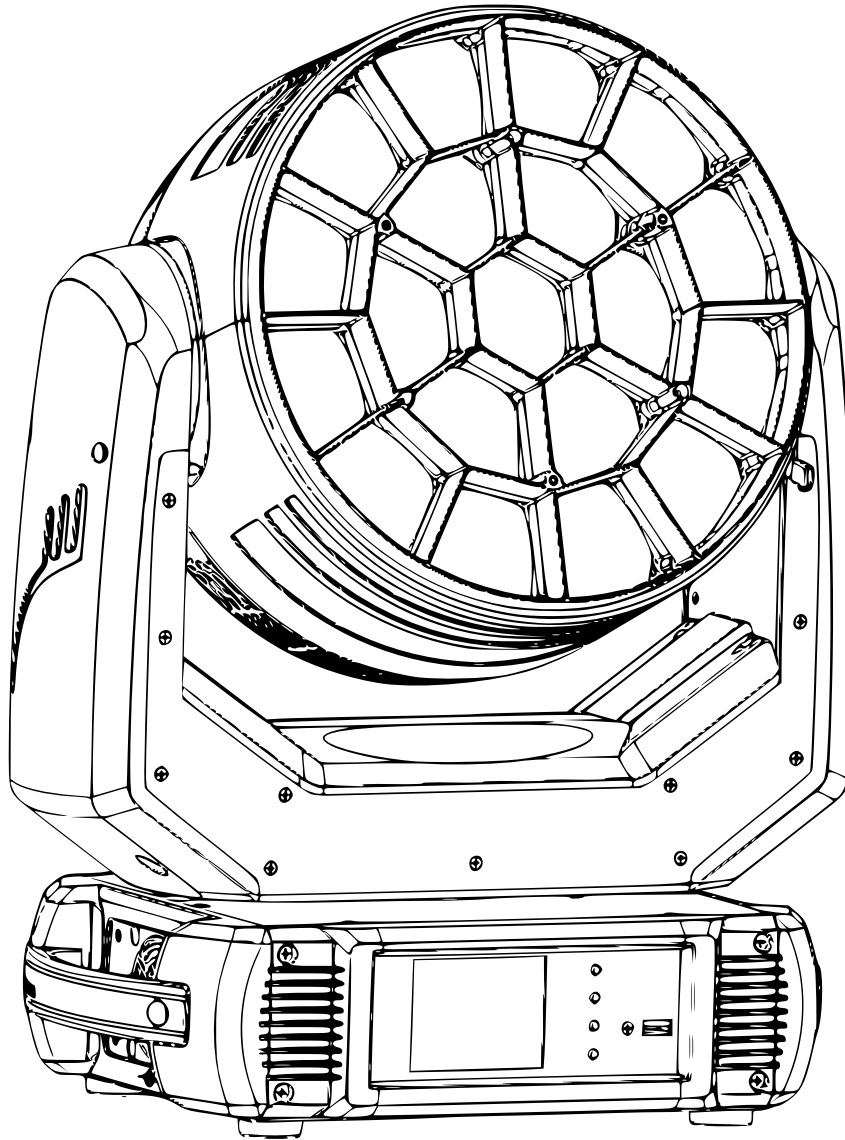


Spiider®



ROBE®

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Total Lumen output measurements

Total lumen output is measured by a Goniophotometer device according to EN 13032-1 within our state of the art ROBE lighting Ltd. photometric laboratory. We measure light emitted from the fixture at all radiating angles for minimum, maximum and mid zoom range. As a confirmation method we also measure lumens on the wall. Data from both measurements are processed in the software to calculate all photometric data. We provide photometric data in IES and LDT file and photometric report that includes spectrum, light distribution, TM30-15 and TLCI report.

Measurement conditions

For absolute consistency the Climate room temperature is 25°C. Fixtures are operated for at least 30 minutes for stabilization. Measurement angles used: -90° to +90° pan (-90° to +90° tilt), step 1°. A step angle of 10° is used for fixtures with elliptical or asymmetrical light output. Distances used are 5 m or 10 m.

All fixtures to produce the data are calibrated and checked for several photometric parameters, such as Intensity, CCT, CRI and duv, to meet all the specified values.

