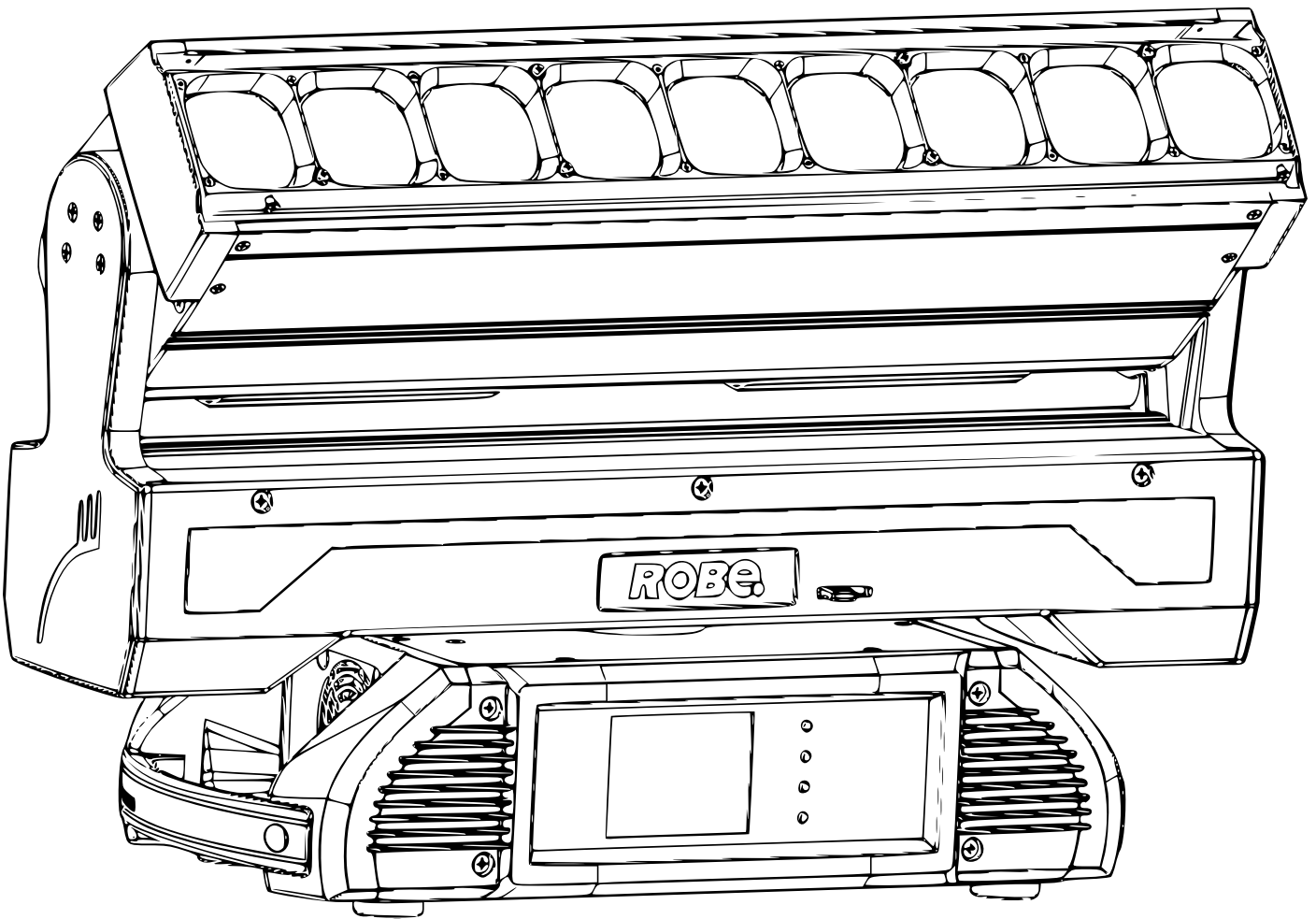


TetraX™



ROBE®

TetraX

Photometric report

Contents

Basic information	2
Beam angle 7° - Min. zoom, WP off	3
Beam angle 45° - Max. zoom, WP off	4
Beam angle 17° - Mid. zoom, WP off	5
Beam angle 7° - Min. zoom, WP on	6
Beam angle 42° - Max. zoom, WP on	9
Beam angle 17° - Mid. zoom, WP on	12

TetraX

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

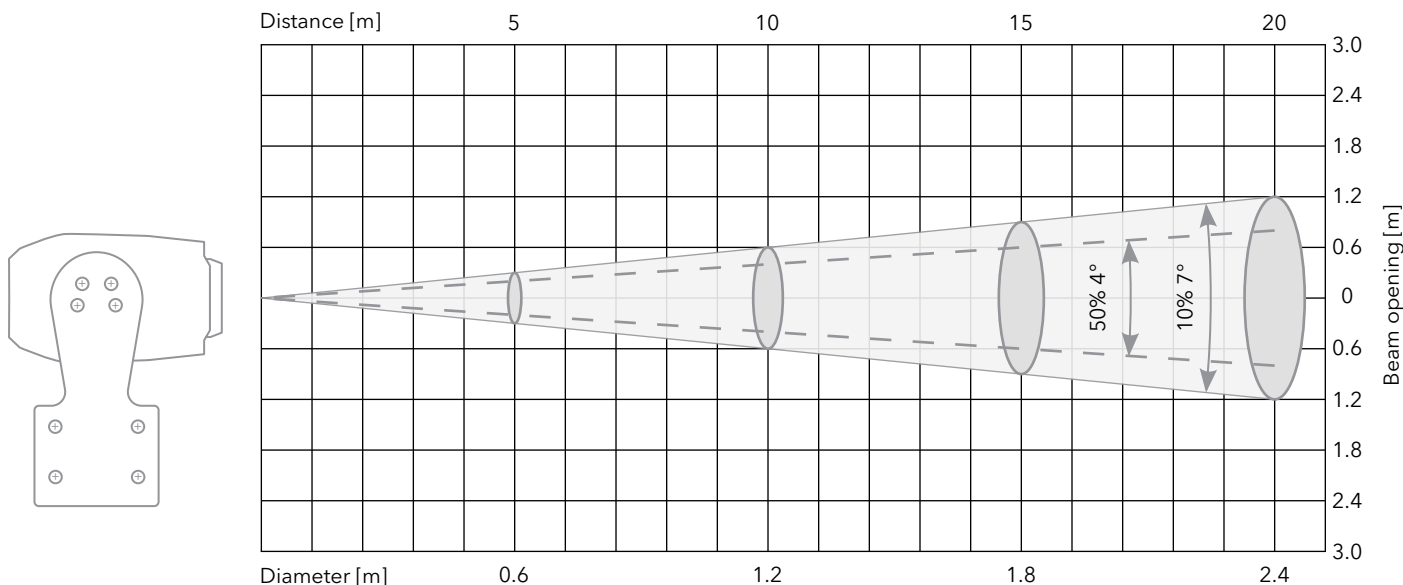
- Photometric measurement head
- UVA and UVC measurement head

TetraX

Photometric report

Beam angle 7° - Min. zoom, WP off

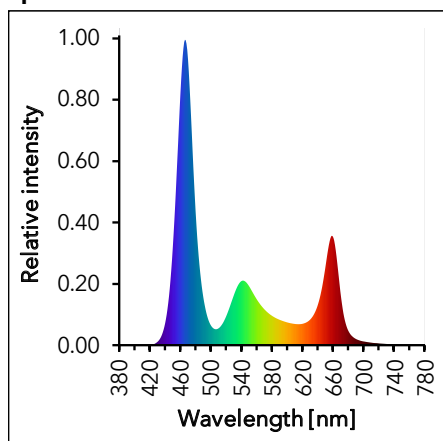
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
7°	2886 lm	2749 lm	168975 cd	280 W



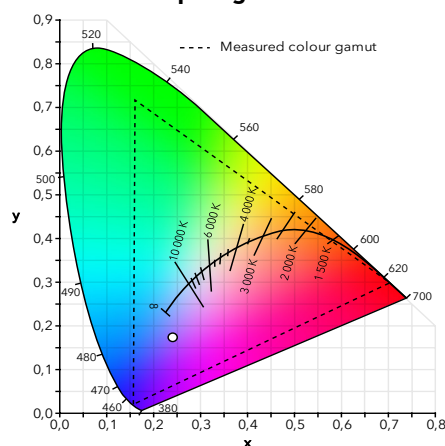
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	6759/628	1690/157	751/70	422/39	270/25	188/17	138/13	2749
Red	1102/102	276/26	122/11	69/6	44/4.1	31/2.8	22/2.1	448
Green	2259/210	565/52	251/23	141/13	90/8	63/6	46/4.3	919
Blue	472/44	118/11	52/4.9	30/2.7	19/1.8	13/1.2	10/0.9	192
White	2917/271	729/68	324/30	182/17	117/11	81/8	60/6	1186

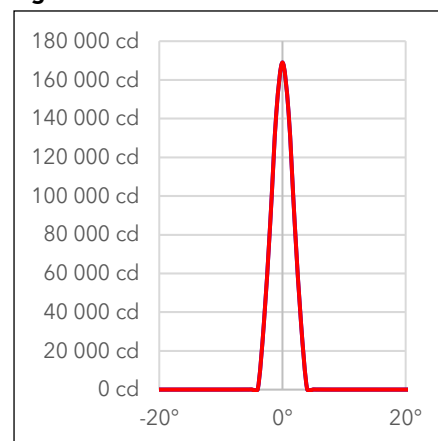
Spectrum



CIE 1931 color space gamut



Light distribution



Color temperature	CCT	N/A
Color Deviation from Black	Duv	N/A
Color Coordinate CIE 1931	x	0.2401
	y	0.1736
Color Coordinate	u	0.2086
	v	0.2263

