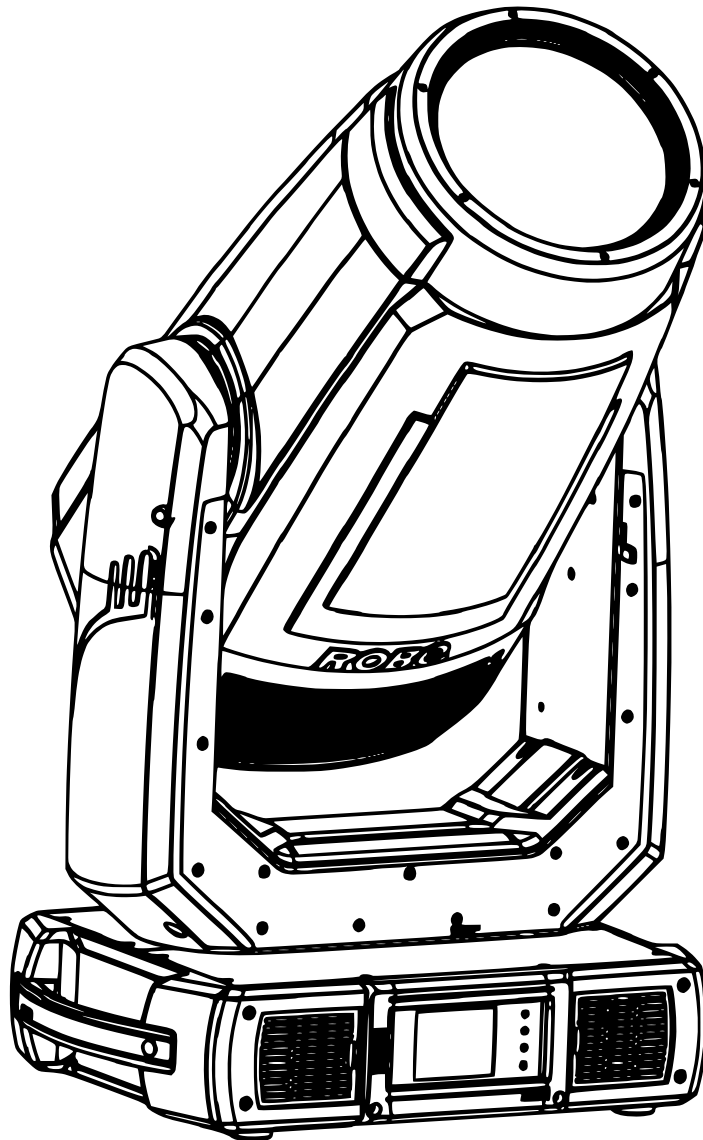


FORTE™



ROBE®

FORTE HCF

Photometric report

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FORTE HCF

Photometric report

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

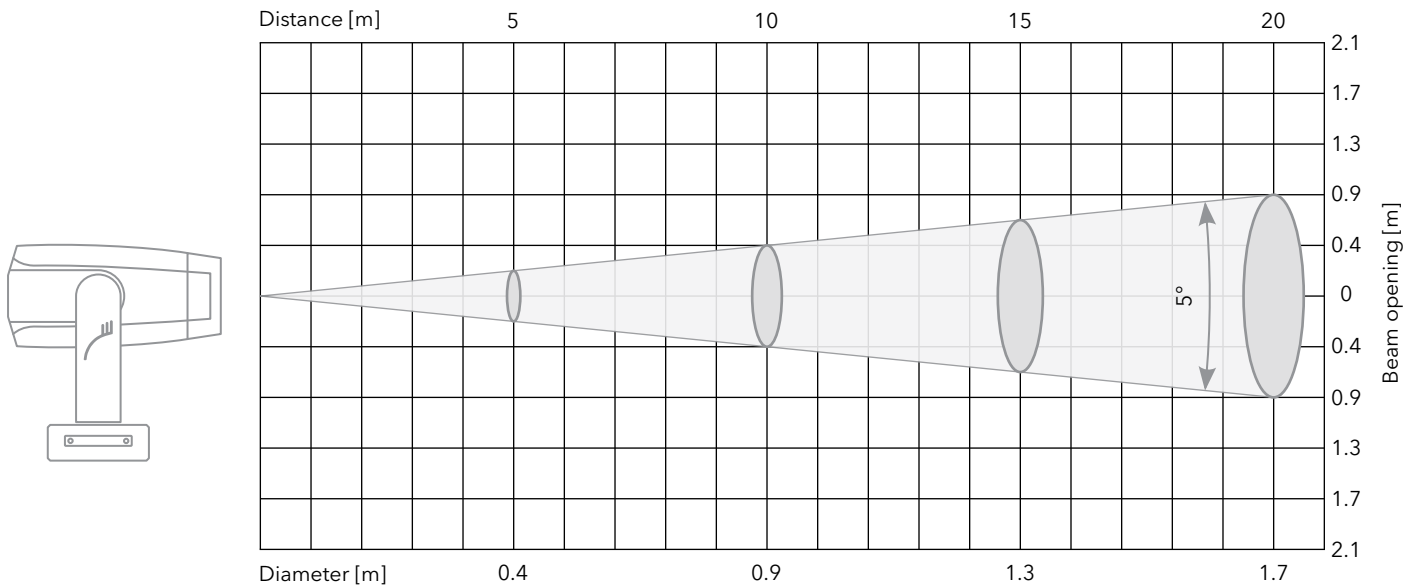
- Photometric measurement head
- UVA and UVC measurement head

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Photometric report

Beam angle 5° - Min. zoom

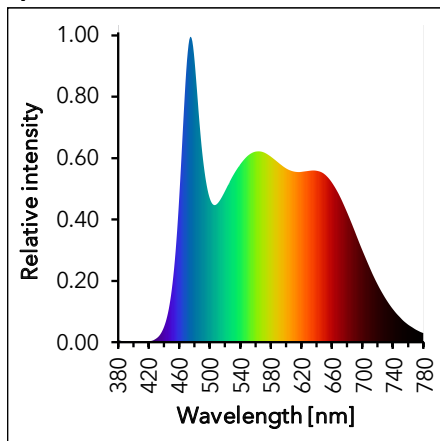
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
5°	11933 lm	11471 lm	1955000 cd	1228 W



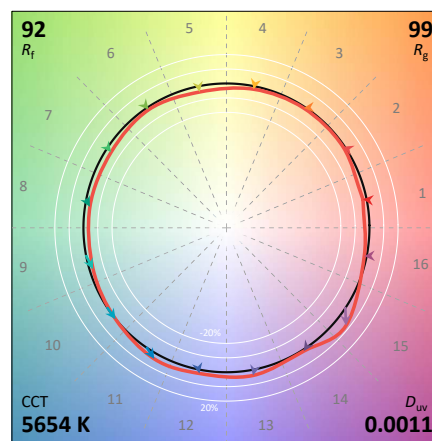
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	78200/7265	19550/1816	8689/807	4888/454	2172/202	1222/114	782/73	11471
Auto Fan Mode	76840/7139	19210/1785	8538/793	4803/446	2134/198	1201/112	768/71	11353
Quiet Fan Mode	56425/5242	14106/1311	6269/582	3527/328	1567/146	882/82	564/52	8337