Equipment

Konica Minolta Illuminance Spectrophotometer CL-500A

Konica Minolta Illuminance Colour Meter CL-200A

Konica Minolta CRI Illuminance meter CL-70F

PRC Krochmann Radiolux 111

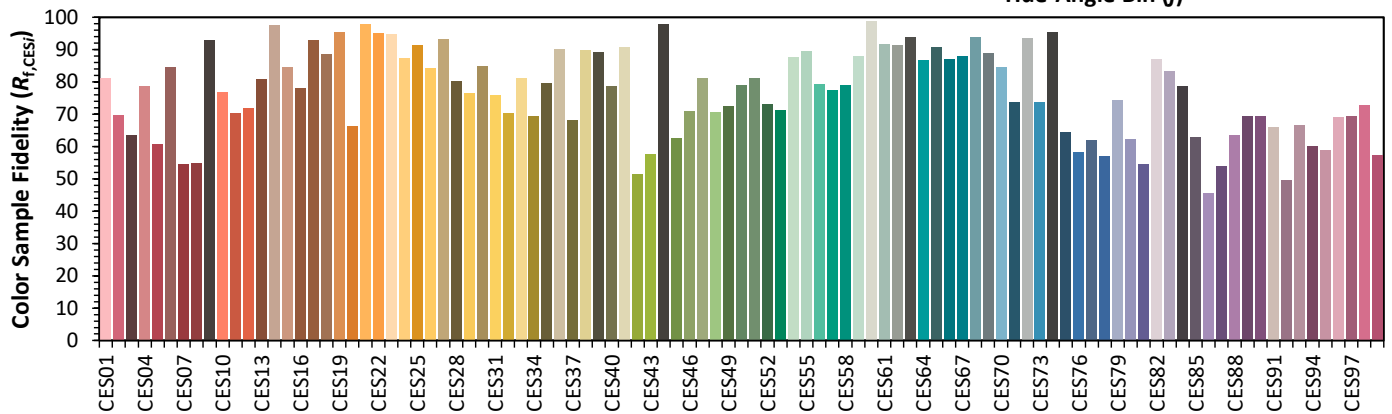
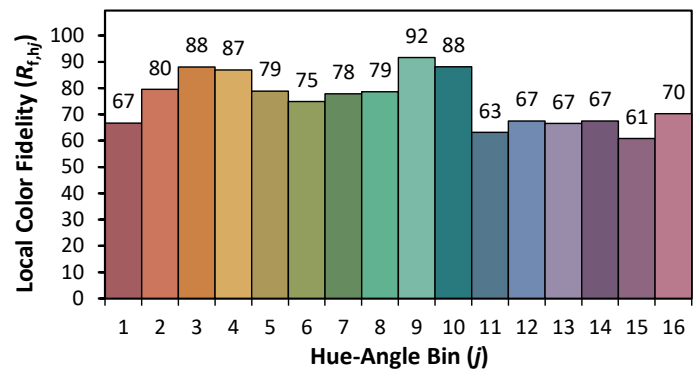
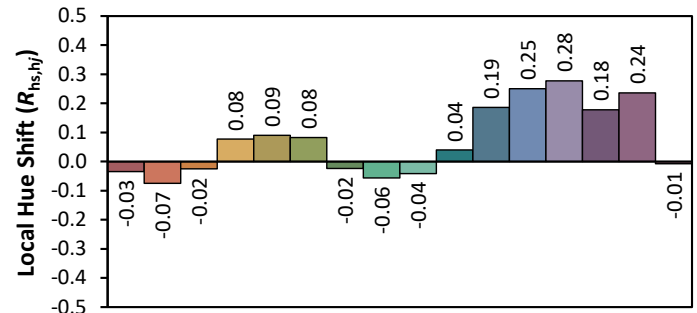
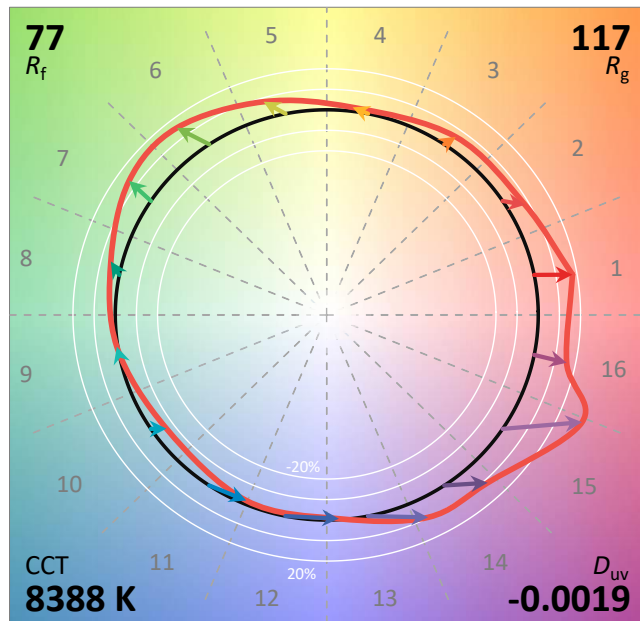
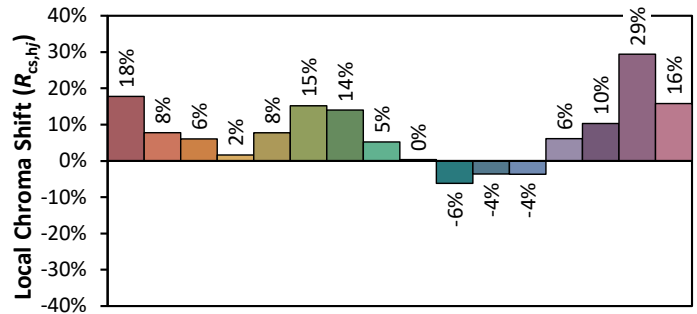
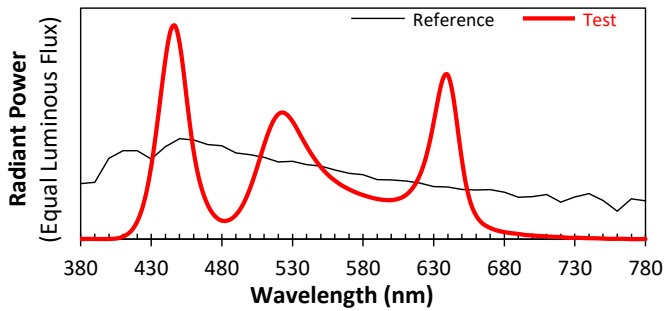
- Photometric measurement head
- UVA and UVC measurement head

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Photometric report

Beam angle 5.6° - Min. Zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.2926
y 0.2984
 u' 0.1952
 v' 0.4479

CIE 13.3-1995
(CRI)

R_a 71

R_g -40

Spiider

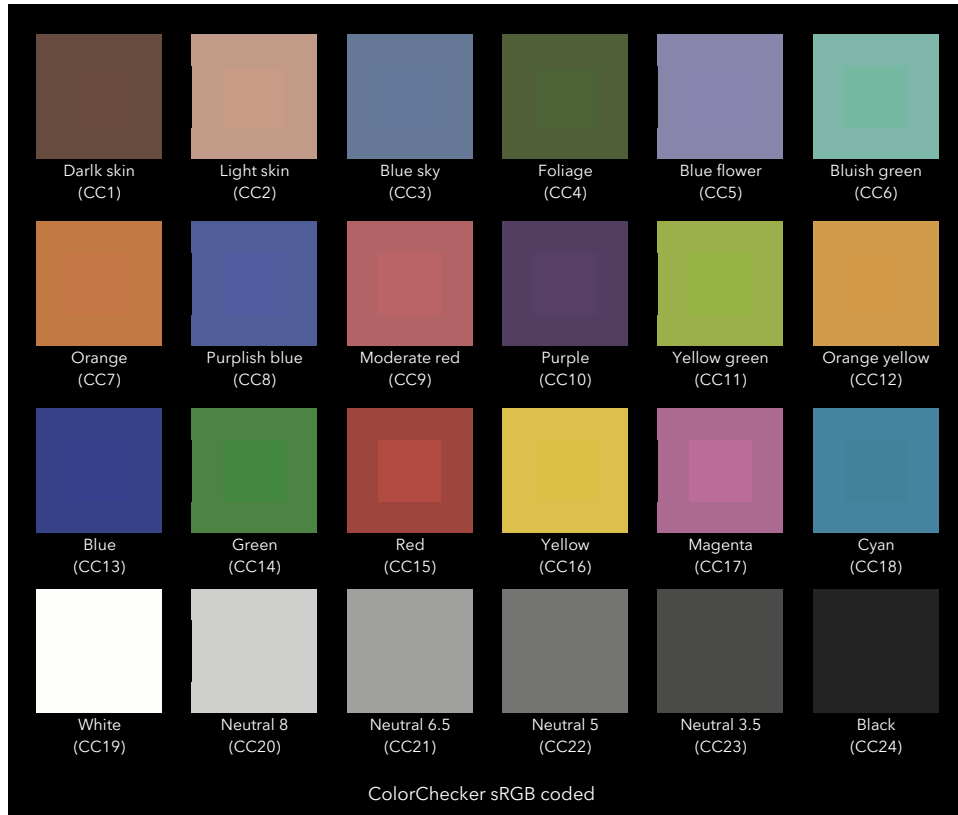
Photometric report

Beam angle 5.6° - Min. Zoom

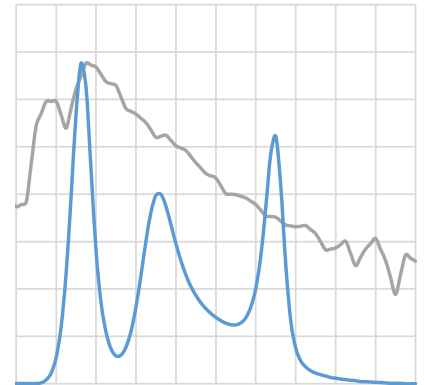
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D8388 (-0.4)