Color rendering index	CRI	N/A
Red component	CRI R9	N/A
Color fidelity	TM30 Rf	N/A
Color gamut	TM30 Rg	N/A
Television consistency Index	TLCI	N/A

Fixture settings: Mode 1, Flower Effect Off, White point Off, All pixels On

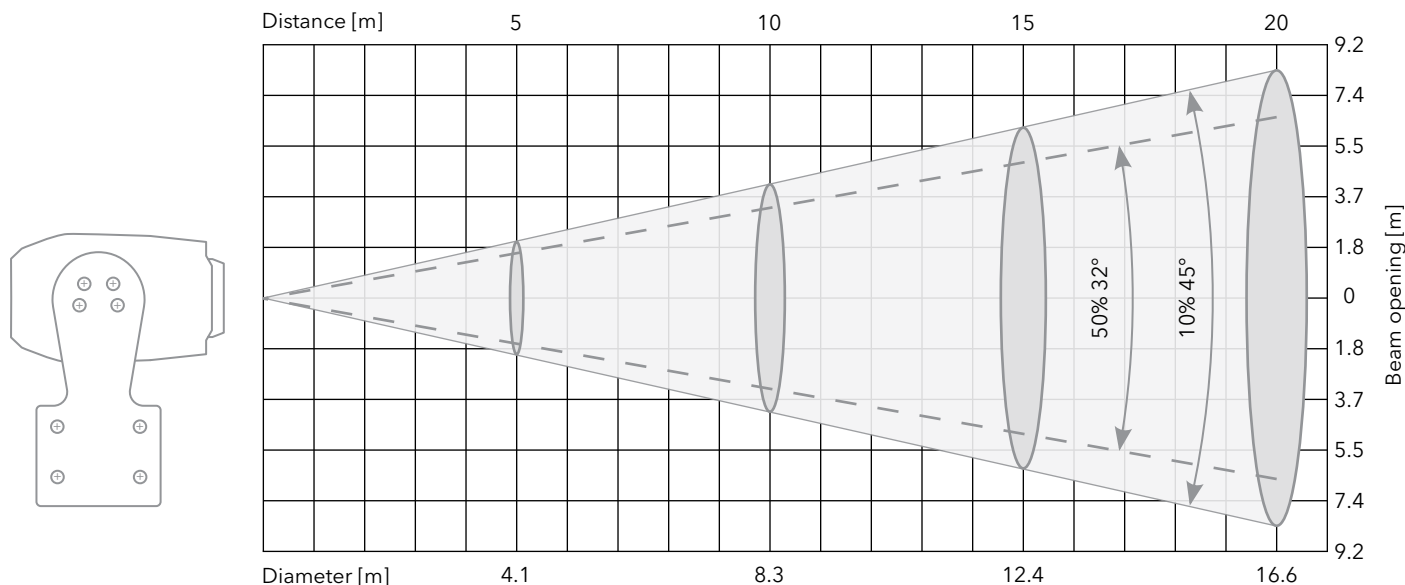
Measurement date: 14.04.2022

TetraX

Photometric report

Beam angle 45° - Max. zoom, WP off

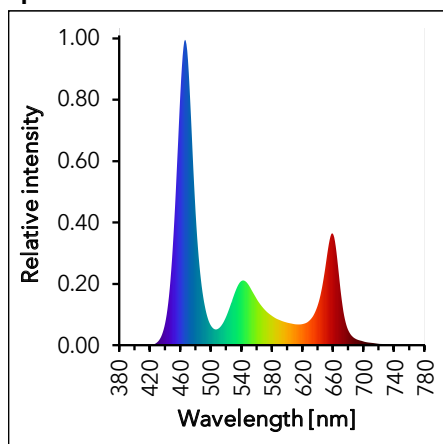
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
45°	4890 lm	3912 lm	15625 cd	280 W



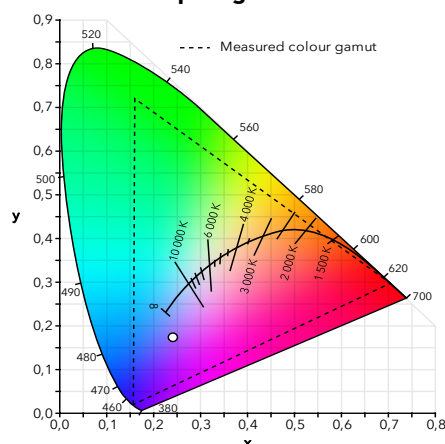
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	625/58	156/15	69/6	39/3.6	25/2.3	17/1.6	13/1.2	3912
Red	102/9	26/2.4	11/1.1	6/0.6	4.1/0.4	2.8/0.3	2.1/0.2	638
Green	213/20	53/4.9	24/2.2	13/1.2	9/0.8	6/0.5	4.3/0.4	1333
Blue	45/4.2	11/1	5/0.5	2.8/0.3	1.8/0.2	1.3/0.1	0.9/0.1	282
White	272/25	68/6	30/2.8	17/1.6	11/1	8/0.7	6/0.5	1703

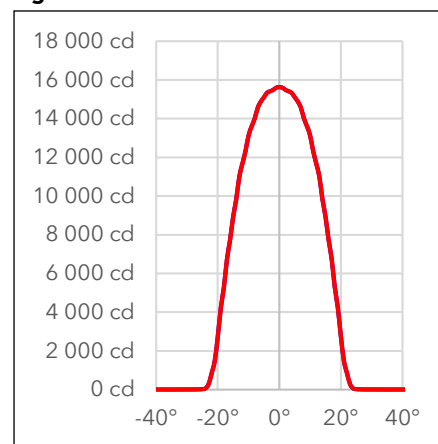
Spectrum



CIE 1931 color space gamut



Light distribution



Color temperature	CCT	N/A
Color Deviation from Black	Duv	N/A
Color Coordinate CIE 1931	x	0.2405
	y	0.1737
Color Coordinate	u	0.2090
	v	0.2264

Color rendering index	CRI	N/A
Red component	CRI R9	N/A
Color fidelity	TM30 Rf	N/A
Color gamut	TM30 Rg	N/A
Television consistency Index	TLCI	N/A

Fixture settings: Mode 1, Flower Effect Off, White point Off, All pixels On

Measurement date: 14.04.2022

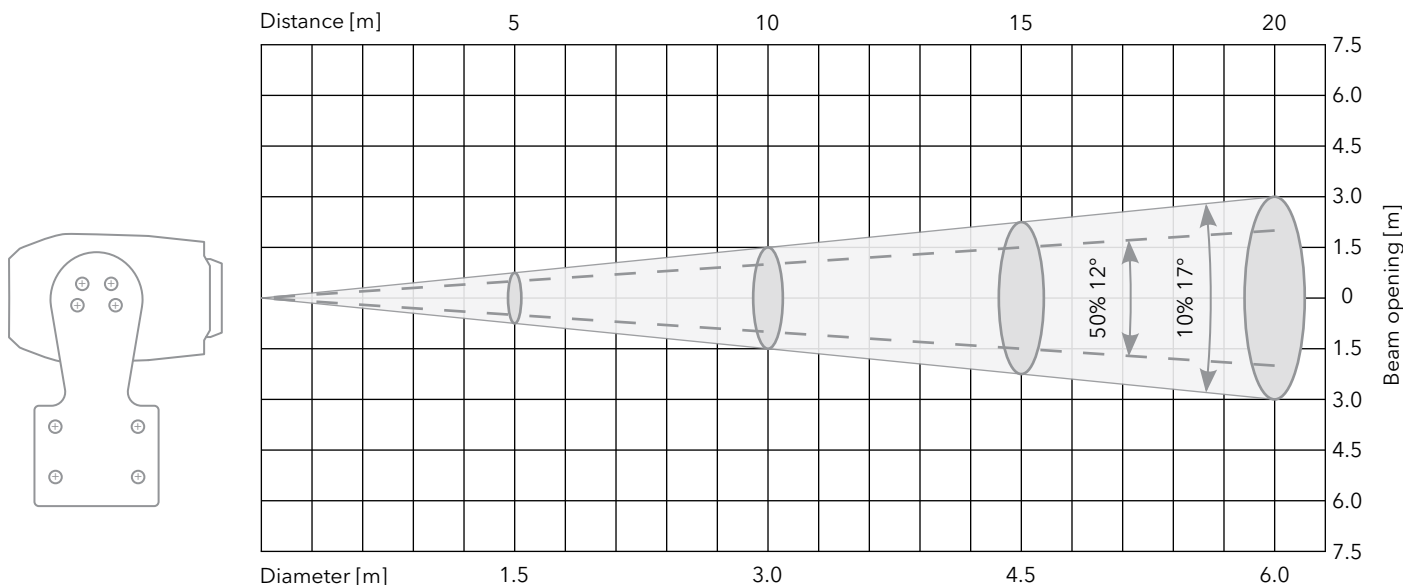


TetraX

Photometric report

Beam angle 17° - Mid. zoom, WP off

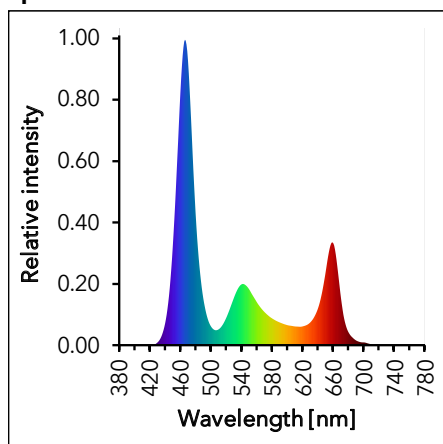
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
17°	3638 lm	2910 lm	50200 cd	280 W