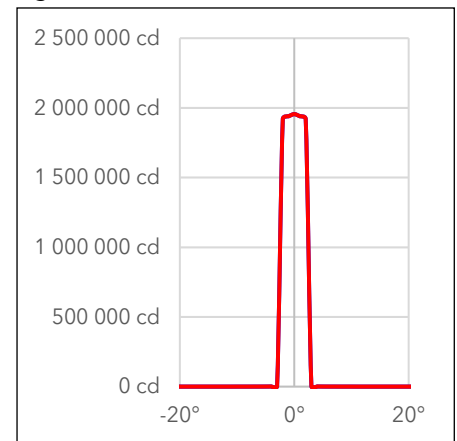
Spectrum



TM-30



Light distribution



Color temperature	CCT	5654
Color Deviation from Black	Duv	0.0011
Color Coordinate CIE 1931	x	0.3290
	y	0.3402
Color Coordinate	u	0.2048
	v	0.3177

Color rendering index	CRI	96
Red component	CRI R9	87
Color fidelity	TM30 Rf	92
Color gamut	TM30 Rg	99
Television consistency Index	TLCI	96

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam

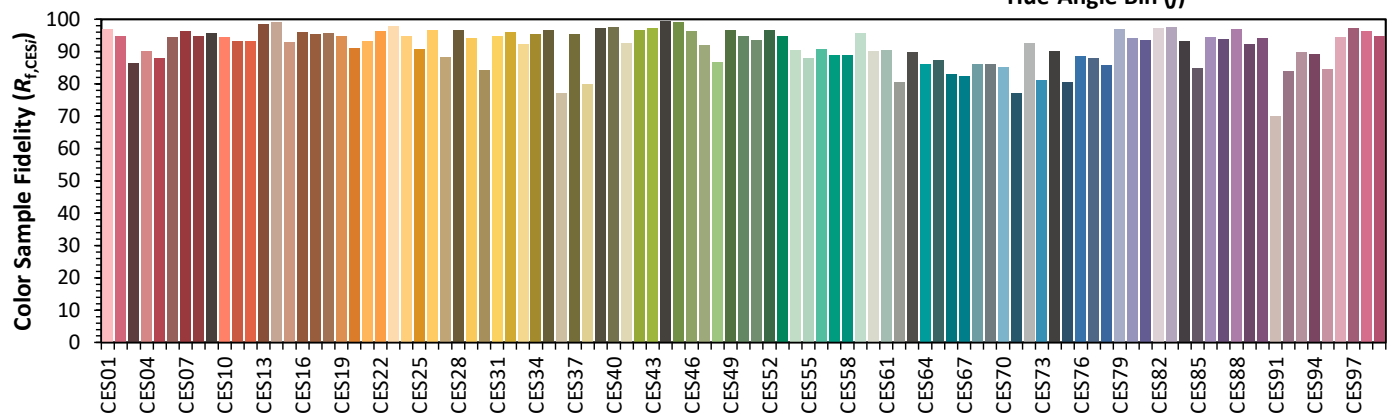
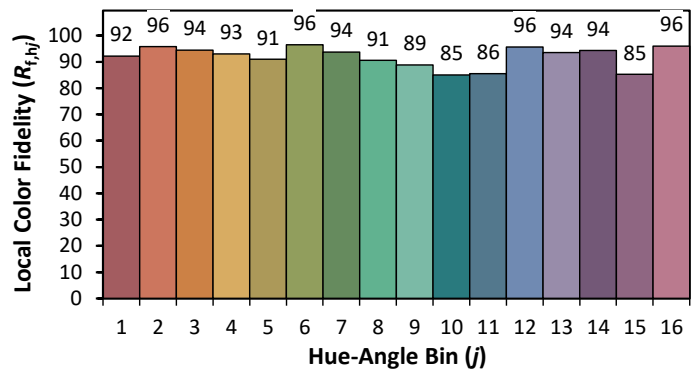
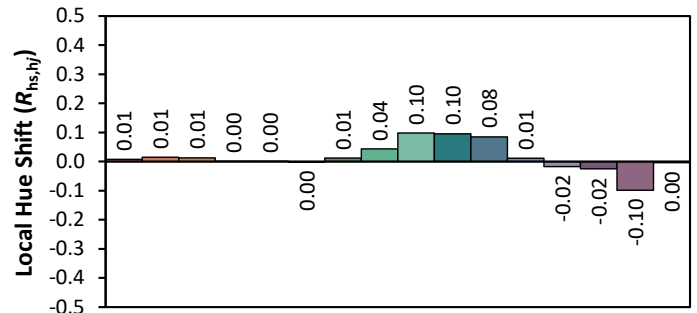
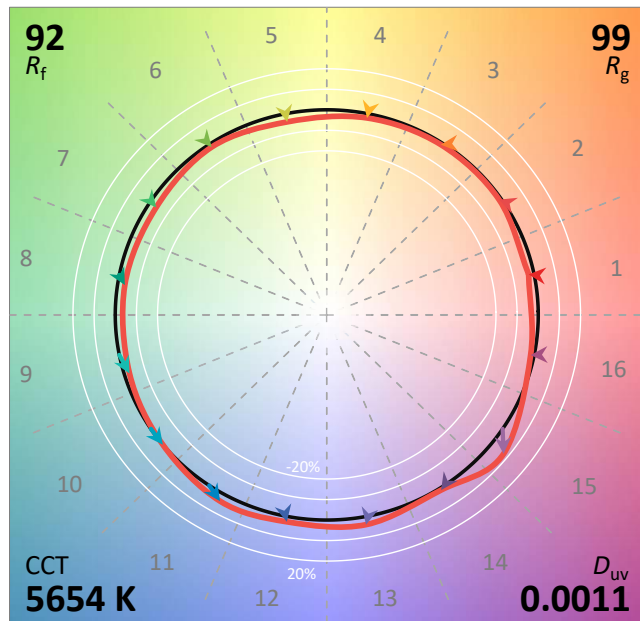
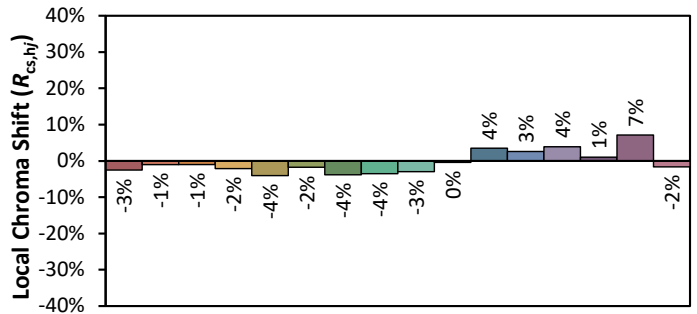
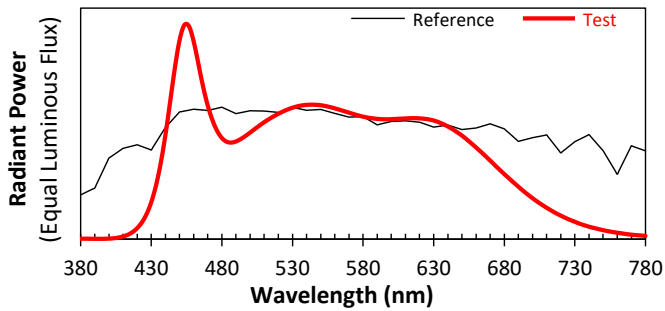
Measurement date: 11.02.2022