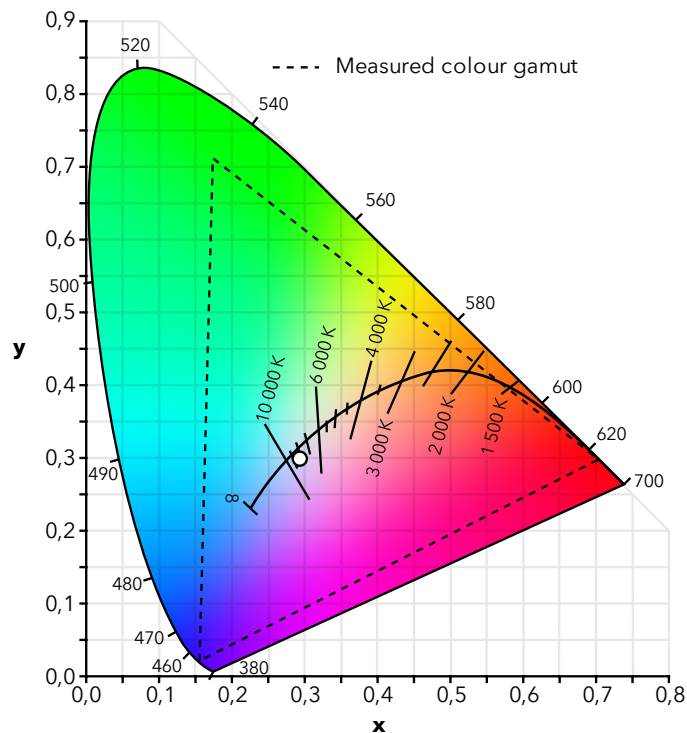
TLCI-2012: 60 (D8388)



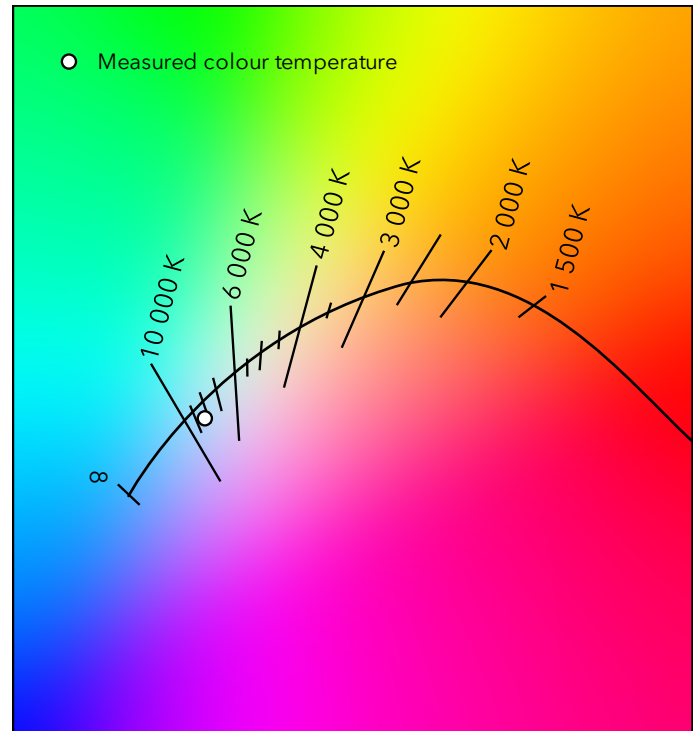
Sector	Lightness	Chroma	Hue
R	-----	---	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	--
G	-	---	0
G/C	0	-----	++++
C	0	-	++++
C/B	0	0	++
B	0	--	--
B/M	0	-	0
M	-	---	--
M/R	-----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

Measurement date: 09.06.2020

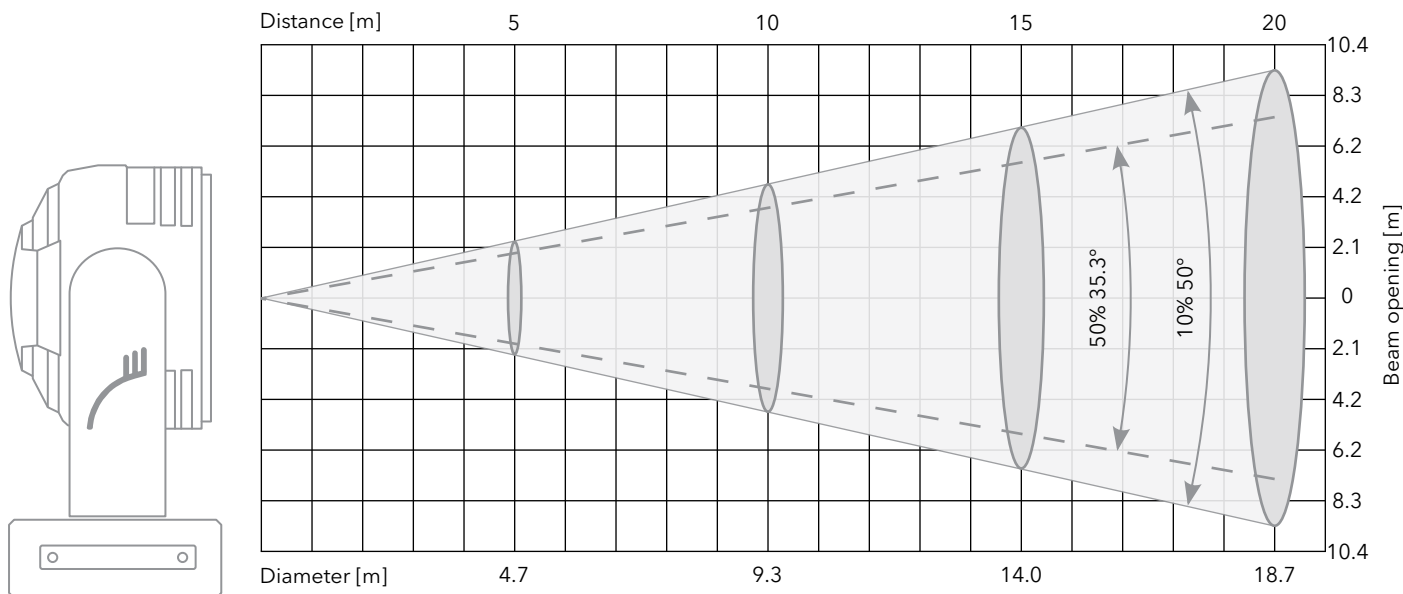
ROBE

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Photometric report

Beam angle 50° - Max. Zoom

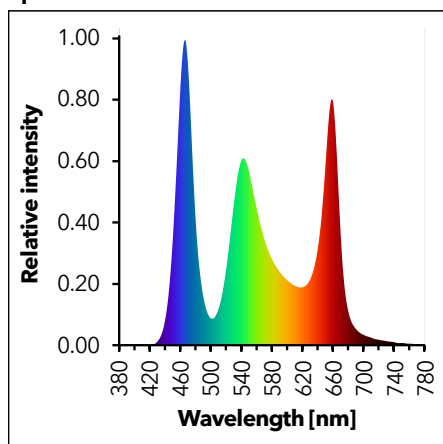
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
50°	13750 lm	11000 lm	31250 cd	430 W