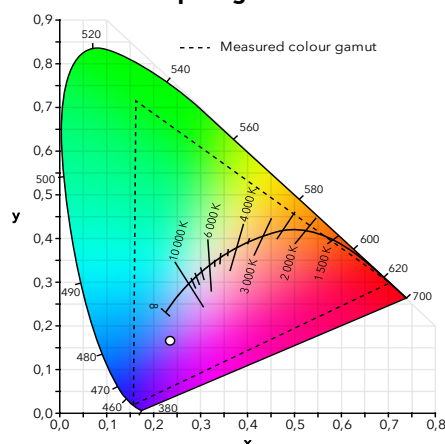
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	2008/187	502/47	223/21	126/12	80/7	56/5	41/3.8	2910
Red	337/31	84/8	37/3.5	21/2	13/1.3	9/0.9	7/0.6	488
Green	710/66	178/16	79/7	44/4.1	28/2.6	20/1.8	14/1.3	1029
Blue	152/14	38/3.5	17/1.6	10/0.9	6/0.6	4.2/0.4	3.1/0.3	220
White	272/25	68/6	30/2.8	17/1.6	11/1	8/0.7	6/0.5	394

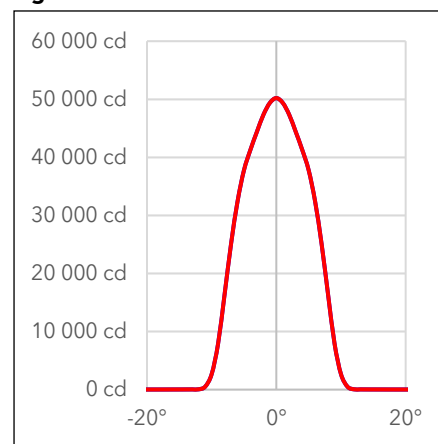
Spectrum



CIE 1931 color space gamut



Light distribution



Color temperature	CCT	N/A
Color Deviation from Black	Duv	N/A
Color Coordinate CIE 1931	x	0.2346
	y	0.1657
Color Coordinate	u	0.2076
	v	0.2200

Color rendering index	CRI	N/A
Red component	CRI R9	N/A
Color fidelity	TM30 Rf	N/A
Color gamut	TM30 Rg	N/A
Television consistency Index	TLCI	N/A

Fixture settings: Mode 1, Flower Effect Off, White point Off, All pixels On

Measurement date: 14.04.2022

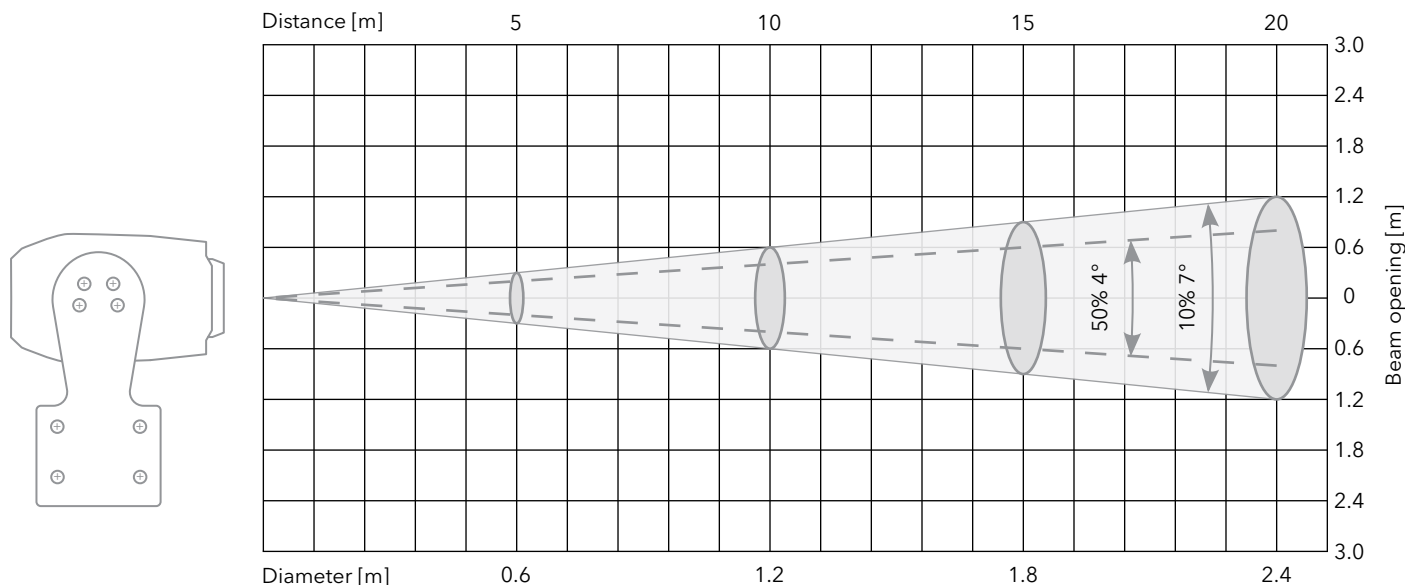


TetraX

Photometric report

Beam angle 7° - Min. zoom, WP on

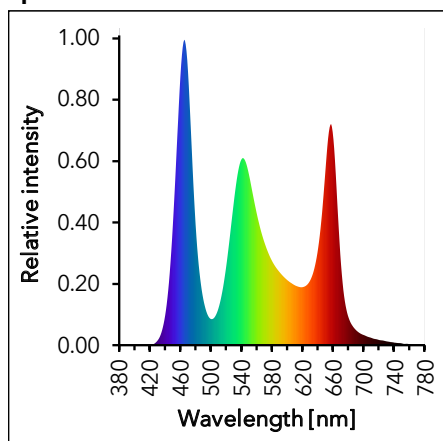
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
7°	2521 lm	2401 lm	147575 cd	265 W



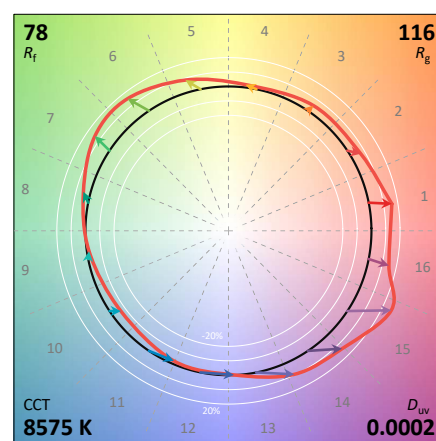
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	5903/548.4	1475.8/137.1	655.9/60.9	368.9/34.3	236.1/21.9	164/15.2	120.5/11.2	2401
Red	1102/102.4	275.5/25.6	122.4/11.4	68.9/6.4	44.1/4.1	30.6/2.8	22.5/2.1	448
Green	2259/209.9	564.8/52.5	251/23.3	141.2/13.1	90.4/8.4	62.8/5.8	46.1/4.3	919
Blue	472/43.9	118/11	52.4/4.9	29.5/2.7	18.9/1.8	13.1/1.2	9.6/0.9	192
White	2917/271	729.3/67.7	324.1/30.1	182.3/16.9	116.7/10.8	81/7.5	59.5/5.5	1186

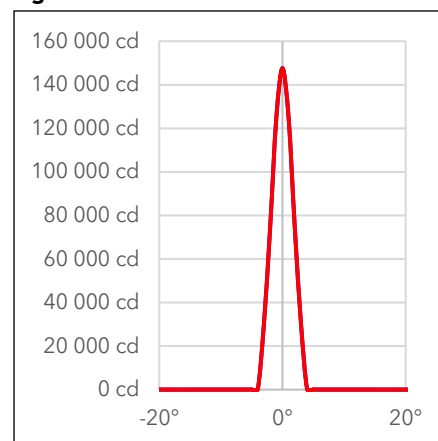
Spectrum



TM-30



Light distribution



Color temperature	CCT	8575
Color Deviation from Black	Duv	0.0002
Color Coordinate CIE 1931	x	0.2901
	y	0.2995
Color Coordinate	u	0.1930
	v	0.2988

Color rendering index	CRI	73
Red component	CRI R9	-19
Color fidelity	TM30 Rf	78
Color gamut	TM30 Rg	116
Television consistency Index	TLCI	64