FORTE HCF

Photometric report

Beam angle 5° - Min. zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.3290
y 0.3402
 u' 0.2048
 v' 0.4766

CIE 13.3-1995
(CRI)

R_a 96

R_g 87

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam
Measurement date: 11.02.2022

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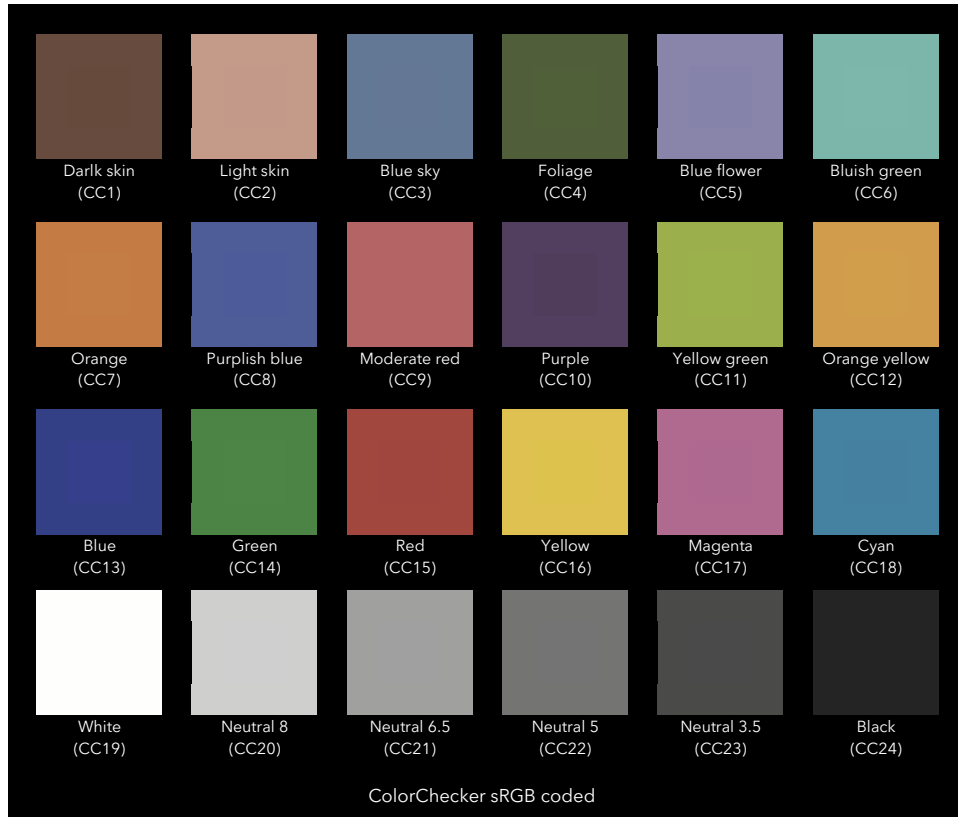
Photometric report

Beam angle 5° - Min. zoom

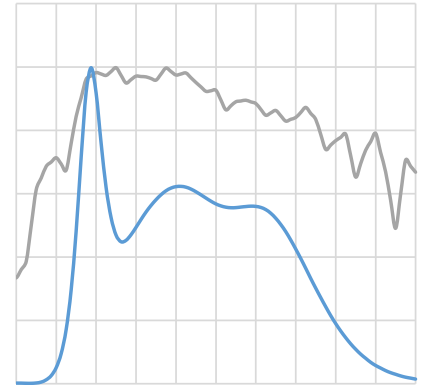
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D5654 (+0.2)

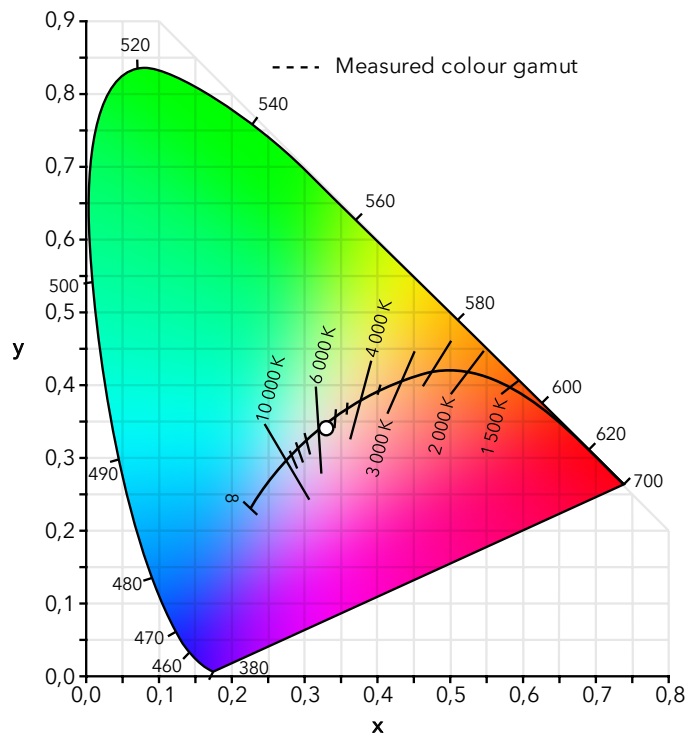
TLCI-2012: 96 (D5654)