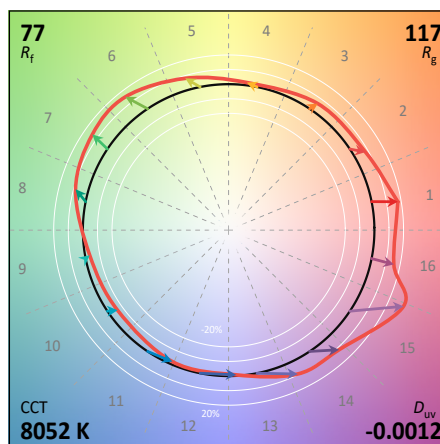
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	1250/116	313/29	139/13	78/7	50/4.6	35/3.2	26/2.4	11000
Red	235/22	59/5	26/2.4	15/1.4	9/0.9	7/0.6	4.8/0.4	2068
Green	420/39	105/10	47/4.3	26/2.4	17/1.6	12/1.1	9/0.8	3696
Blue	85/8	21/2	9/0.9	5/0.5	3.4/0.3	2.4/0.2	1.7/0.2	748
White	570/53	143/13	63/6	36/3.3	23/2.1	16/1.5	12/1.1	5016

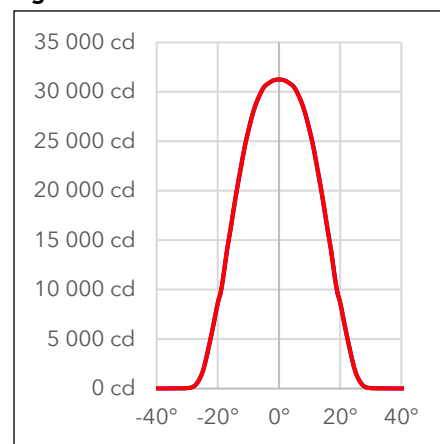
Spectrum



TM-30



Light distribution



Color temperature	CCT	8052
Color Deviation from Black	Duv	-0.0012
Color Coordinate CIE 1931	x	0.2952
	y	0.3026
Color Coordinate	u	0.1955
	v	0.3006

Color rendering index	CRI	71
Red component	CRI R9	-38
Color fidelity	TM30 Rf	77
Color gamut	TM30 Rg	117
Television consistency Index	TLCI	60

Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

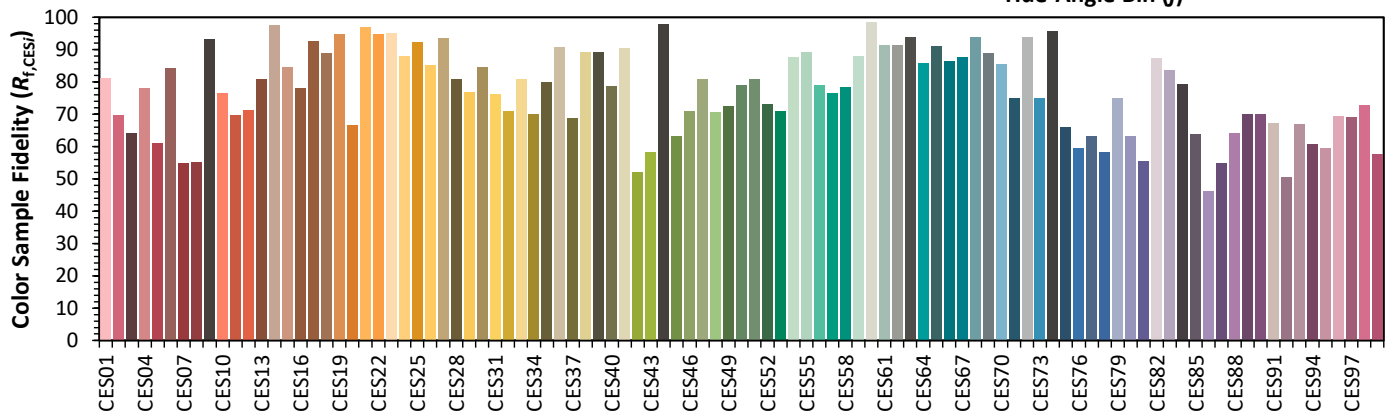
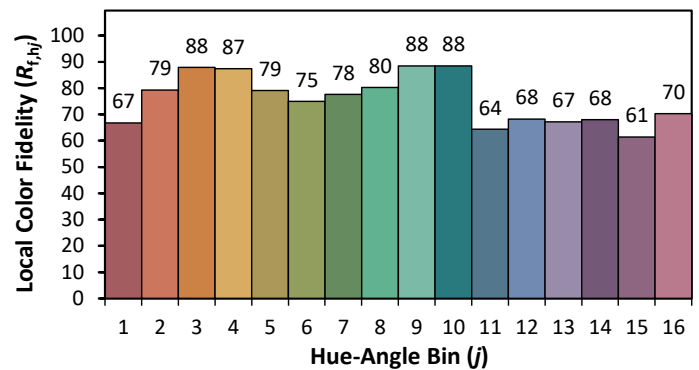
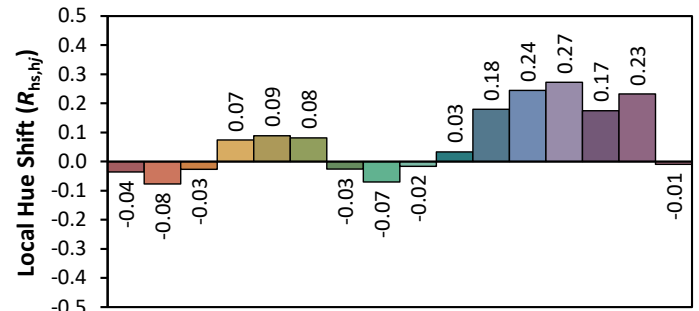
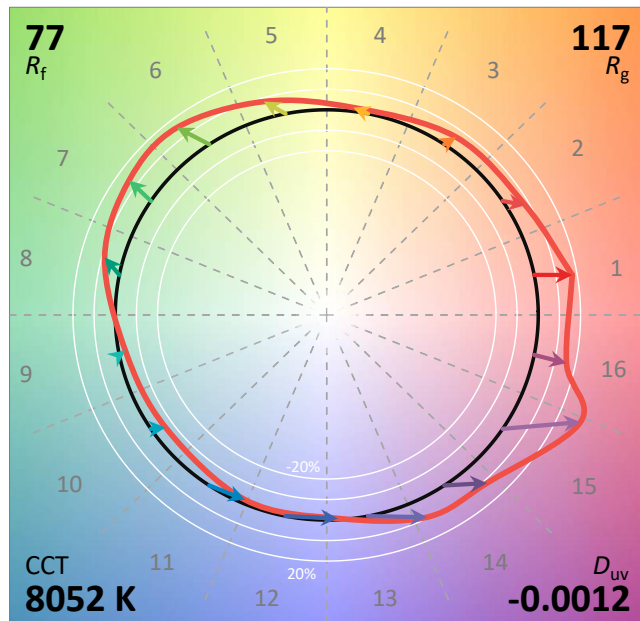
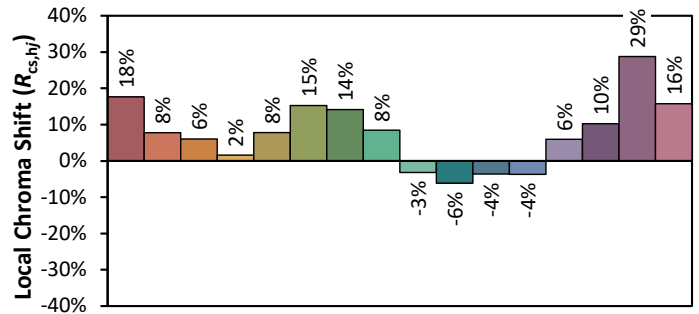
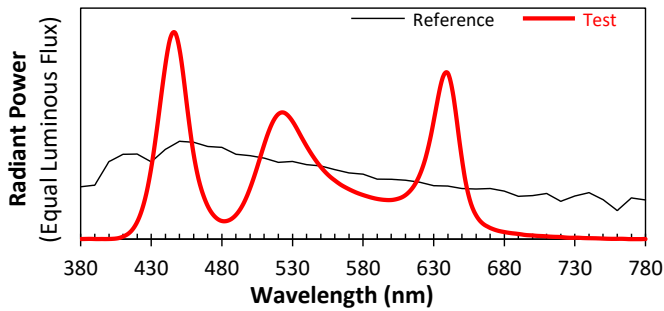
Measurement date: 09.06.2020