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On

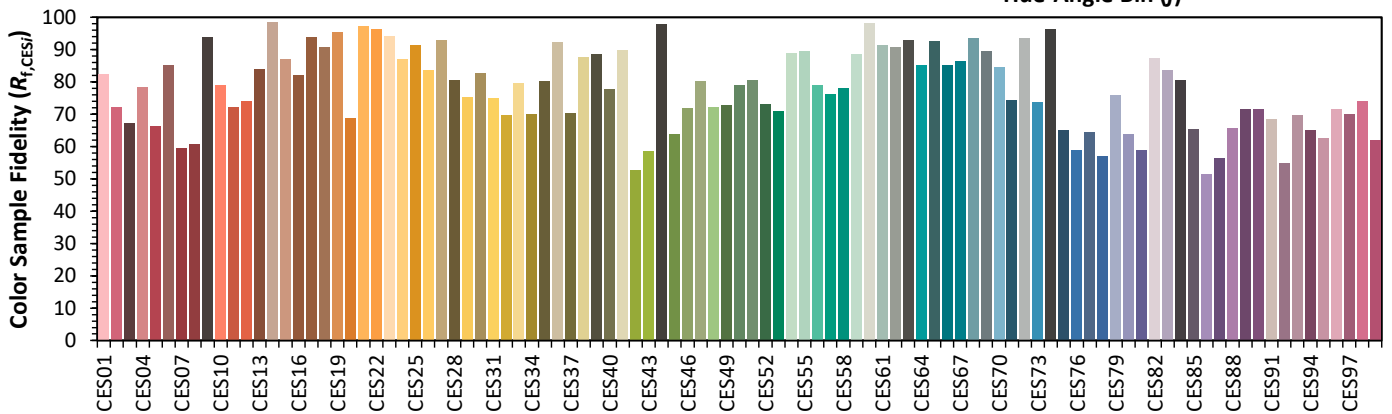
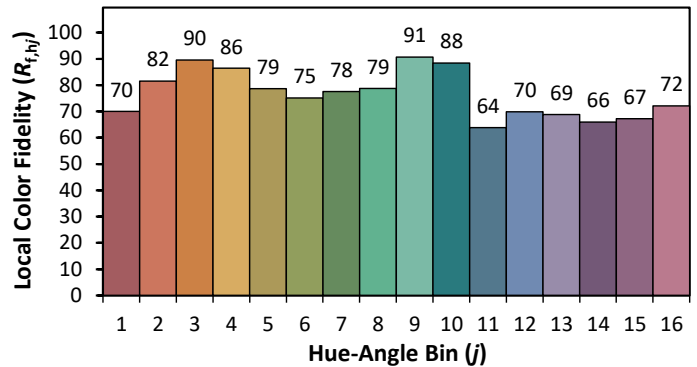
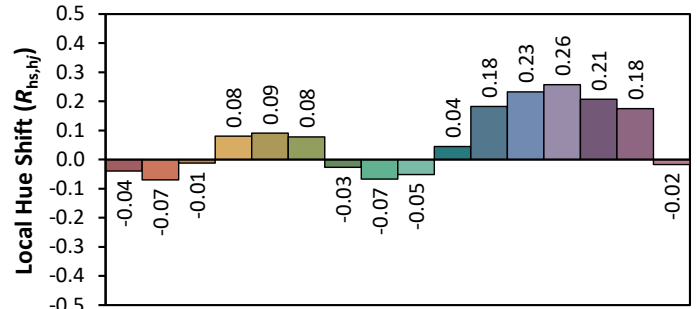
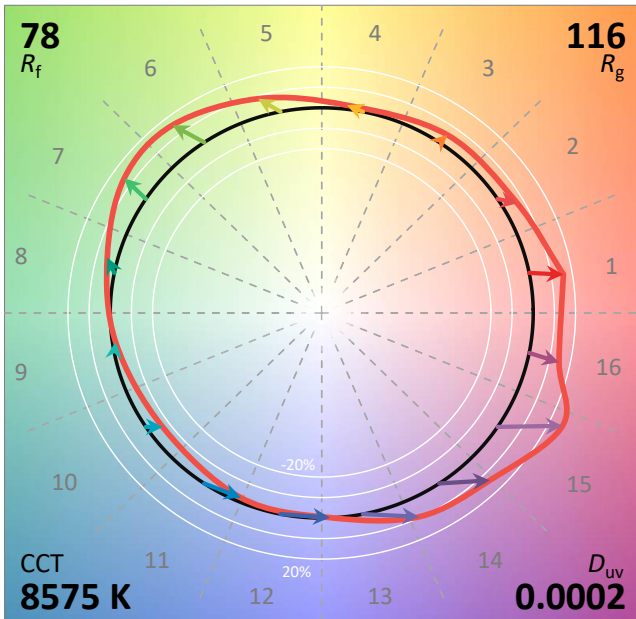
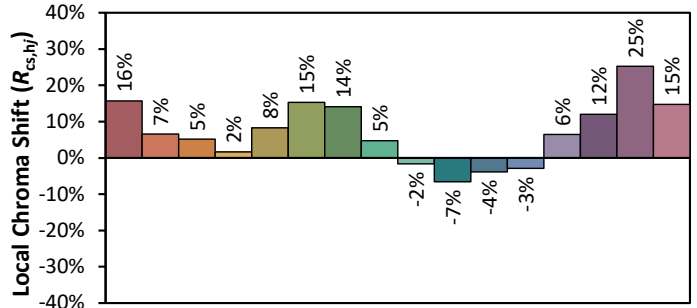
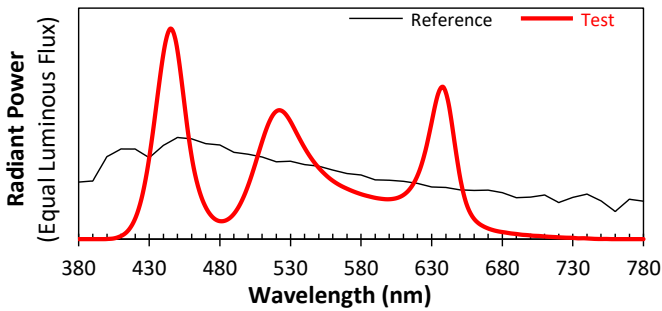
Measurement date: 14.04.2022

TetraX

Photometric report

Beam angle 7° - Min. zoom, WP on

ANSI/IES TM-30-18 Color Rendition Report



Notes:

x **0.2902**
 y **0.2996**
 u' **0.1930**
 v' **0.4483**

CIE 13.3-1995
(CRI)

R_a 73
 R_g -20

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On
 Measurement date: 14.04.2022

TetraX

Photometric report

Beam angle 7° - Min. zoom, WP on

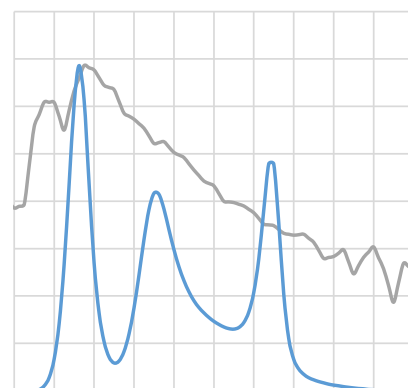
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D8575 (0)

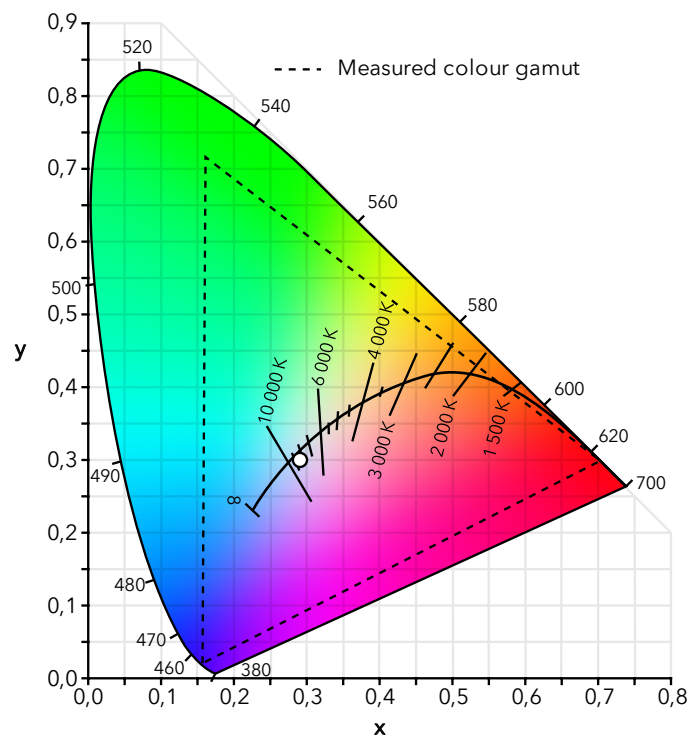
TLCI-2012: 64 (D8575)



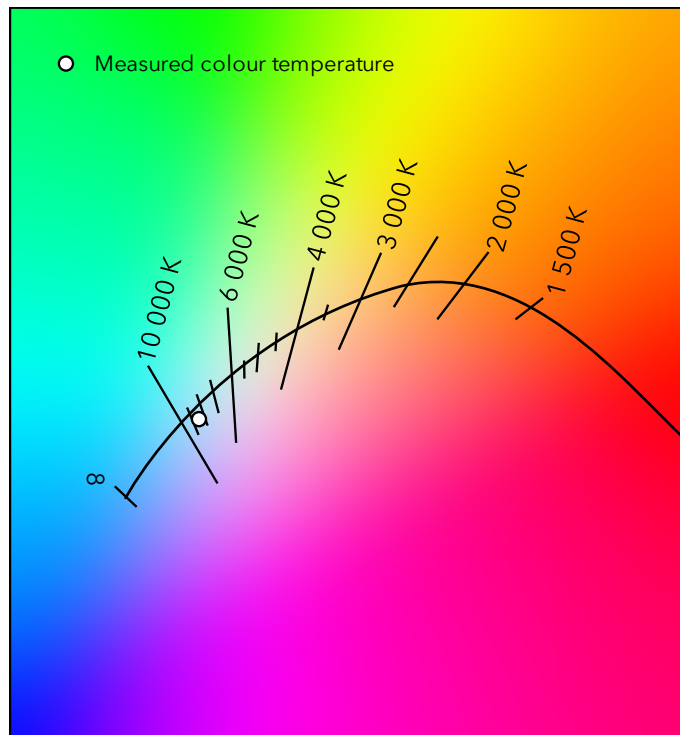
Sector	Lightness	Chroma	Hue
R	-----	--	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	-
G	-	---	0
G/C	0	----	++++
C	0	-	+++++
C/B	0	0	++
B	0	--	-
B/M	0	--	-
M	-	---	-
M/R	----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On