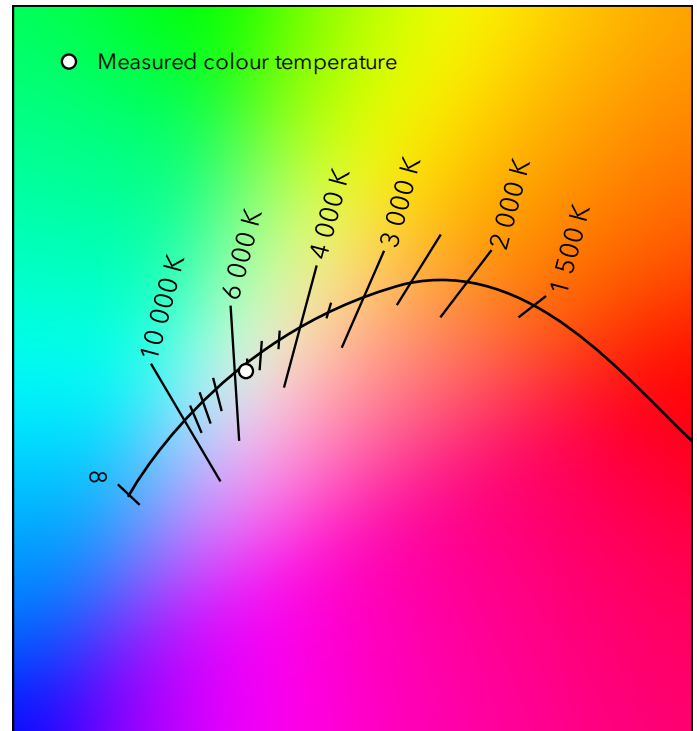
Sector	Lightness	Chroma	Hue
R	0	0	0
R/Y	0	0	0
Y	0	0	-
Y/G	0	0	0
G	0	0	0
G/C	0	0	0
C	0	0	0
C/B	0	0	-
B	0	-	-
B/M	0	0	0
M	0	0	0
M/R	+	0	0



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam

Measurement date: 11.02.2022

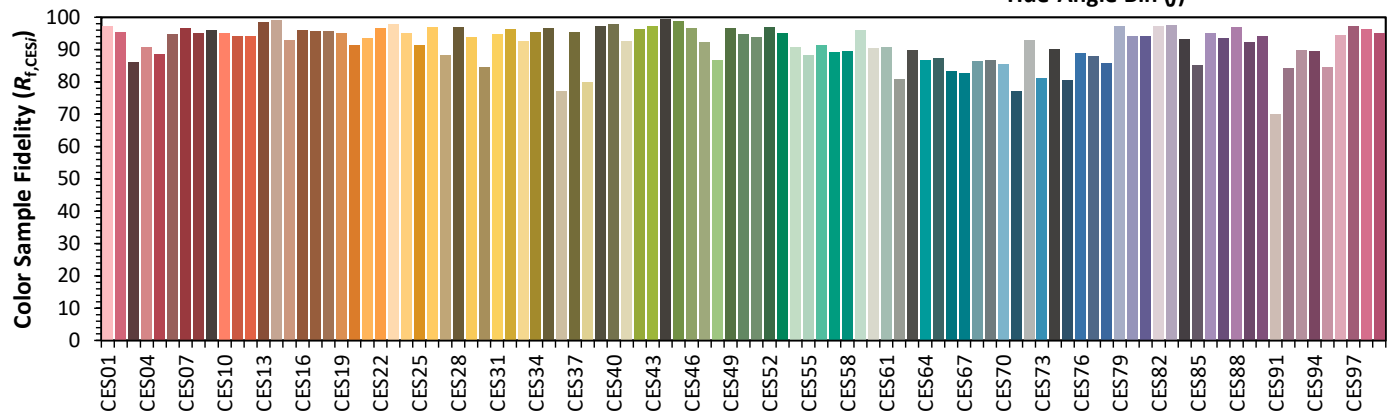
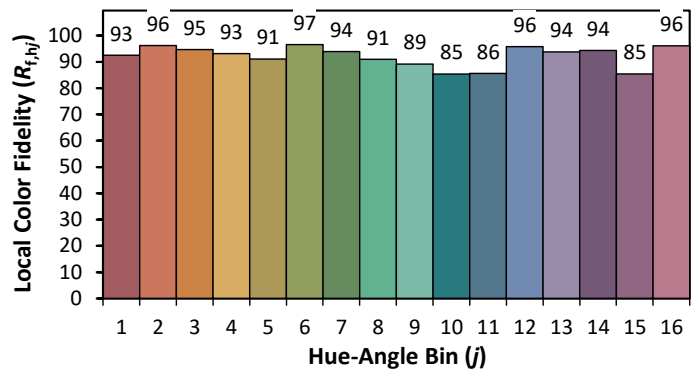
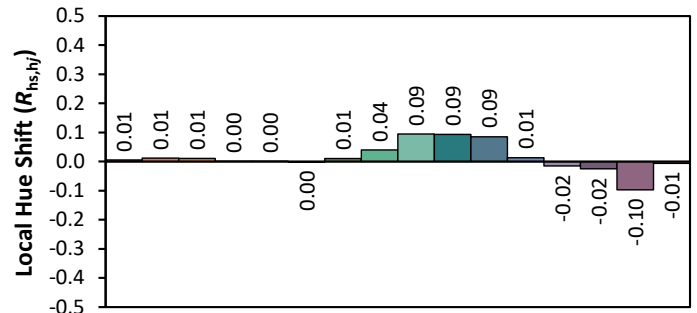
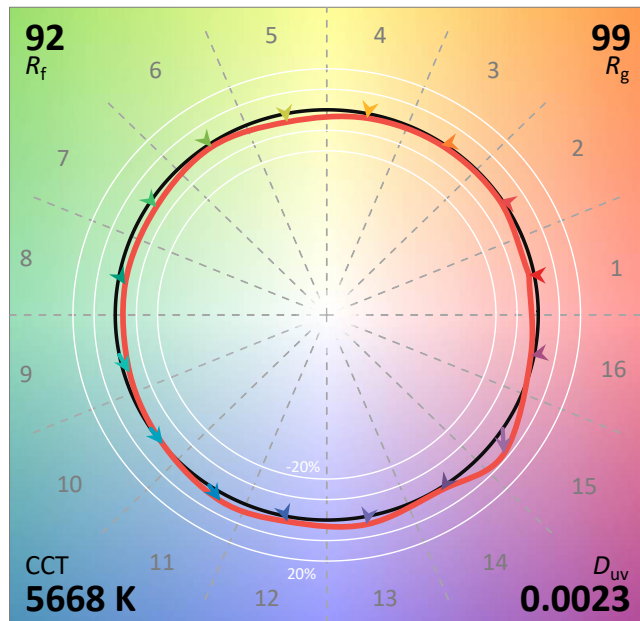
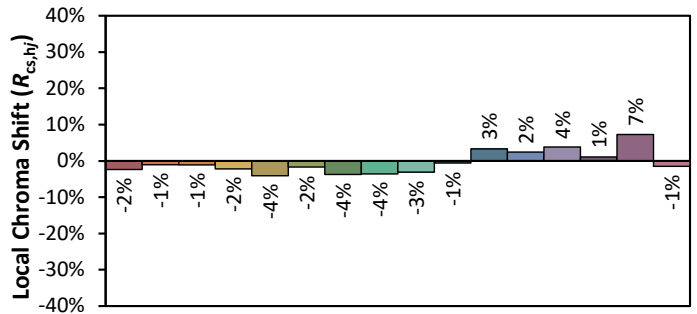
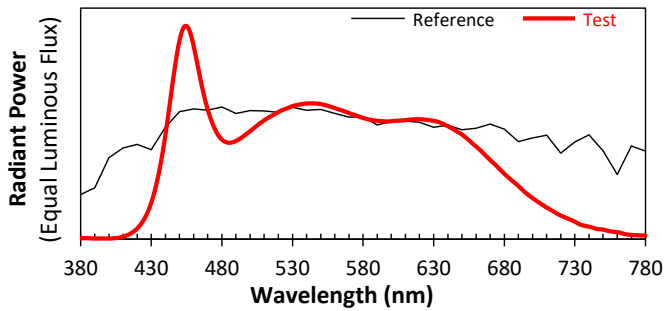
ROBE