Spiider

Photometric report

Beam angle 50° - Max. Zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.2952

y 0.3025

u' 0.1955

v' 0.4508

CIE 13.3-1995
(CRI)

R_a 71

R_g -38

Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On
Measurement date: 09.06.2020

ROBE

Spiider

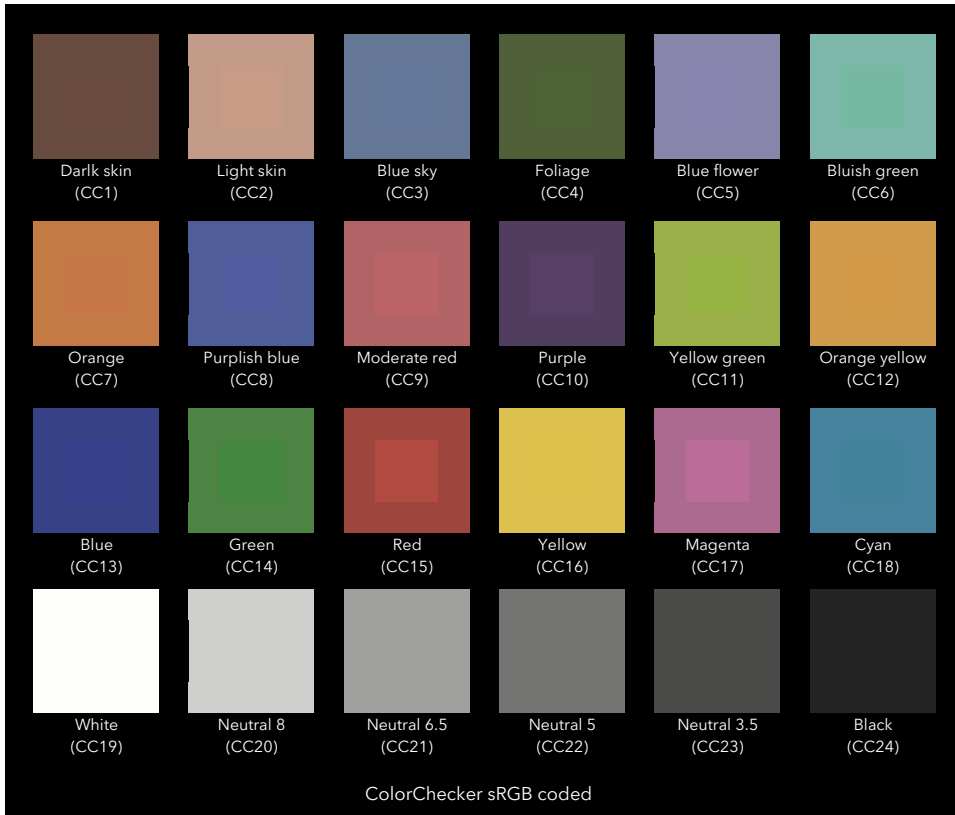
Photometric report

Beam angle 50° - Max. Zoom

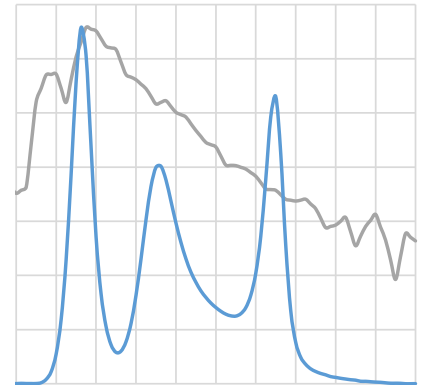
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D8052 (-0.2)

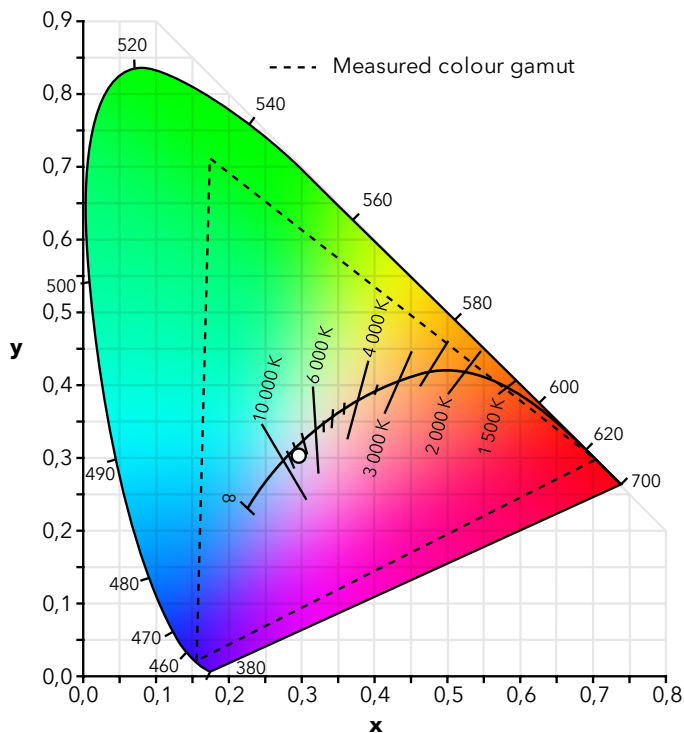
TLCI-2012: 60 (D8052)