Measurement date: 14.04.2022

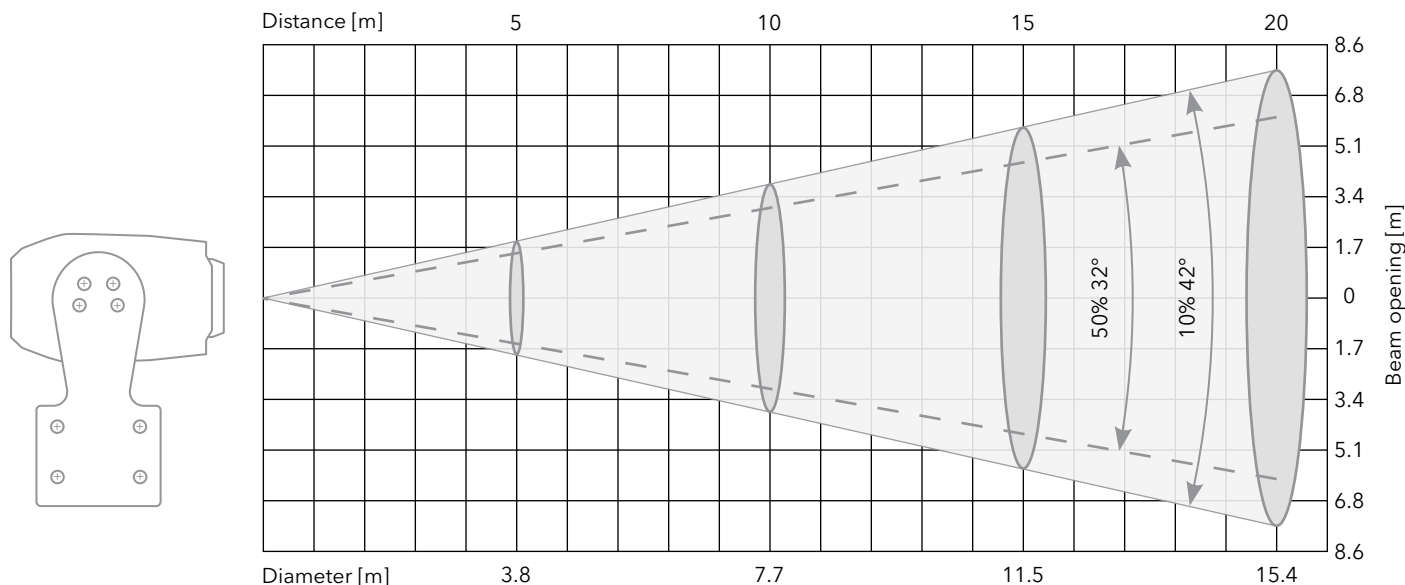


TetraX

Photometric report

Beam angle 42° - Max. zoom, WP on

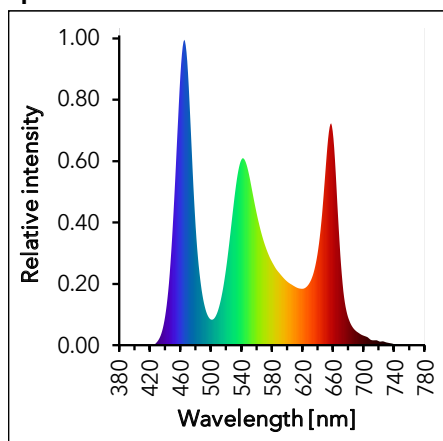
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
42°	4246 lm	3397 lm	13575 cd	265 W



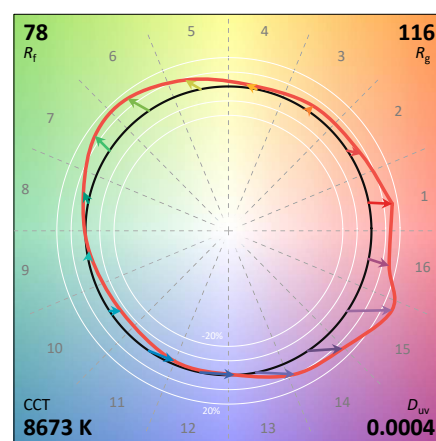
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	543/50.4	135.8/12.6	60.3/5.6	33.9/3.2	21.7/2	15.1/1.4	11.1/1	3397
Red	102/9.5	25.5/2.4	11.3/1.1	6.4/0.6	4.1/0.4	2.8/0.3	2.1/0.2	638
Green	213/19.8	53.3/4.9	23.7/2.2	13.3/1.2	8.5/0.8	5.9/0.5	4.3/0.4	1333
Blue	45/4.2	11.3/1	5/0.5	2.8/0.3	1.8/0.2	1.3/0.1	0.9/0.1	282
White	272/25.3	68/6.3	30.2/2.8	17/1.6	10.9/1	7.6/0.7	5.6/0.5	1702

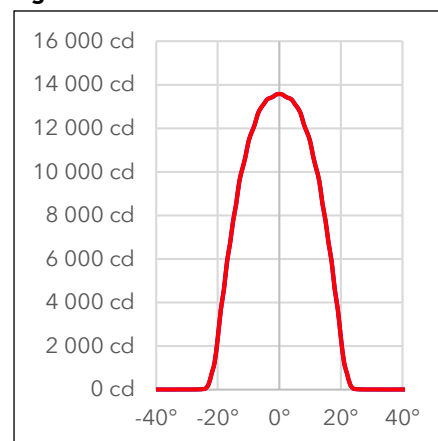
Spectrum



TM-30



Light distribution



Color temperature	CCT	8673
Color Deviation from Black	Duv	0.0004
Color Coordinate CIE 1931	x	0.2892
	y	0.2989
Color Coordinate	u	0.1925
	v	0.2985

Color rendering index	CRI	73
Red component	CRI R9	-21
Color fidelity	TM30 Rf	78
Color gamut	TM30 Rg	116
Television consistency Index	TLCI	63

