium Bastard	L0004) Color name not	
	1-132	Amber))	given	
19+20		Congo Blue	UV	
21+22		Light Green	Lime	
23		CTC	СТО	
			Color Temperature	
24		Green Correction	Adjust	
			- CTC and	
			greencorrection should	
			be on the same encoder	
			set	
25		Color Mix Control	Color Mix Mode	
26		Barndoors + Zoom +		
		Frost Time	Zoom speed	
27		Scrim positioning	Scrim Rotation	
30		Zoom	there should be presets	
			for "real world values"	
32		Edge color correction	focus	

GrandMA 3D

The Fixture library doesn't support GMA 3D at all. Especially the functions pan, tilt, zoom, virtual color wheel, barndoors, scrim are missing.