FORTE HCF

Photometric report

Beam angle 55° - Max. zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.3286
y 0.3422
 u' 0.2038
 v' 0.4776

CIE 13.3-1995
(CRI)

R_a 96

R_g 87

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam
Measurement date: 11.02.2022

ROBE

FORTE HCF

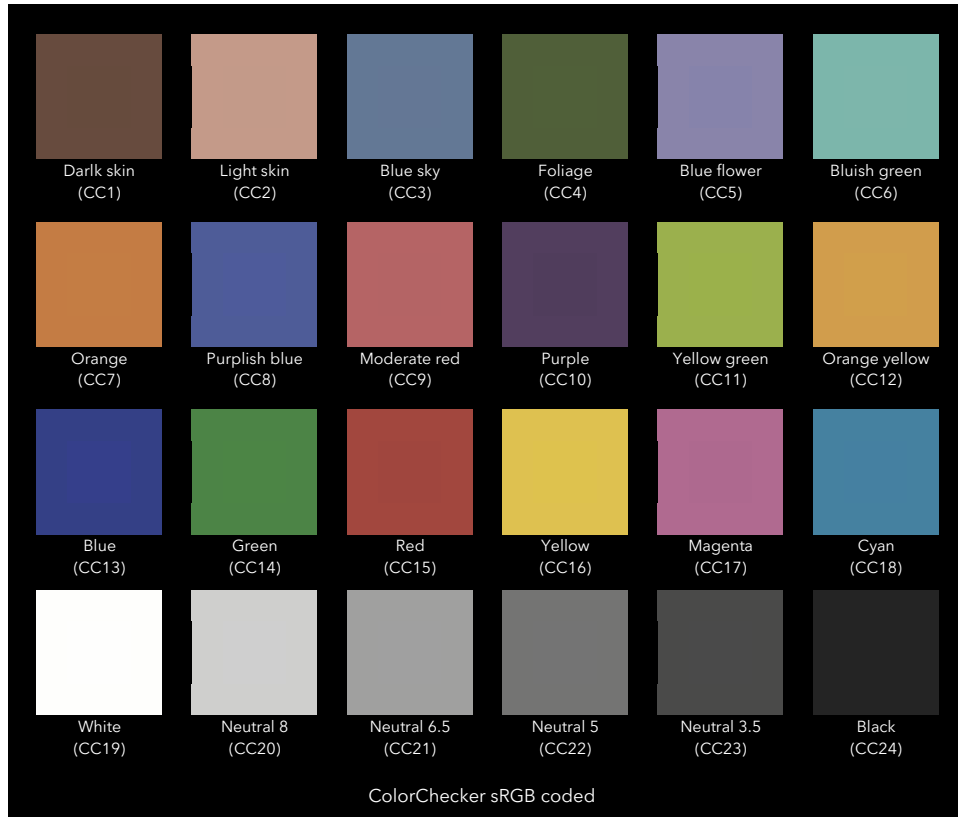
Photometric report

Beam angle 55° - Max. zoom

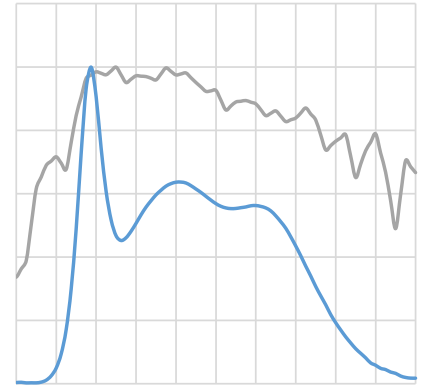
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D5668 (+0.4)

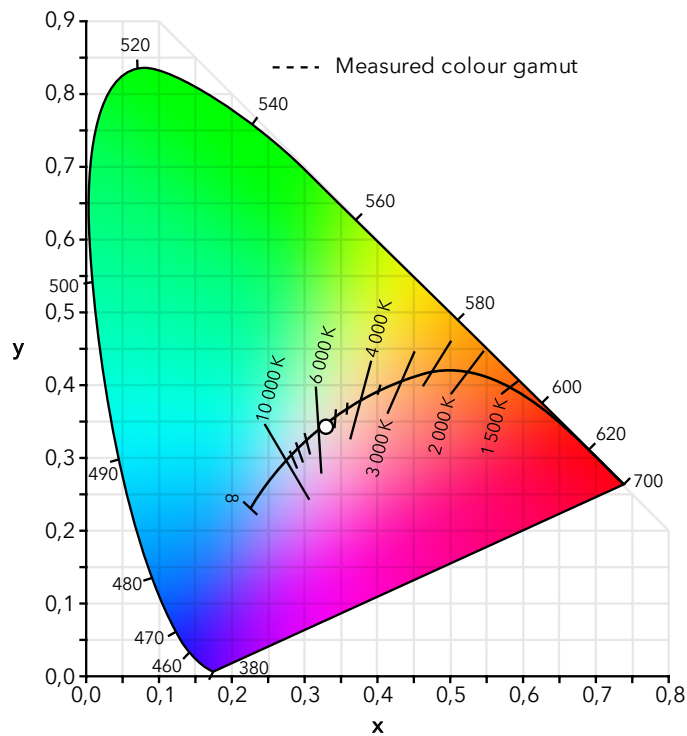
TLCI-2012: 97 (D5668)