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On

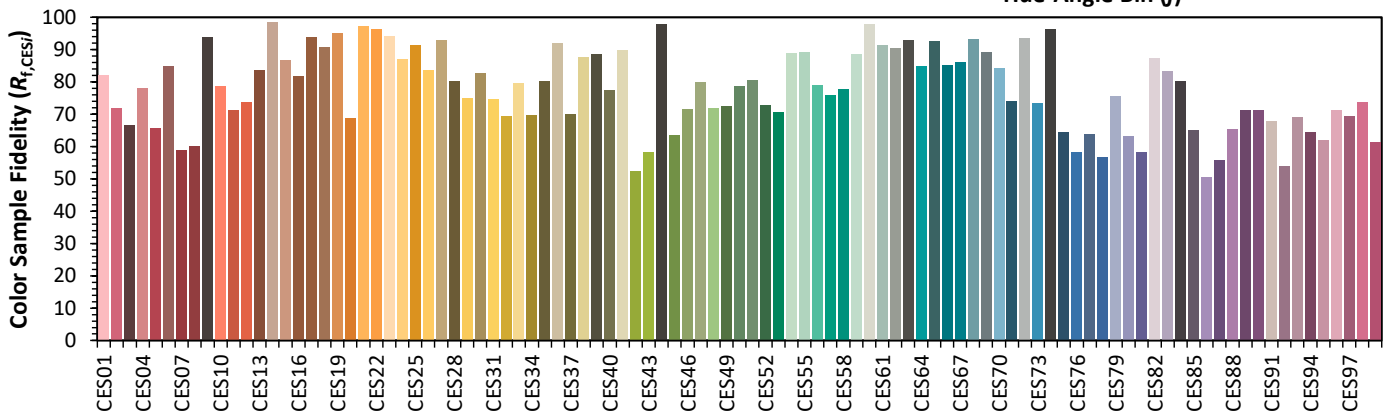
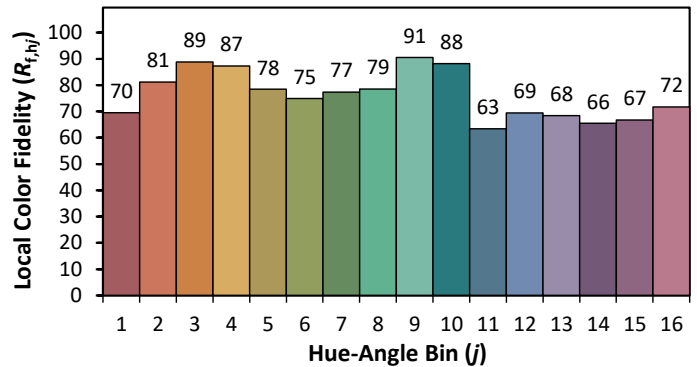
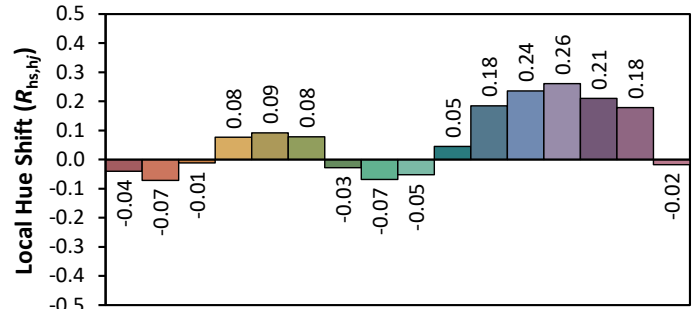
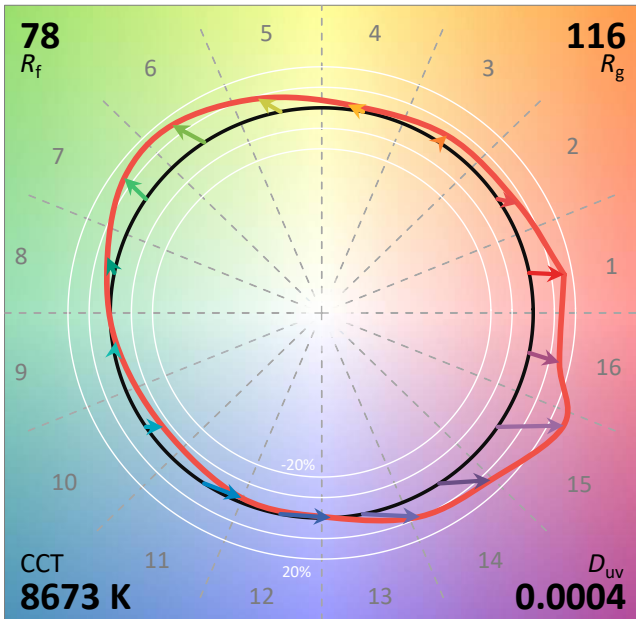
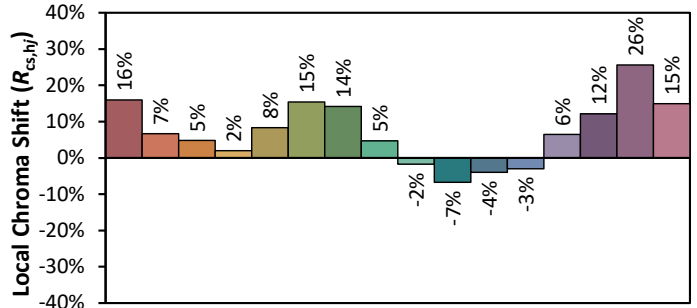
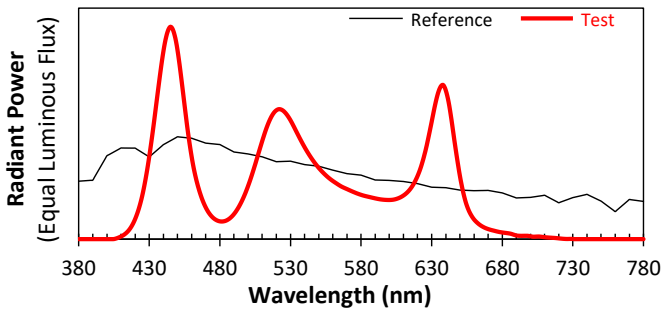
Measurement date: 14.04.2022

TetraX

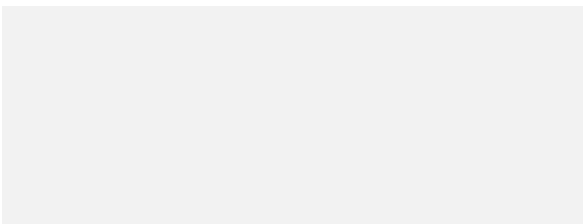
Photometric report

Beam angle 42° - Max. zoom, WP on

ANSI/IES TM-30-18 Color Rendition Report



Notes:



x 0.2892
y 0.2990
u' 0.1925
v' 0.4478

CIE 13.3-1995 (CRI)	
R _a	73
R _g	-21

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On
Measurement date: 14.04.2022



TetraX

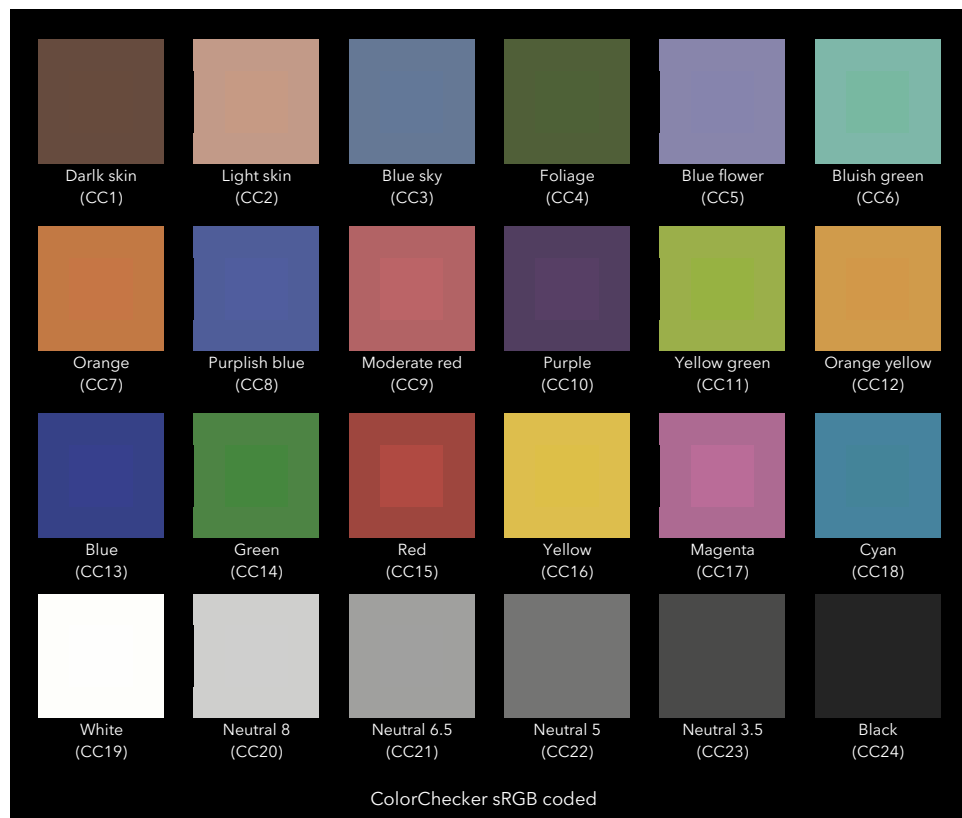
Photometric report

Beam angle 42° - Max. zoom, WP on

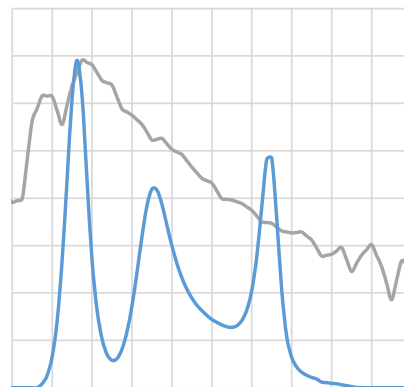
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D8673 (+0.1)

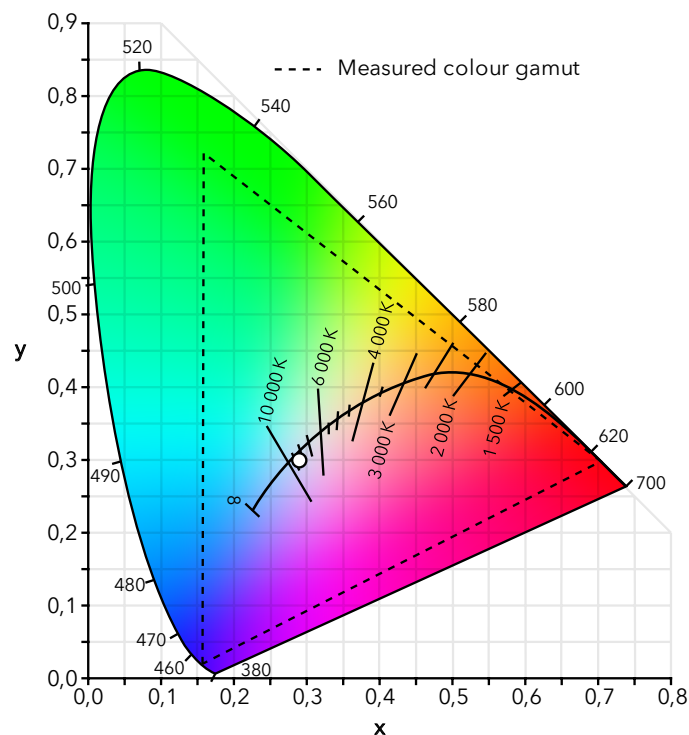
TLCI-2012: 63 (D8673)