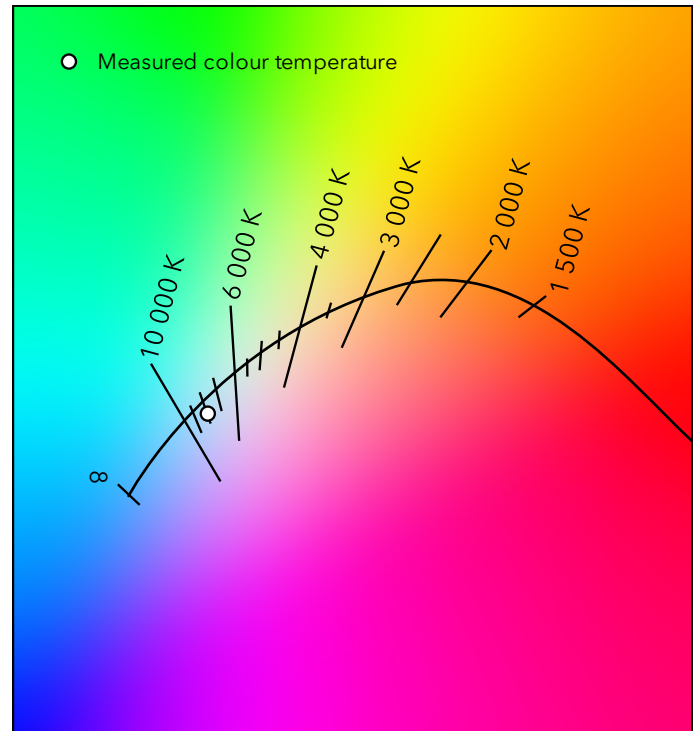
Sector	Lightness	Chroma	Hue
R	-----	---	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	--
G	-	---	0
G/C	0	-----	++++
C	0	-	++++
C/B	0	0	++
B	0	--	--
B/M	0	-	0
M	-	---	--
M/R	-----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

Measurement date: 09.06.2020

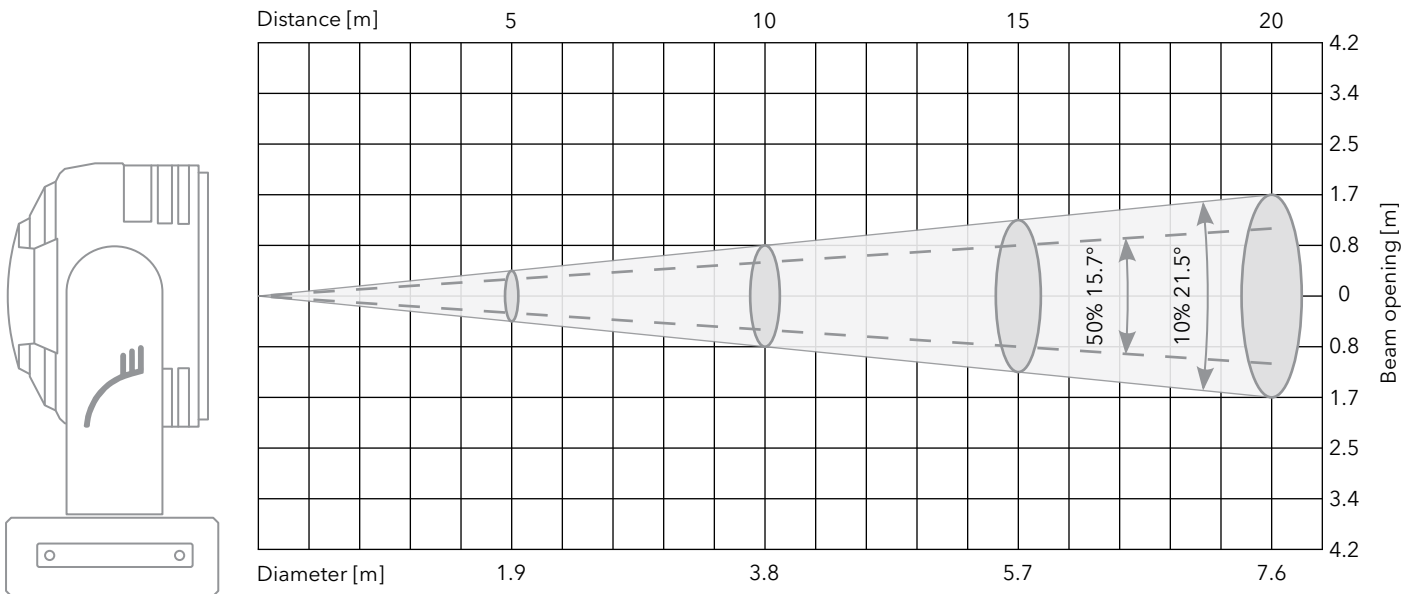
ROBE

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Photometric report

Beam angle 21.5° - Medium Zoom

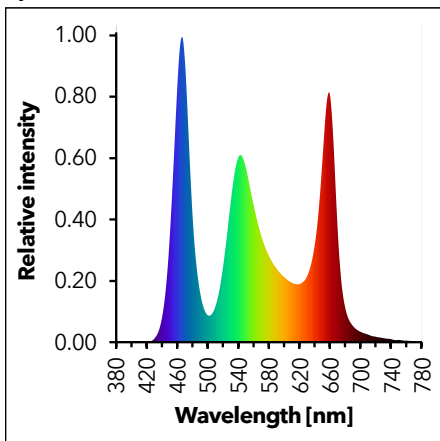
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
21.5°	10245 lm	8196 lm	121100 cd	430 W



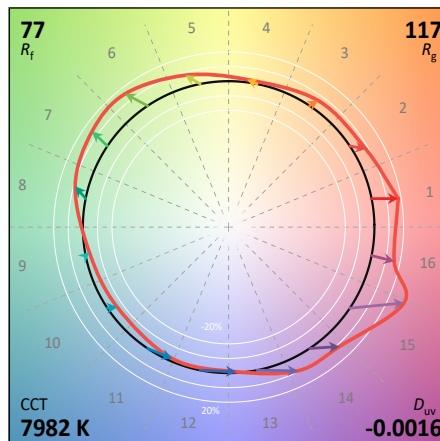
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	4844/450	1211/113	538/50	303/28	194/18	135/13	99/9	8196
Red	906/84	227/21	101/9	57/5	36/3.4	25/2.3	18/1.7	1533
Green	1603/149	401/37	178/17	100/9	64/6	45/4.1	33/3	2712
Blue	317/29	79/7	35/3.3	20/1.8	13/1.2	9/0.8	6/0.6	536
White	2188/203	547/51	243/23	137/13	88/8	61/6	45/4.1	3702

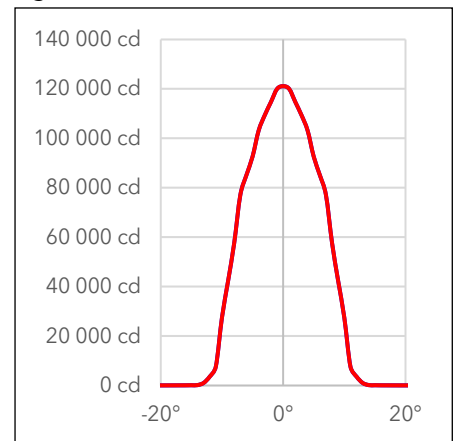
Spectrum



TM-30



Light distribution



Color temperature	CCT	7982
Color Deviation from Black	Duv	-0.0016
Color Coordinate CIE 1931	x	0.2961
	y	0.3027
Color Coordinate	u	0.1961
	v	0.3007