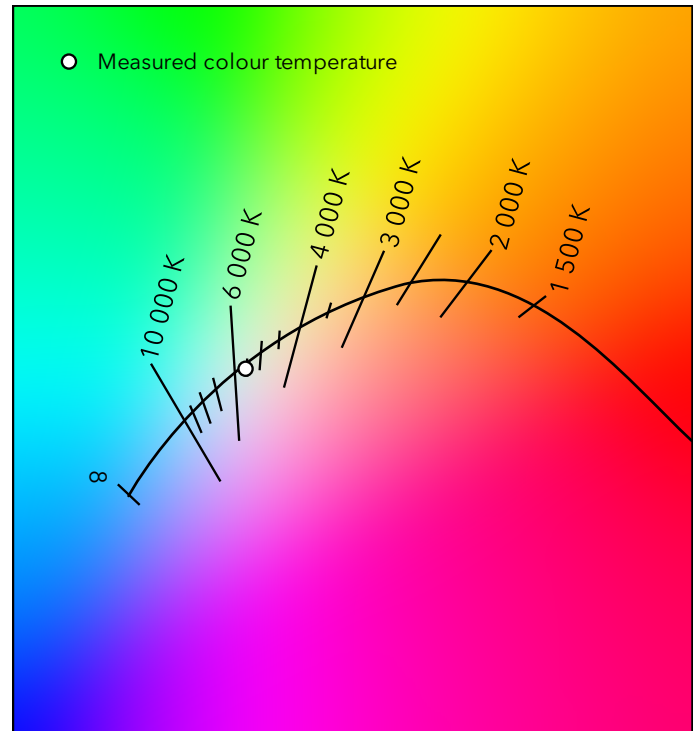
Sector	Lightness	Chroma	Hue
R	0	0	0
R/Y	0	0	0
Y	0	0	-
Y/G	0	0	0
G	0	0	0
G/C	0	0	0
C	0	0	0
C/B	0	0	-
B	0	-	-
B/M	0	0	0
M	0	0	0
M/R	+	0	0



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam

Measurement date: 11.02.2022

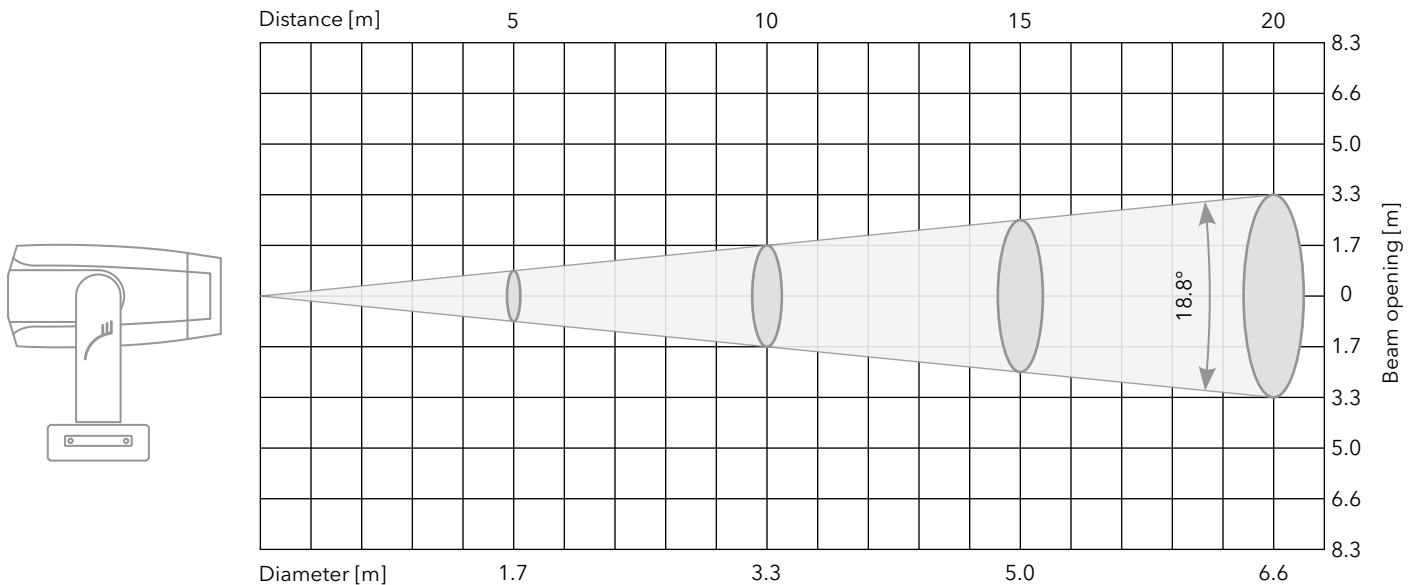
ROBE

FORTE HCF

Photometric report

Beam angle 18.8° - Medium zoom

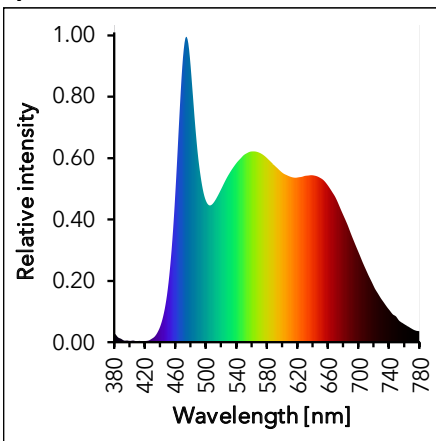
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
18.8°	28405 lm	22892 lm	293975 cd	1228 W



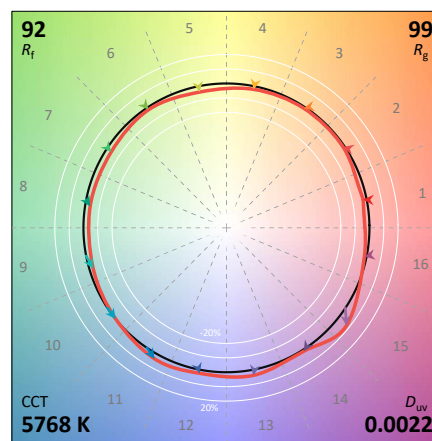
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	30 m	40 m	50 m	Total lumens
High Fan Mode	11759/1092	2940/273	1307/121	735/68	327/30	184/17	118/11	22892
Auto Fan Mode	11528/1071	2882/268	1281/119	721/67	320/30	180/17	115/11	22443
Quiet Fan Mode	7387/686	1847/172	821/76	462/43	205/19	115/11	74/7	14381

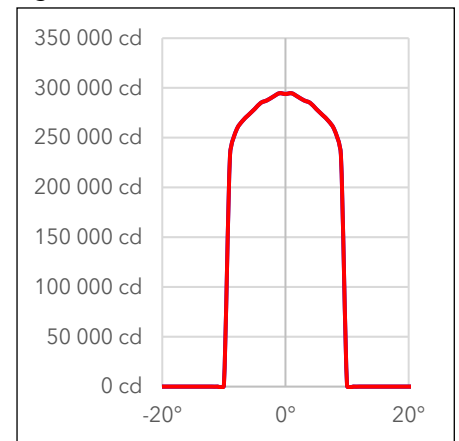
Spectrum



TM-30



Light distribution



Color temperature	CCT	5768
Color Deviation from Black	Duv	0.0022
Color Coordinate CIE 1931	x	0.3265
	y	0.3401
Color Coordinate	u	0.2032
	v	0.3174

Color rendering index	CRI	96
Red component	CRI R9	88
Color fidelity	TM30 Rf	92
Color gamut	TM30 Rg	99
Television consistency Index	TLCI	97