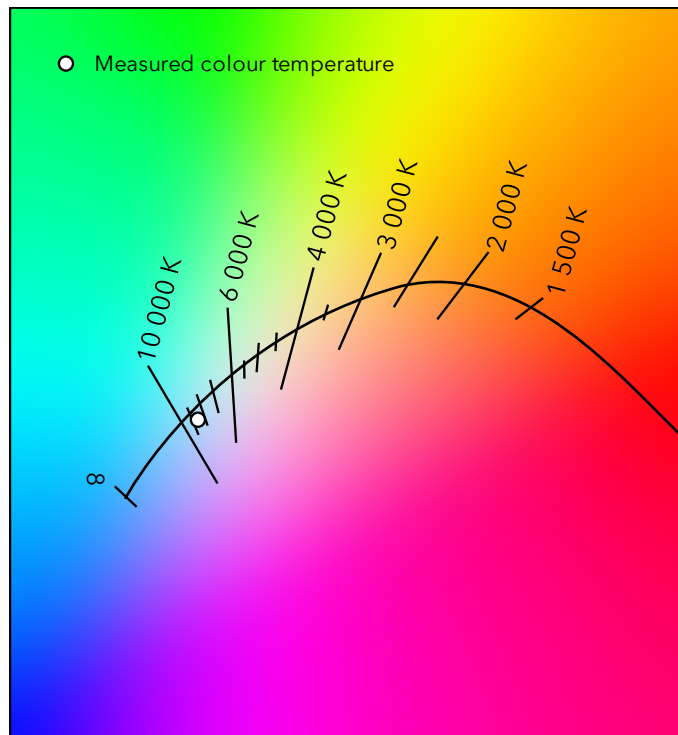
Sector	Lightness	Chroma	Hue
R	-----	---	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	-
G	-	---	0
G/C	0	-----	++++
C	0	-	+++++
C/B	0	0	++
B	0	--	-
B/M	0	--	-
M	-	---	-
M/R	-----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On

Measurement date: 14.04.2022

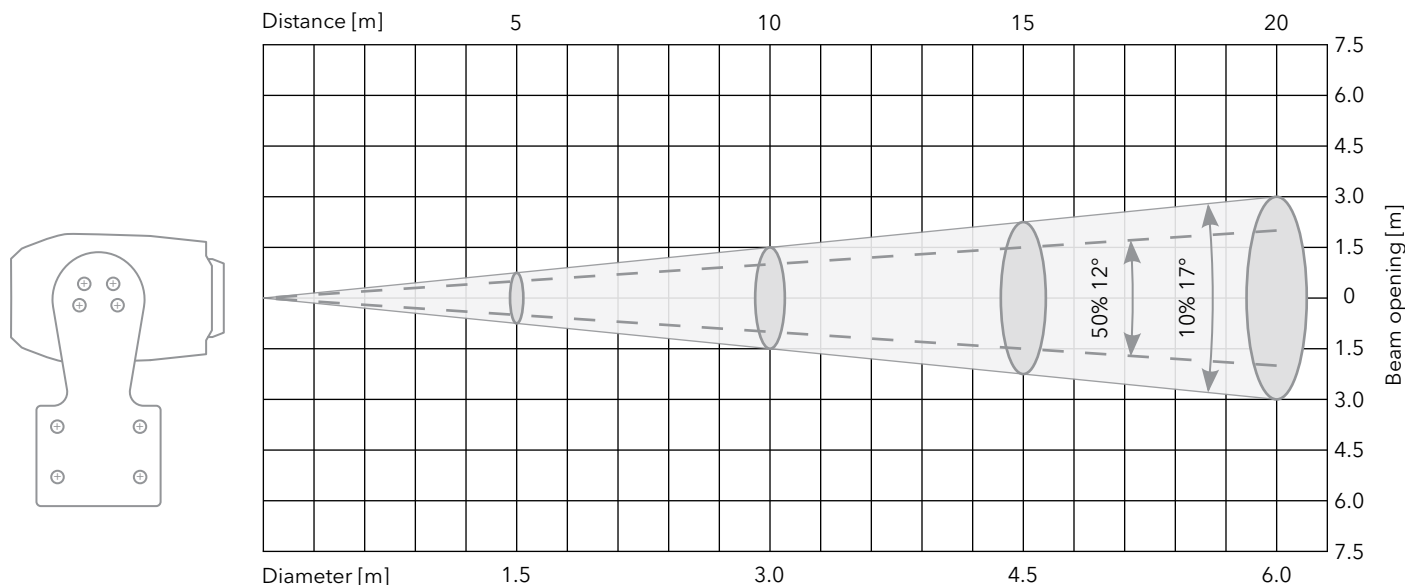


TetraX

Photometric report

Beam angle 17° - Mid. zoom, WP on

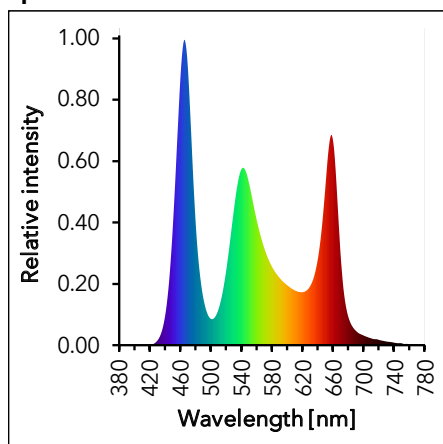
Beam angle	Total lumen output (integrating sphere)	Total lumen output (goniophotometer)	Peak candela	Power
17°	3241 lm	2593 lm	44750 cd	265 W



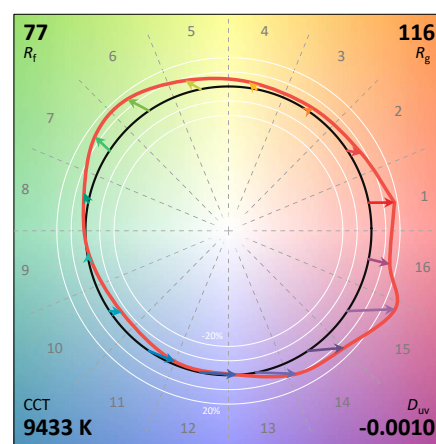
Center beam intensity [lx]/[fcd]; Total lumen output [lm] measured by goniophotometer

Distance	5 m	10 m	15 m	20 m	25 m	30 m	35 m	Total lumens
R+G+B+W	1790/166.3	447.5/41.6	198.9/18.5	111.9/10.4	71.6/6.7	49.7/4.6	36.5/3.4	2593
Red	337/31.3	84.3/7.8	37.4/3.5	21.1/2	13.5/1.3	9.4/0.9	6.9/0.6	488
Green	710/66	177.5/16.5	78.9/7.3	44.4/4.1	28.4/2.6	19.7/1.8	14.5/1.3	1029
Blue	152/14.1	38/3.5	16.9/1.6	9.5/0.9	6.1/0.6	4.2/0.4	3.1/0.3	220
White	272/25.3	68/6.3	30.2/2.8	17/1.6	10.9/1	7.6/0.7	5.6/0.5	394

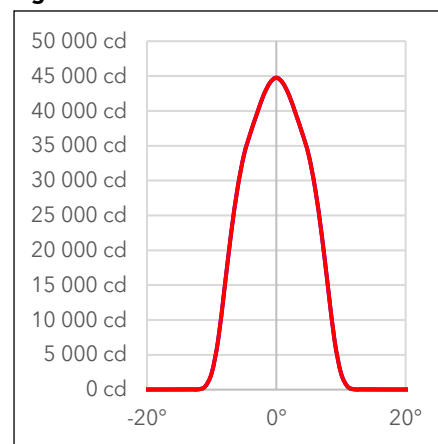
Spectrum



TM-30



Light distribution



Color temperature	CCT	9433
Color Deviation from Black	Duv	-0.0010
Color Coordinate CIE 1931	x	0.2846
	y	0.2910
Color Coordinate	u	0.1922
	v	0.2948

Color rendering index	CRI	72
Red component	CRI R9	-30
Color fidelity	TM30 Rf	77
Color gamut	TM30 Rg	116
Television consistency Index	TLCI	62