Color rendering index	CRI	71
Red component	CRI R9	-41
Color fidelity	TM30 Rf	77
Color gamut	TM30 Rg	117
Television consistency Index	TLCI	59

Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

Measurement date: 09.06.2020

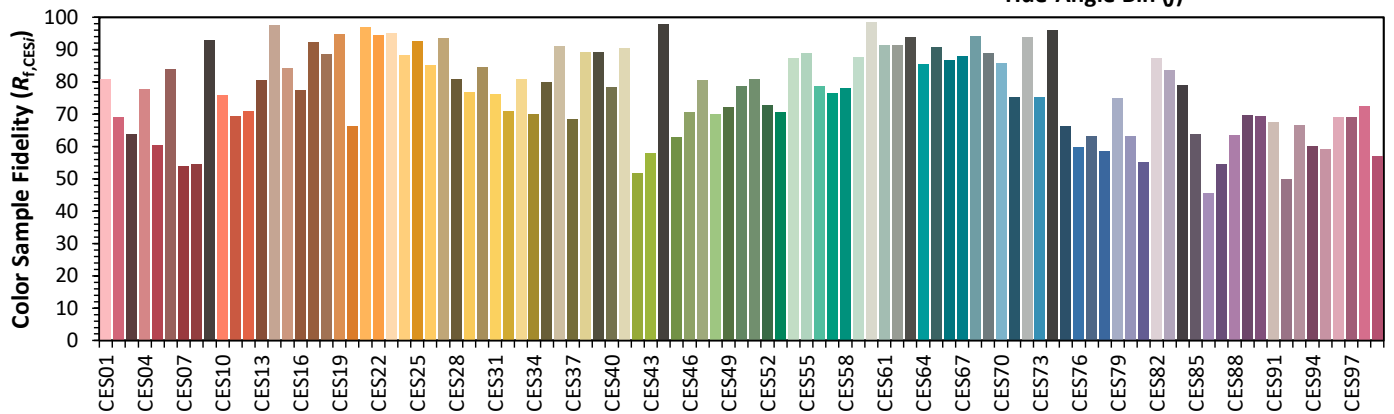
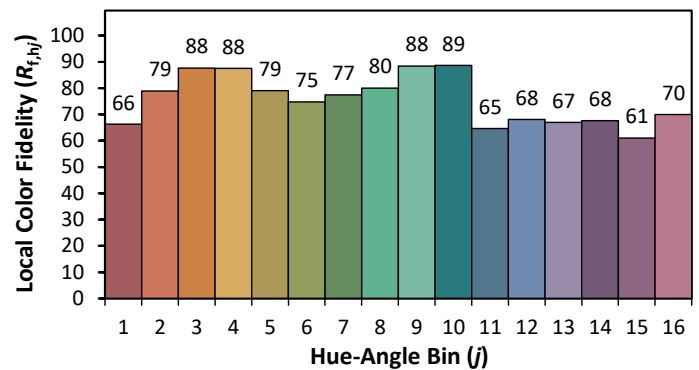
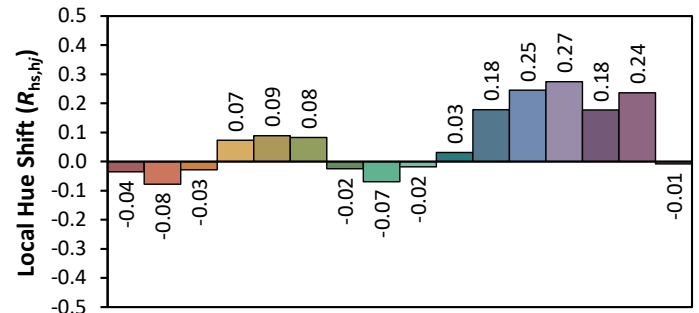
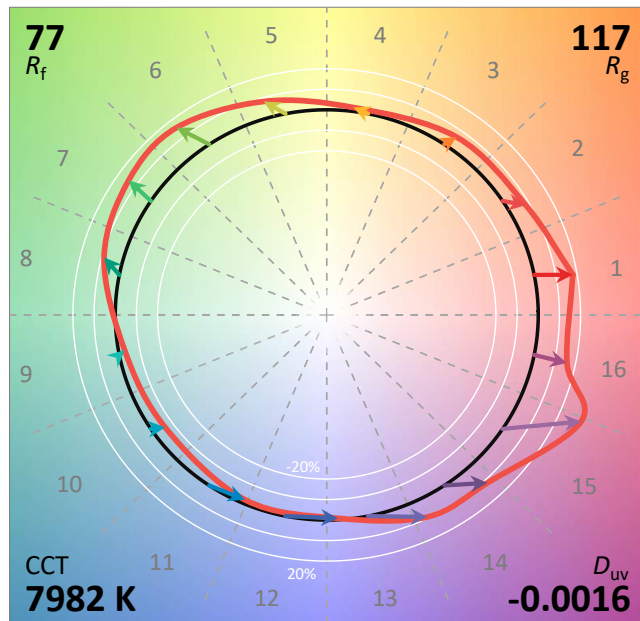
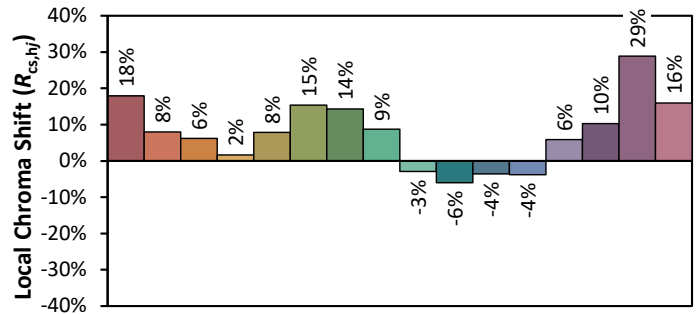
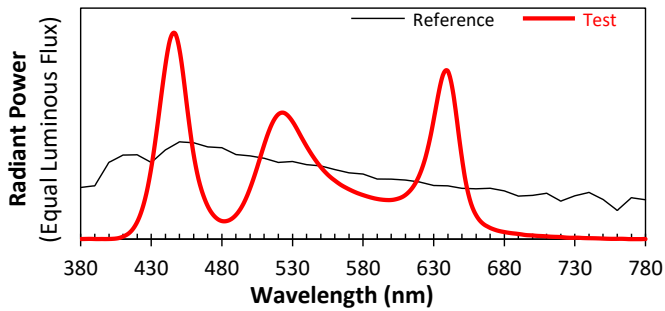


Spiider

Photometric report

Beam angle 21.5° - Medium Zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.2960

y 0.3027

u' 0.1960

v' 0.4510

CIE 13.3-1995
(CRI)