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam

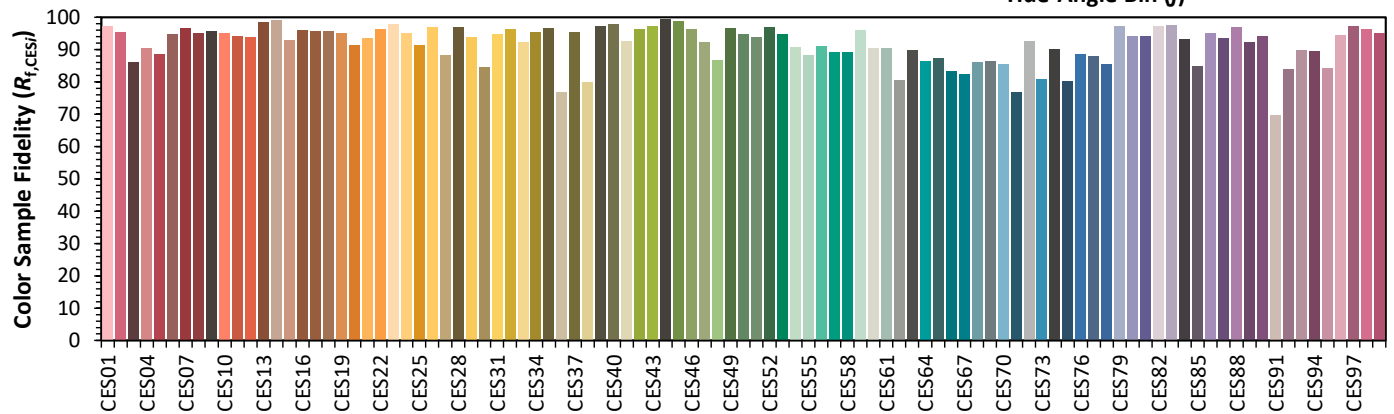
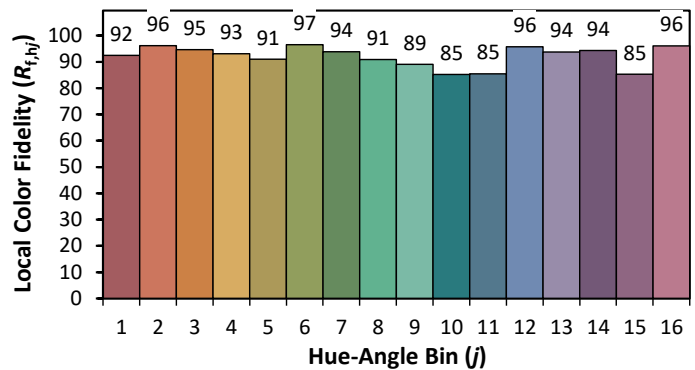
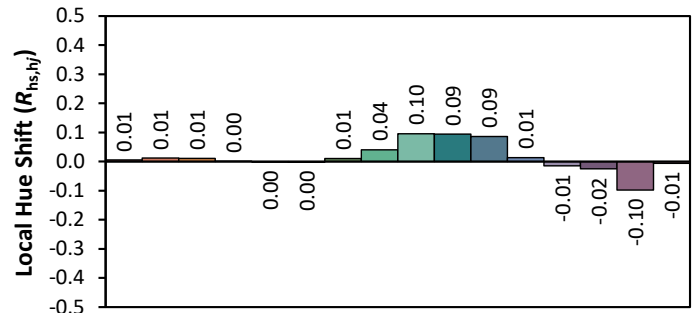
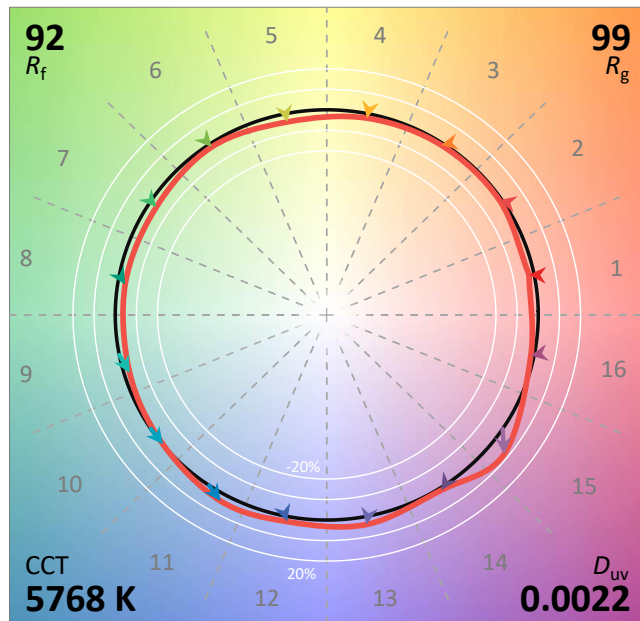
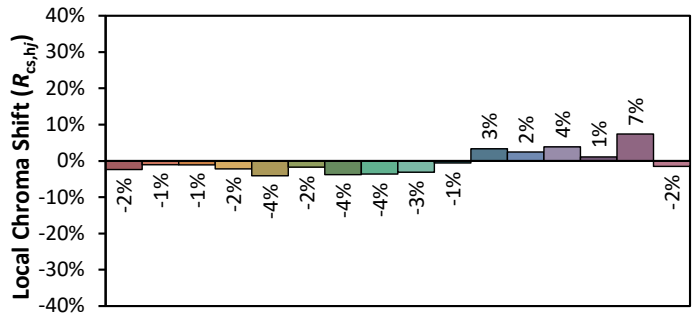
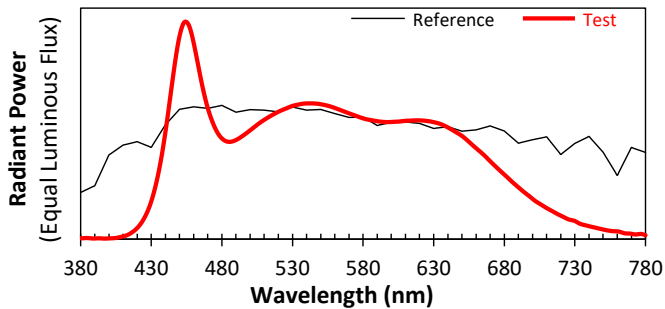
Measurement date: 11.02.2022

FORTE HCF

Photometric report

Beam angle 18.8° - Medium zoom

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x 0.3265
y 0.3401
 u' 0.2031
 v' 0.4762

CIE 13.3-1995
(CRI)

R_a 96

R_g 88

Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam
Measurement date: 11.02.2022