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On

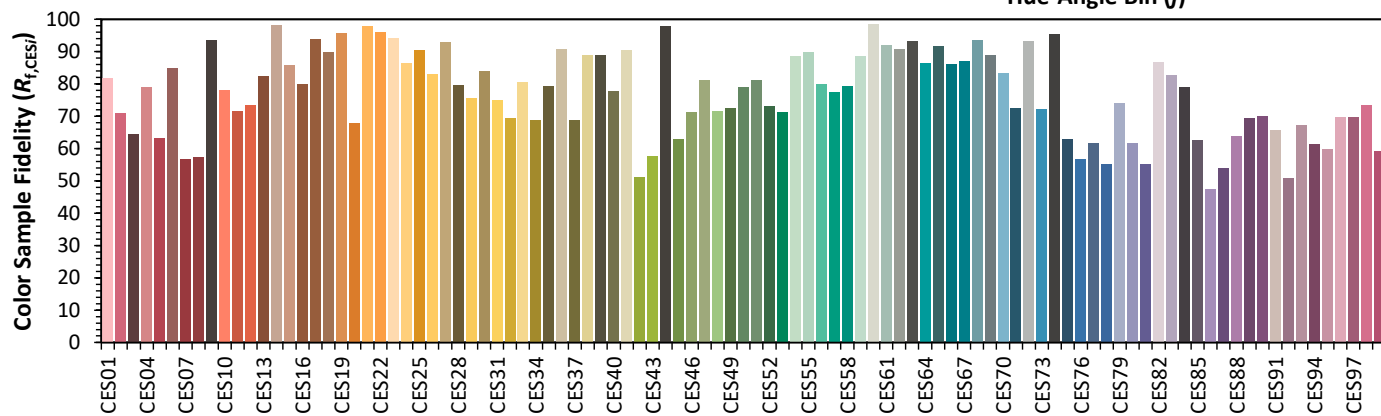
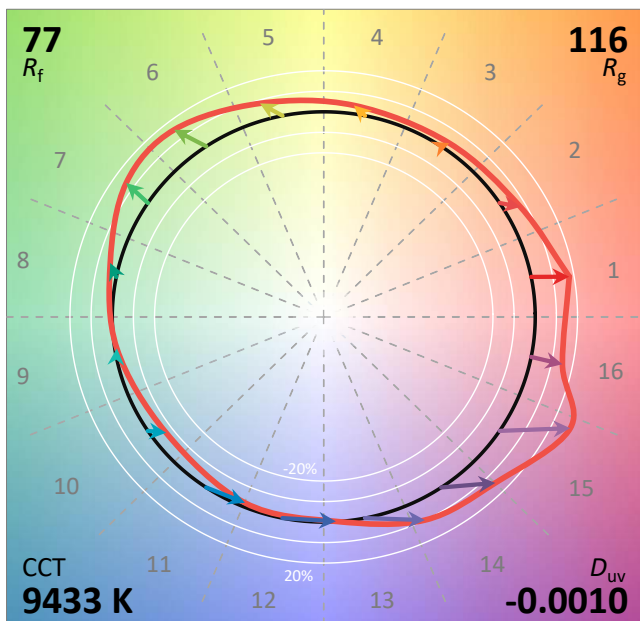
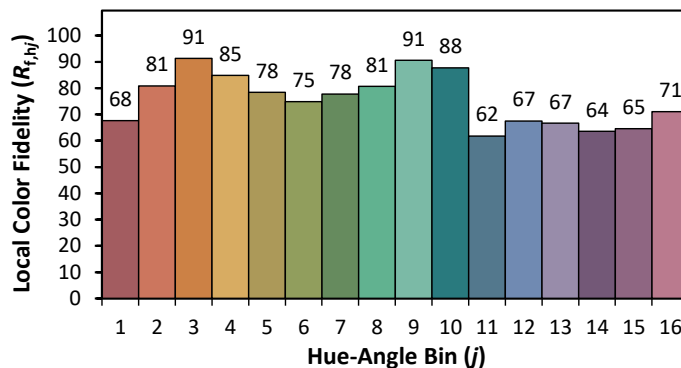
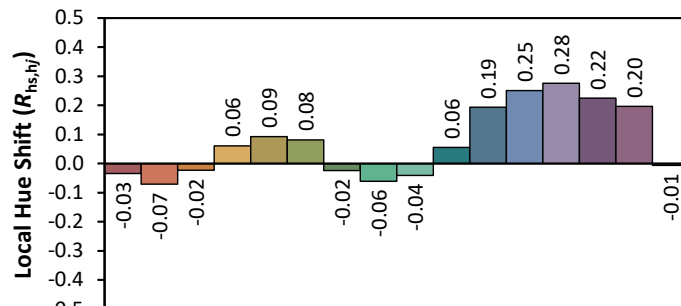
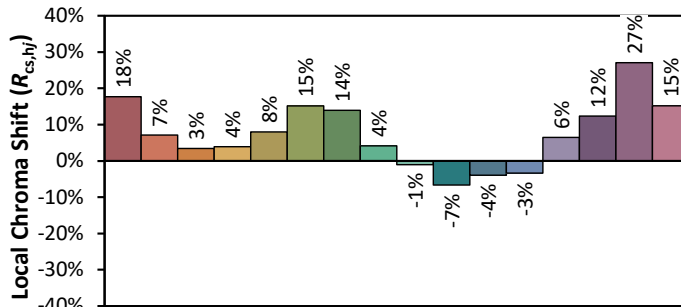
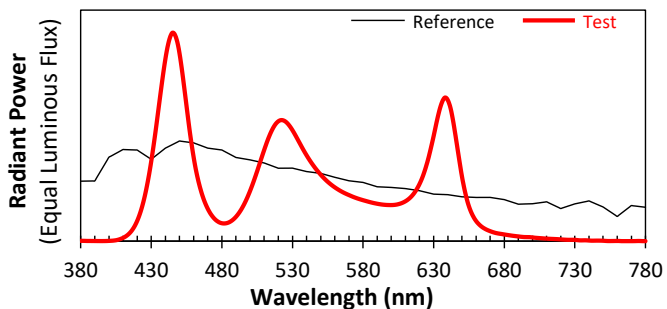
Measurement date: 14.04.2022

TetraX

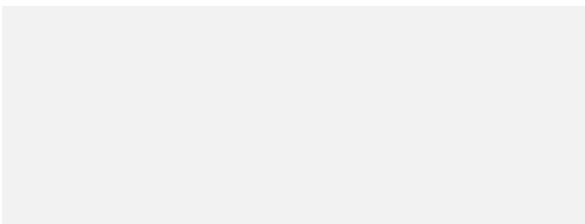
Photometric report

Beam angle 17° - Mid. zoom, WP on

ANSI/IES TM-30-18 Color Rendition Report



Notes:



x 0.2847
y 0.2910
u' 0.1922
v' 0.4422

CIE 13.3-1995 (CRI)	
R _a	72
R _g	-30

Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On
Measurement date: 14.04.2022

TetraX

Photometric report

Beam angle 17° - Mid. zoom, WP on

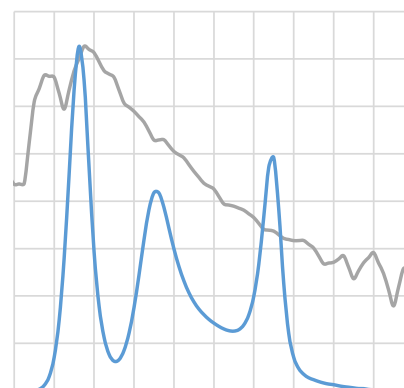
Television Lighting Consistency Index 2012 report

Direct spectrum input: CCT = D9433 (-0.2)

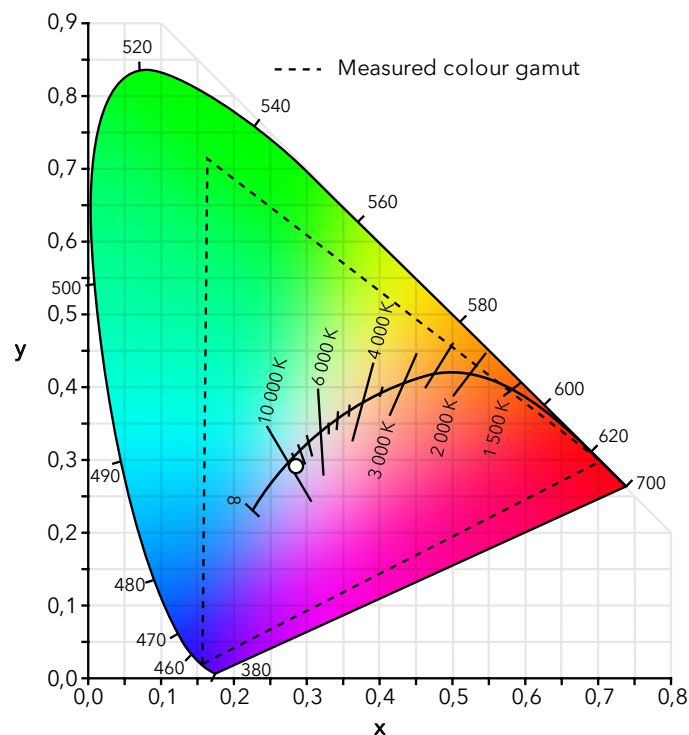
TLCI-2012: 62 (D9433)



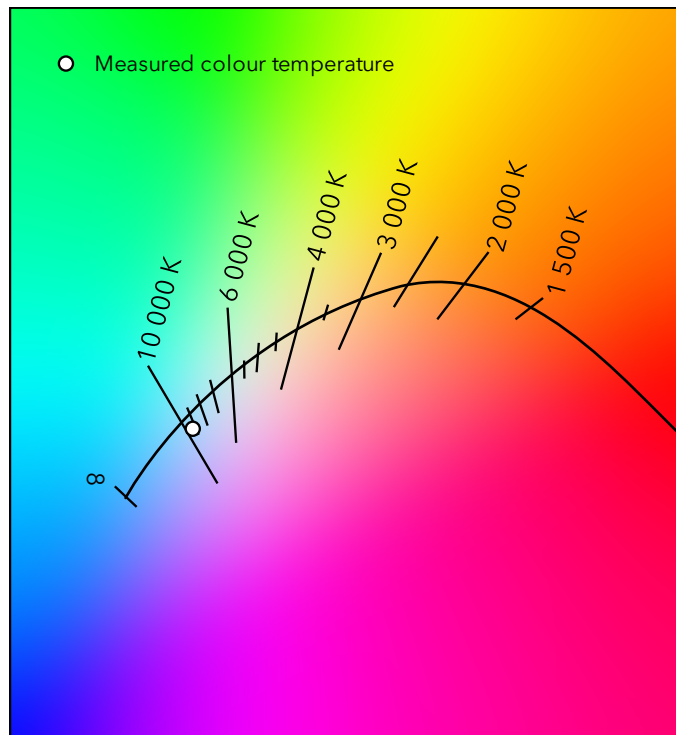
Sector	Lightness	Chroma	Hue
R	-----	---	0
R/Y	0	-	+
Y	0	-	0
Y/G	0	--	-
G	-	---	0
G/C	0	-----	++++
C	0	-	++++
C/B	0	0	++
B	0	--	-
B/M	0	--	-
M	-	---	-
M/R	-----	---	-



CIE 1931 color space gamut



Colour temperature



Fixture settings: Mode 1, Flower Effect Off, White point On, All pixels On
 Measurement date: 14.04.2022