R_a 71

R_g -41

Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

Measurement date: 09.06.2020

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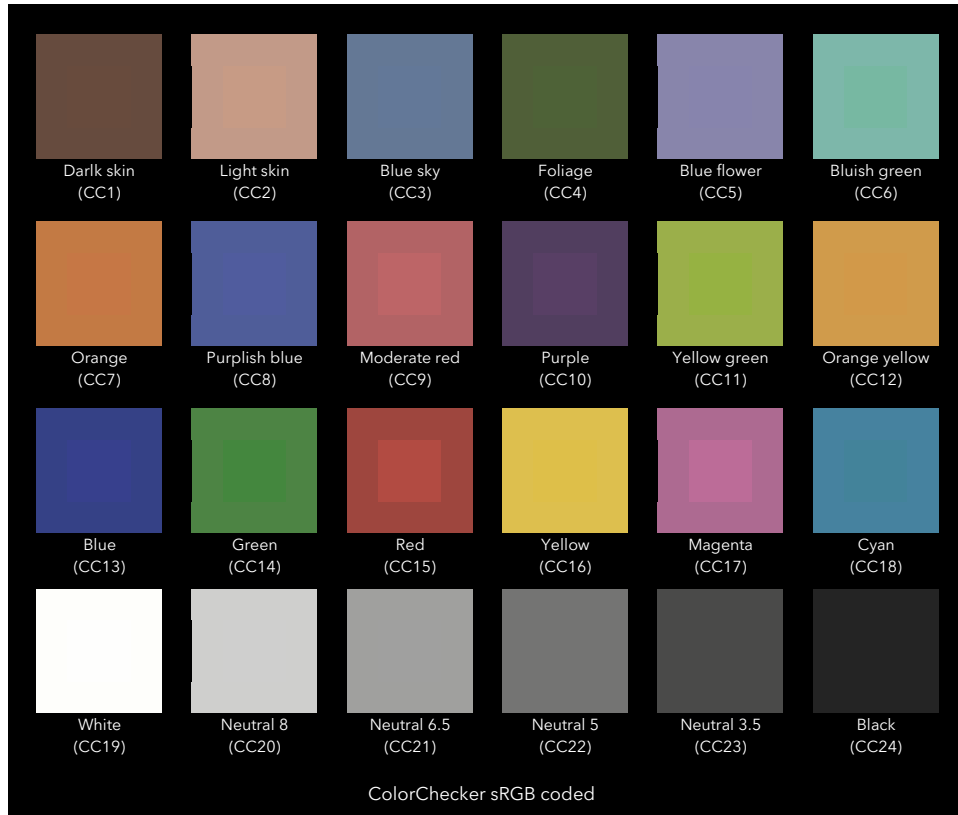
Photometric report

Beam angle 21.5° - Medium Zoom

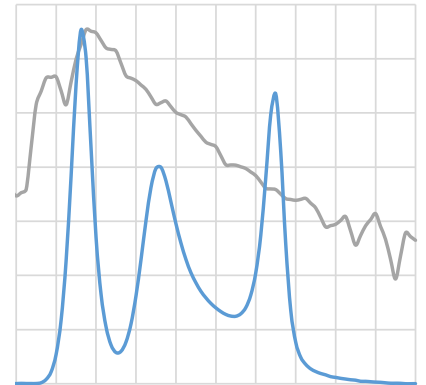
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D7982 (-0.3)

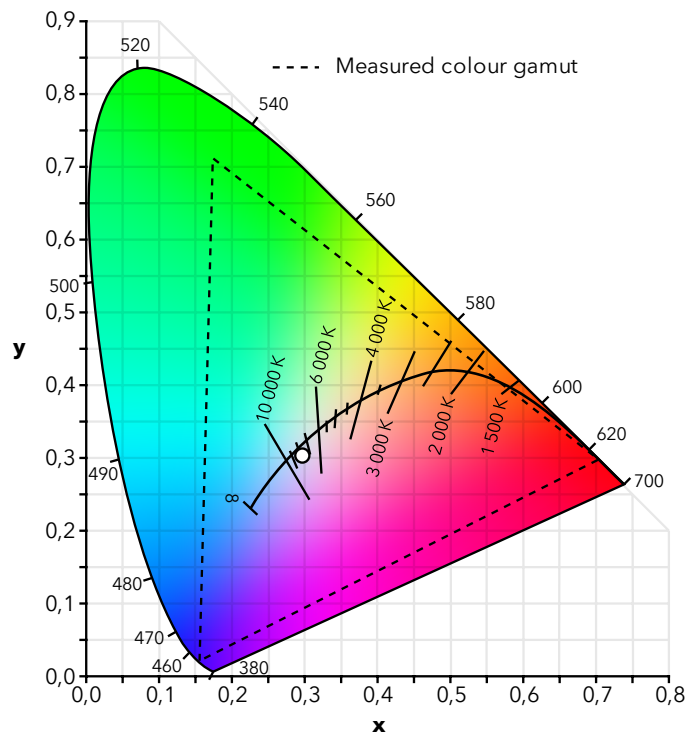
TLCI-2012: 59 (D7982)



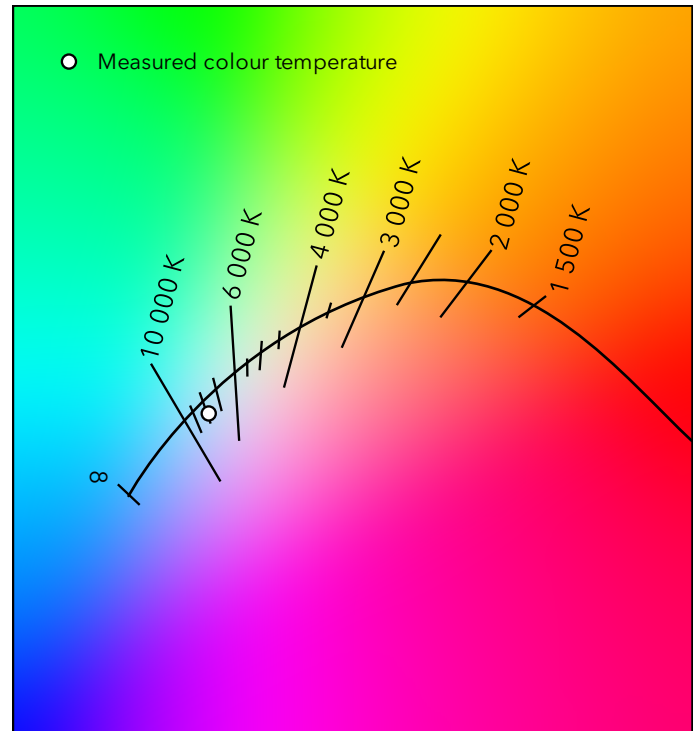
Sector	Lightness	Chroma	Hue
R	-----	---	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	--
G	0	---	0
G/C	0	-----	++++
C	0	--	++++
C/B	0	0	++
B	0	--	--
B/M	0	-	0
M	-	---	--
M/R	-----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Flower effect Off; White Point 8000K On; All pixels On

Measurement date: 09.06.2020

ROBE