ROBE

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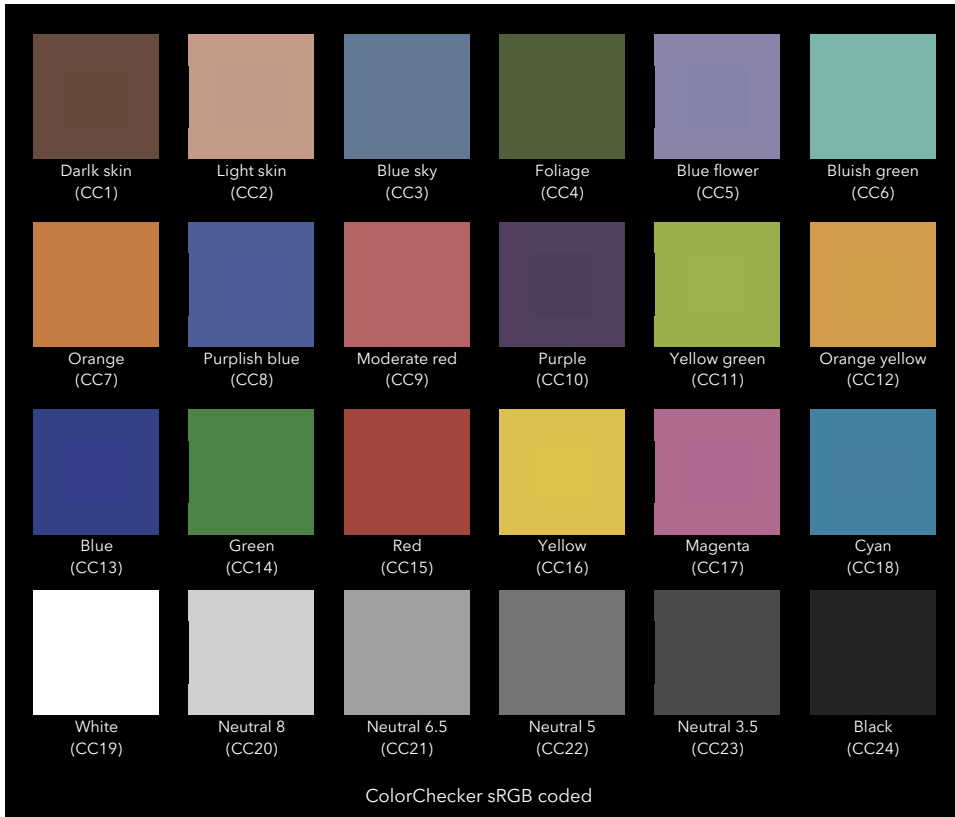
Photometric report

Beam angle 18.8° - Medium zoom

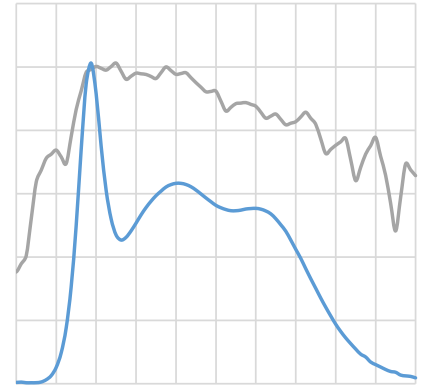
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D5768 (+0.4)

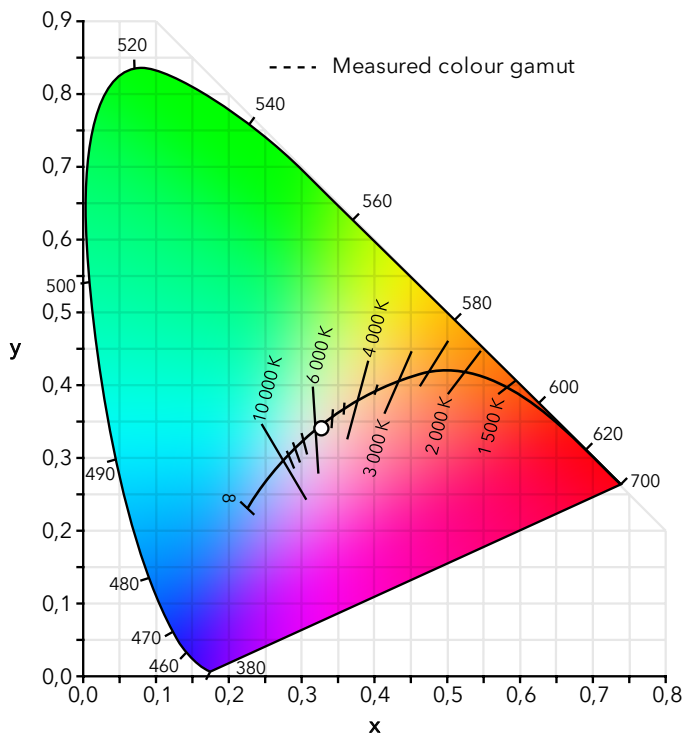
TLCI-2012: 97 (D5768)



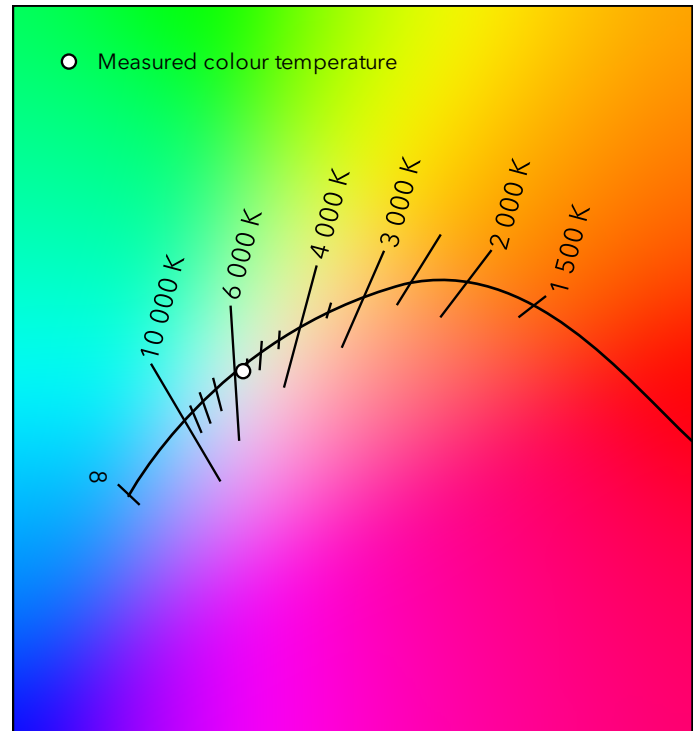
Sector	Lightness	Chroma	Hue
R	0	0	0
R/Y	0	0	0
Y	0	0	-
Y/G	0	0	0
G	0	0	0
G/C	0	0	0
C	0	0	0
C/B	0	0	-
B	0	-	-
B/M	0	0	0
M	0	0	0
M/R	+	0	0



CIE 1931 color space gamut



Colour temperature



Fixture settings: DMX mode: 1; Fans: High; Dimmer curve: Square Law; Shutter: Open; Dimmer: Open; No effect in light beam

Measurement date: 11.02.2022

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